Special, 3/31/2026 10:30:00 AM

BE IT REMEMBERED that on March 31, 2026, there was begun and holden a SPECIAL session of the Commissioners Court of Jefferson County, Texas, with the following members and officers present and participating except those absent as indicated:

Honorable Jeff Branick, County Judge

Commissioner Brandon Willis, Commissioner Pct. No. 1

Commissioner Cary Erickson, Commissioner Pct. No. 2

Commissioner Michael Sinegal, Commissioner Pct. No. 3 (ABSENT)

Absent

Commissioner Everette D. Alfred, Commissioner Pct. No. 4

Honorable Zena Stephens, Sheriff

Honorable Roxanne Acosta-Hellberg, County Clerk

When the following proceedings were had and orders made, to-wit:

Jeff R. Branick, County Judge
Brandon Willis, Commissioner, Precinct One
Cary Erickson, Commissioner, Precinct Two
Michael S. Sinegal, Commissioner, Precinct Three
Everette "Bo" Alfred, Commissioner, Precinct Four

NOTICE OF MEETING AND AGENDA OF COMMISSIONERS' COURT OF JEFFERSON COUNTY, TEXAS March 31, 2026

Notice is hereby given that the Commissioners' Court of Jefferson County, Texas, will meet at **10:30 AM,** on the **31st** day of **March 2026** at its regular meeting place in the Commissioners' Courtroom, 4th Floor, Jefferson County Courthouse, 1149 Pearl Street, Beaumont, Texas.

Said meeting will be a **Special** meeting for the purpose of transacting the routine business of the County. Persons with disabilities requiring auxiliary aids for services who wish to attend this meeting should contact the County Judge's Office to arrange for assistance.

In addition to the routine business of the County, the subject of said meeting will be the following:

10:00 a.m. – Announcement of a Workshop and Conduct a Public Hearing to consider Proposed amendments to the Jefferson County Abatement Policy and Standard Abatement Agreement pursuant to Chapter 312.401 et seq., Texas Tax Code.

Jefferson County provides the opportunity for the public to view the Commissioner's Court meeting with the following options:

View live with audio from the County Webpage: https://co.jefferson.tx.us/comm_crt/commlink.htm

Listen to audio by calling 347-973-4395, conference id 113569383# The court will also have a time for public comments at the beginning of the

meeting. If you would like to speak at that time, please be on the phone call. The Court will allow public comments related to items on the agenda that day at the beginning of the meeting. Public comments will be limited to 3 minutes per person.

Please be mindful that the audio portion of this meeting will be of better quality from the website.

INVOCATION: Brandon Willis, Commissioner, Precinct One

PLEDGE OF ALLEGIANCE: Cary Erickson, Commissioner, Precinct Two

PURCHASING:

(a). Consider and approve specifications for Invitation for Bid (IFB 26-021/MR) Roofing Renovations to Jefferson County Courthouse.

SEE ATTACHMENTS ON PAGES 11 - 76

Motion by: Erickson
Second by: Willis
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

(b). Receive and file bids for (IFB 26-004/CG), Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County, Pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-327.

SEE ATTACHMENTS ON PAGES 77 - 470

Motion by: Erickson
Second by: Willis
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

(c). Consider and approve award, execute, receive and file contract for Request for Proposal (RFP 26-002/CG), Cafeteria Services for Jefferson County; with The Courtyard Café; Pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-327.

SEE ATTACHMENTS ON PAGES 471 - 639

Motion by: Erickson
Second by: Willis
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

(d). Consider and approve a Discretionary Exemption for the purchase of land located at 20245 Highway 90, Beaumont, Texas 77713 as authorized by Local Government Code §262.024 (a)(6) any land or right-of-way.

NO ATTACHMENTS

Motion by: Erickson
Second by: Willis
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

(e).Consider and approve, execute, receive and file Customer Rate Change with Entergy and Jefferson County for the following location: Jack Brooks Regional Airport and Old Jefferson County Service Center Building.

SEE ATTACHMENTS ON PAGES 640 - 643

Motion by: Erickson
Second by: Willis
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

COUNTY AUDITOR:

(a).Receive and file the Jefferson County Annual Comprehensive Financial Report for the fiscal year ended September 30, 2025.

SEE ATTACHMENTS ON PAGES 644 - 840

Motion by: Erickson
Second by: Willis
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

(b).Receive and file Federal Single Audit for Jefferson County, Texas for the Fiscal Year Ended September 30, 2025.

SEE ATTACHMENTS ON PAGES 841 - 854

Motion by: Erickson
Second by: Willis
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

(c).Receive and file State Single Audit for Jefferson County, Texas for the Fiscal Year Ended September 30, 2025.

SEE ATTACHMENTS ON PAGES 855 - 868

Motion by: Erickson
Second by: Willis
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

(d).Receive and file Financial & Operating Statements – County Funds Only for the Three Months Ending December 31, 2025.

SEE ATTACHMENTS ON PAGES 869 - 886

Motion by: Erickson
Second by: Willis
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

(e).Receive and file Financial & Operating Statements – County Funds Only for the Month Ending January 31, 2026.

SEE ATTACHMENTS ON PAGES 887 - 901

Motion by: Erickson
Second by: Willis
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

(f).Consider and approve electronic disbursement for $1,349.24 to Texas Department of Criminal Justice for April insurance reimbursement.

NO ATTACHMENTS

Motion by: Erickson
Second by: Willis
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

(g).Consider and approve electronic disbursement for $511,178.30 to LaSalle for revenue receive from entities for inmate housing.

NO ATTACHMENTS

Motion by: Erickson
Second by: Willis
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

(h).Receive and file the SAS 114 Letter from Pattillo, Brown & Hill LLP for the fiscal year ended September 30, 2025.

SEE ATTACHMENTS ON PAGES 902 - 906

Motion by: Erickson
Second by: Willis
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

(i).Regular County Bills - Check #537817 through check #538069.

SEE ATTACHMENTS ON PAGES 907 - 915

Motion by: Erickson
Second by: Willis
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

(j).Consider and approve budget transfer - County Judge - replacement of laptop.

SEE ATTACHMENTS ON PAGES 916 - 919

120-1015-413-6002	COMPUTER EQUIPMENT	$1,700.00	
120-1015-413-5077	CONTRACTUAL SERVICE		$1,700.00

Motion by: Erickson
Second by: Willis
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

COUNTY COMMISSIONERS:

(a).Consider, possibly approve and authorize the County Judge to execute, receive and file Federal Surplus Application for Eligibility with the Texas Facilities Commission.

SEE ATTACHMENTS ON PAGES 920 - 933

Motion by: Alfred
Second by: Erickson
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

(b).Consider, possibly approve, receive and file a Proclamation for Sexual Assault Awareness Month.

SEE ATTACHMENTS ON PAGES 934 - 934

Motion by: Alfred
Second by: Erickson
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

(c).Consider, possibly approve, authorize the County Judge to execute, receive and file an application for a FEMA Conditional Letter of Map Revision (CLOMR) to be submitted on behalf of the Port Arthur LNG (PALNG) site in Jefferson County, Texas. County signature of this document provides Community Concurrence with the application.

SEE ATTACHMENTS ON PAGES 935 - 3843

Motion by: Alfred
Second by: Erickson
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

(d).Consider and possibly approve the reappointment of Frank Rose and Joel E. Levingston as Commissioners for the Jefferson County Drainage District No. 3, Board of Commissioners, pursuant to Water Code, 56. All are appointments of Commissioner Sinegal, Pct. 3.

NO ATTACHMENTS

Motion by: Alfred
Second by: Erickson
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

JUVENILE PROBATION DEPARTMENT:

(a).Receive and file the Jefferson County Juvenile Board's Inspection and Certification of the Juvenile Detention Facilities at the Minnie Rogers Juvenile Justice Center as per Title 3, Texas Family Code, Section 51.12(c).

SEE ATTACHMENTS ON PAGES 3844 - 3846

Motion by: Willis
Second by: Erickson
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

VISITORS CENTER:

(a).Consider and possibly approve Jefferson County Tourism Committee Hotel Occupancy Tax allocation recommendations for Spring 2026 grant requests.

SEE ATTACHMENTS ON PAGES 3847 - 3849

Motion by: Alfred
Second by: Willis
In Favor: Branick, Willis, Erickson, Alfred
Action: APPROVED

OTHER BUSINESS:

*****DISCUSSION ON ANY OTHER ITEM NOT ON AGENDA WITHOUT TAKING ACTION.**

Receive reports from Elected Officials and staff on matters of community interest without taking action.

Possible Consideration and approval of Resolutions or Proclamations not to be read during court.

_____

Jeff R. Branick
County Judge

Special, March 31, 2026

There being no further business to come before the Court at this time, same is now here adjourned on this date, March 31, 2026.

JEFFERSON COUNTY PURCHASING DEPARTMENT

Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

March 31, 2026

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for Invitation for Bid **(IFB 26-021/MR) Roofing Renovations to Jefferson County Courthouse** Specifications for this project may be obtained from the Jefferson County website, https://jeffersoncountytx.gov/Purchasing/ or by calling 409-835-8593**. Bidders may obtain access to the drawings and project manual by contacting the office of The LaBiche Architectural Group, Inc, 7999 Gladys Ave, Suite 101, Beaumont, TX 77706 or via telephone at 409-860-0197.**

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and two (2) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Purchasing Department (1st Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Roofing Renovations to Jefferson County Courthouse**
BID NUMBER:	**IFB 26-021/MR**
DUE BY TIME/DATE:	**11:00 AM CT, Wednesday, May 6, 2026**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

There will be a **MANDATORY Pre-Bid Conference and Walk-Through** at **2:00 pm CT on Tuesday**, **April 14, 2026**, at the Jefferson County Commissioners' Courtroom (4th Floor, Historic Courthouse), 1149 Pearl Street, Beaumont, TX 77701.

The County shall require the Bidder to furnish a Bid Security in the amount of five percent (5%) of the total contract cost. The bid bond must be executed with a surety company authorized to do business in the State of Texas.

Within ten (10) days after the date of contract execution and prior to the issuance of Notice to Proceed and/or Purchase Order, the Bidder shall furnish the following bonds: Performance Bond to the County for the full amount of the contract if the contract exceeds fifty-thousand dollars ($50,000). Payment Bond to the County for the full amount of the contract if the contract exceeds twenty-five thousand dollars ($25,000.00).

Any questions relating to these bid requirements should be directed to Mistey Reeves, Assistant Purchasing Agent at 409-835-8593 or via email at: mistey.reeves@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent at 409-835-8593 or via email at deb.clark@jeffersoncountytx.gov.

Jefferson County encourages Disadvantaged Business Enterprises (DBEs), Minority/Women Business Enterprises (M/WBEs), and Historically Underutilized Businesses (HUBs) to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment, or the provisions of services. Individuals requiring special accommodations are requested to contact our office at least seven (7) days prior to the bid due date at 409-835-8593.

All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Bidders are strongly encouraged to carefully read the entire invitation, as failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

PUBLISH:

The Examiner:
April 2, 2026 & April 9, 2026

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BID SUBMISSIONS:

One (1) Original and two (2) Bid Copies; with all copies to include a Completed Copy of this specifications packet, in its entirety.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://jeffersoncountytx.gov/Purchasing/

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

SECTION 1: GENERAL CONDITIONS OF BIDDING AND TERMS OF CONTRACT

By execution of this document, the Vendor accepts all general and special conditions of the contract as outlined below and, in the specifications, and plans.

1. BIDDING.

1.1 BIDS.
All bids must be submitted on the bid form furnished in this package.

1.2 AUTHORIZED SIGNATURES.
The bid must be executed personally by the Vendor, duly authorized partner of the partnership, or duly authorized officer of the corporation. If executed by an agent, a power of attorney or other evidence of authority to act on behalf of the Vendor shall accompany the bid to become a valid bid.

1.3 LATE BIDS.
Bids must be in the office of the Jefferson County Purchasing Agent before or at the specified time and date bids are due. Bids received after the submission deadline shall be rejected as non-responsive and returned unopened.

1.4 WITHDRAWAL OF BID PRIOR TO OPENING.
A bid may be withdrawn before the opening date by submitting a written request to the Purchasing Agent. If time allows, the Bidder may submit a new bid. Bidder assumes full responsibility for submitting a new bid before or at the specified time and date bids are due. Jefferson County reserves the right to withdraw a request for bids before the opening date.

1.5 WITHDRAWAL OF BID AFTER OPENING.
Bidder agrees that its offer may not be withdrawn or cancelled by the Vendor for a period of ninety (90) days following the date and time designated for the receipt of bids unless otherwise stated in the bid and/or specifications.

1.6 BID AMOUNTS.
Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be interpreted in the favor of Jefferson County.

1.7 EXCEPTIONS AND/OR SUBSTITUTIONS.
All bids meeting the intent of the specifications and plans will be considered for award. Vendors taking exception to the specifications and plans, or offering substitutions, shall state these exceptions in the section provided. If bid is made on an article other than the one specified, which a Bidder considers comparable, the name and grade of said article must be specified in the bid and sufficient specifications and descriptive data must accompany same to permit thorough evaluation. The absence of stated exceptions and/or substitutions shall indicate that the Vendor has not taken any exceptions to the specifications and shall be responsible to perform in strict accordance with the specifications. As a matter of practice, Jefferson County rejects exception(s) and /or substitutions as non-responsive but reserves the right to accept any and/or all of the exception(s) and/or substitution(s) deemed to be in the best interest of Jefferson County.

1.8 ALTERNATES.
The Invitation for Bid and/or specifications may expressly allow Bidder to submit an alternate bid. Presence of such an offer shall not be considered an indication of non-responsiveness.

1.9 DESCRIPTIONS.

Unless otherwise specified, any reference to make, manufacturer and/or model used in the bid specifications is merely descriptive and not restrictive, and is used only to indicate type, style, or quality of material desired.

1.10 BID ALTERATIONS.

Bids cannot be altered or amended after submission deadline. Any interlineations, alterations, or erasures made before opening time must be initialed by the signer of the bid, guaranteeing authenticity.

1.11 TAX EXEMPT STATUS.

Jefferson County is exempt from federal excise tax and state sales tax. Unless the bid form or specifications specifically indicate otherwise, the bid price must be net, exclusive of above-mentioned taxes and will be so construed. Therefore, the bid price shall not include taxes.

1.12 QUANTITIES.

Quantities indicated are estimated quantities only and are not a commitment to buy. Approximate usage does not constitute an order, but only implies the probable quantity that will be used. Commodities will be ordered on an as-needed basis. Bidder is responsible for accurate final counts.

1.13 BID AWARD.

Award of contract shall be made to the most responsible, responsive Bidder, whose offer is determined to be the best value, taking into consideration the relative importance of price. Jefferson County reserves the right to be the sole judge as to whether items bid will serve the purpose intended.

Jefferson County reserves the right to award based upon individual line items, sections or total bid.

1.14 SILENCE OF SPECIFICATIONS FOR COMPLETE UNITS.

All materials, equipment and/or parts that will become a portion of the completed work, including items not specifically stated herein but, necessary to render the service(s) complete and operational per the specifications, are to be included in the bid price. Vendor may be required to furnish evidence that the service, as bid, will meet or exceed these requirements.

1.15 ADDENDA.

Any interpretations, corrections or changes to the specifications and plans will be made by addenda no later than forty-eight (48) hours prior to the bid opening. Addenda will be posted on the Purchasing web site. Vendors are responsible for monitoring the web site in order to remain informed on addenda. Vendors shall acknowledge receipt of all addenda with submission of bid.

1.16 GENERAL BID BOND/SURETY REQUIREMENTS.

Failure to furnish bid bond/surety, if requested, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.17 GENERAL INSURANCE REQUIREMENTS.

Failure to furnish Affidavit of Insurance, if required in these specifications, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.18 RESPONSIVENESS.

A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid

price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 RESPONSIBLE STANDING OF BIDDER.
To be considered for award, Bidder must at least: have the ability to obtain adequate financial resources, be able to comply with required or proposed delivery/completion schedule, have a satisfactory record of performance; have a satisfactory record of integrity and ethics, and be otherwise qualified and eligible to receive award.

1.20 CONFIDENTIAL/PROPRIETARY INFORMATION.
If any material in the bid submission is considered by Bidder to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Bidder), Bidder **must** clearly mark the applicable pages of bid submission to indicate each claim of confidentiality. Additionally, Bidder must include a statement on company letterhead identifying all Bid Submission section(s) and page(s) that have been marked as confidential. Jefferson County will protect from public disclosure such portions of a bid, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire bid submission is protected from disclosure because it contains some proprietary information is not acceptable, and will make the entire bid submission subject to release under the Texas Public Information Act.

By submitting a bid, Bidder agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Bidder's bid submission or other information submitted by Bidder.

1.21 PUBLIC BID OPENING.
Bidders are invited to be present at the opening of bids. After the official opening of bids, a period of not less than one week is necessary to evaluate bids. The amount of time necessary for bid evaluation may vary and is determined solely by the County. Following the bid evaluation, all bids submitted are available for public review.

2. PERFORMANCE.

2.1 DESIGN, STRENGTH, AND QUALITY.
Design, strength, and quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practices. The apparent silence of specifications and/or plans as to any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications and/or plans shall be made on the basis of this statement.

2.2 AGE AND MANUFACTURE.
All tangible goods being bid must be new and unused, unless otherwise specified, in first-class condition, of current manufacture, and furnished ready to use. All items not specifically mentioned that are required for a complete unit shall be furnished.

2.3 DELIVERY LOCATION.
All deliveries will be made to the address(es) specified on the purchase order during normal office working hours of 8:00 am CT to 4:00 pm CT, Monday through Friday, unless otherwise authorized by the Purchasing Agent or designee.

2.4 DELIVERY SCHEDULE.
Delivery time may be an important consideration in the evaluation of best value. The maximum number of days necessary for delivery ARO shall be stated in the space, if provided, on the bid form.

2.5 DELIVERY CHARGES.
All delivery and freight charges, F.O.B. destination shown on Jefferson County purchase order, as necessary to perform contract are to be included in the bid price.

2.6 INSTALLATION CHARGES.

All charges for assembly, installation and set-up shall be included in the bid price. Unless otherwise stated, assembly, installation and set-up will be required.

2.7 OPERATING INSTRUCTIONS AND TRAINING.

Clear and concise operating instructions and descriptive literature will be provided in English, if requested. On-site detailed training in the safe and efficient use and general maintenance of item(s) purchased shall be provided as needed at the request of Jefferson County. Instructions and training shall be at no additional cost to the County.

2.8 STORAGE.

Bidder agrees to provide storage of custom ordered materials, if requested, for up to thirty (30) calendar days.

2.9 COMPLIANCE WITH FEDERAL, STATE, COUNTY, AND LOCAL LAWS.

Bids must comply with all federal, state, county and local laws, including, but not limited to, all applicable standard safety, emission, and noise control requirements. Any vehicles or equipment shall contain all standard safety, emission, and noise control requirements required for the types and sizes of equipment at the time of their manufacture. The Contractor agrees, during the performance of work or service, to comply with all applicable codes and ordinances of Jefferson County or the State of Texas as they may apply, as these laws may now read, or as they may hereafter be changed or amended.

2.10 OSHA.

The Bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful Bidder will further certify that all items furnished under this project will conform and comply with federal and State of Texas OSHA standards. The successful Bidder will agree to indemnify and hold harmless Jefferson County for any and all damages that may be assessed against the County.

2.11 PATENTS AND COPYRIGHTS.

The successful Vendor agrees to protect the County from claims involving infringements of patents and/or copyrights.

2.12 SAMPLES, DEMONSTRATIONS, AND TESTING.

At Jefferson County's request and direction, Bidder shall provide product samples and/or testing of items bid to ensure compliance with specifications. Samples, demonstrations and/or testing may be requested at any point prior to or following bid award. Samples, demonstrations and/or testing may be requested upon delivery and/or any point during the term of resulting contract. All samples (including return thereof), demonstrations, and/or testing shall be at the expense of the Bidder/Vendor.

2.13 ACCEPTABILITY.

All articles enumerated in the bid shall be subject to inspection by an officer designated for that purpose by Jefferson County. If found inferior to the quality called for, or not equal in value to the specifications, deficient in workmanship or otherwise, this fact shall be certified to the Purchasing Agent, who shall have the right to reject the whole or any part of the same. Items and/or work determined to be contrary to specifications must be replaced at the vendor's expense. Inferior items not retrieved by the vendor within thirty (30) calendar days, or an otherwise agreed upon time, shall become the property of the County. If disposal of such items warrants an expense, an amount equal to the disposal expense will be deducted from amounts payable to the vendor.

2.14 MAINTENANCE.

Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 MATERIAL SAFETY DATA SHEETS.

Under the "Hazardous Communications Act," common known as the "Texas Right to Know Act," a Bidder must provide the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the Bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 EVALUATION.

Evaluation shall be used as a determinant as to which services are the most efficient and/or most economical for the County. It shall be based on all factors having a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Jefferson County Purchasing Department and recommendation to Jefferson County Commissioners' Court. Compliance with all bid requirements and needs of the using department are considered in evaluating bids. Pricing is not the only criteria for making a recommendation. The Jefferson County Purchasing Department reserves to right to contact any Bidder, at any time, to clarify, verify or requirement information with regard to this bid.

3. PURCHASE ORDERS AND PAYMENT.

3.1 PURCHASE ORDERS.

A purchase order(s) shall be generated by the Jefferson County Purchasing Agent to the successful vendor. The purchase order number must appear on all itemized invoices and packing slips. The County will not be held responsible for any work orders placed and/or performed without a valid current purchase order number. Payment will be made for all services rendered and accepted by the contract administrator for which a valid invoice has been received.

3.2 INVOICES.

All invoices shall reference the Purchase Order number. Invoices shall reference the bid item number or a detailed description for each item invoiced. If an item purchased and itemized on the invoice does not correspond to an item in any of the categories awarded to the vendor, invoice shall reference the item as "N/C" to indicate that it is a non-contract item. This requirement is to assist the County in verifying contract pricing on all invoices. Payment will be made under terms of net thirty (30) days unless otherwise agreed upon by seller and the purchasing department.

3.3 PROMPT PAYMENT.

In accordance with the State of Texas Prompt Payment Act, Article 601f V.T.C.S., payment will be made after receive and acceptance by the County of the merchandise ordered and of a valid invoice. Successful Bidder(s) is required to pay Subcontractors within ten (10) days after the successful Bidder receives payment from the County.

3.4 FUNDING.

Jefferson County is operated and funded on an October 1 to September 30 basis; accordingly, the County reserves the right to terminate, without liability to the County, any contract for which funding is not available.

4. CONTRACT.

4.1 CONTRACT DEFINITION.

The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson County, shall constitute a contract equally binding between the successful Bidder and Jefferson County.

4.2 CHANGE ORDER.

No different or additional terms will become part of this contract with the exception of a change order. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing and at the discretion and approval of

Jefferson County. No change order will be binding unless signed by an authorized representative of the County and the vendor.

4.3 PRICE RE-DETERIMINATION.

A price re-determination may be requested at the time of annual renewal. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The Bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

4.4 TERMINATION.

Jefferson County reserves the right to terminate the contract for default if the Bidder breached any of the terms therein, including warranties of Bidder or if the Bidder becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies which Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or service within the proper amount of time, and/or to properly perform any and all services required to Jefferson County's satisfaction and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified. Jefferson County reserves the right to award canceled contract to the next lowest Bidder. Bidder, in submitting this bid, agrees that Jefferson County shall not be liable to prosecution for damages in the event that the County declares the Bidder in default.

4.5 CONFLICT OF INTEREST.

Employees of the County are not permitted to maintain financial interest in, or receive payment, directly or indirectly, borrow from, lend to, invest in, or engage in any substantial financial transaction with any individual, organization, supplier, or Subcontractor who does business with the County without disclosure. When conflict of interest is discovered, it shall be grounds for termination of contract.

4.6 INTEREST BY PUBLIC OFFICIALS.

No public official shall have interest in this contract, in accordance with Texas Local Government Code.

4.7 PRE-AWARD/CONTRACT CONTACT BETWEEN COUNTY AND VENDORS.

The Jefferson County Purchasing Department may initiate discussions with selected vendors; however, discussions may not be initiated by vendors.

The Jefferson County Purchasing Department expects to conduct discussions with vendor's representatives authorized to contractually obligate the vendor with an offer.

Vendors shall not contact any Jefferson County personnel during the IFB process without the express permission from the Jefferson County Purchasing Agent. The Purchasing Agent will disqualify any vendor who has made site visits, contacted Jefferson County personnel, or distributed any literature without authorization from the Jefferson County Purchasing Department.

All correspondence relating to this IFB, from advertisement to award shall be sent to the Jefferson County Purchasing Department. All presentations and/or meetings between Jefferson County and the vendor relating to this IFB shall be coordinated by the Jefferson County Purchasing Department.

Selected vendors may be expected to make a presentation/product demonstration to an Evaluation Committee. Proposals, vendor presentations, and product/service evaluations may develop into negotiating sessions with the vendor(s) as selected by the Evaluation Committee. Jefferson County expects to conduct negotiations with vendor

representatives authorized to contractually obligate the vendor with an offer. If vendor is unable to agree to contract terms and conditions, Jefferson County reserves the right to terminate contract negotiations with that vendor and initiate negotiations with another vendor. In addition to a presentation, visits by the Evaluation Committee to representative vendor client sites may be conducted where the proposed solution can be demonstrated in a production environment.

4.8 INJURIES OR DAMAGES RESULTING FROM NEGLIGENCE.

Successful vendor shall defend, indemnify and save harmless Jefferson County and all its officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful vendor, or of any agent, employee, Subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful vendor shall pay any judgment with cost which may be obtained against Jefferson County growing out of such injury or damages.

4.9 WARRANTY.

The successful vendor shall warrant that all materials utilized in the performance of this contract shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship and title.

4.10 UNIFORM COMMERCIAL CODE.

The successful vendor and Jefferson County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

4.11 VENUE.

This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the County of Jefferson, Texas.

4.12 SALE, ASSIGNMENT, OR TRANSFER OF CONTRACT.

The successful vendor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written consent of Jefferson County.

4.13 SILENCE OF SPECIFICATIONS.

The apparent silence of these specifications as to any detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

5. REJECTION OR WITHDRAWAL.

Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within **90** days after opening date.

6. EMERGENCY/DECLARED DISASTER REQUIREMENTS.

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's

supplier(s).

Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling and drayage fees may apply.

7. AWARD.

The bid will be awarded to the responsible, responsive bidder(s) whose bid, conforming to the solicitation, will be most advantageous to Jefferson County – price and other factors considered. Unless otherwise specified in this IFB, Jefferson County reserves the right to accept a bid in whole or in part, and to award by item or by group, whichever is deemed to be in the best interest of Jefferson County. Any bidder who is in default to Jefferson County at the time of submittal of the bid shall have that bid rejected.

Jefferson County reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial non-conformity in the offer, as determined by Jefferson County, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Jefferson County shall consider the qualifications of the bidders, and, where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment.

In addition, Jefferson County may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County reserves the right to award this contract on the basis of **lowest and best bid** in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one offeror, and/or to reject any or all bids. In the event the lowest dollar offeror meeting specifications is not a awarded a contract, Offeror may appear before the Commissioners' Court and present evidence concerning Offeror responsibility after officially notifying the Office of the Purchasing Agent of Offeror's intent to appear.

8. CONTRACT.

A response to an IFB is an offer to contract with Jefferson County based upon the terms, conditions, and specifications contained in the IFB. Bids do not become contracts unless and until they are executed by Jefferson County, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the IFB, unless any of the terms and conditions is modified by an IFB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

9. WAIVER OF SUBROGATION.

Bidder and bidder's insurance carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from bidder's performance under this agreement.

10. FISCAL FUNDING.

A multi-year contract (if requested by the specifications) continuing as a result of an extension option must include fiscal funding out. If, for any reason, funds are not appropriated to continue the contract, said contract shall become null and void.

11. BID RESULTS.

Bid results are not provided in response to telephone inquiries. A preliminary tabulation of bids received will be posted on the Purchasing web page at https://jeffersoncountytx.gov/Purchasing/ as soon as possible following bid opening. A final tabulation will be posted following bid award, and will also be available for review in the Purchasing Department.

12. CHANGES AND ADDENDA TO BID DOCUMENTS.

Each change or addendum issued in relation to this IFB document will be on file in the Office of the Purchasing Agent, and will be posted on the Purchasing web site as soon as possible. It shall be the bidder's responsibility to make inquiry as to change or addenda issued, and to monitor the web site. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the Office of the County Purchasing Agent.

13. SPECIFICATIONS.

Unless otherwise stated by the bidder, the bid will be considered as being in accordance with Jefferson County's applicable standard specifications, and any special specifications outlined in the bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of Jefferson County, and should not be construed as excluding bids on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid.

Jefferson County reserves the right to determine if equipment/ product being bid is an acceptable alternate. All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of the bid, may be considered non-responsive.

14. DELIVERY.

Bids shall include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder (in writing on the included Bid Form), prices bid will be considered as being based on F.O.B. destination/delivered freight included.

15. INTERPRETATION OF BID AN/OR CONTRACT DOCUMENTS.

All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening, in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. Inquiries received that are not made in a timely fashion may or may not be considered.

16. CURRENCY.

Prices calculated by the bidder shall be stated in U.S. dollars.

17. PRICING.

Prices shall be stated in units of quantity specified in the bid documents. In case of discrepancy in computing the amount of the bid, the unit price shall govern.

18. NOTICE TO PROCEED/PURCHASE ORDER.

The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.

19. CERTIFICATION.

By signing the offer section of the Offer and Acceptance page, Bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.
- The Bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.
- The Bidder hereby certifies that the individual signing the bid is an authorized agent for the Bidder and has the authority to bind the Bidder to the contract.

20. DEFINITIONS.

"County" – Jefferson County, Texas.
"Contractor" – The Bidder whose proposal is accepted by Jefferson County.

21. SMALL, MINORITY & WOMEN BUSINESS ENTERPRISE PARTICIPATION

It is the desire of Jefferson County to increase the participation of Small, Minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

Minority owned business may be eligible for contract procurement assistance with public and private sector entities from MBDA Centers

Dallas Fort Worth MBDA Business Center
8828 N. Stemmons Freeway, Ste. 550 B
Dallas, TX 75247
214-920-2436
Website: https://www.mbdadfw.com
Email: admin1@mbdadallas.com

El Paso MBDA Business Center
2401 East Missouri Avenue
El Paso, TX 79903
915-351-6232
Website: https://www.mbda.gov/business-center/el-paso-mbda-business-center
Email: treed@ephcc.org

San Antonio MBDA Business Center
501 W. Cesar E. Chavez Blvd., Ste. 3.324 B
San Antonio, TX 78207
210-458-2480
Website: https://www.mbda.gov/business-center/san-antonio-mbda-business-center
Email: Jacqueline.jackson@utsa.edu

Small and woman-owned business may be eligible for assistance from U.S. Small Business Administration (SBA):
Website: https://www.sba.gov/local-assistance

Dallas/Fort Worth District Office
150 West Parkway, Ste. 130
Euless, TX 76040
817-684-5500
Website: https://www.sba.gov/district/dallas-fort-worth
Email: dfwdo.email@sba.gov

El Paso District Office
211 N. Florence St, Ste. 201
El Paso, TX 79901
915-834-4600
Website: https://www.sba.gov/district/el-paso
Email: lee.vega@sba.gov

Houston District Office
8701 S. Gessner Dr, Ste. 1200
Houston, TX 77074
713-773-6500
Website: https://www.sba.gov/district/houston
Email: houston@sba.gov

Lower Rio Grande Valley District Office
2422 E. Tyler Ave, Suite E
Harlingen, TX 78550
956-427-8533
Website: https://www.sba.gov/district/lower-rio-grande-valley
Email: lrgvdo.email@sba.gov

San Antonio District Office
615 E. Houston St, Ste 298
San Antonio, TX 78205
210-403-5900
Website: https://www.sba.gov/district/san-antonio
Email: sado.email@sba.gov

West Texas District Office
1205 Texas Ave, Room 408
Lubbock, TX 79401
806-472-7462
Website: https://www.sba.gov/district/west-texas
Email: lubdo@sba.gov

HUB certification information can be found at:

Statewide Procurement Division HUB Program
P.O. Box 13528
Austin, TX 78711
512-463-5872 or 888-863-5881
Website: https://comptroller.texas.gov/purchasing/vendor/hub
Email: statewidehubprogram@cpa.texas.gov

PROPOSER: INSERT HUB, SBE, MBE or WBE Certification behind this page.

SECTION 2: FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)
MANDATED CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY UNDER FEDERAL AWARDS
REQUIRED BY 2 C.F.R. §200.327 APPENDIX II TO 2 CFR §200

2 CFR 200.327 Contract provisions. The non-Federal entity's contracts should contain applicable provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards. The non-Federal entity's contracts must contain the provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards, as applicable. ***Language as of January 3, 2025.**

THRESHOLD	PROVISION	CITATION
>$250,000 (Simplified Acquisition Threshold)	Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. Although not required for contract at or below the SAT, FEMA suggests including a remedies provision. The NFE should consult their servicing legal counsel to determine whether and how remedies for breach of contract are permissible under applicable state, local, or tribal laws or regulations.	2 CFR 200 APPENDIX II (A)
>$10,000	All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement. FEMA suggests including a termination for cause and for convenience in all contracts even when not required. The NFE should consult their servicing legal counsel to determine whether and how termination provisions are permissible under applicable state, local, or tribal laws or regulations.	2 CFR 200 APPENDIX II (B)
None	Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor." 41 CFR 60-1.4 Equal opportunity clause. b) Federally assisted construction contracts. (1) Except as otherwise provided, each administering agency shall require the inclusion of the following language as a condition of any grant, contract, loan, insurance, or guarantee involving federally assisted construction which is not exempt from the requirements of the equal opportunity clause: The [recipient] hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause: During the performance of this contract, the contractor agrees as follows:	2 CFR 200 APPENDIX II (C) and 41 CFR §60-1.4(b)

The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of

investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through
(8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The [recipient] further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the [recipient] so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The [recipient] agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The [recipient] further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted

	construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the [recipient] agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the [recipient] under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such [recipient]; and refer the case to the Department of Justice for appropriate legal proceedings.	
>$2,000	Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non- Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. **FEMA PA and HMGP do not require these clauses unless it is a requirement for matching funds by another federal program legislation such as CDBG-DR.** When required, prime construction contracts over $2,000 awarded by NFEs must include a provision for compliance with the Davis-Bacon Act. If applicable per the standard described above, the NFE must include the provisions at 29 C.F.R. § 5.5(a)(1)-(10) in full into all applicable contracts, and all applicable contractors must include these provisions in full in any subcontracts. In situations where the Davis-Bacon Act does not apply, neither does the Copeland "Anti-Kickback" Act. Sample contract clauses are provided in the FEMA Contract Provisions Guide.	2 CFR 200 APPENDIX II (D); 40 U.S.C. §§ 3141-3144 and 3146-3148; supplemented by 29 C.F.R. Part 5; 40 U.S.C. § 3145; supplemented by 29 C.F.R. Part 3

> $100,000+ Mechanics or Laborers	Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence. **Applicability** **This required contract provision applies to all procurements over $100,000 that involve the employment of mechanics, laborers, and construction work. These requirements *do not* apply to the purchase of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.** Required Language Compliance with the Contract Work Hours and Safety Standards Act. 1. *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 2. *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section. 3. *Withholding for unpaid wages and liquidated damages.* The (insert name of grant recipient or subrecipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or	2 CFR 200 APPENDIX II (E); 40 U.S.C. §§ 3701-3708; supplemented by 29 C.F.R. Part 5

	subcontractor under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section. 4. *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section. **For contracts that are only subject to Contract Work Hours and Safety Standards Act and are not subject to the other statutes in 29 C.F.R. § 5.1 where an additional contract provision is required, FEMA suggests including the language below.** <u>Suggested Language</u> Further Compliance with the Contract Work Hours and Safety Standards Act. 1. The contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Records to be maintained under this provision shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Department of Homeland Security, the Federal Emergency Management Agency, and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.	
None	Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency. **This provision does not apply to all FEMA grant and cooperative agreement programs including PA and HMGP as awards under these**	2 CFR 200 APPENDIX II (F); Funding Agreement; definition found under 37 C.F.R. § 401.2(a).

	programs do not meet the definition.	
>$150,000	Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended - Contracts and subgrants of amounts in excess of $150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). Suggested Language: Clean Air Act The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 *et seq.* The contractor agrees to report each violation to the (insert name of non-federal entity entering into the contract) and understands and agrees that the (insert name of the non-federal entity entering into the contract) will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal assistance provided by FEMA. Federal Water Pollution Control Act The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 *et seq.* The contractor agrees to report each violation to the (insert name of the non-federal entity entering into the contract) and understands and agrees that the (insert name of the non-federal entity entering into the contract) will, in turn, report each violation as required to assure notification to the (insert name of the pass-through entity, if applicable), Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal assistance provided by FEMA.	2 CFR 200 APPENDIX II (G); 42 U.S.C. §§ 7401-7671q; 33 U.S.C. §§ 1251-1387
>$25,000	Debarment and Suspension (Executive Orders 12549 and 12689) - A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority	2 CFR 200 APPENDIX II (H); 2 C.F.R. Part 180 (implementing Executive Order 12549, Debarment and Suspension (1986) and

	other than Executive Order 12549. The following provides a debarment and suspension clause. It incorporates an optional method of verifying that contractors are not excluded or disqualified. Suggested Language: Suspension and Debarment This contract is a covered transaction for purposes of 2 C.F.R. Part 180 and 2 C.F.R. Part 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935). The contractor must comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into. This certification is a material representation of fact relied upon by (insert name of recipient/subrecipient/applicant). If it is later determined that the contractor did not comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, in addition to remedies available to (insert name of recipient/subrecipient/applicant), the federal government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.	Executive Order 12689, Debarment and Suspension (1989)); 2 C.F.R. Part 3000 (Department of Homeland Security regulations for Non-procurement Debarment and Suspension, implementing 2 C.F.R. Part 180).
> $100,000; and Certification required for all contracts greater than $100,000	Byrd Anti-Lobbying Amendment (31 U.S.C. 1352) - Contractors that apply or bid for an award exceeding $100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non- Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award. **If applicable, contractors must sign and submit the following certification to the NFE with each bid or offer exceeding $100,000.** Required Certification: CERTIFICATION REGARDING LOBBYING (APPENDIX A, 44 C.F.R. PART 18)	2 CFR 200 APPENDIX II (I) and 24 CFR §570.303; (citing 31 U.S.C. § 1352); 44 C.F.R. § 18.110
	See 2 CFR §200.323.	2 CFR 200 APPENDIX II (J)
	See 2 CFR §200.216.	2 CFR 200 APPENDIX II (K)
	See 2 CFR §200.322.	2 CFR 200 APPENDIX II (L)
Work involves the use of materials, and the contract is for more than $10,000	A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items	2 CFR 200.323; Pub. L. No. 89-272 (1965) (codified as amended by the

	designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired during the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines. Suggested Language: In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired— Competitively within a timeframe providing for compliance with the contract performance schedule; Meeting contract performance requirements; or At a reasonable price. Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines webpage: https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.	Resource Conservation and Recovery Act at 42 U.S.C. § 6962)
>$100,000	*§135.38 Section 3 clause* *All section 3 covered contracts shall include the following clause (referred to as the section 3 clause):* A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing. B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations. C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment	

	positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin. D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135. E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135. F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts. G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).	
None; All FEMA declarations and awards issued on or after November 12, 2020.	Section 889(b)(1) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (FY2019 NDAA) and 2 C.F.R. § 200.216, as implemented by FEMA Policy 405-143-1, Prohibitions on Expending FEMA Award Funds for Covered Telecommunications Equipment or Services (Interim), prohibit the obligation or expending of federal award funds on certain telecommunication products or from certain entities for national security reasons. Effective August 13, 2020, FEMA recipients and subrecipients, as well as their contractors and subcontractors, may not obligate or expend any FEMA award funds to: Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to: (1) Procure or obtain; (2) Extend or renew a contract to procure or obtain; or (3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered	2 CFR 200.216

	telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). (i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities). (ii) Telecommunications or video surveillance services provided by such entities or using such equipment. (iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country. (b) In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained. (c) See Public Law 115-232, section 889 for additional information. (d) See also § 200.471.	
None	The Federal awarding agency must establish conflict of interest policies for Federal awards. The non-Federal entity must disclose in writing any potential conflict of interest to the Federal awarding agency or pass-through entity in accordance with applicable Federal awarding agency policy.	2 CFR 200.112
None	The Federal awarding agency and the non-Federal entity should, whenever practicable, collect, transmit, and store Federal award-related information in open and machine-readable formats rather than in closed formats or on paper in accordance with applicable legislative requirements. A machine-readable format is a format in a standard computer language (not English text) that can be read automatically by a web browser or computer system. The Federal awarding agency or pass-through entity must always provide or accept paper versions of Federal award-related information to and from the non-Federal entity upon request. If paper copies are submitted, the Federal awarding agency or pass-through entity must not require more than an original and two copies. When original records are electronic and cannot be altered, there is no need to create and retain paper copies. When original records are paper, electronic versions may be substituted through the use of duplication or other forms of electronic media provided that	2 CFR 200.336

	they are subject to periodic quality control reviews, provide reasonable safeguards against alteration, and remain readable.	
None; All FEMA declarations and awards issued on or after November 12, 2020.	Suggested Language: If subcontracts are to be let, the prime contractor is required to take all necessary steps identified in 2 C.F.R. § 200.321(b)(1)-(5) listed below to ensure that small and minority businesses, women's business enterprises, and labor surplus area firms are used when possible. Contracting with HUB, small and minority businesses, women's business enterprises, and labor surplus area firms. (a) When possible, the recipient or subrecipient should ensure that small businesses, minority businesses, women's business enterprises, veteran-owned businesses, and labor surplus area firms (See U.S. Department of Labor's list) are considered as set forth below. (b) Such consideration means: (1) These business types are included on solicitation lists; (2) These business types are solicited whenever they are deemed eligible as potential sources; (3) Dividing procurement transactions into separate procurements to permit maximum participation by these business types; (4) Establishing delivery schedules (for example, the percentage of an order to be delivered by a given date of each month) that encourage participation by these business types; (5) Utilizing organizations such as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and (6) Requiring a contractor under a Federal award to apply this section to subcontracts.	2 C.F.R. § 200.321(b)(1)-(5)
None	Financial records, supporting documents, statistical records, and all other non- Federal entity records pertinent to a Federal award must be retained for a period of three years from the date of submission of the final expenditure report or, for Federal awards that are renewed quarterly or annually, from the date of the submission of the quarterly or annual financial report, respectively, as reported to the Federal awarding agency or pass-through entity in the case of a subrecipient. Federal awarding agencies and pass-through entities must not impose any other record retention requirements upon non-Federal entities. The only exceptions are the following: (a) If any litigation, claim, or audit is started before the expiration of the 3-year period, the records must be retained until all litigation, claims, or audit findings involving the records have been resolved and final action taken. (b) When the non-Federal entity is notified in writing by the Federal awarding agency, cognizant agency for audit, oversight agency for audit, cognizant agency for indirect costs, or pass-through entity to extend the retention period. (c) Records for real property and equipment acquired with Federal funds must be retained for 3 years after final disposition. (d) When records are transferred to or maintained by the Federal awarding agency or pass-through entity, the 3-year retention requirement is not applicable to the non-Federal entity.	2 CFR 200.334; and 200.337

	(e) Records for program income transactions after the period of performance. In some cases recipients must report program income after the period of performance. Where there is such a requirement, the retention period for the records pertaining to the earning of the program income starts from the end of the non-Federal entity's fiscal year in which the program income is earned. (f) Indirect cost rate proposals and cost allocations plans. This paragraph applies to the following types of documents and their supporting records: Indirect cost rate computations or proposals, cost allocation plans, and any similar accounting computations of the rate at which a particular group of costs is chargeable (such as computer usage chargeback rates or composite fringe benefit rates). (1) *If submitted for negotiation.* If the proposal, plan, or other computation is required to be submitted to the Federal Government (or to the pass-through entity) to form the basis for negotiation of the rate, then the 3-year retention period for its supporting records starts from the date of such submission. (2) *If not submitted for negotiation.* If the proposal, plan, or other computation is not required to be submitted to the Federal Government (or to the pass-through entity) for negotiation purposes, then the 3-year retention period for the proposal, plan, or computation and its supporting records starts from the end of the fiscal year (or other accounting period) covered by the proposal, plan, or other computation. Suggested Language for All Procurements: a. The Contractor agrees to provide (insert non-federal entity), the Texas Division of Emergency Management (TDEM), the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions. b. The FIRM agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed. c. The CONTRACTOR agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract. d. In compliance with section 1225 of the Disaster Recovery Reform Act of 2018, the (insert name of the non-federal entity) and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.	
None	CONTRACTS WITH COMPANIES ENGAGED IN BUSINESS WITH IRAN, SUDAN, OR FOREIGN TERRORIST ORGANIZATION PROHIBITED. A governmental Corporation may not enter into a governmental contract with a company that is identified on a list prepared and maintained by the U.S. Department of Treasury under Executive Order 13224.The term "foreign terrorist organization" in this paragraph has the meaning assigned to such a term in Section 8 U.S.C.1189(a)(1) of the United States Code.	United States Code 19 U.S.C. 2511

>$100,000	PROVISION REQUIRED IN CONTRACT. (a) This section applies only to a contract that: (1) is between a governmental entity and a company with 10 or more full-time employees; and (2) has a value of $100,000 or more that is to be paid wholly or partly from public funds of the governmental entity. (b) A governmental Corporation may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and will not boycott Israel during the term of the contract.	(Adhere to your State's Local Government Code)
Option Contract Language for contracts awarded prior to Grant Award	The contract award is contingent upon the receipt of federal funds. If no such funds are awarded, the contract shall terminate.	Optional
	Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act. <u>Suggested Language:</u> The CONTRACTOR shall comply with the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).	42 U.S.C. 6201
	The Firm agrees that no otherwise qualified individual with disabilities shall, solely by reason of his/her disability, be denied the benefits of, or be subjected to discrimination, including discrimination in employment, under any program or activity receiving federal financial assistance.	Section 504 of the Rehabilitation Act of 1973, as amended.
	Pursuant to the *Violence Against Women Act Reauthorization of 2022*, the Grant Recipient must certify that local policies do not interfere with the residents' Right to Report Crime and Emergencies from One's Home. The certification will confirm that no ordinances, local regulations, or policies adopted by the local government and currently in effect contain any financial or regulatory penalty imposed on property owners or residents as a result of any use of emergency services, or that the Grant Recipient is actively addressing such local regulations.	Pub. L. 117-103, 136 Stat. 49

BYRD ANTI-LOBBYING CERTIFICATION

Certification for Contracts, Grants, Loans, and Cooperative Agreements-The undersigned certifies, to the best of his

or her knowledge and belief, that:

1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor_____ certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C.Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

_____

Signature of Contractor's Authorized Official

_____

Name and Title of Contractor's Authorized Official

_____

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DEBARMENT/SUSPENSION CERTIFICATION

Non-Federal entities and Contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (No procurement Debarment and Suspension).

This requirement applies to all FEMA grant and cooperative agreement programs.

Federal Executive Order (E .O.) 12549 "Debarment" requires that all Contractors receiving individual awards, using federal funds, and all sub recipients certify that the organization and its principals are not debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency from doing business with the Federal Government. By signing this document, you certify that your organization and its principals are not debarred. Failure to comply or attempts to edit this language may disqualify your bid. Information on debarment is available at the following websites: www.sam.gov and https://acguisition.qov/far/index.html see section 52.209-6.

The Contractor _____ certifies or affirms by your signature that neither you nor your principal is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

_____

Signature of Contractor's Authorized Official

_____

Name and Title of Contractor's Authorized Official

_____

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CIVIL RIGHTS COMPLIANCE PROVISIONS

1. EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause)

(For all awarded contracts that meet the definition of "federally assisted construction contract" provided in 41 CFR Part 60-1.3)

During the performance of this contract, the Contractor agrees as follows:

1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

   Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

3) The Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.

4) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

5) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

6) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

7) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or order this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

8) The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each Subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

CIVIL RIGHTS COMPLIANCE PROVISIONS (CONTINUED)

Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or vendor as a result of such direction by the administering agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of Contractors and Subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a Contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon Contractors and Subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

_____

Signature of Contractor's Authorized Official

_____

Name and Title of Contractor's Authorized Official

_____

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS

The following requirements and instructions **supersede** General Requirements where applicable.

1. SUBMISSION OF BID.

Bidder is Responsible for Submitting:

One (1) Original and two (2) Bid Copies; with all copies to include a Completed Copy of this Specifications Packet, Drawings & Project Manual, **in their entirety.** Drawings and project manuals only may be submitted as double-sided copies.

Bidders may obtain access to the drawings and project manuals by contacting the office of The Labiche Architectural Group, Inc. located at 7999 Gladys Avenue, Suite 101, Beaumont, Texas 77706 or via phone at 409-860-0197.

The County requests that bid submissions NOT be bound by staples or glued spines.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://jeffersoncountytx.gov/Purchasing/

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Bids must be submitted in complete original form by mail or messenger to the following address:
Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

BID PACKAGING: Bidder shall submit response in a tightly sealed opaque envelope or box, plainly marked "SEALED BID." The outside of the envelope of box shall also include the IFB Number, IFB Name, IFB Due Date, and the Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

All submissions must be received by 11:00 am CT, Wednesday, May 6, 2026.

Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.

Jefferson County will not accept any responsibility for bids being delivered by third party carriers.

Late bids will not be accepted and will be returned unopened to the Bidder.
Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB.

All bid responses submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.

All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

COURTHOUSE SECURITY: All visitors to the Courthouse must pass through Security. Respondents planning to hand deliver proposals must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal. Mondays and Tuesdays are particularly heavy days.
In response to the Covid-19 pandemic, Jefferson County has implemented precautionary measures as currently recommended by the CDC within its facilities. Bidders are strongly urged to plan accordingly.

COUNTY HOLIDAYS (2026):

January 1, 2026 (Thursday) - New Year's
January 19 (Monday) - Martin Luther King, Jr. Day
April 3 (Friday) - Good Friday
May 25 (Monday) - Memorial Day
June 19 (Friday) - Juneteenth
July 3 Observed (Friday) - Independence Day
September 7 (Monday) - Labor Day
November 11 (Wednesday) - Veteran's Day
November 26 & 27 (Thursday & Friday) - Thanksgiving
December 24 & 25 (Thursday & Friday) Christmas

Submissions During Time of Inclement Weather, Disaster, or Emergency:
In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the IFB closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the IFB and urgent County requirements preclude amendment to the IFB, the time specified for receipt of Statements of Qualifications will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

2. PRE-BID MEETING AND WALK-THROUGH.
There will be a MANDATORY Pre-Bid Meeting and Walk-Through on Tuesday, April 14, 2026, at 2:00 PM CT, at the Jefferson County Commissioners' Courtroom (4th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, TX 77701.

3. QUESTIONS/DEADLINE FOR QUESTIONS.
Questions may be emailed to **Mistey Reeves, Assistant Purchasing Agent** at: mistey.reeves@jeffersoncountytx.gov. If no response in 72 hours, contact **Deborah Clark, Purchasing Agent** at: deb.clark@jeffersoncountytx.gov. The Deadline for asking questions or requesting additional information (in writing) is 5:00 pm, CT, Friday, April 24, 2026**.**

4. VENDOR REGISTRATION (System for Award Management).
Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

In instances where a vendor has either an "Inactive" SAM Registration or is not currently registered with the System for Award Management, the Purchasing Department may *initially* accept proof (printout from the SAM website) that the vendor has begun the registration process in order for the IFB/RFQ/RFP submission to be considered as "responsive" to the specifications for the project.
However, the SAM Registration must be completed (showing "active" status, with no exclusions) prior to the award and/or execution of an agreement or contract for the project.

<u>BIDDER</u>: INSERT PROOF OF SYSTEM FOR AWARD MANAGEMENT (SAM) BEHIND THIS PAGE.

5. FORM 1295 (Texas Ethics Commission) SUBMISSSION REQUIREMENT/INSTRUCTIONS FOR BIDDERS.
All Non-Exempt Bidders are required to submit a completed FORM 1295 with bid submission.

1. Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information on Form 1295, and print a copy of the completed form.
The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department **with bid submission.**

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

A sample of a completed FORM 1295 is included on **PAGE 36**.

FORM 1295 Implementation Background:
In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

Question: Will the date of birth and address provided appear on the TEC's website when the form is filed?

Answer: No. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application. Although the TEC does not capture the date of birth and street address of the signatory, the contracting state agency or governmental agency will have a physical copy of the form that includes the date of birth and address of the signatory. The TEC cannot answer whether the contracting state agency or governmental agency may release such information. Questions regarding the Texas Public Information Act may be directed to the Office of the Attorney General. See also Paxton v. City of Dall., No. 03-13-00546-CV, 2015 Tex. App. LEXIS 5228, at *10-11 (App.—Austin May 22, 2015) (mem. op.) (pet. denied) (available here)

FORM 1295 EXEMPTIONS:
What type of contracts are exempt from the Form 1295 filing requirement under the amended law?
The amended law adds to the list of types of contract exempt from the Form 1295 filing requirement.

A completed Form 1295 is not required for:
- a sponsored research contract of an institution of higher education
- an interagency contract of a state agency or an institution of higher education
- a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and any qualified vendor is eligible for the contract
- a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity
- a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code
- a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

SAMPLE COMPLETED FORM 1295

VENDOR: FORM 1295 MUST BE COMPLETED/SUBMITTED ON TEXAS ETHICS COMMISSION WEBSITE. HARD COPY OF FORM 1295 IS TO BE PRINTED, COMPLETED, SIGNED, AND SUBMITTED WITH BID/PROPOSAL/AGREEMENT/CONTRACT.

JEFFERSON COUNTY WILL CONFIRM RECEIPT OF COMPLETED HARD COPY WITH THE TEXAS ETHICS COMMISSION.

CERTIFICATE OF INTERESTED PARTIES — FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

VENDOR:ENTER YOUR BUSINESS NAME, CITY, STATE, AND COUNTRY HERE

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

JEFFERSON COUNTY, TEXAS

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

VENDOR: ENTER BID/PROPOSAL/CONTRACT/AGREEMENT REF# AND TITLE HERE.

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary
VENDOR: ENTER EACH PERSON HAVING INTEREST, OWNERS ARE THE CONTROLLING PARTIES.		X	
VENDOR: WORKERS (OR NON-OWNERS) IN YOUR COMPANY ARE INTERMEDIARY PARTIES.			X

5 Check only if there is NO Interested Party. **CHECK BELOW IF APPLICABLE** ☐

6 UNSWORN DECLARATION **VENDOR: COMPLETE, DATE, AND SIGN THIS DECLARATION SECTION.**

My name is _____, and my date of birth is _____.

My address is _____, _____, _____, _____, _____.
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in _____ County, State of _____, on the _____ day of _____, 20_____.
(month) (year)

_____
Signature of authorized agent of contracting business entity
(Declarant)

ADD ADDITIONAL PAGES AS NECESSARY

Form provided by Texas Ethics Commission www.ethics.state.tx.us Revised 12/22/2017

NOTE: JEFFERSON COUNTY WILL KEEP A COPY OF THIS FORM ON FILE FOR EACH BID/PROPOSAL/CONTRACT/AGREEMENT AND EACH VENDOR RESPONDING TO BIDS/PROPOSALS.

Must file online at www.ethics.state.tx.us/File

BIDDER: INSERT COMPLETED FORM 1295 BEHIND THIS PAGE.

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS (CONTINUED)

6. MULTIPLE VENDOR AWARD.

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

7. DELIVERY.

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the Contractor, at the discretion of, and at no additional charge to, Jefferson County.

8. PAYMENT.

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to:
Jefferson County Auditing Department
Attention: Accounts Payable
1149 Pearl Street, 7th floor
Beaumont, TX 77701.

9. USAGE REPORTS.

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

10. INSURANCE.

The Contractor (including any and all Subcontractors as defined in Section 11.1.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the Contractor. These requirements do not establish limits of the Contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):
Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation Statutory Coverage (See Section 9 Below)

11. WORKERS' COMPENSATION INSURANCE

11.1 Definitions:

11.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

11.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the Contractor's/person's work on the project has been completed and accepted by the governmental entity.

11.1.3 **Persons providing services on the project ("Subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the Contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the Contractor and regardless of whether that person has employees. This includes, without limitation, independent Contractors, Subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

11.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the Contractor providing services on the project, for the duration of the project.

11.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – **refer to Section 10 above**.

11.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

11.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

11.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

11.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

11.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

11.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

11.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

11.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

11.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees providing services on the project, for the duration of the project.

11.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

11.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

11.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

11.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

11.9.4.2 the coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

11.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

11.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

11.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs **11.1. – 11.7**., with the certificates of coverage to be provided to the person for whom they are providing services.

11.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the Contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the Contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

11.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

<u>BIDDER</u>: INSERT COPY OF CERTIFICATE OF INSURANCE (COI) BEHIND THIS PAGE.

Note: For bid purposes, a general COI will suffice. However, a COI that includes the notation that "Jefferson County as an additional insured" will be required from Awarded Bidder(s) prior to the issuance of a Purchase Order.

BIDDER INFORMATION FORM

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: (IFB 26-021/MR) Roofing Renovations to Jefferson County Courthouse

Bidder's Company/Business Name: _____

Bidder's TAX ID Number: _____

If Applicable: **HUB Vendor No**. _____ **DBE Vendor No**. _____

Contact Person: _____ **Title:** _____

Phone Number (with area code): _____

Alternate Phone Number if available (with area code):_____

Fax Number (with area code):_____

Email Address: _____

Mailing Address (Please provide a <u>physical address for bid bond return</u>, if applicable):

_____
Address

_____
City, State, Zip Code

REQUIRED FORM
<u>Bidder</u>: Please complete this form and include with bid submission.

SECTION 4: MINIMUM SPECIFICATIONS

The following requirements and specifications supersede General Bid Requirements where applicable. Any questions relating to bid submission or bid item specifications requirements should be directed to Mistey Reeves, Asst. Purchasing Agent at 409-835-8593 or via email at: mistey.reeves@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent at 409-835-8593 or via email at: deb.clark@jeffersoncountytx.gov. Please reference Bid Number: IFB 26-021/MR.

SCOPE OF PROJECT:

Jefferson County is soliciting bids for Jefferson County Courthouse Roofing Renovations for the Historical Courthouse located at 1149 Pearl Street, Beaumont, Texas 77701 as shown in the Construction Documents.

Jefferson County requires all bidders to submit a **Contractor's Qualification Statement**, as to previous experience in performing comparable work, and as to financial and technical organization and resources available for accomplishing this project.

Bidders may obtain access to the drawings and project manuals by contacting the office of The LaBiche Architectural Group, Inc. located at 7999 Gladys Avenue, Suite 101, Beaumont, Texas 77706 or via telephone at 409-860-0197.

OFFER AND ACCEPTANCE FORM
OFFER TO CONTRACT

To Jefferson County:

We hereby offer and agree to furnish the materials or service in compliance with all terms, conditions, specifications, and amendments in the Invitation for Bid and any written exceptions in the offer.

We understand that the items in this Invitation for Bid, including, but not limited to, all required certificates are fully incorporated herein as a material and necessary part of the contract.

The undersigned hereby states, under penalty of perjury, that all information provided is true, accurate, and complete, and states that he/she has the authority to submit this bid, which will result in a binding contract if accepted by Jefferson County.

We acknowledge receipt of the following amendment(s): _____, _____, _____, _____.

I certify, under penalty of perjury, that I have the legal authorization to bind the firm hereunder:

	For clarification of this offer, contact:
Company Name	
Address	Name & Title
City State Zip	Phone Fax
Signature of Person Authorized to Sign	E-mail
Printed Name	
Title	

REQUIRED FORM
<u>Bidder</u>: Please complete this form and include with bid submission.

ACCEPTANCE OF OFFER

The Offer is hereby accepted for the following items: Roofing Renovations to Jefferson County Courthouse

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the Invitation for Bid, including all terms, conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by Jefferson County.

This contract shall henceforth be referred to as Contract No. IFB 26-021/MR, Roofing Renovations to Jefferson County courthouse. The Contractor has not been authorized to commence any billable work or to provide any material or service under this contract until Contractor receives a purchase order and/or a notice to proceed from the Jefferson County Purchasing Agent.

COUNTERSIGNED:

Jeff R. Branick, County Judge **JEFFERSON COUNTY, TEXAS**	**Date**

ATTEST:

Roxanne Acosta Hellberg, County Clerk **JEFFERSON COUNTY, TEXAS**	**Date**

BIDDER: INSERT ALL ADDENDA BEHIND THIS PAGE.
PLEASE BE SURE TO COMPLETE, SIGN, ATTEST, AND DATE EACH ADDENDUM.

<u>BIDDER</u>: INSERT BID SECURITY BEHIND THIS PAGE.

<u>BIDDER</u>: INSERT CONTRACTOR'S QUALIFICATIONS STATEMENT (PER PAGE 44) BEHIND THIS PAGE.

BID FORM (Page 1 of 2)

We propose to furnish all labor, material and equipment, and to perform all work necessary to construct the **ROOFING RENOVATIONS TO JEFFERSON COUNTY COURTHOUSE**, at 1149 Pearl Street, Beaumont, Texas 77701, in accordance with drawings and specifications prepared by The LaBiche Architectural Group, Inc. for the following sum(s):

BIDDER: PLEASE TYPE OR WRITE LEGIBALLY.

BASE BID –ROOFING RENOVATIONS TO JEFFERSON COUNTY COURTHOUSE:

_____**Dollars** **$**_____ ._____

BASE BID IN WRITTEN WORD — BASE BID WRITTEN NUMERICALLY

Unit Prices: The Offeror agrees that the Base Proposal shall be adjusted by the amounts indicated below for each unit price indicated below:

Unit Price No. 1: 22 ga. Galvanized Hook Strip to match Existing per Detail 1/R3 **$**_____/10 lf

We have examined the site of the Work and the nature and kind of work to be performed and have informed ourselves of all local conditions and other things that might affect the cost or difficulty of performing the Work, and we represent and warrant that we have experience in the use of materials and methods of performance specified, and that we can and will do the Work and construct the improvements with the specified materials as contemplated and indicated by the Drawings and Specifications.

Upon receipt of notice of acceptance of our bid, we agree to execute the Contract within 10 (ten) days after such notice, deliver Performance and Payment bonds for the faithful performance of the Work, to begin work on or before the date of commencement of the Work established in the Notice to Proceed, and to complete the Work within **_____ calendar days.**

BID FORM – CONTINUED (Page 2 of 2)

LIQUIDATED DAMAGES FOR DELAYS:
It is understood and agreed between the parties that time is of the essence of this contract, and in case the Contractor shall fail to fully, entirely, and in conformity with the provisions of this contract, perform and complete said work within the time stated in the proposal with such allowances as herein before provided or within such further time as he may be allowed by Jefferson County, the Architect shall compute the number of days of delinquency in said final and entire completion. It is hereby acknowledged by the Contractor that such delinquency caused additional overhead costs and expenses to Jefferson County.

It is hereby agreed between both parties to this contract that the amount of said damages are hereby ascertained and liquidated at the greater of **TWO HUNDRED AND FIFTY DOLLARS ($250.00)** per day of delay, or the actual measurable damages to Jefferson County including penalties, or other fees which may be charged to Jefferson County for failure to meet the time requirements. The Contractor hereby agrees to pay the stated sum to Jefferson County for each and every day of delinquency.

Contractor (Entity Name)	Signature
Street & Mailing Address	Print Name
City, State & Zip	Date Signed
Telephone Number	Fax Number

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum 1 _____ Date Received_____

Addendum 2 _____ Date Received_____

Addendum 3 _____ Date Received_____

BIDDER: INCLUDE FULL, SIGNED, & ATTESTED COPY OF EACH ADDENDUM ISSUED WITH BID SUBMISSION.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

VENDOR REFERENCES FORM

Bidder: Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or similar products and/or services as contained in this specification package were recently provided.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

REFERENCE ONE

Government/Company Name: _____

Address: _____

Contact Person and Title: _____

Phone: _____ Fax: _____

Email Address: _____ Contract Period: _____

Scope of Work:

REFERENCE TWO

Government/Company Name: _____

Address: _____

Contact Person and Title: _____

Phone: _____ Fax: _____

Email Address: _____ Contract Period: _____

Scope of Work:

REFERENCE THREE

Government/Company Name: _____

Address: _____

Contact Person and Title: _____

Phone: _____ Fax: _____

Email Address: _____ Contract Period: _____

Scope of Work: _____

SIGNATURE PAGE

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would Bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions? .....**Yes** ☐ **No** ☐

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other Bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other Bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the Bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

Bidder (Entity Name)	Signature
Street & Mailing Address	Print Name
City, State & Zip	Date Signed
Telephone Number	Fax Number
E-mail Address	

REQUIRED FORM
<u>Bidder</u>: Please complete this form and include with bid submission.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

_____

Signature of Contractor's Authorized Official

_____

Name and Title of Contractor's Authorized Official *(Please Print)*

_____

Date

REQUIRED FORM
<u>Bidder</u>: Please complete this form and include with bid submission.

CONFLICT OF INTEREST QUESTIONNAIRE

CONFLICT OF INTEREST QUESTIONNAIRE — FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information in this section is being disclosed.**

_____
Name of Officer

This section (item 3 including subparts A, B, C, & D) must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more?

☐ Yes ☐ No

D. Describe each employment or business and family relationship with the local government officer named in this section.

4

_____ _____
Signature of vendor doing business with the governmental entity Date

Adopted 8/7/2015

REQUIRED FORM
<u>Bidder</u>: Please complete this form and include with bid submission.

LOCAL GOVERNMENT OFFICER
CONFLICTS DISCLOSURE STATEMENT – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM CIS

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20 _____, to certify which, witness my hand and seal of office.

_____ _____ _____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

Adopted 8/7/2015

THIS FORM IS FOR OFFICE USE ONLY

GOOD FAITH EFFORT (GFE) DETERMINATION CHECKLIST

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☐ No

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting HUBs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant, and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of HUB Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting HUB Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .?

☐ Yes ☐ No 1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum HUB Subcontractor participation?

☐ Yes ☐ No 2. **Notify** in writing a reasonable number of HUBs, allowing sufficient time for effective participation of the planned work to be subcontracted?

☐ Yes ☐ No 3. **Provide** HUBs that were genuinely interested in bidding on a Subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?

☐ Yes ☐ No 4. **Negotiate** in good faith with interested HUBs, and not reject bids from HUBs that qualify as lowest and responsive Bidders?

☐ Yes ☐ No 5. **Document** reasons HUBs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected HUBs?

☐ Yes ☐ No 6. If Prime Contractor/Consultant has zero (0) HUB participation, **please explain the reasons why.**

If "No" was selected, please explain and include any pertinent documentation with your bid.
If necessary, please use a separate sheet to answer the above questions.

Printed Name of Authorized Representative	Signature
Title	Date

REQUIRED FORM
<u>Bidder</u>: Please complete this form and include with bid submission.

NOTICE OF INTENT (NOI) TO SUBCONTRACT WITH HISTORICALLY UNDERUTILIZED BUSINESS (HUB)

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☐ No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract.

Please submit one form for each HUB Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: _____ HUB: ☐ Yes ☐ No

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____

Prime Contract Amount: $ _____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____ _____ _____
Printed Name of Contractor Representative Signature of Representative Date

_____ _____ _____
Printed Name of HUB Signature of Representative Date

Note: Nothing on this Notice of Intent Form is intended to confer any rights, expressed or implied, to any third parties.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "HUB Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUCONTRACTING PARTICIPATION DECLARATION FORM

PAGE 1 OF 4

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☐ No

Prime Contractor: _____ HUB: ☐ Yes ☐ No

HUB Status (Gender & Ethnicity): _____

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____ IFB/RFP No.: _____

Total Contract: $ _____ Total HUB Subcontract(s): $ _____

Construction HUB Goals: 12.8% MBE:: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African-American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR HUB OFFICE USE ONLY:

Verification date HUB Program Office reviewed and verified HUB Sub information Date: _____ Initials: _____

PART I. HUB SUBCONTRACTOR DISCLOSURE

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

HUB Subcontractor Disclosure

PART I: Continuation Sheet (Duplicate as Needed)

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

All HUB Subcontractor Participation may be verified with the HUB Subcontractor(s) listed on Part I.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUCONTRACTING PARTICIPATION DECLARATION FORM

PAGE 3 OF 4

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING HUB SUBCONTRACTING GOALS

Instructions to Bidder: Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the HUB goals for this project for the following reasons:

- ☐ All Subcontractors to be utilized are "Non-HUBs." *(Complete Part III)*
- ☐ HUBs were solicited but did not respond.
- ☐ HUBs solicited were not competitive.
- ☐ HUBs were unavailable for the following trade(s):
- ☐ Other: _____

Was the Jefferson County HUB Office contacted for assistance in locating HUBs? ☐ Yes ☐ No

PART III: DISCLOSURE OF OTHER "NON-HUB" SUBCONTRACTS

The Bidder shall use this area to provide a listing of all "Non-HUB" Subcontractors, including suppliers, that will perform under this project. A list of those "Non-HUB" Subcontractors the Bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that Bidder is the apparent low Bidder. A list of those "Non-HUB" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
<u>Bidder</u>: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *HUB Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attached any necessary support documentation as required**. I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): _____

Title: _____

Signature: _____

Date: _____

E-mail address: _____

Contact person that will be in charge of invoicing for this project:

Name (print or type): _____

Title: _____

Date: _____

E-mail address: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

RESIDENCE CERTIFICATION/TAX FORM

Pursuant to Texas Government Code §2252.001 *et seq*., as amended, Jefferson County requests Resident Certification. §2252.001 *et seq*. of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Non-resident Bidder" refers to a person who is not a resident.

(4) "Resident Bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☐ I certify that _____ [company name] is a Resident Bidder of Texas as defined in Government Code §2252.001.

☐ I certify that _____ [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is _____ _____ (city and state).

Taxpayer Identification Number (T.I.N.):	
Company Name submitting bid/proposal:	
Mailing address:	
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

REQUIRED FORM
<u>Bidder</u>: Please complete this form and include with bid submission.

HOUSE BILL 89 VERIFICATION

I, _____, the undersigned representative of (company or business name)_____ (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and
2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. "**Boycott Israel**" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. "**Company**" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or an limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

_____
Signature of Company Representative

_____
Date

On this _____ day of _____, 20____, personally appeared

_____, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

_____
Notary Signature

_____
Date

REQUIRED FORM
<u>Bidder</u>: Please complete this form and include with bid submission.

SENATE BILL 252 CERTIFICATION

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

_____

Company Name

_____

IFB/RFP/RFQ number

Certification check performed by:

_____

Purchasing Representative

_____

Date

THIS FORM IS FOR OFFICE USE ONLY

BID AFFIDAVIT

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF_____ COUNTY OF_____

BEFORE ME, the undersigned authority, a Notary Public in and for the State of _____,

on this day personally appeared _____, who
(name)
after being by me duly sworn, did depose and say:

"I, _____ am a duly authorized officer of/agent
(name)
for _____ and have been duly authorized to execute the
(name of firm)
foregoing on behalf of the said_____.
(name of firm)

I hereby certify that the foregoing bid has not been prepared in collusion with any other Bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the Bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of Bidder:_____

_____

Fax: _____ Telephone#_____

by: _____ Title:_____
(print name)

Signature:_____

SUBSCRIBED AND SWORN to before me by the above-named

_____ on

this the _____ day of_____, 20___.

REQUIRED FORM
<u>Bidder</u>: Please complete this form and include with bid submission.

_____
Notary Public in and for
the State of _____

Allegiant Generator Services NA
3701 Kirby, Suite 1166
Houston, TX 77098
https://ags-na.com

Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County, Pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-327

IFB 26-004/CG

Due 11:00 AM CT, March 25, 2026

Jefferson County Purchasing Department

1149 Pearl Street, 1st Floor

Beaumont, Texas 77701

Allegiant Generator Services NA, LLC
Physical Address:
22057 Morton Ranch Road
Building 1
Katy, Texas 77449
832-499-1866

Contact information for our team, please contact John Alford for any questions regarding this RFP Response.

John Alford – President
john@ags-na.com
713-907-2297

Sergio Rios – Houston Service Area Manager
sergio@ags-na.com
713-737-5808

Website:
https://ags-na.com

Allegiant Generator Services NA
3701 Kirby, Suite 1166
Houston, TX 77098
https://ags-na.com

Jefferson County RFQ Generator Preventative Maintenance

Allegiant Generator Services NA, LLC
Physical Address:
22057 Morton Ranch Road
Building 1
Katy, Texas 77449
832-499-1866

Contact information for our team, please contact John Alford for any questions regarding this RFP Response.

John Alford – President
john@ags-na.com
713-907-2297

Sergio Rios – Houston Service Area Manager
sergio@ags-na.com
713-737-5808

Website:
https://ags-na.com

Allegiant Generator Services NA
3701 Kirby, Suite 1166
Houston, TX 77098
https://ags-na.com

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Allegiant Generator Services NA
3701 Kirby, Suite 1166
Houston, TX 77098
https://ags-na.com

Cover Letter and Introduction

Allegiant Generator Services NA, LLC (AGS NA). AGS NA is a Texas incorporated business, incorporated in 2023. We have 6 technicians in Houston and 3 in El Paso. We are an authorized Generac Dealer, Cummins Dealer, and authorized Kohler Dealer. All of our technicians are Generac Certified Technicians and Kohler Certified Technicians. Our team of skilled technicians are able to service Cummins, Kohler, Detroit, MTU, Generac, Taylor, MQ, Caterpillar and all other major brands of generators as well as all the major Automated Transfer Switch platforms. Additionally, all of our preventative maintenance work is done to NFPA 110 standards. We also provide diesel fuel polishing services and infrared imaging on ATS. Furthermore, we can provide rental generators for backup and standby use upon request.

Our team of technicians can provide the following services:

- Preventative maintenance on Generators and ATS
- 24-hour emergency call out for repair and maintenance on Generators and ATS
- Load Bank Testing
- Oil and coolant change, refill, removal
- Fuel, Coolant, and Oil analysis
- Diesel Fuel Polishing
- Infrared thermal imaging of ATS

Below you will find an overview of our technical capabilities and certifications.

- Turn-key installation of new generators, from 50 kW up to 2 MW units.
- Generator Preventative Maintenance Level 1
- Generator Preventative Maintenance Level 2
- Generator Preventative Maintenance Level 3
- ATS Preventative Maintenance Level 1
- ATS Preventative Maintenance Level 2
- Load Bank Testing
- Parallel wiring
- Access to proprietary interfaces for Generac, Cummins, Kohler and Caterpillar, to be able to real-time diagnose and address issues in those generator sets.
- Diesel Fuel Polishing
- Infrared Thermal Imaging

We carry the following certifications:

- EGSA Certification
- Automatic Transfer Switch Certification

At Allegiant Generator Services, we strive to differentiate ourselves by being the team that is known for its communication with our customers. Our goal is to be proactive and professional in all of our communication so that our customers always know the status of their generator project. We aim to provide clear and consistent communication.

Allegiant Generator Services NA
3701 Kirby, Suite 1166
Houston, TX 77098
https://ags-na.com

Below is a list of a handful of customers that we have long-term contracts or performed Preventative Maintenance Services and Repair Work that are of similar size and scope to Jefferson County:

- City of Sugarland – Active Service and Maintenance Contract
- City of College Station – Active 3-year Service and Maintenance Contract
- City of El Paso – Active 5-year Service and Maintenance Contract
- HCA – Northwest Cypress – Active 3-year Service and Maintenance Contract
- Memorial Hermann – Katy & Sugarland – Active 3-Year Service and Maintenance Contract
- Pasadena Independent School District – Active Service and Maintenance Contract
- Pearland Independent School District – Active Service and Maintenance Contract
- City of Richmond – Repair and Installation
- City of Katy – Repair and Installation as well as Preventative Maintenance
- Texas A&M University – College Station – Active 5-Year Service and Maintenance Contract
- Texas Southern University – Houston – Active 3 Service and Maintenance Contract
- Texas A&M University – Killeen – Active 3-Year Service & Maintenance Contract
- Texas Department of Health and Human Services – Active 3-Year Service & Maintenance Contract

Allegiant Generator Services NA
3701 Kirby, Suite 1166
Houston, TX 77098
https://ags-na.com

Project Understanding:

We understand that the Jefferson County is seeking a vendor to provide all labor, equipment and materials for recurring inspection, preventative maintenance, and remedial repairs of the generators across the county. The scope of work shall include emergency calls, non-emergency calls, scheduled preventative maintenance, and evaluating/estimating quotes for repairs if required. The list of generators has been provided to us in this RFP and the service provider will provide prompt service reports and note any deficiencies discovered during routine maintenance. All site visits must be coordinated with Jefferson County. All maintenance shall be to NFPA 110 standards. We understand the General Requirements and Scope of work listed in the RFQ Technical Specifications given to us by Jefferson County.

Work Plan from AGSNA:

When we work with institutions that have multiple generators and a set maintenance schedule, we leverage our internal scheduling system to create job orders and schedule out visits for the full term of the contract. This allows us to proactively work with the customers to notify them of upcoming visits and make modifications to the schedule as needed. No generator is left out, no service report is ever forgotten. Each generator is given a unique ID and each Job Order is unique which allows us to retain records for years on each customer. We measure our success by: responsiveness to customer request, safety of work performed, and communication of service to customer.

Quality Control & Safety

Our technicians have all been trained by OEM training programs. Each technician is a certified Generac Technician and Kohler technician. Several of our technicians are trained as Cummins certified Technicians and several are Caterpillar and MTU trained as well. Every year, we send our technicians to third party schools for additional education. In May of this year, we hosted an EGSA training academy at our shop in Katy to give our team additional training on Load Banks. In July, we sent one of our Houston technicians attending the EGSA Advanced program. Furthermore, every technician is required to annually complete safety training at the Houston Area Safety Council to ensure that all members of the team are properly trained on safety around electrical systems.

Reports and Post-Job Communication

When assigned to a Preventative Maintenance job, our technicians are given an 80-point checklist that was developed by NFPA 110 standards. At the conclusion of each job, our technicians upload the checklist, service report and field pictures to our job tracking system. Our managers will ensure that all of those service reports and checklists are sent to the customer following each job. Our technicians also have the ability to send the service report to a customer POC in the field if the customer requests that. Examples of a service report and checklist are included in the exhibits. We aim to send customers their service reports and checklists within 48 hours of completing the inspection.

For fuel, oil, and coolant testing, we utilized Bureau Veritas as our third-party lab provider. Using their system, we are able to provide a detailed report of each sample taken and will provide that to the customer as soon as the reports are in our in-box. Examples of a oil test report are included in the exhibits.

Allegiant Generator Services NA
3701 Kirby, Suite 1166
Houston, TX 77098
https://ags-na.com

Resume of Key Members of the Team

Sergio Rios – Service Area Manager - Houston

8 Years of Experience
Oversite of safety and daily operations of Houston Branch. Previously in charge of maintenance and facilities of US Border Patrol facilities in Laredo. Oversaw all maintenance and refueling operations for remote facilities.

Rafael Loredo – Technician

28 years of Experience, 26 Years at Cummins
Cummins Generator Level 1 and Level 2 Certification
Cummins Engine Level 1, Level 2 and Level 3 Certification
Cummins/Onan Generator Apprenticeship Program
Training and Certification in dozens of Cummins specific Trainings

Brian Pascascio – Diesel Engine and Power Technician

18 Years of Experience
Generac, Cummins, EGSA Certified
VGF Engine Technology Certified
VHP Engine Technology Certified
EMD 645 & 710 Engine Certified
Kohler Industrial Engines Certified
6076 & Powertech 6081 Advanced Marine Diesel Engine Systems
Powertech 6125 Advanced Marine Diesel Engine Systems
EGSA Load Bank Certified

Espire Gonzales - Diesel Engine and Power Technician

17 Years of Experience
Generac, Cummins, MTU, EGSA Certified
UTI Diesel and Industrial Technology Certification
EGSA "Onsite Power Generations – Basic" Certification
EGSA Load Bank Certified

Thomas Mendoza - Diesel Engine and Power Technician

15 Years of Experience
Generac, Kohler, Cummins, Cat, EGSA Certified
Army Ordinance Corp School for Power Generation and Deisel Repair
Caterpillar Basics Diesel Certification
Cummins Basics Diesel Certification
Volvo Penta Diesel Certification
EGSA Load Bank Certified
EGSA Journeyman Certified

John Williams - Diesel Engine and Power Technician

14 Years of Experience
CAT, Volvo Penta, Mitsubishi, and PSI EGSA Certified
CAT Electric Power I, II & III

Allegiant Generator Services NA
3701 Kirby, Suite 1166
Houston, TX 77098
https://ags-na.com

ASCO 300 ATS Training
Olympian LTA LTG
CAT Engine D&A
CAT Electronic Troubleshooting
OSHA NFPA 70E Arc Flash Training

AMERICAN GENERATOR SERVICES

3701 Kirby
Suite 1166
Houston, TX 77098

SIGNOFF	
SIGNOFF DATE 2/15/2025 3:16 PM	PO Number P1182391
Customer Number TTU00001	Job Number 3996764

BILL TO:

TTUHSC EL PASO
Account Payable MSC 51009
130 Rick Francis St.
El Paso, TX 79905

SHIP TO:

TTUHSC EL PASO
130 Rick Francis St
El Paso, TX 79905-2814

Tasks

TTUHSC - [redacted]

Notes

1 Scope of Work - Flush and Replace the Coolant
Remove and replace all the radiator hoses
Replace the thermostat
Run the unit for about an hour to test for leaks

2 Service Report - At 7:00 AM, we arrived at the Texas Tech Administrative Services Building 1 (ASB1) job site and began preparations for work, starting around 7:30 AM. Customer [redacted]s arrived and greeted us at approximately 7:30 AM. We initiated the work by conducting a Job Hazard Analysis (JHA) and implementing the Lock Out Tag Out (LOTO) procedure, securing the generator at the main power disconnect using lockout device. We drained the existing coolant and removed the old coolant hoses and thermostat. At [redacted]s' request, and after obtaining the necessary parts from our supervisor, we also replaced the heater block hoses (two hoses). A new coolant was added, along with the new thermostat and hoses. We then ran the Generator (CATERPILLER C-9) for one hour, monitoring operating parameters (temperature, pressure, etc.) and visually inspecting leaks, none of which were detected. The used coolant was put in the Tote inside our trailer to be transported back to our shop, and the work area was thoroughly cleaned of debris, tools, and old parts. [redacted] inspected the completed work and expressed his satisfaction. We departed the job site at approximately 3:15 PM.

3 Recommendations - The breather hose from the Engine needs a container to collect the condensed engine oil from the block. I showed the Customer and he said , he will do something about it.

Signature



[redacted]

AMERICAN GENERATOR SERVICES

MAINTENANCE SERVICE REPORT - EXHIBIT B

JOB NO: [redacted] DATE: 2025-02-06 ☒ GEN SET KW: 200 CUSTOMER: [redacted]
M/N: D200GC PREVIOUS HRS: 16.4 ☐ FIREPUMP LOCATION:
S/N: [redacted] CURRENT HRS: 16.9 ☐ AUXILIARY PUMP UNIT NO:

CHECK "YES" OR "NO" IN EACH BLANK OR FILL THE APPROPRIATE READING. CHECK "N/A" WHERE DATA IS NOT APPLICABLE

STATIONARY

Yes	No	N/A	
			LUBRICATION SYSTEM:
☒	☐	☐	Check for leaks
☐	☒	☐	Change oil
☐	☒	☐	Change oil filter
☒	☐	☐	Repair minor leaks
			AIR FILTER SYSTEM:
☒	☐	☐	Check filter element condition
☐	☒	☐	Replace element
			UNIT SET APPEARANCE:
☐	☒	☐	Needs cleaning
☐	☒	☐	Needs paint
			GOVERNOR:
☐	☒	☐	Check sensitivity
☐	☒	☐	Check droop
☐	☒	☐	Set or adjust
			DIESEL STORAGE TANK:
Na (in.)			Fuel level in inches
Na (in.)			Water bottom in inches
☐	☐	☒	Water bottom pumped off
			ENGINE EXHAUST SYSTEM:
☒	☐	☐	Check for leaks
☐	☒	☐	Repair any leaks
☒	☐	☐	Check for ruster silencer & exhaust components
☐	☐	☒	Check and/or clean spark box
			INSTRUMENTS (ENGINE):
☒	☐	☐	Readings taken with no load
☒	☐	☐	Readings taken with full load
☒	☐	☐	Readings taken with 0 % load
☒	☐	☐	Check tachometer
78 psi (HOT)			Oil pressure at operating RMP
80 psi (COLD)			
0 (Amps)			Ampmeter reading
480 (Volts)			Voltmeter reading
145 (Degrees)			Coolant Temperature

Yes	No	N/A	
			ENGINE ELECTRICAL SYSTEM:
☒	☐	☐	Check battery charger
			Charge rate in volts _____
			HIGH X LOW _____
☐	☒	☐	Hydrometer test battery
			Battery specific gravity 1.3
☒	☐	☐	Clean & lubricate battery posts
☒	☐	☐	Inspect battery cables
☐	☒	☐	Replace any battery cables
☒	☐	☐	Check alternator belts
☐	☒	☐	Adjust alternator belts
☐	☒	☐	Replace any alternator belts
11.8			Battery load test volt
			COOLING SYSTEM:
☒	☐	☐	Check all hoses for leaks, loose hose fittings, deterioration, general wear
☒	☐	☐	Check belts
☒	☐	☐	Check antifreeze solution (must check -10°F)
☐	☒	☐	Add antifreeze
☒	☐	☐	Check coolant level
-32			Nitrate reading
☐	☒	☐	Add water
☒	☐	☐	Check engine block heater
☐	☒	☐	Check and grease pillow block bearings
☐	☒	☐	Additives added
			ENGINE FUEL SYSTEM:
☒	☐	☐	Check for leaks
☐	☒	☐	Repair any leaks
☒	☐	☐	Check all hoses
☐	☒	☐	Replace any hose(s)
☒	☐	☐	Check fuel filters
☐	☒	☐	Change fuel filter
☐	☒	☐	Check day tank level
☒	☐	☐	Check float switch
☒	☐	☐	Check transfer pump

Yes	No	N/A	
			IGNITION SYSTEMS (IF APPLICABLE):
☐	☒	☐	Check spark plugs
☐	☒	☐	Replace spark plugs
☒	☐	☐	Mag & distributor
☒	☐	☐	Check points
			INSTRUMENTS (GENERATOR):
480 (volts)			Voltmeter reading
Na (Watts)			Wattmeter reading
0 (Amps)			Ampmeter reading
60 (Hertz)			Frequency meter reading
16.9			Hourmeter reading
			AC GENERATOR/FIRE PUMP:
☐	☒	☐	Check brushes
☐	☒	☐	Replace any brushes
☒	☐	☐	Visually inspect generator/ pump condition
☒	☐	☐	Visually check bearing(s) and oil level
☐	☒	☐	Add any oil or grease
☐	☒	☐	Check P.T.O.
			SAFETY SHUTDOWN SYSTEM/ALARM/AUTO-START SYSTEMS:
☒	☐	☐	Check water temp. alarm/ shutdown
☒	☐	☐	Check oil pressure alarm/ shutdown
☒	☐	☐	Check overcrank alarm
☒	☐	☐	Check overspeed shutdown
			TRANSFER SWITCH (SIMULATE UNDER LOAD WHEN POSSIBLE):
☒	☐	☐	Check operation
☒	☐	☐	Check timers
☒	☐	☐	Check all wiring connections for signs of overloading and frayed or worn wiring
			SAMPLE FOR ANALYSIS:
☐	☒	☐	Oil
☐	☒	☐	Coolant
☐	☒	☐	Fuel

QTY	PART NUMBER	DESCRIPTION	NOTES

Technician Name (Print):	[redacted]	Technician Signature:	[redacted]	Date:	2025-02-06
Customer Name (Print):	[redacted]	Customer Signature:	[redacted]	Date:	2025-02-06

3/24/2026
832-499-1866
CONFIDENTIAL info@ags-na.com

Department	Address	Make	Model	Rating	Inspection	PM1 Charge	Trip Charge	Total Per PM1	PM2 Charge	Trip Charge	Total Per PM 2
Sabine Pass	5960 South 1st Street, Sabine Pass, TX 77655	Baldor	IDLC150-3JU	150 KW	Yes	$ 305.00	$ 99.00	$ 404.00	$ 570.00	$ 99.00	$ 669.00
Courthouse	1149 Pearl St., Beaumont, TX 77701	Baldor	IDLC 2000	2 MW	Yes	$ 540.00	$ 99.00	$ 639.00	$ 2,805.00	$ 99.00	$ 2,904.00
JC Service Center	7789 Vitterbo Rd, Beaumont, TX 77705	Baldor	IDLC 40	40 KW	Yes	$ 305.00	$ 99.00	$ 404.00	$ 495.00	$ 99.00	$ 594.00
Pct. 1	20205 W. Hwy 90, China, TX 77613			200 KW	No	$ 305.00	$ 99.00	$ 404.00	$ 720.00	$ 99.00	$ 819.00
Pct. 2	7759 Viterbo Rd, Beaumont, TX 77705	Baldor	IDLC 100	100 KW	No	$ 305.00	$ 99.00	$ 404.00	$ 525.00	$ 99.00	$ 624.00
Pct. 3	5700 Jade Ave., Pt. Arthur, TX 77640	Baldor	TS80T	60 KW	Yes	$ 305.00	$ 99.00	$ 404.00	$ 495.00	$ 99.00	$ 594.00
Pct. 4	7780 Boyt Rd., Beaumont, TX 77713	Baldor	IDLC 150	150 KW	No	$ 305.00	$ 99.00	$ 404.00	$ 570.00	$ 99.00	$ 669.00
Health & Welfare/Annex 1	1295 Pearl St., Beaumont, TX 77701	Caterpillar	D545	500 KW	Yes	$ 405.00	$ 99.00	$ 504.00	$ 1,140.00	$ 99.00	$ 1,239.00
Mosquito Control	8905 First St., Beaumont, TX 77705	Baldor	IDLC 80	80 KW	Yes	$ 305.00	$ 99.00	$ 404.00	$ 495.00	$ 99.00	$ 594.00
Narcotics Hanger	4640 Hanger Dr., Beaumont, TX 77705	Baldor	TS 130T	100 KW	Yes	$ 305.00	$ 99.00	$ 404.00	$ 510.00	$ 99.00	$ 609.00
Pt. Arthur Courthouse	709 Lakeshore Dr., Pt. Arthur, TX 77640	Baldor	TS350T	250 KW	No	$ 305.00	$ 99.00	$ 404.00	$ 720.00	$ 99.00	$ 819.00
Correctional Facility	5030 Hwy 69 S, Beaumont, TX 77701	Onan	500DFFB	500 KW	Yes	$ 405.00	$ 99.00	$ 504.00	$ 1,190.00	$ 99.00	$ 1,289.00
Correctional Facility	5030 Hwy 69 S, Beaumont, TX 77701	Onan	400DFEB	400 KW	Yes	$ 405.00	$ 99.00	$ 504.00	$ 920.00	$ 99.00	$ 1,019.00
Radio Tower Hwy 73	118235 Hwy 73, Beaumont, TX 77705	Generac	RG06045ANAX	60 KW	Yes	$ 305.00	$ 99.00	$ 404.00	$ 438.99	$ 99.00	$ 537.99
Radio Tower Hwy 90	1991 N. Meeker Rd, Beaumont, TX 77713	Kohler		20 KW	Yes	$ 305.00	$ 99.00	$ 404.00	$ 400.00	$ 99.00	$ 499.00
Airport	5000 Jerry Ware Dr., Beaumont TX 77705/ Gate 1	Kohler	150RE0ZJ01	155 KW	Yes	$ 305.00	$ 99.00	$ 404.00	$ 570.00	$ 99.00	$ 669.00
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ Jerry Ware Terminal	Kohler	100ROZJD	100 KW	Yes	$ 305.00	$ 99.00	$ 404.00	$ 510.00	$ 99.00	$ 609.00
Airport	5000 Jerry Ware Dr., Beaumont TX 77705/ Firehouse	Kohler	20ROZJ	25 KW	Yes	$ 305.00	$ 99.00	$ 404.00	$ 415.00	$ 99.00	$ 514.00
Airport	5000 Jerry Ware Dr., Beaumont TX 77705/ New Terminal	Generac	P22FE	600 KW	Yes	$ 405.00	$ 99.00	$ 504.00	$ 1,175.00	$ 99.00	$ 1,274.00
							Total PM1	$ 8,311.00		Total PM2	$ 16,544.99

Other Fees	
Trip Charge - Troubleshooting & Repair	$265 per technician
Trip Charge - PM Visit	$99 per unit
Freight Charge	20% markup
Parts Markup - Repair Items	30% markup
Parts Markup - PM Items	20% markup

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

February 17, 2026

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for Invitation for Bid **(IFB 26-004/CG), Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County, Pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-327.** Specifications for this project may be obtained from the Jefferson County website, https://jeffersoncountytx.gov/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and one (1) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Purchasing Department (1st Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County, Pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-327**
BID NUMBER:	**IFB 26-004/CG**
DUE BY TIME/DATE:	**11:00 AM CT, Wednesday, March 25, 2026**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

Any questions relating to these bid requirements should be directed to Cindy Greene, Contract Specialist at 409-835-8593 or via email at: Cynthia.greene@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent, at 409-835-8593 or via email at deb.clark@jeffersoncountytx.gov.

Jefferson County encourages Disadvantaged Business Enterprises (DBEs), Minority/Women Business Enterprises (M/WBEs), and Historically Underutilized Businesses (HUBs) to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment, or the provisions of services. Individuals requiring special accommodations are requested to contact our office at least seven (7) days prior to the bid due date at 409-835-8593.

All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Bidders are strongly encouraged to carefully read the entire invitation, as failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

PUBLISH:
Beaumont Enterprise & Port Arthur News:
February 18, 2026
The Examiner:
February 19, 2026 & February 26, 2026

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BID SUBMISSIONS:

One (1) Original and one (1) Bid Copies; with all copies to include a Completed Copy of this specifications packet, in its entirety.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://jeffersoncountytx.gov/Purchasing/

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

SECTION 1: GENERAL CONDITIONS OF BIDDING AND TERMS OF CONTRACT

By execution of this document, the Vendor accepts all general and special conditions of the contract as outlined below and, in the specifications, and plans.

1. BIDDING.

1.1 BIDS.
All bids must be submitted on the bid form furnished in this package.

1.2 AUTHORIZED SIGNATURES.
The bid must be executed personally by the Vendor, duly authorized partner of the partnership, or duly authorized officer of the corporation. If executed by an agent, a power of attorney or other evidence of authority to act on behalf of the Vendor shall accompany the bid to become a valid bid.

1.3 LATE BIDS.
Bids must be in the office of the Jefferson County Purchasing Agent before or at the specified time and date bids are due. Bids received after the submission deadline shall be rejected as non-responsive and returned unopened.

1.4 WITHDRAWAL OF BID PRIOR TO OPENING.
A bid may be withdrawn before the opening date by submitting a written request to the Purchasing Agent. If time allows, the Bidder may submit a new bid. Bidder assumes full responsibility for submitting a new bid before or at the specified time and date bids are due. Jefferson County reserves the right to withdraw a request for bids before the opening date.

1.5 WITHDRAWAL OF BID AFTER OPENING.
Bidder agrees that its offer may not be withdrawn or cancelled by the Vendor for a period of ninety (90) days following the date and time designated for the receipt of bids unless otherwise stated in the bid and/or specifications.

1.6 BID AMOUNTS.
Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be interpreted in the favor of Jefferson County.

1.7 EXCEPTIONS AND/OR SUBSTITUTIONS.
All bids meeting the intent of the specifications and plans will be considered for award. Vendors taking exception to the specifications and plans, or offering substitutions, shall state these exceptions in the section provided. If bid is made on an article other than the one specified, which a Bidder considers comparable, the name and grade of said article must be specified in the bid and sufficient specifications and descriptive data must accompany same to permit thorough evaluation. The absence of stated exceptions and/or substitutions shall indicate that the Vendor has not taken any exceptions to the specifications and shall be responsible to perform in strict accordance with the specifications. As a matter of practice, Jefferson County rejects exception(s) and /or substitutions as non-responsive but reserves the right to accept any and/or all of the exception(s) and/or substitution(s) deemed to be in the best interest of Jefferson County.

1.8 ALTERNATES.
The Invitation for Bid and/or specifications may expressly allow Bidder to submit an alternate bid. Presence of such an offer shall not be considered an indication of non-responsiveness.

1.9 DESCRIPTIONS.

Unless otherwise specified, any reference to make, manufacturer and/or model used in the bid specifications is merely descriptive and not restrictive, and is used only to indicate type, style, or quality of material desired.

1.10 BID ALTERATIONS.
Bids cannot be altered or amended after submission deadline. Any interlineations, alterations, or erasures made before opening time must be initialed by the signer of the bid, guaranteeing authenticity.

1.11 TAX EXEMPT STATUS.
Jefferson County is exempt from federal excise tax and state sales tax. Unless the bid form or specifications specifically indicate otherwise, the bid price must be net, exclusive of above-mentioned taxes and will be so construed. Therefore, the bid price shall not include taxes.

1.12 QUANTITIES.
Quantities indicated are estimated quantities only and are not a commitment to buy. Approximate usage does not constitute an order, but only implies the probable quantity that will be used. Commodities will be ordered on an as-needed basis. Bidder is responsible for accurate final counts.

1.13 BID AWARD.
Award of contract shall be made to the most responsible, responsive Bidder, whose offer is determined to be the best value, taking into consideration the relative importance of price. Jefferson County reserves the right to be the sole judge as to whether items bid will serve the purpose intended.

Jefferson County reserves the right to award based upon individual line items, sections or total bid.

1.14 SILENCE OF SPECIFICATIONS FOR COMPLETE UNITS.
All materials, equipment and/or parts that will become a portion of the completed work, including items not specifically stated herein but, necessary to render the service(s) complete and operational per the specifications, are to be included in the bid price. Vendor may be required to furnish evidence that the service, as bid, will meet or exceed these requirements.

1.15 ADDENDA.
Any interpretations, corrections or changes to the specifications and plans will be made by addenda no later than forty-eight (48) hours prior to the bid opening. Addenda will be posted on the Purchasing web site. Vendors are responsible for monitoring the web site in order to remain informed on addenda. Vendors shall acknowledge receipt of all addenda with submission of bid.

1.16 GENERAL BID BOND/SURETY REQUIREMENTS.
Failure to furnish bid bond/surety, if requested, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.17 GENERAL INSURANCE REQUIREMENTS.
Failure to furnish Affidavit of Insurance, if required in these specifications, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.18 RESPONSIVENESS.
A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid

price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 RESPONSIBLE STANDING OF BIDDER.

To be considered for award, Bidder must at least: have the ability to obtain adequate financial resources, be able to comply with required or proposed delivery/completion schedule, have a satisfactory record of performance; have a satisfactory record of integrity and ethics, and be otherwise qualified and eligible to receive award.

1.20 CONFIDENTIAL/PROPRIETARY INFORMATION.

If any material in the bid submission is considered by Bidder to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Bidder), Bidder **must** clearly mark the applicable pages of bid submission to indicate each claim of confidentiality. Additionally, Bidder must include a statement on company letterhead identifying all Bid Submission section(s) and page(s) that have been marked as confidential. Jefferson County will protect from public disclosure such portions of a bid, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire bid submission is protected from disclosure because it contains some proprietary information is not acceptable, and will make the entire bid submission subject to release under the Texas Public Information Act.

By submitting a bid, Bidder agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Bidder's bid submission or other information submitted by Bidder.

1.21 PUBLIC BID OPENING.

Bidders are invited to be present at the opening of bids. After the official opening of bids, a period of not less than one week is necessary to evaluate bids. The amount of time necessary for bid evaluation may vary and is determined solely by the County. Following the bid evaluation, all bids submitted are available for public review.

2. PERFORMANCE.

2.1 DESIGN, STRENGTH, AND QUALITY.

Design, strength, and quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practices. The apparent silence of specifications and/or plans as to any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications and/or plans shall be made on the basis of this statement.

2.2 AGE AND MANUFACTURE.

All tangible goods being bid must be new and unused, unless otherwise specified, in first-class condition, of current manufacture, and furnished ready to use. All items not specifically mentioned that are required for a complete unit shall be furnished.

2.3 DELIVERY LOCATION.

All deliveries will be made to the address(es) specified on the purchase order during normal office working hours of 8:00 am CT to 4:00 pm CT, Monday through Friday, unless otherwise authorized by the Purchasing Agent or designee.

2.4 DELIVERY SCHEDULE.

Delivery time may be an important consideration in the evaluation of best value. The maximum number of days necessary for delivery ARO shall be stated in the space, if provided, on the bid form.

2.5 DELIVERY CHARGES.

All delivery and freight charges, F.O.B. destination shown on Jefferson County purchase order, as necessary to perform contract are to be included in the bid price.

2.6 INSTALLATION CHARGES.

All charges for assembly, installation and set-up shall be included in the bid price. Unless otherwise stated, assembly, installation and set-up will be required.

2.7 OPERATING INSTRUCTIONS AND TRAINING.

Clear and concise operating instructions and descriptive literature will be provided in English, if requested. On-site detailed training in the safe and efficient use and general maintenance of item(s) purchased shall be provided as needed at the request of Jefferson County. Instructions and training shall be at no additional cost to the County.

2.8 STORAGE.

Bidder agrees to provide storage of custom ordered materials, if requested, for up to thirty (30) calendar days.

2.9 COMPLIANCE WITH FEDERAL, STATE, COUNTY, AND LOCAL LAWS.

Bids must comply with all federal, state, county and local laws, including, but not limited to, all applicable standard safety, emission, and noise control requirements. Any vehicles or equipment shall contain all standard safety, emission, and noise control requirements required for the types and sizes of equipment at the time of their manufacture. The Contractor agrees, during the performance of work or service, to comply with all applicable codes and ordinances of Jefferson County or the State of Texas as they may apply, as these laws may now read, or as they may hereafter be changed or amended.

2.10 OSHA.

The Bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful Bidder will further certify that all items furnished under this project will conform and comply with federal and State of Texas OSHA standards. The successful Bidder will agree to indemnify and hold harmless Jefferson County for any and all damages that may be assessed against the County.

2.11 PATENTS AND COPYRIGHTS.

The successful Vendor agrees to protect the County from claims involving infringements of patents and/or copyrights.

2.12 SAMPLES, DEMONSTRATIONS, AND TESTING.

At Jefferson County's request and direction, Bidder shall provide product samples and/or testing of items bid to ensure compliance with specifications. Samples, demonstrations and/or testing may be requested at any point prior to or following bid award. Samples, demonstrations and/or testing may be requested upon delivery and/or any point during the term of resulting contract. All samples (including return thereof), demonstrations, and/or testing shall be at the expense of the Bidder/Vendor.

2.13 ACCEPTABILITY.

All articles enumerated in the bid shall be subject to inspection by an officer designated for that purpose by Jefferson County. If found inferior to the quality called for, or not equal in value to the specifications, deficient in workmanship or otherwise, this fact shall be certified to the Purchasing Agent, who shall have the right to reject the whole or any part of the same. Items and/or work determined to be contrary to specifications must be replaced at the vendor's expense. Inferior items not retrieved by the vendor within thirty (30) calendar days, or an otherwise agreed upon time, shall become the property of the County. If disposal of such items warrants an expense, an amount equal to the disposal expense will be deducted from amounts payable to the vendor.

2.14 MAINTENANCE.

Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 MATERIAL SAFETY DATA SHEETS.

Under the "Hazardous Communications Act," common known as the "Texas Right to Know Act," a Bidder must provide the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the Bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 EVALUATION.

Evaluation shall be used as a determinant as to which services are the most efficient and/or most economical for the County. It shall be based on all factors having a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Jefferson County Purchasing Department and recommendation to Jefferson County Commissioners' Court. Compliance with all bid requirements and needs of the using department are considered in evaluating bids. Pricing is not the only criteria for making a recommendation. The Jefferson County Purchasing Department reserves to right to contact any Bidder, at any time, to clarify, verify or requirement information with regard to this bid.

3. PURCHASE ORDERS AND PAYMENT.

3.1 PURCHASE ORDERS.

A purchase order(s) shall be generated by the Jefferson County Purchasing Agent to the successful vendor. The purchase order number must appear on all itemized invoices and packing slips. The County will not be held responsible for any work orders placed and/or performed without a valid current purchase order number. Payment will be made for all services rendered and accepted by the contract administrator for which a valid invoice has been received.

3.2 INVOICES.

All invoices shall reference the Purchase Order number. Invoices shall reference the bid item number or a detailed description for each item invoiced. If an item purchased and itemized on the invoice does not correspond to an item in any of the categories awarded to the vendor, invoice shall reference the item as "N/C" to indicate that it is a non-contract item. This requirement is to assist the County in verifying contract pricing on all invoices. Payment will be made under terms of net thirty (30) days unless otherwise agreed upon by seller and the purchasing department.

3.3 PROMPT PAYMENT.

In accordance with the State of Texas Prompt Payment Act, Article 601f V.T.C.S., payment will be made after receive and acceptance by the County of the merchandise ordered and of a valid invoice. Successful Bidder(s) is required to pay Subcontractors within ten (10) days after the successful Bidder receives payment from the County.

3.4 FUNDING.

Jefferson County is operated and funded on an October 1 to September 30 basis; accordingly, the County reserves the right to terminate, without liability to the County, any contract for which funding is not available.

4. CONTRACT.

4.1 CONTRACT DEFINITION.

The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson County, shall constitute a contract equally binding between the successful Bidder and Jefferson County.

4.2 CHANGE ORDER.

No different or additional terms will become part of this contract with the exception of a change order. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing and at the discretion and approval of

Jefferson County. No change order will be binding unless signed by an authorized representative of the County and the vendor.

4.3 PRICE RE-DETERIMINATION.

A price re-determination may be requested at the time of annual renewal. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The Bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

4.4 TERMINATION.

Jefferson County reserves the right to terminate the contract for default if the Bidder breached any of the terms therein, including warranties of Bidder or if the Bidder becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies which Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or service within the proper amount of time, and/or to properly perform any and all services required to Jefferson County's satisfaction and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified. Jefferson County reserves the right to award canceled contract to the next lowest Bidder. Bidder, in submitting this bid, agrees that Jefferson County shall not be liable to prosecution for damages in the event that the County declares the Bidder in default.

4.5 CONFLICT OF INTEREST.

Employees of the County are not permitted to maintain financial interest in, or receive payment, directly or indirectly, borrow from, lend to, invest in, or engage in any substantial financial transaction with any individual, organization, supplier, or Subcontractor who does business with the County without disclosure. When conflict of interest is discovered, it shall be grounds for termination of contract.

4.6 INTEREST BY PUBLIC OFFICIALS.

No public official shall have interest in this contract, in accordance with Texas Local Government Code.

4.7 PRE-AWARD/CONTRACT CONTACT BETWEEN COUNTY AND VENDORS.

The Jefferson County Purchasing Department may initiate discussions with selected vendors; however, discussions <u>may not</u> be initiated by vendors.

The Jefferson County Purchasing Department expects to conduct discussions with vendor's representatives authorized to contractually obligate the vendor with an offer.

Vendors shall not contact any Jefferson County personnel during the IFB process without the express permission from the Jefferson County Purchasing Agent. The Purchasing Agent will disqualify any vendor who has made site visits, contacted Jefferson County personnel, or distributed any literature without authorization from the Jefferson County Purchasing Department.

All correspondence relating to this IFB, from advertisement to award shall be sent to the Jefferson County Purchasing Department. All presentations and/or meetings between Jefferson County and the vendor relating to this IFB shall be coordinated by the Jefferson County Purchasing Department.

Selected vendors may be expected to make a presentation/product demonstration to an Evaluation Committee. Proposals, vendor presentations, and product/service evaluations may develop into negotiating sessions with the vendor(s) as selected by the Evaluation Committee. Jefferson County expects to conduct negotiations with vendor

representatives authorized to contractually obligate the vendor with an offer. If vendor is unable to agree to contract terms and conditions, Jefferson County reserves the right to terminate contract negotiations with that vendor and initiate negotiations with another vendor. In addition to a presentation, visits by the Evaluation Committee to representative vendor client sites may be conducted where the proposed solution can be demonstrated in a production environment.

4.8 INJURIES OR DAMAGES RESULTING FROM NEGLIGENCE.

Successful vendor shall defend, indemnify and save harmless Jefferson County and all its officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful vendor, or of any agent, employee, Subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful vendor shall pay any judgment with cost which may be obtained against Jefferson County growing out of such injury or damages.

4.9 WARRANTY.

The successful vendor shall warrant that all materials utilized in the performance of this contract shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship and title.

4.10 UNIFORM COMMERCIAL CODE.

The successful vendor and Jefferson County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

4.11 VENUE.

This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the County of Jefferson, Texas.

4.12 SALE, ASSIGNMENT, OR TRANSFER OF CONTRACT.

The successful vendor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written consent of Jefferson County.

4.13 SILENCE OF SPECIFICATIONS.

The apparent silence of these specifications as to any detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

5. REJECTION OR WITHDRAWAL.

Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within **90** days after opening date.

6. EMERGENCY/DECLARED DISASTER REQUIREMENTS.

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's

supplier(s).

Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling and drayage fees may apply.

7. AWARD.

The bid will be awarded to the responsible, responsive bidder(s) whose bid, conforming to the solicitation, will be most advantageous to Jefferson County – price and other factors considered. Unless otherwise specified in this IFB, Jefferson County reserves the right to accept a bid in whole or in part, and to award by item or by group, whichever is deemed to be in the best interest of Jefferson County. Any bidder who is in default to Jefferson County at the time of submittal of the bid shall have that bid rejected.

Jefferson County reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial non-conformity in the offer, as determined by Jefferson County, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Jefferson County shall consider the qualifications of the bidders, and, where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment.

In addition, Jefferson County may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County reserves the right to award this contract on the basis of **lowest and best bid** in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one offeror, and/or to reject any or all bids. In the event the lowest dollar offeror meeting specifications is not a awarded a contract, Offeror may appear before the Commissioners' Court and present evidence concerning Offeror responsibility after officially notifying the Office of the Purchasing Agent of Offeror's intent to appear.

8. CONTRACT.

A response to an IFB is an offer to contract with Jefferson County based upon the terms, conditions, and specifications contained in the IFB. Bids do not become contracts unless and until they are executed by Jefferson County, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the IFB, unless any of the terms and conditions is modified by an IFB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

9. WAIVER OF SUBROGATION.

Bidder and bidder's insurance carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from bidder's performance under this agreement.

10. FISCAL FUNDING.

A multi-year contract (if requested by the specifications) continuing as a result of an extension option must include fiscal funding out. If, for any reason, funds are not appropriated to continue the contract, said contract shall become null and void.

11. BID RESULTS.

Bid results are not provided in response to telephone inquiries. A preliminary tabulation of bids received will be posted on the Purchasing web page at https://jeffersoncountytx.gov/Purchasing/ as soon as possible following bid opening. A final tabulation will be posted following bid award, and will also be available for review in the Purchasing Department.

12. CHANGES AND ADDENDA TO BID DOCUMENTS.

Each change or addendum issued in relation to this IFB document will be on file in the Office of the Purchasing Agent, and will be posted on the Purchasing web site as soon as possible. It shall be the bidder's responsibility to make inquiry as to change or addenda issued, and to monitor the web site. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the Office of the County Purchasing Agent.

13. SPECIFICATIONS.

Unless otherwise stated by the bidder, the bid will be considered as being in accordance with Jefferson County's applicable standard specifications, and any special specifications outlined in the bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of Jefferson County, and should not be construed as excluding bids on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid.

Jefferson County reserves the right to determine if equipment/ product being bid is an acceptable alternate. All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of the bid, may be considered non-responsive.

14. DELIVERY.

Bids shall include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder (in writing on the included Bid Form), prices bid will be considered as being based on F.O.B. destination/delivered freight included.

15. INTERPRETATION OF BID AN/OR CONTRACT DOCUMENTS.

All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening, in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. Inquiries received that are not made in a timely fashion may or may not be considered.

16. CURRENCY.

Prices calculated by the bidder shall be stated in U.S. dollars.

17. PRICING.

Prices shall be stated in units of quantity specified in the bid documents. In case of discrepancy in computing the amount of the bid, the unit price shall govern.

18. NOTICE TO PROCEED/PURCHASE ORDER.

The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.

19. CERTIFICATION.

By signing the offer section of the Offer and Acceptance page, Bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.
- The Bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.
- The Bidder hereby certifies that the individual signing the bid is an authorized agent for the Bidder and has the authority to bind the Bidder to the contract.

20. DEFINITIONS.

"County" – Jefferson County, Texas.
"Contractor" – The Bidder whose proposal is accepted by Jefferson County.

21. SMALL, MINORITY & WOMEN BUSINESS ENTERPRISE PARTICIPATION

It is the desire of Jefferson County to increase the participation of Small, Minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

Minority owned business may be eligible for contract procurement assistance with public and private sector entities from MBDA Centers

Dallas Fort Worth MBDA Business Center
8828 N. Stemmons Freeway, Ste. 550 B
Dallas, TX 75247
214-920-2436
Website: https://www.mbdadfw.com
Email: admin1@mbdadallas.com

El Paso MBDA Business Center
2401 East Missouri Avenue
El Paso, TX 79903
915-351-6232
Website: https://www.mbda.gov/business-center/el-paso-mbda-business-center
Email: treed@ephcc.org

San Antonio MBDA Business Center
501 W. Cesar E. Chavez Blvd., Ste. 3.324 B
San Antonio, TX 78207
210-458-2480
Website: https://www.mbda.gov/business-center/san-antonio-mbda-business-center
Email: Jacqueline.jackson@utsa.edu

Small and woman-owned business may be eligible for assistance from U.S. Small Business Administration (SBA):
Website: https://www.sba.gov/local-assistance

Dallas/Fort Worth District Office
150 West Parkway, Ste. 130
Euless, TX 76040
817-684-5500
Website: https://www.sba.gov/district/dallas-fort-worth
Email: dfwdo.email@sba.gov

El Paso District Office
211 N. Florence St, Ste. 201

El Paso, TX 79901
915-834-4600
Website: https://www.sba.gov/district/el-paso
Email: lee.vega@sba.gov

Houston District Office
8701 S. Gessner Dr, Ste. 1200
Houston, TX 77074
713-773-6500
Website: https://www.sba.gov/district/houston
Email: houston@sba.gov

Lower Rio Grande Valley District Office
2422 E. Tyler Ave, Suite E
Harlingen, TX 78550
956-427-8533
Website: https://www.sba.gov/district/lower-rio-grande-valley
Email: lrgvdo.email@sba.gov

San Antonio District Office
615 E. Houston St, Ste 298
San Antonio, TX 78205
210-403-5900
Website: https://www.sba.gov/district/san-antonio
Email: sado.email@sba.gov

West Texas District Office
1205 Texas Ave, Room 408
Lubbock, TX 79401
806-472-7462
Website: https://www.sba.gov/district/west-texas
Email: lubdo@sba.gov

HUB certification information can be found at:

Statewide Procurement Division HUB Program
P.O. Box 13528
Austin, TX 78711
512-463-5872 or 888-863-5881
Website: https://comptroller.texas.gov/purchasing/vendor/hub
Email: statewidehubprogram@cpa.texas.gov

PROPOSER: INSERT HUB, SBE, MBE or WBE Certification behind this page.

Allegiant Generator Services NA
3701 Kirby, Suite 1166
Houston, TX 77098
https://ags-na.com

HUB, SBE, MBE or WBE Certification

Allegiant Generator Services NA, LLC is not HUB, SBE, MBE or WBE Certified.

SECTION 2: FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) MANDATED CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY UNDER FEDERAL AWARDS REQUIRED BY 2 C.F.R. §200.327 APPENDIX II TO 2 CFR §200

2 CFR 200.327 Contract provisions. The non-Federal entity's contracts should contain applicable provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards. The non-Federal entity's contracts must contain the provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards, as applicable. ***Language as of January 3, 2025.**

THRESHOLD	PROVISION	CITATION
>$250,000 (Simplified Acquisition Threshold)	Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. Although not required for contract at or below the SAT, FEMA suggests including a remedies provision. The NFE should consult their servicing legal counsel to determine whether and how remedies for breach of contract are permissible under applicable state, local, or tribal laws or regulations.	2 CFR 200 APPENDIX II (A)
>$10,000	All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement. FEMA suggests including a termination for cause and for convenience in all contracts even when not required. The NFE should consult their servicing legal counsel to determine whether and how termination provisions are permissible under applicable state, local, or tribal laws or regulations.	2 CFR 200 APPENDIX II (B)
None	Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor." 41 CFR 60-1.4 Equal opportunity clause. b) Federally assisted construction contracts. (1) Except as otherwise provided, each administering agency shall require the inclusion of the following language as a condition of any grant, contract, loan, insurance, or guarantee involving federally assisted construction which is not exempt from the requirements of the equal opportunity clause: The [recipient] hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any	2 CFR 200 APPENDIX II (C) and 41 CFR §60-1.4(b)

Federal program involving such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause:

During the performance of this contract, the contractor agrees as follows:

The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through
(8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The [recipient] further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the [recipient] so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The [recipient] agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

	The [recipient] further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the [recipient] agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the [recipient] under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such [recipient]; and refer the case to the Department of Justice for appropriate legal proceedings.	
>$2,000	Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non- Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. **FEMA PA and HMGP do not require these clauses unless it is a requirement for matching funds by another federal program legislation such as CDBG-DR.** When required, prime construction contracts over $2,000 awarded by NFEs must include a provision for compliance with the Davis-Bacon Act. If applicable per the standard described above, the NFE must include the provisions at 29 C.F.R. § 5.5(a)(1)-(10) in full into all applicable contracts, and all applicable contractors must include these provisions in full in any subcontracts.	2 CFR 200 APPENDIX II (D); 40 U.S.C. §§ 3141-3144 and 3146-3148; supplemented by 29 C.F.R. Part 5; 40 U.S.C. § 3145; supplemented by 29 C.F.R. Part 3

	In situations where the Davis-Bacon Act does not apply, neither does the Copeland "Anti-Kickback" Act. Sample contract clauses are provided in the FEMA Contract Provisions Guide.	
> $100,000+ Mechanics or Laborers	Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence. **Applicability** **This required contract provision applies to all procurements over $100,000 that involve the employment of mechanics, laborers, and construction work. These requirements *do not* apply to the purchase of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.** Required Language Compliance with the Contract Work Hours and Safety Standards Act. 1. *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 2. *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section. 3. *Withholding for unpaid wages and liquidated damages.* The (insert	2 CFR 200 APPENDIX II (E); 40 U.S.C. §§ 3701-3708; supplemented by 29 C.F.R. Part 5

	name of grant recipient or subrecipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section. 4. *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section. **For contracts that are only subject to Contract Work Hours and Safety Standards Act and are not subject to the other statutes in 29 C.F.R. § 5.1 where an additional contract provision is required, FEMA suggests including the language below.** Suggested Language Further Compliance with the Contract Work Hours and Safety Standards Act. 1. The contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Records to be maintained under this provision shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Department of Homeland Security, the Federal Emergency Management Agency, and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.	
None	Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.	2 CFR 200 APPENDIX II (F); Funding Agreement; definition found under 37 C.F.R. § 401.2(a).

	This provision does not apply to all FEMA grant and cooperative agreement programs including PA and HMGP as awards under these programs do not meet the definition.	
>$150,000	Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended - Contracts and subgrants of amounts in excess of $150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). Suggested Language: Clean Air Act The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 *et seq.* The contractor agrees to report each violation to the (insert name of non-federal entity entering into the contract) and understands and agrees that the (insert name of the non-federal entity entering into the contract) will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal assistance provided by FEMA. Federal Water Pollution Control Act The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 *et seq.* The contractor agrees to report each violation to the (insert name of the non-federal entity entering into the contract) and understands and agrees that the (insert name of the non-federal entity entering into the contract) will, in turn, report each violation as required to assure notification to the (insert name of the pass-through entity, if applicable), Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal assistance provided by FEMA.	2 CFR 200 APPENDIX II (G); 42 U.S.C. §§ 7401-7671q; 33 U.S.C. §§ 1251-1387
>$25,000	Debarment and Suspension (Executive Orders 12549 and 12689) - A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989	2 CFR 200 APPENDIX II (H); 2 C.F.R. Part 180

	Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. The following provides a debarment and suspension clause. It incorporates an optional method of verifying that contractors are not excluded or disqualified. <u>Suggested Language:</u> Suspension and Debarment This contract is a covered transaction for purposes of 2 C.F.R. Part 180 and 2 C.F.R. Part 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935). The contractor must comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into. This certification is a material representation of fact relied upon by (insert name of recipient/subrecipient/applicant). If it is later determined that the contractor did not comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, in addition to remedies available to (insert name of recipient/subrecipient/applicant), the federal government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.	(implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989)); 2 C.F.R. Part 3000 (Department of Homeland Security regulations for Non-procurement Debarment and Suspension, implementing 2 C.F.R. Part 180).
> $100,000; and Certification required for all contracts greater than $100,000	Byrd Anti-Lobbying Amendment (31 U.S.C. 1352) - Contractors that apply or bid for an award exceeding $100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non- Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award. **If applicable, contractors must sign and submit the following certification to the NFE with each bid or offer exceeding $100,000.** <u>Required Certification:</u> CERTIFICATION REGARDING LOBBYING (APPENDIX A, 44 C.F.R. PART 18)	2 CFR 200 APPENDIX II (I) and 24 CFR §570.303; (citing 31 U.S.C. § 1352); 44 C.F.R. § 18.110
	See 2 CFR §200.323.	2 CFR 200 APPENDIX II (J)
	See 2 CFR §200.216.	2 CFR 200 APPENDIX II (K)
	See 2 CFR §200.322.	2 CFR 200 APPENDIX II (L)

Work involves the use of materials, and the contract is for more than $10,000	A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired during the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines. Suggested Language: In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired— Competitively within a timeframe providing for compliance with the contract performance schedule; Meeting contract performance requirements; or At a reasonable price. Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines webpage: https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.	2 CFR 200.323; Pub. L. No. 89-272 (1965) (codified as amended by the Resource Conservation and Recovery Act at 42 U.S.C. § 6962)
>$100,000	*§135.38 Section 3 clause* *All section 3 covered contracts shall include the following clause (referred to as the section 3 clause):* A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing. B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations. C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement	

	or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin. D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135. E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135. F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts. G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).	
None; All FEMA declarations and awards issued on or after November 12, 2020.	Section 889(b)(1) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (FY2019 NDAA) and 2 C.F.R. § 200.216, as implemented by FEMA Policy 405-143-1, Prohibitions on Expending FEMA Award Funds for Covered Telecommunications Equipment or Services (Interim), prohibit the obligation or expending of federal award funds on certain telecommunication products or from certain entities for national security reasons. Effective August 13, 2020, FEMA recipients and subrecipients, as well as their contractors and subcontractors, may not obligate or expend any FEMA award funds to: Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:	2 CFR 200.216

	(1) Procure or obtain; (2) Extend or renew a contract to procure or obtain; or (3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). (i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities). (ii) Telecommunications or video surveillance services provided by such entities or using such equipment. (iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country. (b) In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained. (c) See Public Law 115-232, section 889 for additional information. (d) See also § 200.471.	
None	The Federal awarding agency must establish conflict of interest policies for Federal awards. The non-Federal entity must disclose in writing any potential conflict of interest to the Federal awarding agency or pass-through entity in accordance with applicable Federal awarding agency policy.	2 CFR 200.112
None	The Federal awarding agency and the non-Federal entity should, whenever practicable, collect, transmit, and store Federal award-related information in open and machine-readable formats rather than in closed formats or on paper in accordance with applicable legislative requirements. A machine-readable format is a format in a standard computer language (not English text) that can be read automatically by a web browser or computer system. The Federal awarding agency or pass-through entity must always provide or accept paper versions of Federal award-related information to and from the non-Federal entity upon request. If	2 CFR 200.336

	paper copies are submitted, the Federal awarding agency or pass-through entity must not require more than an original and two copies. When original records are electronic and cannot be altered, there is no need to create and retain paper copies. When original records are paper, electronic versions may be substituted through the use of duplication or other forms of electronic media provided that they are subject to periodic quality control reviews, provide reasonable safeguards against alteration, and remain readable.	
None; All FEMA declarations and awards issued on or after November 12, 2020.	Suggested Language: If subcontracts are to be let, the prime contractor is required to take all necessary steps identified in 2 C.F.R. § 200.321(b)(1)-(5) listed below to ensure that small and minority businesses, women's business enterprises, and labor surplus area firms are used when possible. Contracting with HUB, small and minority businesses, women's business enterprises, and labor surplus area firms. (a) When possible, the recipient or subrecipient should ensure that small businesses, minority businesses, women's business enterprises, veteran-owned businesses, and labor surplus area firms (See U.S. Department of Labor's list) are considered as set forth below. (b) Such consideration means: (1) These business types are included on solicitation lists; (2) These business types are solicited whenever they are deemed eligible as potential sources; (3) Dividing procurement transactions into separate procurements to permit maximum participation by these business types; (4) Establishing delivery schedules (for example, the percentage of an order to be delivered by a given date of each month) that encourage participation by these business types; (5) Utilizing organizations such as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and (6) Requiring a contractor under a Federal award to apply this section to subcontracts.	2 C.F.R. § 200.321(b)(1)-(5)
None	Financial records, supporting documents, statistical records, and all other non- Federal entity records pertinent to a Federal award must be retained for a period of three years from the date of submission of the final expenditure report or, for Federal awards that are renewed quarterly or annually, from the date of the submission of the quarterly or annual financial report, respectively, as reported to the Federal awarding agency or pass-through entity in the case of a subrecipient. Federal awarding agencies and pass-through entities must not impose any other record retention requirements upon non-Federal entities. The only exceptions are the following: (a) If any litigation, claim, or audit is started before the expiration of the 3-year period, the records must be retained until all litigation, claims, or audit findings involving the records have been resolved and final action taken. (b) When the non-Federal entity is notified in writing by the Federal awarding agency, cognizant agency for audit, oversight agency for audit, cognizant agency for indirect costs, or pass-through entity to extend the retention period. (c) Records for real property and equipment acquired with Federal funds	2 CFR 200.334; and 200.337

	must be retained for 3 years after final disposition. (d) When records are transferred to or maintained by the Federal awarding agency or pass-through entity, the 3-year retention requirement is not applicable to the non-Federal entity. (e) Records for program income transactions after the period of performance. In some cases recipients must report program income after the period of performance. Where there is such a requirement, the retention period for the records pertaining to the earning of the program income starts from the end of the non-Federal entity's fiscal year in which the program income is earned. (f) Indirect cost rate proposals and cost allocations plans. This paragraph applies to the following types of documents and their supporting records: Indirect cost rate computations or proposals, cost allocation plans, and any similar accounting computations of the rate at which a particular group of costs is chargeable (such as computer usage chargeback rates or composite fringe benefit rates). (1) *If submitted for negotiation.* If the proposal, plan, or other computation is required to be submitted to the Federal Government (or to the pass-through entity) to form the basis for negotiation of the rate, then the 3-year retention period for its supporting records starts from the date of such submission. (2) *If not submitted for negotiation.* If the proposal, plan, or other computation is not required to be submitted to the Federal Government (or to the pass-through entity) for negotiation purposes, then the 3-year retention period for the proposal, plan, or computation and its supporting records starts from the end of the fiscal year (or other accounting period) covered by the proposal, plan, or other computation. Suggested Language for All Procurements: a. The Contractor agrees to provide (insert non-federal entity), the Texas Division of Emergency Management (TDEM), the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions. b. The FIRM agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed. c. The CONTRACTOR agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract. d. In compliance with section 1225 of the Disaster Recovery Reform Act of 2018, the (insert name of the non-federal entity) and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.	
None	CONTRACTS WITH COMPANIES ENGAGED IN BUSINESS WITH IRAN, SUDAN, OR FOREIGN TERRORIST ORGANIZATION PROHIBITED. A governmental Corporation may not enter into a governmental contract with a company that	United States Code 19 U.S.C. 2511

	is identified on a list prepared and maintained by the U.S. Department of Treasury under Executive Order 13224.The term "foreign terrorist organization" in this paragraph has the meaning assigned to such a term in Section 8 U.S.C.1189(a)(1) of the United States Code.	
>$100,000	PROVISION REQUIRED IN CONTRACT. (a) This section applies only to a contract that: (1) is between a governmental entity and a company with 10 or more full-time employees; and (2) has a value of $100,000 or more that is to be paid wholly or partly from public funds of the governmental entity. (b) A governmental Corporation may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and will not boycott Israel during the term of the contract.	(Adhere to your State's Local Government Code)
Option Contract Language for contracts awarded prior to Grant Award	The contract award is contingent upon the receipt of federal funds. If no such funds are awarded, the contract shall terminate.	Optional
	Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act. Suggested Language: The CONTRACTOR shall comply with the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).	42 U.S.C. 6201
	The Firm agrees that no otherwise qualified individual with disabilities shall, solely by reason of his/her disability, be denied the benefits of, or be subjected to discrimination, including discrimination in employment, under any program or activity receiving federal financial assistance.	Section 504 of the Rehabilitation Act of 1973, as amended.
	Pursuant to the *Violence Against Women Act Reauthorization of 2022*, the Grant Recipient must certify that local policies do not interfere with the residents' Right to Report Crime and Emergencies from One's Home. The certification will confirm that no ordinances, local regulations, or policies adopted by the local government and currently in effect contain any financial or regulatory penalty imposed on property owners or residents as a result of any use of emergency services, or that the Grant Recipient is actively addressing such local regulations.	Pub. L. 117-103, 136 Stat. 49

BYRD ANTI-LOBBYING CERTIFICATION

Certification for Contracts, Grants, Loans, and Cooperative Agreements-The undersigned certifies, to the best of his or her knowledge and belief, that:

1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor Allegiant Generator Services NA certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C.Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

John Alford, President

Name and Title of Contractor's Authorized Official

03/24/2026

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DEBARMENT/SUSPENSION CERTIFICATION

Non-Federal entities and Contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (No procurement Debarment and Suspension).

This requirement applies to all FEMA grant and cooperative agreement programs.

Federal Executive Order (E .O.) 12549 "Debarment" requires that all Contractors receiving individual awards, using federal funds, and all sub recipients certify that the organization and its principals are not debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency from doing business with the Federal Government. By signing this document, you certify that your organization and its principals are not debarred. Failure to comply or attempts to edit this language may disqualify your bid. Information on debarment is available at the following websites: www.sam.gov and https://acguisition.qov/far/index.html see section 52.209-6.

The Contractor Allegiant Generator Services NA certifies or affirms by your signature that neither you nor your principal is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

Signature of Contractor's Authorized Official

John Alford, President

Name and Title of Contractor's Authorized Official

03/24/2026

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CIVIL RIGHTS COMPLIANCE PROVISIONS

1. EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause)

(For all awarded contracts that meet the definition of "federally assisted construction contract" provided in 41 CFR Part 60-1.3)

During the performance of this contract, the Contractor agrees as follows:

1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

   Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

3) The Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.

4) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

5) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

6) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

7) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or order this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

8) The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each Subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

CIVIL RIGHTS COMPLIANCE PROVISIONS (CONTINUED)

Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or vendor as a result of such direction by the administering agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of Contractors and Subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a Contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon Contractors and Subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.



Signature of Contractor's Authorized Official

John Alford, President

Name and Title of Contractor's Authorized Official

03/24/2026

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS

The following requirements and instructions **supersede** General Requirements where applicable.

1. SUBMISSION OF BID.

Bidder is Responsible for Submitting:

One (1) Original and one (1) Bid Copies; with all copies to include a Completed Copy of this Specifications Packet , **in its entirety**.

The County requests that bid submissions NOT be bound by staples or glued spines.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://jeffersoncountytx.gov/Purchasing/

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Bids must be submitted in complete original form by mail or messenger to the following address:
Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

BID PACKAGING: Bidder shall submit response in a tightly sealed opaque envelope or box, plainly marked "SEALED BID." The outside of the envelope of box shall also include the IFB Number, IFB Name, IFB Due Date, and the Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

All submissions must be received by 11:00 am CT, Wednesday, March 25, 2026.

Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.

Jefferson County will not accept any responsibility for bids being delivered by third party carriers.

Late bids will not be accepted and will be returned unopened to the Bidder.
Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB.

All bid responses submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.

All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

COURTHOUSE SECURITY: All visitors to the Courthouse must pass through Security. Respondents planning to hand deliver proposals must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal. Mondays and Tuesdays are particularly heavy days.

In response to the Covid-19 pandemic, Jefferson County has implemented precautionary measures as currently recommended by the CDC within its facilities. Bidders are strongly urged to plan accordingly.

COUNTY HOLIDAYS (2026):

~~January 1, 2026 (Thursday) - New Year's~~
~~January 19 (Monday) - Martin Luther King, Jr. Day~~
April 3 (Friday) - Good Friday
May 25 (Monday) - Memorial Day
June 19 (Friday) - Juneteenth
July 3 Observed (Friday) - Independence Day
September 7 (Monday) - Labor Day
November 11 (Wednesday) - Veteran's Day
November 26 & 27 (Thursday & Friday) - Thanksgiving
December 24 & 25 (Thursday & Friday) Christmas

Submissions During Time of Inclement Weather, Disaster, or Emergency:

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the IFB closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the IFB and urgent County requirements preclude amendment to the IFB, the time specified for receipt of Statements of Qualifications will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

2. PRE-BID MEETING AND WALK-THROUGH.

Due to the nature of this Bid, a Pre-Bid Conference will not be held for this project.

3. QUESTIONS/DEADLINE FOR QUESTIONS.

Questions may be emailed to Cindy Greene, Contract Specialist, at: Cynthia.greene@jeffersoncountytx.gov. If no response within 72 hours, email Deborah Clark, Purchasing Agent at: deb.clark@jeffersoncountytx.gov
The Deadline for asking questions or requesting additional information (in writing) is 5:00 pm, CT, **Friday, February 27, 2026.**

4. VENDOR REGISTRATION (System for Award Management).

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

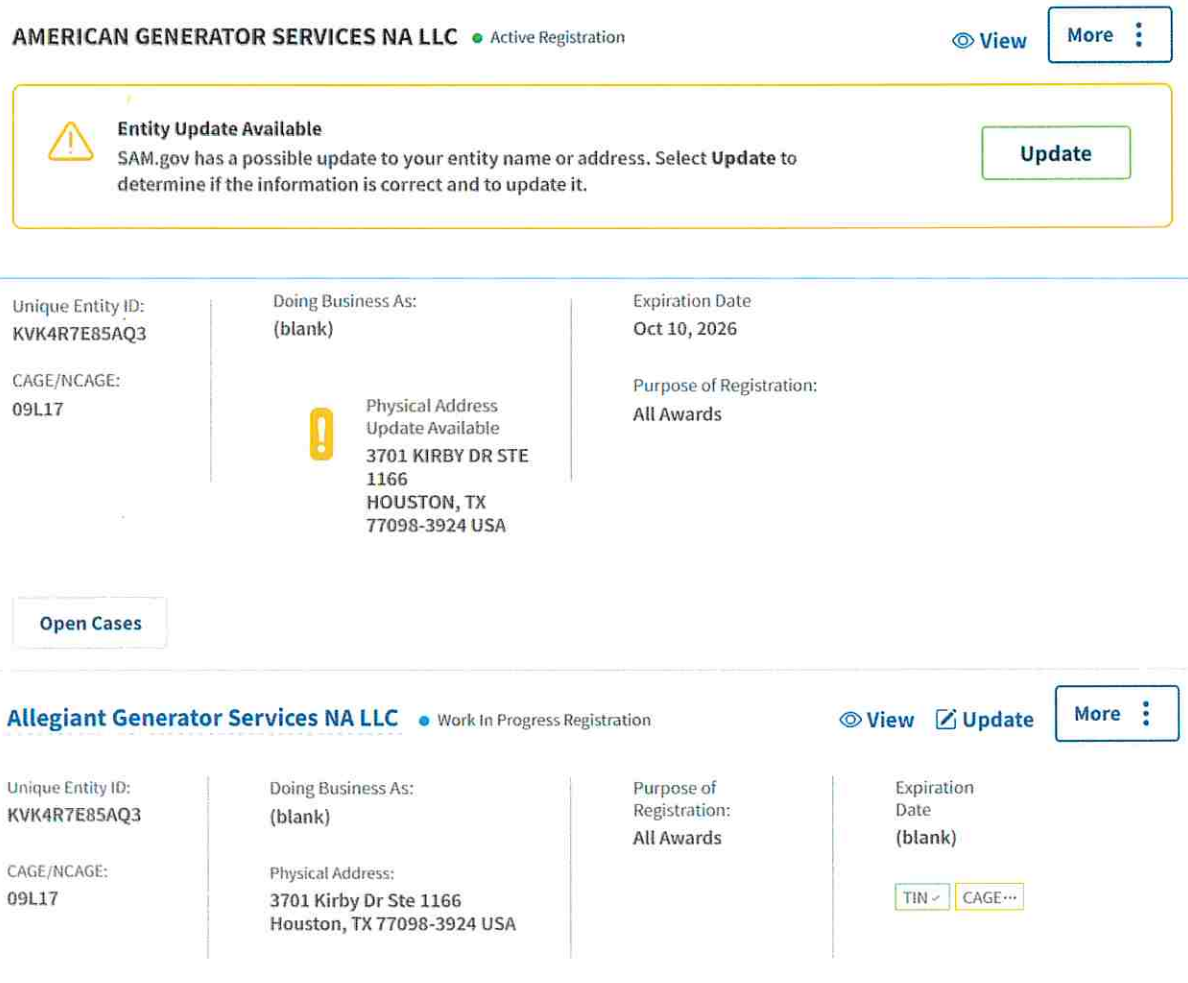
In instances where a vendor has either an "Inactive" SAM Registration or is not currently registered with the System for Award Management, the Purchasing Department may *initially* accept proof (printout from the SAM website) that the vendor has begun the registration process in order for the IFB/RFQ/RFP submission to be considered as "responsive" to the specifications for the project.
However, the SAM Registration must be completed (showing "active" status, with no exclusions) prior to the award and/or execution of an agreement or contract for the project.

BIDDER: INSERT PROOF OF SYSTEM FOR AWARD MANAGEMENT (SAM) BEHIND THIS PAGE.

Allegiant Generator Services NA
3701 Kirby, Suite 1166
Houston, TX 77098
https://ags-na.com

SAM Registration

On March 1, 2026 American Generator Services NA LLC was legal rebranded as Allegiant Generator Services NA, LLC. American Generator Services NA has an active SAM Registration with UEID: KVK4R7E85AQ3 and Cage Code 09L17. We are in process with SAM.Gov to have the name change reflected on Sam.Gov. Below is a screenshot from the Sam.Gov showing the active registration and the update in process.



5. FORM 1295 (Texas Ethics Commission) SUBMISSSION REQUIREMENT/INSTRUCTIONS FOR BIDDERS.
All Non-Exempt Bidders are required to submit a completed FORM 1295 with bid submission.

1. Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information on Form 1295, and print a copy of the completed form.
The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department **with bid submission.**

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

A sample of a completed FORM 1295 is included on **PAGE 36**.

FORM 1295 Implementation Background:
In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

Question: Will the date of birth and address provided appear on the TEC's website when the form is filed?

Answer: No. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application. Although the TEC does not capture the date of birth and street address of the signatory, the contracting state agency or governmental agency will have a physical copy of the form that includes the date of birth and address of the signatory. The TEC cannot answer whether the contracting state agency or governmental agency may release such information. Questions regarding the Texas Public Information Act may be directed to the Office of the Attorney General. See also Paxton v. City of Dall., No. 03-13-00546-CV, 2015 Tex. App. LEXIS 5228, at *10-11 (App.—Austin May 22, 2015) (mem. op.) (pet. denied) (available here)

FORM 1295 EXEMPTIONS:
What type of contracts are exempt from the Form 1295 filing requirement under the amended law?
The amended law adds to the list of types of contract exempt from the Form 1295 filing requirement.

A completed Form 1295 is not required for:
- a sponsored research contract of an institution of higher education
- an interagency contract of a state agency or an institution of higher education
- a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and any qualified vendor is eligible for the contract
- a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity
- a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code
- a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

SAMPLE COMPLETED FORM 1295

VENDOR: FORM 1295 MUST BE COMPLETED/SUBMITTED ON TEXAS ETHICS COMMISSION WEBSITE. HARD COPY OF FORM 1295 IS TO BE PRINTED, COMPLETED, SIGNED, AND SUBMITTED WITH BID/PROPOSAL/AGREEMENT/CONTRACT.

JEFFERSON COUNTY WILL CONFIRM RECEIPT OF COMPLETED HARD COPY WITH THE TEXAS ETHICS COMMISSION.

CERTIFICATE OF INTERESTED PARTIES — FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

VENDOR:ENTER YOUR BUSINESS NAME, CITY, STATE, AND COUNTRY HERE

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

JEFFERSON COUNTY, TEXAS

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

VENDOR: ENTER BID/PROPOSAL/CONTRACT/AGREEMENT REF# AND TITLE HERE

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary
VENDOR: ENTER EACH PERSON HAVING INTEREST, OWNERS ARE THE CONTROLLING PARTIES.		X	
VENDOR: WORKERS (OR NON-OWNERS) IN YOUR COMPANY ARE INTERMEDIARY PARTIES.			X

5 Check only if there is NO Interested Party. CHECK BELOW IF APPLICABLE ☐

6 UNSWORN DECLARATION VENDOR: COMPLETE, DATE, AND SIGN THIS DECLARATION SECTION.

My name is _____, and my date of birth is _____.

My address is _____, _____, _____, _____, _____.
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in _____ County, State of _____, on the _____ day of _____, 20_____
(month) (year)

_____
Signature of authorized agent of contracting business entity
(Declarant)

ADD ADDITIONAL PAGES AS NECESSARY

Form provided by Texas Ethics Commission www.ethics.state.tx.us Revised 12/22/2017

NOTE: JEFFERSON COUNTY WILL KEEP A COPY OF THIS FORM ON FILE FOR EACH BID/PROPOSAL/CONTRACT/AGREEMENT AND EACH VENDOR RESPONDING TO BIDS/PROPOSALS.

Must file online at www.ethics.state.tx.us/File

BIDDER: INSERT COMPLETED FORM 1295 BEHIND THIS PAGE.

Allegiant Generator Services NA
3701 Kirby, Suite 1166
Houston, TX 77098
https://ags-na.com

Form 1295

On March 1, 2026 American Generator Services NA LLC was legal rebranded as Allegiant Generator Services NA, LLC. Attached is a copy of the Certificate of Amendment that was filed with the State of Texas. Despite the formal documentation being accepted by the state, the Texas Ethics Commission has not updated their site to reflect the new name, hence our Form 1295 submission still holds the old entity name (American Generator Services NA LLC) on the forms. We are working to get this resolved.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

1 of 1

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2026-1435846

Date Filed:
03/20/2026

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.
American Generator Services NA LLC
Houston, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.
Jefferson County

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.
IFB 26-004/CG
Generator Maintenance and repair

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. [X]

6 UNSWORN DECLARATION

My name is John Alford, and my date of birth is 8/12/68.

My address is 3701 Kirby, Houston (city), TX (state), 77098 (zip code), USA (country).

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Harris County, State of TX, on the 24 day of March (month), 2026 (year).

Signature of authorized agent of contracting business entity
(Declarant)

Corporations Section
P.O.Box 13697
Austin, Texas 78711-3697

Jane Nelson
Secretary of State

Office of the Secretary of State

February 12, 2026

Attn: Capitol Services, Inc.

Capitol Services, Inc.
PO Box 1831
Austin, TX 78767 USA

RE: Allegiant Generator Services NA LLC
File Number: 805340515

It has been our pleasure to file the Certificate of Amendment for the referenced entity. Enclosed is the certificate evidencing filing. Payment of the filing fee is acknowledged by this letter.

If we may be of further service at any time, please let us know.

Sincerely,

Corporations Section
Business & Public Filings Division
(512) 463-5555

Enclosure

Corporations Section
P.O.Box 13697
Austin, Texas 78711-3697

Jane Nelson
Secretary of State

Office of the Secretary of State

CERTIFICATE OF FILING
OF

Allegiant Generator Services NA LLC
805340515

[formerly: American Generator Services NA LLC]

The undersigned, as Secretary of State of Texas, hereby certifies that a Certificate of Amendment for the above named entity has been received in this office and has been found to conform to the applicable provisions of law.

ACCORDINGLY, the undersigned, as Secretary of State, and by virtue of the authority vested in the secretary by law, hereby issues this certificate evidencing filing effective on the date shown below.

Dated: 02/11/2026

Effective: 03/01/2026

Jane Nelson
Secretary of State

Form 424		
Secretary of State P.O. Box 13697 Austin, TX 78711-3697 FAX: 512/463-5709 **Filing Fee: See instructions**	**Certificate of Amendment**	**Filed in the Office of the Secretary of State of Texas** **Filing #: 805340515 02/11/2026** **Document #: 1557551450002** **Image Generated Electronically for Web Filing**

Entity Information

The filing entity is a: **Domestic Limited Liability Company (LLC)**

The name of the filing entity is: **American Generator Services NA LLC**

The file number issued to the filing entity by the secretary of state is: **805340515**

Amendment to Name

The amendment changes the formation document of the filing entity to change the article or provision that names the entity. The article or provision is amended to read as follows:

The name of the filing entity is:

Allegiant Generator Services NA LLC

A letter of consent, if applicable, is attached.

Statement of Approval

The amendment has been approved in the manner required by the Texas Business Organizations Code and by the governing documents of the entity.

Effectiveness of Filing

☐ A. This document becomes effective when the document is filed by the secretary of state.

☑ B. This document becomes effective at a later date, which is not more than ninety (90) days from the date of its filing by the secretary of state. The delayed effective date is: **March 1, 2026**

Execution

The undersigned signs this document subject to the penalties imposed by law for the submission of a materially false or fraudulent instrument and declares under penalty of perjury that the undersigned is authorized under the Texas Business Organizations Code to execute the filing instrument.

Date: **February 11, 2026**

John Alford, Authorized Signatory
Signature of authorized person

FILING OFFICE COPY

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS (CONTINUED)

6. MULTIPLE VENDOR AWARD.

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

7. DELIVERY.

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the Contractor, at the discretion of, and at no additional charge to, Jefferson County.

8. PAYMENT.

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to:
Jefferson County Auditing Department
Attention: Accounts Payable
1149 Pearl Street, 7th floor
Beaumont, TX 77701.

9. USAGE REPORTS.

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

10. INSURANCE.

The Contractor (including any and all Subcontractors as defined in Section 11.1.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the Contractor. These requirements do not establish limits of the Contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):
Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation Statutory Coverage (See Section 9 Below)

11. WORKERS' COMPENSATION INSURANCE

11.1 Definitions:

11.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

11.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the Contractor's/person's work on the project has been completed and accepted by the governmental entity.

11.1.3 **Persons providing services on the project ("Subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the Contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the Contractor and regardless of whether that person has employees. This includes, without limitation, independent Contractors, Subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

11.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the Contractor providing services on the project, for the duration of the project.

11.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – **refer to Section 10 above**.

11.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

11.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

11.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

11.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

11.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

11.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

11.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

11.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

11.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees providing services on the project, for the duration of the project.

11.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

11.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

11.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

11.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

11.9.4.2 the coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

11.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

11.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

11.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs **11.1. – 11.7**., with the certificates of coverage to be provided to the person for whom they are providing services.

11.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the Contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the Contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

11.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

<u>BIDDER</u>: INSERT COPY OF CERTIFICATE OF INSURANCE (COI) BEHIND THIS PAGE.

Note: For bid purposes, a general COI will suffice. However, a COI that includes the notation that "Jefferson County as an additional insured" will be required from Awarded Bidder(s) prior to the issuance of a Purchase Order.

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 3/3/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Higginbotham Insurance Agency, Inc.
911 Central Pkwy N.
Suite 325
San Antonio TX 78232

License#: 2081754

CONTACT NAME: Lanae Stevens
PHONE (A/C, No, Ext): 817-347-7054 **FAX (A/C, No):** 817-347-6981
E-MAIL ADDRESS: LaStevens@higginbotham.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Tri-State Ins Company of Minnesota	31003
INSURER B : The Hanover American Insurance Company	36064
INSURER C : Texas Mutual Insurance Company	22945
INSURER D : Lloyd's	15642
INSURER E : Evanston Insurance Company	35378
INSURER F :	

INSURED AMERGEN-03
Allegiant Generator Services NA, LLC
3701 Kirby Drive
Suite 1166
Houston TX 77098

COVERAGES **CERTIFICATE NUMBER:** 187688976 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY			ADV9179181-11	1/5/2026	1/5/2027	EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 300,000
							MED EXP (Any one person)	$ 10,000
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	X POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	OTHER:							$
A	AUTOMOBILE LIABILITY			ADV9179181-11	1/5/2026	1/5/2027	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
A	X UMBRELLA LIAB X OCCUR			ADV9179181-11	1/5/2026	1/5/2027	EACH OCCURRENCE	$ 5,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$ 5,000,000
	DED RETENTION $							$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N	N / A		0002105359	1/5/2026	1/5/2027	X PER STATUTE OTH-ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBEREXCLUDED? (Mandatory in NH)						E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
D	Pollution Liability			MNGR-P-2002538-01	1/5/2026	1/5/2027	Limit	$1,000,000
B	Leased/Rented Equipment			IHD J931983 01	1/5/2026	1/5/2027	Limit	$25,000
E	2nd Layer Excess Liability			MKLV4EUE101468	1/5/2026	1/5/2027	Agg/Occ Limit	$5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Proof of Coverage

CERTIFICATE HOLDER

For Information Only
Not to be Altered
3701 Kirby Drive
Suite 1166
Houston TX 77098

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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BIDDER INFORMATION FORM

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: (IFB 26-004/CG), Term Contract for Generator Inspections, Routine Maintenance & Service for Jefferson County

Bidder's Company/Business Name: Allegiant Generator Services NA

Bidder's TAX ID Number: 93-4932841

If Applicable: **HUB Vendor No.** N/A **DBE Vendor No.** N/A

Contact Person: John Alford **Title:** President

Phone Number (with area code): 832-499-1866

Alternate Phone Number if available (with area code): 713-907-2297

Fax Number (with area code): N/A

Email Address: john@ags-na.com

Mailing Address (Please provide a physical address for bid bond return, if applicable):

3701 Kirby, Suite 1166
Address
Houston, TX 77098
City, State, Zip Code

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SECTION 4: MINIMUM SPECIFICATIONS

The following requirements and specifications supersede General Bid Requirements where applicable. Any questions relating to bid submission or bid item specifications requirements should be directed to Cindy Greene, Contract Specialist at 409-835-8593 or via email at: cynthia.greene@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent at 409-839-8593 or via email at: deb.clark@jeffersoncountytx.gov. Please reference Bid Number: IFB 26-004/CG.

SCOPE OF PROJECT

Jefferson County is soliciting bids for a generator technician to perform inspections, preventative maintenance and service on generators located in various locations for Jefferson County. Vendor shall provide copy of any applicable license with proposal. Vendor shall perform all electrical and engine work on generators.

TERMS

Individual departments will call to schedule any inspection, preventive maintenance or service for their generator. No work is guaranteed for generators listed in this proposal.

The County reserves the right to change, add, or delete service and/or locations.

Service call agreements will be made on an "as needed" basis. Repair work, other than the initial service call, resulting from this agreement shall not begin without a Notice to Proceed or Purchase Order from the County to the Vendor.

The vendor shall only proceed with repairs after the estimate has been approved by the department requesting the repair and a notice to proceed or purchase order has been issued.

- A "not to exceed" amount and description of work to be completed will be set at the time of the Notice to Proceed or Purchase Order agreed upon by both parties.

Awarded vendor shall furnish all labor, tools, transportation, equipment materials and supplies as required to complete the service request, to provide a working system, complete in all respects. All work shall be in compliance with Federal, State and Local Codes. All equipment or components must be installed in accordance with manufacturer's recommendations.

Vendor shall repair any damage caused by the Vendor and its employees at no cost to the County.

Modification of contract price shall be allowed only on the anniversary date of the contract. Prices throughout the initial one (1) year term shall remain firm/fixed. Written requests for price revisions after the first year shall be submitted in advance to the Jefferson County Purchasing Department. Requests shall be based upon and include documentation of the actual change in cost of components or CPI increases, involved in the contract. Price increase shall not include overhead or profit. The County reserves the right to reject any price increase and/or to terminate the contract.

All hourly cost proposals must be to service the generators listed in the IFB. Any additional costs not included on the Bid Form on page 49 of this IFB will not be allowed. This includes but is not limited to inspection fee, service call charge, mileage charges, fuel surcharges, miscellaneous supply charges.

INSPECTIONS

Vendor will provide semi-annual inspections for generators for Jefferson County upon the request of each department. These inspections shall include the following systems:

1. General Condition of Generator
    - Check generator area for obstructions
    - Wipe off unit
    - Clean oil, coolant, fuel & acid deposits
    - Check housing for leaks or corrosion
2. Starting System & Charging System
    - Visually inspect batteries for damage or leakage
    - Clean batteries with acid neutralizer
    - Clean & tighten all battery cable connections
    - Perform battery load test
    - Inspect battery charger for proper operation, loose terminals and deteriorated wiring
    - Starting motor – inspect electrical connections and wiring.
    - Air starter – inspect oil jar and feeder operation
    - Inspect alternator for proper operation, loose connections and mounting hardware
    - Check belts, pulley and voltage output
3. Engine Cooling System
    - Visually inspect radiator/heat exchanger for leaks, damage and debris
    - Check radiator/heat exchanger louver operation
    - Visually inspect coolant for correct levels and condition of coolant
    - Check coolant conditioner concentration and temperature protection
    - Check filler cap gasket and sealing surface
    - Visually inspect all hoses for deterioration
    - Check tightness of connections
    - Fan Drive Pulley & Fan – check for loose or worn pulleys, lube fan drive bearing
    - Check fan operation and clearance
    - Inspect fan belts for wear and/or deterioration. Check tension and adjust as needed
    - Inspect jacket water heater for proper operation
    - Inspect water pump visually and operationally for leaks and/or unusual noises
4. Engine Fuel System
    - Visually inspect fuel tank for leaks, damage and fuel level
    - Test day tank pump for proper operation
    - Inspect fuel condition for contaminants
    - Drain water from fuel tank of water separator
    - Visually inspect fuel lines for leaks and tightness of connections
    - Check line brackets
    - Inspect governor oil level
    - Inspect controls and linkage for proper operation. Add oil as necessary
    - Inspect fuel filters for damage, leaks and proper operation. Change when necessary
    - Fill Port Info – Special fittings, adapters needed, extra hose length, access to tank and other restrictions that may hamper fueling
5. Air Induction & Exhaust System
    - Air Filter Service Indicator – Note reading. Inspect for proper operation. Reset indicator.
    - Inspect air filter. Clean and/or replace as necessary

- Air Inlet System – Inspect piping and air filter housing for damage, loose connections and evidence of leaks
- Clean air filter housing if air filter is cleaned and replaced. Check housing seals and gaskets
- Inspect turbocharger for oil leakage or exhaust leakage. Check for unusual noises and proper operation
- Inspect exhaust manifold for damage, loose or missing hardware, and evidence of exhaust leakage and wet-stacking. Load bank recommendation if necessary
- Exhaust System – Inspect silencer and piping for damage, corrosion or leakage. Check rain cap
- Check supports for vibration damage and loose connections

6. Lube Oil System
    - Visually inspect for correct oil level and add when necessary, inspect for leaks
    - Note oil pressure
    - Operational and visual inspection of prelube pump
    - Inspect crankcase breather for proper operation. Check connections and inspect hose for deterioration. Note and report excessive blow by
7. Engine Monitors & Safety Controls (All PM Levels)
    - Check safety controls for loose connections and wiring deterioration
    - Check for proper operation of all safety controls and alarms
    - Remote Annunciator and Alarm – Inspect all panels and system alarms for proper functions
8. Ignition System (All PM Levels)
    - Check spark plug condition and electrode gap
    - Check spark plug wires for condition and connections for corrosion
    - Check ignition coils condition and connections for corrosion
9. Control Panels (All PM Levels)
    - Voltmeter – Operational check for correct reading. Check voltage level
    - Frequency Meter – Operational check for correct reading
    - Check alarm history
10. Generator Rear Bearings & Vibration Isolators
    - Lubricate generator rear bearing if applicable
    - Check vibration isolators for proper adjustment and condition
11. Transfer Switch (All PM Levels)
    - Check for leaks/corrosion on cabinets
    - Verify connections are tight on lugs
    - Check voltage across contacts
    - Lube as necessary
    - Verify exercise program
    - Functional test of unit
    - Verify time delays
    - Check for hot spots

Upon completion of the inspection, the vendor will ensure the generator is put back into stand-by mode.

Vendor will provide an inspection report within 15 days of the inspection to the department requesting the inspection that details the following:

1. Record of all findings of the inspections.
2. Record of any unsafe conditions.
3. Record of any corrective action taken.
4. Report recommendations for replacement of minor and major components.

PREVENTATIVE MAINTENANCE

Vendor will provide preventative maintenance for each generator upon the request of each department for Jefferson County as needed to maintain the proper functioning of the generators. This includes, but not limited to oil and filter changes.

Vendor will provide a report of all preventative maintenance performed on the generator to the department requesting the maintenance. Upon completion of preventative maintenance, the vendor will ensure the generator is put back into stand-by mode.

SERVICE CALLS

Vendor will provide service for generators when the generator is not functioning properly upon the request of each department or the Purchasing Department. Vendor will get approval from each department before replacing or ordering any parts for repair. Upon completion of service call, vendor will ensure the generator is put back into stand-by mode. This service will include calls 24 hours a day, 7 days a week. Vendor will also provide service during any man-made or natural disaster/emergency. Service calls in this agreement are made on an "as needed" basis as no repair work shall result from this agreement, other than the initial service call, without a written Notice to Proceed or Purchase Order from the County to the Vendor. A "not to exceed" amount and description of work to be completed will be set in the Notice to Proceed or Purchase Order agreed upon by both parties.

1. Non-Emergency Call-Out – Verbally respond to requests for non-emergency service to any generator within four (4) hours and be on site to perform repairs within forty-eight (48) hours after being contacted.
2. Emergency Call-Out – Verbally respond to requests for emergency service to any generator within one (1) hour and be on site to perform repairs within three (3) hours after being contacted.

GENERATOR LIST

This is the list of current generators located throughout Jefferson County that will need to be serviced and inspected. Generators may be added or removed upon the discretion of Jefferson County.

Department	Address	Make	Model	Output Rating	Inspection
Sabine Pass	5960 South 1st Street, Sabine Pass, TX 77655	Baldor	IDLC150 -3JU	150 KW	Yes
Courthouse	1149 Pearl St., Beaumont, TX 77701	Baldor	IDLC 2000	2 MEG	Yes
JC Service Center	7789 Vitterbo Rd, Beaumont, TX 77705	Baldor	IDLC 40	40 KW	Yes

Department	Address	Make		Output Rating	Inspection
Pct. 1	20205 W. Hwy 90, China, TX 77613			200 KW	No
Pct. 2	7759 Viterbo Rd, Beaumont, TX 77705	Baldor	IDLC 100	100 KW	No
Pct. 3	5700 Jade Ave., Pt. Arthur, TX 77640	Baldor	TS80T	60 KW	Yes
Pct. 4	7780 Boyt Rd., Beaumont, TX 77713	Baldor	IDLC 150	150 KW	No
Health & Welfare/Annex 1	1295 Pearl St., Beaumont, TX 77701	Caterpillar	D545	500 KW	Yes
Mosquito Control	8905 First St., Beaumont, TX 77705	Baldor	IDLC 80	80 KW	Yes
Narcotics/Sheriff Hanger	4640 Hanger Dr., Beaumont, TX 77705	Baldor	TS 130T	100 KW	Yes
Pt. Arthur Courthouse	709 Lakeshore Dr., Pt. Arthur, TX 77640	Baldor	TS350T	250 KW	No
Correctional Facility	5030 Hwy 69 S, Beaumont, TX 77701	Onan	500DFFB	500 KW	Yes
Correctional Facility	5030 Hwy 69 S, Beaumont, TX 77701	Onan	400DFEB	400 KW	Yes
Radio Tower Hwy 73	118235 Hwy 73, Beaumont, TX 77705	Generac	RG060545ANAX	60 KW	Yes
Radio Tower Hwy 90	1991 N. Meeker Rd, Beaumont, TX 77713	Kohler		20 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ Gate 1	Kohler	150REOZJ01	155 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ Jerry Ware Terminal	Kohler	100ROZJD	100 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ Firehouse	Kohler	20ROZJ	25 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ New Terminal	Generac	P22FE	600 KW	Yes

OFFER AND ACCEPTANCE FORM
OFFER TO CONTRACT

To Jefferson County:

We hereby offer and agree to furnish the materials or service in compliance with all terms, conditions, specifications, and amendments in the Invitation for Bid and any written exceptions in the offer.

We understand that the items in this Invitation for Bid, including, but not limited to, all required certificates are fully incorporated herein as a material and necessary part of the contract.

The undersigned hereby states, under penalty of perjury, that all information provided is true, accurate, and complete, and states that he/she has the authority to submit this bid, which will result in a binding contract if accepted by Jefferson County.

We acknowledge receipt of the following amendment(s): 1, _____, _____, _____.

I certify, under penalty of perjury, that I have the legal authorization to bind the firm hereunder:

Allegiant Generator Services NA
Company Name

3701 Kirby, Suite 1166
Address

Houston TX 77098
City State Zip

Signature of Person Authorized to Sign

John Alford
Printed Name

President
Title

For clarification of this offer, contact:

John Alford, President
Name & Title

713-907-2297 N/A
Phone Fax

john@ags-na.com
E-mail

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

ACCEPTANCE OF OFFER

The Offer is hereby accepted for the following items: Term Contract for Generator Inspections, Routine Maintenance & Service for Jefferson County for Contract Term: One (1) year from date of award with an option to renew for two (2) additional years.

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the Invitation for Bid, including all terms, conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by Jefferson County.

This contract shall henceforth be referred to as Contract No. (IFB 26-004/CG), Term Contract for Generator Inspections, Routine Maintenance & Service for Jefferson County. The Contractor has not been authorized to commence any billable work or to provide any material or service under this contract until Contractor receives a purchase order and/or a notice to proceed from the Jefferson County Purchasing Agent.

COUNTERSIGNED:

_____ _____

Jeff R. Branick, County Judge **Date**
JEFFERSON COUNTY, TEXAS

ATTEST:

_____ _____

Roxanne Acosta Hellberg, County Clerk **Date**
JEFFERSON COUNTY, TEXAS

BIDDER: INSERT ALL ADDENDA BEHIND THIS PAGE.
PLEASE BE SURE TO COMPLETE, SIGN, ATTEST, AND DATE EACH ADDENDUM.

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Addendum to IFB

IFB NUMBER: (IFB 26-004/CG)

IFB TITLE: Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County

IFB DUE BY: 11:00 am, CST, Wednesday, March 25, 2026

ADDENDUM NO.: 1

ISSUED (DATE): March 2, 2026

To Bidder: This Addendum is an integral part of the IFB package under consideration by you as a Bidder in connection with the subject matter herein identified. Jefferson County deems all sealed bids to have been proffered in recognition and consideration of the entire IFB Specifications Package – *including all addenda*. For purposes of clarification, **receipt of this present Addendum by a Bidder should be evidenced by returning it (signed) as part of the Bidder's sealed bid submission.** If the bid submission has already been received by the Jefferson County Purchasing Department, Bidder should return this addendum in a separate sealed envelope, clearly marked with the IFB Title, IFB Number, and IFB Opening Date and Time, as stated above.

Reason for Issuance of this Addendum: Vendor Questions and page number clarification.

The information included herein is hereby incorporated into the documents of this present bid matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

Witness

Witness

Approved by ____ Date: _____

Authorized Signature (Respondent)

President
Title of Person Signing Above

John Alfred
Typed Name of Business or Individual

3701 Kirby, Houston, TX 77098
Address

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Correction: The last paragraph on page 43 incorrectly references the Bid Form as being on page 49. The Bid form is found on page 51 of the specifications.

Vendor Questions:

1. **Question:** Do you require any load bank testing to be quoted for the yearly service?
   Answer: Under Section 4: Minimum Specifications, Inspections (pg 44) it notes that Vendor will provide semi-annual inspections for generators for Jefferson County upon the request of each department. The inspection requirements are outlined.

2. **Question:** Are there any units that are located on roofs or not accessible to pull up a truck within 50 feet?
   Answer: All generators are accessible to pull a truck within 50 feet. There are no generators on roofs. The Sabine Pass generator is on a stand-alone platform 10' off the ground with built in stairs. You can drive right up to it.

3. **Question:** Are you requiring ATS Services once or twice per year?
   Answer: See question and answer #1.

4. **Question:** Does each generator have 1 ATS switch or do some units have multiple?
   Answer: Most units have one ATS switch, a few units have 2 ATS switches.

5. **Question:** Can you please also clarify if a bid bond is needed for submission of bid?
   Answer: A bid bond is not required.

BID FORM

Item	Description	Labor Charge Per Hour
1	Generator Technician during working hours (Monday-Friday, 8:00 am to 5:00 pm)	$165 /hour
2	Helper accompanying Generator Technician during working hours (Monday-Friday, 8:00 am to 5:00 pm)	$135 /hour
3	Generator Technician during after-hours (Monday-Friday 5:00 pm – 8:00 am, and all-day Saturday & Sunday)	$205 /hour
4	Helper accompanying Generator Technician during after-hours (Monday-Friday 5:00 pm – 8:00 am, and all-day Saturday & Sunday)	$165 /hour
5	Generator Technician for services on Holidays	$215 /hour
6	Helper accompanying Generator Technician for services on Holidays	$175 /hour
7	Generator Technician for disaster relief service during mandatory/voluntary County evacuation (Monday-Friday, 8:00 am to 5:00 pm)	$295 /hour
8	Helper accompanying Generator Technician for disaster relief service during mandatory/voluntary County evacuation (Monday-Friday, 8:00 am to 5:00 pm)	$235 /hour
9	Generator Technician for emergency disaster relief service after-hours during mandatory/voluntary County evacuation (Monday-Friday 5:00 pm to 8:00 am)	$295 /hour
10	Helper accompanying Generator Technician for emergency disaster relief service after-hours during mandatory/voluntary County evacuation (Monday-Friday 5:00 pm to 8:00 am)	$235 /hour
11	Generator Technician for emergency disaster service relief during mandatory/voluntary County evacuation (Holidays)	$325 /hour
12	Helper accompanying Generator Technician for emergency disaster service during mandatory/ voluntary county evacuation (Holidays)	$250 /hour
13	Additional charges (Including, but no limited to inspection fee, service call charge, mileage charges, fuel surcharges, miscellaneous supply charges)	See attached excel file

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum 1 JLA Date Received_____

Addendum 2 _____ Date Received_____

Addendum 3 _____ Date Received_____

BIDDER: INCLUDE FULL, SIGNED, & ATTESTED COPY OF EACH ADDENDUM ISSUED WITH BID SUBMISSION.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

VENDOR REFERENCES FORM

Bidder: Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or similar products and/or services as contained in this specification package were recently provided.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

REFERENCE ONE

Government/Company Name: City of College Station

Address: 1101 Texas Ave, College Station, TX 77840

Contact Person and Title: Craig Dohnalik - Facilities Maintenance Manager

Phone: 979-764-3476 Fax:

Email Address: cdohnalik@cstx.gov Contract Period: Aug 2025-Aug 2028

Scope of Work: Preventative Maintenance and 24/7 service for 36 generators for the City of College Station

REFERENCE TWO

Government/Company Name: City of Sugarland

Address: 101A Gillingham Lane, Sugarland, TX 77478

Contact Person and Title: Dave Brown - Facilities Services Manager

Phone: 281-275-2692 Fax:

Email Address: dbrown@sugarlandtx.gov Contract Period: Sept 2025-Sept 2027

Scope of Work: Preventative Maintenance and 24/7 service for 13 generators for the City of Sugarland

REFERENCE THREE

Government/Company Name: Pasadena Independent School District

Address: 5525 S Shaver Rd, Houston, TX 77034

Contact Person and Title: Gary Jackson - Maintenance Electrical Supervisor

Phone: 281-352-1188 Fax:

Email Address: gjackson@pasadenaisd.org Contract Period: May 2025-May2028

Scope of Work: Preventative Maintenance and 24/7 service for 52 generators for Pasadena ISD

SIGNATURE PAGE

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would Bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions? ..... **Yes** [X] **No** [ ]

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other Bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other Bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the Bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

Allegiant Generator Services NA	
Bidder (Entity Name)	Signature
3701 Kirby, Suite 1166	John Alford
Street & Mailing Address	Print Name
Houston, TX 77098	03/24/26
City, State & Zip	Date Signed
832-499-1866	N/A
Telephone Number	Fax Number
john@ags-na.com	
E-mail Address	

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.



Signature of Contractor's Authorized Official

John Alford, President

Name and Title of Contractor's Authorized Official *(Please Print)*

03/24/2026

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CONFLICT OF INTEREST QUESTIONNAIRE

CONFLICT OF INTEREST QUESTIONNAIRE — FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY
Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

Allegiant Generator Services NA

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information in this section is being disclosed.**

N/A

Name of Officer

This section (item 3 including subparts A, B, C, & D) must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more?

☐ Yes ☐ No

D. Describe each employment or business and family relationship with the local government officer named in this section.

4

Signature of vendor doing business with the governmental entity

03/24/2026

Date

Adopted 8/7/2015

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

LOCAL GOVERNMENT OFFICER
CONFLICTS DISCLOSURE STATEMENT – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM **CIS**

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20 _____, to certify which, witness my hand and seal of office.

_____ _____ _____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

Adopted 8/7/2015

THIS FORM IS FOR OFFICE USE ONLY

GOOD FAITH EFFORT (GFE) DETERMINATION CHECKLIST

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting HUBs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant, and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of HUB Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting HUB Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .?

☐ Yes	☒ No	1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum HUB Subcontractor participation?
☐ Yes	☒ No	2. **Notify** in writing a reasonable number of HUBs, allowing sufficient time for effective participation of the planned work to be subcontracted?
☐ Yes	☒ No	3. **Provide** HUBs that were genuinely interested in bidding on a Subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?
☐ Yes	☒ No	4. **Negotiate** in good faith with interested HUBs, and not reject bids from HUBs that qualify as lowest and responsive Bidders?
☐ Yes	☒ No	5. **Document** reasons HUBs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected HUBs?
☐ Yes	☒ No	6. If Prime Contractor/Consultant has zero (0) HUB participation, **please explain the reasons why.**

If "No" was selected, please explain and include any pertinent documentation with your bid.
If necessary, please use a separate sheet to answer the above questions.

John Alford
Printed Name of Authorized Representative

Signature

President
Title

03/24/26
Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

Allegiant Generator Services NA
3701 Kirby, Suite 1166
Houston, TX 77098
https://ags-na.com

HUB Response Detail

If awarded the contract, Allegiant Generator Services NA LLC, intends to fulfill the contract 100% with our own employees and equipment.

NOTICE OF INTENT (NOI) TO SUBCONTRACT WITH HISTORICALLY UNDERUTILIZED BUSINESS (HUB)

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract.

Please submit one form for each HUB Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: N/A HUB: ☐ Yes ☐ No

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____

Prime Contract Amount: $ _____

HUB Subcontractor Name: N/A

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Printed Name of Contractor Representative	Signature of Representative	Date
Printed Name of HUB	Signature of Representative	Date

Note: Nothing on this Notice of Intent Form is intended to confer any rights, expressed or implied, to any third parties.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "HUB Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUCONTRACTING PARTICIPATION DECLARATION FORM

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Prime Contractor: N/A HUB: ☐ Yes ☐ No

HUB Status (Gender & Ethnicity): _____

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____ IFB/RFP No.: _____

Total Contract: $ _____ Total HUB Subcontract(s): $ _____

Construction HUB Goals: 12.8% MBE:: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African-American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR HUB OFFICE USE ONLY:

Verification date HUB Program Office reviewed and verified HUB Sub information Date: _____ Initials: _____

PART I. HUB SUBCONTRACTOR DISCLOSURE

HUB Subcontractor Name: N/A

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

HUB Subcontractor Disclosure

PART I: Continuation Sheet (Duplicate as Needed)

HUB Subcontractor Name: N/A

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

HUB Subcontractor Name: N/A

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

All HUB Subcontractor Participation may be verified with the HUB Subcontractor(s) listed on Part I.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUCONTRACTING PARTICIPATION DECLARATION FORM

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING HUB SUBCONTRACTING GOALS

Instructions to Bidder: Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the HUB goals for this project for the following reasons:

- ☐ All Subcontractors to be utilized are "Non-HUBs." *(Complete Part III)*
- ☐ HUBs were solicited but did not respond.
- ☐ HUBs solicited were not competitive.
- ☐ HUBs were unavailable for the following trade(s):
- ☐ Other: _____

Was the Jefferson County HUB Office contacted for assistance in locating HUBs? ☐ Yes ☐ No

PART III: DISCLOSURE OF OTHER "NON-HUB" SUBCONTRACTS

The Bidder shall use this area to provide a listing of all "Non-HUB" Subcontractors, including suppliers, that will perform under this project. A list of those "Non-HUB" Subcontractors the Bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that Bidder is the apparent low Bidder. A list of those "Non-HUB" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: N/A

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: N/A

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB) SUBCONTRACTING PARTICIPATION DECLARATION FORM

Subcontractor Name: N/A

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: N/A

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *HUB Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attached any necessary support documentation as required**. I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): John Alford

Title: President

Signature: _____

Date: 03/24/26

E-mail address: john@ags-na.com

Contact person that will be in charge of invoicing for this project:

Name (print or type): Lameika Tabor

Title: Accounting Supervisor

Date: 03/24/26

E-mail address: accounting@ags-na.com

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

RESIDENCE CERTIFICATION/TAX FORM

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq*. of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Non-resident Bidder" refers to a person who is not a resident.

(4) "Resident Bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☒ I certify that Allegiant Generator Services NA [company name] is a Resident Bidder of Texas as defined in Government Code §2252.001.

☐ I certify that _____ [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is _____ _____ (city and state).

Taxpayer Identification Number (T.I.N.):	93-4932841
Company Name submitting bid/proposal:	Allegiant Generator Services NA
Mailing address:	3701 Kirby, Suite 1166 , Houston, TX 77098
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**
N/A	N/A

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HOUSE BILL 89 VERIFICATION

I, John Alford, the undersigned representative of (company or business name) Allegiant Generator Services NA (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and
2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. "**Boycott Israel**" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. "**Company**" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or an limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

Signature of Company Representative

03/24/26
Date

On this 24th day of March, 2026, personally appeared

John Alford, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

Notary Signature

3/24/26
Date

JULIE PINCUS
Notary Public, State of Texas
Comm. Expires 02-27-2028
Notary ID 128898861

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SENATE BILL 252 CERTIFICATION

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

_____

Company Name

_____

IFB/RFP/RFQ number

Certification check performed by:

_____

Purchasing Representative

_____

Date

THIS FORM IS FOR OFFICE USE ONLY

BID AFFIDAVIT

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF Texas COUNTY OF Harris

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas,

on this day personally appeared John Alford (name), who

after being by me duly sworn, did depose and say:

"I, John Alford (name) am a duly authorized officer of/agent

for Allegiant Generator Services NA (name of firm) and have been duly authorized to execute the

foregoing on behalf of the said Allegiant Generator Services NA (name of firm).

I hereby certify that the foregoing bid has not been prepared in collusion with any other Bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the Bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of Bidder: Allegiant Generator Services NA,
3701 Kirby, Suite 1166, Houston, TX 77098

Fax: N/A Telephone# 832-499-1866

by: John Alford (print name) Title: President

Signature: [signature]

SUBSCRIBED AND SWORN to before me by the above-named

John Alford on

this the 24th day of March, 2026.

[signature]
Notary Public in and for
the State of Texas

JULIE PINCUS
Notary Public, State of Texas
Comm. Expires 02-27-2028
Notary ID 128898861

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

February 17, 2026

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for Invitation for Bid **(IFB 26-004/CG), Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County, Pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-327.** Specifications for this project may be obtained from the Jefferson County website, https://jeffersoncountytx.gov/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and one (1) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Purchasing Department (1st Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County, Pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-327**
BID NUMBER:	**IFB 26-004/CG**
DUE BY TIME/DATE:	**11:00 AM CT, Wednesday, March 25, 2026**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

Any questions relating to these bid requirements should be directed to Cindy Greene, Contract Specialist at 409-835-8593 or via email at: Cynthia.greene@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent, at 409-835-8593 or via email at deb.clark@jeffersoncountytx.gov.

Jefferson County encourages Disadvantaged Business Enterprises (DBEs), Minority/Women Business Enterprises (M/WBEs), and Historically Underutilized Businesses (HUBs) to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment, or the provisions of services. Individuals requiring special accommodations are requested to contact our office at least seven (7) days prior to the bid due date at 409-835-8593.

All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Bidders are strongly encouraged to carefully read the entire invitation, as failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

PUBLISH:
Beaumont Enterprise & Port Arthur News:
February 18, 2026
The Examiner:
February 19, 2026 & February 26, 2026

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BID SUBMISSIONS:

One (1) Original and one (1) Bid Copies; with all copies to include a Completed Copy of this specifications packet, in its entirety.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://jeffersoncountytx.gov/Purchasing/

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

SECTION 1: GENERAL CONDITIONS OF BIDDING AND TERMS OF CONTRACT

By execution of this document, the Vendor accepts all general and special conditions of the contract as outlined below and, in the specifications, and plans.

1. BIDDING.

1.1 BIDS.
All bids must be submitted on the bid form furnished in this package.

1.2 AUTHORIZED SIGNATURES.
The bid must be executed personally by the Vendor, duly authorized partner of the partnership, or duly authorized officer of the corporation. If executed by an agent, a power of attorney or other evidence of authority to act on behalf of the Vendor shall accompany the bid to become a valid bid.

1.3 LATE BIDS.
Bids must be in the office of the Jefferson County Purchasing Agent before or at the specified time and date bids are due. Bids received after the submission deadline shall be rejected as non-responsive and returned unopened.

1.4 WITHDRAWAL OF BID PRIOR TO OPENING.
A bid may be withdrawn before the opening date by submitting a written request to the Purchasing Agent. If time allows, the Bidder may submit a new bid. Bidder assumes full responsibility for submitting a new bid before or at the specified time and date bids are due. Jefferson County reserves the right to withdraw a request for bids before the opening date.

1.5 WITHDRAWAL OF BID AFTER OPENING.
Bidder agrees that its offer may not be withdrawn or cancelled by the Vendor for a period of ninety (90) days following the date and time designated for the receipt of bids unless otherwise stated in the bid and/or specifications.

1.6 BID AMOUNTS.
Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be interpreted in the favor of Jefferson County.

1.7 EXCEPTIONS AND/OR SUBSTITUTIONS.
All bids meeting the intent of the specifications and plans will be considered for award. Vendors taking exception to the specifications and plans, or offering substitutions, shall state these exceptions in the section provided. If bid is made on an article other than the one specified, which a Bidder considers comparable, the name and grade of said article must be specified in the bid and sufficient specifications and descriptive data must accompany same to permit thorough evaluation. The absence of stated exceptions and/or substitutions shall indicate that the Vendor has not taken any exceptions to the specifications and shall be responsible to perform in strict accordance with the specifications. As a matter of practice, Jefferson County rejects exception(s) and /or substitutions as non-responsive but reserves the right to accept any and/or all of the exception(s) and/or substitution(s) deemed to be in the best interest of Jefferson County.

1.8 ALTERNATES.
The Invitation for Bid and/or specifications may expressly allow Bidder to submit an alternate bid. Presence of such an offer shall not be considered an indication of non-responsiveness.

1.9 DESCRIPTIONS.

Unless otherwise specified, any reference to make, manufacturer and/or model used in the bid specifications is merely descriptive and not restrictive, and is used only to indicate type, style, or quality of material desired.

1.10 BID ALTERATIONS.
Bids cannot be altered or amended after submission deadline. Any interlineations, alterations, or erasures made before opening time must be initialed by the signer of the bid, guaranteeing authenticity.

1.11 TAX EXEMPT STATUS.
Jefferson County is exempt from federal excise tax and state sales tax. Unless the bid form or specifications specifically indicate otherwise, the bid price must be net, exclusive of above-mentioned taxes and will be so construed. Therefore, the bid price shall not include taxes.

1.12 QUANTITIES.
Quantities indicated are estimated quantities only and are not a commitment to buy. Approximate usage does not constitute an order, but only implies the probable quantity that will be used. Commodities will be ordered on an as-needed basis. Bidder is responsible for accurate final counts.

1.13 BID AWARD.
Award of contract shall be made to the most responsible, responsive Bidder, whose offer is determined to be the best value, taking into consideration the relative importance of price. Jefferson County reserves the right to be the sole judge as to whether items bid will serve the purpose intended.

Jefferson County reserves the right to award based upon individual line items, sections or total bid.

1.14 SILENCE OF SPECIFICATIONS FOR COMPLETE UNITS.
All materials, equipment and/or parts that will become a portion of the completed work, including items not specifically stated herein but, necessary to render the service(s) complete and operational per the specifications, are to be included in the bid price. Vendor may be required to furnish evidence that the service, as bid, will meet or exceed these requirements.

1.15 ADDENDA.
Any interpretations, corrections or changes to the specifications and plans will be made by addenda no later than forty-eight (48) hours prior to the bid opening. Addenda will be posted on the Purchasing web site. Vendors are responsible for monitoring the web site in order to remain informed on addenda. Vendors shall acknowledge receipt of all addenda with submission of bid.

1.16 GENERAL BID BOND/SURETY REQUIREMENTS.
Failure to furnish bid bond/surety, if requested, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.17 GENERAL INSURANCE REQUIREMENTS.
Failure to furnish Affidavit of Insurance, if required in these specifications, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.18 RESPONSIVENESS.
A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid

price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 RESPONSIBLE STANDING OF BIDDER.

To be considered for award, Bidder must at least: have the ability to obtain adequate financial resources, be able to comply with required or proposed delivery/completion schedule, have a satisfactory record of performance; have a satisfactory record of integrity and ethics, and be otherwise qualified and eligible to receive award.

1.20 CONFIDENTIAL/PROPRIETARY INFORMATION.

If any material in the bid submission is considered by Bidder to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Bidder), Bidder **must** clearly mark the applicable pages of bid submission to indicate each claim of confidentiality. Additionally, Bidder must include a statement on company letterhead identifying all Bid Submission section(s) and page(s) that have been marked as confidential. Jefferson County will protect from public disclosure such portions of a bid, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire bid submission is protected from disclosure because it contains some proprietary information is not acceptable, and will make the entire bid submission subject to release under the Texas Public Information Act.

By submitting a bid, Bidder agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Bidder's bid submission or other information submitted by Bidder.

1.21 PUBLIC BID OPENING.

Bidders are invited to be present at the opening of bids. After the official opening of bids, a period of not less than one week is necessary to evaluate bids. The amount of time necessary for bid evaluation may vary and is determined solely by the County. Following the bid evaluation, all bids submitted are available for public review.

2. PERFORMANCE.

2.1 DESIGN, STRENGTH, AND QUALITY.

Design, strength, and quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practices. The apparent silence of specifications and/or plans as to any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications and/or plans shall be made on the basis of this statement.

2.2 AGE AND MANUFACTURE.

All tangible goods being bid must be new and unused, unless otherwise specified, in first-class condition, of current manufacture, and furnished ready to use. All items not specifically mentioned that are required for a complete unit shall be furnished.

2.3 DELIVERY LOCATION.

All deliveries will be made to the address(es) specified on the purchase order during normal office working hours of 8:00 am CT to 4:00 pm CT, Monday through Friday, unless otherwise authorized by the Purchasing Agent or designee.

2.4 DELIVERY SCHEDULE.

Delivery time may be an important consideration in the evaluation of best value. The maximum number of days necessary for delivery ARO shall be stated in the space, if provided, on the bid form.

2.5 DELIVERY CHARGES.

All delivery and freight charges, F.O.B. destination shown on Jefferson County purchase order, as necessary to perform contract are to be included in the bid price.

2.6 INSTALLATION CHARGES.

All charges for assembly, installation and set-up shall be included in the bid price. Unless otherwise stated, assembly, installation and set-up will be required.

2.7 OPERATING INSTRUCTIONS AND TRAINING.

Clear and concise operating instructions and descriptive literature will be provided in English, if requested. On-site detailed training in the safe and efficient use and general maintenance of item(s) purchased shall be provided as needed at the request of Jefferson County. Instructions and training shall be at no additional cost to the County.

2.8 STORAGE.

Bidder agrees to provide storage of custom ordered materials, if requested, for up to thirty (30) calendar days.

2.9 COMPLIANCE WITH FEDERAL, STATE, COUNTY, AND LOCAL LAWS.

Bids must comply with all federal, state, county and local laws, including, but not limited to, all applicable standard safety, emission, and noise control requirements. Any vehicles or equipment shall contain all standard safety, emission, and noise control requirements required for the types and sizes of equipment at the time of their manufacture. The Contractor agrees, during the performance of work or service, to comply with all applicable codes and ordinances of Jefferson County or the State of Texas as they may apply, as these laws may now read, or as they may hereafter be changed or amended.

2.10 OSHA.

The Bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful Bidder will further certify that all items furnished under this project will conform and comply with federal and State of Texas OSHA standards. The successful Bidder will agree to indemnify and hold harmless Jefferson County for any and all damages that may be assessed against the County.

2.11 PATENTS AND COPYRIGHTS.

The successful Vendor agrees to protect the County from claims involving infringements of patents and/or copyrights.

2.12 SAMPLES, DEMONSTRATIONS, AND TESTING.

At Jefferson County's request and direction, Bidder shall provide product samples and/or testing of items bid to ensure compliance with specifications. Samples, demonstrations and/or testing may be requested at any point prior to or following bid award. Samples, demonstrations and/or testing may be requested upon delivery and/or any point during the term of resulting contract. All samples (including return thereof), demonstrations, and/or testing shall be at the expense of the Bidder/Vendor.

2.13 ACCEPTABILITY.

All articles enumerated in the bid shall be subject to inspection by an officer designated for that purpose by Jefferson County. If found inferior to the quality called for, or not equal in value to the specifications, deficient in workmanship or otherwise, this fact shall be certified to the Purchasing Agent, who shall have the right to reject the whole or any part of the same. Items and/or work determined to be contrary to specifications must be replaced at the vendor's expense. Inferior items not retrieved by the vendor within thirty (30) calendar days, or an otherwise agreed upon time, shall become the property of the County. If disposal of such items warrants an expense, an amount equal to the disposal expense will be deducted from amounts payable to the vendor.

2.14 MAINTENANCE.

Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 MATERIAL SAFETY DATA SHEETS.

Under the "Hazardous Communications Act," common known as the "Texas Right to Know Act," a Bidder must provide the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the Bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 EVALUATION.

Evaluation shall be used as a determinant as to which services are the most efficient and/or most economical for the County. It shall be based on all factors having a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Jefferson County Purchasing Department and recommendation to Jefferson County Commissioners' Court. Compliance with all bid requirements and needs of the using department are considered in evaluating bids. Pricing is not the only criteria for making a recommendation. The Jefferson County Purchasing Department reserves to right to contact any Bidder, at any time, to clarify, verify or requirement information with regard to this bid.

3. PURCHASE ORDERS AND PAYMENT.

3.1 PURCHASE ORDERS.

A purchase order(s) shall be generated by the Jefferson County Purchasing Agent to the successful vendor. The purchase order number must appear on all itemized invoices and packing slips. The County will not be held responsible for any work orders placed and/or performed without a valid current purchase order number. Payment will be made for all services rendered and accepted by the contract administrator for which a valid invoice has been received.

3.2 INVOICES.

All invoices shall reference the Purchase Order number. Invoices shall reference the bid item number or a detailed description for each item invoiced. If an item purchased and itemized on the invoice does not correspond to an item in any of the categories awarded to the vendor, invoice shall reference the item as "N/C" to indicate that it is a non-contract item. This requirement is to assist the County in verifying contract pricing on all invoices. Payment will be made under terms of net thirty (30) days unless otherwise agreed upon by seller and the purchasing department.

3.3 PROMPT PAYMENT.

In accordance with the State of Texas Prompt Payment Act, Article 601f V.T.C.S., payment will be made after receive and acceptance by the County of the merchandise ordered and of a valid invoice. Successful Bidder(s) is required to pay Subcontractors within ten (10) days after the successful Bidder receives payment from the County.

3.4 FUNDING.

Jefferson County is operated and funded on an October 1 to September 30 basis; accordingly, the County reserves the right to terminate, without liability to the County, any contract for which funding is not available.

4. CONTRACT.

4.1 CONTRACT DEFINITION.

The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson County, shall constitute a contract equally binding between the successful Bidder and Jefferson County.

4.2 CHANGE ORDER.

No different or additional terms will become part of this contract with the exception of a change order. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing and at the discretion and approval of

Jefferson County. No change order will be binding unless signed by an authorized representative of the County and the vendor.

4.3 PRICE RE-DETERIMINATION.

A price re-determination may be requested at the time of annual renewal. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The Bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

4.4 TERMINATION.

Jefferson County reserves the right to terminate the contract for default if the Bidder breached any of the terms therein, including warranties of Bidder or if the Bidder becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies which Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or service within the proper amount of time, and/or to properly perform any and all services required to Jefferson County's satisfaction and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified. Jefferson County reserves the right to award canceled contract to the next lowest Bidder. Bidder, in submitting this bid, agrees that Jefferson County shall not be liable to prosecution for damages in the event that the County declares the Bidder in default.

4.5 CONFLICT OF INTEREST.

Employees of the County are not permitted to maintain financial interest in, or receive payment, directly or indirectly, borrow from, lend to, invest in, or engage in any substantial financial transaction with any individual, organization, supplier, or Subcontractor who does business with the County without disclosure. When conflict of interest is discovered, it shall be grounds for termination of contract.

4.6 INTEREST BY PUBLIC OFFICIALS.

No public official shall have interest in this contract, in accordance with Texas Local Government Code.

4.7 PRE-AWARD/CONTRACT CONTACT BETWEEN COUNTY AND VENDORS.

The Jefferson County Purchasing Department may initiate discussions with selected vendors; however, discussions may not be initiated by vendors.

The Jefferson County Purchasing Department expects to conduct discussions with vendor's representatives authorized to contractually obligate the vendor with an offer.

Vendors shall not contact any Jefferson County personnel during the IFB process without the express permission from the Jefferson County Purchasing Agent. The Purchasing Agent will disqualify any vendor who has made site visits, contacted Jefferson County personnel, or distributed any literature without authorization from the Jefferson County Purchasing Department.

All correspondence relating to this IFB, from advertisement to award shall be sent to the Jefferson County Purchasing Department. All presentations and/or meetings between Jefferson County and the vendor relating to this IFB shall be coordinated by the Jefferson County Purchasing Department.

Selected vendors may be expected to make a presentation/product demonstration to an Evaluation Committee. Proposals, vendor presentations, and product/service evaluations may develop into negotiating sessions with the vendor(s) as selected by the Evaluation Committee. Jefferson County expects to conduct negotiations with vendor

representatives authorized to contractually obligate the vendor with an offer. If vendor is unable to agree to contract terms and conditions, Jefferson County reserves the right to terminate contract negotiations with that vendor and initiate negotiations with another vendor. In addition to a presentation, visits by the Evaluation Committee to representative vendor client sites may be conducted where the proposed solution can be demonstrated in a production environment.

4.8 INJURIES OR DAMAGES RESULTING FROM NEGLIGENCE.

Successful vendor shall defend, indemnify and save harmless Jefferson County and all its officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful vendor, or of any agent, employee, Subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful vendor shall pay any judgment with cost which may be obtained against Jefferson County growing out of such injury or damages.

4.9 WARRANTY.

The successful vendor shall warrant that all materials utilized in the performance of this contract shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship and title.

4.10 UNIFORM COMMERCIAL CODE.

The successful vendor and Jefferson County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

4.11 VENUE.

This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the County of Jefferson, Texas.

4.12 SALE, ASSIGNMENT, OR TRANSFER OF CONTRACT.

The successful vendor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written consent of Jefferson County.

4.13 SILENCE OF SPECIFICATIONS.

The apparent silence of these specifications as to any detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

5. REJECTION OR WITHDRAWAL.

Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within **90** days after opening date.

6. EMERGENCY/DECLARED DISASTER REQUIREMENTS.

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's

supplier(s).

Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling and drayage fees may apply.

7. AWARD.

The bid will be awarded to the responsible, responsive bidder(s) whose bid, conforming to the solicitation, will be most advantageous to Jefferson County – price and other factors considered. Unless otherwise specified in this IFB, Jefferson County reserves the right to accept a bid in whole or in part, and to award by item or by group, whichever is deemed to be in the best interest of Jefferson County. Any bidder who is in default to Jefferson County at the time of submittal of the bid shall have that bid rejected.

Jefferson County reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial non-conformity in the offer, as determined by Jefferson County, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Jefferson County shall consider the qualifications of the bidders, and, where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment.

In addition, Jefferson County may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County reserves the right to award this contract on the basis of **lowest and best bid** in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one offeror, and/or to reject any or all bids. In the event the lowest dollar offeror meeting specifications is not a awarded a contract, Offeror may appear before the Commissioners' Court and present evidence concerning Offeror responsibility after officially notifying the Office of the Purchasing Agent of Offeror's intent to appear.

8. CONTRACT.

A response to an IFB is an offer to contract with Jefferson County based upon the terms, conditions, and specifications contained in the IFB. Bids do not become contracts unless and until they are executed by Jefferson County, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the IFB, unless any of the terms and conditions is modified by an IFB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

9. WAIVER OF SUBROGATION.

Bidder and bidder's insurance carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from bidder's performance under this agreement.

10. FISCAL FUNDING.

A multi-year contract (if requested by the specifications) continuing as a result of an extension option must include fiscal funding out. If, for any reason, funds are not appropriated to continue the contract, said contract shall become null and void.

11. BID RESULTS.

Bid results are not provided in response to telephone inquiries. A preliminary tabulation of bids received will be posted on the Purchasing web page at https://jeffersoncountytx.gov/Purchasing/ as soon as possible following bid opening. A final tabulation will be posted following bid award, and will also be available for review in the Purchasing Department.

12. CHANGES AND ADDENDA TO BID DOCUMENTS.

Each change or addendum issued in relation to this IFB document will be on file in the Office of the Purchasing Agent, and will be posted on the Purchasing web site as soon as possible. It shall be the bidder's responsibility to make inquiry as to change or addenda issued, and to monitor the web site. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the Office of the County Purchasing Agent.

13. SPECIFICATIONS.

Unless otherwise stated by the bidder, the bid will be considered as being in accordance with Jefferson County's applicable standard specifications, and any special specifications outlined in the bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of Jefferson County, and should not be construed as excluding bids on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid.

Jefferson County reserves the right to determine if equipment/ product being bid is an acceptable alternate. All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of the bid, may be considered non-responsive.

14. DELIVERY.

Bids shall include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder (in writing on the included Bid Form), prices bid will be considered as being based on F.O.B. destination/delivered freight included.

15. INTERPRETATION OF BID AN/OR CONTRACT DOCUMENTS.

All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening, in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. Inquiries received that are not made in a timely fashion may or may not be considered.

16. CURRENCY.

Prices calculated by the bidder shall be stated in U.S. dollars.

17. PRICING.

Prices shall be stated in units of quantity specified in the bid documents. In case of discrepancy in computing the amount of the bid, the unit price shall govern.

18. NOTICE TO PROCEED/PURCHASE ORDER.

The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.

19. CERTIFICATION.

By signing the offer section of the Offer and Acceptance page, Bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.
- The Bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.
- The Bidder hereby certifies that the individual signing the bid is an authorized agent for the Bidder and has the authority to bind the Bidder to the contract.

20. DEFINITIONS.

"County" – Jefferson County, Texas.
"Contractor" – The Bidder whose proposal is accepted by Jefferson County.

21. SMALL, MINORITY & WOMEN BUSINESS ENTERPRISE PARTICIPATION

It is the desire of Jefferson County to increase the participation of Small, Minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

Minority owned business may be eligible for contract procurement assistance with public and private sector entities from MBDA Centers

Dallas Fort Worth MBDA Business Center
8828 N. Stemmons Freeway, Ste. 550 B
Dallas, TX 75247
214-920-2436
Website: https://www.mbdadfw.com
Email: admin1@mbdadallas.com

El Paso MBDA Business Center
2401 East Missouri Avenue
El Paso, TX 79903
915-351-6232
Website: https://www.mbda.gov/business-center/el-paso-mbda-business-center
Email: treed@ephcc.org

San Antonio MBDA Business Center
501 W. Cesar E. Chavez Blvd., Ste. 3.324 B
San Antonio, TX 78207
210-458-2480
Website: https://www.mbda.gov/business-center/san-antonio-mbda-business-center
Email: Jacqueline.jackson@utsa.edu

Small and woman-owned business may be eligible for assistance from U.S. Small Business Administration (SBA):
Website: https://www.sba.gov/local-assistance

Dallas/Fort Worth District Office
150 West Parkway, Ste. 130
Euless, TX 76040
817-684-5500
Website: https://www.sba.gov/district/dallas-fort-worth
Email: dfwdo.email@sba.gov

El Paso District Office
211 N. Florence St, Ste. 201

El Paso, TX 79901
915-834-4600
Website: https://www.sba.gov/district/el-paso
Email: lee.vega@sba.gov

Houston District Office
8701 S. Gessner Dr, Ste. 1200
Houston, TX 77074
713-773-6500
Website: https://www.sba.gov/district/houston
Email: houston@sba.gov

Lower Rio Grande Valley District Office
2422 E. Tyler Ave, Suite E
Harlingen, TX 78550
956-427-8533
Website: https://www.sba.gov/district/lower-rio-grande-valley
Email: lrgvdo.email@sba.gov

San Antonio District Office
615 E. Houston St, Ste 298
San Antonio, TX 78205
210-403-5900
Website: https://www.sba.gov/district/san-antonio
Email: sado.email@sba.gov

West Texas District Office
1205 Texas Ave, Room 408
Lubbock, TX 79401
806-472-7462
Website: https://www.sba.gov/district/west-texas
Email: lubdo@sba.gov

HUB certification information can be found at:

Statewide Procurement Division HUB Program
P.O. Box 13528
Austin, TX 78711
512-463-5872 or 888-863-5881
Website: https://comptroller.texas.gov/purchasing/vendor/hub
Email: statewidehubprogram@cpa.texas.gov

PROPOSER: INSERT HUB, SBE, MBE or WBE Certification behind this page.

WBENC
WOMEN'S BUSINESS ENTERPRISE NATIONAL COUNCIL
JOIN FORCES. SUCCEED TOGETHER.

hereby grants

National Women's Business Enterprise Certification

to

Cat5 Resources, LLC

who has successfully met WBENC's standards as a Women's Business Enterprise (WBE).
This certification affirms the business is woman-owned, operated and controlled and is valid through the date herein.

WBENC National WBE Certification was processed and validated by Women's Business Enterprise Alliance, a WBENC Regional Partner Organization.

Certification Granted: January 31, 2014
Expiration Date: January 31, 2027
WBENC National Certification Number: 2005126422

Authorized by April Day, President Women's Business Enterprise Alliance

WBEA

NAICS: 811310, 237130, 484220, 624230
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SECTION 2: FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) MANDATED CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY UNDER FEDERAL AWARDS REQUIRED BY 2 C.F.R. §200.327 APPENDIX II TO 2 CFR §200

2 CFR 200.327 Contract provisions. The non-Federal entity's contracts should contain applicable provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards. The non-Federal entity's contracts must contain the provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards, as applicable. ***Language as of January 3, 2025.**

THRESHOLD	PROVISION	CITATION
>$250,000 (Simplified Acquisition Threshold)	Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. Although not required for contract at or below the SAT, FEMA suggests including a remedies provision. The NFE should consult their servicing legal counsel to determine whether and how remedies for breach of contract are permissible under applicable state, local, or tribal laws or regulations.	2 CFR 200 APPENDIX II (A)
>$10,000	All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement. FEMA suggests including a termination for cause and for convenience in all contracts even when not required. The NFE should consult their servicing legal counsel to determine whether and how termination provisions are permissible under applicable state, local, or tribal laws or regulations.	2 CFR 200 APPENDIX II (B)
None	Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor." 41 CFR 60-1.4 Equal opportunity clause. b) Federally assisted construction contracts. (1) Except as otherwise provided, each administering agency shall require the inclusion of the following language as a condition of any grant, contract, loan, insurance, or guarantee involving federally assisted construction which is not exempt from the requirements of the equal opportunity clause: The [recipient] hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any	2 CFR 200 APPENDIX II (C) and 41 CFR §60-1.4(b)

Federal program involving such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause:

During the performance of this contract, the contractor agrees as follows:

The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through
(8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The [recipient] further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the [recipient] so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The [recipient] agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

	The [recipient] further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the [recipient] agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the [recipient] under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such [recipient]; and refer the case to the Department of Justice for appropriate legal proceedings.	
>$2,000	Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non- Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. **FEMA PA and HMGP do not require these clauses unless it is a requirement for matching funds by another federal program legislation such as CDBG-DR.** When required, prime construction contracts over $2,000 awarded by NFEs must include a provision for compliance with the Davis-Bacon Act. If applicable per the standard described above, the NFE must include the provisions at 29 C.F.R. § 5.5(a)(1)-(10) in full into all applicable contracts, and all applicable contractors must include these provisions in full in any subcontracts.	2 CFR 200 APPENDIX II (D); 40 U.S.C. §§ 3141-3144 and 3146-3148; supplemented by 29 C.F.R. Part 5; 40 U.S.C. § 3145; supplemented by 29 C.F.R. Part 3

	In situations where the Davis-Bacon Act does not apply, neither does the Copeland "Anti-Kickback" Act. Sample contract clauses are provided in the FEMA Contract Provisions Guide.	
> $100,000+ Mechanics or Laborers	Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence. **Applicability** **This required contract provision applies to all procurements over $100,000 that involve the employment of mechanics, laborers, and construction work. These requirements *do not* apply to the purchase of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.** Required Language Compliance with the Contract Work Hours and Safety Standards Act. 1. *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 2. *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section. 3. *Withholding for unpaid wages and liquidated damages.* The (insert	2 CFR 200 APPENDIX II (E); 40 U.S.C. §§ 3701-3708; supplemented by 29 C.F.R. Part 5

	name of grant recipient or subrecipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section. 4. *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section. **For contracts that are only subject to Contract Work Hours and Safety Standards Act and are not subject to the other statutes in 29 C.F.R. § 5.1 where an additional contract provision is required, FEMA suggests including the language below.** Suggested Language Further Compliance with the Contract Work Hours and Safety Standards Act. 1. The contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Records to be maintained under this provision shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Department of Homeland Security, the Federal Emergency Management Agency, and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.	
None	Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.	2 CFR 200 APPENDIX II (F); Funding Agreement; definition found under 37 C.F.R. § 401.2(a).

	This provision does not apply to all FEMA grant and cooperative agreement programs including PA and HMGP as awards under these programs do not meet the definition.	
>$150,000	Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended - Contracts and subgrants of amounts in excess of $150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). Suggested Language: Clean Air Act The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 *et seq.* The contractor agrees to report each violation to the (insert name of non-federal entity entering into the contract) and understands and agrees that the (insert name of the non-federal entity entering into the contract) will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal assistance provided by FEMA. Federal Water Pollution Control Act The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 *et seq.* The contractor agrees to report each violation to the (insert name of the non-federal entity entering into the contract) and understands and agrees that the (insert name of the non-federal entity entering into the contract) will, in turn, report each violation as required to assure notification to the (insert name of the pass-through entity, if applicable), Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal assistance provided by FEMA.	2 CFR 200 APPENDIX II (G); 42 U.S.C. §§ 7401-7671q; 33 U.S.C. §§ 1251-1387
>$25,000	Debarment and Suspension (Executive Orders 12549 and 12689) - A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989	2 CFR 200 APPENDIX II (H); 2 C.F.R. Part 180

	Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. The following provides a debarment and suspension clause. It incorporates an optional method of verifying that contractors are not excluded or disqualified. Suggested Language: Suspension and Debarment This contract is a covered transaction for purposes of 2 C.F.R. Part 180 and 2 C.F.R. Part 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935). The contractor must comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into. This certification is a material representation of fact relied upon by (insert name of recipient/subrecipient/applicant). If it is later determined that the contractor did not comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, in addition to remedies available to (insert name of recipient/subrecipient/applicant), the federal government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.	(implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989)); 2 C.F.R. Part 3000 (Department of Homeland Security regulations for Non-procurement Debarment and Suspension, implementing 2 C.F.R. Part 180).
> $100,000; and Certification required for all contracts greater than $100,000	Byrd Anti-Lobbying Amendment (31 U.S.C. 1352) - Contractors that apply or bid for an award exceeding $100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non- Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award. **If applicable, contractors must sign and submit the following certification to the NFE with each bid or offer exceeding $100,000.** Required Certification: CERTIFICATION REGARDING LOBBYING (APPENDIX A, 44 C.F.R. PART 18)	2 CFR 200 APPENDIX II (I) and 24 CFR §570.303; (citing 31 U.S.C. § 1352); 44 C.F.R. § 18.110
	See 2 CFR §200.323.	2 CFR 200 APPENDIX II (J)
	See 2 CFR §200.216.	2 CFR 200 APPENDIX II (K)
	See 2 CFR §200.322.	2 CFR 200 APPENDIX II (L)

Work involves the use of materials, and the contract is for more than $10,000	A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired during the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines. Suggested Language: In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired— Competitively within a timeframe providing for compliance with the contract performance schedule; Meeting contract performance requirements; or At a reasonable price. Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines webpage: https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.	2 CFR 200.323; Pub. L. No. 89-272 (1965) (codified as amended by the Resource Conservation and Recovery Act at 42 U.S.C. § 6962)
>$100,000	*§135.38 Section 3 clause* *All section 3 covered contracts shall include the following clause (referred to as the section 3 clause):* A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing. B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations. C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement	

	or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin. D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135. E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135. F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.	
	G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).	
None; All FEMA declarations and awards issued on or after November 12, 2020.	Section 889(b)(1) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (FY2019 NDAA) and 2 C.F.R. § 200.216, as implemented by FEMA Policy 405-143-1, Prohibitions on Expending FEMA Award Funds for Covered Telecommunications Equipment or Services (Interim), prohibit the obligation or expending of federal award funds on certain telecommunication products or from certain entities for national security reasons. Effective August 13, 2020, FEMA recipients and subrecipients, as well as their contractors and subcontractors, may not obligate or expend any FEMA award funds to: Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:	2 CFR 200.216

	(1) Procure or obtain; (2) Extend or renew a contract to procure or obtain; or (3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). (i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities). (ii) Telecommunications or video surveillance services provided by such entities or using such equipment. (iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country. (b) In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained. (c) See Public Law 115-232, section 889 for additional information. (d) See also § 200.471.	
None	The Federal awarding agency must establish conflict of interest policies for Federal awards. The non-Federal entity must disclose in writing any potential conflict of interest to the Federal awarding agency or pass-through entity in accordance with applicable Federal awarding agency policy.	2 CFR 200.112
None	The Federal awarding agency and the non-Federal entity should, whenever practicable, collect, transmit, and store Federal award-related information in open and machine-readable formats rather than in closed formats or on paper in accordance with applicable legislative requirements. A machine-readable format is a format in a standard computer language (not English text) that can be read automatically by a web browser or computer system. The Federal awarding agency or pass-through entity must always provide or accept paper versions of Federal award-related information to and from the non-Federal entity upon request. If	2 CFR 200.336

	paper copies are submitted, the Federal awarding agency or pass-through entity must not require more than an original and two copies. When original records are electronic and cannot be altered, there is no need to create and retain paper copies. When original records are paper, electronic versions may be substituted through the use of duplication or other forms of electronic media provided that they are subject to periodic quality control reviews, provide reasonable safeguards against alteration, and remain readable.	
None; All FEMA declarations and awards issued on or after November 12, 2020.	Suggested Language: If subcontracts are to be let, the prime contractor is required to take all necessary steps identified in 2 C.F.R. § 200.321(b)(1)-(5) listed below to ensure that small and minority businesses, women's business enterprises, and labor surplus area firms are used when possible. Contracting with HUB, small and minority businesses, women's business enterprises, and labor surplus area firms. (a) When possible, the recipient or subrecipient should ensure that small businesses, minority businesses, women's business enterprises, veteran-owned businesses, and labor surplus area firms (See U.S. Department of Labor's list) are considered as set forth below. (b) Such consideration means: (1) These business types are included on solicitation lists; (2) These business types are solicited whenever they are deemed eligible as potential sources; (3) Dividing procurement transactions into separate procurements to permit maximum participation by these business types; (4) Establishing delivery schedules (for example, the percentage of an order to be delivered by a given date of each month) that encourage participation by these business types; (5) Utilizing organizations such as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and (6) Requiring a contractor under a Federal award to apply this section to subcontracts.	2 C.F.R. § 200.321(b)(1)-(5)
None	Financial records, supporting documents, statistical records, and all other non- Federal entity records pertinent to a Federal award must be retained for a period of three years from the date of submission of the final expenditure report or, for Federal awards that are renewed quarterly or annually, from the date of the submission of the quarterly or annual financial report, respectively, as reported to the Federal awarding agency or pass-through entity in the case of a subrecipient. Federal awarding agencies and pass-through entities must not impose any other record retention requirements upon non-Federal entities. The only exceptions are the following: (a) If any litigation, claim, or audit is started before the expiration of the 3-year period, the records must be retained until all litigation, claims, or audit findings involving the records have been resolved and final action taken. (b) When the non-Federal entity is notified in writing by the Federal awarding agency, cognizant agency for audit, oversight agency for audit, cognizant agency for indirect costs, or pass-through entity to extend the retention period. (c) Records for real property and equipment acquired with Federal funds	2 CFR 200.334; and 200.337

	must be retained for 3 years after final disposition. (d) When records are transferred to or maintained by the Federal awarding agency or pass-through entity, the 3-year retention requirement is not applicable to the non-Federal entity. (e) Records for program income transactions after the period of performance. In some cases recipients must report program income after the period of performance. Where there is such a requirement, the retention period for the records pertaining to the earning of the program income starts from the end of the non-Federal entity's fiscal year in which the program income is earned. (f) Indirect cost rate proposals and cost allocations plans. This paragraph applies to the following types of documents and their supporting records: Indirect cost rate computations or proposals, cost allocation plans, and any similar accounting computations of the rate at which a particular group of costs is chargeable (such as computer usage chargeback rates or composite fringe benefit rates). (1) *If submitted for negotiation.* If the proposal, plan, or other computation is required to be submitted to the Federal Government (or to the pass-through entity) to form the basis for negotiation of the rate, then the 3-year retention period for its supporting records starts from the date of such submission. (2) *If not submitted for negotiation.* If the proposal, plan, or other computation is not required to be submitted to the Federal Government (or to the pass-through entity) for negotiation purposes, then the 3-year retention period for the proposal, plan, or computation and its supporting records starts from the end of the fiscal year (or other accounting period) covered by the proposal, plan, or other computation. <u>Suggested Language for All Procurements:</u> a. The Contractor agrees to provide (insert non-federal entity), the Texas Division of Emergency Management (TDEM), the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions. b. The FIRM agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed. c. The CONTRACTOR agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract. d. In compliance with section 1225 of the Disaster Recovery Reform Act of 2018, the (insert name of the non-federal entity) and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.	
None	CONTRACTS WITH COMPANIES ENGAGED IN BUSINESS WITH IRAN, SUDAN, OR FOREIGN TERRORIST ORGANIZATION PROHIBITED. A governmental Corporation may not enter into a governmental contract with a company that	United States Code 19 U.S.C. 2511

	Is identified on a list prepared and maintained by the U.S. Department of Treasury under Executive Order 13224.The term "foreign terrorist organization" in this paragraph has the meaning assigned to such a term in Section 8 U.S.C.1189(a)(1) of the United States Code.	
>$100,000	PROVISION REQUIRED IN CONTRACT. (a) This section applies only to a contract that: (1) is between a governmental entity and a company with 10 or more full-time employees; and (2) has a value of $100,000 or more that is to be paid wholly or partly from public funds of the governmental entity. (b) A governmental Corporation may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and will not boycott Israel during the term of the contract.	(Adhere to your State's Local Government Code)
Option Contract Language for contracts awarded prior to Grant Award	The contract award is contingent upon the receipt of federal funds. If no such funds are awarded, the contract shall terminate.	Optional
	Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act. Suggested Language: The CONTRACTOR shall comply with the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).	42 U.S.C. 6201
	The Firm agrees that no otherwise qualified individual with disabilities shall, solely by reason of his/her disability, be denied the benefits of, or be subjected to discrimination, including discrimination in employment, under any program or activity receiving federal financial assistance.	Section 504 of the Rehabilitation Act of 1973, as amended.
	Pursuant to the *Violence Against Women Act Reauthorization of 2022*, the Grant Recipient must certify that local policies do not interfere with the residents' Right to Report Crime and Emergencies from One's Home. The certification will confirm that no ordinances, local regulations, or policies adopted by the local government and currently in effect contain any financial or regulatory penalty imposed on property owners or residents as a result of any use of emergency services, or that the Grant Recipient is actively addressing such local regulations.	Pub. L. 117-103, 136 Stat. 49

BYRD ANTI-LOBBYING CERTIFICATION

Certification for Contracts, Grants, Loans, and Cooperative Agreements-The undersigned certifies, to the best of his or her knowledge and belief, that:

1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor Cat5 Resources LLC certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C.Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Cindy Perez

Signature of Contractor's Authorized Official

Cat5 Resources, LLC

Name and Title of Contractor's Authorized Official

3/17/26

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DEBARMENT/SUSPENSION CERTIFICATION

Non-Federal entities and Contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (No procurement Debarment and Suspension).

This requirement applies to all FEMA grant and cooperative agreement programs.

Federal Executive Order (E .O.) 12549 "Debarment" requires that all Contractors receiving individual awards, using federal funds, and all sub recipients certify that the organization and its principals are not debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency from doing business with the Federal Government. By signing this document, you certify that your organization and its principals are not debarred. Failure to comply or attempts to edit this language may disqualify your bid. Information on debarment is available at the following websites: www.sam.gov and https://acguisition.qov/far/index.html see section 52.209-6.

The Contractor Cat5 Resources, LLC certifies or affirms by your signature that neither you nor your principal is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

Cindy Perez

Signature of Contractor's Authorized Official

Cat5 Resources, LLC

Name and Title of Contractor's Authorized Official

3/17/26

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CIVIL RIGHTS COMPLIANCE PROVISIONS

1. **EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause)**

(For all awarded contracts that meet the definition of "federally assisted construction contract" provided in 41 CFR Part 60-1.3)

During the performance of this contract, the Contractor agrees as follows:

1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

   Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

3) The Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.

4) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

5) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

6) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

7) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or order this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

8) The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each Subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

CIVIL RIGHTS COMPLIANCE PROVISIONS (CONTINUED)

Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or vendor as a result of such direction by the administering agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of Contractors and Subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a Contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon Contractors and Subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

Cindy Perez

Signature of Contractor's Authorized Official

Cat5 Resources, LLC

Name and Title of Contractor's Authorized Official

3/17/26

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS

The following requirements and instructions **supersede** General Requirements where applicable.

1. SUBMISSION OF BID.

Bidder is Responsible for Submitting:

One (1) Original and one (1) Bid Copies; with all copies to include a Completed Copy of this Specifications Packet , **in its entirety.**

The County requests that bid submissions NOT be bound by staples or glued spines.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://jeffersoncountytx.gov/Purchasing/

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Bids must be submitted in complete original form by mail or messenger to the following address:
Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

BID PACKAGING: Bidder shall submit response in a tightly sealed opaque envelope or box, plainly marked "SEALED BID." The outside of the envelope of box shall also include the IFB Number, IFB Name, IFB Due Date, and the Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

All submissions must be received by 11:00 am CT, Wednesday, March 25, 2026.

Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.

Jefferson County will not accept any responsibility for bids being delivered by third party carriers.

Late bids will not be accepted and will be returned unopened to the Bidder.
Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB.

All bid responses submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.

All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

COURTHOUSE SECURITY: All visitors to the Courthouse must pass through Security. Respondents planning to hand deliver proposals must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal. Mondays and Tuesdays are particularly heavy days.

In response to the Covid-19 pandemic, Jefferson County has implemented precautionary measures as currently recommended by the CDC within its facilities. Bidders are strongly urged to plan accordingly.

COUNTY HOLIDAYS (2026):

~~January 1, 2026 (Thursday) - New Year's~~
~~January 19 (Monday) - Martin Luther King, Jr. Day~~
April 3 (Friday) - Good Friday
May 25 (Monday) - Memorial Day
June 19 (Friday) - Juneteenth
July 3 Observed (Friday) - Independence Day
September 7 (Monday) - Labor Day
November 11 (Wednesday) - Veteran's Day
November 26 & 27 (Thursday & Friday) - Thanksgiving
December 24 & 25 (Thursday & Friday) Christmas

Submissions During Time of Inclement Weather, Disaster, or Emergency:

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the IFB closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the IFB and urgent County requirements preclude amendment to the IFB, the time specified for receipt of Statements of Qualifications will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

2. PRE-BID MEETING AND WALK-THROUGH.

Due to the nature of this Bid, a Pre-Bid Conference will not be held for this project.

3. QUESTIONS/DEADLINE FOR QUESTIONS.

Questions may be emailed to Cindy Greene, Contract Specialist, at: Cynthia.greene@jeffersoncountytx.gov. If no response within 72 hours, email Deborah Clark, Purchasing Agent at: deb.clark@jeffersoncountytx.gov
The Deadline for asking questions or requesting additional information (in writing) is 5:00 pm, CT, **Friday, February 27, 2026.**

4. VENDOR REGISTRATION (System for Award Management).

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

In instances where a vendor has either an "Inactive" SAM Registration or is not currently registered with the System for Award Management, the Purchasing Department may *initially* accept proof (printout from the SAM website) that the vendor has begun the registration process in order for the IFB/RFQ/RFP submission to be considered as "responsive" to the specifications for the project.
However, the SAM Registration must be completed (showing "active" status, with no exclusions) prior to the award and/or execution of an agreement or contract for the project.

BIDDER: INSERT PROOF OF SYSTEM FOR AWARD MANAGEMENT (SAM) BEHIND THIS PAGE.

Alexander Strait

From: donotreply@sam.gov
Sent: Friday, February 20, 2026 6:47 AM
To: Kathy Hileman; Cindy Perez
Cc: jhoffses+cat5resources@usfcr.com
Subject: Registration Activated for CAT5 RESOURCES, L.L.C. / LVU1X1HV4LM5 / 6YCZ7 in the U.S. Government's System for Award Management (SAM.gov)

Kathy Hileman, Cindy Perez,

The registration for CAT5 RESOURCES, L.L.C. / LVU1X1HV4LM5 / 6YCZ7 is now active in the U.S. federal government's System for Award Management (SAM.gov). If you did not provide a Commercial and Government Entity (CAGE) Code during the registration process, one has been assigned to you by the Defense Logistics Agency (DLA) CAGE Program.

To remain eligible to do business with the federal government, you must renew your entity's registration in SAM.gov every year. The annual renewal date for the registration is 2027-02-18 16:14:31.292.

You may invite additional users to manage or review your entity registration by following these steps:

1. Go to the SAM.gov website and sign in
2. On your Workspace page, scroll down to the "User Directory"
3. Enter the email address of the user you want to invite and select the email address from the list
4. On the next page, select the "Assign Role" button in the top right corner of the page
5. On the assign role page, follow the instructions provided and then select "Send Invitation" at the bottom of the page
6. The user will be notified

All invitees will receive an email message from SAM.gov with instructions on how to complete the process.

Remember, it is free to register in SAM.gov. Get free help at SAM.gov in the "Help" section and at the Federal Service Desk (FSD) where you will find SAM.gov user guides, quick start guides, helpful hints, videos, and frequently asked questions. If you are going through entity validation at SAM.gov for the first time and have questions, visit this list of FAQs.

In addition, if you are located in the U.S. and its outlying areas, you can get FREE support from your local APEX Accelerator (formerly known as PTAC), an official resource for government contracting assistance. Go to https://www.apexaccelerators.us to find your closest office.

Do not reply to this auto-generated email.

This email was sent from Production.

5. FORM 1295 (Texas Ethics Commission) SUBMISSSION REQUIREMENT/INSTRUCTIONS FOR BIDDERS.
All Non-Exempt Bidders are required to submit a completed FORM 1295 with bid submission.

1. Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information on Form 1295, and print a copy of the completed form.
The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department **with bid submission.**

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

A sample of a completed FORM 1295 is included on **PAGE 36**.

FORM 1295 Implementation Background:
In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

Question: Will the date of birth and address provided appear on the TEC's website when the form is filed?

Answer: No. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application. Although the TEC does not capture the date of birth and street address of the signatory, the contracting state agency or governmental agency will have a physical copy of the form that includes the date of birth and address of the signatory. The TEC cannot answer whether the contracting state agency or governmental agency may release such information. Questions regarding the Texas Public Information Act may be directed to the Office of the Attorney General. See also Paxton v. City of Dall., No. 03-13-00546-CV, 2015 Tex. App. LEXIS 5228, at *10-11 (App.—Austin May 22, 2015) (mem. op.) (pet. denied) (available here)

FORM 1295 EXEMPTIONS:
What type of contracts are exempt from the Form 1295 filing requirement under the amended law?
The amended law adds to the list of types of contract exempt from the Form 1295 filing requirement.

A completed Form 1295 is not required for:
- a sponsored research contract of an institution of higher education
- an interagency contract of a state agency or an institution of higher education
- a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and any qualified vendor is eligible for the contract
- a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity
- a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code
- a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

SAMPLE COMPLETED FORM 1295

VENDOR: FORM 1295 MUST BE COMPLETED/SUBMITTED ON TEXAS ETHICS COMMISSION WEBSITE. HARD COPY OF FORM 1295 IS TO BE PRINTED, COMPLETED, SIGNED, AND SUBMITTED WITH BID/PROPOSAL/AGREEMENT/CONTRACT.

JEFFERSON COUNTY WILL CONFIRM RECEIPT OF COMPLETED HARD COPY WITH THE TEXAS ETHICS COMMISSION.

CERTIFICATE OF INTERESTED PARTIES — FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

VENDOR:ENTER YOUR BUSINESS NAME, CITY, STATE, AND COUNTRY HERE

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

JEFFERSON COUNTY, TEXAS

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

VENDOR: ENTER BID/PROPOSAL/CONTRACT/AGREEMENT REF# AND TITLE HERE.

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary
VENDOR: ENTER EACH PERSON HAVING INTEREST, OWNERS ARE THE CONTROLLING PARTIES.		X	
VENDOR: WORKERS (OR NON-OWNERS) IN YOUR COMPANY ARE INTERMEDIARY PARTIES.			X

5 Check only if there is NO Interested Party. **CHECK BELOW IF APPLICABLE** ☐

6 UNSWORN DECLARATION **VENDOR: COMPLETE, DATE, AND SIGN THIS DECLARATION SECTION.**

My name is _____, and my date of birth is _____.

My address is _____, _____, _____, _____, _____.
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in _____ County, State of _____, on the _____ day of _____, 20_____.
(month) (year)

_____
Signature of authorized agent of contracting business entity
(Declarant)

ADD ADDITIONAL PAGES AS NECESSARY

Form provided by Texas Ethics Commission www.ethics.state.tx.us Revised 12/22/2017

NOTE: JEFFERSON COUNTY WILL KEEP A COPY OF THIS FORM ON FILE FOR EACH BID/PROPOSAL/CONTRACT/AGREEMENT AND EACH VENDOR RESPONDING TO BIDS/PROPOSALS.

Must file online at www.ethics.state.tx.us/File

BIDDER: INSERT COMPLETED FORM 1295 BEHIND THIS PAGE.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

1 of 1

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2026-1433523

Date Filed:
03/15/2026

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.
Cat5 Resources, LLC
Beaumont, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.
Jefferson County Purchasing Department

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.
IFB 26-004/CG
Generator Inspections, Routine Maintenance and Service for Jefferson County

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. [X]

6 UNSWORN DECLARATION

My name is Cindy Perez, and my date of birth is 08/21/1967.

My address is 12455 US Hwy 96 N, Brookeland (city), TX (state), 75931 (zip code), USA (country).

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Jasper County, State of Texas, on the 17th day of March (month), 2026 (year).

Cindy Perez

Signature of authorized agent of contracting business entity
(Declarant)

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS (CONTINUED)

6. MULTIPLE VENDOR AWARD.

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

7. DELIVERY.

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the Contractor, at the discretion of, and at no additional charge to, Jefferson County.

8. PAYMENT.

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to:
Jefferson County Auditing Department
Attention: Accounts Payable
1149 Pearl Street, 7th floor
Beaumont, TX 77701.

9. USAGE REPORTS.

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

10. INSURANCE.

The Contractor (including any and all Subcontractors as defined in Section 11.1.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the Contractor. These requirements do not establish limits of the Contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):
Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation Statutory Coverage (See Section 9 Below)

11. WORKERS' COMPENSATION INSURANCE

11.1 Definitions:

11.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

11.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the Contractor's/person's work on the project has been completed and accepted by the governmental entity.

11.1.3 **Persons providing services on the project ("Subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the Contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the Contractor and regardless of whether that person has employees. This includes, without limitation, independent Contractors, Subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

11.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the Contractor providing services on the project, for the duration of the project.

11.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – **refer to Section 10 above**.

11.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

11.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

11.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

11.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

11.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

11.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

11.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

11.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

11.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees providing services on the project, for the duration of the project.

11.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

11.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

11.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

11.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

11.9.4.2 the coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

11.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

11.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

11.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs **11.1. – 11.7.**, with the certificates of coverage to be provided to the person for whom they are providing services.

11.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the Contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the Contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

11.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

BIDDER: INSERT COPY OF CERTIFICATE OF INSURANCE (COI) BEHIND THIS PAGE.

Note: For bid purposes, a general COI will suffice. However, a COI that includes the notation that "Jefferson County as an additional insured" will be required from Awarded Bidder(s) prior to the issuance of a Purchase Order.

CAT5RES01C TADAMS

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 6/30/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER INSURICA 6011 Garth Road, Suite A Baytown, TX 77521	CONTACT NAME: Jackie Velasquez, ACSR, CAM PHONE (A/C, No, Ext): (281) 421-3759 FAX (A/C, No): E-MAIL ADDRESS: Jackie.Velasquez@INSURICA.com
INSURED CAT5 Resources LLC P O Box 1383 Nederland, TX 77627	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : Underwriters at Lloyd's London — 15792 INSURER B : StarStone National Insurance Company — 25496 INSURER C : Texas Mutual Insurance Company — 22945 INSURER D : National Fire & Marine Insurance Company — 20079 INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR X Pollution Liab X Professional Liab GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT LOC OTHER:			ENVP0000412-25	7/1/2025	7/1/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG HIRED/NON-OWNED	$ 1,000,000 $ 300,000 $ 25,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $ 1,000,000
B	AUTOMOBILE LIABILITY ANY AUTO OWNED AUTOS ONLY X SCHEDULED AUTOS X HIRED AUTOS ONLY X NON-OWNED AUTOS ONLY			APM4100217	7/1/2025	7/1/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
A	UMBRELLA LIAB X OCCUR X EXCESS LIAB CLAIMS-MADE DED RETENTION $			ENVX0000417-25	7/1/2025	7/1/2026	EACH OCCURRENCE AGGREGATE	$ 9,000,000 $ 9,000,000
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		0001271489	7/1/2025	7/1/2026	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
D	Rented/Leased Equip			42MAR10165601	7/1/2025	7/1/2026	Max Per Item	300,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

Jefferson County TX
1149 Pearl Street, 7th Floor
Beaumont, TX 77701

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



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AGENCY CUSTOMER ID: CAT5RES01C TADAMS

LOC #: 1

ADDITIONAL REMARKS SCHEDULE

AGENCY		NAMED INSURED
INSURICA		CAT5 Resources LLC P O Box 1383 Nederland, TX 77627
POLICY NUMBER		
SEE PAGE 1		
CARRIER	NAIC CODE	EFFECTIVE DATE: SEE PAGE 1
SEE PAGE 1	SEE P 1	

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance

Blanket COI Wording

The General Liability policy includes Blanket Additional Insured. Blanket Waiver of Subrogation and Primary & Non-Contributory endorsements.

The Auto policy includes Blanket Additional Insured, Blanket Waiver of Subrogation and Primary and Non Contributory endorsements.

The Workers Compensation policy includes Blanket Waiver of Subrogation endorsement.

The Excess Liability policy follows form over the General Liability, Auto, and Workers Compensation. The Excess Liability policy also follows form over the Professional Liability if required by written contract.

All above are as required by written contract subject to policy terms, conditions and exclusions.

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BIDDER INFORMATION FORM

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: (IFB 26-004/CG), Term Contract for Generator Inspections, Routine Maintenance & Service for Jefferson County

Bidder's Company/Business Name: Cat5 Resources, LLC

Bidder's TAX ID Number: 46-3004394

***If Applicable*:** **HUB Vendor No.** _____ **DBE Vendor No.** _____

Contact Person: Cheryl Shaw **Title:** Business Development Manager

Phone Number (with area code): 409-332-0959

Alternate Phone Number if available (with area code): 855-550-2285 Ext 142

Fax Number (with area code): 888-663-4161

Email Address: cshaw@cat5resources.com

Mailing Address (Please provide a physical address for bid bond return, if applicable):

6757 Patillo Rd
Address
Beaumont, TX 77705
City, State, Zip Code

Type text here

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SECTION 4: MINIMUM SPECIFICATIONS

The following requirements and specifications supersede General Bid Requirements where applicable. Any questions relating to bid submission or bid item specifications requirements should be directed to Cindy Greene, Contract Specialist at 409-835-8593 or via email at: cynthia.greene@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent at 409-839-8593 or via email at: deb.clark@jeffersoncountytx.gov. Please reference Bid Number: IFB 26-004/CG.

SCOPE OF PROJECT

Jefferson County is soliciting bids for a generator technician to perform inspections, preventative maintenance and service on generators located in various locations for Jefferson County. Vendor shall provide copy of any applicable license with proposal. Vendor shall perform all electrical and engine work on generators.

TERMS

Individual departments will call to schedule any inspection, preventive maintenance or service for their generator. No work is guaranteed for generators listed in this proposal.

The County reserves the right to change, add, or delete service and/or locations.

Service call agreements will be made on an "as needed" basis. Repair work, other than the initial service call, resulting from this agreement shall not begin without a Notice to Proceed or Purchase Order from the County to the Vendor.

The vendor shall only proceed with repairs after the estimate has been approved by the department requesting the repair and a notice to proceed or purchase order has been issued.

- A "not to exceed" amount and description of work to be completed will be set at the time of the Notice to Proceed or Purchase Order agreed upon by both parties.

Awarded vendor shall furnish all labor, tools, transportation, equipment materials and supplies as required to complete the service request, to provide a working system, complete in all respects. All work shall be in compliance with Federal, State and Local Codes. All equipment or components must be installed in accordance with manufacturer's recommendations.

Vendor shall repair any damage caused by the Vendor and its employees at no cost to the County.

Modification of contract price shall be allowed only on the anniversary date of the contract. Prices throughout the initial one (1) year term shall remain firm/fixed. Written requests for price revisions after the first year shall be submitted in advance to the Jefferson County Purchasing Department. Requests shall be based upon and include documentation of the actual change in cost of components or CPI increases, involved in the contract. Price increase shall not include overhead or profit. The County reserves the right to reject any price increase and/or to terminate the contract.

All hourly cost proposals must be to service the generators listed in the IFB. Any additional costs not included on the Bid Form on page 49 of this IFB will not be allowed. This includes but is not limited to inspection fee, service call charge, mileage charges, fuel surcharges, miscellaneous supply charges.

INSPECTIONS

Vendor will provide semi-annual inspections for generators for Jefferson County upon the request of each department. These inspections shall include the following systems:

1. General Condition of Generator
    - Check generator area for obstructions
    - Wipe off unit
    - Clean oil, coolant, fuel & acid deposits
    - Check housing for leaks or corrosion
2. Starting System & Charging System
    - Visually inspect batteries for damage or leakage
    - Clean batteries with acid neutralizer
    - Clean & tighten all battery cable connections
    - Perform battery load test
    - Inspect battery charger for proper operation, loose terminals and deteriorated wiring
    - Starting motor – inspect electrical connections and wiring.
    - Air starter – inspect oil jar and feeder operation
    - Inspect alternator for proper operation, loose connections and mounting hardware
    - Check belts, pulley and voltage output
3. Engine Cooling System
    - Visually inspect radiator/heat exchanger for leaks, damage and debris
    - Check radiator/heat exchanger louver operation
    - Visually inspect coolant for correct levels and condition of coolant
    - Check coolant conditioner concentration and temperature protection
    - Check filler cap gasket and sealing surface
    - Visually inspect all hoses for deterioration
    - Check tightness of connections
    - Fan Drive Pulley & Fan – check for loose or worn pulleys, lube fan drive bearing
    - Check fan operation and clearance
    - Inspect fan belts for wear and/or deterioration. Check tension and adjust as needed
    - Inspect jacket water heater for proper operation
    - Inspect water pump visually and operationally for leaks and/or unusual noises
4. Engine Fuel System
    - Visually inspect fuel tank for leaks, damage and fuel level
    - Test day tank pump for proper operation
    - Inspect fuel condition for contaminants
    - Drain water from fuel tank of water separator
    - Visually inspect fuel lines for leaks and tightness of connections
    - Check line brackets
    - Inspect governor oil level
    - Inspect controls and linkage for proper operation. Add oil as necessary
    - Inspect fuel filters for damage, leaks and proper operation. Change when necessary
    - Fill Port Info – Special fittings, adapters needed, extra hose length, access to tank and other restrictions that may hamper fueling
5. Air Induction & Exhaust System
    - Air Filter Service Indicator – Note reading. Inspect for proper operation. Reset indicator.
    - Inspect air filter. Clean and/or replace as necessary

- Air Inlet System – Inspect piping and air filter housing for damage, loose connections and evidence of leaks
- Clean air filter housing if air filter is cleaned and replaced. Check housing seals and gaskets
- Inspect turbocharger for oil leakage or exhaust leakage. Check for unusual noises and proper operation
- Inspect exhaust manifold for damage, loose or missing hardware, and evidence of exhaust leakage and wet-stacking. Load bank recommendation if necessary
- Exhaust System – Inspect silencer and piping for damage, corrosion or leakage. Check rain cap
- Check supports for vibration damage and loose connections

6. Lube Oil System
    - Visually inspect for correct oil level and add when necessary, inspect for leaks
    - Note oil pressure
    - Operational and visual inspection of prelube pump
    - Inspect crankcase breather for proper operation. Check connections and inspect hose for deterioration. Note and report excessive blow by
7. Engine Monitors & Safety Controls (All PM Levels)
    - Check safety controls for loose connections and wiring deterioration
    - Check for proper operation of all safety controls and alarms
    - Remote Annunciator and Alarm – Inspect all panels and system alarms for proper functions
8. Ignition System (All PM Levels)
    - Check spark plug condition and electrode gap
    - Check spark plug wires for condition and connections for corrosion
    - Check ignition coils condition and connections for corrosion
9. Control Panels (All PM Levels)
    - Voltmeter – Operational check for correct reading. Check voltage level
    - Frequency Meter – Operational check for correct reading
    - Check alarm history
10. Generator Rear Bearings & Vibration Isolators
    - Lubricate generator rear bearing if applicable
    - Check vibration isolators for proper adjustment and condition
11. Transfer Switch (All PM Levels)
    - Check for leaks/corrosion on cabinets
    - Verify connections are tight on lugs
    - Check voltage across contacts
    - Lube as necessary
    - Verify exercise program
    - Functional test of unit
    - Verify time delays
    - Check for hot spots

Upon completion of the inspection, the vendor will ensure the generator is put back into stand-by mode.

Vendor will provide an inspection report within 15 days of the inspection to the department requesting the inspection that details the following:

1. Record of all findings of the inspections.
2. Record of any unsafe conditions.
3. Record of any corrective action taken.
4. Report recommendations for replacement of minor and major components.

PREVENTATIVE MAINTENANCE

Vendor will provide preventative maintenance for each generator upon the request of each department for Jefferson County as needed to maintain the proper functioning of the generators. This includes, but not limited to oil and filter changes.

Vendor will provide a report of all preventative maintenance performed on the generator to the department requesting the maintenance. Upon completion of preventative maintenance, the vendor will ensure the generator is put back into stand-by mode.

SERVICE CALLS

Vendor will provide service for generators when the generator is not functioning properly upon the request of each department or the Purchasing Department. Vendor will get approval from each department before replacing or ordering any parts for repair. Upon completion of service call, vendor will ensure the generator is put back into stand-by mode. This service will include calls 24 hours a day, 7 days a week. Vendor will also provide service during any man-made or natural disaster/emergency. Service calls in this agreement are made on an "as needed" basis as no repair work shall result from this agreement, other than the initial service call, without a written Notice to Proceed or Purchase Order from the County to the Vendor. A "not to exceed" amount and description of work to be completed will be set in the Notice to Proceed or Purchase Order agreed upon by both parties.

1. Non-Emergency Call-Out – Verbally respond to requests for non-emergency service to any generator within four (4) hours and be on site to perform repairs within forty-eight (48) hours after being contacted.
2. Emergency Call-Out – Verbally respond to requests for emergency service to any generator within one (1) hour and be on site to perform repairs within three (3) hours after being contacted.

GENERATOR LIST

This is the list of current generators located throughout Jefferson County that will need to be serviced and inspected. Generators may be added or removed upon the discretion of Jefferson County.

Department	Address	Make	Model	Output Rating	Inspection
Sabine Pass	5960 South 1st Street, Sabine Pass, TX 77655	Baldor	IDLC150 -3JU	150 KW	Yes
Courthouse	1149 Pearl St., Beaumont, TX 77701	Baldor	IDLC 2000	2 MEG	Yes
JC Service Center	7789 Vitterbo Rd, Beaumont, TX 77705	Baldor	IDLC 40	40 KW	Yes

Department	Address	Make		Output Rating	Inspection
Pct. 1	20205 W. Hwy 90, China, TX 77613			200 KW	No
Pct. 2	7759 Viterbo Rd, Beaumont, TX 77705	Baldor	IDLC 100	100 KW	No
Pct. 3	5700 Jade Ave., Pt. Arthur, TX 77640	Baldor	TS80T	60 KW	Yes
Pct. 4	7780 Boyt Rd., Beaumont, TX 77713	Baldor	IDLC 150	150 KW	No
Health & Welfare/Annex 1	1295 Pearl St., Beaumont, TX 77701	Caterpillar	D545	500 KW	Yes
Mosquito Control	8905 First St., Beaumont, TX 77705	Baldor	IDLC 80	80 KW	Yes
Narcotics/Sheriff Hanger	4640 Hanger Dr., Beaumont, TX 77705	Baldor	TS 130T	100 KW	Yes
Pt. Arthur Courthouse	709 Lakeshore Dr., Pt. Arthur, TX 77640	Baldor	TS350T	250 KW	No
Correctional Facility	5030 Hwy 69 S, Beaumont, TX 77701	Onan	500DFFB	500 KW	Yes
Correctional Facility	5030 Hwy 69 S, Beaumont, TX 77701	Onan	400DFEB	400 KW	Yes
Radio Tower Hwy 73	118235 Hwy 73, Beaumont, TX 77705	Generac	RG060545ANAX	60 KW	Yes
Radio Tower Hwy 90	1991 N. Meeker Rd, Beaumont, TX 77713	Kohler		20 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ Gate 1	Kohler	150REOZJ01	155 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ Jerry Ware Terminal	Kohler	100ROZJD	100 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ Firehouse	Kohler	20ROZJ	25 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ New Terminal	Generac	P22FE	600 KW	Yes

OFFER AND ACCEPTANCE FORM
OFFER TO CONTRACT

To Jefferson County:

We hereby offer and agree to furnish the materials or service in compliance with all terms, conditions, specifications, and amendments in the Invitation for Bid and any written exceptions in the offer.

We understand that the items in this Invitation for Bid, including, but not limited to, all required certificates are fully incorporated herein as a material and necessary part of the contract.

The undersigned hereby states, under penalty of perjury, that all information provided is true, accurate, and complete, and states that he/she has the authority to submit this bid, which will result in a binding contract if accepted by Jefferson County.

We acknowledge receipt of the following amendment(s): Addendum #1 _____, _____, _____, _____.

I certify, under penalty of perjury, that I have the legal authorization to bind the firm hereunder:

Cat5 Resources, LLC
Company Name

6757 Patillo Rd
Address

Beaumont, TX 77705
City State Zip

Cindy Perez
Signature of Person Authorized to Sign

Cindy Perez
Printed Name

CEO
Title

For clarification of this offer, contact:

Cindy Perez, CEO
Name & Title

855-550-2285 Ext 115 888-663-4161
Phone Fax

RFPs@cat5resources.com
E-mail

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

ACCEPTANCE OF OFFER

The Offer is hereby accepted for the following items: Term Contract for Generator Inspections, Routine Maintenance & Service for Jefferson County for Contract Term: One (1) year from date of award with an option to renew for two (2) additional years.

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the Invitation for Bid, including all terms, conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by Jefferson County.

This contract shall henceforth be referred to as Contract No. (IFB 26-004/CG), Term Contract for Generator Inspections, Routine Maintenance & Service for Jefferson County. The Contractor has not been authorized to commence any billable work or to provide any material or service under this contract until Contractor receives a purchase order and/or a notice to proceed from the Jefferson County Purchasing Agent.

COUNTERSIGNED:

Jeff R. Branick, County Judge
JEFFERSON COUNTY, TEXAS

Date

ATTEST:

Roxanne Acosta Hellberg, County Clerk
JEFFERSON COUNTY, TEXAS

Date

BIDDER: INSERT ALL ADDENDA BEHIND THIS PAGE.
PLEASE BE SURE TO COMPLETE, SIGN, ATTEST, AND DATE EACH ADDENDUM.

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Addendum to IFB

IFB NUMBER: (IFB 26-004/CG)

IFB TITLE: Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County

IFB DUE BY: 11:00 am, CST, Wednesday, March 25, 2026

ADDENDUM NO.: 1

ISSUED (DATE): March 2, 2026

To Bidder: This Addendum is an integral part of the IFB package under consideration by you as a Bidder in connection with the subject matter herein identified. Jefferson County deems all sealed bids to have been proffered in recognition and consideration of the entire IFB Specifications Package – *including all addenda*. For purposes of clarification, **receipt of this present Addendum by a Bidder should be evidenced by returning it (signed) as part of the Bidder's sealed bid submission.** If the bid submission has already been received by the Jefferson County Purchasing Department, Bidder should return this addendum in a separate sealed envelope, clearly marked with the IFB Title, IFB Number, and IFB Opening Date and Time, as stated above.

Reason for Issuance of this Addendum: Vendor Questions and page number clarification.

The information included herein is hereby incorporated into the documents of this present bid matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

Kathy Hileman
Witness

Witness

Approved by ____ Date: _____

Cindy Perez
Authorized Signature (Respondent)

CEO
Title of Person Signing Above

Cindy Perez
Typed Name of Business or Individual

6757 Patillo Rd., Beaumont, TX 77705
Address

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Correction: The last paragraph on page 43 incorrectly references the Bid Form as being on page 49. The Bid form is found on page 51 of the specifications.

Vendor Questions:

1. **Question:** Do you require any load bank testing to be quoted for the yearly service?
   Answer: Under Section 4: Minimum Specifications, Inspections (pg 44) it notes that Vendor will provide semi-annual inspections for generators for Jefferson County upon the request of each department. The inspection requirements are outlined.

2. **Question:** Are there any units that are located on roofs or not accessible to pull up a truck within 50 feet?
   Answer: All generators are accessible to pull a truck within 50 feet. There are no generators on roofs. The Sabine Pass generator is on a stand-alone platform 10' off the ground with built in stairs. You can drive right up to it.

3. **Question:** Are you requiring ATS Services once or twice per year?
   Answer: See question and answer #1.

4. **Question:** Does each generator have 1 ATS switch or do some units have multiple?
   Answer: Most units have one ATS switch, a few units have 2 ATS switches.

5. **Question:** Can you please also clarify if a bid bond is needed for submission of bid?
   Answer: A bid bond is not required.

BID FORM

Item	Description	Labor Charge Per Hour
1	Generator Technician during working hours (Monday-Friday, 8:00 am to 5:00 pm)	$ 105.00 /hour
2	Helper accompanying Generator Technician during working hours (Monday-Friday, 8:00 am to 5:00 pm)	$ 95.00 /hour
3	Generator Technician during after-hours (Monday-Friday 5:00 pm – 8:00 am, and all-day Saturday & Sunday)	$ 145.00 /hour
4	Helper accompanying Generator Technician during after-hours (Monday-Friday 5:00 pm – 8:00 am, and all-day Saturday & Sunday)	$ 125.00 /hour
5	Generator Technician for services on Holidays	$ 145.00 /hour
6	Helper accompanying Generator Technician for services on Holidays	$ 125.00 /hour
7	Generator Technician for disaster relief service during mandatory/voluntary County evacuation (Monday-Friday, 8:00 am to 5:00 pm)	$ 145.00 /hour
8	Helper accompanying Generator Technician for disaster relief service during mandatory/voluntary County evacuation (Monday-Friday, 8:00 am to 5:00 pm)	$ 125.00 /hour
9	Generator Technician for emergency disaster relief service after-hours during mandatory/voluntary County evacuation (Monday-Friday 5:00 pm to 8:00 am)	$ 145.00 /hour
10	Helper accompanying Generator Technician for emergency disaster relief service after-hours during mandatory/voluntary County evacuation (Monday-Friday 5:00 pm to 8:00 am)	$ 125.00 /hour
11	Generator Technician for emergency disaster service relief during mandatory/voluntary County evacuation (Holidays)	$ 145.00 /hour
12	Helper accompanying Generator Technician for emergency disaster service during mandatory/ voluntary county evacuation (Holidays)	$ 125.00 /hour
13	Additional charges (Including, but no limited to inspection fee, service call charge, mileage charges, fuel surcharges, miscellaneous supply charges)	Materials Cost + 15% Fuel is cost +$.50/per gallon

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum 1 X Date Received 3/2/26

Addendum 2 _____ Date Received_____

Addendum 3 _____ Date Received_____

BIDDER: INCLUDE FULL, SIGNED, & ATTESTED COPY OF EACH ADDENDUM ISSUED WITH BID SUBMISSION.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

VENDOR REFERENCES FORM

Bidder: Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or similar products and/or services as contained in this specification package were recently provided.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

REFERENCE ONE

Government/Company Name: Port Arthur Fire Department

Address: P. O Box 1089; 444 4th Street Port Arthur, TX 77641

Contact Person and Title: Richard "Ricky" Bodin, Battalion Chief – Fleet and Facilities

Phone: (409) 926-3679 Fax: (409) 983-8291

Email Address: richard.bodin@portarthurtx.gov Contract Period: 12/14/23-12/14/26

Scope of Work: Maintenance and Repair of Fire Dept Generators

REFERENCE TWO

Government/Company Name: T-Mobile US, Inc.

Address: 3625 123nd SE, Bellevue, WA 98006

Contact Person and Title: Donnie Jeffery, Engineer Technical Support, Network Resiliency & Safety

Phone: (972) 670-1282 Fax: Unavailable

Email Address: Donnie.Jeffery@t-mobile.com Contract Period: 6/22/2023 - current

Scope of Work: Stationary Generator Maintenance South Region

REFERENCE THREE

Government/Company Name: Chambers County (Texas)

Address: 404 Washington Avenue, Anahuac, TX 77514

Contact Person and Title: Steven Wood, Maintenance & Facility Coordinator

Phone: (409-267-2726 / Cell (281) 415-1905 Fax:

Email Address: scwood@chamberstx.gov Contract Period:

Scope of Work: Generator Installation

SIGNATURE PAGE

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would Bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions? .....**Yes** ☑ **No** ☐

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other Bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other Bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the Bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

Cat5 Resources, LLC	Cindy Perez
Bidder (Entity Name)	Signature
6757 Patillo Rd	Cindy Perez
Street & Mailing Address	Print Name
Beaumont, TX 77705	3/17/26
City, State & Zip	Date Signed
855-550-2285 Ext 113	888-663-4161
Telephone Number	Fax Number
RFPs@cat5resources.com	
E-mail Address	

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Cindy Perez

Signature of Contractor's Authorized Official

Cindy Perez, CEO

Name and Title of Contractor's Authorized Official *(Please Print)*

3/17/26

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CONFLICT OF INTEREST QUESTIONNAIRE

CONFLICT OF INTEREST QUESTIONNAIRE FORM **CIQ**
For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY
Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**
Cat5 Resources, LLC

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**
(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information in this section is being disclosed.**
N/A
Name of Officer

This section (item 3 including subparts A, B, C, & D) must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?
☐ Yes ☒ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?
☐ Yes ☒ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more?
☐ Yes ☒ No

D. Describe each employment or business and family relationship with the local government officer named in this section.

4 Cindy Perez
Signature of vendor doing business with the governmental entity

3/17/26
Date

Adopted 8/7/2015

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

LOCAL GOVERNMENT OFFICER
CONFLICTS DISCLOSURE STATEMENT – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT — FORM CIS

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20 _____, to certify which, witness my hand and seal of office.

_____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

Adopted 8/7/2015

THIS FORM IS FOR OFFICE USE ONLY

GOOD FAITH EFFORT (GFE) DETERMINATION CHECKLIST

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting HUBs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant, and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of HUB Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting HUB Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .?

☐ Yes ☐ No 1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum HUB Subcontractor participation?

☐ Yes ☐ No 2. **Notify** in writing a reasonable number of HUBs, allowing sufficient time for effective participation of the planned work to be subcontracted?

☐ Yes ☐ No 3. **Provide** HUBs that were genuinely interested in bidding on a Subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?

☐ Yes ☐ No 4. **Negotiate** in good faith with interested HUBs, and not reject bids from HUBs that qualify as lowest and responsive Bidders?

☐ Yes ☐ No 5. **Document** reasons HUBs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected HUBs?

☐ Yes ☐ No 6. If Prime Contractor/Consultant has zero (0) HUB participation, **please explain the reasons why.**

If "No" was selected, please explain and include any pertinent documentation with your bid.
If necessary, please use a separate sheet to answer the above questions.

Cindy Perez
Printed Name of Authorized Representative

Cindy Perez
Signature

CEO
Title

3/17/26
Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

NOTICE OF INTENT (NOI) TO SUBCONTRACT WITH HISTORICALLY UNDERUTILIZED BUSINESS (HUB)

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract.

Please submit one form for each HUB Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: _____ HUB: ☐ Yes ☐ No

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____

Prime Contract Amount: $ _____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____ _____ _____
Printed Name of Contractor Representative Signature of Representative Date

_____ _____ _____
Printed Name of HUB Signature of Representative Date

Note: Nothing on this Notice of Intent Form is intended to confer any rights, expressed or implied, to any third parties.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "HUB Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUCONTRACTING PARTICIPATION DECLARATION FORM

PAGE 1 OF 4

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Prime Contractor: _____ HUB: ☐ Yes ☐ No

HUB Status (Gender & Ethnicity): _____

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____ IFB/RFP No.: _____

Total Contract: $ _____ Total HUB Subcontract(s): $ _____

Construction HUB Goals: 12.8% MBE:: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African-American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR HUB OFFICE USE ONLY:

Verification date HUB Program Office reviewed and verified HUB Sub information Date: _____ Initials: _____

PART I. HUB SUBCONTRACTOR DISCLOSURE

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

HUB Subcontractor Disclosure

PART I: Continuation Sheet (Duplicate as Needed)

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

All HUB Subcontractor Participation may be verified with the HUB Subcontractor(s) listed on Part I.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUCONTRACTING PARTICIPATION DECLARATION FORM

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING HUB SUBCONTRACTING GOALS

Instructions to Bidder: Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the HUB goals for this project for the following reasons:

- ☐ All Subcontractors to be utilized are "Non-HUBs." *(Complete Part III)*
- ☐ HUBs were solicited but did not respond.
- ☐ HUBs solicited were not competitive.
- ☐ HUBs were unavailable for the following trade(s):
- ☐ Other: _____

Was the Jefferson County HUB Office contacted for assistance in locating HUBs? ☐ Yes ☑ No

PART III: DISCLOSURE OF OTHER "NON-HUB" SUBCONTRACTS

The Bidder shall use this area to provide a listing of all "Non-HUB" Subcontractors, including suppliers, that will perform under this project. A list of those "Non-HUB" Subcontractors the Bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that Bidder is the apparent low Bidder. A list of those "Non-HUB" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *HUB Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attached any necessary support documentation as required.** I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): Cindy Perez

Title: CEO

Signature: Cindy Perez

Date: 3/17/26

E-mail address: cperez@cat5resources.com

Contact person that will be in charge of invoicing for this project:

Name (print or type): Stephanie Reynolds, Accounting Director

Title: Accounting Director

Date: 3/17/26

E-mail address: accounting@cat5resources.com

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

RESIDENCE CERTIFICATION/TAX FORM

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Non-resident Bidder" refers to a person who is not a resident.

(4) "Resident Bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☒ I certify that Cat5 Resources, LLC [company name] is a Resident Bidder of Texas as defined in Government Code §2252.001.

☐ I certify that _____ [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is _____ _____ (city and state).

Taxpayer Identification Number (T.I.N.):	46-3004394
Company Name submitting bid/proposal:	Cat5 Resources, LLC
Mailing address:	6757 Patillo Rd., Beaumont, TX 77705
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**
417092	6757 Patillo Rd., Beaumont, TX 77705

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HOUSE BILL 89 VERIFICATION

I, Cindy Perez, the undersigned representative of (company or business name) Cat5 Resources, LLC (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and
2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. "**Boycott Israel**" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. "**Company**" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or an limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

Cindy Perez
Signature of Company Representative

3/17/26
Date

On this 17th day of March, 2026, personally appeared

Cindy Perez, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

KATHY RENEE HILEMAN
NOTARY PUBLIC
STATE OF TEXAS
MY COMM. EXP. 05/06/27
NOTARY ID 452888-0

Kathy Hileman
Notary Signature

3/17/26
Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SENATE BILL 252 CERTIFICATION

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

Cat5 Resources, LLC

Company Name

IFB 26-004/CG

IFB/RFP/RFQ number

Certification check performed by:

_____

Purchasing Representative

_____

Date

THIS FORM IS FOR OFFICE USE ONLY

BID AFFIDAVIT

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF Texas COUNTY OF Jasper

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas,

on this day personally appeared Cindy Perez (name), who

after being by me duly sworn, did depose and say:

"I, Cindy Perez (name) am a duly authorized officer of/agent

for Cat5 Resources, LLC (name of firm) and have been duly authorized to execute the

foregoing on behalf of the said Cat5 Resources, LLC (name of firm).

I hereby certify that the foregoing bid has not been prepared in collusion with any other Bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the Bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of Bidder: Cat5 Resources, LLC
6757 Patillo Rd., Beaumont, TX 77705

Fax: 888-663-4161 Telephone# 855-550-2285 Ext 113

by: Cindy Perez (print name) Title: CEO

Signature: Cindy Perez

SUBSCRIBED AND SWORN to before me by the above-named
Cat5 Resources, LLC /Cindy Perez on

this the 17th day of March, 2026.

Kathy Hileman
Notary Public in and for
the State of Texas

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

KATHY RENEE HILEMAN
NOTARY PUBLIC
STATE OF TEXAS
MY COMM. EXP. 05/06/27
NOTARY ID 452888-0

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

February 17, 2026

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for Invitation for Bid **(IFB 26-004/CG), Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County, Pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-327.** Specifications for this project may be obtained from the Jefferson County website, https://jeffersoncountytx.gov/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and one (1) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Purchasing Department (1st Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County, Pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-327**
BID NUMBER:	**IFB 26-004/CG**
DUE BY TIME/DATE:	**11:00 AM CT, Wednesday, March 25, 2026**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

Any questions relating to these bid requirements should be directed to Cindy Greene, Contract Specialist at 409-835-8593 or via email at: Cynthia.greene@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent, at 409-835-8593 or via email at deb.clark@jeffersoncountytx.gov.

Jefferson County encourages Disadvantaged Business Enterprises (DBEs), Minority/Women Business Enterprises (M/WBEs), and Historically Underutilized Businesses (HUBs) to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment, or the provisions of services. Individuals requiring special accommodations are requested to contact our office at least seven (7) days prior to the bid due date at 409-835-8593.

All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Bidders are strongly encouraged to carefully read the entire invitation, as failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

PUBLISH:
Beaumont Enterprise & Port Arthur News:
February 18, 2026
The Examiner:
February 19, 2026 & February 26, 2026

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BID SUBMISSIONS:

One (1) Original and one (1) Bid Copies; with all copies to include a Completed Copy of this specifications packet, in its entirety.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://jeffersoncountytx.gov/Purchasing/

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

SECTION 1: GENERAL CONDITIONS OF BIDDING AND TERMS OF CONTRACT

By execution of this document, the Vendor accepts all general and special conditions of the contract as outlined below and, in the specifications, and plans.

1. BIDDING.

1.1 BIDS.
All bids must be submitted on the bid form furnished in this package.

1.2 AUTHORIZED SIGNATURES.
The bid must be executed personally by the Vendor, duly authorized partner of the partnership, or duly authorized officer of the corporation. If executed by an agent, a power of attorney or other evidence of authority to act on behalf of the Vendor shall accompany the bid to become a valid bid.

1.3 LATE BIDS.
Bids must be in the office of the Jefferson County Purchasing Agent before or at the specified time and date bids are due. Bids received after the submission deadline shall be rejected as non-responsive and returned unopened.

1.4 WITHDRAWAL OF BID PRIOR TO OPENING.
A bid may be withdrawn before the opening date by submitting a written request to the Purchasing Agent. If time allows, the Bidder may submit a new bid. Bidder assumes full responsibility for submitting a new bid before or at the specified time and date bids are due. Jefferson County reserves the right to withdraw a request for bids before the opening date.

1.5 WITHDRAWAL OF BID AFTER OPENING.
Bidder agrees that its offer may not be withdrawn or cancelled by the Vendor for a period of ninety (90) days following the date and time designated for the receipt of bids unless otherwise stated in the bid and/or specifications.

1.6 BID AMOUNTS.
Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be interpreted in the favor of Jefferson County.

1.7 EXCEPTIONS AND/OR SUBSTITUTIONS.
All bids meeting the intent of the specifications and plans will be considered for award. Vendors taking exception to the specifications and plans, or offering substitutions, shall state these exceptions in the section provided. If bid is made on an article other than the one specified, which a Bidder considers comparable, the name and grade of said article must be specified in the bid and sufficient specifications and descriptive data must accompany same to permit thorough evaluation. The absence of stated exceptions and/or substitutions shall indicate that the Vendor has not taken any exceptions to the specifications and shall be responsible to perform in strict accordance with the specifications. As a matter of practice, Jefferson County rejects exception(s) and /or substitutions as non-responsive but reserves the right to accept any and/or all of the exception(s) and/or substitution(s) deemed to be in the best interest of Jefferson County.

1.8 ALTERNATES.
The Invitation for Bid and/or specifications may expressly allow Bidder to submit an alternate bid. Presence of such an offer shall not be considered an indication of non-responsiveness.

1.9 DESCRIPTIONS.

Unless otherwise specified, any reference to make, manufacturer and/or model used in the bid specifications is merely descriptive and not restrictive, and is used only to indicate type, style, or quality of material desired.

1.10 BID ALTERATIONS.

Bids cannot be altered or amended after submission deadline. Any interlineations, alterations, or erasures made before opening time must be initialed by the signer of the bid, guaranteeing authenticity.

1.11 TAX EXEMPT STATUS.

Jefferson County is exempt from federal excise tax and state sales tax. Unless the bid form or specifications specifically indicate otherwise, the bid price must be net, exclusive of above-mentioned taxes and will be so construed. Therefore, the bid price shall not include taxes.

1.12 QUANTITIES.

Quantities indicated are estimated quantities only and are not a commitment to buy. Approximate usage does not constitute an order, but only implies the probable quantity that will be used. Commodities will be ordered on an as-needed basis. Bidder is responsible for accurate final counts.

1.13 BID AWARD.

Award of contract shall be made to the most responsible, responsive Bidder, whose offer is determined to be the best value, taking into consideration the relative importance of price. Jefferson County reserves the right to be the sole judge as to whether items bid will serve the purpose intended.

Jefferson County reserves the right to award based upon individual line items, sections or total bid.

1.14 SILENCE OF SPECIFICATIONS FOR COMPLETE UNITS.

All materials, equipment and/or parts that will become a portion of the completed work, including items not specifically stated herein but, necessary to render the service(s) complete and operational per the specifications, are to be included in the bid price. Vendor may be required to furnish evidence that the service, as bid, will meet or exceed these requirements.

1.15 ADDENDA.

Any interpretations, corrections or changes to the specifications and plans will be made by addenda no later than forty-eight (48) hours prior to the bid opening. Addenda will be posted on the Purchasing web site. Vendors are responsible for monitoring the web site in order to remain informed on addenda. Vendors shall acknowledge receipt of all addenda with submission of bid.

1.16 GENERAL BID BOND/SURETY REQUIREMENTS.

Failure to furnish bid bond/surety, if requested, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.17 GENERAL INSURANCE REQUIREMENTS.

Failure to furnish Affidavit of Insurance, if required in these specifications, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.18 RESPONSIVENESS.

A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid

price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 RESPONSIBLE STANDING OF BIDDER.

To be considered for award, Bidder must at least: have the ability to obtain adequate financial resources, be able to comply with required or proposed delivery/completion schedule, have a satisfactory record of performance; have a satisfactory record of integrity and ethics, and be otherwise qualified and eligible to receive award.

1.20 CONFIDENTIAL/PROPRIETARY INFORMATION.

If any material in the bid submission is considered by Bidder to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Bidder), Bidder **must** clearly mark the applicable pages of bid submission to indicate each claim of confidentiality. Additionally, Bidder must include a statement on company letterhead identifying all Bid Submission section(s) and page(s) that have been marked as confidential. Jefferson County will protect from public disclosure such portions of a bid, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire bid submission is protected from disclosure because it contains some proprietary information is not acceptable, and will make the entire bid submission subject to release under the Texas Public Information Act.

By submitting a bid, Bidder agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Bidder's bid submission or other information submitted by Bidder.

1.21 PUBLIC BID OPENING.

Bidders are invited to be present at the opening of bids. After the official opening of bids, a period of not less than one week is necessary to evaluate bids. The amount of time necessary for bid evaluation may vary and is determined solely by the County. Following the bid evaluation, all bids submitted are available for public review.

2. PERFORMANCE.

2.1 DESIGN, STRENGTH, AND QUALITY.

Design, strength, and quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practices. The apparent silence of specifications and/or plans as to any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications and/or plans shall be made on the basis of this statement.

2.2 AGE AND MANUFACTURE.

All tangible goods being bid must be new and unused, unless otherwise specified, in first-class condition, of current manufacture, and furnished ready to use. All items not specifically mentioned that are required for a complete unit shall be furnished.

2.3 DELIVERY LOCATION.

All deliveries will be made to the address(es) specified on the purchase order during normal office working hours of 8:00 am CT to 4:00 pm CT, Monday through Friday, unless otherwise authorized by the Purchasing Agent or designee.

2.4 DELIVERY SCHEDULE.

Delivery time may be an important consideration in the evaluation of best value. The maximum number of days necessary for delivery ARO shall be stated in the space, if provided, on the bid form.

2.5 DELIVERY CHARGES.

All delivery and freight charges, F.O.B. destination shown on Jefferson County purchase order, as necessary to perform contract are to be included in the bid price.

2.6 INSTALLATION CHARGES.

All charges for assembly, installation and set-up shall be included in the bid price. Unless otherwise stated, assembly, installation and set-up will be required.

2.7 OPERATING INSTRUCTIONS AND TRAINING.

Clear and concise operating instructions and descriptive literature will be provided in English, if requested. On-site detailed training in the safe and efficient use and general maintenance of item(s) purchased shall be provided as needed at the request of Jefferson County. Instructions and training shall be at no additional cost to the County.

2.8 STORAGE.

Bidder agrees to provide storage of custom ordered materials, if requested, for up to thirty (30) calendar days.

2.9 COMPLIANCE WITH FEDERAL, STATE, COUNTY, AND LOCAL LAWS.

Bids must comply with all federal, state, county and local laws, including, but not limited to, all applicable standard safety, emission, and noise control requirements. Any vehicles or equipment shall contain all standard safety, emission, and noise control requirements required for the types and sizes of equipment at the time of their manufacture. The Contractor agrees, during the performance of work or service, to comply with all applicable codes and ordinances of Jefferson County or the State of Texas as they may apply, as these laws may now read, or as they may hereafter be changed or amended.

2.10 OSHA.

The Bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful Bidder will further certify that all items furnished under this project will conform and comply with federal and State of Texas OSHA standards. The successful Bidder will agree to indemnify and hold harmless Jefferson County for any and all damages that may be assessed against the County.

2.11 PATENTS AND COPYRIGHTS.

The successful Vendor agrees to protect the County from claims involving infringements of patents and/or copyrights.

2.12 SAMPLES, DEMONSTRATIONS, AND TESTING.

At Jefferson County's request and direction, Bidder shall provide product samples and/or testing of items bid to ensure compliance with specifications. Samples, demonstrations and/or testing may be requested at any point prior to or following bid award. Samples, demonstrations and/or testing may be requested upon delivery and/or any point during the term of resulting contract. All samples (including return thereof), demonstrations, and/or testing shall be at the expense of the Bidder/Vendor.

2.13 ACCEPTABILITY.

All articles enumerated in the bid shall be subject to inspection by an officer designated for that purpose by Jefferson County. If found inferior to the quality called for, or not equal in value to the specifications, deficient in workmanship or otherwise, this fact shall be certified to the Purchasing Agent, who shall have the right to reject the whole or any part of the same. Items and/or work determined to be contrary to specifications must be replaced at the vendor's expense. Inferior items not retrieved by the vendor within thirty (30) calendar days, or an otherwise agreed upon time, shall become the property of the County. If disposal of such items warrants an expense, an amount equal to the disposal expense will be deducted from amounts payable to the vendor.

2.14 MAINTENANCE.

Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 MATERIAL SAFETY DATA SHEETS.
Under the "Hazardous Communications Act," common known as the "Texas Right to Know Act," a Bidder must provide the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the Bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 EVALUATION.
Evaluation shall be used as a determinant as to which services are the most efficient and/or most economical for the County. It shall be based on all factors having a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Jefferson County Purchasing Department and recommendation to Jefferson County Commissioners' Court. Compliance with all bid requirements and needs of the using department are considered in evaluating bids. Pricing is not the only criteria for making a recommendation. The Jefferson County Purchasing Department reserves to right to contact any Bidder, at any time, to clarify, verify or requirement information with regard to this bid.

3. PURCHASE ORDERS AND PAYMENT.

3.1 PURCHASE ORDERS.
A purchase order(s) shall be generated by the Jefferson County Purchasing Agent to the successful vendor. The purchase order number must appear on all itemized invoices and packing slips. The County will not be held responsible for any work orders placed and/or performed without a valid current purchase order number. Payment will be made for all services rendered and accepted by the contract administrator for which a valid invoice has been received.

3.2 INVOICES.
All invoices shall reference the Purchase Order number. Invoices shall reference the bid item number or a detailed description for each item invoiced. If an item purchased and itemized on the invoice does not correspond to an item in any of the categories awarded to the vendor, invoice shall reference the item as "N/C" to indicate that it is a non-contract item. This requirement is to assist the County in verifying contract pricing on all invoices. Payment will be made under terms of net thirty (30) days unless otherwise agreed upon by seller and the purchasing department.

3.3 PROMPT PAYMENT.
In accordance with the State of Texas Prompt Payment Act, Article 601f V.T.C.S., payment will be made after receive and acceptance by the County of the merchandise ordered and of a valid invoice. Successful Bidder(s) is required to pay Subcontractors within ten (10) days after the successful Bidder receives payment from the County.

3.4 FUNDING.
Jefferson County is operated and funded on an October 1 to September 30 basis; accordingly, the County reserves the right to terminate, without liability to the County, any contract for which funding is not available.

4. CONTRACT.

4.1 CONTRACT DEFINITION.
The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson County, shall constitute a contract equally binding between the successful Bidder and Jefferson County.

4.2 CHANGE ORDER.
No different or additional terms will become part of this contract with the exception of a change order. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing and at the discretion and approval of

Jefferson County. No change order will be binding unless signed by an authorized representative of the County and the vendor.

4.3 PRICE RE-DETERIMINATION.

A price re-determination may be requested at the time of annual renewal. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The Bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

4.4 TERMINATION.

Jefferson County reserves the right to terminate the contract for default if the Bidder breached any of the terms therein, including warranties of Bidder or if the Bidder becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies which Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or service within the proper amount of time, and/or to properly perform any and all services required to Jefferson County's satisfaction and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified. Jefferson County reserves the right to award canceled contract to the next lowest Bidder. Bidder, in submitting this bid, agrees that Jefferson County shall not be liable to prosecution for damages in the event that the County declares the Bidder in default.

4.5 CONFLICT OF INTEREST.

Employees of the County are not permitted to maintain financial interest in, or receive payment, directly or indirectly, borrow from, lend to, invest in, or engage in any substantial financial transaction with any individual, organization, supplier, or Subcontractor who does business with the County without disclosure. When conflict of interest is discovered, it shall be grounds for termination of contract.

4.6 INTEREST BY PUBLIC OFFICIALS.

No public official shall have interest in this contract, in accordance with Texas Local Government Code.

4.7 PRE-AWARD/CONTRACT CONTACT BETWEEN COUNTY AND VENDORS.

The Jefferson County Purchasing Department may initiate discussions with selected vendors; however, discussions may not be initiated by vendors.

The Jefferson County Purchasing Department expects to conduct discussions with vendor's representatives authorized to contractually obligate the vendor with an offer.

Vendors shall not contact any Jefferson County personnel during the IFB process without the express permission from the Jefferson County Purchasing Agent. The Purchasing Agent will disqualify any vendor who has made site visits, contacted Jefferson County personnel, or distributed any literature without authorization from the Jefferson County Purchasing Department.

All correspondence relating to this IFB, from advertisement to award shall be sent to the Jefferson County Purchasing Department. All presentations and/or meetings between Jefferson County and the vendor relating to this IFB shall be coordinated by the Jefferson County Purchasing Department.

Selected vendors may be expected to make a presentation/product demonstration to an Evaluation Committee. Proposals, vendor presentations, and product/service evaluations may develop into negotiating sessions with the vendor(s) as selected by the Evaluation Committee. Jefferson County expects to conduct negotiations with vendor

representatives authorized to contractually obligate the vendor with an offer. If vendor is unable to agree to contract terms and conditions, Jefferson County reserves the right to terminate contract negotiations with that vendor and initiate negotiations with another vendor. In addition to a presentation, visits by the Evaluation Committee to representative vendor client sites may be conducted where the proposed solution can be demonstrated in a production environment.

4.8 INJURIES OR DAMAGES RESULTING FROM NEGLIGENCE.

Successful vendor shall defend, indemnify and save harmless Jefferson County and all its officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful vendor, or of any agent, employee, Subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful vendor shall pay any judgment with cost which may be obtained against Jefferson County growing out of such injury or damages.

4.9 WARRANTY.

The successful vendor shall warrant that all materials utilized in the performance of this contract shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship and title.

4.10 UNIFORM COMMERCIAL CODE.

The successful vendor and Jefferson County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

4.11 VENUE.

This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the County of Jefferson, Texas.

4.12 SALE, ASSIGNMENT, OR TRANSFER OF CONTRACT.

The successful vendor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written consent of Jefferson County.

4.13 SILENCE OF SPECIFICATIONS.

The apparent silence of these specifications as to any detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

5. REJECTION OR WITHDRAWAL.

Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within 90 days after opening date.

6. EMERGENCY/DECLARED DISASTER REQUIREMENTS.

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's

supplier(s).

Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling and drayage fees may apply.

7. AWARD.

The bid will be awarded to the responsible, responsive bidder(s) whose bid, conforming to the solicitation, will be most advantageous to Jefferson County – price and other factors considered. Unless otherwise specified in this IFB, Jefferson County reserves the right to accept a bid in whole or in part, and to award by item or by group, whichever is deemed to be in the best interest of Jefferson County. Any bidder who is in default to Jefferson County at the time of submittal of the bid shall have that bid rejected.

Jefferson County reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial non-conformity in the offer, as determined by Jefferson County, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Jefferson County shall consider the qualifications of the bidders, and, where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment.

In addition, Jefferson County may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County reserves the right to award this contract on the basis of **lowest and best bid** in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one offeror, and/or to reject any or all bids. In the event the lowest dollar offeror meeting specifications is not a awarded a contract, Offeror may appear before the Commissioners' Court and present evidence concerning Offeror responsibility after officially notifying the Office of the Purchasing Agent of Offeror's intent to appear.

8. CONTRACT.

A response to an IFB is an offer to contract with Jefferson County based upon the terms, conditions, and specifications contained in the IFB. Bids do not become contracts unless and until they are executed by Jefferson County, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the IFB, unless any of the terms and conditions is modified by an IFB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

9. WAIVER OF SUBROGATION.

Bidder and bidder's insurance carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from bidder's performance under this agreement.

10. FISCAL FUNDING.

A multi-year contract (if requested by the specifications) continuing as a result of an extension option must include fiscal funding out. If, for any reason, funds are not appropriated to continue the contract, said contract shall become null and void.

11. BID RESULTS.

Bid results are not provided in response to telephone inquiries. A preliminary tabulation of bids received will be posted on the Purchasing web page at https://jeffersoncountytx.gov/Purchasing/ as soon as possible following bid opening. A final tabulation will be posted following bid award, and will also be available for review in the Purchasing Department.

12. CHANGES AND ADDENDA TO BID DOCUMENTS.

Each change or addendum issued in relation to this IFB document will be on file in the Office of the Purchasing Agent, and will be posted on the Purchasing web site as soon as possible. It shall be the bidder's responsibility to make inquiry as to change or addenda issued, and to monitor the web site. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the Office of the County Purchasing Agent.

13. SPECIFICATIONS.

Unless otherwise stated by the bidder, the bid will be considered as being in accordance with Jefferson County's applicable standard specifications, and any special specifications outlined in the bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of Jefferson County, and should not be construed as excluding bids on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid.

Jefferson County reserves the right to determine if equipment/ product being bid is an acceptable alternate. All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of the bid, may be considered non-responsive.

14. DELIVERY.

Bids shall include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder (in writing on the included Bid Form), prices bid will be considered as being based on F.O.B. destination/delivered freight included.

15. INTERPRETATION OF BID AN/OR CONTRACT DOCUMENTS.

All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening, in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. Inquiries received that are not made in a timely fashion may or may not be considered.

16. CURRENCY.

Prices calculated by the bidder shall be stated in U.S. dollars.

17. PRICING.

Prices shall be stated in units of quantity specified in the bid documents. In case of discrepancy in computing the amount of the bid, the unit price shall govern.

18. NOTICE TO PROCEED/PURCHASE ORDER.

The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.

19. CERTIFICATION.

By signing the offer section of the Offer and Acceptance page, Bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.
- The Bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.
- The Bidder hereby certifies that the individual signing the bid is an authorized agent for the Bidder and has the authority to bind the Bidder to the contract.

20. DEFINITIONS.

"County" – Jefferson County, Texas.
"Contractor" – The Bidder whose proposal is accepted by Jefferson County.

21. SMALL, MINORITY & WOMEN BUSINESS ENTERPRISE PARTICIPATION

It is the desire of Jefferson County to increase the participation of Small, Minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

Minority owned business may be eligible for contract procurement assistance with public and private sector entities from MBDA Centers

Dallas Fort Worth MBDA Business Center
8828 N. Stemmons Freeway, Ste. 550 B
Dallas, TX 75247
214-920-2436
Website: https://www.mbdadfw.com
Email: admin1@mbdadallas.com

El Paso MBDA Business Center
2401 East Missouri Avenue
El Paso, TX 79903
915-351-6232
Website: https://www.mbda.gov/business-center/el-paso-mbda-business-center
Email: treed@ephcc.org

San Antonio MBDA Business Center
501 W. Cesar E. Chavez Blvd., Ste. 3.324 B
San Antonio, TX 78207
210-458-2480
Website: https://www.mbda.gov/business-center/san-antonio-mbda-business-center
Email: Jacqueline.jackson@utsa.edu

Small and woman-owned business may be eligible for assistance from U.S. Small Business Administration (SBA):
Website: https://www.sba.gov/local-assistance

Dallas/Fort Worth District Office
150 West Parkway, Ste. 130
Euless, TX 76040
817-684-5500
Website: https://www.sba.gov/district/dallas-fort-worth
Email: dfwdo.email@sba.gov

El Paso District Office
211 N. Florence St, Ste. 201

El Paso, TX 79901
915-834-4600
Website: https://www.sba.gov/district/el-paso
Email: lee.vega@sba.gov

Houston District Office
8701 S. Gessner Dr, Ste. 1200
Houston, TX 77074
713-773-6500
Website: https://www.sba.gov/district/houston
Email: houston@sba.gov

Lower Rio Grande Valley District Office
2422 E. Tyler Ave, Suite E
Harlingen, TX 78550
956-427-8533
Website: https://www.sba.gov/district/lower-rio-grande-valley
Email: lrgvdo.email@sba.gov

San Antonio District Office
615 E. Houston St, Ste 298
San Antonio, TX 78205
210-403-5900
Website: https://www.sba.gov/district/san-antonio
Email: sado.email@sba.gov

West Texas District Office
1205 Texas Ave, Room 408
Lubbock, TX 79401
806-472-7462
Website: https://www.sba.gov/district/west-texas
Email: lubdo@sba.gov

HUB certification information can be found at:

Statewide Procurement Division HUB Program
P.O. Box 13528
Austin, TX 78711
512-463-5872 or 888-863-5881
Website: https://comptroller.texas.gov/purchasing/vendor/hub
Email: statewidehubprogram@cpa.texas.gov

PROPOSER: INSERT HUB, SBE, MBE or WBE Certification behind this page.

SECTION 2: FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) MANDATED CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY UNDER FEDERAL AWARDS REQUIRED BY 2 C.F.R. §200.327 APPENDIX II TO 2 CFR §200

2 CFR 200.327 Contract provisions. The non-Federal entity's contracts should contain applicable provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards. The non-Federal entity's contracts must contain the provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards, as applicable. *Language as of January 3, 2025.

THRESHOLD	PROVISION	CITATION
>$250,000 (Simplified Acquisition Threshold)	Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. Although not required for contract at or below the SAT, FEMA suggests including a remedies provision. The NFE should consult their servicing legal counsel to determine whether and how remedies for breach of contract are permissible under applicable state, local, or tribal laws or regulations.	2 CFR 200 APPENDIX II (A)
>$10,000	All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement. FEMA suggests including a termination for cause and for convenience in all contracts even when not required. The NFE should consult their servicing legal counsel to determine whether and how termination provisions are permissible under applicable state, local, or tribal laws or regulations.	2 CFR 200 APPENDIX II (B)
None	Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor." 41 CFR 60-1.4 Equal opportunity clause. b) Federally assisted construction contracts. (1) Except as otherwise provided, each administering agency shall require the inclusion of the following language as a condition of any grant, contract, loan, insurance, or guarantee involving federally assisted construction which is not exempt from the requirements of the equal opportunity clause: The [recipient] hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any	2 CFR 200 APPENDIX II (C) and 41 CFR §60-1.4(b)

Federal program involving such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause:

During the performance of this contract, the contractor agrees as follows:

The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through
(8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The [recipient] further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the [recipient] so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The [recipient] agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

	The [recipient] further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the [recipient] agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the [recipient] under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such [recipient]; and refer the case to the Department of Justice for appropriate legal proceedings.	
>$2,000	Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non- Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. **FEMA PA and HMGP do not require these clauses unless it is a requirement for matching funds by another federal program legislation such as CDBG-DR.** When required, prime construction contracts over $2,000 awarded by NFEs must include a provision for compliance with the Davis-Bacon Act. If applicable per the standard described above, the NFE must include the provisions at 29 C.F.R. § 5.5(a)(1)-(10) in full into all applicable contracts, and all applicable contractors must include these provisions in full in any subcontracts.	2 CFR 200 APPENDIX II (D); 40 U.S.C. §§ 3141-3144 and 3146-3148; supplemented by 29 C.F.R. Part 5; 40 U.S.C. § 3145; supplemented by 29 C.F.R. Part 3

	In situations where the Davis-Bacon Act does not apply, neither does the Copeland "Anti-Kickback" Act. Sample contract clauses are provided in the FEMA Contract Provisions Guide.	
> $100,000+ Mechanics or Laborers	Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence. **Applicability** **This required contract provision applies to all procurements over $100,000 that involve the employment of mechanics, laborers, and construction work. These requirements *do not* apply to the purchase of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.** Required Language Compliance with the Contract Work Hours and Safety Standards Act. 1. *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 2. *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section. 3. *Withholding for unpaid wages and liquidated damages.* The (insert	2 CFR 200 APPENDIX II (E); 40 U.S.C. §§ 3701-3708; supplemented by 29 C.F.R. Part 5

	name of grant recipient or subrecipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section. 4. *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section. **For contracts that are only subject to Contract Work Hours and Safety Standards Act and are not subject to the other statutes in 29 C.F.R. § 5.1 where an additional contract provision is required, FEMA suggests including the language below.** Suggested Language Further Compliance with the Contract Work Hours and Safety Standards Act. 1. The contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Records to be maintained under this provision shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Department of Homeland Security, the Federal Emergency Management Agency, and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.	
None	Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.	2 CFR 200 APPENDIX II (F); Funding Agreement; definition found under 37 C.F.R. § 401.2(a).

	This provision does not apply to all FEMA grant and cooperative agreement programs including PA and HMGP as awards under these programs do not meet the definition.	
>$150,000	Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended - Contracts and subgrants of amounts in excess of $150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). Suggested Language: Clean Air Act The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 *et seq.* The contractor agrees to report each violation to the (insert name of non-federal entity entering into the contract) and understands and agrees that the (insert name of the non-federal entity entering into the contract) will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal assistance provided by FEMA. Federal Water Pollution Control Act The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 *et seq.* The contractor agrees to report each violation to the (insert name of the non-federal entity entering into the contract) and understands and agrees that the (insert name of the non-federal entity entering into the contract) will, in turn, report each violation as required to assure notification to the (insert name of the pass-through entity, if applicable), Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal assistance provided by FEMA.	2 CFR 200 APPENDIX II (G); 42 U.S.C. §§ 7401-7671q; 33 U.S.C. §§ 1251-1387
>$25,000	Debarment and Suspension (Executive Orders 12549 and 12689) - A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989	2 CFR 200 APPENDIX II (H); 2 C.F.R. Part 180

	Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. The following provides a debarment and suspension clause. It incorporates an optional method of verifying that contractors are not excluded or disqualified. Suggested Language: Suspension and Debarment This contract is a covered transaction for purposes of 2 C.F.R. Part 180 and 2 C.F.R. Part 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935). The contractor must comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into. This certification is a material representation of fact relied upon by (insert name of recipient/subrecipient/applicant). If it is later determined that the contractor did not comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, in addition to remedies available to (insert name of recipient/subrecipient/applicant), the federal government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.	(implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989)); 2 C.F.R. Part 3000 (Department of Homeland Security regulations for Non-procurement Debarment and Suspension, implementing 2 C.F.R. Part 180).
> $100,000; and Certification required for all contracts greater than $100,000	Byrd Anti-Lobbying Amendment (31 U.S.C. 1352) - Contractors that apply or bid for an award exceeding $100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non- Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award. **If applicable, contractors must sign and submit the following certification to the NFE with each bid or offer exceeding $100,000.** Required Certification: CERTIFICATION REGARDING LOBBYING (APPENDIX A, 44 C.F.R. PART 18)	2 CFR 200 APPENDIX II (I) and 24 CFR §570.303; (citing 31 U.S.C. § 1352); 44 C.F.R. § 18.110
	See 2 CFR §200.323.	2 CFR 200 APPENDIX II (J)
	See 2 CFR §200.216.	2 CFR 200 APPENDIX II (K)
	See 2 CFR §200.322.	2 CFR 200 APPENDIX II (L)

Work involves the use of materials, and the contract is for more than $10,000	A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired during the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines. Suggested Language: In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired— Competitively within a timeframe providing for compliance with the contract performance schedule; Meeting contract performance requirements; or At a reasonable price. Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines webpage: https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.	2 CFR 200.323; Pub. L. No. 89-272 (1965) (codified as amended by the Resource Conservation and Recovery Act at 42 U.S.C. § 6962)
>$100,000	*§135.38 Section 3 clause* *All section 3 covered contracts shall include the following clause (referred to as the section 3 clause):* A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing. B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations. C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement	

	or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin. D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135. E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135. F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.	
	G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).	
None; All FEMA declarations and awards issued on or after November 12, 2020.	Section 889(b)(1) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (FY2019 NDAA) and 2 C.F.R. § 200.216, as implemented by FEMA Policy 405-143-1, Prohibitions on Expending FEMA Award Funds for Covered Telecommunications Equipment or Services (Interim), prohibit the obligation or expending of federal award funds on certain telecommunication products or from certain entities for national security reasons. Effective August 13, 2020, FEMA recipients and subrecipients, as well as their contractors and subcontractors, may not obligate or expend any FEMA award funds to: Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:	2 CFR 200.216

	(1) Procure or obtain; (2) Extend or renew a contract to procure or obtain; or (3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). (i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities). (ii) Telecommunications or video surveillance services provided by such entities or using such equipment. (iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country. (b) In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained. (c) See Public Law 115-232, section 889 for additional information. (d) See also § 200.471.	
None	The Federal awarding agency must establish conflict of interest policies for Federal awards. The non-Federal entity must disclose in writing any potential conflict of interest to the Federal awarding agency or pass-through entity in accordance with applicable Federal awarding agency policy.	2 CFR 200.112
None	The Federal awarding agency and the non-Federal entity should, whenever practicable, collect, transmit, and store Federal award-related information in open and machine-readable formats rather than in closed formats or on paper in accordance with applicable legislative requirements. A machine-readable format is a format in a standard computer language (not English text) that can be read automatically by a web browser or computer system. The Federal awarding agency or pass-through entity must always provide or accept paper versions of Federal award-related information to and from the non-Federal entity upon request. If	2 CFR 200.336

	paper copies are submitted, the Federal awarding agency or pass-through entity must not require more than an original and two copies. When original records are electronic and cannot be altered, there is no need to create and retain paper copies. When original records are paper, electronic versions may be substituted through the use of duplication or other forms of electronic media provided that they are subject to periodic quality control reviews, provide reasonable safeguards against alteration, and remain readable.	
None; All FEMA declarations and awards issued on or after November 12, 2020.	Suggested Language: If subcontracts are to be let, the prime contractor is required to take all necessary steps identified in 2 C.F.R. § 200.321(b)(1)-(5) listed below to ensure that small and minority businesses, women's business enterprises, and labor surplus area firms are used when possible. Contracting with HUB, small and minority businesses, women's business enterprises, and labor surplus area firms. (a) When possible, the recipient or subrecipient should ensure that small businesses, minority businesses, women's business enterprises, veteran-owned businesses, and labor surplus area firms (See U.S. Department of Labor's list) are considered as set forth below. (b) Such consideration means: (1) These business types are included on solicitation lists; (2) These business types are solicited whenever they are deemed eligible as potential sources; (3) Dividing procurement transactions into separate procurements to permit maximum participation by these business types; (4) Establishing delivery schedules (for example, the percentage of an order to be delivered by a given date of each month) that encourage participation by these business types; (5) Utilizing organizations such as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and (6) Requiring a contractor under a Federal award to apply this section to subcontracts.	2 C.F.R. § 200.321(b)(1)-(5)
None	Financial records, supporting documents, statistical records, and all other non- Federal entity records pertinent to a Federal award must be retained for a period of three years from the date of submission of the final expenditure report or, for Federal awards that are renewed quarterly or annually, from the date of the submission of the quarterly or annual financial report, respectively, as reported to the Federal awarding agency or pass-through entity in the case of a subrecipient. Federal awarding agencies and pass-through entities must not impose any other record retention requirements upon non-Federal entities. The only exceptions are the following: (a) If any litigation, claim, or audit is started before the expiration of the 3-year period, the records must be retained until all litigation, claims, or audit findings involving the records have been resolved and final action taken. (b) When the non-Federal entity is notified in writing by the Federal awarding agency, cognizant agency for audit, oversight agency for audit, cognizant agency for indirect costs, or pass-through entity to extend the retention period. (c) Records for real property and equipment acquired with Federal funds	2 CFR 200.334; and 200.337

	must be retained for 3 years after final disposition. (d) When records are transferred to or maintained by the Federal awarding agency or pass-through entity, the 3-year retention requirement is not applicable to the non-Federal entity. (e) Records for program income transactions after the period of performance. In some cases recipients must report program income after the period of performance. Where there is such a requirement, the retention period for the records pertaining to the earning of the program income starts from the end of the non-Federal entity's fiscal year in which the program income is earned. (f) Indirect cost rate proposals and cost allocations plans. This paragraph applies to the following types of documents and their supporting records: Indirect cost rate computations or proposals, cost allocation plans, and any similar accounting computations of the rate at which a particular group of costs is chargeable (such as computer usage chargeback rates or composite fringe benefit rates). (1) *If submitted for negotiation.* If the proposal, plan, or other computation is required to be submitted to the Federal Government (or to the pass-through entity) to form the basis for negotiation of the rate, then the 3-year retention period for its supporting records starts from the date of such submission. (2) *If not submitted for negotiation.* If the proposal, plan, or other computation is not required to be submitted to the Federal Government (or to the pass-through entity) for negotiation purposes, then the 3-year retention period for the proposal, plan, or computation and its supporting records starts from the end of the fiscal year (or other accounting period) covered by the proposal, plan, or other computation. Suggested Language for All Procurements: a. The Contractor agrees to provide (insert non-federal entity), the Texas Division of Emergency Management (TDEM), the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions. b. The FIRM agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed. c. The CONTRACTOR agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract. d. In compliance with section 1225 of the Disaster Recovery Reform Act of 2018, the (insert name of the non-federal entity) and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.	
None	CONTRACTS WITH COMPANIES ENGAGED IN BUSINESS WITH IRAN, SUDAN, OR FOREIGN TERRORIST ORGANIZATION PROHIBITED. A governmental Corporation may not enter into a governmental contract with a company that	United States Code 19 U.S.C. 2511

	is identified on a list prepared and maintained by the U.S. Department of Treasury under Executive Order 13224.The term "foreign terrorist organization" in this paragraph has the meaning assigned to such a term in Section 8 U.S.C.1189(a)(1) of the United States Code.	
>$100,000	PROVISION REQUIRED IN CONTRACT. (a) This section applies only to a contract that: (1) is between a governmental entity and a company with 10 or more full-time employees; and (2) has a value of $100,000 or more that is to be paid wholly or partly from public funds of the governmental entity. (b) A governmental Corporation may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and will not boycott Israel during the term of the contract.	(Adhere to your State's Local Government Code)
Option Contract Language for contracts awarded prior to Grant Award	The contract award is contingent upon the receipt of federal funds. If no such funds are awarded, the contract shall terminate.	Optional
	Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act. Suggested Language: The CONTRACTOR shall comply with the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).	42 U.S.C. 6201
	The Firm agrees that no otherwise qualified individual with disabilities shall, solely by reason of his/her disability, be denied the benefits of, or be subjected to discrimination, including discrimination in employment, under any program or activity receiving federal financial assistance.	Section 504 of the Rehabilitation Act of 1973, as amended.
	Pursuant to the *Violence Against Women Act Reauthorization of 2022*, the Grant Recipient must certify that local policies do not interfere with the residents' Right to Report Crime and Emergencies from One's Home. The certification will confirm that no ordinances, local regulations, or policies adopted by the local government and currently in effect contain any financial or regulatory penalty imposed on property owners or residents as a result of any use of emergency services, or that the Grant Recipient is actively addressing such local regulations.	Pub. L. 117-103, 136 Stat. 49

BYRD ANTI-LOBBYING CERTIFICATION

Certification for Contracts, Grants, Loans, and Cooperative Agreements-The undersigned certifies, to the best of his or her knowledge and belief, that:

1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor GenServe certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C.Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Jack Leonard

Signature of Contractor's Authorized Official

Jack Leonard Account Executive

Name and Title of Contractor's Authorized Official

2/27/2026

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DEBARMENT/SUSPENSION CERTIFICATION

Non-Federal entities and Contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (No procurement Debarment and Suspension).

This requirement applies to all FEMA grant and cooperative agreement programs.

Federal Executive Order (E .O.) 12549 "Debarment" requires that all Contractors receiving individual awards, using federal funds, and all sub recipients certify that the organization and its principals are not debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency from doing business with the Federal Government. By signing this document, you certify that your organization and its principals are not debarred. Failure to comply or attempts to edit this language may disqualify your bid. Information on debarment is available at the following websites: www.sam.gov and https://acguisition.qov/far/index.html see section 52.209-6.

The Contractor GenServe certifies or affirms by your signature that neither you nor your principal is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

Jack Leonard

Signature of Contractor's Authorized Official

Jack Leonard Account Executive

Name and Title of Contractor's Authorized Official

2/27/2026

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CIVIL RIGHTS COMPLIANCE PROVISIONS

1. **EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause)**

(For all awarded contracts that meet the definition of "federally assisted construction contract" provided in 41 CFR Part 60-1.3)

During the performance of this contract, the Contractor agrees as follows:

1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

   Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

3) The Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.

4) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

5) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

6) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

7) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or order this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

8) The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each Subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

CIVIL RIGHTS COMPLIANCE PROVISIONS (CONTINUED)

Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or vendor as a result of such direction by the administering agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of Contractors and Subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a Contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon Contractors and Subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

Jack Leonard

Signature of Contractor's Authorized Official

Jack Leonard Account Executive

Name and Title of Contractor's Authorized Official

2/27/2026

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS

The following requirements and instructions **supersede** General Requirements where applicable.

1. SUBMISSION OF BID.

Bidder is Responsible for Submitting:

One (1) Original and one (1) Bid Copies; with all copies to include a Completed Copy of this Specifications Packet , **in its entirety**.

The County requests that bid submissions NOT be bound by staples or glued spines.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://jeffersoncountytx.gov/Purchasing/

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Bids must be submitted in complete original form by mail or messenger to the following address:
Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

BID PACKAGING: Bidder shall submit response in a tightly sealed opaque envelope or box, plainly marked "SEALED BID." The outside of the envelope of box shall also include the IFB Number, IFB Name, IFB Due Date, and the Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

All submissions must be received by 11:00 am CT, Wednesday, March 25, 2026.

Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.

Jefferson County will not accept any responsibility for bids being delivered by third party carriers.

Late bids will not be accepted and will be returned unopened to the Bidder.
Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB.

All bid responses submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.

All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

COURTHOUSE SECURITY: All visitors to the Courthouse must pass through Security. Respondents planning to hand deliver proposals must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal. Mondays and Tuesdays are particularly heavy days.

In response to the Covid-19 pandemic, Jefferson County has implemented precautionary measures as currently recommended by the CDC within its facilities. Bidders are strongly urged to plan accordingly.

COUNTY HOLIDAYS (2026):

~~January 1, 2026 (Thursday) - New Year's~~
~~January 19 (Monday) - Martin Luther King, Jr. Day~~
April 3 (Friday) - Good Friday
May 25 (Monday) - Memorial Day
June 19 (Friday) - Juneteenth
July 3 Observed (Friday) - Independence Day
September 7 (Monday) - Labor Day
November 11 (Wednesday) - Veteran's Day
November 26 & 27 (Thursday & Friday) - Thanksgiving
December 24 & 25 (Thursday & Friday) Christmas

Submissions During Time of Inclement Weather, Disaster, or Emergency:

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the IFB closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the IFB and urgent County requirements preclude amendment to the IFB, the time specified for receipt of Statements of Qualifications will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

2. PRE-BID MEETING AND WALK-THROUGH.

Due to the nature of this Bid, a Pre-Bid Conference will not be held for this project.

3. QUESTIONS/DEADLINE FOR QUESTIONS.

Questions may be emailed to Cindy Greene, Contract Specialist, at: Cynthia.greene@jeffersoncountytx.gov. If no response within 72 hours, email Deborah Clark, Purchasing Agent at: deb.clark@jeffersoncountytx.gov
The Deadline for asking questions or requesting additional information (in writing) is 5:00 pm, CT, **Friday, February 27, 2026.**

4. VENDOR REGISTRATION (System for Award Management).

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

In instances where a vendor has either an "Inactive" SAM Registration or is not currently registered with the System for Award Management, the Purchasing Department may *initially* accept proof (printout from the SAM website) that the vendor has begun the registration process in order for the IFB/RFQ/RFP submission to be considered as "responsive" to the specifications for the project.
However, the SAM Registration must be completed (showing "active" status, with no exclusions) prior to the award and/or execution of an agreement or contract for the project.

BIDDER: INSERT PROOF OF SYSTEM FOR AWARD MANAGEMENT (SAM) BEHIND THIS PAGE.

GenServe SAM #

Federal Cage Code = 4PTE7 / SAM # MKULZ3EC7WB8. Genserve LLC has been registered in SAM.gov since March 20, 2007.

5. FORM 1295 (Texas Ethics Commission) SUBMISSSION REQUIREMENT/INSTRUCTIONS FOR BIDDERS.
All Non-Exempt Bidders are required to submit a completed FORM 1295 with bid submission.

1. Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information on Form 1295, and print a copy of the completed form.
The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department **with bid submission.**

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

A sample of a completed FORM 1295 is included on **PAGE 36**.

FORM 1295 Implementation Background:
In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

Question: Will the date of birth and address provided appear on the TEC's website when the form is filed?

Answer: No. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application. Although the TEC does not capture the date of birth and street address of the signatory, the contracting state agency or governmental agency will have a physical copy of the form that includes the date of birth and address of the signatory. The TEC cannot answer whether the contracting state agency or governmental agency may release such information. Questions regarding the Texas Public Information Act may be directed to the Office of the Attorney General. See also Paxton v. City of Dall., No. 03-13-00546-CV, 2015 Tex. App. LEXIS 5228, at *10-11 (App.—Austin May 22, 2015) (mem. op.) (pet. denied) (available here)

FORM 1295 EXEMPTIONS:
What type of contracts are exempt from the Form 1295 filing requirement under the amended law?
The amended law adds to the list of types of contract exempt from the Form 1295 filing requirement.

A completed Form 1295 is not required for:
- a sponsored research contract of an institution of higher education
- an interagency contract of a state agency or an institution of higher education
- a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and any qualified vendor is eligible for the contract
- a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity
- a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code
- a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

BIDDER: INSERT COMPLETED FORM 1295 BEHIND THIS PAGE.

CERTIFICATE OF INTERESTED PARTIES

FORM **1295**

1 of 1

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2026-1432712

Date Filed:
03/12/2026

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.
GenServe LLC
Houston, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.
Jefferson County, Texas

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.
IFB 26-004/CG
Generator inspections, routine maintenance and services for Jefferson County.

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
Aurora Capital	Los Angeles, CA United States	X	

5 Check only if there is NO Interested Party. ☐

6 UNSWORN DECLARATION

My name is James T. Bannon, and my date of birth is 4/17/1982.

My address is 1000 Continental Drive, King of Prussia (city), PA (state), 19406 (zip code), USA (country).

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Montgomery County, State of PA, on the 12th day of March (month), 2026 (year).

Signature of authorized agent of contracting business entity
(Declarant)

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS (CONTINUED)

6. MULTIPLE VENDOR AWARD.

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

7. DELIVERY.

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the Contractor, at the discretion of, and at no additional charge to, Jefferson County.

8. PAYMENT.

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to:
Jefferson County Auditing Department
Attention: Accounts Payable
1149 Pearl Street, 7th floor
Beaumont, TX 77701.

9. USAGE REPORTS.

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

10. INSURANCE.

The Contractor (including any and all Subcontractors as defined in Section 11.1.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the Contractor. These requirements do not establish limits of the Contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):
Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation Statutory Coverage (See Section 9 Below)

11. WORKERS' COMPENSATION INSURANCE

11.1 Definitions:

11.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

11.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the Contractor's/person's work on the project has been completed and accepted by the governmental entity.

11.1.3 **Persons providing services on the project ("Subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the Contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the Contractor and regardless of whether that person has employees. This includes, without limitation, independent Contractors, Subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

11.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the Contractor providing services on the project, for the duration of the project.

11.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – **refer to Section 10 above**.

11.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

11.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

11.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

11.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

11.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

11.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

11.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

11.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

11.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees providing services on the project, for the duration of the project.

11.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

11.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

11.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

11.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

11.9.4.2 the coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

11.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

11.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

11.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs **11.1. – 11.7.**, with the certificates of coverage to be provided to the person for whom they are providing services.

11.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the Contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the Contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

11.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

BIDDER: INSERT COPY OF CERTIFICATE OF INSURANCE (COI) BEHIND THIS PAGE.

Note: For bid purposes, a general COI will suffice. However, a COI that includes the notation that "Jefferson County as an additional insured" will be required from Awarded Bidder(s) prior to the issuance of a Purchase Order.

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 2/24/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Hylant - Fort Wayne 6714 Pointe Inverness Way Ste 100 Fort Wayne IN 46804-7935 License#: 23894	**CONTACT NAME:** Sarah Olney **PHONE (A/C, No, Ext):** 260-969-3963 **FAX (A/C, No):** 260-969-3999 **E-MAIL ADDRESS:** Sarah.Olney@hylant.com
INSURED GenServe LLC 100 Newton Road Plainview, NY 11803 GENSINC-01	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** **INSURER A :** Starr Specialty Insurance Company — 16109 **INSURER B :** The Travelers Indemnity Company — 25658 **INSURER C :** **INSURER D :** **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 16007300 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [X] PRO-JECT [X] LOC OTHER:			1000090178251	4/1/2025	4/1/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG Employee benefits	$ 1,000,000 $ 1,000,000 $ 15,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $ 1,000,000
A	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY / SCHEDULED AUTOS HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY			1000635863251	4/1/2025	4/1/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
A B	X UMBRELLA LIAB [X] OCCUR X EXCESS LIAB CLAIMS-MADE DED RETENTION $			1000095249251 EX-A9220555-25-NF	4/1/2025 4/1/2025	4/1/2026 4/1/2026	EACH OCCURRENCE AGGREGATE Excess	$ 10,000,000 $ 10,000,000 $ 10,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N [N] N/A (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below			100 0002106	4/1/2025	4/1/2026	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

Evidence of Coverage

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Nicholas R Hylant

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BIDDER INFORMATION FORM

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: (IFB 26-004/CG), Term Contract for Generator Inspections, Routine Maintenance & Service for Jefferson County

Bidder's Company/Business Name: GenServe LLC

Bidder's TAX ID Number: 11-3041060

If Applicable: **HUB Vendor No.** N/A **DBE Vendor No.** N/A

Contact Person: Jack Leonard **Title:** Account Executive

Phone Number (with area code): 346-488-5357

Alternate Phone Number if available (with area code): (737) 703-5000

Fax Number (with area code):_____

Email Address: jleonard@genserveinc.com

Mailing Address (Please provide a physical address for bid bond return, if applicable):

10757 Cutten Road Building #3
Address

Houston, TX, 7706
City, State, Zip Code

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SECTION 4: MINIMUM SPECIFICATIONS

The following requirements and specifications supersede General Bid Requirements where applicable. Any questions relating to bid submission or bid item specifications requirements should be directed to Cindy Greene, Contract Specialist at 409-835-8593 or via email at: cynthia.greene@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent at 409-839-8593 or via email at: deb.clark@jeffersoncountytx.gov. Please reference Bid Number: IFB 26-004/CG.

SCOPE OF PROJECT

Jefferson County is soliciting bids for a generator technician to perform inspections, preventative maintenance and service on generators located in various locations for Jefferson County. Vendor shall provide copy of any applicable license with proposal. Vendor shall perform all electrical and engine work on generators.

TERMS

Individual departments will call to schedule any inspection, preventive maintenance or service for their generator. No work is guaranteed for generators listed in this proposal.

The County reserves the right to change, add, or delete service and/or locations.

Service call agreements will be made on an "as needed" basis. Repair work, other than the initial service call, resulting from this agreement shall not begin without a Notice to Proceed or Purchase Order from the County to the Vendor.

The vendor shall only proceed with repairs after the estimate has been approved by the department requesting the repair and a notice to proceed or purchase order has been issued.

- A "not to exceed" amount and description of work to be completed will be set at the time of the Notice to Proceed or Purchase Order agreed upon by both parties.

Awarded vendor shall furnish all labor, tools, transportation, equipment materials and supplies as required to complete the service request, to provide a working system, complete in all respects. All work shall be in compliance with Federal, State and Local Codes. All equipment or components must be installed in accordance with manufacturer's recommendations.

Vendor shall repair any damage caused by the Vendor and its employees at no cost to the County.

Modification of contract price shall be allowed only on the anniversary date of the contract. Prices throughout the initial one (1) year term shall remain firm/fixed. Written requests for price revisions after the first year shall be submitted in advance to the Jefferson County Purchasing Department. Requests shall be based upon and include documentation of the actual change in cost of components or CPI increases, involved in the contract. Price increase shall not include overhead or profit. The County reserves the right to reject any price increase and/or to terminate the contract.

All hourly cost proposals must be to service the generators listed in the IFB. Any additional costs not included on the Bid Form on page 49 of this IFB will not be allowed. This includes but is not limited to inspection fee, service call charge, mileage charges, fuel surcharges, miscellaneous supply charges.

INSPECTIONS

Vendor will provide semi-annual inspections for generators for Jefferson County upon the request of each department. These inspections shall include the following systems:

1. General Condition of Generator
    - Check generator area for obstructions
    - Wipe off unit
    - Clean oil, coolant, fuel & acid deposits
    - Check housing for leaks or corrosion
2. Starting System & Charging System
    - Visually inspect batteries for damage or leakage
    - Clean batteries with acid neutralizer
    - Clean & tighten all battery cable connections
    - Perform battery load test
    - Inspect battery charger for proper operation, loose terminals and deteriorated wiring
    - Starting motor – inspect electrical connections and wiring.
    - Air starter – inspect oil jar and feeder operation
    - Inspect alternator for proper operation, loose connections and mounting hardware
    - Check belts, pulley and voltage output
3. Engine Cooling System
    - Visually inspect radiator/heat exchanger for leaks, damage and debris
    - Check radiator/heat exchanger louver operation
    - Visually inspect coolant for correct levels and condition of coolant
    - Check coolant conditioner concentration and temperature protection
    - Check filler cap gasket and sealing surface
    - Visually inspect all hoses for deterioration
    - Check tightness of connections
    - Fan Drive Pulley & Fan – check for loose or worn pulleys, lube fan drive bearing
    - Check fan operation and clearance
    - Inspect fan belts for wear and/or deterioration. Check tension and adjust as needed
    - Inspect jacket water heater for proper operation
    - Inspect water pump visually and operationally for leaks and/or unusual noises
4. Engine Fuel System
    - Visually inspect fuel tank for leaks, damage and fuel level
    - Test day tank pump for proper operation
    - Inspect fuel condition for contaminants
    - Drain water from fuel tank of water separator
    - Visually inspect fuel lines for leaks and tightness of connections
    - Check line brackets
    - Inspect governor oil level
    - Inspect controls and linkage for proper operation. Add oil as necessary
    - Inspect fuel filters for damage, leaks and proper operation. Change when necessary
    - Fill Port Info – Special fittings, adapters needed, extra hose length, access to tank and other restrictions that may hamper fueling
5. Air Induction & Exhaust System
    - Air Filter Service Indicator – Note reading. Inspect for proper operation. Reset indicator.
    - Inspect air filter. Clean and/or replace as necessary

- Air Inlet System – Inspect piping and air filter housing for damage, loose connections and evidence of leaks
- Clean air filter housing if air filter is cleaned and replaced. Check housing seals and gaskets
- Inspect turbocharger for oil leakage or exhaust leakage. Check for unusual noises and proper operation
- Inspect exhaust manifold for damage, loose or missing hardware, and evidence of exhaust leakage and wet-stacking. Load bank recommendation if necessary
- Exhaust System – Inspect silencer and piping for damage, corrosion or leakage. Check rain cap
- Check supports for vibration damage and loose connections

6. Lube Oil System
   - Visually inspect for correct oil level and add when necessary, inspect for leaks
   - Note oil pressure
   - Operational and visual inspection of prelube pump
   - Inspect crankcase breather for proper operation. Check connections and inspect hose for deterioration. Note and report excessive blow by
7. Engine Monitors & Safety Controls (All PM Levels)
   - Check safety controls for loose connections and wiring deterioration
   - Check for proper operation of all safety controls and alarms
   - Remote Annunciator and Alarm – Inspect all panels and system alarms for proper functions
8. Ignition System (All PM Levels)
   - Check spark plug condition and electrode gap
   - Check spark plug wires for condition and connections for corrosion
   - Check ignition coils condition and connections for corrosion
9. Control Panels (All PM Levels)
   - Voltmeter – Operational check for correct reading. Check voltage level
   - Frequency Meter – Operational check for correct reading
   - Check alarm history
10. Generator Rear Bearings & Vibration Isolators
    - Lubricate generator rear bearing if applicable
    - Check vibration isolators for proper adjustment and condition
11. Transfer Switch (All PM Levels)
    - Check for leaks/corrosion on cabinets
    - Verify connections are tight on lugs
    - Check voltage across contacts
    - Lube as necessary
    - Verify exercise program
    - Functional test of unit
    - Verify time delays
    - Check for hot spots

Upon completion of the inspection, the vendor will ensure the generator is put back into stand-by mode.

Vendor will provide an inspection report within 15 days of the inspection to the department requesting the inspection that details the following:

1. Record of all findings of the inspections.
2. Record of any unsafe conditions.
3. Record of any corrective action taken.
4. Report recommendations for replacement of minor and major components.

PREVENTATIVE MAINTENANCE

Vendor will provide preventative maintenance for each generator upon the request of each department for Jefferson County as needed to maintain the proper functioning of the generators. This includes, but not limited to oil and filter changes.

Vendor will provide a report of all preventative maintenance performed on the generator to the department requesting the maintenance. Upon completion of preventative maintenance, the vendor will ensure the generator is put back into stand-by mode.

SERVICE CALLS

Vendor will provide service for generators when the generator is not functioning properly upon the request of each department or the Purchasing Department. Vendor will get approval from each department before replacing or ordering any parts for repair. Upon completion of service call, vendor will ensure the generator is put back into stand-by mode. This service will include calls 24 hours a day, 7 days a week. Vendor will also provide service during any man-made or natural disaster/emergency. Service calls in this agreement are made on an "as needed" basis as no repair work shall result from this agreement, other than the initial service call, without a written Notice to Proceed or Purchase Order from the County to the Vendor. A "not to exceed" amount and description of work to be completed will be set in the Notice to Proceed or Purchase Order agreed upon by both parties.

1. Non-Emergency Call-Out – Verbally respond to requests for non-emergency service to any generator within four (4) hours and be on site to perform repairs within forty-eight (48) hours after being contacted.
2. Emergency Call-Out – Verbally respond to requests for emergency service to any generator within one (1) hour and be on site to perform repairs within three (3) hours after being contacted.

GENERATOR LIST

This is the list of current generators located throughout Jefferson County that will need to be serviced and inspected. Generators may be added or removed upon the discretion of Jefferson County.

Department	Address	Make	Model	Output Rating	Inspection
Sabine Pass	5960 South 1st Street, Sabine Pass, TX 77655	Baldor	IDLC150 -3JU	150 KW	Yes
Courthouse	1149 Pearl St., Beaumont, TX 77701	Baldor	IDLC 2000	2 MEG	Yes
JC Service Center	7789 Vitterbo Rd, Beaumont, TX 77705	Baldor	IDLC 40	40 KW	Yes

Department	Address	Make		Output Rating	Inspection
Pct. 1	20205 W. Hwy 90, China, TX 77613			200 KW	No
Pct. 2	7759 Viterbo Rd, Beaumont, TX 77705	Baldor	IDLC 100	100 KW	No
Pct. 3	5700 Jade Ave., Pt. Arthur, TX 77640	Baldor	TS80T	60 KW	Yes
Pct. 4	7780 Boyt Rd., Beaumont, TX 77713	Baldor	IDLC 150	150 KW	No
Health & Welfare/Annex 1	1295 Pearl St., Beaumont, TX 77701	Caterpillar	D545	500 KW	Yes
Mosquito Control	8905 First St., Beaumont, TX 77705	Baldor	IDLC 80	80 KW	Yes
Narcotics/Sheriff Hanger	4640 Hanger Dr., Beaumont, TX 77705	Baldor	TS 130T	100 KW	Yes
Pt. Arthur Courthouse	709 Lakeshore Dr., Pt. Arthur, TX 77640	Baldor	TS350T	250 KW	No
Correctional Facility	5030 Hwy 69 S, Beaumont, TX 77701	Onan	500DFF B	500 KW	Yes
Correctional Facility	5030 Hwy 69 S, Beaumont, TX 77701	Onan	400DFE B	400 KW	Yes
Radio Tower Hwy 73	118235 Hwy 73, Beaumont, TX 77705	Generac	RG0605 45ANAX	60 KW	Yes
Radio Tower Hwy 90	1991 N. Meeker Rd, Beaumont, TX 77713	Kohler		20 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ Gate 1	Kohler	150RE0 ZJ01	155 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ Jerry Ware Terminal	Kohler	100ROZJ D	100 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ Firehouse	Kohler	20ROZJ	25 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ New Terminal	Generac	P22FE	600 KW	Yes

OFFER AND ACCEPTANCE FORM
OFFER TO CONTRACT

To Jefferson County:

We hereby offer and agree to furnish the materials or service in compliance with all terms, conditions, specifications, and amendments in the Invitation for Bid and any written exceptions in the offer.

We understand that the items in this Invitation for Bid, including, but not limited to, all required certificates are fully incorporated herein as a material and necessary part of the contract.

The undersigned hereby states, under penalty of perjury, that all information provided is true, accurate, and complete, and states that he/she has the authority to submit this bid, which will result in a binding contract if accepted by Jefferson County.

We acknowledge receipt of the following amendment(s): 1, _____, _____, _____.

I certify, under penalty of perjury, that I have the legal authorization to bind the firm hereunder:

GenServe LLC
Company Name

10757 Cutten Rd Building #3
Address

Houston, TX 77066
City State Zip

Jack Leonard
Signature of Person Authorized to Sign

Jack Leonard
Printed Name

Account Executive
Title

For clarification of this offer, contact:

Jack Leonard Account Executive
Name & Title

346-488-5357
Phone Fax

jleonard@genserveinc.com
E-mail

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

ACCEPTANCE OF OFFER

The Offer is hereby accepted for the following items: Term Contract for Generator Inspections, Routine Maintenance & Service for Jefferson County for Contract Term: One (1) year from date of award with an option to renew for two (2) additional years.

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the Invitation for Bid, including all terms, conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by Jefferson County.

This contract shall henceforth be referred to as Contract No. (IFB 26-004/CG), Term Contract for Generator Inspections, Routine Maintenance & Service for Jefferson County. The Contractor has not been authorized to commence any billable work or to provide any material or service under this contract until Contractor receives a purchase order and/or a notice to proceed from the Jefferson County Purchasing Agent.

COUNTERSIGNED:

Jeff R. Branick, County Judge
JEFFERSON COUNTY, TEXAS

Date

ATTEST:

Roxanne Acosta Hellberg, County Clerk
JEFFERSON COUNTY, TEXAS

Date

BIDDER: INSERT ALL ADDENDA BEHIND THIS PAGE.
PLEASE BE SURE TO COMPLETE, SIGN, ATTEST, AND DATE EACH ADDENDUM.

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Addendum to IFB

IFB NUMBER: (IFB 26-004/CG)

IFB TITLE: Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County

IFB DUE BY: 11:00 am, CST, Wednesday, March 25, 2026

ADDENDUM NO.: 1

ISSUED (DATE): March 2, 2026

To Bidder: This Addendum is an integral part of the IFB package under consideration by you as a Bidder in connection with the subject matter herein identified. Jefferson County deems all sealed bids to have been proffered in recognition and consideration of the entire IFB Specifications Package – *including all addenda*. For purposes of clarification, **receipt of this present Addendum by a Bidder should be evidenced by returning it (signed) as part of the Bidder's sealed bid submission.** If the bid submission has already been received by the Jefferson County Purchasing Department, Bidder should return this addendum in a separate sealed envelope, clearly marked with the IFB Title, IFB Number, and IFB Opening Date and Time, as stated above.

Reason for Issuance of this Addendum: Vendor Questions and page number clarification.

The information included herein is hereby incorporated into the documents of this present bid matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

Witness

Witness

Approved by [signature] Date: 3/12

[signature]
Authorized Signature (Respondent)

Account Executive
Title of Person Signing Above

Jack Leonard
Typed Name of Business or Individual

10757 Cutten RD Bldg 3, Houston, TX 77066
Address

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Correction: The last paragraph on page 43 incorrectly references the Bid Form as being on page 49. The Bid form is found on page 51 of the specifications.

Vendor Questions:

1. **Question:** Do you require any load bank testing to be quoted for the yearly service?
   Answer: Under Section 4: Minimum Specifications, Inspections (pg 44) it notes that Vendor will provide semi-annual inspections for generators for Jefferson County upon the request of each department. The inspection requirements are outlined.

2. **Question:** Are there any units that are located on roofs or not accessible to pull up a truck within 50 feet?
   Answer: All generators are accessible to pull a truck within 50 feet. There are no generators on roofs. The Sabine Pass generator is on a stand-alone platform 10' off the ground with built in stairs. You can drive right up to it.

3. **Question:** Are you requiring ATS Services once or twice per year?
   Answer: See question and answer #1.

4. **Question:** Does each generator have 1 ATS switch or do some units have multiple?
   Answer: Most units have one ATS switch, a few units have 2 ATS switches.

5. **Question:** Can you please also clarify if a bid bond is needed for submission of bid?
   Answer: A bid bond is not required.

BID FORM

Item	Description	Labor Charge Per Hour
1	Generator Technician during working hours (Monday-Friday, 8:00 am to 5:00 pm)	$ 185 /hour
2	Helper accompanying Generator Technician during working hours (Monday-Friday, 8:00 am to 5:00 pm)	$ 185 /hour
3	Generator Technician during after-hours (Monday-Friday 5:00 pm – 8:00 am, and all-day Saturday & Sunday)	$ 277.50 /hour
4	Helper accompanying Generator Technician during after-hours (Monday-Friday 5:00 pm – 8:00 am, and all-day Saturday & Sunday)	$ 277.50 /hour
5	Generator Technician for services on Holidays	$ 370 /hour
6	Helper accompanying Generator Technician for services on Holidays	$ 370 /hour
7	Generator Technician for disaster relief service during mandatory/voluntary County evacuation (Monday-Friday, 8:00 am to 5:00 pm)	$ 185 /hour
8	Helper accompanying Generator Technician for disaster relief service during mandatory/voluntary County evacuation (Monday-Friday, 8:00 am to 5:00 pm)	$ 185 /hour
9	Generator Technician for emergency disaster relief service after-hours during mandatory/voluntary County evacuation (Monday-Friday 5:00 pm to 8:00 am)	$ 277.50 /hour
10	Helper accompanying Generator Technician for emergency disaster relief service after-hours during mandatory/voluntary County evacuation (Monday-Friday 5:00 pm to 8:00 am)	$ 277.50 /hour
11	Generator Technician for emergency disaster service relief during mandatory/voluntary County evacuation (Holidays)	$ 370 /hour
12	Helper accompanying Generator Technician for emergency disaster service during mandatory/ voluntary county evacuation (Holidays)	$ 370 /hour
13	Additional charges (Including, but no limited to inspection fee, service call charge, mileage charges, fuel surcharges, miscellaneous supply charges)	$3.50 mileage

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum 1 ✓ Date Received_____

Addendum 2 _____ Date Received_____

Addendum 3 _____ Date Received_____

BIDDER: INCLUDE FULL, SIGNED, & ATTESTED COPY OF EACH ADDENDUM ISSUED WITH BID SUBMISSION.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

VENDOR REFERENCES FORM

Bidder: Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or similar products and/or services as contained in this specification package were recently provided.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

REFERENCE ONE

Government/Company Name: Harris County

Address: 1115 Congress, B100 Houston, TX 77002

Contact Person and Title: Darrell Breedlove, Regional Facilities Manager

Phone: 713-274-1807 Fax:

Email Address: Darrell.Breedlove@harriscountytx.gov Contract Period: May 2015 - Current

Scope of Work: Generator Preventive Maintenance Service contract, Repairs, New equipment sales

REFERENCE TWO

Government/Company Name: City of Pasadena

Address: 3124 Red Bluff Pasadena, TX 77503

Contact Person and Title: Anna Olvera, Maintenance Services

Phone: 713-475-7046 Fax:

Email Address: aolvera@pasadenatx.gov Contract Period: August 2025 - Current

Scope of Work: Generator Preventive Maintenance Service contract, Repairs, New equipment sales

REFERENCE THREE

Government/Company Name: City of Austin

Address: 411 Chicon St Austin, TX 78702

Contact Person and Title: Don Pearson, Building Services

Phone: 512-974-3971 Fax:

Email Address: Don.Pearson@austintexas.gov Contract Period: January 2016-Current

Scope of Work: Generator Preventive Maintenance Service contract, Repairs, New equipment sales

SIGNATURE PAGE

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would Bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions? ..... **Yes** ☐ **No** ☐

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other Bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other Bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the Bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

GenServe LLC	Jack Leonard
Bidder (Entity Name)	Signature
10757 Cutten Rd Building #3	Jack Leonard
Street & Mailing Address	Print Name
Houston, TX 77066	3/11/2026
City, State & Zip	Date Signed
7377035000	
Telephone Number	Fax Number
jleonard@genserveinc.com	
E-mail Address	

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Jack Leonard

Signature of Contractor's Authorized Official

Jack Leonard Account Executive

Name and Title of Contractor's Authorized Official *(Please Print)*

02/27/2026

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CONFLICT OF INTEREST QUESTIONNAIRE

CONFLICT OF INTEREST QUESTIONNAIRE — FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY
Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

GenServe LLC

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information in this section is being disclosed.**

N/A

Name of Officer

This section (item 3 including subparts A, B, C, & D) must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more?

☐ Yes ☐ No

D. Describe each employment or business and family relationship with the local government officer named in this section.

N/A

4

Signature of vendor doing business with the governmental entity

3/12/2026

Date

Adopted 8/7/2015

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

LOCAL GOVERNMENT OFFICER
CONFLICTS DISCLOSURE STATEMENT – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT — FORM CIS

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

N/A

2 **Office Held**

N/A

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

N/A

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

N/A

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted — Description of Gift

Date Gift Accepted — Description of Gift

Date Gift Accepted — Description of Gift

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20_____, to certify which, witness my hand and seal of office.

Signature of officer administering oath — Printed name of officer administering oath — Title of officer administering oath

Adopted 8/7/2015

THIS FORM IS FOR OFFICE USE ONLY

GOOD FAITH EFFORT (GFE) DETERMINATION CHECKLIST

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting HUBs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant, and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of HUB Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting HUB Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .?

☐ Yes	☑ No	1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum HUB Subcontractor participation?
☐ Yes	☑ No	2. **Notify** in writing a reasonable number of HUBs, allowing sufficient time for effective participation of the planned work to be subcontracted?
☐ Yes	☑ No	3. **Provide** HUBs that were genuinely interested in bidding on a Subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?
☐ Yes	☑ No	4. **Negotiate** in good faith with interested HUBs, and not reject bids from HUBs that qualify as lowest and responsive Bidders?
☐ Yes	☑ No	5. **Document** reasons HUBs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected HUBs?
☐ Yes	☑ No	6. If Prime Contractor/Consultant has zero (0) HUB participation, **please explain the reasons why.**

If "No" was selected, please explain and include any pertinent documentation with your bid.
If necessary, please use a separate sheet to answer the above questions.

Jack Leonard
Printed Name of Authorized Representative

Jack Leonard
Signature

Account Executive
Title

3/11/2026
Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

NOTICE OF INTENT (NOI) TO SUBCONTRACT WITH HISTORICALLY UNDERUTILIZED BUSINESS (HUB)

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract.

Please submit one form for each HUB Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: _____ HUB: ☐ Yes ☐ No

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____

Prime Contract Amount: $ _____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____ _____ _____
Printed Name of Contractor Representative Signature of Representative Date

_____ _____ _____
Printed Name of HUB Signature of Representative Date

Note: Nothing on this Notice of Intent Form is intended to confer any rights, expressed or implied, to any third parties.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "HUB Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUCONTRACTING PARTICIPATION DECLARATION FORM

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Prime Contractor: _____ HUB: ☐ Yes ☐ No

HUB Status (Gender & Ethnicity): _____

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____ IFB/RFP No.: _____

Total Contract: $ _____ Total HUB Subcontract(s): $ _____

Construction HUB Goals: 12.8% MBE:: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African-American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR HUB OFFICE USE ONLY:

Verification date HUB Program Office reviewed and verified HUB Sub information Date: _____ Initials: _____

PART I. HUB SUBCONTRACTOR DISCLOSURE

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB) SUBCONTRACTING PARTICIPATION DECLARATION FORM

HUB Subcontractor Disclosure

PART I: Continuation Sheet (Duplicate as Needed)

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

All HUB Subcontractor Participation may be verified with the HUB Subcontractor(s) listed on Part I.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUCONTRACTING PARTICIPATION DECLARATION FORM

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING HUB SUBCONTRACTING GOALS

Instructions to Bidder: Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the HUB goals for this project for the following reasons:

- ☐ All Subcontractors to be utilized are "Non-HUBs." *(Complete Part III)*
- ☐ HUBs were solicited but did not respond.
- ☐ HUBs solicited were not competitive.
- ☐ HUBs were unavailable for the following trade(s):
- ☑ Other: Not outsourcing work

Was the Jefferson County HUB Office contacted for assistance in locating HUBs? ☐ Yes ☑ No

PART III: DISCLOSURE OF OTHER "NON-HUB" SUBCONTRACTS

The Bidder shall use this area to provide a listing of all "Non-HUB" Subcontractors, including suppliers, that will perform under this project. A list of those "Non-HUB" Subcontractors the Bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that Bidder is the apparent low Bidder. A list of those "Non-HUB" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *HUB Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attached any necessary support documentation as required**. I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): Jack Leonard

Title: Account Executive

Signature: [signature]

Date: 3/12/2026

E-mail address: jleonard@genserveinc.com

Contact person that will be in charge of invoicing for this project:

Name (print or type): Jack Leonard

Title: Account Executive

Date: 3/12/2026

E-mail address: jleonard@genserveinc.com

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

RESIDENCE CERTIFICATION/TAX FORM

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Non-resident Bidder" refers to a person who is not a resident.

(4) "Resident Bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☐ I certify that GenServe LLC is a Resident Bidder of Texas as defined in Government Code §2252.001.

☐ I certify that _____ [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is _____ _____ (city and state).

Taxpayer Identification Number (T.I.N.):	320805986603
Company Name submitting bid/proposal:	GenServe LLC
Mailing address:	10757 Cutten Rd Building #3, Houston, TX 77066
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**
N/A	

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BID AFFIDAVIT

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF Pennsylvania COUNTY OF Montgomery

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Pennsylvania,

on this day personally appeared John Leonard (name), who

after being by me duly sworn, did depose and say:

"I, Jack Leonard (name) am a duly authorized officer of/agent

for GenServe (name of firm) and have been duly authorized to execute the

foregoing on behalf of the said GenServe (name of firm).

I hereby certify that the foregoing bid has not been prepared in collusion with any other Bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the Bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of Bidder: Jack Leonard 1057 Cutten Rd bldg #3 Houston, TX 77066

Fax: _____ Telephone# 346-488-5357

by: Jack Leonard (print name) Title: Account Executive

Signature: [signature]

SUBSCRIBED AND SWORN to before me by the above-named

John Leonard on

this the 18th day of March, 2026.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

[signature]
Notary Public in and for
the State of Pennsylvania

Commonwealth of Pennsylvania - Notary Seal
TERRANCE BRUNSON - Notary Public
Montgomery County
My Commission Expires March 12, 2029
Commission Number 1457333

HOUSE BILL 89 VERIFICATION

I, _____, the undersigned representative of (company or business name)_____ (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and
2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. "**Boycott Israel**" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. "**Company**" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or an limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

_____
Signature of Company Representative

_____
Date

On this _____ day of _____, 20____, personally appeared

_____, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

_____
Notary Signature

_____
Date

REQUIRED FORM
<u>Bidder</u>: Please complete this form and include with bid submission.

SENATE BILL 252 CERTIFICATION

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

_____

Company Name

_____

IFB/RFP/RFQ number

Certification check performed by:

_____

Purchasing Representative

_____

Date

THIS FORM IS FOR OFFICE USE ONLY

Remit Payment Address
Genserve LLC
P.O. Box 23974
New York, NY 10087-3974

Branch Office
10757 Cutten Road 311
Building Three
Houston, TX 77066
US
(737) 703-5000

Power Maintenance Agreement

Customer Information
Jefferson County
1149 Pearl Street
Beaumont, Texas 77701

Prepared By
Jack Leonard
(346) 488-5357
jleonard@genserveinc.com

Q-116288
Quote Expires On: 6/30/2026
Contract Start:
Contract End:
Contract Term (Months): 12

Contact Information
Deborah Clark
deb.clark@jeffersoncountytx.gov
5027771301

BuyBoard ID 757-24

Sabine Pass

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Baldor	IDLC150-3JU		150	1.00	B Service (Minor)	$275.00	$275.00
Baldor	IDLC150-3JU		150	1.00	A Service (Major)	$660.00	$660.00

Courthouse

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Baldor	IDLC 2000		2,000	1.00	B Service (Minor)	$275.00	$275.00
Baldor	IDLC 2000		2,000	1.00	A Service (Major)	$3,945.00	$3,945.00

JC Service Center

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Baldor	IDLC 40		40	1.00	B Service (Minor)	$275.00	$275.00
Baldor	IDLC 40		40	1.00	A Service (Major)	$575.00	$575.00

Pct. 1

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
			200	1.00	B Service (Minor)	$275.00	$275.00
			200	1.00	A Service (Major)	$790.00	$790.00

Pct. 2

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Baldor	IDLC 100		100	1.00	B Service (Minor)	$275.00	$275.00
Baldor	IDLC 100		100	1.00	A Service (Major)	$650.00	$650.00

Pct. 3

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Baldor	TS80T		60	1.00	B Service (Minor)	$275.00	$275.00
Baldor	TS80T		60	1.00	A Service (Major)	$575.00	$575.00

Pct. 4

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Baldor	IDLC 150		150	1.00	B Service (Minor)	$275.00	$275.00
Baldor	IDLC 150		150	1.00	A Service (Major)	$660.00	$660.00

Health & Welfare/Annex 1

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Caterpillar	D545		500	1.00	B Service (Minor)	$275.00	$275.00
Caterpillar	D545		500	1.00	A Service (Major)	$1,110.00	$1,110.00

Mosquito Control

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Baldor	IDLC 80		80	1.00	B Service (Minor)	$275.00	$275.00
Baldor	IDLC 80		80	1.00	A Service (Major)	$630.00	$630.00

Narcotics/Sheriff Hanger

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Baldor	TS 130T		100	1.00	B Service (Minor)	$275.00	$275.00
Baldor	TS 130T		100	1.00	A Service (Major)	$650.00	$650.00

Pt. Arthur Courthouse

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Baldor	TS350T		250	1.00	B Service (Minor)	$275.00	$275.00
Baldor	TS350T		250	1.00	A Service (Major)	$815.00	$815.00

Correctional Facility Gen 1

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Onan	500DFFB		500	1.00	B Service (Minor)	$275.00	$275.00

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Onan	500DFFB		500	1.00	A Service (Major)	$1,110.00	$1,110.00

Correctional Facility Gen 2

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Onan	400DFEB		400	1.00	B Service (Minor)	$275.00	$275.00
Onan	400DFEB		400	1.00	A Service (Major)	$1,015.00	$1,015.00

Radio Tower Hwy 73

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Generac	RG060545ANAX		60	1.00	B Service (Minor)	$275.00	$275.00
Generac	RG060545ANAX		60	1.00	A Service (Major)	$575.00	$575.00

Radio Tower Hwy 90

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Kohler			20	1.00	B Service (Minor)	$275.00	$275.00
Kohler			20	1.00	A Service (Major)	$550.00	$550.00

Airport Gen 1

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Kohler	150RE0ZJ01		155	1.00	B Service (Minor)	$275.00	$275.00
Kohler	150RE0ZJ01		155	1.00	A Service (Major)	$660.00	$660.00

Airport Gen 2

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Kohler	100ROZJD		100	1.00	B Service (Minor)	$275.00	$275.00
Kohler	100ROZJD		100	1.00	A Service (Major)	$650.00	$650.00

Airport Gen 3

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Kohler	20ROZJ		25	1.00	B Service (Minor)	$275.00	$275.00
Kohler	20ROZJ		25	1.00	A Service (Major)	$550.00	$550.00

Airport Gen 4

Make	Model	Serial Number	kW	Times per Year	Service Type	Unit Price	Extended Price
Generac	P22FE		22	1.00	B Service (Minor)	$275.00	$275.00
Generac	P22FE		22	1.00	A Service (Major)	$550.00	$550.00

Additional Notes

Payment Terms:

Subtotal: $21,945.00
Tax: $0.00

Annual Agreement Amount: $21,945.00
Total Agreement Amount $21,945.00

Customer PO#: _____ **Signature:** _____ **Date:** _____

Sales Rep Signature: _____ **Date:** _____

GenServe is to provide the Customer with the periodic maintenance service for the following listed equipment.

GenServe agrees to provide and arrange for said maintenance service.

GenServe Terms and Conditions apply and are available here: genserveinc.com/tce/

Additional Terms for Remote Monitoring, if applicable, are here: genserveinc.com/rm/

Preventative Maintenance Scopes of Work, if applicable, are on pages following.

Preventative Maintenance Checklist

All Items in Column "A" Are Performed When Major Service Is Done.
All Items in Column "B" Are Performed When Minor Service Is Done.

	A	B	
1.	☑	☐	Change Lubricating Oil
2.	☑	☐	Change Lube Oil Filters
3.	☑	☐	Change Fuel Filters
4.	☑	☑	Inspect Air Filter
5.	☑	☑	Check Coolant Level and Degree of Protection
6.	☑	☑	Inspect and Adjust Fan Belts
7.	☑	☑	Check Flex Connections and Mountings
8.	☑	☑	Check Operation of Jacket Water Heater
9.	☑	☑	Check Battery Level and Maintain
10.	☑	☑	Check Operation of Battery Charging Equipment
11.	☑	☑	Lubricate Necessary Fittings
12.	☑	☑	Inspect Governor Linkage, Oil Level, and Control
13.	☑	☑	Inspect Electronic Governor Connections
14.	☑	☑	Repair Minor Coolant, Lube, and Fuel Leaks
15.	☑	☑	Inspect Day Tank and Pump Control
16.	☑	☐	Inspect Spark Plugs, Magneto, and Coils, If Applicable
17.	☑	☑	Drain Condensate From Day Tank, If Accessible
18.	☑	☑	Check Operation of Remote Fans, Pumps, and Louvers
19.	☑	☑	Inspect Generator Slip Rings and Clean If Necessary
20.	☑	☑	Operate Electric Set and Check or Reset for Correct Voltage and Frequency
21.	☑	☑	Check Auto Start-Stop Mode
22.	☑	☑	Simulate Each Safety Shutdown, If Able To
23.	☑	☑	Test Fault Lamps
24.	☐	☐	Optional Service: Perform Lab Analysis of Used Oil and Coolant
25.	☐	☐	Optional Service: Perform Lab Analysis of Used Fuel
26.	☐	☐	Optional Service: Change Air Filter

Dear Jefferson County,

GenServe LLC is pleased to submit this introductory letter in response to IFB 26-004/CG, Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County. As a premier independent service provider specializing in comprehensive solutions for commercial and industrial backup power systems nationwide for approximately 35 years, we are confident that our expertise and commitment to reliability align perfectly with the needs of Jefferson County.

At GenServe, our promise is clear: **to provide backup power when you need it.** This commitment extends beyond simply keeping the lights on. We partner with a wide array of the industry's best brands to deliver tailored solutions that prioritize your specific requirements and ensure uninterrupted power when it matters most.

We are particularly excited about the opportunity to partner with Jefferson County, especially given our strong ties to the state of Texas. Our second headquarters is strategically located in Houston, allowing us to provide exceptional service and support to counties like yourself. Furthermore, all our dispatching for Texas is handled locally, ensuring swift and efficient response times.

GenServe has a significant operational presence within Texas, employing 30 highly skilled field technicians who are dedicated to self-servicing all our contracted locations in the state. This local expertise and commitment to self-sufficiency translate to consistent, reliable service delivered by professionals who understand the unique needs of Texas-based municipalities.

With a robust team of over 190 highly skilled field technicians and more than 300 employees company-wide, GenServe possesses the scale and expertise to handle diverse and complex power generation needs. Our strategic network of 17 branches and satellites across key regions allow for rapid response capabilities, often within a critical two-hour timeframe.

Our core competencies encompass a full spectrum of services designed to ensure the operational readiness of your backup power infrastructure. These include proactive maintenance programs, expert repairs, seamless upgrades, reliable new and replacement equipment sales, systems integrations, equipment retrofitting, and critical emergency response. We are proficient in working with all major makes and models of generators and associated equipment, such as switchgear, providing comprehensive support for your existing and future systems.

GenServe's commitment to technical excellence is underscored by the fact that we proudly employ the largest number of Electrical Generating Systems Association (EGSA) certified technicians in the industry. We perform all services in compliance with NFPA 110 standards, guaranteeing adherence to industry's best practices and regulatory requirements. Our traveling technician team further reinforces our commitment to providing uninterrupted power, offering support to branch operations during major catastrophes and weather events.

Our long-standing presence in the market, substantial team of qualified professionals, extensive geographic footprint, and unwavering commitment to reliability make GenServe a trusted partner for maintaining and ensuring the operational readiness of critical backup power infrastructure. Our track record of serving over 10,000 satisfied customers across a wide array of industries speaks to our experience and dedication to providing "backup power when you need it."

GenServe brings extensive experience in supporting School Districts and Municipalities across Texas, including **Harris County, City of Austin, City of Pasadena.** With a proven track record of delivering reliable power solutions and generator services, GenServe understands the unique operational demands and compliance requirements of municipal environments. Our long-standing partnerships with these cities highlight our commitment to quality, responsiveness, and technical expertise, making us a trusted provider for public sector clients seeking dependable backup power and maintenance services. **We also utilize BuyBoard as a Co-Op with the number 757-24. This has allowed us to work seamlessly with many municipalities, school districts and government agencies in the state of Texas.**

We are confident that GenServe LLC offers expertise, local presence, and unwavering commitment to providing the Jefferson County with the reliable backup power solutions you require. We look forward to the opportunity to further discuss your needs and demonstrate how our comprehensive services can ensure the continuity and resilience of your critical operations.

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

February 17, 2026

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for Invitation for Bid **(IFB 26-004/CG), Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County, Pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-327.** Specifications for this project may be obtained from the Jefferson County website, https://jeffersoncountytx.gov/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and one (1) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Purchasing Department (1st Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County, Pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-327**
BID NUMBER:	**IFB 26-004/CG**
DUE BY TIME/DATE:	**11:00 AM CT, Wednesday, March 25, 2026**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

Any questions relating to these bid requirements should be directed to Cindy Greene, Contract Specialist at 409-835-8593 or via email at: Cynthia.greene@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent, at 409-835-8593 or via email at deb.clark@jeffersoncountytx.gov.

Jefferson County encourages Disadvantaged Business Enterprises (DBEs), Minority/Women Business Enterprises (M/WBEs), and Historically Underutilized Businesses (HUBs) to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment, or the provisions of services. Individuals requiring special accommodations are requested to contact our office at least seven (7) days prior to the bid due date at 409-835-8593.

All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Bidders are strongly encouraged to carefully read the entire invitation, as failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

PUBLISH:
Beaumont Enterprise & Port Arthur News:
February 18, 2026
The Examiner:
February 19, 2026 & February 26, 2026

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BID SUBMISSIONS:

One (1) Original and one (1) Bid Copies; with all copies to include a Completed Copy of this specifications packet, in its entirety.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://jeffersoncountytx.gov/Purchasing/

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

SECTION 1: GENERAL CONDITIONS OF BIDDING AND TERMS OF CONTRACT

By execution of this document, the Vendor accepts all general and special conditions of the contract as outlined below and, in the specifications, and plans.

1. BIDDING.

1.1 BIDS.
All bids must be submitted on the bid form furnished in this package.

1.2 AUTHORIZED SIGNATURES.
The bid must be executed personally by the Vendor, duly authorized partner of the partnership, or duly authorized officer of the corporation. If executed by an agent, a power of attorney or other evidence of authority to act on behalf of the Vendor shall accompany the bid to become a valid bid.

1.3 LATE BIDS.
Bids must be in the office of the Jefferson County Purchasing Agent before or at the specified time and date bids are due. Bids received after the submission deadline shall be rejected as non-responsive and returned unopened.

1.4 WITHDRAWAL OF BID PRIOR TO OPENING.
A bid may be withdrawn before the opening date by submitting a written request to the Purchasing Agent. If time allows, the Bidder may submit a new bid. Bidder assumes full responsibility for submitting a new bid before or at the specified time and date bids are due. Jefferson County reserves the right to withdraw a request for bids before the opening date.

1.5 WITHDRAWAL OF BID AFTER OPENING.
Bidder agrees that its offer may not be withdrawn or cancelled by the Vendor for a period of ninety (90) days following the date and time designated for the receipt of bids unless otherwise stated in the bid and/or specifications.

1.6 BID AMOUNTS.
Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be interpreted in the favor of Jefferson County.

1.7 EXCEPTIONS AND/OR SUBSTITUTIONS.
All bids meeting the intent of the specifications and plans will be considered for award. Vendors taking exception to the specifications and plans, or offering substitutions, shall state these exceptions in the section provided. If bid is made on an article other than the one specified, which a Bidder considers comparable, the name and grade of said article must be specified in the bid and sufficient specifications and descriptive data must accompany same to permit thorough evaluation. The absence of stated exceptions and/or substitutions shall indicate that the Vendor has not taken any exceptions to the specifications and shall be responsible to perform in strict accordance with the specifications. As a matter of practice, Jefferson County rejects exception(s) and /or substitutions as non-responsive but reserves the right to accept any and/or all of the exception(s) and/or substitution(s) deemed to be in the best interest of Jefferson County.

1.8 ALTERNATES.
The Invitation for Bid and/or specifications may expressly allow Bidder to submit an alternate bid. Presence of such an offer shall not be considered an indication of non-responsiveness.

1.9 DESCRIPTIONS.

Unless otherwise specified, any reference to make, manufacturer and/or model used in the bid specifications is merely descriptive and not restrictive, and is used only to indicate type, style, or quality of material desired.

1.10 BID ALTERATIONS.

Bids cannot be altered or amended after submission deadline. Any interlineations, alterations, or erasures made before opening time must be initialed by the signer of the bid, guaranteeing authenticity.

1.11 TAX EXEMPT STATUS.

Jefferson County is exempt from federal excise tax and state sales tax. Unless the bid form or specifications specifically indicate otherwise, the bid price must be net, exclusive of above-mentioned taxes and will be so construed. Therefore, the bid price shall not include taxes.

1.12 QUANTITIES.

Quantities indicated are estimated quantities only and are not a commitment to buy. Approximate usage does not constitute an order, but only implies the probable quantity that will be used. Commodities will be ordered on an as-needed basis. Bidder is responsible for accurate final counts.

1.13 BID AWARD.

Award of contract shall be made to the most responsible, responsive Bidder, whose offer is determined to be the best value, taking into consideration the relative importance of price. Jefferson County reserves the right to be the sole judge as to whether items bid will serve the purpose intended.

Jefferson County reserves the right to award based upon individual line items, sections or total bid.

1.14 SILENCE OF SPECIFICATIONS FOR COMPLETE UNITS.

All materials, equipment and/or parts that will become a portion of the completed work, including items not specifically stated herein but, necessary to render the service(s) complete and operational per the specifications, are to be included in the bid price. Vendor may be required to furnish evidence that the service, as bid, will meet or exceed these requirements.

1.15 ADDENDA.

Any interpretations, corrections or changes to the specifications and plans will be made by addenda no later than forty-eight (48) hours prior to the bid opening. Addenda will be posted on the Purchasing web site. Vendors are responsible for monitoring the web site in order to remain informed on addenda. Vendors shall acknowledge receipt of all addenda with submission of bid.

1.16 GENERAL BID BOND/SURETY REQUIREMENTS.

Failure to furnish bid bond/surety, if requested, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.17 GENERAL INSURANCE REQUIREMENTS.

Failure to furnish Affidavit of Insurance, if required in these specifications, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.18 RESPONSIVENESS.

A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid

price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 RESPONSIBLE STANDING OF BIDDER.

To be considered for award, Bidder must at least: have the ability to obtain adequate financial resources, be able to comply with required or proposed delivery/completion schedule, have a satisfactory record of performance; have a satisfactory record of integrity and ethics, and be otherwise qualified and eligible to receive award.

1.20 CONFIDENTIAL/PROPRIETARY INFORMATION.

If any material in the bid submission is considered by Bidder to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Bidder), Bidder **must** clearly mark the applicable pages of bid submission to indicate each claim of confidentiality. Additionally, Bidder must include a statement on company letterhead identifying all Bid Submission section(s) and page(s) that have been marked as confidential. Jefferson County will protect from public disclosure such portions of a bid, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire bid submission is protected from disclosure because it contains some proprietary information is not acceptable, and will make the entire bid submission subject to release under the Texas Public Information Act.

By submitting a bid, Bidder agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Bidder's bid submission or other information submitted by Bidder.

1.21 PUBLIC BID OPENING.

Bidders are invited to be present at the opening of bids. After the official opening of bids, a period of not less than one week is necessary to evaluate bids. The amount of time necessary for bid evaluation may vary and is determined solely by the County. Following the bid evaluation, all bids submitted are available for public review.

2. PERFORMANCE.

2.1 DESIGN, STRENGTH, AND QUALITY.

Design, strength, and quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practices. The apparent silence of specifications and/or plans as to any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications and/or plans shall be made on the basis of this statement.

2.2 AGE AND MANUFACTURE.

All tangible goods being bid must be new and unused, unless otherwise specified, in first-class condition, of current manufacture, and furnished ready to use. All items not specifically mentioned that are required for a complete unit shall be furnished.

2.3 DELIVERY LOCATION.

All deliveries will be made to the address(es) specified on the purchase order during normal office working hours of 8:00 am CT to 4:00 pm CT, Monday through Friday, unless otherwise authorized by the Purchasing Agent or designee.

2.4 DELIVERY SCHEDULE.

Delivery time may be an important consideration in the evaluation of best value. The maximum number of days necessary for delivery ARO shall be stated in the space, if provided, on the bid form.

2.5 DELIVERY CHARGES.

All delivery and freight charges, F.O.B. destination shown on Jefferson County purchase order, as necessary to perform contract are to be included in the bid price.

2.6 INSTALLATION CHARGES.

All charges for assembly, installation and set-up shall be included in the bid price. Unless otherwise stated, assembly, installation and set-up will be required.

2.7 OPERATING INSTRUCTIONS AND TRAINING.

Clear and concise operating instructions and descriptive literature will be provided in English, if requested. On-site detailed training in the safe and efficient use and general maintenance of item(s) purchased shall be provided as needed at the request of Jefferson County. Instructions and training shall be at no additional cost to the County.

2.8 STORAGE.

Bidder agrees to provide storage of custom ordered materials, if requested, for up to thirty (30) calendar days.

2.9 COMPLIANCE WITH FEDERAL, STATE, COUNTY, AND LOCAL LAWS.

Bids must comply with all federal, state, county and local laws, including, but not limited to, all applicable standard safety, emission, and noise control requirements. Any vehicles or equipment shall contain all standard safety, emission, and noise control requirements required for the types and sizes of equipment at the time of their manufacture. The Contractor agrees, during the performance of work or service, to comply with all applicable codes and ordinances of Jefferson County or the State of Texas as they may apply, as these laws may now read, or as they may hereafter be changed or amended.

2.10 OSHA.

The Bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful Bidder will further certify that all items furnished under this project will conform and comply with federal and State of Texas OSHA standards. The successful Bidder will agree to indemnify and hold harmless Jefferson County for any and all damages that may be assessed against the County.

2.11 PATENTS AND COPYRIGHTS.

The successful Vendor agrees to protect the County from claims involving infringements of patents and/or copyrights.

2.12 SAMPLES, DEMONSTRATIONS, AND TESTING.

At Jefferson County's request and direction, Bidder shall provide product samples and/or testing of items bid to ensure compliance with specifications. Samples, demonstrations and/or testing may be requested at any point prior to or following bid award. Samples, demonstrations and/or testing may be requested upon delivery and/or any point during the term of resulting contract. All samples (including return thereof), demonstrations, and/or testing shall be at the expense of the Bidder/Vendor.

2.13 ACCEPTABILITY.

All articles enumerated in the bid shall be subject to inspection by an officer designated for that purpose by Jefferson County. If found inferior to the quality called for, or not equal in value to the specifications, deficient in workmanship or otherwise, this fact shall be certified to the Purchasing Agent, who shall have the right to reject the whole or any part of the same. Items and/or work determined to be contrary to specifications must be replaced at the vendor's expense. Inferior items not retrieved by the vendor within thirty (30) calendar days, or an otherwise agreed upon time, shall become the property of the County. If disposal of such items warrants an expense, an amount equal to the disposal expense will be deducted from amounts payable to the vendor.

2.14 MAINTENANCE.

Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 MATERIAL SAFETY DATA SHEETS.

Under the "Hazardous Communications Act," common known as the "Texas Right to Know Act," a Bidder must provide the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the Bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 EVALUATION.

Evaluation shall be used as a determinant as to which services are the most efficient and/or most economical for the County. It shall be based on all factors having a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Jefferson County Purchasing Department and recommendation to Jefferson County Commissioners' Court. Compliance with all bid requirements and needs of the using department are considered in evaluating bids. Pricing is not the only criteria for making a recommendation. The Jefferson County Purchasing Department reserves to right to contact any Bidder, at any time, to clarify, verify or requirement information with regard to this bid.

3. PURCHASE ORDERS AND PAYMENT.

3.1 PURCHASE ORDERS.

A purchase order(s) shall be generated by the Jefferson County Purchasing Agent to the successful vendor. The purchase order number must appear on all itemized invoices and packing slips. The County will not be held responsible for any work orders placed and/or performed without a valid current purchase order number. Payment will be made for all services rendered and accepted by the contract administrator for which a valid invoice has been received.

3.2 INVOICES.

All invoices shall reference the Purchase Order number. Invoices shall reference the bid item number or a detailed description for each item invoiced. If an item purchased and itemized on the invoice does not correspond to an item in any of the categories awarded to the vendor, invoice shall reference the item as "N/C" to indicate that it is a non-contract item. This requirement is to assist the County in verifying contract pricing on all invoices. Payment will be made under terms of net thirty (30) days unless otherwise agreed upon by seller and the purchasing department.

3.3 PROMPT PAYMENT.

In accordance with the State of Texas Prompt Payment Act, Article 601f V.T.C.S., payment will be made after receive and acceptance by the County of the merchandise ordered and of a valid invoice. Successful Bidder(s) is required to pay Subcontractors within ten (10) days after the successful Bidder receives payment from the County.

3.4 FUNDING.

Jefferson County is operated and funded on an October 1 to September 30 basis; accordingly, the County reserves the right to terminate, without liability to the County, any contract for which funding is not available.

4. CONTRACT.

4.1 CONTRACT DEFINITION.

The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson County, shall constitute a contract equally binding between the successful Bidder and Jefferson County.

4.2 CHANGE ORDER.

No different or additional terms will become part of this contract with the exception of a change order. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing and at the discretion and approval of

Jefferson County. No change order will be binding unless signed by an authorized representative of the County and the vendor.

4.3 PRICE RE-DETERIMINATION.

A price re-determination may be requested at the time of annual renewal. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The Bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

4.4 TERMINATION.

Jefferson County reserves the right to terminate the contract for default if the Bidder breached any of the terms therein, including warranties of Bidder or if the Bidder becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies which Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or service within the proper amount of time, and/or to properly perform any and all services required to Jefferson County's satisfaction and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified. Jefferson County reserves the right to award canceled contract to the next lowest Bidder. Bidder, in submitting this bid, agrees that Jefferson County shall not be liable to prosecution for damages in the event that the County declares the Bidder in default.

4.5 CONFLICT OF INTEREST.

Employees of the County are not permitted to maintain financial interest in, or receive payment, directly or indirectly, borrow from, lend to, invest in, or engage in any substantial financial transaction with any individual, organization, supplier, or Subcontractor who does business with the County without disclosure. When conflict of interest is discovered, it shall be grounds for termination of contract.

4.6 INTEREST BY PUBLIC OFFICIALS.

No public official shall have interest in this contract, in accordance with Texas Local Government Code.

4.7 PRE-AWARD/CONTRACT CONTACT BETWEEN COUNTY AND VENDORS.

The Jefferson County Purchasing Department may initiate discussions with selected vendors; however, discussions may not be initiated by vendors.

The Jefferson County Purchasing Department expects to conduct discussions with vendor's representatives authorized to contractually obligate the vendor with an offer.

Vendors shall not contact any Jefferson County personnel during the IFB process without the express permission from the Jefferson County Purchasing Agent. The Purchasing Agent will disqualify any vendor who has made site visits, contacted Jefferson County personnel, or distributed any literature without authorization from the Jefferson County Purchasing Department.

All correspondence relating to this IFB, from advertisement to award shall be sent to the Jefferson County Purchasing Department. All presentations and/or meetings between Jefferson County and the vendor relating to this IFB shall be coordinated by the Jefferson County Purchasing Department.

Selected vendors may be expected to make a presentation/product demonstration to an Evaluation Committee. Proposals, vendor presentations, and product/service evaluations may develop into negotiating sessions with the vendor(s) as selected by the Evaluation Committee. Jefferson County expects to conduct negotiations with vendor

representatives authorized to contractually obligate the vendor with an offer. If vendor is unable to agree to contract terms and conditions, Jefferson County reserves the right to terminate contract negotiations with that vendor and initiate negotiations with another vendor. In addition to a presentation, visits by the Evaluation Committee to representative vendor client sites may be conducted where the proposed solution can be demonstrated in a production environment.

4.8 INJURIES OR DAMAGES RESULTING FROM NEGLIGENCE.

Successful vendor shall defend, indemnify and save harmless Jefferson County and all its officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful vendor, or of any agent, employee, Subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful vendor shall pay any judgment with cost which may be obtained against Jefferson County growing out of such injury or damages.

4.9 WARRANTY.

The successful vendor shall warrant that all materials utilized in the performance of this contract shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship and title.

4.10 UNIFORM COMMERCIAL CODE.

The successful vendor and Jefferson County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

4.11 VENUE.

This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the County of Jefferson, Texas.

4.12 SALE, ASSIGNMENT, OR TRANSFER OF CONTRACT.

The successful vendor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written consent of Jefferson County.

4.13 SILENCE OF SPECIFICATIONS.

The apparent silence of these specifications as to any detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

5. REJECTION OR WITHDRAWAL.

Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within **90** days after opening date.

6. EMERGENCY/DECLARED DISASTER REQUIREMENTS.

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's

supplier(s).

Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling and drayage fees may apply.

7. AWARD.

The bid will be awarded to the responsible, responsive bidder(s) whose bid, conforming to the solicitation, will be most advantageous to Jefferson County – price and other factors considered. Unless otherwise specified in this IFB, Jefferson County reserves the right to accept a bid in whole or in part, and to award by item or by group, whichever is deemed to be in the best interest of Jefferson County. Any bidder who is in default to Jefferson County at the time of submittal of the bid shall have that bid rejected.

Jefferson County reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial non-conformity in the offer, as determined by Jefferson County, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Jefferson County shall consider the qualifications of the bidders, and, where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment.

In addition, Jefferson County may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County reserves the right to award this contract on the basis of **lowest and best bid** in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one offeror, and/or to reject any or all bids. In the event the lowest dollar offeror meeting specifications is not a awarded a contract, Offeror may appear before the Commissioners' Court and present evidence concerning Offeror responsibility after officially notifying the Office of the Purchasing Agent of Offeror's intent to appear.

8. CONTRACT.

A response to an IFB is an offer to contract with Jefferson County based upon the terms, conditions, and specifications contained in the IFB. Bids do not become contracts unless and until they are executed by Jefferson County, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the IFB, unless any of the terms and conditions is modified by an IFB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

9. WAIVER OF SUBROGATION.

Bidder and bidder's insurance carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from bidder's performance under this agreement.

10. FISCAL FUNDING.

A multi-year contract (if requested by the specifications) continuing as a result of an extension option must include fiscal funding out. If, for any reason, funds are not appropriated to continue the contract, said contract shall become null and void.

11. BID RESULTS.

Bid results are not provided in response to telephone inquiries. A preliminary tabulation of bids received will be posted on the Purchasing web page at https://jeffersoncountytx.gov/Purchasing/ as soon as possible following bid opening. A final tabulation will be posted following bid award, and will also be available for review in the Purchasing Department.

12. CHANGES AND ADDENDA TO BID DOCUMENTS.

Each change or addendum issued in relation to this IFB document will be on file in the Office of the Purchasing Agent, and will be posted on the Purchasing web site as soon as possible. It shall be the bidder's responsibility to make inquiry as to change or addenda issued, and to monitor the web site. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the Office of the County Purchasing Agent.

13. SPECIFICATIONS.

Unless otherwise stated by the bidder, the bid will be considered as being in accordance with Jefferson County's applicable standard specifications, and any special specifications outlined in the bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of Jefferson County, and should not be construed as excluding bids on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid.

Jefferson County reserves the right to determine if equipment/ product being bid is an acceptable alternate. All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of the bid, may be considered non-responsive.

14. DELIVERY.

Bids shall include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder (in writing on the included Bid Form), prices bid will be considered as being based on F.O.B. destination/delivered freight included.

15. INTERPRETATION OF BID AN/OR CONTRACT DOCUMENTS.

All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening, in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. Inquiries received that are not made in a timely fashion may or may not be considered.

16. CURRENCY.

Prices calculated by the bidder shall be stated in U.S. dollars.

17. PRICING.

Prices shall be stated in units of quantity specified in the bid documents. In case of discrepancy in computing the amount of the bid, the unit price shall govern.

18. NOTICE TO PROCEED/PURCHASE ORDER.

The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.

19. CERTIFICATION.

By signing the offer section of the Offer and Acceptance page, Bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.
- The Bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.
- The Bidder hereby certifies that the individual signing the bid is an authorized agent for the Bidder and has the authority to bind the Bidder to the contract.

20. DEFINITIONS.

"County" – Jefferson County, Texas.
"Contractor" – The Bidder whose proposal is accepted by Jefferson County.

21. SMALL, MINORITY & WOMEN BUSINESS ENTERPRISE PARTICIPATION

It is the desire of Jefferson County to increase the participation of Small, Minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

Minority owned business may be eligible for contract procurement assistance with public and private sector entities from MBDA Centers

Dallas Fort Worth MBDA Business Center
8828 N. Stemmons Freeway, Ste. 550 B
Dallas, TX 75247
214-920-2436
Website: https://www.mbdadfw.com
Email: admin1@mbdadallas.com

El Paso MBDA Business Center
2401 East Missouri Avenue
El Paso, TX 79903
915-351-6232
Website: https://www.mbda.gov/business-center/el-paso-mbda-business-center
Email: treed@ephcc.org

San Antonio MBDA Business Center
501 W. Cesar E. Chavez Blvd., Ste. 3.324 B
San Antonio, TX 78207
210-458-2480
Website: https://www.mbda.gov/business-center/san-antonio-mbda-business-center
Email: Jacqueline.jackson@utsa.edu

Small and woman-owned business may be eligible for assistance from U.S. Small Business Administration (SBA):
Website: https://www.sba.gov/local-assistance

Dallas/Fort Worth District Office
150 West Parkway, Ste. 130
Euless, TX 76040
817-684-5500
Website: https://www.sba.gov/district/dallas-fort-worth
Email: dfwdo.email@sba.gov

El Paso District Office
211 N. Florence St, Ste. 201

El Paso, TX 79901
915-834-4600
Website: https://www.sba.gov/district/el-paso
Email: lee.vega@sba.gov

Houston District Office
8701 S. Gessner Dr, Ste. 1200
Houston, TX 77074
713-773-6500
Website: https://www.sba.gov/district/houston
Email: houston@sba.gov

Lower Rio Grande Valley District Office
2422 E. Tyler Ave, Suite E
Harlingen, TX 78550
956-427-8533
Website: https://www.sba.gov/district/lower-rio-grande-valley
Email: lrgvdo.email@sba.gov

San Antonio District Office
615 E. Houston St, Ste 298
San Antonio, TX 78205
210-403-5900
Website: https://www.sba.gov/district/san-antonio
Email: sado.email@sba.gov

West Texas District Office
1205 Texas Ave, Room 408
Lubbock, TX 79401
806-472-7462
Website: https://www.sba.gov/district/west-texas
Email: lubdo@sba.gov

HUB certification information can be found at:

Statewide Procurement Division HUB Program
P.O. Box 13528
Austin, TX 78711
512-463-5872 or 888-863-5881
Website: https://comptroller.texas.gov/purchasing/vendor/hub
Email: statewidehubprogram@cpa.texas.gov

PROPOSER: INSERT HUB, SBE, MBE or WBE Certification behind this page.

SECTION 2: FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) MANDATED CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY UNDER FEDERAL AWARDS REQUIRED BY 2 C.F.R. §200.327 APPENDIX II TO 2 CFR §200

2 CFR 200.327 Contract provisions. The non-Federal entity's contracts should contain applicable provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards. The non-Federal entity's contracts must contain the provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards, as applicable. ***Language as of January 3, 2025.**

THRESHOLD	PROVISION	CITATION
>$250,000 (Simplified Acquisition Threshold)	Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. Although not required for contract at or below the SAT, FEMA suggests including a remedies provision. The NFE should consult their servicing legal counsel to determine whether and how remedies for breach of contract are permissible under applicable state, local, or tribal laws or regulations.	2 CFR 200 APPENDIX II (A)
>$10,000	All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement. FEMA suggests including a termination for cause and for convenience in all contracts even when not required. The NFE should consult their servicing legal counsel to determine whether and how termination provisions are permissible under applicable state, local, or tribal laws or regulations.	2 CFR 200 APPENDIX II (B)
None	Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor." 41 CFR 60-1.4 Equal opportunity clause. b) Federally assisted construction contracts. (1) Except as otherwise provided, each administering agency shall require the inclusion of the following language as a condition of any grant, contract, loan, insurance, or guarantee involving federally assisted construction which is not exempt from the requirements of the equal opportunity clause: The [recipient] hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any	2 CFR 200 APPENDIX II (C) and 41 CFR §60-1.4(b)

Federal program involving such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause:

During the performance of this contract, the contractor agrees as follows:

The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through
(8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The [recipient] further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the [recipient] so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The [recipient] agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

	The [recipient] further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the [recipient] agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the [recipient] under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such [recipient]; and refer the case to the Department of Justice for appropriate legal proceedings.	
>$2,000	Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non- Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. **FEMA PA and HMGP do not require these clauses unless it is a requirement for matching funds by another federal program legislation such as CDBG-DR.** When required, prime construction contracts over $2,000 awarded by NFEs must include a provision for compliance with the Davis-Bacon Act. If applicable per the standard described above, the NFE must include the provisions at 29 C.F.R. § 5.5(a)(1)-(10) in full into all applicable contracts, and all applicable contractors must include these provisions in full in any subcontracts.	2 CFR 200 APPENDIX II (D); 40 U.S.C. §§ 3141-3144 and 3146-3148; supplemented by 29 C.F.R. Part 5; 40 U.S.C. § 3145; supplemented by 29 C.F.R. Part 3

	In situations where the Davis-Bacon Act does not apply, neither does the Copeland "Anti-Kickback" Act. Sample contract clauses are provided in the FEMA Contract Provisions Guide.	
> $100,000+ Mechanics or Laborers	Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence. **Applicability** **This required contract provision applies to all procurements over $100,000 that involve the employment of mechanics, laborers, and construction work. These requirements *do not* apply to the purchase of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.** Required Language Compliance with the Contract Work Hours and Safety Standards Act. 1. *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 2. *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section. 3. *Withholding for unpaid wages and liquidated damages.* The (insert	2 CFR 200 APPENDIX II (E); 40 U.S.C. §§ 3701-3708; supplemented by 29 C.F.R. Part 5

	name of grant recipient or subrecipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section. 4. *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section. **For contracts that are only subject to Contract Work Hours and Safety Standards Act and are not subject to the other statutes in 29 C.F.R. § 5.1 where an additional contract provision is required, FEMA suggests including the language below.** Suggested Language Further Compliance with the Contract Work Hours and Safety Standards Act. 1. The contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Records to be maintained under this provision shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Department of Homeland Security, the Federal Emergency Management Agency, and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.	
None	Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.	2 CFR 200 APPENDIX II (F); Funding Agreement; definition found under 37 C.F.R. § 401.2(a).

	This provision does not apply to all FEMA grant and cooperative agreement programs including PA and HMGP as awards under these programs do not meet the definition.	
>$150,000	Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended - Contracts and subgrants of amounts in excess of $150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). Suggested Language: Clean Air Act The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 *et seq.* The contractor agrees to report each violation to the (insert name of non-federal entity entering into the contract) and understands and agrees that the (insert name of the non-federal entity entering into the contract) will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal assistance provided by FEMA. Federal Water Pollution Control Act The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 *et seq.* The contractor agrees to report each violation to the (insert name of the non-federal entity entering into the contract) and understands and agrees that the (insert name of the non-federal entity entering into the contract) will, in turn, report each violation as required to assure notification to the (insert name of the pass-through entity, if applicable), Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal assistance provided by FEMA.	2 CFR 200 APPENDIX II (G); 42 U.S.C. §§ 7401-7671q; 33 U.S.C. §§ 1251-1387
>$25,000	Debarment and Suspension (Executive Orders 12549 and 12689) - A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989	2 CFR 200 APPENDIX II (H); 2 C.F.R. Part 180

	Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. The following provides a debarment and suspension clause. It incorporates an optional method of verifying that contractors are not excluded or disqualified. Suggested Language: Suspension and Debarment This contract is a covered transaction for purposes of 2 C.F.R. Part 180 and 2 C.F.R. Part 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935). The contractor must comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into. This certification is a material representation of fact relied upon by (insert name of recipient/subrecipient/applicant). If it is later determined that the contractor did not comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, in addition to remedies available to (insert name of recipient/subrecipient/applicant), the federal government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.	(implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989)); 2 C.F.R. Part 3000 (Department of Homeland Security regulations for Non-procurement Debarment and Suspension, implementing 2 C.F.R. Part 180).
> $100,000; and Certification required for all contracts greater than $100,000	Byrd Anti-Lobbying Amendment (31 U.S.C. 1352) - Contractors that apply or bid for an award exceeding $100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non- Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award. **If applicable, contractors must sign and submit the following certification to the NFE with each bid or offer exceeding $100,000.** Required Certification: CERTIFICATION REGARDING LOBBYING (APPENDIX A, 44 C.F.R. PART 18)	2 CFR 200 APPENDIX II (I) and 24 CFR §570.303; (citing 31 U.S.C. § 1352); 44 C.F.R. § 18.110
	See 2 CFR §200.323.	2 CFR 200 APPENDIX II (J)
	See 2 CFR §200.216.	2 CFR 200 APPENDIX II (K)
	See 2 CFR §200.322.	2 CFR 200 APPENDIX II (L)

Work involves the use of materials, and the contract is for more than $10,000	A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired during the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines. Suggested Language: In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired— Competitively within a timeframe providing for compliance with the contract performance schedule; Meeting contract performance requirements; or At a reasonable price. Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines webpage: https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.	2 CFR 200.323; Pub. L. No. 89-272 (1965) (codified as amended by the Resource Conservation and Recovery Act at 42 U.S.C. § 6962)
>$100,000	*§135.38 Section 3 clause* *All section 3 covered contracts shall include the following clause (referred to as the section 3 clause):* A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing. B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations. C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement	

	or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin. D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135. E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135. F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.	
	G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).	
None; All FEMA declarations and awards issued on or after November 12, 2020.	Section 889(b)(1) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (FY2019 NDAA) and 2 C.F.R. § 200.216, as implemented by FEMA Policy 405-143-1, Prohibitions on Expending FEMA Award Funds for Covered Telecommunications Equipment or Services (Interim), prohibit the obligation or expending of federal award funds on certain telecommunication products or from certain entities for national security reasons. Effective August 13, 2020, FEMA recipients and subrecipients, as well as their contractors and subcontractors, may not obligate or expend any FEMA award funds to: Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:	2 CFR 200.216

	(1) Procure or obtain; (2) Extend or renew a contract to procure or obtain; or (3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). (i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities). (ii) Telecommunications or video surveillance services provided by such entities or using such equipment. (iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country. (b) In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained. (c) See Public Law 115-232, section 889 for additional information. (d) See also § 200.471.	
None	The Federal awarding agency must establish conflict of interest policies for Federal awards. The non-Federal entity must disclose in writing any potential conflict of interest to the Federal awarding agency or pass-through entity in accordance with applicable Federal awarding agency policy.	2 CFR 200.112
None	The Federal awarding agency and the non-Federal entity should, whenever practicable, collect, transmit, and store Federal award-related information in open and machine-readable formats rather than in closed formats or on paper in accordance with applicable legislative requirements. A machine-readable format is a format in a standard computer language (not English text) that can be read automatically by a web browser or computer system. The Federal awarding agency or pass-through entity must always provide or accept paper versions of Federal award-related information to and from the non-Federal entity upon request. If	2 CFR 200.336

	paper copies are submitted, the Federal awarding agency or pass-through entity must not require more than an original and two copies. When original records are electronic and cannot be altered, there is no need to create and retain paper copies. When original records are paper, electronic versions may be substituted through the use of duplication or other forms of electronic media provided that they are subject to periodic quality control reviews, provide reasonable safeguards against alteration, and remain readable.	
None; All FEMA declarations and awards issued on or after November 12, 2020.	Suggested Language: If subcontracts are to be let, the prime contractor is required to take all necessary steps identified in 2 C.F.R. § 200.321(b)(1)-(5) listed below to ensure that small and minority businesses, women's business enterprises, and labor surplus area firms are used when possible. Contracting with HUB, small and minority businesses, women's business enterprises, and labor surplus area firms. (a) When possible, the recipient or subrecipient should ensure that small businesses, minority businesses, women's business enterprises, veteran-owned businesses, and labor surplus area firms (See U.S. Department of Labor's list) are considered as set forth below. (b) Such consideration means: (1) These business types are included on solicitation lists; (2) These business types are solicited whenever they are deemed eligible as potential sources; (3) Dividing procurement transactions into separate procurements to permit maximum participation by these business types; (4) Establishing delivery schedules (for example, the percentage of an order to be delivered by a given date of each month) that encourage participation by these business types; (5) Utilizing organizations such as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and (6) Requiring a contractor under a Federal award to apply this section to subcontracts.	2 C.F.R. § 200.321(b)(1)-(5)
None	Financial records, supporting documents, statistical records, and all other non- Federal entity records pertinent to a Federal award must be retained for a period of three years from the date of submission of the final expenditure report or, for Federal awards that are renewed quarterly or annually, from the date of the submission of the quarterly or annual financial report, respectively, as reported to the Federal awarding agency or pass-through entity in the case of a subrecipient. Federal awarding agencies and pass-through entities must not impose any other record retention requirements upon non-Federal entities. The only exceptions are the following: (a) If any litigation, claim, or audit is started before the expiration of the 3-year period, the records must be retained until all litigation, claims, or audit findings involving the records have been resolved and final action taken. (b) When the non-Federal entity is notified in writing by the Federal awarding agency, cognizant agency for audit, oversight agency for audit, cognizant agency for indirect costs, or pass-through entity to extend the retention period. (c) Records for real property and equipment acquired with Federal funds	2 CFR 200.334; and 200.337

	must be retained for 3 years after final disposition. (d) When records are transferred to or maintained by the Federal awarding agency or pass-through entity, the 3-year retention requirement is not applicable to the non-Federal entity. (e) Records for program income transactions after the period of performance. In some cases recipients must report program income after the period of performance. Where there is such a requirement, the retention period for the records pertaining to the earning of the program income starts from the end of the non-Federal entity's fiscal year in which the program income is earned. (f) Indirect cost rate proposals and cost allocations plans. This paragraph applies to the following types of documents and their supporting records: Indirect cost rate computations or proposals, cost allocation plans, and any similar accounting computations of the rate at which a particular group of costs is chargeable (such as computer usage chargeback rates or composite fringe benefit rates). (1) *If submitted for negotiation.* If the proposal, plan, or other computation is required to be submitted to the Federal Government (or to the pass-through entity) to form the basis for negotiation of the rate, then the 3-year retention period for its supporting records starts from the date of such submission. (2) *If not submitted for negotiation.* If the proposal, plan, or other computation is not required to be submitted to the Federal Government (or to the pass-through entity) for negotiation purposes, then the 3-year retention period for the proposal, plan, or computation and its supporting records starts from the end of the fiscal year (or other accounting period) covered by the proposal, plan, or other computation. <u>Suggested Language for All Procurements:</u> a. The Contractor agrees to provide (insert non-federal entity), the Texas Division of Emergency Management (TDEM), the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions. b. The FIRM agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed. c. The CONTRACTOR agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract. d. In compliance with section 1225 of the Disaster Recovery Reform Act of 2018, the (insert name of the non-federal entity) and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.	
None	CONTRACTS WITH COMPANIES ENGAGED IN BUSINESS WITH IRAN, SUDAN, OR FOREIGN TERRORIST ORGANIZATION PROHIBITED. A governmental Corporation may not enter into a governmental contract with a company that	United States Code 19 U.S.C. 2511

	is identified on a list prepared and maintained by the U.S. Department of Treasury under Executive Order 13224.The term "foreign terrorist organization" in this paragraph has the meaning assigned to such a term in Section 8 U.S.C.1189(a)(1) of the United States Code.	
>$100,000	PROVISION REQUIRED IN CONTRACT. (a) This section applies only to a contract that: (1) is between a governmental entity and a company with 10 or more full-time employees; and (2) has a value of $100,000 or more that is to be paid wholly or partly from public funds of the governmental entity. (b) A governmental Corporation may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and will not boycott Israel during the term of the contract.	(Adhere to your State's Local Government Code)
Option Contract Language for contracts awarded prior to Grant Award	The contract award is contingent upon the receipt of federal funds. If no such funds are awarded, the contract shall terminate.	Optional
	Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act. Suggested Language: The CONTRACTOR shall comply with the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).	42 U.S.C. 6201
	The Firm agrees that no otherwise qualified individual with disabilities shall, solely by reason of his/her disability, be denied the benefits of, or be subjected to discrimination, including discrimination in employment, under any program or activity receiving federal financial assistance.	Section 504 of the Rehabilitation Act of 1973, as amended.
	Pursuant to the *Violence Against Women Act Reauthorization of 2022*, the Grant Recipient must certify that local policies do not interfere with the residents' Right to Report Crime and Emergencies from One's Home. The certification will confirm that no ordinances, local regulations, or policies adopted by the local government and currently in effect contain any financial or regulatory penalty imposed on property owners or residents as a result of any use of emergency services, or that the Grant Recipient is actively addressing such local regulations.	Pub. L. 117-103, 136 Stat. 49

BYRD ANTI-LOBBYING CERTIFICATION

Certification for Contracts, Grants, Loans, and Cooperative Agreements-The undersigned certifies, to the best of his or her knowledge and belief, that:

1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor Gulf Coast Electric Co., Inc. certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C.Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Kevin J. Picard

Signature of Contractor's Authorized Official

Kevin J. Picard / President

Name and Title of Contractor's Authorized Official

3/24/2026

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DEBARMENT/SUSPENSION CERTIFICATION

Non-Federal entities and Contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (No procurement Debarment and Suspension).

This requirement applies to all FEMA grant and cooperative agreement programs.

Federal Executive Order (E .O.) 12549 "Debarment" requires that all Contractors receiving individual awards, using federal funds, and all sub recipients certify that the organization and its principals are not debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency from doing business with the Federal Government. By signing this document, you certify that your organization and its principals are not debarred. Failure to comply or attempts to edit this language may disqualify your bid. Information on debarment is available at the following websites: www.sam.gov and https://acguisition.qov/far/index.html see section 52.209-6.

The Contractor Gulf Coast Electric Co., Inc. certifies or affirms by your signature that neither you nor your principal is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

Signature of Contractor's Authorized Official

Kevin J. Picard / President

Name and Title of Contractor's Authorized Official

3/24/2026

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CIVIL RIGHTS COMPLIANCE PROVISIONS

1. EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause)

(For all awarded contracts that meet the definition of "federally assisted construction contract" provided in 41 CFR Part 60-1.3)

During the performance of this contract, the Contractor agrees as follows:

1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

   Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

3) The Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.

4) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

5) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

6) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

7) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or order this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

8) The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each Subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

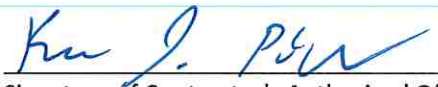
CIVIL RIGHTS COMPLIANCE PROVISIONS (CONTINUED)

Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or vendor as a result of such direction by the administering agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of Contractors and Subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a Contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon Contractors and Subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.



Signature of Contractor's Authorized Official

Kevin J. Picard

Name and Title of Contractor's Authorized Official

3/24/2026

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS

The following requirements and instructions **supersede** General Requirements where applicable.

1. SUBMISSION OF BID.

Bidder is Responsible for Submitting:

One (1) Original and one (1) Bid Copies; with all copies to include a Completed Copy of this Specifications Packet , **in its entirety.**

The County requests that bid submissions NOT be bound by staples or glued spines.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://jeffersoncountytx.gov/Purchasing/

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Bids must be submitted in complete original form by mail or messenger to the following address:
Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

BID PACKAGING: Bidder shall submit response in a tightly sealed opaque envelope or box, plainly marked "SEALED BID." The outside of the envelope of box shall also include the IFB Number, IFB Name, IFB Due Date, and the Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

All submissions must be received by 11:00 am CT, Wednesday, March 25, 2026.

Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.

Jefferson County will not accept any responsibility for bids being delivered by third party carriers.

Late bids will not be accepted and will be returned unopened to the Bidder.
Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB.

All bid responses submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.

All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

COURTHOUSE SECURITY: All visitors to the Courthouse must pass through Security. Respondents planning to hand deliver proposals must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal. Mondays and Tuesdays are particularly heavy days.

In response to the Covid-19 pandemic, Jefferson County has implemented precautionary measures as currently recommended by the CDC within its facilities. Bidders are strongly urged to plan accordingly.

COUNTY HOLIDAYS (2026):

~~January 1, 2026 (Thursday) - New Year's~~
~~January 19 (Monday) - Martin Luther King, Jr. Day~~
April 3 (Friday) - Good Friday
May 25 (Monday) - Memorial Day
June 19 (Friday) - Juneteenth
July 3 Observed (Friday) - Independence Day
September 7 (Monday) - Labor Day
November 11 (Wednesday) - Veteran's Day
November 26 & 27 (Thursday & Friday) - Thanksgiving
December 24 & 25 (Thursday & Friday) Christmas

Submissions During Time of Inclement Weather, Disaster, or Emergency:

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the IFB closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the IFB and urgent County requirements preclude amendment to the IFB, the time specified for receipt of Statements of Qualifications will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

2. PRE-BID MEETING AND WALK-THROUGH.

Due to the nature of this Bid, a Pre-Bid Conference will not be held for this project.

3. QUESTIONS/DEADLINE FOR QUESTIONS.

Questions may be emailed to Cindy Greene, Contract Specialist, at: Cynthia.greene@jeffersoncountytx.gov. If no response within 72 hours, email Deborah Clark, Purchasing Agent at: deb.clark@jeffersoncountytx.gov
The Deadline for asking questions or requesting additional information (in writing) is 5:00 pm, CT, **Friday, February 27, 2026.**

4. VENDOR REGISTRATION (System for Award Management).

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

In instances where a vendor has either an "Inactive" SAM Registration or is not currently registered with the System for Award Management, the Purchasing Department may *initially* accept proof (printout from the SAM website) that the vendor has begun the registration process in order for the IFB/RFQ/RFP submission to be considered as "responsive" to the specifications for the project.
However, the SAM Registration must be completed (showing "active" status, with no exclusions) prior to the award and/or execution of an agreement or contract for the project.

BIDDER: INSERT PROOF OF SYSTEM FOR AWARD MANAGEMENT (SAM) BEHIND THIS PAGE.

SAM.GOV

Entity Workspace Results 1 Total Results

GULF COAST ELECTRIC CO., INC.

Unique Entity ID: HF8WHBXKS978

CAGE/NCAGE: 36PE7

Entity Status: Active Registration

Doing Business As: GULF COAST ELECTRIC

Physical Address:
2005 PECOS ST
BEAUMONT , TX
77701-2519 USA

Expiration Date:
Jan 05, 2027

Purpose of Registration:
All Awards

5. FORM 1295 (Texas Ethics Commission) SUBMISSSION REQUIREMENT/INSTRUCTIONS FOR BIDDERS.
All Non-Exempt Bidders are required to submit a completed FORM 1295 with bid submission.

1. Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information on Form 1295, and print a copy of the completed form.
The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department **with bid submission.**

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

A sample of a completed FORM 1295 is included on **PAGE 36**.

FORM 1295 Implementation Background:
In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

Question: Will the date of birth and address provided appear on the TEC's website when the form is filed?

Answer: No. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application. Although the TEC does not capture the date of birth and street address of the signatory, the contracting state agency or governmental agency will have a physical copy of the form that includes the date of birth and address of the signatory. The TEC cannot answer whether the contracting state agency or governmental agency may release such information. Questions regarding the Texas Public Information Act may be directed to the Office of the Attorney General. See also Paxton v. City of Dall., No. 03-13-00546-CV, 2015 Tex. App. LEXIS 5228, at *10-11 (App.—Austin May 22, 2015) (mem. op.) (pet. denied) (available here)

FORM 1295 EXEMPTIONS:
What type of contracts are exempt from the Form 1295 filing requirement under the amended law?
The amended law adds to the list of types of contract exempt from the Form 1295 filing requirement.

A completed Form 1295 is not required for:
- a sponsored research contract of an institution of higher education
- an interagency contract of a state agency or an institution of higher education
- a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and any qualified vendor is eligible for the contract
- a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity
- a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code
- a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

BIDDER: INSERT COMPLETED FORM 1295 BEHIND THIS PAGE.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

1 of 1

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2026-1437618

Date Filed:
03/24/2026

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

GULF COAST ELECTRIC CO., INC.
Beaumont, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

Jefferson County

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

26-004/CG
Generator Inspections, routine maintenance and services

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
PICARD, Kevin	Beaumont, TX United States	X	

5 Check only if there is NO Interested Party. ☐

6 UNSWORN DECLARATION

My name is Kevin J. Picard, and my date of birth is July 27, 1982.

My address is 2005 Pecos Street, Beaumont (city), TX (state), 77701 (zip code), USA (country).

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Jefferson County, State of Texas, on the 24 day of March (month), 20 26 (year).

Signature of authorized agent of contracting business entity
(Declarant)

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS (CONTINUED)

6. MULTIPLE VENDOR AWARD.

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

7. DELIVERY.

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the Contractor, at the discretion of, and at no additional charge to, Jefferson County.

8. PAYMENT.

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to:
Jefferson County Auditing Department
Attention: Accounts Payable
1149 Pearl Street, 7th floor
Beaumont, TX 77701.

9. USAGE REPORTS.

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

10. INSURANCE.

The Contractor (including any and all Subcontractors as defined in Section 11.1.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the Contractor. These requirements do not establish limits of the Contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):
Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation Statutory Coverage (See Section 9 Below)

11. WORKERS' COMPENSATION INSURANCE

11.1 Definitions:

11.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

11.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the Contractor's/person's work on the project has been completed and accepted by the governmental entity.

11.1.3 **Persons providing services on the project ("Subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the Contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the Contractor and regardless of whether that person has employees. This includes, without limitation, independent Contractors, Subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

11.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the Contractor providing services on the project, for the duration of the project.

11.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – **refer to Section 10 above**.

11.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

11.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

11.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

11.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

11.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

11.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

11.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

11.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

11.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees providing services on the project, for the duration of the project.

11.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

11.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

11.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

11.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

11.9.4.2 the coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

11.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

11.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

11.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs **11.1. – 11.7**., with the certificates of coverage to be provided to the person for whom they are providing services.

11.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the Contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the Contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

11.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

BIDDER: INSERT COPY OF CERTIFICATE OF INSURANCE (COI) BEHIND THIS PAGE.

Note: For bid purposes, a general COI will suffice. However, a COI that includes the notation that "Jefferson County as an additional insured" will be required from Awarded Bidder(s) prior to the issuance of a Purchase Order.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 3/3/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
NavSav Holdings, LLC
6250 Delaware Street
Suite B
Beaumont TX 77706
License#: PC-1654559

CONTACT NAME: Phyllis Thibodeaux
PHONE (A/C, No, Ext): 409-753-8608 **FAX (A/C, No):**
E-MAIL ADDRESS: phyllis@navsav.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Texas Mutual Insurance Company	22945
INSURER B : ASCOT GROUP	23752
INSURER C : StarStone Specialty Ins. Co.	44776
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
Gulf Coast Electric Company, Inc
2005 Pecos St
Beaumont TX 77701
GULFCOA-04

COVERAGES **CERTIFICATE NUMBER:** 1411033422 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
B	X COMMERCIAL GENERAL LIABILITY			ESGL2510004431-02	12/31/2025	12/31/2026	EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
							MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	POLICY X PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	OTHER:							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$
	ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
C	UMBRELLA LIAB X OCCUR			78775B250ALI	12/31/2025	12/31/2026	EACH OCCURRENCE	$ 2,000,000
	X EXCESS LIAB CLAIMS-MADE						AGGREGATE	$ 2,000,000
	DED RETENTION $							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N	N/A		0001317569	12/31/2025	12/31/2026	X PER STATUTE OTH-ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? N (Mandatory in NH)						E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
B	Pollution Liability			HLM51CL0731607-26	12/31/2025	12/31/2026	Liability Limit	1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
The General Liability policy includes a BLANKET automatic additional insured endorsement that provides additional insured status to the certificate holder for products/completed operations and on going operations when there is a written contract between the named insured and the certificate holder that requires such status.
General Liability includes Primary & Noncontributory wording.
The General Liability, & Workers' Compensation policies provides BLANKET waiver of subrogation endorsement that provides this feature only when there is a written contract between the named insured and the certificate holder that requires such status.
Excess Liability follows form over General Liability, Auto Liability and Workers Compensation.
All above as required by written contract subject to policy terms & conditions.
Coverage is subject to all the terms, exclusions, and conditions of the policies.

CERTIFICATE HOLDER

Insured

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Phyllis Thibodeaux

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GULFCOA05C JVELASQUEZ

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 1/5/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
INSURICA 6011 Garth Road, Suite A Baytown, TX 77521	PHONE (A/C, No, Ext): (281) 421-7605	FAX (A/C, No): (866) 652-9381
	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A : Rock Ridge Insurance Company	11089
INSURED	INSURER B :	
Gulf Coast Electric Co., Inc. 2005 Pecos Street Beaumont, TX 77701-2519	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	$
	[ ] CLAIMS-MADE [ ] OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$
							MED EXP (Any one person)	$
							PERSONAL & ADV INJURY	$
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$
	[ ] POLICY [ ] PRO-JECT [ ] LOC						PRODUCTS - COMP/OP AGG	$
	[ ] OTHER:							$
A	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	[X] ANY AUTO			BW92-STR-2500431-01	12/31/2025	12/31/2026	BODILY INJURY (Per person)	$
	[ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	[ ] HIRED AUTOS ONLY [ ] NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
	[ ] UMBRELLA LIAB [ ] OCCUR						EACH OCCURRENCE	$
	[ ] EXCESS LIAB [ ] CLAIMS-MADE						AGGREGATE	$
	[ ] DED [ ] RETENTION $							$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N						[ ] PER STATUTE [ ] OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] (Mandatory in NH)	N / A					E.L. EACH ACCIDENT	$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

SAMPLE CERTIFICATE

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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BIDDER INFORMATION FORM

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: (IFB 26-004/CG), Term Contract for Generator Inspections, Routine Maintenance & Service for Jefferson County

Bidder's Company/Business Name: Gulf Coast Electric Co., Inc.

Bidder's TAX ID Number: 74-1557032

***If Applicable*:** **HUB Vendor No.** _____ **DBE Vendor No.** _____

Contact Person: Kevin J. Picard **Title:** President

Phone Number (with area code): 409-833-2828

Alternate Phone Number if available (with area code): 409-658-5246

Fax Number (with area code): _____

Email Address: KevinJPicard@yahoo.com

Mailing Address (Please provide a physical address for bid bond return, if applicable):

2005 Pecos Street
Address

Beaumont, TX 77701
City, State, Zip Code

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SECTION 4: MINIMUM SPECIFICATIONS

The following requirements and specifications supersede General Bid Requirements where applicable. Any questions relating to bid submission or bid item specifications requirements should be directed to Cindy Greene, Contract Specialist at 409-835-8593 or via email at: cynthia.greene@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent at 409-839-8593 or via email at: deb.clark@jeffersoncountytx.gov. Please reference Bid Number: IFB 26-004/CG.

SCOPE OF PROJECT

Jefferson County is soliciting bids for a generator technician to perform inspections, preventative maintenance and service on generators located in various locations for Jefferson County. Vendor shall provide copy of any applicable license with proposal. Vendor shall perform all electrical and engine work on generators.

TERMS

Individual departments will call to schedule any inspection, preventive maintenance or service for their generator. No work is guaranteed for generators listed in this proposal.

The County reserves the right to change, add, or delete service and/or locations.

Service call agreements will be made on an "as needed" basis. Repair work, other than the initial service call, resulting from this agreement shall not begin without a Notice to Proceed or Purchase Order from the County to the Vendor.

The vendor shall only proceed with repairs after the estimate has been approved by the department requesting the repair and a notice to proceed or purchase order has been issued.

- A "not to exceed" amount and description of work to be completed will be set at the time of the Notice to Proceed or Purchase Order agreed upon by both parties.

Awarded vendor shall furnish all labor, tools, transportation, equipment materials and supplies as required to complete the service request, to provide a working system, complete in all respects. All work shall be in compliance with Federal, State and Local Codes. All equipment or components must be installed in accordance with manufacturer's recommendations.

Vendor shall repair any damage caused by the Vendor and its employees at no cost to the County.

Modification of contract price shall be allowed only on the anniversary date of the contract. Prices throughout the initial one (1) year term shall remain firm/fixed. Written requests for price revisions after the first year shall be submitted in advance to the Jefferson County Purchasing Department. Requests shall be based upon and include documentation of the actual change in cost of components or CPI increases, involved in the contract. Price increase shall not include overhead or profit. The County reserves the right to reject any price increase and/or to terminate the contract.

All hourly cost proposals must be to service the generators listed in the IFB. Any additional costs not included on the Bid Form on page 49 of this IFB will not be allowed. This includes but is not limited to inspection fee, service call charge, mileage charges, fuel surcharges, miscellaneous supply charges.

INSPECTIONS

Vendor will provide semi-annual inspections for generators for Jefferson County upon the request of each department. These inspections shall include the following systems:

1. General Condition of Generator
    - Check generator area for obstructions
    - Wipe off unit
    - Clean oil, coolant, fuel & acid deposits
    - Check housing for leaks or corrosion
2. Starting System & Charging System
    - Visually inspect batteries for damage or leakage
    - Clean batteries with acid neutralizer
    - Clean & tighten all battery cable connections
    - Perform battery load test
    - Inspect battery charger for proper operation, loose terminals and deteriorated wiring
    - Starting motor – inspect electrical connections and wiring.
    - Air starter – inspect oil jar and feeder operation
    - Inspect alternator for proper operation, loose connections and mounting hardware
    - Check belts, pulley and voltage output
3. Engine Cooling System
    - Visually inspect radiator/heat exchanger for leaks, damage and debris
    - Check radiator/heat exchanger louver operation
    - Visually inspect coolant for correct levels and condition of coolant
    - Check coolant conditioner concentration and temperature protection
    - Check filler cap gasket and sealing surface
    - Visually inspect all hoses for deterioration
    - Check tightness of connections
    - Fan Drive Pulley & Fan – check for loose or worn pulleys, lube fan drive bearing
    - Check fan operation and clearance
    - Inspect fan belts for wear and/or deterioration. Check tension and adjust as needed
    - Inspect jacket water heater for proper operation
    - Inspect water pump visually and operationally for leaks and/or unusual noises
4. Engine Fuel System
    - Visually inspect fuel tank for leaks, damage and fuel level
    - Test day tank pump for proper operation
    - Inspect fuel condition for contaminants
    - Drain water from fuel tank of water separator
    - Visually inspect fuel lines for leaks and tightness of connections
    - Check line brackets
    - Inspect governor oil level
    - Inspect controls and linkage for proper operation. Add oil as necessary
    - Inspect fuel filters for damage, leaks and proper operation. Change when necessary
    - Fill Port Info – Special fittings, adapters needed, extra hose length, access to tank and other restrictions that may hamper fueling
5. Air Induction & Exhaust System
    - Air Filter Service Indicator – Note reading. Inspect for proper operation. Reset indicator.
    - Inspect air filter. Clean and/or replace as necessary

- Air Inlet System – Inspect piping and air filter housing for damage, loose connections and evidence of leaks
- Clean air filter housing if air filter is cleaned and replaced. Check housing seals and gaskets
- Inspect turbocharger for oil leakage or exhaust leakage. Check for unusual noises and proper operation
- Inspect exhaust manifold for damage, loose or missing hardware, and evidence of exhaust leakage and wet-stacking. Load bank recommendation if necessary
- Exhaust System – Inspect silencer and piping for damage, corrosion or leakage. Check rain cap
- Check supports for vibration damage and loose connections

6. Lube Oil System
    - Visually inspect for correct oil level and add when necessary, inspect for leaks
    - Note oil pressure
    - Operational and visual inspection of prelube pump
    - Inspect crankcase breather for proper operation. Check connections and inspect hose for deterioration. Note and report excessive blow by
7. Engine Monitors & Safety Controls (All PM Levels)
    - Check safety controls for loose connections and wiring deterioration
    - Check for proper operation of all safety controls and alarms
    - Remote Annunciator and Alarm – Inspect all panels and system alarms for proper functions
8. Ignition System (All PM Levels)
    - Check spark plug condition and electrode gap
    - Check spark plug wires for condition and connections for corrosion
    - Check ignition coils condition and connections for corrosion
9. Control Panels (All PM Levels)
    - Voltmeter – Operational check for correct reading. Check voltage level
    - Frequency Meter – Operational check for correct reading
    - Check alarm history
10. Generator Rear Bearings & Vibration Isolators
    - Lubricate generator rear bearing if applicable
    - Check vibration isolators for proper adjustment and condition
11. Transfer Switch (All PM Levels)
    - Check for leaks/corrosion on cabinets
    - Verify connections are tight on lugs
    - Check voltage across contacts
    - Lube as necessary
    - Verify exercise program
    - Functional test of unit
    - Verify time delays
    - Check for hot spots

Upon completion of the inspection, the vendor will ensure the generator is put back into stand-by mode.

Vendor will provide an inspection report within 15 days of the inspection to the department requesting the inspection that details the following:

1. Record of all findings of the inspections.
2. Record of any unsafe conditions.
3. Record of any corrective action taken.
4. Report recommendations for replacement of minor and major components.

PREVENTATIVE MAINTENANCE

Vendor will provide preventative maintenance for each generator upon the request of each department for Jefferson County as needed to maintain the proper functioning of the generators. This includes, but not limited to oil and filter changes.

Vendor will provide a report of all preventative maintenance performed on the generator to the department requesting the maintenance. Upon completion of preventative maintenance, the vendor will ensure the generator is put back into stand-by mode.

SERVICE CALLS

Vendor will provide service for generators when the generator is not functioning properly upon the request of each department or the Purchasing Department. Vendor will get approval from each department before replacing or ordering any parts for repair. Upon completion of service call, vendor will ensure the generator is put back into stand-by mode. This service will include calls 24 hours a day, 7 days a week. Vendor will also provide service during any man-made or natural disaster/emergency. Service calls in this agreement are made on an "as needed" basis as no repair work shall result from this agreement, other than the initial service call, without a written Notice to Proceed or Purchase Order from the County to the Vendor. A "not to exceed" amount and description of work to be completed will be set in the Notice to Proceed or Purchase Order agreed upon by both parties.

1. Non-Emergency Call-Out – Verbally respond to requests for non-emergency service to any generator within four (4) hours and be on site to perform repairs within forty-eight (48) hours after being contacted.
2. Emergency Call-Out – Verbally respond to requests for emergency service to any generator within one (1) hour and be on site to perform repairs within three (3) hours after being contacted.

GENERATOR LIST

This is the list of current generators located throughout Jefferson County that will need to be serviced and inspected. Generators may be added or removed upon the discretion of Jefferson County.

Department	Address	Make	Model	Output Rating	Inspection
Sabine Pass	5960 South 1st Street, Sabine Pass, TX 77655	Baldor	IDLC150 -3JU	150 KW	Yes
Courthouse	1149 Pearl St., Beaumont, TX 77701	Baldor	IDLC 2000	2 MEG	Yes
JC Service Center	7789 Vitterbo Rd, Beaumont, TX 77705	Baldor	IDLC 40	40 KW	Yes

Department	Address	Make		Output Rating	Inspection
Pct. 1	20205 W. Hwy 90, China, TX 77613			200 KW	No
Pct. 2	7759 Viterbo Rd, Beaumont, TX 77705	Baldor	IDLC 100	100 KW	No
Pct. 3	5700 Jade Ave., Pt. Arthur, TX 77640	Baldor	TS80T	60 KW	Yes
Pct. 4	7780 Boyt Rd., Beaumont, TX 77713	Baldor	IDLC 150	150 KW	No
Health & Welfare/Annex 1	1295 Pearl St., Beaumont, TX 77701	Caterpillar	D545	500 KW	Yes
Mosquito Control	8905 First St., Beaumont, TX 77705	Baldor	IDLC 80	80 KW	Yes
Narcotics/Sheriff Hanger	4640 Hanger Dr., Beaumont, TX 77705	Baldor	TS 130T	100 KW	Yes
Pt. Arthur Courthouse	709 Lakeshore Dr., Pt. Arthur, TX 77640	Baldor	TS350T	250 KW	No
Correctional Facility	5030 Hwy 69 S, Beaumont, TX 77701	Onan	500DFF B	500 KW	Yes
Correctional Facility	5030 Hwy 69 S, Beaumont, TX 77701	Onan	400DFE B	400 KW	Yes
Radio Tower Hwy 73	118235 Hwy 73, Beaumont, TX 77705	Generac	RG0605 45ANAX	60 KW	Yes
Radio Tower Hwy 90	1991 N. Meeker Rd, Beaumont, TX 77713	Kohler		20 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ Gate 1	Kohler	150RE0 ZJ01	155 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ Jerry Ware Terminal	Kohler	100ROZJ D	100 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ Firehouse	Kohler	20ROZJ	25 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ New Terminal	Generac	P22FE	600 KW	Yes

OFFER AND ACCEPTANCE FORM
OFFER TO CONTRACT

To Jefferson County:

We hereby offer and agree to furnish the materials or service in compliance with all terms, conditions, specifications, and amendments in the Invitation for Bid and any written exceptions in the offer.

We understand that the items in this Invitation for Bid, including, but not limited to, all required certificates are fully incorporated herein as a material and necessary part of the contract.

The undersigned hereby states, under penalty of perjury, that all information provided is true, accurate, and complete, and states that he/she has the authority to submit this bid, which will result in a binding contract if accepted by Jefferson County.

We acknowledge receipt of the following amendment(s): 1 _____, _____, _____, _____.

I certify, under penalty of perjury, that I have the legal authorization to bind the firm hereunder:

Gulf Coast Electric Co., Inc.
Company Name

2005 Pecos Street
Address

Beaumont, TX 77701
City State Zip

Signature of Person Authorized to Sign

Kevin J. Picard
Printed Name

President
Title

For clarification of this offer, contact:

Kevin J. Picard / President
Name & Title

409-833-2828
Phone Fax

KevinJPicard@yahoo.com
E-mail

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

ACCEPTANCE OF OFFER

The Offer is hereby accepted for the following items: Term Contract for Generator Inspections, Routine Maintenance & Service for Jefferson County for Contract Term: One (1) year from date of award with an option to renew for two (2) additional years.

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the Invitation for Bid, including all terms, conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by Jefferson County.

This contract shall henceforth be referred to as Contract No. (IFB 26-004/CG), Term Contract for Generator Inspections, Routine Maintenance & Service for Jefferson County. The Contractor has not been authorized to commence any billable work or to provide any material or service under this contract until Contractor receives a purchase order and/or a notice to proceed from the Jefferson County Purchasing Agent.

COUNTERSIGNED:

_____ _____

Jeff R. Branick, County Judge **Date**
JEFFERSON COUNTY, TEXAS

ATTEST:

_____ _____

Roxanne Acosta Hellberg, County Clerk **Date**
JEFFERSON COUNTY, TEXAS

BIDDER: INSERT ALL ADDENDA BEHIND THIS PAGE.
PLEASE BE SURE TO COMPLETE, SIGN, ATTEST, AND DATE EACH ADDENDUM.

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Addendum to IFB

IFB NUMBER: (IFB 26-004/CG)

IFB TITLE: Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County

IFB DUE BY: 11:00 am, CST, Wednesday, March 25, 2026

ADDENDUM NO.: 1

ISSUED (DATE): March 2, 2026

To Bidder: This Addendum is an integral part of the IFB package under consideration by you as a Bidder in connection with the subject matter herein identified. Jefferson County deems all sealed bids to have been proffered in recognition and consideration of the entire IFB Specifications Package – *including all addenda*. For purposes of clarification, **receipt of this present Addendum by a Bidder should be evidenced by returning it (signed) as part of the Bidder's sealed bid submission.** If the bid submission has already been received by the Jefferson County Purchasing Department, Bidder should return this addendum in a separate sealed envelope, clearly marked with the IFB Title, IFB Number, and IFB Opening Date and Time, as stated above.

Reason for Issuance of this Addendum: Vendor Questions and page number clarification.

The information included herein is hereby incorporated into the documents of this present bid matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

Debbie Haslet
Witness

Amy Pilegge
Witness

Approved by KP Date: 3/24/2026

Kevin J. Picard
Authorized Signature (Respondent)

Kevin J. Picard
Title of Person Signing Above

Gulf Coast Electric Co., Inc.
Typed Name of Business or Individual

2005 Pecos Street, Beaumont, TX 77701
Address

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Correction: The last paragraph on page 43 incorrectly references the Bid Form as being on page 49. The Bid form is found on page 51 of the specifications.

Vendor Questions:

1. **Question:** Do you require any load bank testing to be quoted for the yearly service?
   Answer: Under Section 4: Minimum Specifications, Inspections (pg 44) it notes that Vendor will provide semi-annual inspections for generators for Jefferson County upon the request of each department. The inspection requirements are outlined.

2. **Question:** Are there any units that are located on roofs or not accessible to pull up a truck within 50 feet?
   Answer: All generators are accessible to pull a truck within 50 feet. There are no generators on roofs. The Sabine Pass generator is on a stand-alone platform 10' off the ground with built in stairs. You can drive right up to it.

3. **Question:** Are you requiring ATS Services once or twice per year?
   Answer: See question and answer #1.

4. **Question:** Does each generator have 1 ATS switch or do some units have multiple?
   Answer: Most units have one ATS switch, a few units have 2 ATS switches.

5. **Question:** Can you please also clarify if a bid bond is needed for submission of bid?
   Answer: A bid bond is not required.

BID FORM

Item	Description	Labor Charge Per Hour
1	Generator Technician during working hours (Monday-Friday, 8:00 am to 5:00 pm)	$ 105.00 /hour
2	Helper accompanying Generator Technician during working hours (Monday-Friday, 8:00 am to 5:00 pm)	$ 65.00 /hour
3	Generator Technician during after-hours (Monday-Friday 5:00 pm – 8:00 am, and all-day Saturday & Sunday)	$ 157.50 /hour
4	Helper accompanying Generator Technician during after-hours (Monday-Friday 5:00 pm – 8:00 am, and all-day Saturday & Sunday)	$ 97.50 /hour
5	Generator Technician for services on Holidays	$ 210.00 /hour
6	Helper accompanying Generator Technician for services on Holidays	$ 130.00 /hour
7	Generator Technician for disaster relief service during mandatory/voluntary County evacuation (Monday-Friday, 8:00 am to 5:00 pm)	$ 157.50 /hour
8	Helper accompanying Generator Technician for disaster relief service during mandatory/voluntary County evacuation (Monday-Friday, 8:00 am to 5:00 pm)	$ 97.50 /hour
9	Generator Technician for emergency disaster relief service after-hours during mandatory/voluntary County evacuation (Monday-Friday 5:00 pm to 8:00 am)	$ 210.00 /hour
10	Helper accompanying Generator Technician for emergency disaster relief service after-hours during mandatory/voluntary County evacuation (Monday-Friday 5:00 pm to 8:00 am)	$ 130.00 /hour
11	Generator Technician for emergency disaster service relief during mandatory/voluntary County evacuation (Holidays)	$ 210.00 /hour
12	Helper accompanying Generator Technician for emergency disaster service during mandatory/ voluntary county evacuation (Holidays)	$ 130.00 /hour
13	Additional charges (Including, but no limited to inspection fee, service call charge, mileage charges, fuel surcharges, miscellaneous supply charges)	0.00

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum 1 1 Date Received 3/2/2026

Addendum 2 _____ Date Received _____

Addendum 3 _____ Date Received _____

BIDDER: INCLUDE FULL, SIGNED, & ATTESTED COPY OF EACH ADDENDUM ISSUED WITH BID SUBMISSION.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

VENDOR REFERENCES FORM

Bidder: Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or similar products and/or services as contained in this specification package were recently provided.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

REFERENCE ONE

Government/Company Name: Lamar University Beaumont

Address: PO Box 10016, Beaumont, TX 77710

Contact Person and Title: Marc Riggillo Director of Facilities Maintenance

Phone: 409-880-8108 Fax:

Email Address: M.Riggillo@lamar.edu Contract Period: 2023-current

Scope of Work: Campus wide maintenance including generators

REFERENCE TWO

Government/Company Name: Lamar State College Port Arthur

Address: 1848 Proctor Street, Port Arthur, TX 77641

Contact Person and Title: Reed Richard Director of Facilities Maintenance

Phone: 409-984-6252 Fax:

Email Address: Richardrj@lamarpa.edu Contract Period: 2023-current

Scope of Work: Campus wide maintenance including generators

REFERENCE THREE

Government/Company Name: City of Beaumont

Address: 801 Main Street, Beaumont, TX 77701

Contact Person and Title: Randal Peet Facilities Maintenance

Phone: 409-651-2354 Fax:

Email Address: Randal.Peet@BeaumontTexas.gov Contract Period: 2023-current

Scope of Work: city wide maintenance

SIGNATURE PAGE

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would Bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions? .....**Yes** ☑ **No** ☐

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other Bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other Bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the Bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

Gulf Coast Electric Co., Inc.	
Bidder (Entity Name)	Signature
2005 Pecos Street	Kevin J. Picard
Street & Mailing Address	Print Name
Beaumont, TX 77701	3/24/2026
City, State & Zip	Date Signed
409-833-2828	
Telephone Number	Fax Number
KevinJPicard@yahoo.com	
E-mail Address	

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.



Signature of Contractor's Authorized Official

Kevin J. Picard / President

Name and Title of Contractor's Authorized Official *(Please Print)*

3/24/2026

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CONFLICT OF INTEREST QUESTIONNAIRE

CONFLICT OF INTEREST QUESTIONNAIRE — FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

Gulf Coast Electric Co., Inc.

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information in this section is being disclosed.**

N/a

Name of Officer

This section (item 3 including subparts A, B, C, & D) must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more?

☐ Yes ☐ No

D. Describe each employment or business and family relationship with the local government officer named in this section.

4

Signature of vendor doing business with the governmental entity

3/24/2026

Date

Adopted 8/7/2015

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

LOCAL GOVERNMENT OFFICER
CONFLICTS DISCLOSURE STATEMENT – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM **CIS**

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20 _____, to certify which, witness my hand and seal of office.

_____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

Adopted 8/7/2015

THIS FORM IS FOR OFFICE USE ONLY

GOOD FAITH EFFORT (GFE) DETERMINATION CHECKLIST

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting HUBs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant, and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of HUB Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting HUB Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .?

☐ Yes	☑ No	1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum HUB Subcontractor participation?
☐ Yes	☑ No	2. **Notify** in writing a reasonable number of HUBs, allowing sufficient time for effective participation of the planned work to be subcontracted?
☐ Yes	☑ No	3. **Provide** HUBs that were genuinely interested in bidding on a Subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?
☐ Yes	☑ No	4. **Negotiate** in good faith with interested HUBs, and not reject bids from HUBs that qualify as lowest and responsive Bidders?
☐ Yes	☑ No	5. **Document** reasons HUBs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected HUBs?
☐ Yes	☐ No	6. If Prime Contractor/Consultant has zero (0) HUB participation, **please explain the reasons why.** All work to be self-performed

If "No" was selected, please explain and include any pertinent documentation with your bid.
If necessary, please use a separate sheet to answer the above questions.

Kevin J. Picard
Printed Name of Authorized Representative

Signature

President
Title

3/24/2026
Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

NOTICE OF INTENT (NOI) TO SUBCONTRACT WITH HISTORICALLY UNDERUTILIZED BUSINESS (HUB)

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract.

Please submit one form for each HUB Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: Gulf Coast Electric Co., Inc. HUB: ☐ Yes ☑ No

Address: 2005 Pecos Street, Beaumont, TX 77701
Street City State Zip

Phone (with area code): 409-833-2828 Fax (with area code): _____

Project Title & No.: Generator inspection & routine maintenance IFB26-004/CG

Prime Contract Amount: $ unknown

HUB Subcontractor Name: n/a

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Gulf Coast Electric Co., Inc.		3/24/2026
Printed Name of Contractor Representative	Signature of Representative	Date
Printed Name of HUB	Signature of Representative	Date

Note: Nothing on this Notice of Intent Form is intended to confer any rights, expressed or implied, to any third parties.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "HUB Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUCONTRACTING PARTICIPATION DECLARATION FORM

PAGE 1 OF 4

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Prime Contractor: Gulf Coast Electric Co., Inc. HUB: ☐ Yes ☑ No

HUB Status (Gender & Ethnicity): _____

Address: 2005 Pecos Street, Beaumont, TX 77701
Street City State Zip

Phone (with area code): 409-833-2828 Fax (with area code): _____

Project Title & No.: Generator inspection & routine maintenance IFB/RFP No.: 26-004/CG

Total Contract: $ unknown Total HUB Subcontract(s): $ _____

Construction HUB Goals: 12.8% MBE:: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African-American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR HUB OFFICE USE ONLY:

Verification date HUB Program Office reviewed and verified HUB Sub information Date: _____ Initials: _____

PART I. HUB SUBCONTRACTOR DISCLOSURE

HUB Subcontractor Name: n/a

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB) SUBCONTRACTING PARTICIPATION DECLARATION FORM

HUB Subcontractor Disclosure

PART I: Continuation Sheet (Duplicate as Needed)

HUB Subcontractor Name: n/a

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

HUB Subcontractor Name: n/a

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

All HUB Subcontractor Participation may be verified with the HUB Subcontractor(s) listed on Part I.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUCONTRACTING PARTICIPATION DECLARATION FORM

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING HUB SUBCONTRACTING GOALS

Instructions to Bidder: Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the HUB goals for this project for the following reasons:

- ☐ All Subcontractors to be utilized are "Non-HUBs." *(Complete Part III)*
- ☐ HUBs were solicited but did not respond.
- ☐ HUBs solicited were not competitive.
- ☐ HUBs were unavailable for the following trade(s):
- ☑ Other: All work to be self-performed

Was the Jefferson County HUB Office contacted for assistance in locating HUBs? ☐ Yes ☑ No

PART III: DISCLOSURE OF OTHER "NON-HUB" SUBCONTRACTS

The Bidder shall use this area to provide a listing of all "Non-HUB" Subcontractors, including suppliers, that will perform under this project. A list of those "Non-HUB" Subcontractors the Bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that Bidder is the apparent low Bidder. A list of those "Non-HUB" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: n/a

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: n/a

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

Subcontractor Name: n/a

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: n/a

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *HUB Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attached any necessary support documentation as required**. I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): Kevin J. Picard

Title: President

Signature: Kevin J. Picard

Date: 3/24/2026

E-mail address: KevinJPicard@yahoo.com

Contact person that will be in charge of invoicing for this project:

Name (print or type): Michelle Josey

Title: Accounts Receivable

Date: 3/24/2026

E-mail address: AR@GulfCoastElectric.com

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

RESIDENCE CERTIFICATION/TAX FORM

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Non-resident Bidder" refers to a person who is not a resident.

(4) "Resident Bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☑ I certify that Gulf Coast Electric Co., Inc. [company name] is a Resident Bidder of Texas as defined in Government Code §2252.001.

☐ I certify that _____ [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is _____ _____ (city and state).

Taxpayer Identification Number (T.I.N.):	74-1557032
Company Name submitting bid/proposal:	Gulf Coast Electric Co., Inc.
Mailing address:	2005 Pecos Street, Beaumont, TX 77701
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**
05075000001060000000	2005 Pecos Street, Beaumont, TX 77701

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HOUSE BILL 89 VERIFICATION

I, Kevin J. Picard, the undersigned representative of (company or business name) Gulf Coast Electric Co., Inc. (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and
2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. "**Boycott Israel**" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. "**Company**" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or an limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

Signature of Company Representative

3/24/2026
Date

On this 24th day of March, 2026, personally appeared

Kevin J. Picard, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

Amy K Pileggi
My Commission Expires
11/18/2029
Notary ID135540556

Notary Signature

3/24/2026
Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SENATE BILL 252 CERTIFICATION

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

_____

Company Name

_____

IFB/RFP/RFQ number

Certification check performed by:

_____

Purchasing Representative

_____

Date

THIS FORM IS FOR OFFICE USE ONLY

BID AFFIDAVIT

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF Texas COUNTY OF Jefferson

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas,

on this day personally appeared Kevin J. Picard (name), who

after being by me duly sworn, did depose and say:

"I, Kevin J. Picard (name) am a duly authorized officer of/agent

for Gulf Coast Electric Co., Inc. (name of firm) and have been duly authorized to execute the

foregoing on behalf of the said Gulf Coast Electric Co., Inc. (name of firm).

I hereby certify that the foregoing bid has not been prepared in collusion with any other Bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the Bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of Bidder: Gulf Coast Electric Co., Inc.
2005 Pecos Street, Beaumont, TX 77701

Fax: _____ Telephone# 409-833-2828

by: Kevin J. Picard (print name) Title: President

Signature: Kevin J. Picard

SUBSCRIBED AND SWORN to before me by the above-named

Kevin J. Picard on

this the 24 day of March, 20 26.

Amy K Pileggi
Notary Public in and for
the State of Texas

Amy K Pileggi
My Commission Expires
11/18/2029
Notary ID135540556

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Addendum to IFB

IFB NUMBER: **(IFB 26-004/CG)**

IFB TITLE: **Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County**

IFB DUE BY: **11:00 am, CST, Wednesday, March 25, 2026**

ADDENDUM NO.: **1**

ISSUED (DATE): **March 2, 2026**

To Bidder: This Addendum is an integral part of the IFB package under consideration by you as a Bidder in connection with the subject matter herein identified. Jefferson County deems all sealed bids to have been proffered in recognition and consideration of the entire IFB Specifications Package – *including all addenda*. For purposes of clarification, **receipt of this present Addendum by a Bidder should be evidenced by returning it (signed) as part of the Bidder's sealed bid submission.** If the bid submission has already been received by the Jefferson County Purchasing Department, Bidder should return this addendum in a separate sealed envelope, clearly marked with the IFB Title, IFB Number, and IFB Opening Date and Time, as stated above.

Reason for Issuance of this Addendum: Vendor Questions and page number clarification.

The information included herein is hereby incorporated into the documents of this present bid matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

_____
Witness

_____
Witness

Approved by ____ Date: _____

_____
Authorized Signature (Respondent)

President
Title of Person Signing Above

John & Bell
Typed Name of Business or Individual

P.O. Box 8 Silsbee Tx 77656
Address

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Correction: The last paragraph on page 43 incorrectly references the Bid Form as being on page 49. The Bid form is found on page 51 of the specifications.

Vendor Questions:

1. **Question:** Do you require any load bank testing to be quoted for the yearly service?
   Answer: Under Section 4: Minimum Specifications, Inspections (pg 44) it notes that Vendor will provide semi-annual inspections for generators for Jefferson County upon the request of each department. The inspection requirements are outlined.

2. **Question:** Are there any units that are located on roofs or not accessible to pull up a truck within 50 feet?
   Answer: All generators are accessible to pull a truck within 50 feet. There are no generators on roofs. The Sabine Pass generator is on a stand-alone platform 10' off the ground with built in stairs. You can drive right up to it.

3. **Question:** Are you requiring ATS Services once or twice per year?
   Answer: See question and answer #1.

4. **Question:** Does each generator have 1 ATS switch or do some units have multiple?
   Answer: Most units have one ATS switch, a few units have 2 ATS switches.

5. **Question:** Can you please also clarify if a bid bond is needed for submission of bid?
   Answer: A bid bond is not required.

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

February 17, 2026

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for Invitation for Bid **(IFB 26-004/CG), Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County, Pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-327.** Specifications for this project may be obtained from the Jefferson County website, https://jeffersoncountytx.gov/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and one (1) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Purchasing Department (1st Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Term Contract for Generator Inspections, Routine Maintenance and Service for Jefferson County, Pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-327**
BID NUMBER:	**IFB 26-004/CG**
DUE BY TIME/DATE:	**11:00 AM CT, Wednesday, March 25, 2026**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

Any questions relating to these bid requirements should be directed to Cindy Greene, Contract Specialist at 409-835-8593 or via email at: Cynthia.greene@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent, at 409-835-8593 or via email at deb.clark@jeffersoncountytx.gov.

Jefferson County encourages Disadvantaged Business Enterprises (DBEs), Minority/Women Business Enterprises (M/WBEs), and Historically Underutilized Businesses (HUBs) to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment, or the provisions of services. Individuals requiring special accommodations are requested to contact our office at least seven (7) days prior to the bid due date at 409-835-8593.

All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Bidders are strongly encouraged to carefully read the entire invitation, as failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

PUBLISH:
Beaumont Enterprise & Port Arthur News:
February 18, 2026
The Examiner:
February 19, 2026 & February 26, 2026

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BID SUBMISSIONS:

One (1) Original and one (1) Bid Copies; with all copies to include a Completed Copy of this specifications packet, in its entirety.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://jeffersoncountytx.gov/Purchasing/

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

SECTION 1: GENERAL CONDITIONS OF BIDDING AND TERMS OF CONTRACT

By execution of this document, the Vendor accepts all general and special conditions of the contract as outlined below and, in the specifications, and plans.

1. BIDDING.

1.1 BIDS.
All bids must be submitted on the bid form furnished in this package.

1.2 AUTHORIZED SIGNATURES.
The bid must be executed personally by the Vendor, duly authorized partner of the partnership, or duly authorized officer of the corporation. If executed by an agent, a power of attorney or other evidence of authority to act on behalf of the Vendor shall accompany the bid to become a valid bid.

1.3 LATE BIDS.
Bids must be in the office of the Jefferson County Purchasing Agent before or at the specified time and date bids are due. Bids received after the submission deadline shall be rejected as non-responsive and returned unopened.

1.4 WITHDRAWAL OF BID PRIOR TO OPENING.
A bid may be withdrawn before the opening date by submitting a written request to the Purchasing Agent. If time allows, the Bidder may submit a new bid. Bidder assumes full responsibility for submitting a new bid before or at the specified time and date bids are due. Jefferson County reserves the right to withdraw a request for bids before the opening date.

1.5 WITHDRAWAL OF BID AFTER OPENING.
Bidder agrees that its offer may not be withdrawn or cancelled by the Vendor for a period of ninety (90) days following the date and time designated for the receipt of bids unless otherwise stated in the bid and/or specifications.

1.6 BID AMOUNTS.
Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be interpreted in the favor of Jefferson County.

1.7 EXCEPTIONS AND/OR SUBSTITUTIONS.
All bids meeting the intent of the specifications and plans will be considered for award. Vendors taking exception to the specifications and plans, or offering substitutions, shall state these exceptions in the section provided. If bid is made on an article other than the one specified, which a Bidder considers comparable, the name and grade of said article must be specified in the bid and sufficient specifications and descriptive data must accompany same to permit thorough evaluation. The absence of stated exceptions and/or substitutions shall indicate that the Vendor has not taken any exceptions to the specifications and shall be responsible to perform in strict accordance with the specifications. As a matter of practice, Jefferson County rejects exception(s) and /or substitutions as non-responsive but reserves the right to accept any and/or all of the exception(s) and/or substitution(s) deemed to be in the best interest of Jefferson County.

1.8 ALTERNATES.
The Invitation for Bid and/or specifications may expressly allow Bidder to submit an alternate bid. Presence of such an offer shall not be considered an indication of non-responsiveness.

1.9 DESCRIPTIONS.

Unless otherwise specified, any reference to make, manufacturer and/or model used in the bid specifications is merely descriptive and not restrictive, and is used only to indicate type, style, or quality of material desired.

1.10 BID ALTERATIONS.

Bids cannot be altered or amended after submission deadline. Any interlineations, alterations, or erasures made before opening time must be initialed by the signer of the bid, guaranteeing authenticity.

1.11 TAX EXEMPT STATUS.

Jefferson County is exempt from federal excise tax and state sales tax. Unless the bid form or specifications specifically indicate otherwise, the bid price must be net, exclusive of above-mentioned taxes and will be so construed. Therefore, the bid price shall not include taxes.

1.12 QUANTITIES.

Quantities indicated are estimated quantities only and are not a commitment to buy. Approximate usage does not constitute an order, but only implies the probable quantity that will be used. Commodities will be ordered on an as-needed basis. Bidder is responsible for accurate final counts.

1.13 BID AWARD.

Award of contract shall be made to the most responsible, responsive Bidder, whose offer is determined to be the best value, taking into consideration the relative importance of price. Jefferson County reserves the right to be the sole judge as to whether items bid will serve the purpose intended.

Jefferson County reserves the right to award based upon individual line items, sections or total bid.

1.14 SILENCE OF SPECIFICATIONS FOR COMPLETE UNITS.

All materials, equipment and/or parts that will become a portion of the completed work, including items not specifically stated herein but, necessary to render the service(s) complete and operational per the specifications, are to be included in the bid price. Vendor may be required to furnish evidence that the service, as bid, will meet or exceed these requirements.

1.15 ADDENDA.

Any interpretations, corrections or changes to the specifications and plans will be made by addenda no later than forty-eight (48) hours prior to the bid opening. Addenda will be posted on the Purchasing web site. Vendors are responsible for monitoring the web site in order to remain informed on addenda. Vendors shall acknowledge receipt of all addenda with submission of bid.

1.16 GENERAL BID BOND/SURETY REQUIREMENTS.

Failure to furnish bid bond/surety, if requested, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.17 GENERAL INSURANCE REQUIREMENTS.

Failure to furnish Affidavit of Insurance, if required in these specifications, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.18 RESPONSIVENESS.

A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid

price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 RESPONSIBLE STANDING OF BIDDER.

To be considered for award, Bidder must at least: have the ability to obtain adequate financial resources, be able to comply with required or proposed delivery/completion schedule, have a satisfactory record of performance; have a satisfactory record of integrity and ethics, and be otherwise qualified and eligible to receive award.

1.20 CONFIDENTIAL/PROPRIETARY INFORMATION.

If any material in the bid submission is considered by Bidder to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Bidder), Bidder **must** clearly mark the applicable pages of bid submission to indicate each claim of confidentiality. Additionally, Bidder must include a statement on company letterhead identifying all Bid Submission section(s) and page(s) that have been marked as confidential. Jefferson County will protect from public disclosure such portions of a bid, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire bid submission is protected from disclosure because it contains some proprietary information is not acceptable, and will make the entire bid submission subject to release under the Texas Public Information Act.

By submitting a bid, Bidder agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Bidder's bid submission or other information submitted by Bidder.

1.21 PUBLIC BID OPENING.

Bidders are invited to be present at the opening of bids. After the official opening of bids, a period of not less than one week is necessary to evaluate bids. The amount of time necessary for bid evaluation may vary and is determined solely by the County. Following the bid evaluation, all bids submitted are available for public review.

2. PERFORMANCE.

2.1 DESIGN, STRENGTH, AND QUALITY.

Design, strength, and quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practices. The apparent silence of specifications and/or plans as to any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications and/or plans shall be made on the basis of this statement.

2.2 AGE AND MANUFACTURE.

All tangible goods being bid must be new and unused, unless otherwise specified, in first-class condition, of current manufacture, and furnished ready to use. All items not specifically mentioned that are required for a complete unit shall be furnished.

2.3 DELIVERY LOCATION.

All deliveries will be made to the address(es) specified on the purchase order during normal office working hours of 8:00 am CT to 4:00 pm CT, Monday through Friday, unless otherwise authorized by the Purchasing Agent or designee.

2.4 DELIVERY SCHEDULE.

Delivery time may be an important consideration in the evaluation of best value. The maximum number of days necessary for delivery ARO shall be stated in the space, if provided, on the bid form.

2.5 DELIVERY CHARGES.

All delivery and freight charges, F.O.B. destination shown on Jefferson County purchase order, as necessary to perform contract are to be included in the bid price.

2.6 INSTALLATION CHARGES.

All charges for assembly, installation and set-up shall be included in the bid price. Unless otherwise stated, assembly, installation and set-up will be required.

2.7 OPERATING INSTRUCTIONS AND TRAINING.

Clear and concise operating instructions and descriptive literature will be provided in English, if requested. On-site detailed training in the safe and efficient use and general maintenance of item(s) purchased shall be provided as needed at the request of Jefferson County. Instructions and training shall be at no additional cost to the County.

2.8 STORAGE.

Bidder agrees to provide storage of custom ordered materials, if requested, for up to thirty (30) calendar days.

2.9 COMPLIANCE WITH FEDERAL, STATE, COUNTY, AND LOCAL LAWS.

Bids must comply with all federal, state, county and local laws, including, but not limited to, all applicable standard safety, emission, and noise control requirements. Any vehicles or equipment shall contain all standard safety, emission, and noise control requirements required for the types and sizes of equipment at the time of their manufacture. The Contractor agrees, during the performance of work or service, to comply with all applicable codes and ordinances of Jefferson County or the State of Texas as they may apply, as these laws may now read, or as they may hereafter be changed or amended.

2.10 OSHA.

The Bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful Bidder will further certify that all items furnished under this project will conform and comply with federal and State of Texas OSHA standards. The successful Bidder will agree to indemnify and hold harmless Jefferson County for any and all damages that may be assessed against the County.

2.11 PATENTS AND COPYRIGHTS.

The successful Vendor agrees to protect the County from claims involving infringements of patents and/or copyrights.

2.12 SAMPLES, DEMONSTRATIONS, AND TESTING.

At Jefferson County's request and direction, Bidder shall provide product samples and/or testing of items bid to ensure compliance with specifications. Samples, demonstrations and/or testing may be requested at any point prior to or following bid award. Samples, demonstrations and/or testing may be requested upon delivery and/or any point during the term of resulting contract. All samples (including return thereof), demonstrations, and/or testing shall be at the expense of the Bidder/Vendor.

2.13 ACCEPTABILITY.

All articles enumerated in the bid shall be subject to inspection by an officer designated for that purpose by Jefferson County. If found inferior to the quality called for, or not equal in value to the specifications, deficient in workmanship or otherwise, this fact shall be certified to the Purchasing Agent, who shall have the right to reject the whole or any part of the same. Items and/or work determined to be contrary to specifications must be replaced at the vendor's expense. Inferior items not retrieved by the vendor within thirty (30) calendar days, or an otherwise agreed upon time, shall become the property of the County. If disposal of such items warrants an expense, an amount equal to the disposal expense will be deducted from amounts payable to the vendor.

2.14 MAINTENANCE.

Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 MATERIAL SAFETY DATA SHEETS.

Under the "Hazardous Communications Act," common known as the "Texas Right to Know Act," a Bidder must provide the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the Bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 EVALUATION.

Evaluation shall be used as a determinant as to which services are the most efficient and/or most economical for the County. It shall be based on all factors having a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Jefferson County Purchasing Department and recommendation to Jefferson County Commissioners' Court. Compliance with all bid requirements and needs of the using department are considered in evaluating bids. Pricing is not the only criteria for making a recommendation. The Jefferson County Purchasing Department reserves to right to contact any Bidder, at any time, to clarify, verify or requirement information with regard to this bid.

3. PURCHASE ORDERS AND PAYMENT.

3.1 PURCHASE ORDERS.

A purchase order(s) shall be generated by the Jefferson County Purchasing Agent to the successful vendor. The purchase order number must appear on all itemized invoices and packing slips. The County will not be held responsible for any work orders placed and/or performed without a valid current purchase order number. Payment will be made for all services rendered and accepted by the contract administrator for which a valid invoice has been received.

3.2 INVOICES.

All invoices shall reference the Purchase Order number. Invoices shall reference the bid item number or a detailed description for each item invoiced. If an item purchased and itemized on the invoice does not correspond to an item in any of the categories awarded to the vendor, invoice shall reference the item as "N/C" to indicate that it is a non-contract item. This requirement is to assist the County in verifying contract pricing on all invoices. Payment will be made under terms of net thirty (30) days unless otherwise agreed upon by seller and the purchasing department.

3.3 PROMPT PAYMENT.

In accordance with the State of Texas Prompt Payment Act, Article 601f V.T.C.S., payment will be made after receive and acceptance by the County of the merchandise ordered and of a valid invoice. Successful Bidder(s) is required to pay Subcontractors within ten (10) days after the successful Bidder receives payment from the County.

3.4 FUNDING.

Jefferson County is operated and funded on an October 1 to September 30 basis; accordingly, the County reserves the right to terminate, without liability to the County, any contract for which funding is not available.

4. CONTRACT.

4.1 CONTRACT DEFINITION.

The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson County, shall constitute a contract equally binding between the successful Bidder and Jefferson County.

4.2 CHANGE ORDER.

No different or additional terms will become part of this contract with the exception of a change order. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing and at the discretion and approval of

Jefferson County. No change order will be binding unless signed by an authorized representative of the County and the vendor.

4.3 PRICE RE-DETERIMINATION.

A price re-determination may be requested at the time of annual renewal. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The Bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

4.4 TERMINATION.

Jefferson County reserves the right to terminate the contract for default if the Bidder breached any of the terms therein, including warranties of Bidder or if the Bidder becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies which Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or service within the proper amount of time, and/or to properly perform any and all services required to Jefferson County's satisfaction and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified. Jefferson County reserves the right to award canceled contract to the next lowest Bidder. Bidder, in submitting this bid, agrees that Jefferson County shall not be liable to prosecution for damages in the event that the County declares the Bidder in default.

4.5 CONFLICT OF INTEREST.

Employees of the County are not permitted to maintain financial interest in, or receive payment, directly or indirectly, borrow from, lend to, invest in, or engage in any substantial financial transaction with any individual, organization, supplier, or Subcontractor who does business with the County without disclosure. When conflict of interest is discovered, it shall be grounds for termination of contract.

4.6 INTEREST BY PUBLIC OFFICIALS.

No public official shall have interest in this contract, in accordance with Texas Local Government Code.

4.7 PRE-AWARD/CONTRACT CONTACT BETWEEN COUNTY AND VENDORS.

The Jefferson County Purchasing Department may initiate discussions with selected vendors; however, discussions may not be initiated by vendors.

The Jefferson County Purchasing Department expects to conduct discussions with vendor's representatives authorized to contractually obligate the vendor with an offer.

Vendors shall not contact any Jefferson County personnel during the IFB process without the express permission from the Jefferson County Purchasing Agent. The Purchasing Agent will disqualify any vendor who has made site visits, contacted Jefferson County personnel, or distributed any literature without authorization from the Jefferson County Purchasing Department.

All correspondence relating to this IFB, from advertisement to award shall be sent to the Jefferson County Purchasing Department. All presentations and/or meetings between Jefferson County and the vendor relating to this IFB shall be coordinated by the Jefferson County Purchasing Department.

Selected vendors may be expected to make a presentation/product demonstration to an Evaluation Committee. Proposals, vendor presentations, and product/service evaluations may develop into negotiating sessions with the vendor(s) as selected by the Evaluation Committee. Jefferson County expects to conduct negotiations with vendor

representatives authorized to contractually obligate the vendor with an offer. If vendor is unable to agree to contract terms and conditions, Jefferson County reserves the right to terminate contract negotiations with that vendor and initiate negotiations with another vendor. In addition to a presentation, visits by the Evaluation Committee to representative vendor client sites may be conducted where the proposed solution can be demonstrated in a production environment.

4.8 INJURIES OR DAMAGES RESULTING FROM NEGLIGENCE.

Successful vendor shall defend, indemnify and save harmless Jefferson County and all its officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful vendor, or of any agent, employee, Subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful vendor shall pay any judgment with cost which may be obtained against Jefferson County growing out of such injury or damages.

4.9 WARRANTY.

The successful vendor shall warrant that all materials utilized in the performance of this contract shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship and title.

4.10 UNIFORM COMMERCIAL CODE.

The successful vendor and Jefferson County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

4.11 VENUE.

This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the County of Jefferson, Texas.

4.12 SALE, ASSIGNMENT, OR TRANSFER OF CONTRACT.

The successful vendor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written consent of Jefferson County.

4.13 SILENCE OF SPECIFICATIONS.

The apparent silence of these specifications as to any detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

5. REJECTION OR WITHDRAWAL.

Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within **90** days after opening date.

6. EMERGENCY/DECLARED DISASTER REQUIREMENTS.

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's

supplier(s).

Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling and drayage fees may apply.

7. AWARD.

The bid will be awarded to the responsible, responsive bidder(s) whose bid, conforming to the solicitation, will be most advantageous to Jefferson County – price and other factors considered. Unless otherwise specified in this IFB, Jefferson County reserves the right to accept a bid in whole or in part, and to award by item or by group, whichever is deemed to be in the best interest of Jefferson County. Any bidder who is in default to Jefferson County at the time of submittal of the bid shall have that bid rejected.

Jefferson County reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial non-conformity in the offer, as determined by Jefferson County, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Jefferson County shall consider the qualifications of the bidders, and, where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment.

In addition, Jefferson County may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County reserves the right to award this contract on the basis of **lowest and best bid** in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one offeror, and/or to reject any or all bids. In the event the lowest dollar offeror meeting specifications is not a awarded a contract, Offeror may appear before the Commissioners' Court and present evidence concerning Offeror responsibility after officially notifying the Office of the Purchasing Agent of Offeror's intent to appear.

8. CONTRACT.

A response to an IFB is an offer to contract with Jefferson County based upon the terms, conditions, and specifications contained in the IFB. Bids do not become contracts unless and until they are executed by Jefferson County, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the IFB, unless any of the terms and conditions is modified by an IFB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

9. WAIVER OF SUBROGATION.

Bidder and bidder's insurance carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from bidder's performance under this agreement.

10. FISCAL FUNDING.

A multi-year contract (if requested by the specifications) continuing as a result of an extension option must include fiscal funding out. If, for any reason, funds are not appropriated to continue the contract, said contract shall become null and void.

11. BID RESULTS.

Bid results are not provided in response to telephone inquiries. A preliminary tabulation of bids received will be posted on the Purchasing web page at https://jeffersoncountytx.gov/Purchasing/ as soon as possible following bid opening. A final tabulation will be posted following bid award, and will also be available for review in the Purchasing Department.

12. CHANGES AND ADDENDA TO BID DOCUMENTS.

Each change or addendum issued in relation to this IFB document will be on file in the Office of the Purchasing Agent, and will be posted on the Purchasing web site as soon as possible. It shall be the bidder's responsibility to make inquiry as to change or addenda issued, and to monitor the web site. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the Office of the County Purchasing Agent.

13. SPECIFICATIONS.

Unless otherwise stated by the bidder, the bid will be considered as being in accordance with Jefferson County's applicable standard specifications, and any special specifications outlined in the bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of Jefferson County, and should not be construed as excluding bids on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid.

Jefferson County reserves the right to determine if equipment/ product being bid is an acceptable alternate. All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of the bid, may be considered non-responsive.

14. DELIVERY.

Bids shall include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder (in writing on the included Bid Form), prices bid will be considered as being based on F.O.B. destination/delivered freight included.

15. INTERPRETATION OF BID AN/OR CONTRACT DOCUMENTS.

All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening, in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. Inquiries received that are not made in a timely fashion may or may not be considered.

16. CURRENCY.

Prices calculated by the bidder shall be stated in U.S. dollars.

17. PRICING.

Prices shall be stated in units of quantity specified in the bid documents. In case of discrepancy in computing the amount of the bid, the unit price shall govern.

18. NOTICE TO PROCEED/PURCHASE ORDER.

The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.

19. CERTIFICATION.

By signing the offer section of the Offer and Acceptance page, Bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.
- The Bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.
- The Bidder hereby certifies that the individual signing the bid is an authorized agent for the Bidder and has the authority to bind the Bidder to the contract.

20. DEFINITIONS.

"County" – Jefferson County, Texas.
"Contractor" – The Bidder whose proposal is accepted by Jefferson County.

21. SMALL, MINORITY & WOMEN BUSINESS ENTERPRISE PARTICIPATION

It is the desire of Jefferson County to increase the participation of Small, Minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

Minority owned business may be eligible for contract procurement assistance with public and private sector entities from MBDA Centers

Dallas Fort Worth MBDA Business Center
8828 N. Stemmons Freeway, Ste. 550 B
Dallas, TX 75247
214-920-2436
Website: https://www.mbdadfw.com
Email: admin1@mbdadallas.com

El Paso MBDA Business Center
2401 East Missouri Avenue
El Paso, TX 79903
915-351-6232
Website: https://www.mbda.gov/business-center/el-paso-mbda-business-center
Email: treed@ephcc.org

San Antonio MBDA Business Center
501 W. Cesar E. Chavez Blvd., Ste. 3.324 B
San Antonio, TX 78207
210-458-2480
Website: https://www.mbda.gov/business-center/san-antonio-mbda-business-center
Email: Jacqueline.jackson@utsa.edu

Small and woman-owned business may be eligible for assistance from U.S. Small Business Administration (SBA):
Website: https://www.sba.gov/local-assistance

Dallas/Fort Worth District Office
150 West Parkway, Ste. 130
Euless, TX 76040
817-684-5500
Website: https://www.sba.gov/district/dallas-fort-worth
Email: dfwdo.email@sba.gov

El Paso District Office
211 N. Florence St, Ste. 201

El Paso, TX 79901
915-834-4600
Website: https://www.sba.gov/district/el-paso
Email: lee.vega@sba.gov

Houston District Office
8701 S. Gessner Dr, Ste. 1200
Houston, TX 77074
713-773-6500
Website: https://www.sba.gov/district/houston
Email: houston@sba.gov

Lower Rio Grande Valley District Office
2422 E. Tyler Ave, Suite E
Harlingen, TX 78550
956-427-8533
Website: https://www.sba.gov/district/lower-rio-grande-valley
Email: lrgvdo.email@sba.gov

San Antonio District Office
615 E. Houston St, Ste 298
San Antonio, TX 78205
210-403-5900
Website: https://www.sba.gov/district/san-antonio
Email: sado.email@sba.gov

West Texas District Office
1205 Texas Ave, Room 408
Lubbock, TX 79401
806-472-7462
Website: https://www.sba.gov/district/west-texas
Email: lubdo@sba.gov

HUB certification information can be found at:

Statewide Procurement Division HUB Program
P.O. Box 13528
Austin, TX 78711
512-463-5872 or 888-863-5881
Website: https://comptroller.texas.gov/purchasing/vendor/hub
Email: statewidehubprogram@cpa.texas.gov

PROPOSER: INSERT HUB, SBE, MBE or WBE Certification behind this page.

SECTION 2: FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) MANDATED CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY UNDER FEDERAL AWARDS REQUIRED BY 2 C.F.R. §200.327 APPENDIX II TO 2 CFR §200

2 CFR 200.327 Contract provisions. The non-Federal entity's contracts should contain applicable provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards. The non-Federal entity's contracts must contain the provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards, as applicable. *Language as of January 3, 2025.

THRESHOLD	PROVISION	CITATION
>$250,000 (Simplified Acquisition Threshold)	Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. Although not required for contract at or below the SAT, FEMA suggests including a remedies provision. The NFE should consult their servicing legal counsel to determine whether and how remedies for breach of contract are permissible under applicable state, local, or tribal laws or regulations.	2 CFR 200 APPENDIX II (A)
>$10,000	All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement. FEMA suggests including a termination for cause and for convenience in all contracts even when not required. The NFE should consult their servicing legal counsel to determine whether and how termination provisions are permissible under applicable state, local, or tribal laws or regulations.	2 CFR 200 APPENDIX II (B)
None	Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor." 41 CFR 60-1.4 Equal opportunity clause. b) Federally assisted construction contracts. (1) Except as otherwise provided, each administering agency shall require the inclusion of the following language as a condition of any grant, contract, loan, insurance, or guarantee involving federally assisted construction which is not exempt from the requirements of the equal opportunity clause: The [recipient] hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any	2 CFR 200 APPENDIX II (C) and 41 CFR §60-1.4(b)

Federal program involving such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause:

During the performance of this contract, the contractor agrees as follows:

The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through
(8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The [recipient] further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the [recipient] so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The [recipient] agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

	The [recipient] further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the [recipient] agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the [recipient] under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such [recipient]; and refer the case to the Department of Justice for appropriate legal proceedings.	
>$2,000	Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non- Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. **FEMA PA and HMGP do not require these clauses unless it is a requirement for matching funds by another federal program legislation such as CDBG-DR.** When required, prime construction contracts over $2,000 awarded by NFEs must include a provision for compliance with the Davis-Bacon Act. If applicable per the standard described above, the NFE must include the provisions at 29 C.F.R. § 5.5(a)(1)-(10) in full into all applicable contracts, and all applicable contractors must include these provisions in full in any subcontracts.	2 CFR 200 APPENDIX II (D); 40 U.S.C. §§ 3141-3144 and 3146-3148; supplemented by 29 C.F.R. Part 5; 40 U.S.C. § 3145; supplemented by 29 C.F.R. Part 3

	In situations where the Davis-Bacon Act does not apply, neither does the Copeland "Anti-Kickback" Act. Sample contract clauses are provided in the FEMA Contract Provisions Guide.	
> $100,000+ Mechanics or Laborers	Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence. **Applicability** **This required contract provision applies to all procurements over $100,000 that involve the employment of mechanics, laborers, and construction work. These requirements *do not* apply to the purchase of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.** Required Language Compliance with the Contract Work Hours and Safety Standards Act. 1. *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 2. *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section. 3. *Withholding for unpaid wages and liquidated damages.* The (insert	2 CFR 200 APPENDIX II (E); 40 U.S.C. §§ 3701-3708; supplemented by 29 C.F.R. Part 5

	name of grant recipient or subrecipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section. 4. *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section. **For contracts that are only subject to Contract Work Hours and Safety Standards Act and are not subject to the other statutes in 29 C.F.R. § 5.1 where an additional contract provision is required, FEMA suggests including the language below.** Suggested Language Further Compliance with the Contract Work Hours and Safety Standards Act. 1. The contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Records to be maintained under this provision shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Department of Homeland Security, the Federal Emergency Management Agency, and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.	
None	Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.	2 CFR 200 APPENDIX II (F); Funding Agreement; definition found under 37 C.F.R. § 401.2(a).

	This provision does not apply to all FEMA grant and cooperative agreement programs including PA and HMGP as awards under these programs do not meet the definition.	
>$150,000	Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended - Contracts and subgrants of amounts in excess of $150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). Suggested Language: Clean Air Act The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 *et seq.* The contractor agrees to report each violation to the (insert name of non-federal entity entering into the contract) and understands and agrees that the (insert name of the non-federal entity entering into the contract) will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal assistance provided by FEMA. Federal Water Pollution Control Act The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 *et seq.* The contractor agrees to report each violation to the (insert name of the non-federal entity entering into the contract) and understands and agrees that the (insert name of the non-federal entity entering into the contract) will, in turn, report each violation as required to assure notification to the (insert name of the pass-through entity, if applicable), Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal assistance provided by FEMA.	2 CFR 200 APPENDIX II (G); 42 U.S.C. §§ 7401-7671q; 33 U.S.C. §§ 1251-1387
>$25,000	Debarment and Suspension (Executive Orders 12549 and 12689) - A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989	2 CFR 200 APPENDIX II (H); 2 C.F.R. Part 180

	Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. The following provides a debarment and suspension clause. It incorporates an optional method of verifying that contractors are not excluded or disqualified. Suggested Language: Suspension and Debarment This contract is a covered transaction for purposes of 2 C.F.R. Part 180 and 2 C.F.R. Part 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935). The contractor must comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into. This certification is a material representation of fact relied upon by (insert name of recipient/subrecipient/applicant). If it is later determined that the contractor did not comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, in addition to remedies available to (insert name of recipient/subrecipient/applicant), the federal government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.	(implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989)); 2 C.F.R. Part 3000 (Department of Homeland Security regulations for Non-procurement Debarment and Suspension, implementing 2 C.F.R. Part 180).
> $100,000; and Certification required for all contracts greater than $100,000	Byrd Anti-Lobbying Amendment (31 U.S.C. 1352) - Contractors that apply or bid for an award exceeding $100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non- Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award. **If applicable, contractors must sign and submit the following certification to the NFE with each bid or offer exceeding $100,000.** Required Certification: CERTIFICATION REGARDING LOBBYING (APPENDIX A, 44 C.F.R. PART 18)	2 CFR 200 APPENDIX II (I) and 24 CFR §570.303; (citing 31 U.S.C. § 1352); 44 C.F.R. § 18.110
	See 2 CFR §200.323.	2 CFR 200 APPENDIX II (J)
	See 2 CFR §200.216.	2 CFR 200 APPENDIX II (K)
	See 2 CFR §200.322.	2 CFR 200 APPENDIX II (L)

Work involves the use of materials, and the contract is for more than $10,000	A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired during the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines. Suggested Language: In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired— Competitively within a timeframe providing for compliance with the contract performance schedule; Meeting contract performance requirements; or At a reasonable price. Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines webpage: https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.	2 CFR 200.323; Pub. L. No. 89-272 (1965) (codified as amended by the Resource Conservation and Recovery Act at 42 U.S.C. § 6962)
>$100,000	*§135.38 Section 3 clause* *All section 3 covered contracts shall include the following clause (referred to as the section 3 clause):* A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing. B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations. C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement	

	or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin. D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135. E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135. F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts. G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).	
None; All FEMA declarations and awards issued on or after November 12, 2020.	Section 889(b)(1) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (FY2019 NDAA) and 2 C.F.R. § 200.216, as implemented by FEMA Policy 405-143-1, Prohibitions on Expending FEMA Award Funds for Covered Telecommunications Equipment or Services (Interim), prohibit the obligation or expending of federal award funds on certain telecommunication products or from certain entities for national security reasons. Effective August 13, 2020, FEMA recipients and subrecipients, as well as their contractors and subcontractors, may not obligate or expend any FEMA award funds to: Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:	2 CFR 200.216

	(1) Procure or obtain; (2) Extend or renew a contract to procure or obtain; or (3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). (i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities). (ii) Telecommunications or video surveillance services provided by such entities or using such equipment. (iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country. (b) In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained. (c) See Public Law 115-232, section 889 for additional information. (d) See also § 200.471.	
None	The Federal awarding agency must establish conflict of interest policies for Federal awards. The non-Federal entity must disclose in writing any potential conflict of interest to the Federal awarding agency or pass-through entity in accordance with applicable Federal awarding agency policy.	2 CFR 200.112
None	The Federal awarding agency and the non-Federal entity should, whenever practicable, collect, transmit, and store Federal award-related information in open and machine-readable formats rather than in closed formats or on paper in accordance with applicable legislative requirements. A machine-readable format is a format in a standard computer language (not English text) that can be read automatically by a web browser or computer system. The Federal awarding agency or pass-through entity must always provide or accept paper versions of Federal award-related information to and from the non-Federal entity upon request. If	2 CFR 200.336

	paper copies are submitted, the Federal awarding agency or pass-through entity must not require more than an original and two copies. When original records are electronic and cannot be altered, there is no need to create and retain paper copies. When original records are paper, electronic versions may be substituted through the use of duplication or other forms of electronic media provided that they are subject to periodic quality control reviews, provide reasonable safeguards against alteration, and remain readable.	
None; All FEMA declarations and awards issued on or after November 12, 2020.	Suggested Language: If subcontracts are to be let, the prime contractor is required to take all necessary steps identified in 2 C.F.R. § 200.321(b)(1)-(5) listed below to ensure that small and minority businesses, women's business enterprises, and labor surplus area firms are used when possible. Contracting with HUB, small and minority businesses, women's business enterprises, and labor surplus area firms. (a) When possible, the recipient or subrecipient should ensure that small businesses, minority businesses, women's business enterprises, veteran-owned businesses, and labor surplus area firms (See U.S. Department of Labor's list) are considered as set forth below. (b) Such consideration means: (1) These business types are included on solicitation lists; (2) These business types are solicited whenever they are deemed eligible as potential sources; (3) Dividing procurement transactions into separate procurements to permit maximum participation by these business types; (4) Establishing delivery schedules (for example, the percentage of an order to be delivered by a given date of each month) that encourage participation by these business types; (5) Utilizing organizations such as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and (6) Requiring a contractor under a Federal award to apply this section to subcontracts.	2 C.F.R. § 200.321(b)(1)-(5)
None	Financial records, supporting documents, statistical records, and all other non- Federal entity records pertinent to a Federal award must be retained for a period of three years from the date of submission of the final expenditure report or, for Federal awards that are renewed quarterly or annually, from the date of the submission of the quarterly or annual financial report, respectively, as reported to the Federal awarding agency or pass-through entity in the case of a subrecipient. Federal awarding agencies and pass-through entities must not impose any other record retention requirements upon non-Federal entities. The only exceptions are the following: (a) If any litigation, claim, or audit is started before the expiration of the 3-year period, the records must be retained until all litigation, claims, or audit findings involving the records have been resolved and final action taken. (b) When the non-Federal entity is notified in writing by the Federal awarding agency, cognizant agency for audit, oversight agency for audit, cognizant agency for indirect costs, or pass-through entity to extend the retention period. (c) Records for real property and equipment acquired with Federal funds	2 CFR 200.334; and 200.337

	must be retained for 3 years after final disposition. (d) When records are transferred to or maintained by the Federal awarding agency or pass-through entity, the 3-year retention requirement is not applicable to the non-Federal entity. (e) Records for program income transactions after the period of performance. In some cases recipients must report program income after the period of performance. Where there is such a requirement, the retention period for the records pertaining to the earning of the program income starts from the end of the non-Federal entity's fiscal year in which the program income is earned. (f) Indirect cost rate proposals and cost allocations plans. This paragraph applies to the following types of documents and their supporting records: Indirect cost rate computations or proposals, cost allocation plans, and any similar accounting computations of the rate at which a particular group of costs is chargeable (such as computer usage chargeback rates or composite fringe benefit rates). (1) *If submitted for negotiation.* If the proposal, plan, or other computation is required to be submitted to the Federal Government (or to the pass-through entity) to form the basis for negotiation of the rate, then the 3-year retention period for its supporting records starts from the date of such submission. (2) *If not submitted for negotiation.* If the proposal, plan, or other computation is not required to be submitted to the Federal Government (or to the pass-through entity) for negotiation purposes, then the 3-year retention period for the proposal, plan, or computation and its supporting records starts from the end of the fiscal year (or other accounting period) covered by the proposal, plan, or other computation. Suggested Language for All Procurements: a. The Contractor agrees to provide (insert non-federal entity), the Texas Division of Emergency Management (TDEM), the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions. b. The FIRM agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed. c. The CONTRACTOR agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract. d. In compliance with section 1225 of the Disaster Recovery Reform Act of 2018, the (insert name of the non-federal entity) and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.	
None	CONTRACTS WITH COMPANIES ENGAGED IN BUSINESS WITH IRAN, SUDAN, OR FOREIGN TERRORIST ORGANIZATION PROHIBITED. A governmental Corporation may not enter into a governmental contract with a company that	United States Code 19 U.S.C. 2511

	is identified on a list prepared and maintained by the U.S. Department of Treasury under Executive Order 13224.The term "foreign terrorist organization" in this paragraph has the meaning assigned to such a term in Section 8 U.S.C.1189(a)(1) of the United States Code.	
>$100,000	PROVISION REQUIRED IN CONTRACT. (a) This section applies only to a contract that: (1) is between a governmental entity and a company with 10 or more full-time employees; and (2) has a value of $100,000 or more that is to be paid wholly or partly from public funds of the governmental entity. (b) A governmental Corporation may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and will not boycott Israel during the term of the contract.	(Adhere to your State's Local Government Code)
Option Contract Language for contracts awarded prior to Grant Award	The contract award is contingent upon the receipt of federal funds. If no such funds are awarded, the contract shall terminate.	Optional
	Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act. Suggested Language: The CONTRACTOR shall comply with the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).	42 U.S.C. 6201
	The Firm agrees that no otherwise qualified individual with disabilities shall, solely by reason of his/her disability, be denied the benefits of, or be subjected to discrimination, including discrimination in employment, under any program or activity receiving federal financial assistance.	Section 504 of the Rehabilitation Act of 1973, as amended.
	Pursuant to the *Violence Against Women Act Reauthorization of 2022*, the Grant Recipient must certify that local policies do not interfere with the residents' Right to Report Crime and Emergencies from One's Home. The certification will confirm that no ordinances, local regulations, or policies adopted by the local government and currently in effect contain any financial or regulatory penalty imposed on property owners or residents as a result of any use of emergency services, or that the Grant Recipient is actively addressing such local regulations.	Pub. L. 117-103, 136 Stat. 49

BYRD ANTI-LOBBYING CERTIFICATION

Certification for Contracts, Grants, Loans, and Cooperative Agreements-The undersigned certifies, to the best of his or her knowledge and belief, that:

1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor Johnker Inc DBA Emergency Power Service certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C.Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

John W Baker

Signature of Contractor's Authorized Official

John W Baker President

Name and Title of Contractor's Authorized Official

2/17/26

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DEBARMENT/SUSPENSION CERTIFICATION

Non-Federal entities and Contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (No procurement Debarment and Suspension).

This requirement applies to all FEMA grant and cooperative agreement programs.

Federal Executive Order (E .O.) 12549 "Debarment" requires that all Contractors receiving individual awards, using federal funds, and all sub recipients certify that the organization and its principals are not debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency from doing business with the Federal Government. By signing this document, you certify that your organization and its principals are not debarred. Failure to comply or attempts to edit this language may disqualify your bid. Information on debarment is available at the following websites: www.sam.gov and https://acguisition.qov/far/index.html see section 52.209-6.

The Contractor Johnker Inc. DBA Emergency Power Service certifies or affirms by your signature that neither you nor your principal is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

John W Baker

Signature of Contractor's Authorized Official

John W Baker President

Name and Title of Contractor's Authorized Official

2/17/26

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CIVIL RIGHTS COMPLIANCE PROVISIONS

1. EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause)

(For all awarded contracts that meet the definition of "federally assisted construction contract" provided in 41 CFR Part 60-1.3)

During the performance of this contract, the Contractor agrees as follows:

1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

   Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

3) The Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.

4) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

5) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

6) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

7) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or order this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

8) The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each Subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

CIVIL RIGHTS COMPLIANCE PROVISIONS (CONTINUED)

Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or vendor as a result of such direction by the administering agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of Contractors and Subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a Contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon Contractors and Subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

John W Baker

Signature of Contractor's Authorized Official

John Baker President

Name and Title of Contractor's Authorized Official

2/17/26

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS

The following requirements and instructions **supersede** General Requirements where applicable.

1. SUBMISSION OF BID.

Bidder is Responsible for Submitting:

One (1) Original and one (1) Bid Copies; with all copies to include a Completed Copy of this Specifications Packet , **in its entirety.**

The County requests that bid submissions NOT be bound by staples or glued spines.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://jeffersoncountytx.gov/Purchasing/

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Bids must be submitted in complete original form by mail or messenger to the following address:
Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

BID PACKAGING: Bidder shall submit response in a tightly sealed opaque envelope or box, plainly marked "SEALED BID." The outside of the envelope of box shall also include the IFB Number, IFB Name, IFB Due Date, and the Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

All submissions must be received by 11:00 am CT, Wednesday, March 25, 2026.

Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.

Jefferson County will not accept any responsibility for bids being delivered by third party carriers.

Late bids will not be accepted and will be returned unopened to the Bidder.
Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB.

All bid responses submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.

All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

COURTHOUSE SECURITY: All visitors to the Courthouse must pass through Security. Respondents planning to hand deliver proposals must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal. Mondays and Tuesdays are particularly heavy days.

In response to the Covid-19 pandemic, Jefferson County has implemented precautionary measures as currently recommended by the CDC within its facilities. Bidders are strongly urged to plan accordingly.

COUNTY HOLIDAYS (2026):

~~January 1, 2026 (Thursday) - New Year's~~
~~January 19 (Monday) - Martin Luther King, Jr. Day~~
April 3 (Friday) - Good Friday
May 25 (Monday) - Memorial Day
June 19 (Friday) - Juneteenth
July 3 Observed (Friday) - Independence Day
September 7 (Monday) - Labor Day
November 11 (Wednesday) - Veteran's Day
November 26 & 27 (Thursday & Friday) - Thanksgiving
December 24 & 25 (Thursday & Friday) Christmas

Submissions During Time of Inclement Weather, Disaster, or Emergency:

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the IFB closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the IFB and urgent County requirements preclude amendment to the IFB, the time specified for receipt of Statements of Qualifications will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

2. PRE-BID MEETING AND WALK-THROUGH.

Due to the nature of this Bid, a Pre-Bid Conference will not be held for this project.

3. QUESTIONS/DEADLINE FOR QUESTIONS.

Questions may be emailed to Cindy Greene, Contract Specialist, at: Cynthia.greene@jeffersoncountytx.gov. If no response within 72 hours, email Deborah Clark, Purchasing Agent at: deb.clark@jeffersoncountytx.gov
The Deadline for asking questions or requesting additional information (in writing) is 5:00 pm, CT, **Friday, February 27, 2026.**

4. VENDOR REGISTRATION (System for Award Management).

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

In instances where a vendor has either an "Inactive" SAM Registration or is not currently registered with the System for Award Management, the Purchasing Department may *initially* accept proof (printout from the SAM website) that the vendor has begun the registration process in order for the IFB/RFQ/RFP submission to be considered as "responsive" to the specifications for the project.
However, the SAM Registration must be completed (showing "active" status, with no exclusions) prior to the award and/or execution of an agreement or contract for the project.

ov/workspace/em/entities/non-federal?statusCode=4

427

Saltwater fishing sh... | Polarity - Learn.SFE | Honda 16100-ZE3-7... | Rules in PDF | www.tceq.texas.gov... | TCEQ Homepage | KC-10 Online

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Enter an entity ID, name, or keyword

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page 1 of 1

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JOHNKER INC ● Active Registration

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Unique Entity ID:
JJ3TAB2KK8B1

CAGE/NCAGE:
5FYL4

Doing Business As:
EMERGENCY POWER SERVICE

Physical Address:
1787 JOE REGISTER RD
KOUNTZE, TX 77625 USA

Expiration Date
Feb 18, 2027

Purpose of Registration:
All Awards

BIDDER: INSERT PROOF OF SYSTEM FOR AWARD MANAGEMENT (SAM) BEHIND THIS PAGE.

5. FORM 1295 (Texas Ethics Commission) SUBMISSSION REQUIREMENT/INSTRUCTIONS FOR BIDDERS.
All Non-Exempt Bidders are required to submit a completed FORM 1295 with bid submission.

1. Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information on Form 1295, and print a copy of the completed form.
The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department **with bid submission.**

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

A sample of a completed FORM 1295 is included on **PAGE 36.**

FORM 1295 Implementation Background:
In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

Question: Will the date of birth and address provided appear on the TEC's website when the form is filed?

Answer: No. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application. Although the TEC does not capture the date of birth and street address of the signatory, the contracting state agency or governmental agency will have a physical copy of the form that includes the date of birth and address of the signatory. The TEC cannot answer whether the contracting state agency or governmental agency may release such information. Questions regarding the Texas Public Information Act may be directed to the Office of the Attorney General. See also Paxton v. City of Dall., No. 03-13-00546-CV, 2015 Tex. App. LEXIS 5228, at *10-11 (App.—Austin May 22, 2015) (mem. op.) (pet. denied) (available here)

FORM 1295 EXEMPTIONS:
What type of contracts are exempt from the Form 1295 filing requirement under the amended law?
The amended law adds to the list of types of contract exempt from the Form 1295 filing requirement.

A completed Form 1295 is not required for:
- a sponsored research contract of an institution of higher education
- an interagency contract of a state agency or an institution of higher education
- a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and any qualified vendor is eligible for the contract
- a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity
- a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code
- a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

CERTIFICATE OF INTERESTED PARTIES

FORM 1295 431

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2023-972371

Date Filed:
01/16/2023

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Johnker Inc. DBA Emergency Power Service
Kountze , TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

Jefferson County, Texas

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

IFB 22-053/MR
Standby Generator Service and Repair

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. [X]

6 UNSWORN DECLARATION

My name is John W Baker, and my date of birth is 04/11/1972.

My address is P O Box 8, Silsbee (city), Tx (state), 77656 (zip code), USA (country).

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Hardin County, State of Texas, on the 17th day of February (month), 20 26 (year).

John W Baker

Signature of authorized agent of contracting business entity
(Declarant)

SAMPLE COMPLETED FORM 1295

VENDOR: FORM 1295 MUST BE COMPLETED/SUBMITTED ON TEXAS ETHICS COMMISSION WEBSITE. HARD COPY OF FORM 1295 IS TO BE PRINTED, COMPLETED, SIGNED, AND SUBMITTED WITH BID/PROPOSAL/AGREEMENT/CONTRACT.

JEFFERSON COUNTY WILL CONFIRM RECEIPT OF COMPLETED HARD COPY WITH THE TEXAS ETHICS COMMISSION.

CERTIFICATE OF INTERESTED PARTIES — FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

VENDOR:ENTER YOUR BUSINESS NAME, CITY, STATE, AND COUNTRY HERE

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

JEFFERSON COUNTY, TEXAS

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

VENDOR: ENTER BID/PROPOSAL/CONTRACT/AGREEMENT REF# AND TITLE HERE.

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary
VENDOR: ENTER EACH PERSON HAVING INTEREST, OWNERS ARE THE CONTROLLING PARTIES.		X	
VENDOR: WORKERS (OR NON-OWNERS) IN YOUR COMPANY ARE INTERMEDIARY PARTIES.			X

5 Check only if there is NO Interested Party. CHECK BELOW IF APPLICABLE ☐

6 UNSWORN DECLARATION VENDOR: COMPLETE, DATE, AND SIGN THIS DECLARATION SECTION.

My name is _____, and my date of birth is _____.

My address is _____, _____, _____, _____, _____.
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in _____ County, State of _____, on the _____ day of _____, 20_____.
(month) (year)

_____
Signature of authorized agent of contracting business entity
(Declarant)

ADD ADDITIONAL PAGES AS NECESSARY

Form provided by Texas Ethics Commission www.ethics.state.tx.us Revised 12/22/2017

NOTE: JEFFERSON COUNTY WILL KEEP A COPY OF THIS FORM ON FILE FOR EACH BID/PROPOSAL/CONTRACT/AGREEMENT AND EACH VENDOR RESPONDING TO BIDS/PROPOSALS.

Must file online at www.ethics.state.tx.us/File

BIDDER: INSERT COMPLETED FORM 1295 BEHIND THIS PAGE.

6. MULTIPLE VENDOR AWARD.

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

7. DELIVERY.

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the Contractor, at the discretion of, and at no additional charge to, Jefferson County.

8. PAYMENT.

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to:
Jefferson County Auditing Department
Attention: Accounts Payable
1149 Pearl Street, 7th floor
Beaumont, TX 77701.

9. USAGE REPORTS.

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

10. INSURANCE.

The Contractor (including any and all Subcontractors as defined in Section 11.1.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the Contractor. These requirements do not establish limits of the Contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):
Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation Statutory Coverage (See Section 9 Below)

11. WORKERS' COMPENSATION INSURANCE

11.1 Definitions:

11.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

11.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the Contractor's/person's work on the project has been completed and accepted by the governmental entity.

11.1.3 **Persons providing services on the project ("Subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the Contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the Contractor and regardless of whether that person has employees. This includes, without limitation, independent Contractors, Subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

11.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the Contractor providing services on the project, for the duration of the project.

11.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – **refer to Section 10 above**.

11.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

11.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

11.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

11.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

11.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

11.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

11.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

11.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

11.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees providing services on the project, for the duration of the project.

11.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

11.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

11.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

11.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

11.9.4.2 the coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

11.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

11.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

11.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs **11.1. – 11.7**., with the certificates of coverage to be provided to the person for whom they are providing services.

11.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the Contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the Contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

11.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

BIDDER: INSERT COPY OF CERTIFICATE OF INSURANCE (COI) BEHIND THIS PAGE.

Note: For bid purposes, a general COI will suffice. However, a COI that includes the notation that "Jefferson County as an additional insured" will be required from Awarded Bidder(s) prior to the issuance of a Purchase Order.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 11/21/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Upshaw Insurance Agency, Inc.
801 S. Fillmore, Suite 300
Amarillo TX 79101

CONTACT NAME: Ashlie Bettis
PHONE (A/C, No, Ext): 806-468-0400 **FAX (A/C, No):** 806-468-0450
E-MAIL ADDRESS: Ashlieb@upshaw-insurance.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Texas Mutual Insurance Co	22945
INSURER B : National American Insurance Co	23663
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED EMERPOW-01
Emergency Power Service
Johnker Inc dba
PO Box 8
Silsbee TX 77656

COVERAGES **CERTIFICATE NUMBER:** 1401145940 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
B	[X] COMMERCIAL GENERAL LIABILITY			MP48790142	11/21/2025	11/21/2026	EACH OCCURRENCE	$ 1,000,000
	[ ] CLAIMS-MADE [X] OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
							MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	[ ] POLICY [X] PRO-JECT [ ] LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	[ ] OTHER:							$
B	AUTOMOBILE LIABILITY			MP48790142	11/21/2025	11/21/2026	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	[ ] ANY AUTO						BODILY INJURY (Per person)	$
	[ ] OWNED AUTOS ONLY [X] SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	[X] HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
	[ ]							$
B	[ ] UMBRELLA LIAB [X] OCCUR			MB73250142	11/21/2025	11/21/2026	EACH OCCURRENCE	$ 5,000,000
	[X] EXCESS LIAB [ ] CLAIMS-MADE						AGGREGATE	$ 5,000,000
	[ ] DED [ ] RETENTION $							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N	N / A		0001303963	11/21/2025	11/21/2026	[ ] PER STATUTE [ ] OTH-ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] (Mandatory in NH)						E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Endts shown apply only if there is a written contract between the named insured & certificate holder that requires such coverage. GL,AU: Policies include a blanket additional insured endt (GL per attached NACG23A 03/21 including ongoing & completed ops with primary & non-contributory language). GL,AU,WC: Policies include a blanket waiver of subrogation endt. Excess: Policy follows form on additional insured and includes a primary non-contributory endorsement and a blanket waiver of subrogation endt. 30 days Notice of Cancellation applies except 10 days for non-pay.

CERTIFICATE HOLDER

File Copy

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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4. **Additional Insured - Owners, Lessees or Contractors - Automatic Status When Required In Construction or Service Agreement With You**

   Each of the following is an insured:

   a. Any person or organization for whom you are performing operations when you and such person or organization have agreed in writing in a contract or agreement that such person or organization be added as an additional insured on your policy;

   b. Any other person or organization you are required to add as an additional insured under the contract or agreement described in Paragraph **a.** above.

   Such person or organization is an additional insured only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" which may be imputed to that person or organization directly arising out of:

   (1) Your acts or omissions, or the acts or omissions of those acting on your behalf in the performance of your ongoing operations for the additional insured; or

   (2) "Your work" specified in the "written contract" but only for "bodily injury", "property damage" or "personal and advertising injury" included in the "products-completed operations hazard";

   However, the insurance afforded to such additional insureds described in Paragraphs **a.** and **b.** above, only applies to the extent permitted by law and will not be broader than that which you are required by the contract or agreement to provide for such additional insureds.

   c. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

   This insurance does not apply to:

   (1) "Bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:

   (a) The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or

   (b) Supervisory, inspection, architectural or engineering activities.

   This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of or the failure to render any professional architectural, engineering or surveying services.

   d. With respect to the insurance afforded to these additional insureds, the following is added to **Section III - Limits of Insurance:**

   The most we will pay on behalf of the additional insured is the amount of insurance:

   (1) Required by the contract or agreement you have entered into with the additional insured; or

   (2) Available under the applicable Limits of Insurance;

   whichever is less.

   This coverage shall not increase the applicable Limits of Insurance.

5. **Additional Insured - Lessor of Leased Equipment - Automatic Status When Required In Lease Agreement With You**

   Each of the following is an insured:

   a. Any person(s) or organization(s) from whom you lease equipment when you and such person(s) or organization(s) have agreed in writing in a contract or agreement that such person(s) or organization(s) be added as an additional insured on your policy. Such person(s) or organization(s) is an insured only with respect to your liability for "bodily injury", "property damage" or "personal and advertising injury" directly arising out of the maintenance, operation or use of equipment leased to you by such person(s) or organization(s).

However:

(1) The insurance afforded to such additional insured only applies to the extent permitted by law; and

(2) If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

b. With respect to the insurance afforded to these additional insureds, this insurance does not apply to any "occurrence" which takes place after the equipment lease expires.

c. With respect to the insurance afforded to these additional insureds, the following is added to **Section III - Limits of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

(1) Required by the contract or agreement; or

(2) Available under the applicable Limits of Insurance;

whichever is less.

This coverage shall not increase the applicable Limits of Insurance.

6. Additional Insured - Managers or Lessors of Premises

Each of the following is an insured:

a. Any person(s) or organization(s), but only with respect to liability arising out of the ownership, maintenance or use of that part of the premises leased to you and subject to the following additional exclusions:

This insurance does not apply to:

(1) Any "occurrence" which takes place after you cease to be a tenant in that premises.

(2) Structural alterations, new construction or demolition operations performed by or on behalf of such person(s) or organization(s).

However:

(1) The insurance afforded to such additional insured only applies to the extent permitted by law; and

(2) If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

b. With respect to the insurance afforded to these additional insureds, the following is added to **Section III-Limits of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

(1) Required by the contract or agreement; or

(2) Available under the applicable Limits of Insurance;

whichever is less.

This coverage shall not increase the applicable Limits of Insurance.

7. Additional Insured - Engineers, Architects or Surveyors Not Engaged by the Named Insured

Each of the following is an insured:

a. Any architects, engineers or surveyors who are not engaged by you are insureds, but only with respect to liability for "bodily injury" or "property damage" or "personal and advertising injury" which may be imputed to that architect, engineer or surveyor arising out of:

(1) Your acts or omissions; or

(2) The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations performed by you or on your behalf.

Such architects, engineers or surveyors, while not engaged by you, are contractually required to be added as an additional insured to your policy.

However, the insurance afforded to such additional insured:

(1) Only applies to the extent permitted by law; and

(2) Will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

b. With respect to the insurance afforded to these additional insureds, the following additional exclusion applies:

The insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of or the failure to render any professional services, including:

(1) The preparing, approving, or failing to prepare or approve, maps, drawings, opinions, reports, surveys, change orders, designs or specifications; or

(2) Supervisory, inspection or engineering services.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of or the failure to render any professional services.

SECTION III - LIMITS OF INSURANCE

A. Paragraphs **2., 3.,** and **6.** of **SECTION III - LIMITS OF INSURANCE** are replaced by the following:

2. The General Aggregate Limit is the most we will pay for the sum of:

a. Medical expenses under **Coverage C**;

b. Damages under **Coverage A,** except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard"; and

c. Damages under **Coverage B**; and

d. Damages under **Coverage G.**

e. Damages under **Coverage H.**

3. The Products-Completed Operations Aggregate Limit is the most we will pay under **Coverage A** for damages because of "bodily injury" and "property damage" included in the "products-completed operations hazard" and **Coverage F.**

6. Subject to Paragraph **5.** above, the Damage To Premises Rented To You Limit is the most we will pay under **Coverage A** for damages because of "property damage" to any one premises, while rented to you, or in the case of damage by fire, explosion, lightning, or smoke resulting from such fire, explosion, or lightning, or sprinkler leakage while rented to you or temporarily occupied by you with permission of the owner.

B. The following are added to **SECTION III - LIMITS OF INSURANCE:**

8. Aggregate Limits of Insurance (Per Location)

The General Aggregate Limit applies separately to each of your "locations" owned by or rented to you or temporarily occupied by you with the permission of the owner.

"Location" means premises involving the same or connecting lots, or premises whose connection is interrupted only by a street, roadway, waterway or right-of-way of a railroad.

9. Aggregate Limits of Insurance (Per Project)

The General Aggregate Limit applies separately to each of your "construction projects" away from premises owned by or rented to you.

"Construction Project" means "your work" conducted according to a single plan.

10. Even though the General Aggregate Limit applies separately to each of your "locations" and each of your "construction projects", the most we will pay under this policy is three times the General Aggregate Limit regardless of the number of "locations", "construction projects", "occurrences", "insureds", claims, "suits", or persons or organizations making claims or bringing "suits".

SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS

A. The following is added to Paragraph **4. Other Insurance:**

Primary And Noncontributory Insurance

This insurance is primary to and will not seek contribution from any other insurance available to an additional insured under your policy provided that:

(1) The additional insured is a Named Insured under such other insurance; and

(2) You have agreed in writing in a contract or agreement that this insurance would be primary and would not seek contribution from any other insurance available to the additional insured.

B. Paragraphs **2.a.** and **b.** are replaced with the following:

2. Duties In The Event Of Occurrence, Offense, Claim Or Suit

a. You must see to it that we are notified as soon as practicable of an "occurrence" or an offense which may result in a claim. Knowledge of an "occurrence" by your agent, servant or employee shall not in itself constitute knowledge of the Named Insured unless an officer of the Named Insured has received such notice from the agent, servant or employee. To the extent possible, notice should include:

(1) How, when and where the "occurrence" took place;

(2) The names and addresses of any injured persons and witnesses; and

(3) The nature and location of any injury or damage arising out of the "occurrence" or offense.

b. If a claim is made or "suit" is brought against any insured, you must:

(1) Immediately record the specifics of the claim or "suit" and the date received; and

(2) Notify us as soon as practicable.

You must see to it that we receive written notice of the claim or "suit" as soon as practicable. Knowledge of a claim or "suit" by your agent, servant or employee shall not in itself constitute knowledge of the Named Insured unless an officer of the Named Insured has received such notice from the agent, servant or employee.

C. The following is added to Paragraph **2.c.**:

2. Duties In The Event Of Occurrence, Offense, Claim or Suit

c. You and any other involved insured must:

(5) Upon our request, replace or repair the property covered under **Coverage D - Voluntary Property Damage** at your actual cost, excluding profit or overhead.

D. Paragraph **8.** is modified by adding the following sentence:

8. Transfer Of Rights Of Recovery Against Others To Us

We waive our right to recovery against any person or organization for whom the insured is operating under a written contract when such contract requires a waiver of subrogation, and such contract is executed before the "property damage" or "bodily injury" occurs or the "personal and advertising" offense is committed.

BIDDER INFORMATION FORM

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: (IFB 26-004/CG), Term Contract for Generator Inspections, Routine Maintenance & Service for Jefferson County

Bidder's Company/Business Name: _Johnker Inc. DBA Emergency Power Service_____

Bidder's TAX ID Number:
__01-0917603_____

If Applicable: **HUB Vendor No.** _____ **DBE Vendor No.**
_____

Contact Person: _John Baker_____ **Title:** President

Phone Number (with area code): __409-658-0765_____

Alternate Phone Number if available (with area code):_____

Fax Number (with area code):__409-246-8164_____

Email Address:

__jb17@wt.net_____

Mailing Address (Please provide a physical address for bid bond return, if applicable):

_P O Box 8
Address
_Silsbee Texas 77656
City, State, Zip Code

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SECTION 4: MINIMUM SPECIFICATIONS

The following requirements and specifications supersede General Bid Requirements where applicable. Any questions relating to bid submission or bid item specifications requirements should be directed to Cindy Greene, Contract Specialist at 409-835-8593 or via email at: cynthia.greene@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent at 409-839-8593 or via email at: deb.clark@jeffersoncountytx.gov. Please reference Bid Number: IFB 26-004/CG.

SCOPE OF PROJECT

Jefferson County is soliciting bids for a generator technician to perform inspections, preventative maintenance and service on generators located in various locations for Jefferson County. Vendor shall provide copy of any applicable license with proposal. Vendor shall perform all electrical and engine work on generators.

TERMS

Individual departments will call to schedule any inspection, preventive maintenance or service for their generator. No work is guaranteed for generators listed in this proposal.

The County reserves the right to change, add, or delete service and/or locations.

Service call agreements will be made on an "as needed" basis. Repair work, other than the initial service call, resulting from this agreement shall not begin without a Notice to Proceed or Purchase Order from the County to the Vendor.

The vendor shall only proceed with repairs after the estimate has been approved by the department requesting the repair and a notice to proceed or purchase order has been issued.

- A "not to exceed" amount and description of work to be completed will be set at the time of the Notice to Proceed or Purchase Order agreed upon by both parties.

Awarded vendor shall furnish all labor, tools, transportation, equipment materials and supplies as required to complete the service request, to provide a working system, complete in all respects. All work shall be in compliance with Federal, State and Local Codes. All equipment or components must be installed in accordance with manufacturer's recommendations.

Vendor shall repair any damage caused by the Vendor and its employees at no cost to the County.

Modification of contract price shall be allowed only on the anniversary date of the contract. Prices throughout the initial one (1) year term shall remain firm/fixed. Written requests for price revisions after the first year shall be submitted in advance to the Jefferson County Purchasing Department. Requests shall be based upon and include documentation of the actual change in cost of components or CPI increases, involved in the contract. Price increase shall not include overhead or profit. The County reserves the right to reject any price increase and/or to terminate the contract.

All hourly cost proposals must be to service the generators listed in the IFB. Any additional costs not included on the Bid Form on page 49 of this IFB will not be allowed. This includes but is not limited to inspection fee, service call charge, mileage charges, fuel surcharges, miscellaneous supply charges.

INSPECTIONS

Vendor will provide semi-annual inspections for generators for Jefferson County upon the request of each department. These inspections shall include the following systems:

1. General Condition of Generator
    - Check generator area for obstructions
    - Wipe off unit
    - Clean oil, coolant, fuel & acid deposits
    - Check housing for leaks or corrosion
2. Starting System & Charging System
    - Visually inspect batteries for damage or leakage
    - Clean batteries with acid neutralizer
    - Clean & tighten all battery cable connections
    - Perform battery load test
    - Inspect battery charger for proper operation, loose terminals and deteriorated wiring
    - Starting motor – inspect electrical connections and wiring.
    - Air starter – inspect oil jar and feeder operation
    - Inspect alternator for proper operation, loose connections and mounting hardware
    - Check belts, pulley and voltage output
3. Engine Cooling System
    - Visually inspect radiator/heat exchanger for leaks, damage and debris
    - Check radiator/heat exchanger louver operation
    - Visually inspect coolant for correct levels and condition of coolant
    - Check coolant conditioner concentration and temperature protection
    - Check filler cap gasket and sealing surface
    - Visually inspect all hoses for deterioration
    - Check tightness of connections
    - Fan Drive Pulley & Fan – check for loose or worn pulleys, lube fan drive bearing
    - Check fan operation and clearance
    - Inspect fan belts for wear and/or deterioration. Check tension and adjust as needed
    - Inspect jacket water heater for proper operation
    - Inspect water pump visually and operationally for leaks and/or unusual noises
4. Engine Fuel System
    - Visually inspect fuel tank for leaks, damage and fuel level
    - Test day tank pump for proper operation
    - Inspect fuel condition for contaminants
    - Drain water from fuel tank of water separator
    - Visually inspect fuel lines for leaks and tightness of connections
    - Check line brackets
    - Inspect governor oil level
    - Inspect controls and linkage for proper operation. Add oil as necessary
    - Inspect fuel filters for damage, leaks and proper operation. Change when necessary
    - Fill Port Info – Special fittings, adapters needed, extra hose length, access to tank and other restrictions that may hamper fueling
5. Air Induction & Exhaust System
    - Air Filter Service Indicator – Note reading. Inspect for proper operation. Reset indicator.
    - Inspect air filter. Clean and/or replace as necessary

- Air Inlet System – Inspect piping and air filter housing for damage, loose connections and evidence of leaks
- Clean air filter housing if air filter is cleaned and replaced. Check housing seals and gaskets
- Inspect turbocharger for oil leakage or exhaust leakage. Check for unusual noises and proper operation
- Inspect exhaust manifold for damage, loose or missing hardware, and evidence of exhaust leakage and wet-stacking. Load bank recommendation if necessary
- Exhaust System – Inspect silencer and piping for damage, corrosion or leakage. Check rain cap
- Check supports for vibration damage and loose connections

6. Lube Oil System
   - Visually inspect for correct oil level and add when necessary, inspect for leaks
   - Note oil pressure
   - Operational and visual inspection of prelube pump
   - Inspect crankcase breather for proper operation. Check connections and inspect hose for deterioration. Note and report excessive blow by
7. Engine Monitors & Safety Controls (All PM Levels)
   - Check safety controls for loose connections and wiring deterioration
   - Check for proper operation of all safety controls and alarms
   - Remote Annunciator and Alarm – Inspect all panels and system alarms for proper functions
8. Ignition System (All PM Levels)
   - Check spark plug condition and electrode gap
   - Check spark plug wires for condition and connections for corrosion
   - Check ignition coils condition and connections for corrosion
9. Control Panels (All PM Levels)
   - Voltmeter – Operational check for correct reading. Check voltage level
   - Frequency Meter – Operational check for correct reading
   - Check alarm history
10. Generator Rear Bearings & Vibration Isolators
    - Lubricate generator rear bearing if applicable
    - Check vibration isolators for proper adjustment and condition
11. Transfer Switch (All PM Levels)
    - Check for leaks/corrosion on cabinets
    - Verify connections are tight on lugs
    - Check voltage across contacts
    - Lube as necessary
    - Verify exercise program
    - Functional test of unit
    - Verify time delays
    - Check for hot spots

Upon completion of the inspection, the vendor will ensure the generator is put back into stand-by mode.

Vendor will provide an inspection report within 15 days of the inspection to the department requesting the inspection that details the following:

1. Record of all findings of the inspections.
2. Record of any unsafe conditions.
3. Record of any corrective action taken.
4. Report recommendations for replacement of minor and major components.

PREVENTATIVE MAINTENANCE

Vendor will provide preventative maintenance for each generator upon the request of each department for Jefferson County as needed to maintain the proper functioning of the generators. This includes, but not limited to oil and filter changes.

Vendor will provide a report of all preventative maintenance performed on the generator to the department requesting the maintenance. Upon completion of preventative maintenance, the vendor will ensure the generator is put back into stand-by mode.

SERVICE CALLS

Vendor will provide service for generators when the generator is not functioning properly upon the request of each department or the Purchasing Department. Vendor will get approval from each department before replacing or ordering any parts for repair. Upon completion of service call, vendor will ensure the generator is put back into stand-by mode. This service will include calls 24 hours a day, 7 days a week. Vendor will also provide service during any man-made or natural disaster/emergency. Service calls in this agreement are made on an "as needed" basis as no repair work shall result from this agreement, other than the initial service call, without a written Notice to Proceed or Purchase Order from the County to the Vendor. A "not to exceed" amount and description of work to be completed will be set in the Notice to Proceed or Purchase Order agreed upon by both parties.

1. Non-Emergency Call-Out – Verbally respond to requests for non-emergency service to any generator within four (4) hours and be on site to perform repairs within forty-eight (48) hours after being contacted.
2. Emergency Call-Out – Verbally respond to requests for emergency service to any generator within one (1) hour and be on site to perform repairs within three (3) hours after being contacted.

GENERATOR LIST

This is the list of current generators located throughout Jefferson County that will need to be serviced and inspected. Generators may be added or removed upon the discretion of Jefferson County.

Department	Address	Make	Model	Output Rating	Inspection
Sabine Pass	5960 South 1st Street, Sabine Pass, TX 77655	Baldor	IDLC150 -3JU	150 KW	Yes
Courthouse	1149 Pearl St., Beaumont, TX 77701	Baldor	IDLC 2000	2 MEG	Yes
JC Service Center	7789 Vitterbo Rd, Beaumont, TX 77705	Baldor	IDLC 40	40 KW	Yes

Department	Address	Make		Output Rating	Inspection
Pct. 1	20205 W. Hwy 90, China, TX 77613			200 KW	No
Pct. 2	7759 Viterbo Rd, Beaumont, TX 77705	Baldor	IDLC 100	100 KW	No
Pct. 3	5700 Jade Ave., Pt. Arthur, TX 77640	Baldor	TS80T	60 KW	Yes
Pct. 4	7780 Boyt Rd., Beaumont, TX 77713	Baldor	IDLC 150	150 KW	No
Health & Welfare/Annex 1	1295 Pearl St., Beaumont, TX 77701	Caterpillar	D545	500 KW	Yes
Mosquito Control	8905 First St., Beaumont, TX 77705	Baldor	IDLC 80	80 KW	Yes
Narcotics/Sheriff Hanger	4640 Hanger Dr., Beaumont, TX 77705	Baldor	TS 130T	100 KW	Yes
Pt. Arthur Courthouse	709 Lakeshore Dr., Pt. Arthur, TX 77640	Baldor	TS350T	250 KW	No
Correctional Facility	5030 Hwy 69 S, Beaumont, TX 77701	Onan	500DFF B	500 KW	Yes
Correctional Facility	5030 Hwy 69 S, Beaumont, TX 77701	Onan	400DFE B	400 KW	Yes
Radio Tower Hwy 73	118235 Hwy 73, Beaumont, TX 77705	Generac	RG0605 45ANAX	60 KW	Yes
Radio Tower Hwy 90	1991 N. Meeker Rd, Beaumont, TX 77713	Kohler		20 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ Gate 1	Kohler	150RE0 ZJ01	155 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ Jerry Ware Terminal	Kohler	100ROZJ D	100 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ Firehouse	Kohler	20ROZJ	25 KW	Yes
Airport	5000 Jerry Ware Dr., Beaumont, TX 77705/ New Terminal	Generac	P22FE	600 KW	Yes

OFFER AND ACCEPTANCE FORM
OFFER TO CONTRACT

To Jefferson County:

We hereby offer and agree to furnish the materials or service in compliance with all terms, conditions, specifications, and amendments in the Invitation for Bid and any written exceptions in the offer.

We understand that the items in this Invitation for Bid, including, but not limited to, all required certificates are fully incorporated herein as a material and necessary part of the contract.

The undersigned hereby states, under penalty of perjury, that all information provided is true, accurate, and complete, and states that he/she has the authority to submit this bid, which will result in a binding contract if accepted by Jefferson County.

We acknowledge receipt of the following amendment(s): _____, _____, _____, _____.

I certify, under penalty of perjury, that I have the legal authorization to bind the firm hereunder:

Johnker Inc DBA Emergency Power Service
Company Name

P O Box 8
Address

Silsbee Tx 77656
City State Zip

John W Baker
Signature of Person Authorized to Sign

John W Baker
Printed Name

President
Title

For clarification of this offer, contact:

John Baker President
Name & Title

409-658-0765 409-246-8164
Phone Fax

jb17@wt.net
E-mail

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

ACCEPTANCE OF OFFER

The Offer is hereby accepted for the following items: Term Contract for Generator Inspections, Routine Maintenance & Service for Jefferson County for Contract Term: One (1) year from date of award with an option to renew for two (2) additional years.

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the Invitation for Bid, including all terms, conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by Jefferson County.

This contract shall henceforth be referred to as Contract No. (IFB 26-004/CG), Term Contract for Generator Inspections, Routine Maintenance & Service for Jefferson County. The Contractor has not been authorized to commence any billable work or to provide any material or service under this contract until Contractor receives a purchase order and/or a notice to proceed from the Jefferson County Purchasing Agent.

COUNTERSIGNED:

Jeff R. Branick, County Judge **JEFFERSON COUNTY, TEXAS**	**Date**
ATTEST:	
Roxanne Acosta Hellberg, County Clerk **JEFFERSON COUNTY, TEXAS**	**Date**

BIDDER: INSERT ALL ADDENDA BEHIND THIS PAGE.
PLEASE BE SURE TO COMPLETE, SIGN, ATTEST, AND DATE EACH ADDENDUM.

BID FORM

Item	Description	Labor Charge Per Hour
1	Generator Technician during working hours (Monday-Friday, 8:00 am to 5:00 pm)	$_185.00___/hour
2	Helper accompanying Generator Technician during working hours (Monday-Friday, 8:00 am to 5:00 pm)	$__92.50___/hour
3	Generator Technician during after-hours (Monday-Friday 5:00 pm – 8:00 am, and all-day Saturday & Sunday)	$_277.50 __/hour
4	Helper accompanying Generator Technician during after-hours (Monday-Friday 5:00 pm – 8:00 am, and all-day Saturday & Sunday)	$_138.75___/hour
5	Generator Technician for services on Holidays	$_277.50 __/hour
6	Helper accompanying Generator Technician for services on Holidays	$__138.75__/hour
7	Generator Technician for disaster relief service during mandatory/voluntary County evacuation (Monday-Friday, 8:00 am to 5:00 pm)	$_277.50___/hour
8	Helper accompanying Generator Technician for disaster relief service during mandatory/voluntary County evacuation (Monday-Friday, 8:00 am to 5:00 pm)	$_138.75___/hour
9	Generator Technician for emergency disaster relief service after-hours during mandatory/voluntary County evacuation (Monday-Friday 5:00 pm to 8:00 am)	$_277.50___/hour
10	Helper accompanying Generator Technician for emergency disaster relief service after-hours during mandatory/voluntary County evacuation (Monday-Friday 5:00 pm to 8:00 am)	$_138.75___/hour
11	Generator Technician for emergency disaster service relief during mandatory/voluntary County evacuation (Holidays)	$_277.50___/hour
12	Helper accompanying Generator Technician for emergency disaster service during mandatory/ voluntary county evacuation (Holidays)	$_138.75___/hour
13	Additional charges (Including, but no limited to inspection fee, service call charge, mileage charges, fuel surcharges, miscellaneous supply charges)	**Mileage portal to portal** 2.25 mile **Supplies** 50.00 **per invoice** **4 hour minimum after hours charge**

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum 1 _____ Date Received_____

Addendum 2 _____ Date Received_____

Addendum 3 _____ Date Received_____

BIDDER: INCLUDE FULL, SIGNED, & ATTESTED COPY OF EACH ADDENDUM ISSUED WITH BID SUBMISSION.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

VENDOR REFERENCES FORM

Bidder: Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or similar products and/or services as contained in this specification package were recently provided.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

REFERENCE ONE

Government/Company Name: Entergy Texas, Lousianna, Arkansas

Address: ENTERGY SERVICES, LLC, 639 LOYOLA AVENUE NEW ORLEANS, LA 70113

Contact Person and Title: Pete Bouzeman IT Telecom Manager

Phone: 409-838-3888 Fax:

Email Address: hbouzem@entergy.com Contract Period: past 20 plus years

Scope of Work: standby generator service, sales and installation to include automatic transfer switches, and other related equipement.

REFERENCE TWO

Government/Company Name: Southeast Texas Regional Planning Commision

Address: 2210 Eastex Fwy, Beaumont, TX 77703

Contact Person and Title: Pete Delacruz

Phone: (409) 899-8444 Fax:

Email Address: Pete DeLaCruz <pdelacruz@setrpc.org> Contract Period: 15 years plus

Scope of Work: standby generator service, sales and installation to include automatic transfer switches, and other related equipement.

REFERENCE THREE

Government/Company Name: City of Beaumont

Address: P.O. Box 3827 Beaumont, TX 77704

Contact Person and Title: Jimmy Bevilaqua Projects Coordinator

Phone: 409-880-3792 Fax:

Email Address: Jimmy.Bevilacqua@BeaumontTexas.gov Contract Period: 20 plus years

Scope of Work: standby generator service, sales and installation to include automatic transfer switches, and other related equipement.

SIGNATURE PAGE

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would Bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions? .....Yes.[X] [ ]No

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other Bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other Bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the Bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

John Inc. DBA Emergency Power Service	
Bidder (Entity Name)	Signature
P.O. Box 8	John W Baker
Street & Mailing Address	Print Name
Silsbee Tx. 77656	2/17/26
City, State & Zip	Date Signed
409-658-0765	409-246-8169
Telephone Number	Fax Number
jbrown@wt.net	
E-mail Address	

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

John W Baker

Signature of Contractor's Authorized Official

John W Baker

Name and Title of Contractor's Authorized Official *(Please Print)*

2/17/26

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CONFLICT OF INTEREST QUESTIONNAIRE

CONFLICT OF INTEREST QUESTIONNAIRE — FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY
Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

Johnker Inc DBA Emergency Power Service

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information in this section is being disclosed.**

_____
Name of Officer

This section (item 3 including subparts A, B, C, & D) must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more?

☐ Yes ☐ No

D. Describe each employment or business and family relationship with the local government officer named in this section.

4 John W Baker — Signature of vendor doing business with the governmental entity

2/17/26 — Date

Adopted 8/7/2015

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

LOCAL GOVERNMENT OFFICER
CONFLICTS DISCLOSURE STATEMENT – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM CIS

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20 _____, to certify which, witness my hand and seal of office.

_____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

Adopted 8/7/2015

THIS FORM IS FOR OFFICE USE ONLY

GOOD FAITH EFFORT (GFE) DETERMINATION CHECKLIST

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting HUBs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant, and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of HUB Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting HUB Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .?

☐ Yes	☐ No	1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum HUB Subcontractor participation?
☐ Yes	☐ No	2. **Notify** in writing a reasonable number of HUBs, allowing sufficient time for effective participation of the planned work to be subcontracted?
☐ Yes	☐ No	3. **Provide** HUBs that were genuinely interested in bidding on a Subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?
☐ Yes	☐ No	4. **Negotiate** in good faith with interested HUBs, and not reject bids from HUBs that qualify as lowest and responsive Bidders?
☐ Yes	☐ No	5. **Document** reasons HUBs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected HUBs?
☐ Yes	☐ No	6. If Prime Contractor/Consultant has zero (0) HUB participation, **please explain the reasons why.**

If "No" was selected, please explain and include any pertinent documentation with your bid.
If necessary, please use a separate sheet to answer the above questions.

John W Baker
Printed Name of Authorized Representative

Signature

President
Title

2/12/26
Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

NOTICE OF INTENT (NOI) TO SUBCONTRACT WITH HISTORICALLY UNDERUTILIZED BUSINESS (HUB)

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract.

Please submit one form for each HUB Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: _____ HUB: ☐ Yes ☐ No

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____

Prime Contract Amount: $ _____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____

Printed Name of Contractor Representative	Signature of Representative	Date

Printed Name of HUB	Signature of Representative	Date

Note: Nothing on this Notice of Intent Form is intended to confer any rights, expressed or implied, to any third parties.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "HUB Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB) SUCONTRACTING PARTICIPATION DECLARATION FORM

Bidder intends to utilize Subcontractors/Subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Prime Contractor: _____ HUB: ☐ Yes ☐ No

HUB Status (Gender & Ethnicity): _____

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____ IFB/RFP No.: _____

Total Contract: $ _____ Total HUB Subcontract(s): $ _____

Construction HUB Goals: 12.8% MBE:: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African-American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR HUB OFFICE USE ONLY:

Verification date HUB Program Office reviewed and verified HUB Sub information Date: _____ Initials: _____

PART I. HUB SUBCONTRACTOR DISCLOSURE

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB) SUBCONTRACTING PARTICIPATION DECLARATION FORM

HUB Subcontractor Disclosure

PART I: Continuation Sheet (Duplicate as Needed)

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

All HUB Subcontractor Participation may be verified with the HUB Subcontractor(s) listed on Part I.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB) SUCONTRACTING PARTICIPATION DECLARATION FORM

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING HUB SUBCONTRACTING GOALS

Instructions to Bidder: Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the HUB goals for this project for the following reasons:

- ☐ All Subcontractors to be utilized are "Non-HUBs." *(Complete Part III)*
- ☐ HUBs were solicited but did not respond.
- ☐ HUBs solicited were not competitive.
- ☐ HUBs were unavailable for the following trade(s):
- ☒ Other: **We are not using sub contractors , we are factory trained and certified to repair and maintain standby power systems.**

Was the Jefferson County HUB Office contacted for assistance in locating HUBs? ☐ Yes ☐ No

PART III: DISCLOSURE OF OTHER "NON-HUB" SUBCONTRACTS

The Bidder shall use this area to provide a listing of all "Non-HUB" Subcontractors, including suppliers, that will perform under this project. A list of those "Non-HUB" Subcontractors the Bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that Bidder is the apparent low Bidder. A list of those "Non-HUB" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HISTORICALLY UNDERUTILIZED BUSINESS (HUB) SUBCONTRACTING PARTICIPATION DECLARATION FORM

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *HUB Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attached any necessary support documentation as required**. I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): John W Baker

Title: President

Signature: _____

Date: 2/17/26

E-mail address: jb170wt.net

Contact person that will be in charge of invoicing for this project:

Name (print or type): Jodie Baker

Title: Office Manager

Date: 2/17/26

E-mail address: jstevens.eps@gmail.com

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

RESIDENCE CERTIFICATION/TAX FORM

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Non-resident Bidder" refers to a person who is not a resident.

(4) "Resident Bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

x I certify that _Johnker Inc DBA Emergency Power Service is a Resident Bidder of Texas as defined in Government Code §2252.001.

☐ I certify that _____ [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is _____ _____ (city and state).

Taxpayer Identification Number (T.I.N.):	**01-0917603**
Company Name submitting bid/proposal:	**Johnker Inc. DBA Emergency Power Service**
Mailing address:	**P O Box 8 Silsbee Tx 77656**
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HOUSE BILL 89 VERIFICATION

I, John W Baker, the undersigned representative of (company or business name) Johnker Inc DBA Emergency Power Service (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and
2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. "**Boycott Israel**" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. "**Company**" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or an limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

Signature of Company Representative

2/27/24
Date

On this 26 day of February, 2026, personally appeared

John Baker, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

KIM MARIE CARLSON
My Notary ID # 124588035
Expires May 18, 2029

Notary Signature

2/27/24
Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SENATE BILL 252 CERTIFICATION

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

Johnker Inc. DBA Emergency Power Service

Company Name

IFB/RFP/RFQ number

Certification check performed by:

Purchasing Representative

Date

THIS FORM IS FOR OFFICE USE ONLY

BID AFFIDAVIT

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF Texas COUNTY OF Hardin

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas,

on this day personally appeared _____, who
(name)

after being by me duly sworn, did depose and say:

"I, John W Baker am a duly authorized officer of/agent
(name)

for Johnker Inc DBA Emergency Power Service and have been duly authorized to execute the
(name of firm)

foregoing on behalf of the said Johnker Inc DBA Emergency Power Service.
(name of firm)

I hereby certify that the foregoing bid has not been prepared in collusion with any other Bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the Bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of Bidder: Johnker Inc. DBA Emergency Power Service, PO Box 8 Silsbee Texas 77656

Fax: 409-246-8164 Telephone# 409-658-0765

by: John W Baker Title: President
(print name)

Signature: _____

SUBSCRIBED AND SWORN to before me by the above-named

John W Baker on

this the 26 day of February, 2024.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

Notary Public in and for
the State of Texas

KIM MARIE CARLSON
My Notary ID # 124588035
Expires May 18, 2029

STATE OF TEXAS
COUNTY OF JEFFERSON

CONTRACT NUMBER: RFP 26-002/CG
CAFETERIA SERVICES

WHEREAS, JEFFERSON COUNTY has determined there is a need to provide for Cafeteria Services at Jefferson County Courthouse; located at 1149 Pearl, Beaumont, TX.

WHEREAS, JEFFERSON COUNTY has requested and reviewed proposals for a Food Service Contractor in accordance with applicable Federal, State and local laws and ordinances regarding health, sanitation, and safety.

WHEREAS, JEFFERSON COUNTY has determined that The Courtyard Cafe can best provide Cafeteria Services at Jefferson County Courthouse located at 1149 Pearl, Beaumont, TX.

WHEREAS, this agreement is made between The Courtyard Cafe (hereinafter referred to as (CONTRACTOR) and the COUNTY OF JEFFERSON, TEXAS (hereinafter referred to as (COUNTY) acting by and through its duly authorized representative, Jefferson County Judge Jeff Branick.

NOW THEREFORE, the parties agree as follows:

ARTICLE I
RETENTION OF CONTRACTOR

COUNTY hereby retains CONTRACTOR as an independent contractor and not an employee for services more particularly described in this Agreement.

ARTICLE II
TERM OF AGREEMENT

Regardless of the date of execution, this Agreement shall become effective April 1, 2026 and continue in force until March 31, 2027 with the option to extend for four (4) additional one (1) year terms unless sooner terminated as provided herein. Should this Agreement naturally expire without alternative provisions, this agreement shall continue in force on a month-to-month basis under the same terms.

Due to the Constitutional debt limitation for Counties, any Agreement, which extends beyond the current fiscal year, is executed subject to future appropriations to fund its provision.

ARTICLE III
CREDENTIALING

CONTRACTOR shall select and assign specific personnel to provide services for COUNTY under this Agreement and shall provide COUNTY with current copies of all licensure, credentialing, and insurance information as required by State law. All such information shall be provided at the time of execution of this Agreement.

ARTICLE IV
TERMINATION

The parties hereto understand and agree that after a good faith effort has been made toward the success and performance of the Agreement, if either party believes in its sole judgment that the Agreement cannot be successfully continued for any reason, either party may terminate the Agreement NINETY (90) calendar days from receipt of said notice. Thereafter, this Agreement shall terminate, become null and void, and be of no further force or effect.

This Agreement shall immediately and automatically terminate upon the occurrence of any one of the following:

52705556. Dissolution of CONTRACTOR.

52705557. CONTRACTOR abandons its duties in accordance with the provisions of Article V (Duties of Contractor).

52705558. Failure of CONTRACTOR to perform its responsibilities under this Agreement in the highest professional manner.

52705559. Any substantiated allegation of criminal wrongdoing on the part of CONTRACTOR, which would substantially interfere with the performance of the duties, set out herein.

52705560. Failure by CONTRACTOR to cure any default or breach under this Agreement within ten (10) days after receiving notice in writing.

52705561. Whenever CONTRACTOR and COUNTY mutually agree to termination in writing.

Upon termination of this agreement under any provision, CONTRACTOR shall be entitled to receive only the unpaid accrued compensation as of the date of termination minus any reasonable costs incurred by COUNTY to fulfill CONTRACTORS obligations under this Agreement.

ARTICLE V
DUTIES OF CONTRACTOR

CONTRACTOR shall be responsible for all duties specified in RFP Specification Number 26-002/CG, which by this reference is incorporated in full into this agreement, and include but are not limited to the following:

52709568. CONTRACTOR shall furnish Cafeteria Services in accordance with the Specifications of RFP 26-002/CG.

52705562. CONTRACTOR may supply certain furnishings, kitchen equipment, POS equipment, television(s), artwork and decor with the understanding upon expiration of agreement

equipment remains property of The Courtyard Café.

52705563. CONTRACTOR's hours of operation will be 7:30 am – 3:00 pm

52705564. CONTRACTOR will be responsible for all licenses and permits necessary to comply with all local, state, and federal mandates pertaining to food service operations.

52705565. CONTRACTOR shall schedule outside vendors for rental space and collect appropriate fees.

52705566. CONTRACTOR shall make payments to COUNTY as specified in ARTICLE VII.

52705567. CONTRACTOR shall be responsible for all long distance telephone charges, direct cable/internet installation and charges incurred in the performance of this Agreement.

52705568. CONTRACTOR is responsible for all day-to-day as well as periodic major cleaning of the entire kitchen area assigned to CONTRACTOR including walk-ins, storerooms, freezers, dish room, office, staff, and dining rooms and receiving area.

52705569. CONTRACTOR and its employees assigned to COUNTY facilities are required to comply with all facility rules of conduct concerning normal day-to-day operations.

52705570. CONTRACTOR is required to staff the operation with the optimum number of employees at all times for the efficient operation of the kitchen.

52705571. CONTRACTOR employees must be properly attired in a standard uniform.

52705572. All Cafeteria Services employees in the kitchen and Cafeteria Services areas must wear hair restraints (nets or hats).

52705573. CONTRACTOR employees are subject to background check and wear security identification while working in the County facilities.

52705574. CONTRACTOR employees are subject to search at any time while within secured areas of COUNTY facilities.

52705575. CONTRACTOR must obey all Federal, State and local laws and ordinances regarding health, sanitation, and safety. CONTRACTOR will be subject to inspections in the kitchen by authorized personnel from the Jefferson County Courthouse Superintendent of Maintenance and City Health Department.

ARTICLE VI
DUTIES OF COUNTY

COUNTY shall provide access to dumpsters and recycling containers at reasonable times to be negotiated between CONTRACTOR and Courthouse Superintendent of Maintenance.

COUNTY will provide, install, and permit CONTRACTOR to use the capital equipment, which

COUNTY deems necessary for Cafeteria Services and related activities.

COUNTY shall approve any and all designs, furnishings, decorations, alterations, improvements, advertisements, etc., prior to any such action being taken by the Contractor.

COUNTY will provide the cafeteria facility, standard utilities, existing equipment, tables and chairs, and related utilities to the Contractor at no charge to the Contractor.

COUNTY will provide all preventive maintenance and repairs on all equipment related to the cafeteria operation, including refrigerators, freezers, ice machines, stoves, warmers, etc., that are used directly by the cafeteria operation. The Jefferson County Maintenance Department will maintain all building systems (HVAC, electrical, structural).

ARTICLE VII
RATES

CONTRACTOR shall pay directly to COUNTY Lease Payment $100.00 per month in accordance with CONTRACTOR'S response to RFP Number 26-002/CG, which with the RFP Specifications for RFP Number 26-002/CG are by this reference incorporated in full into this Agreement. Payments will be monthly installments by the 5th of each month.

ARTICLE VIII
RELATIONSHIP OF PARTIES

None of the provisions of this Agreement is intended to create nor shall be deemed or construed to create any relationship between the parties other than that of independent entities contracting with each other solely for affecting the provisions of this Agreement.

It is expressly acknowledged and agreed that neither of the parties, nor any of their employees shall be construed to be agent, employer or representative of the other nor shall any provision of this Agreement create any right in COUNTY to exercise control or direction over the business of CONTRACTOR provided, however, that all services provided to COUNTY hereunder shall be provided and delivered at all times in a manner consistent with the standards of CONTRACTORS profession, the terms of this Agreement and all applicable laws, rules and regulations of authorities having jurisdiction over Jefferson County.

Personnel provided by CONTRACTOR are not employees of COUNTY nor are they entitled to any direct compensation nor any benefits or rights of COUNTY employees as from time to time may be established, and shall provide services for the benefit of COUNTY through

CONTRACTOR and only pursuant to this Agreement.

COUNTY has hired CONTRACTOR to provide food services. As such, CONTRACTOR has the duty and obligation to perform all obligations to COUNTY under this Agreement in the highest professional manner. No property owned by or referencing COUNTY or one of its subdivisions shall be used by any employee, staff member, or representative of CONTRACTOR without express approval by the authorized COUNTY representative and then shall be used only for professional purposes within the parameters of this Agreement.

ARTICLE IX
INSURANCE

CONTRACTOR, at no cost to COUNTY, shall have and maintain at all times insurance of the types and amounts required in the bid specifications.

ARTICLE X
INDEMNIFICATION

CONTRACTOR shall indemnify and hold COUNTY harmless from and against any and all claims, demands, costs, expenses, liabilities and losses (including reasonable attorney's fees) which may arise out of any acts or failure to act of CONTRACTOR, its employees, agents or contractors in connection with the performance of services pursuant to this Agreement.

ARTICLE XI
MISCELLANEOUS

This agreement, Specifications for RFP Number 26-002/CG, and CONTRACTOR'S response constitute the entire understanding between the parties, and no other agreements, representations or contract shall be binding on any of the parties unless set forth in writing and signed by all parties. Should the documents comprising this understanding contain conflicting provisions, provisions of the Bid Specifications shall have priority.

This Agreement supersedes all other prior agreements, either oral or written between the parties with respect to the professional services to be provided by CONTRACTOR to COUNTY and contains all of the covenants and agreements between the parties with respect to the rendering of such services in any manner.

Each party to this Agreement acknowledges that any party or anyone acting on behalf of any party that is not embodied in this Agreement has made no inducements or promises, oral or otherwise.

The invalidity or unenforceability of any term or provision of this Agreement shall in no way affect the validity or enforceability of any other term or provision.

Neither party under this Agreement shall have the right to assign or transfer its rights to any third party without prior written consent of the other party.

The law of the State of Texas hereunder, shall govern the validity of this Agreement and of any of

its terms or provisions, as well as the rights and duties of the parties and all venues shall be in Jefferson County, Texas.

ARTICLE XII
NOTICES

All notice required under this Agreement shall be sent postage prepaid U.S. Mail or hand delivered to the parties at the following addresses:

CONTRACTOR: The Courtyard Café
4321 Lincoln Ave.
Groves, Texas 77619

COUNTY: Jefferson County Purchasing Department
Deborah L. Clark, County Purchasing Agent
1149 Pearl Street, 1st Floor
Beaumont, Texas 77701

Signed on this the 31 of March, 2026.

OWNER:

Jefferson County

By: _____
Jeff Branick
County Judge

CONTRACTOR:

The Courtyard Café

By: _____
Karen Theis
Owner

ATTEST:

_____
Roxanne Acosta-Hellberg
County Clerk

COMMISSIONERS COURT
JEFFERSON COUNTY, TEXAS

JEFFERSON COUNTY PURCHASING DEPARTMENT

Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

LEGAL NOTICE
Advertisement for Request for Proposal

January 13, 2026

Notice is hereby given that sealed proposals will be accepted by the Jefferson County Purchasing Department for Request for Proposals (RFP 26-002/CG), **Cafeteria Services for Jefferson County, Pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-327**. **Specifications for this project may be obtained from the Jefferson County website,** https://jeffersoncountytx.gov/Purchasing/ **, or by calling 409-835-8593.**

Proposals are to be sealed and addressed to the Purchasing Agent with the proposal number and name marked on the outside of the envelope or box. Proposers shall forward an original and five (5) hard copies of their proposal to the address shown below. Late proposals will be rejected as non-responsive. Proposals will be publicly opened and only the firm name will be read aloud in the Jefferson County Engineering Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701 at the time and date below. Proposals shall be opened in a manner that avoids disclosure of the contents to competing Proposers and maintains the confidentiality of the proposals during negotiations. Proposals will be open for public inspection after the award of the contract, except for trade secrets and confidential information. Proposers are invited to attend the sealed proposal opening.

To arrange a site visit, contact Cindy Greene, Contract Specialist at 409-835-8593 or via email at cynthia.greene@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent at 409-835-8593 or via email at deb.clark@jeffersoncountytx.gov.

PROPOSAL NAME:	**Cafeteria Services for Jefferson County, Pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-327**.
PROPOSAL NUMBER:	**RFP 26-002/CG**
DUE DATE/TIME:	**11:00 AM CT, Wednesday, February 18, 2026**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

Any questions relating to these requirements should be directed to Cindy Greene, Contract Specialist at 409-835-8593 or via email at cynthia.greene@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent at 409-835-8593 or via email at deb.clark@jeffersoncountytx.gov.

Jefferson County encourages Disadvantaged Business Enterprises (DBEs), Minority/Women Business Enterprises (M/WBEs), and Historically Underutilized Businesses (HUBs) to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment, or the provisions of services. Individuals requiring special accommodations are requested to contact our office at least seven (7) days prior to the bid due date at 409-835-8593.

All interested firms are invited to submit a proposal in accordance with the terms and conditions stated in this bid.

Proposers are strongly encouraged to carefully read the entire invitation, as failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

PUBLISH:
Beaumont Enterprise & Port Arthur News:
January 14, 2026
The Examiner:
January 15, 2026 & January 22, 2026

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PROPOSAL SUBMITTAL CHECKLIST

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

The Proposer's attention is especially called to the items listed below, which must be submitted in full as part of the proposal.

Failure to submit any of the documents listed below as a part of your proposal, or failure to acknowledge any addendum in writing with your proposal, or submitting a proposal on any condition, limitation, or provision not officially invited in this Request for Proposal (RFP) may cause for rejection of the proposal.

Proposer shall check each box indicating compliance.

THE ITEMS ON THE CHECKLIST BELOW MUST BE INCLUDED IN YOUR PROPOSAL SUBMISSION.

☐ Cover sheet identifying the contract/project being proposed, the name and address of the Proposer, the date of the proposal, and the email address, telephone, and facsimile numbers of Proposer.

☐ An acknowledgment and/or response to each section of the proposal.

☐ Form of business (e.g., corporation, sole proprietorship, partnership); if corporation the date and state of incorporation.

☐ Identification of three (3) entities for which the Proposer is providing or has provided Food Services of the type requested, including the name, position, and telephone number of a contact person at each entity.

☐ Completed and Signed FORM 1295.

☐ Copy of Certificate of Insurance (COI). The COI at a minimum should reflect your firm/company's general insurance coverage.

☐ Identification of all legal claims, demands, contracts terminated or lawsuits filed, threatened, or pending against the Proposer and/or its principal/officers for the last three (3) years, as well as identification of any administrative actions or warnings taken or issued by any federal, state, or local governmental agency to Proposer and/or its principals/officers with regard to the provision of the same or similar service as covered by this RFP, or the payment of monies under the terms of any agreement(s) relating to such services.

☐ **One (1) Original and five (5) Response Copies; with all copies to include a Completed Copy of this specifications packet, in its entirety.**

Each Proposer shall ensure that required parts of the response are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Please read the "Proposal Submittal Checklist" included in this package.

Company	Telephone Number
Address	Fax Number
Authorized Representative (Please print)	Title
Authorized Signature	Date

SECTION 1: INTRODUCTION TO PROPOSERS AND GENERAL REQUIREMENTS

This Request for Proposal (RFP) is to receive proposals from qualified firms regarding services for Cafeteria Food Services.

The following items are provided as general information and specifications as required by the Jefferson County Purchasing Department.

1.1 VENDOR INSTRUCTIONS

Read the document carefully. Follow all instructions. Proposer is responsible for fulfilling all requirements and specifications. It is imperative

General Requirements apply to all advertised requests for proposals; however, these may be superseded, whole or in part, by the Scope of Services, Guidelines and Specifications, Requested Responses and Information, or other data contained herein. Be sure your proposal package is complete.

1.2 GOVERNING LAW

Proposer is advised that these requirements shall be fully governed by the laws of the State of Texas and that Jefferson County may request and rely on advice, decisions, and opinions of the Attorney General of Texas and the County Attorney concerning any portion of these requirements.

1.3 AMBIGUITY, CONFLICT, OR OTHER ERRORS IN THE RFP

If Proposer discovers any ambiguity, conflict, discrepancy, omission or other error in the RFP, Proposer shall immediately notify the County of such error in writing and request modification or clarification of the document. Modifications will be made by issuing Addenda. Written notice will be given to all parties who have been furnished with the RFP without divulging the source of the request for the same. If the Proposer fails to notify the County prior to the date and time fixed for submission of proposals of an error or ambiguity in the RFP known to Proposer, or an error or ambiguity that reasonably should have been known to Proposer, then Proposer shall not be entitled to compensation or additional time by reason of the error or ambiguity or its later resolution.

The County may also modify the RFP, no later than 48 hours prior to the date and time fixed for submission of proposals, by issuance of an Addendum to all parties who have received the RFP. All addenda will be numbered consecutively, beginning with 1.

1.4 NOTIFICATION OF MOST CURRENT ADDRESS

Firms in receipt of this RFP shall notify Deborah L. Clark, Jefferson County Purchasing Agent, of any address changes, contact person changes, and/or telephone number changes no later than 48 hours prior to the date and time fixed for submission of proposals.

1.5 PROPOSAL PREPARATION COST

Cost for developing proposals is entirely the responsibility of Proposers and shall not be charged to Jefferson County.

1.6 SIGNATURE OF PROPOSAL

A transmittal letter, which shall be considered an integral part of the proposal, shall be signed by an individual who is authorized to bind the Proposer contractually. If the Proposer is a corporation, the legal name of the corporation shall be provided together with the signature of the officer or officers authorized to sign on behalf of the corporation.

If the Proposer is a partnership, the true name of the firm shall be provided with the signature of the partner or partners authorized to sign.

If the Proposer is an individual, that individual shall sign. If signature is by an agent, other than an officer of a corporation or a member of a partnership, a power of attorney or equivalent document must be submitted to the Jefferson County Purchasing Department prior to the submission of the proposal or with the proposal.

1.7 ECONOMY OF PRESENTATION

Proposals shall not contain promotional or display materials, except as they may directly answer in whole or in part questions contained in the RFP. Such exhibits shall be clearly marked with the applicable reference number of the question in the RFP. Proposals must address the technical requirements as specified in the RFP. All questions posed by the RFP must be answered concisely and clearly. Proposals that do not address each criterion may be rejected and not considered.

1.8 PROPOSAL OBLIGATION

The contents of the proposal and any clarification thereof submitted by the selected Proposer shall become part of the contractual obligation and incorporated by reference into the ensuing contract.

1.9 INCORPORATION BY REFERENCE AND PRECEDENCE

This Agreement is derived from (1) the RFP, written clarifications to the RFP and County's response to questions; (2) the Contractor's Best and Final Offer, and (3) the Contractor's response to the RFP.

In the event of a dispute under this Agreement, applicable documents will be referred to for the purpose of clarification or for additional detail in the following order of precedence: (1) Amendments to the Agreement in reverse chronological order; (2) the Agreement, including the Scope of Work; (3) the Contractor's Best and Final Offer; (4) the RFP, including attachments thereto and written responses to questions and written clarifications; and (5) the Contractors response to the RFP.

1.10 GOVERNING FORMS

In the event of any conflict between the terms and provisions of these requirements and the specifications, the specifications shall govern. In the event of any conflict of interpretation of any part of this overall document, Jefferson County's interpretation shall govern.

1.11 IMPLIED REQUIREMENTS

Products and services not specifically mentioned in the RFP, but which are necessary to provide the functional capabilities described by the Proposer, shall be included in the proposal.

1.12 COMPLIANCE WITH RFP SPECIFICATIONS

It is intended that this Request for Proposals (RFP) describe the requirements and the response format in sufficient detail to secure comparable proposals. Failure to comply with all provisions of the RFP will result in disqualification.

1.13 VENDOR REGISTRATION: SAM (SYSTEM FOR AWARD MANAGEMENT)

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

In instances where a vendor has either an "Inactive" SAM Registration or is not currently registered with the System for Award Management, the Purchasing Department may *initially* accept proof (printout from the SAM website) that the vendor has begun the registration process in order for the IFB/RFQ/RFP submission to be considered as "responsive" to the specifications for the project.

However, the SAM Registration must be completed (showing "active" status, with no exclusions) prior to the award and/or execution of an agreement or contract for the project.

1.14 FORM 1295 (TEXAS ETHICS COMMISSION)

FORM 1295 SUBMISSION REQUIREMENT/INSTRUCTIONS FOR RFP PROPOSERS:

ALL NON-EXEMPT PROPOSERS ARE REQUIRED TO SUBMIT COMPLETED FORM 1295 WITH PROPOSAL SUBMISSION.

INSTRUCTIONS:

(1) Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information on Form 1295, and print a copy of the completed form.
The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department WITH RFP PROPOSAL SUBMISSION.

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

SAMPLE: A sample of a completed FORM 1295 is included on PAGE 7.

FORM 1295 Implementation Background:

In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

FORM 1295 EXEMPTIONS:

What type of contracts are exempt from the Form 1295 filing requirement under the amended law?
The amended law adds to the list of types of contract exempt from the Form 1295 filing requirement.

A completed Form 1295 is not required for:

- a sponsored research contract of an institution of higher education
- an interagency contract of a state agency or an institution of higher education
- a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and o any qualified vendor is eligible for the contract
- a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity
- a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code
- a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

SAMPLE COMPLETED FORM 1295

VENDOR: FORM 1295 MUST BE COMPLETED/SUBMITTED ON TEXAS ETHICS COMMISSION WEBSITE. HARD COPY OF FORM 1295 IS TO BE PRINTED, COMPLETED, SIGNED, AND SUBMITTED WITH BID/PROPOSAL/AGREEMENT/CONTRACT.
JEFFERSON COUNTY WILL CONFIRM RECEIPT OF COMPLETED HARD COPY WITH THE TEXAS ETHICS COMMISSION.

CERTIFICATE OF INTERESTED PARTIES — FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties. Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.	**OFFICE USE ONLY**
1 Name of business entity filing form, and the city, state and country of the business entity's place of business. **VENDOR:ENTER YOUR BUSINESS NAME, CITY, STATE, AND COUNTRY HERE**	
2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed. **JEFFERSON COUNTY, TEXAS**	

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.
VENDOR: ENTER BID/PROPOSAL/CONTRACT/AGREEMENT REF# AND TITLE HERE.

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary
VENDOR: ENTER EACH PERSON HAVING INTEREST, OWNERS ARE THE CONTROLLING PARTIES.		X	
VENDOR: WORKERS (OR NON-OWNERS) IN YOUR COMPANY ARE INTERMEDIARY PARTIES.			X

5 Check only if there is NO Interested Party. **CHECK BELOW IF APPLICABLE** ☐

6 UNSWORN DECLARATION **VENDOR: COMPLETE, DATE, AND SIGN THIS DECLARATION SECTION.**

My name is _____, and my date of birth is _____.

My address is _____, _____, _____, _____, _____.
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in _____ County, State of _____, on the _____ day of _____, 20_____.
(month) (year)

_____
Signature of authorized agent of contracting business entity
(Declarant)

ADD ADDITIONAL PAGES AS NECESSARY

Form provided by Texas Ethics Commission www.ethics.state.tx.us Revised 12/22/2017

NOTE: JEFFERSON COUNTY WILL KEEP A COPY OF THIS FORM ON FILE FOR EACH BID/PROPOSAL/CONTRACT/AGREEMENT AND EACH VENDOR RESPONDING TO BIDS/PROPOSALS.

Must file online at www.ethics.state.tx.us/File

PROPOSER: INSERT COMPLETED FORM 1295 BEHIND THIS PAGE.

1.15 EMERGENCY/DECLARED DISASTER REQUIREMENTS

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, a contract (executed in response to this Request for Proposal) may be subjected to unusual usage. Contractor shall service the County during such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in the contract shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the contract, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's supplier(s). Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling and drayage fees may apply.

1.16 EVALUATION

Jefferson County reserves the right to use all pertinent information (also learned from sources other than disclosed in the RFP process) that might affect the County's judgment as to the appropriateness of an award to the best evaluated Proposer. This information may be appended to the proposal evaluation process results. Information on a service provider from reliable sources, and not within the service provider's proposal, may also be noted and made part of the evaluation file. Jefferson County shall have sole responsibility for determining a reliable source. Jefferson County reserves the right to conduct written and/or oral discussions/interviews after the proposal opening. The purpose of such discussions/interviews is to provide clarification and/or additional information to make an award is in the best interest of Jefferson County.

1.17 WITHDRAWAL OF PROPOSAL

The Proposer may withdraw its proposal by submitting a written request over the signature of an authorized individual, as described in paragraph 1.6, to the Purchasing Department any time prior to the submission deadline. The Proposer may thereafter submit a new proposal prior to the deadline. Modification or withdrawal of the proposal in any manner, oral or written, will not be considered if submitted after the deadline.

1.18 SMALL, MINORITY & WOMEN BUSINESS ENTERPRISE PARTICIPATION

It is the desire of Jefferson County to increase the participation of Small, Minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

Minority owned business may be eligible for contract procurement assistance with public and private sector entities from MBDA Centers

Dallas Fort Worth MBDA Business Center
8828 N. Stemmons Freeway, Ste. 550 B
Dallas, TX 75247
214-920-2436
Website: https://www.mbdadfw.com
Email: admin1@mbdadallas.com

El Paso MBDA Business Center
2401 East Missouri Avenue
El Paso, TX 79903
915-351-6232
Website: https://www.mbda.gov/business-center/el-paso-mbda-business-center
Email: treed@ephcc.org

San Antonio MBDA Business Center
501 W. Cesar E. Chavez Blvd., Ste. 3.324 B
San Antonio, TX 78207
210-458-2480
Website: https://www.mbda.gov/business-center/san-antonio-mbda-business-center
Email: Jacqueline.jackson@utsa.edu

Small and woman-owned business may be eligible for assistance from U.S. Small Business Administration (SBA):
Website: https://www.sba.gov/local-assistance

Dallas/Fort Worth District Office
150 West Parkway, Ste. 130
Euless, TX 76040
817-684-5500
Website: https://www.sba.gov/district/dallas-fort-worth
Email: dfwdo.email@sba.gov

El Paso District Office
211 N. Florence St, Ste. 201
El Paso, TX 79901
915-834-4600
Website: https://www.sba.gov/district/el-paso
Email: lee.vega@sba.gov

Houston District Office
8701 S. Gessner Dr, Ste. 1200
Houston, TX 77074
713-773-6500
Website: https://www.sba.gov/district/houston
Email: houston@sba.gov

Lower Rio Grande Valley District Office
2422 E. Tyler Ave, Suite E
Harlingen, TX 78550
956-427-8533
Website: https://www.sba.gov/district/lower-rio-grande-valley
Email: lrgvdo.email@sba.gov

San Antonio District Office
615 E. Houston St, Ste 298
San Antonio, TX 78205
210-403-5900
Website: https://www.sba.gov/district/san-antonio
Email: sado.email@sba.gov

West Texas District Office
1205 Texas Ave, Room 408
Lubbock, TX 79401
806-472-7462
Website: https://www.sba.gov/district/west-texas
Email: lubdo@sba.gov

HUB certification information can be found at:

Statewide Procurement Division HUB Program
P.O. Box 13528
Austin, TX 78711
512-463-5872 or 888-863-5881
Website: https://comptroller.texas.gov/purchasing/vendor/hub
Email: statewidehubprogram@cpa.texas.gov

PROPOSER: INSERT HUB, SBE, MBE or WBE Certification behind this page.

1.19 AWARD

Jefferson County reserves the right to award this contract on the basis of the **Best Offer** in accordance with the laws of Texas, to waive any formality or irregularity, to make award to more than one Proposer, and/or to reject any or all proposals. In the event the highest dollar Proposer meeting specifications is not awarded a contract, the Proposer may appear before Commissioners' Court and present evidence concerning his responsibility.

1.20 OWNERSHIP OF PROPOSAL

All proposals become the property of Jefferson County and will not be returned to Proposers.

1.21 DISQUALIFICATION OF PROPOSAL

Upon signing this proposal document, a contractor offering to sell supplies, materials, services, or equipment to Jefferson County certifies that the Proposer has not violated the antitrust laws of this state codified in Section 15.01, et seq, Business & Commerce Code, or the Federal Antitrust Laws, and has not communicated directly or indirectly the offer made to any competitor or any other person engaged in such line of business. Any or all proposals may be rejected if the County believes that collusion exists among the Proposers.

1.22 CONTRACTUAL DEVELOPMENT

The contents of the RFP and the selected proposal will become an integral part of the contract, but may be modified by provisions of the contract as negotiated. Therefore, the Proposer must be amenable to inclusion in a contract of any information provided (in writing) either in response to this RFP or subsequently during the selection process.

1.23 ASSIGNMENT

The selected vendor may not assign, sell, or otherwise transfer this contract without written permission of the Jefferson County Commissioners' Court.

1.24 CONTRACT OBLIGATION

Jefferson County Commissioners' Court must award the contract, and the County Judge or other person authorized by Jefferson County Commissioners' Court must sign the contract before it becomes binding on Jefferson County or the Proposer. **Department heads are not authorized to sign agreements for Jefferson County.** Binding agreements shall remain in effect until all products and/or services covered by this proposal have been satisfactorily delivered and accepted.

1.25 TERMINATION

Jefferson County reserves the right to terminate the contract for default if the awarded vendor breached any of the terms therein, including warranties of proposal, or if the Proposer becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or services within the proper amount of time, and/or to properly perform any and all other requirements to Jefferson County's satisfaction, and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified.

1.26 INSPECTIONS

Jefferson County reserves the right to inspect any item(s) or service location(s) for compliance with specifications and requirements and needs of the using department. If a proposal cannot furnish a sample of a proposed item, where applicable, for review, or fails to satisfactorily show an ability to perform, the County can reject the Proposer as inadequate.

1.27 TESTING

Jefferson County reserves the right to test equipment, supplies, material and goods proposed for quality, compliance with specifications, and ability to meet the needs of the user. Demonstration units must be available for review. Should the goods or services fail to meet requirements and/or be unavailable for evaluation, the offer is subject to rejection.

1.28 LOSS, DAMAGE, OR CLAIM

The Proposer shall totally indemnify Jefferson County against all claims by its employees, agents, or representatives or personal injury arising from any cause. In addition, the Proposer shall totally indemnify Jefferson County against all claims of loss or damage to the Proposer's and Jefferson County's property, equipment, and/or supplies.

1.29 TAXES

The contractor and its subcontractors, agents and employees, as the case may be, will be responsible for the payment of all federal, state and local taxes, and deposits or contributions imposed or required by law.

1.30 NON-DISCRIMINATION

The successful Proposer will be required to comply with the Americans With Disabilities Act and with all provisions of federal, state, county and local (if any) laws and regulations to ensure that no employee or applicant for employment is discriminated against because of race, color, religion, sex, age, handicap or national origin.

1.31 CONFLICT OF INTEREST

The agreement entered into pursuant to this RFP will contain the Contractor's warranty that, except for bona-fide employees or selling agents maintained by the Contractor for the purpose of securing business, no person or selling agency has been employed or retained to solicit this contract upon an agreement or understanding for commission, percentage or contingency.

Further, the contractor will warrant that no kickbacks, gratuities, or contingency fees have been paid in connection with this RFP or contract and none has been promised contingent upon the award of contract. And, will still further warrant that to its knowledge and best belief, no one being paid under the agreement between the County and the contractor, is engaged in any activities which would constitute a conflict of interest with respect to the purposes of said agreement.

By submitting a proposal in response to this RFP, all Proposers affirm that they have not given, nor intend to give, at any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant or any employee or representative of same, in connection with this procurement.

Each Proposer must disclose any existing or potential conflict of interest relative to the performance of the requirements of this RFP. Examples of potential conflicts may include an existing business or personal relationship between the Proposer, its principal, or any affiliate or subcontractor, with the County or any other entity or person involved in any way in the project that is the subject of this RFP. Similarly, any personal or business relationship between the Proposer, the principals, or any affiliate or subcontractor, with any employee of the County or its suppliers must be disclosed. **Any such relationship that might be perceived or represented as a conflict must be disclosed. Failure to disclose any such relationship or reveal personal relationships with state employees may be cause for contract termination. The County will decide if an actual or perceived conflict should result in proposal disqualification.**

1.32 CONFIDENTIAL/PROPRIETARY INFORMATION

If any material in the proposal submission is considered by Proposer to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Proposer), **Proposer must clearly mark the applicable pages of Proposer's proposal submission to indicate each claim of confidentiality. Additionally, Proposer must include a statement on company letterhead identifying all Proposal section(s) and page(s) that have been marked as confidential.** Jefferson County will protect from public disclosure such portions of a proposal, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire proposal submission is protected from disclosure because it contains some proprietary information is not acceptable, and will make the entire proposal submission subject to release under the Texas Public Information Act.

By submitting a proposal, Proposer agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Proposer's proposal submission or other information submitted by Proposer.

1.33 WAIVER OF SUBROGATION

Proposer and Proposer's Insurance Carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from the Proposer's performance under this agreement.

1.34 AKNOWLEDGEMENT OF INSURANCE REQUIREMENTS

By signing its proposal, Proposer acknowledges that it has read and understands the insurance requirements for this proposal. Proposer also understands that evidence of required insurance must be submitted within fifteen (15) working days following notification of acceptance of its offer; otherwise, Jefferson County may rescind its acceptance of the Proposer's proposal. The insurance requirements are part of this package.

1.35 INSURANCE REQUIREMENTS

The contractor (including any and all subcontractors as defined in Section 1.36 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the contractor. These requirements do not establish limits of the contractor's liability. All policies of insurance shall waive all rights of subrogation against the County, its officers, employees and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an Insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public, Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):

Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation Statutory Coverage (See Section 1.36 Below)

1.36 WORKERS' COMPENSATION INSURANCE

1.36.1 **Definitions:**

1.36.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

1.36.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

1.36.1.3 **Persons providing services on the project ("subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

1.36.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.

1.36.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – refer to Section 1.35 above.

1.36.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

1.36.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

1.36.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

1.36.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

1.36.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

1.36.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

1.36.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

1.36.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

1.36.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees providing services on the project, for the duration of the project.

1.36.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

1.36.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

1.36.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

1.36.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

1.36.9.4.2 The coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

1.36.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

1.36.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

1.36.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs 1.36.1. – 1.36.7., with the certificates of coverage to be provided to the person for whom they are providing services.

1.36.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

1.36.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

PROPOSER: INSERT COPY OF CERTIFICATE OF INSURANCE (COI) BEHIND THIS PAGE.

Note: For proposal purposes, a general COI will suffice. However, a COI that includes the notation that “Jefferson County as an additional insured” will be required from Awarded Proposer(s) prior to the issuance of a Purchase Order.

SECTION 2: FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) MANDATED CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY UNDER FEDERAL AWARDS REQUIRED BY 2 C.F.R. §200.327 APPENDIX II TO 2 CFR §200

2 CFR 200.327 Contract provisions. The non-Federal entity's contracts should contain applicable provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards. The non-Federal entity's contracts must contain the provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards, as applicable. ***Language as of January 3, 2025**

THRESHOLD	PROVISION	CITATION
>$250,000 (Simplified Acquisition Threshold)	Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. Although not required for contract at or below the SAT, FEMA suggests including a remedies provision. The NFE should consult their servicing legal counsel to determine whether and how remedies for breach of contract are permissible under applicable state, local, or tribal laws or regulations.	2 CFR 200 APPENDIX II (A)
>$10,000	All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement. FEMA suggests including a termination for cause and for convenience in all contracts even when not required. The NFE should consult their servicing legal counsel to determine whether and how termination provisions are permissible under applicable state, local, or tribal laws or regulations.	2 CFR 200 APPENDIX II (B)
None	Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor." 41 CFR 60-1.4 Equal opportunity clause. b) Federally assisted construction contracts. (1) Except as otherwise provided, each administering agency shall require the inclusion of the following language as a condition of any grant, contract, loan, insurance, or guarantee involving federally assisted construction which is not exempt from the requirements of the equal opportunity clause: The [recipient] hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause: During the performance of this contract, the contractor agrees as follows:	2 CFR 200 APPENDIX II (C) and 41 CFR §60-1.4(b)

The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through
(8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The [recipient] further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the [recipient] so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The [recipient] agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The [recipient] further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the [recipient] agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or

	all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the [recipient] under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such [recipient]; and refer the case to the Department of Justice for appropriate legal proceedings.	
>$2,000	Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non- Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. **FEMA PA and HMGP do not require these clauses unless it is a requirement for matching funds by another federal program legislation such as CDBG-DR.** When required, prime construction contracts over $2,000 awarded by NFEs must include a provision for compliance with the Davis-Bacon Act. If applicable per the standard described above, the NFE must include the provisions at 29 C.F.R. § 5.5(a)(1)-(10) in full into all applicable contracts, and all applicable contractors must include these provisions in full in any subcontracts. In situations where the Davis-Bacon Act does not apply, neither does the Copeland "Anti-Kickback" Act. Sample contract clauses are provided in the FEMA Contract Provisions Guide.	2 CFR 200 APPENDIX II (D); 40 U.S.C. §§ 3141-3144 and 3146-3148; supplemented by 29 C.F.R. Part 5; 40 U.S.C. § 3145; supplemented by 29 C.F.R. Part 3
> $100,000+ Mechanics or Laborers	Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a	2 CFR 200 APPENDIX II (E); 40 U.S.C. §§ 3701-3708; supplemented by 29 C.F.R. Part 5

half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

Applicability

This required contract provision applies to all procurements over $100,000 that involve the employment of mechanics, laborers, and construction work. These requirements *do not* apply to the purchase of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

Required Language

Compliance with the Contract Work Hours and Safety Standards Act.

1. *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
2. *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of
   $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.
3. *Withholding for unpaid wages and liquidated damages.* The (insert name of grant recipient or subrecipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
4. *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor

	shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section. **For contracts that are only subject to Contract Work Hours and Safety Standards Act and are not subject to the other statutes in 29 C.F.R. § 5.1 where an additional contract provision is required, FEMA suggests including the language below.** Suggested Language Further Compliance with the Contract Work Hours and Safety Standards Act. 1. The contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Records to be maintained under this provision shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Department of Homeland Security, the Federal Emergency Management Agency, and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.	
None	Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency. **This provision does not apply to all FEMA grant and cooperative agreement programs including PA and HMGP as awards under these programs do not meet the definition.**	2 CFR 200 APPENDIX II (F); Funding Agreement; definition found under 37 C.F.R. § 401.2(a).
>$150,000	Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended - Contracts and subgrants of amounts in excess of $150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). Suggested Language: Clean Air Act The contractor agrees to comply with all applicable standards, orders or	2 CFR 200 APPENDIX II (G); 42 U.S.C. §§ 7401-7671q; 33 U.S.C. §§ 1251-1387

	regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 *et seq.* The contractor agrees to report each violation to the (insert name of non-federal entity entering into the contract) and understands and agrees that the (insert name of the non-federal entity entering into the contract) will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal assistance provided by FEMA. Federal Water Pollution Control Act The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 *et seq.* The contractor agrees to report each violation to the (insert name of the non-federal entity entering into the contract) and understands and agrees that the (insert name of the non-federal entity entering into the contract) will, in turn, report each violation as required to assure notification to the (insert name of the pass-through entity, if applicable), Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office. The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal assistance provided by FEMA.	
>$25,000	Debarment and Suspension (Executive Orders 12549 and 12689) - A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. The following provides a debarment and suspension clause. It incorporates an optional method of verifying that contractors are not excluded or disqualified. Suggested Language: Suspension and Debarment This contract is a covered transaction for purposes of 2 C.F.R. Part 180 and 2 C.F.R. Part 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935). The contractor must comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into. This certification is a material representation of fact relied upon by (insert name of recipient/subrecipient/applicant). If it is later determined that the contractor did not comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part	2 CFR 200 APPENDIX II (H); 2 C.F.R. Part 180 (implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989)); 2 C.F.R. Part 3000 (Department of Homeland Security regulations for Non-procurement Debarment and Suspension, implementing 2 C.F.R. Part 180).

	3000, subpart C, in addition to remedies available to (insert name of recipient/subrecipient/applicant), the federal government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.	
> $100,000; and Certification required for all contracts greater than $100,000	Byrd Anti-Lobbying Amendment (31 U.S.C. 1352) - Contractors that apply or bid for an award exceeding $100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non- Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award. **If applicable, contractors must sign and submit the following certification to the NFE with each bid or offer exceeding $100,000.** Required Certification: CERTIFICATION REGARDING LOBBYING (APPENDIX A, 44 C.F.R. PART 18)	2 CFR 200 APPENDIX II (I) and 24 CFR §570.303; (citing 31 U.S.C. § 1352); 44 C.F.R. § 18.110
	See 2 CFR §200.323.	2 CFR 200 APPENDIX II (J)
	See 2 CFR §200.216.	2 CFR 200 APPENDIX II (K)
	See 2 CFR §200.322.	2 CFR 200 APPENDIX II (L)
Work involves the use of materials, and the contract is for more than $10,000	A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired during the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines. Suggested Language: In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired— Competitively within a timeframe providing for compliance with the contract performance schedule; Meeting contract performance requirements; or At a reasonable price.	2 CFR 200.323; Pub. L. No. 89-272 (1965) (codified as amended by the Resource Conservation and Recovery Act at 42 U.S.C. § 6962)

	Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines webpage: https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.	
>$100,000	*§135.38 Section 3 clause* *All section 3 covered contracts shall include the following clause (referred to as the section 3 clause):* A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing. B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations. C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin. D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135. E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135. F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or	

	suspension from future HUD assisted contracts. G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).	
None; All FEMA declarations and awards issued on or after November 12, 2020.	Section 889(b)(1) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (FY2019 NDAA) and 2 C.F.R. § 200.216, as implemented by FEMA Policy 405-143-1, Prohibitions on Expending FEMA Award Funds for Covered Telecommunications Equipment or Services (Interim), prohibit the obligation or expending of federal award funds on certain telecommunication products or from certain entities for national security reasons. Effective August 13, 2020, FEMA recipients and subrecipients, as well as their contractors and subcontractors, may not obligate or expend any FEMA award funds to: Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to: (1) Procure or obtain; (2) Extend or renew a contract to procure or obtain; or (3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). (i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities). (ii) Telecommunications or video surveillance services provided by such entities or using such equipment. (iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country. (b) In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical	2 CFR 200.216

	support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained. (c) See Public Law 115-232, section 889 for additional information. (d) See also § 200.471.	
None	The Federal awarding agency must establish conflict of interest policies for Federal awards. The non-Federal entity must disclose in writing any potential conflict of interest to the Federal awarding agency or pass-through entity in accordance with applicable Federal awarding agency policy.	2 CFR 200.112
None	The Federal awarding agency and the non-Federal entity should, whenever practicable, collect, transmit, and store Federal award-related information in open and machine-readable formats rather than in closed formats or on paper in accordance with applicable legislative requirements. A machine-readable format is a format in a standard computer language (not English text) that can be read automatically by a web browser or computer system. The Federal awarding agency or pass-through entity must always provide or accept paper versions of Federal award-related information to and from the non-Federal entity upon request. If paper copies are submitted, the Federal awarding agency or pass-through entity must not require more than an original and two copies. When original records are electronic and cannot be altered, there is no need to create and retain paper copies. When original records are paper, electronic versions may be substituted through the use of duplication or other forms of electronic media provided that they are subject to periodic quality control reviews, provide reasonable safeguards against alteration, and remain readable.	2 CFR 200.336
None; All FEMA declarations and awards issued on or after November 12, 2020.	Suggested Language: If subcontracts are to be let, the prime contractor is required to take all necessary steps identified in 2 C.F.R. § 200.321(b)(1)-(5) listed below to ensure that small and minority businesses, women's business enterprises, and labor surplus area firms are used when possible. Contracting with HUB, small and minority businesses, women's business enterprises, and labor surplus area firms. (a) When possible, the recipient or subrecipient should ensure that small businesses, minority businesses, women's business enterprises, veteran-owned businesses, and labor surplus area firms (See U.S. Department of Labor's list) are considered as set forth below. (b) Such consideration means: (1) These business types are included on solicitation lists; (2) These business types are solicited whenever they are deemed eligible as potential sources; (3) Dividing procurement transactions into separate procurements to permit maximum participation by these business types; (4) Establishing delivery schedules (for example, the percentage of an order to be delivered by a given date of each month) that encourage participation by these business types; (5) Utilizing organizations such as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and (6) Requiring a contractor under a Federal award to apply this section to subcontracts.	2 C.F.R. § 200.321(b)(1)-(5)
None	Financial records, supporting documents, statistical records, and all other	2 CFR 200.334; and

	non- Federal entity records pertinent to a Federal award must be retained for a period of three years from the date of submission of the final expenditure report or, for Federal awards that are renewed quarterly or annually, from the date of the submission of the quarterly or annual financial report, respectively, as reported to the Federal awarding agency or pass-through entity in the case of a subrecipient. Federal awarding agencies and pass-through entities must not impose any other record retention requirements upon non-Federal entities. The only exceptions are the following: (a) If any litigation, claim, or audit is started before the expiration of the 3-year period, the records must be retained until all litigation, claims, or audit findings involving the records have been resolved and final action taken. (b) When the non-Federal entity is notified in writing by the Federal awarding agency, cognizant agency for audit, oversight agency for audit, cognizant agency for indirect costs, or pass-through entity to extend the retention period. (c) Records for real property and equipment acquired with Federal funds must be retained for 3 years after final disposition. (d) When records are transferred to or maintained by the Federal awarding agency or pass-through entity, the 3-year retention requirement is not applicable to the non-Federal entity. (e) Records for program income transactions after the period of performance. In some cases recipients must report program income after the period of performance. Where there is such a requirement, the retention period for the records pertaining to the earning of the program income starts from the end of the non-Federal entity's fiscal year in which the program income is earned. (f) Indirect cost rate proposals and cost allocations plans. This paragraph applies to the following types of documents and their supporting records: Indirect cost rate computations or proposals, cost allocation plans, and any similar accounting computations of the rate at which a particular group of costs is chargeable (such as computer usage chargeback rates or composite fringe benefit rates). (1) *If submitted for negotiation.* If the proposal, plan, or other computation is required to be submitted to the Federal Government (or to the pass-through entity) to form the basis for negotiation of the rate, then the 3-year retention period for its supporting records starts from the date of such submission. (2) *If not submitted for negotiation.* If the proposal, plan, or other computation is not required to be submitted to the Federal Government (or to the pass-through entity) for negotiation purposes, then the 3-year retention period for the proposal, plan, or computation and its supporting records starts from the end of the fiscal year (or other accounting period) covered by the proposal, plan, or other computation. Suggested Language for All Procurements: a. The Contractor agrees to provide (insert non-federal entity), the Texas Division of Emergency Management (TDEM), the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.	200.337

	b. The FIRM agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed. c. The CONTRACTOR agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract. d. In compliance with section 1225 of the Disaster Recovery Reform Act of 2018, the (insert name of the non-federal entity) and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.	
None	CONTRACTS WITH COMPANIES ENGAGED IN BUSINESS WITH IRAN, SUDAN, OR FOREIGN TERRORIST ORGANIZATION PROHIBITED. A governmental Corporation may not enter into a governmental contract with a company that is identified on a list prepared and maintained by the U.S. Department of Treasury under Executive Order 13224.The term "foreign terrorist organization" in this paragraph has the meaning assigned to such a term in Section 8 U.S.C.1189(a)(1) of the United States Code.	United States Code 19 U.S.C. 2511
>$100,000	PROVISION REQUIRED IN CONTRACT. (a) This section applies only to a contract that: (1) is between a governmental entity and a company with 10 or more full-time employees; and (2) has a value of $100,000 or more that is to be paid wholly or partly from public funds of the governmental entity. (b) A governmental Corporation may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and will not boycott Israel during the term of the contract.	(Adhere to your State's Local Government Code)
Option Contract Language for contracts awarded prior to Grant Award	The contract award is contingent upon the receipt of federal funds. If no such funds are awarded, the contract shall terminate.	Optional
	Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act. <u>Suggested Language:</u> The CONTRACTOR shall comply with the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).	42 U.S.C. 6201
	The Firm agrees that no otherwise qualified individual with disabilities shall, solely by reason of his/her disability, be denied the benefits of, or be subjected to discrimination, including discrimination in employment, under any program or activity receiving federal financial assistance.	Section 504 of the Rehabilitation Act of 1973, as amended.
	Pursuant to the *Violence Against Women Act Reauthorization of 2022*, the Grant Recipient must certify that local policies do not interfere with the residents' Right to Report Crime and Emergencies from One's Home. The certification will confirm that no ordinances, local regulations, or policies adopted by the local government and currently in effect contain any financial or regulatory penalty imposed on property owners or residents as a result of any use of emergency services, or that the Grant Recipient is actively addressing such local regulations.	Pub. L. 117-103, 136 Stat. 49

BYRD ANTI-LOBBYING CERTIFICATION

Certification for Contracts, Grants, Loans, and Cooperative Agreements-The undersigned certifies, to the best of his or her knowledge and belief, that:

1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor _____ certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

_____

Signature of Contractor's Authorized Official

_____

Name and Title of Contractor's Authorized Official

_____

Date

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

DEBARMENT/SUSPENSION CERTIFICATION

Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (No procurement Debarment and Suspension).

This requirement applies to all FEMA grant and cooperative agreement programs.

Federal Executive Order (E .O.) 12549 "Debarment" requires that all contractors receiving individual awards, using federal funds, and all sub recipients certify that the organization and its principals are not debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency from doing business with the Federal Government. By signing this document, you certify that your organization and its principals are not debarred. Failure to comply or attempts to edit this language may disqualify your bid/proposal. Information on debarment is available at the following websites: www.sam.gov and https://acguisition.qov/far/index.html see section 52.209-6.

The Contractor _____ certifies or affirms by your signature that neither you nor your principal is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

_____

Signature of Contractor's Authorized Official

_____

Name and Title of Contractor's Authorized Official

_____

Date

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

CIVIL RIGHTS COMPLIANCE PROVISIONS

1. EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause)

(For all awarded contracts that meet the definition of "federally assisted construction contract" provided in 41 CFR Part 60-1.3)

During the performance of this contract, the contractor agrees as follows:

1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

   Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or order this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

CIVIL RIGHTS COMPLIANCE PROVISIONS (CONTINUED)

8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

_____

Signature of Contractor's Authorized Official

_____

Name and Title of Contractor's Authorized Official

_____

Date

REQUIRED FORM
<u>Proposer</u>:
Please complete this form and include with proposal submission.

SECTION 3. PROPOSAL SUBMISSION INSTRUCTIONS AND SPECIAL REQUIREMENTS

The following requirements and instructions **supersede** General Requirements where applicable.

3.1. SUBMISSION OF PROPOSAL

Each Respondent shall ensure that required parts of the RFP response are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Respondent is responsible for submitting: One (1) original and five (5) response copies; with all copies to include a completed copy of this specifications packet, in its entirety.

The County requests that response submissions NOT be bound by staples or glued spines.

Respondent shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or RFQ updates. https://jeffersoncountytx.gov/Purchasing/.

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Reponses must be submitted in complete original form by mail or messenger to the following address:
Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

Respondent shall submit response in a tightly sealed opaque envelope or box, plainly marked "SEALED RFP RESPONSE." The outside of the envelope of box shall also include the RFP Number, RFP Name, RFP Due Date, and the Respondent's Name and Address; and shall be addressed to the Purchasing Agent.

All submissions must be received by 11:00 am CT, Wednesday, February 18, 2026

- Late responses will not be accepted and will be returned unopened to the Respondent.
- Jefferson County will not accept any responsibility for responses being delivered by third party carriers.
- RFP responses will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.
- Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this RFP.
- All responses submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.
- All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

Please direct questions to Cindy Greene, Contract Specialist at 409-835-8593 or via email at cynthia.greene@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent at 409-835-8593 or via email at deb.clark@jeffersoncountytx.gov.

Courthouse Security:
All visitors to the Courthouse must pass through Security. Respondents planning to hand deliver proposals must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal. Mondays and Tuesdays are particularly heavy days.

In response to the Covid-19 pandemic, Jefferson County will be implementing precautionary measures as currently recommended by the CDC within its facilities.

Respondents are strongly urged to plan accordingly.

COUNTY HOLIDAYS (2026):

~~January 1, 2026 (Thursday) - New Year's~~
January 19 (Monday) - Martin Luther King, Jr. Day
April 3 (Friday) - Good Friday
May 25 (Monday) - Memorial Day
June 19 (Friday) - Juneteenth
July 3 Observed (Friday) - Independence Day
September 7 (Monday) - Labor Day
November 11 (Wednesday) - Veteran's Day
November 26 & 27 (Thursday & Friday) - Thanksgiving
December 24 & 25 (Thursday & Friday) Christmas

Submissions During Time of Inclement Weather, Disaster, or Emergency:

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the RFP closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the RFP and urgent County requirements preclude amendment to the RFP, the time specified for receipt of Statements of Qualifications will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

3.2 PRE-PROPOSAL CONFERENCE

Due to the nature of this RFP, there will not be a Pre-Proposal Conference. If you would like to schedule a site visit, please contact. Cindy Greene, Contract Specialist at 409-835-8593 or via email at cynthia.greene@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent at 409-835-8593 or via email at deb.clark@jeffersoncountytx.gov.

Proposals will be opened publicly in a manner to avoid public disclosure of contents; however, only names of Proposers will be read aloud.

3.3 QUESTIONS AND DEADLINE FOR QUESTION SUBMISSION

Questions may be emailed to **Cindy Greene, Contract Specialist at cynthia.greene@jeffersoncountytx.gov or faxed at: 409-835-8456. If no response in 72 hours, contact Deborah Clark, Purchasing Agent via email at deb.clark@jeffersoncountytx.gov.**

The Deadline for asking questions or requesting additional information (in writing) **is 5:00 pm, CT, Friday, January 30, 2026.**

3.4 TENTATIVE SCHEDULE OF EVENTS

January 13, 2026	**Issuance of Request for Proposal**
February 18, 2026	**Deadline Submission (late proposals will not be considered)**
February 20, 2026	**Proposals distributed to Evaluation Committee**
February 24, 2026	**Evaluation Committee Convenes to Tabulate Scoring and Determines Short List**
February 27, 2026	**If Applicable: Conduct Interview/Best and Final Offer/Short List**
March 4, 2026	**Recommendation for Award**

Please note:
The above schedule of events is *tentative* in nature. Dates listed are subject to change.

SECTION 4. PROPOSAL FORMAT REQUIREMENTS

4.1 INTRODUCTION TO PROPOSAL FORMAT REQUIREMENTS

Each proposal submitted in response to this RFP must be organized to correspond with those numbered sections of this RFP that require a response. Failure to arrange the proposal as requested may result in the disqualification of the proposal. Conciseness and clarity of content are emphasized and encouraged. Vague and general proposals will be considered non-responsive, and will result in disqualification. The response must be complete. Failure to provide the required information may result in the disqualification of the proposal. All pages of the proposal must be numbered and the proposal must contain an organized, paginated table of contents corresponding to the sections and pages of the proposal.

The County requests that proposal submissions NOT be bound by staples or glued spines.

4.2 ORGANIZATION OF PROPOSAL CONTENTS

Each proposal must be organized in the manner described below:

A. Transmittal Letter

B. Table of Contents

C. Executive Summary

D. Proposer Identifying Information

E. Proposer Personnel and Organization

F. Cost Proposal Form Page 50

G. Copy of RFP Specifications and any Addenda in their entirety.
(Note: All forms should be completed, and any information requested should be inserted/included)

4.3 TRANSMITTAL LETTER

The Proposer must submit a transmittal letter that identifies the entity submitting the proposal, and includes a commitment by that entity to provide the services required by the County. The transmittal letter must state that the proposal is valid for (**90)** days from the deadline for delivery of proposals to the County. Any proposal containing a term of less than (**90)** days for acceptance will be rejected as non-responsive.

The transmittal letter must be signed by a person legally authorized to bind the Proposer to the representations in the response. In the case of a joint proposal, each party must sign the transmittal letter. The Proposer also must indicate, in its transmittal letter, why it believes that it is the most qualified Proposer to provide the services described in this RFP.

The transmittal letter must include a statement of acceptance of the terms and conditions of the contract resulting from this RFP. If Proposer takes exception to any of the proposed terms and conditions stated in this RFP, those exceptions must be noted in the transmittal letter. However, Proposer must realize that failure to accept the terms specified in this proposal may result in disqualification of the proposal.

4.4 TABLE OF CONTENTS

Each proposal must be submitted with a table of contents that clearly identifies and denotes the location of each title and subtitle of the proposal. Additionally, the table of contents must clearly identify and denote the location of all enclosures of the proposal. The table of contents must follow the RFP's structure as much as is practical.

4.5 EXECUTIVE SUMMARY

The Proposer must provide an executive summary of its proposal that asserts that the Proposer is providing in its response all of the requirements of this RFP. The executive summary must not exceed three (3) pages, and must represent a full and concise summary of the contents of the proposal. The executive summary must not include any information concerning the cost of the proposal. The Proposer must identify any services that are provided beyond those specifically requested. If the Proposer is providing services that do not meet the specific requirements of this RFP, but in the opinion of the Proposer are equivalent or superior to those specifically requested, any such differences must be noted in the executive summary. However, the Proposer must realize that failure to provide the services specifically required may result in disqualification of the proposal.

4.6 PROPOSER IDENTIFYING INFORMATION

Proposers must provide the following identifying information with their proposal submission:

a. Name and address of business entity submitting the proposal;

b. Type of business entity (i.e., corporation, partnership);

c. Place of incorporation, if applicable;

d. Name and location of major offices and other facilities that relate to the Proposer's performance under the terms of this RFP;

e. Name, address, business and fax number of the Proposer's principal contact person regarding all contractual matters relating to this RFP;

f. The Proposer's Federal Employer Identification Number, Jefferson County Vendor Number and Jefferson County Business License Number, if any;

g. Full name and address for each member, partner, and employee of the Proposer (and any subcontractors) who will perform services on this project; and

h. A statement regarding the financial stability of the Proposer, including the ability of the Proposer to perform the functions required by this RFP and to provide those services represented by the Proposer in its response.

4.7 PROPOSER'S PERSONNEL AND ORGANIZATION

The Proposer must provide resumes of all key personnel that will be involved in performing the project, and must provide for each person:

a. Full name (including full middle name);

b. An employment history;

c. A specific description of relevant experience and skills that person has in connection with the conduct of financial advisory services that is the subject of this RFP (limit one page);

d. A specific indication of what role the individual will have in this project; and

e. Any additional helpful information to indicate the individual's ability to aid the Proposer in successfully performing the work involved in this RFP (limit to one page).

The resumes must present the required personnel in sufficient detail as to provide the County an indication that the personnel involved can perform the work specified in this RFP. All proposed personnel will be subject to the County approval.

Jefferson County is committed to using the selected Performance Review Company according to reasonable and well-planned timeframes, to the extent possible. Jefferson County is committed to making available its personnel in a similar manner to enable the Performance Review team able to perform its duties in a timely basis.

Each Proposer is required to make a statement as to the availability of key personnel to Jefferson County when required. The key personnel who are to work on this project, identified in the proposal as such, are considered to be essential to the services to be provided. No substitutions of key personnel following contract award will be made without the prior written consent of Jefferson County Commissioners' Court. All requested substitutes must be submitted to the Jefferson County Commissioners' Court, or, together with their resumes, for approval.

Each of the successful Proposer's personnel is subject to removal from this project by Jefferson County Commissioners' Court. In addition, if the person removed is among the project's key personnel, the replacement must be approved by Jefferson County Commissioners' Court. All replacements of key personnel will be paid at the same rate as the person who was replaced, unless the rate normally charged by the replacement is lower, in which case the lower rate will be paid. All replacements of key personnel must be of equal or superior experience as the person replaced.

If applicable, each Proposer must provide a detailed statement setting forth the proposed hourly billing rate for all key personnel, and for each additional staff member to be assigned to the project. The hours each of the key personnel and other staff members are projected to work on the project.

Each Proposer must provide any equipment, software, or data communication lines required by the successful Proposer's personnel to complete the work specified in this document. Each Proposer also must identify any personnel related through blood or marriage to the County or to any current employee of the County.

Each Proposer must provide an organizational chart covering the services offered in its proposal, indicating lines of authority, names, titles, and functions of individuals assigned. The Proposer must assign a contact person to the project.

SECTION 5. PROJECT OBJECTIVE AND SCOPE OF SERVICES

5.1 OBJECTIVE

Jefferson County seeks a Contractor to provide Cafeteria Services for Jefferson County Courthouse. The contractor shall occupy, staff and operate a café serving breakfast, lunch and break time offerings in a cafeteria style format within the space specified in Attachment A (floor plan). It is the intention of Jefferson County that the food and beverage service be of high quality. All food and beverage areas shall be kept clean, orderly and sanitary at all times and in strict accordance with all applicable food service establishment requirements, laws, ordinances, rules and regulations of this IFB. The successful contractor will pay Jefferson County a monthly lease. The cafeteria shall operate Monday through Friday, with the exception of County Holidays and Mandated Disaster Closures during the hours of/or about 7:00 am – 3:30 pm. The current County Holidays are as follows (this is subject to change):

New Year's Day
Martin Luther King, Jr. Day
Good Friday
Memorial Day
Juneteenth
Independence Day
Labor Day
Veterans' Day
Thanksgiving Day
Day after Thanksgiving
Christmas Eve
Christmas Day

5.2 BACKGROUND

Jefferson County has approximately 1200 full and part time employees. Members of the general public visiting the Courthouse are also available as a customer base. The existing 3,500 square foot cafeteria facility seats approximately 97 persons and is equipped with tables and chairs in the dining area. The kitchen/serving area is equipped with, but not limited to, basic modern commercial grade hardware for cooking, cooling and freezing, heating, baking, frying, mixing and washing. The cafeteria also has food preparation areas, cold and hot food serving lines, and seating areas. There are two conference rooms in the cafeteria area that the contractor can use.

5.3 REQUIRED INFORMATION

The following information shall be included in the offeror's proposal:

- Provide approach to making the Courthouse Café successful and approach to sustaining a versatile healthy and casual dining experience at a reasonable price.

- State any food service experience with a list of owned/operated food service establishments. Include time periods.

- Provide a versatile menu of items that the contractor will offer including pricing. The menu must include healthy food options (i.e. salads, grilled chicken, sandwiches). The sample menu must include full meal pricing as well as a la carte pricing. Breakfast, lunch and break time meals shall be included. Include proposed hours of operation. The following are the suggested time periods:

    - Breakfast: 7:00 am – 10:00 am
    - Break Time Snack: 10:00 am – 11:00 am and 1:30 pm – 3:30 pm
    - Lunch: 11:00 am – 1:30 pm

- Proposed monthly lease amount should be included on the Cost Proposal Form (page 50) of the RFP.

- Provide any additional information pertinent to the offeror's proposal.

5.4 RESPONSIBILITIES OF THE COUNTY

- Grant to the contractor for a stipulated period, subject to the contract requirements and conditions set herein, the right to establish, manage, and operate a cafeteria-type restaurant and snack bar within the County Courthouse and, in connection therewith, to prepare and sell food, non-alcoholic beverages, and other such products as the County may authorize.

- Approve any and all designs, furnishings, decorations, alterations, improvements, advertisements, etc. prior to any such action being taken by the contractor.

- Provide the cafeteria facility standard utilities at no charge to the contractor.

- Provide all preventative maintenance and repairs on all County owned equipment related to the cafeteria operation, including, but not limited to, refrigerators, coolers, freezers, ice machines, stoves, grills, warmers, serving lines, etc. that are used directly by the cafeteria operation.

- Maintain all building systems (HVAC, electrical, structural, etc.)

- Pest control services for the cafeteria will be provided by the County.

- Jefferson County carries the responsibility to correct any repair of County structures or County equipment as a result of inspection violation by state and local authorized health department offices, fire department and other agencies relative to safety requirements.

- Jefferson County will complete a background check and issue identification badges to all employees of the Contractor. These identification badges must be worn at all times. It is the responsibility of the Contractor to notify the County of any termination or hire of employees.

- Jefferson County will issue keys to the Contractor for the Cafeteria area. It is the responsibility of the Contractor to report any lost or damaged keys to the County.

5.5 RESPONSIBILITES OF THE CONTRACTOR - OPERATIONS

- Operate and manage, under the Contractor's name, a cafeteria type operation within the County Courthouse Cafeteria.

- Purchase, prepare and serve all cafeteria food items. Grilling and/or cooking of foods on site is desired. The menu offerings could be prepared off site and transported to the cafeteria; however, on-site is preferred. Food items prepared off-site must be prepared at a location and transported conforming to all food establishment and health department requirements of this Invitation for Bid. Breakfast, lunch and break food options must be provided. Meal service shall include dine-in and to-go orders.

- County is not responsible for any loss or damage resulting from a power failure, natural or man-made disaster.

- Provide all cookware, dishes and utensils need for food preparation and service.
- Provide all condiments, containers, plates, utensils, napkins and to-go containers for food service.
- Provide fountain drink dispensing machines and/or coolers.
- Contractor is responsible for maintaining their equipment.
- Ensure proper and adequate staffing to provide efficient services.
- Contractor shall comply with all laws (State and Federal), and local ordinances, as they may relate to employment practices.
- Proper food handling gloves and proper hair restraints are required.
- Provide all custodial and janitorial service to the cafeteria area during all normal hours of operation. Contractor will provide all cleaning supplies necessary to maintain the Courthouse Cafeteria. Trash must be removed daily.
- The business must be operated and maintained at all times in compliance with any and all applicable health and sanitary standards prescribed by Jefferson County Environmental Control. We have included a cleaning schedule as an example of our expectations and stewardship while leasing Jefferson County property. (Attachment B)
- Contractor will comply with Jefferson County Best Management Practices for Fats, Oil and Grease (FOG) Control Program. (Attachment C)
- Comply with FDA Code 2017 with the Texas Supplement.
- Contractor shall be responsible for all licenses and permits necessary to comply with all local, state and federal mandates pertaining to food service operations. The Food Permit is issued through Jefferson County Environmental Control.
- Contractor is responsible for correcting any violations issued by state and local authorized health department officials that do not pertain to the repair of County owned equipment or structures.
- Display all menu items and menu pricing. This includes meals, beverages and a la carte items. Make every effort to adhere to reasonable food cost ranges as submitted in the proposal. The pricing must be posted and displayed in a manner that is visible to all prospective patrons from a distance as well as close up. Menu board purchase shall be the responsibility of the Contractor and must be approved by the County.
- Contractor must accept cash, credit and debit cards as a method of payment for goods and services. All equipment and fees associated with credit and debit card transactions will be the responsibility of the Contractor. Any fees to be collected for any purchases when a credit or debit card is used must be approved by the County.
- Schedule outside vendors for conference room rental space in the cafeteria area and collect appropriate fees.

5.6 RESPONSIBILITES OF THE CONTRACTOR – EMPLOYEES

- All employees must pass a background check through the County.
- Employees must wear their County issued Identification Badge at all times.

- Provide any and all employees insurances and/or benefits to its employees. The County assumes absolutely no responsibility pertaining thereto.
- Assume full and total responsibility and liability for all employees and operation of the Contractor.
- One licensed Food Manager is required. All other staff must have a Food Handler License. The training course must be accredited by the Texas Department of State Health Services (DSHS) or American National Standards Institute (ANSI).
- All employees must complete a Conditional or Food Employee Reporting Agreement. (Attachment D)
- Ensure employees are properly attired/uniformed when performing work assignments.

5.7 TERMS

- Contract Term: One (1) year from the date of award with an option to renew for four (4) additional one-year renewals.
- The monthly lease payment is due by the 5th of each month.
- The physical facilities made available to the contractor under this contract shall only be used by the contractor during regular County business hours.
- Any modifications to the cafeteria space must be approved by Jefferson County due to historical purposes.
- Menu pricing changes must be approved by the County.

SECTION 6. PROPOSAL REQUIREMENTS

6.1 OBJECTIVE OF PROPOSAL

Each proposal must include a detailed work plan that addresses how work for Jefferson County would be performed. It shall include detailed personnel assignments. A detailed description of major deliverables to be provided must also be included.

The proposal must include a sample timeline for the completion of each major task included in the proposal to the extent practicable, as well as projected completion dates for each major activity required. All proposals submitted in response to this RFP become the property of Jefferson County.

6.2 PROPOSER EXPERIENCE

The Successful Proposer must demonstrate extensive experience in and understanding of the nature of research and analysis required in order to carry out the intent of this project.

The proposal must identify all key personnel who are to be part of the proposed consultant team and detail their experience. Jefferson County Commissioners' Court reserves the right to approve each member of the team and to request substitutions.

The Proposer must describe in detail the current and historical experience the Proposer and its subcontractors have that would be relevant to completing the project. The Proposer must provide descriptions and references for all engagements of comparable complexity and sensitivity to the requirements of this RFP that have been conducted within the past five (5) years. References must contain the name of key contacts and a telephone number. The description of experience must be detailed and cover all relevant contracts that the Proposer and its subcontractors, as applicable, have had and all experience similar to this contract that qualifies the Proposer to meet the requirements of this contract. Included must be the names, titles, addresses, and current telephone numbers of organizations that may be contacted to verify qualifying experience

The Proposer must indicate whether the organizations so listed are included for the purpose of verifying the Proposer's qualifying experience, or the qualifying experience of its subcontractors. Each experience statement also must include the name and types of services directly provided by the Proposer under the contract, and whether the Proposer was the contractor or subcontractor.

The Proposer must briefly state why it believes its proposed services best meet the County's needs and RFP requirements, and the Proposer also must concisely describe any additional features, aspects, or advantages of its services in any relevant area not covered elsewhere in its proposal.

6.3 TYPE OF SERVICES PROVIDED BY PROPOSER

A. A description of services that may be utilized under this RFP includes:

1. Food Services

6.4 LAWS AND REGULATIONS

The Food Service Firm(s) must comply with all laws, ordinances, and rules and regulations which govern the work specified in this contract.

SECTION 7. PROPOSAL EVALUATION AND SELECTION PROCESS

7.1 INTRODUCTION TO EVALUATION AND SELECTION PROCESS

The proposal evaluation and selection process is detailed in this section, as are other factors, and the format in which the cost response of each proposal must be submitted.

7.2 COST PROPOSAL

The Proposer must utilize the form provided on **PAGE 50 of these specifications** in its submission of a cost proposal in response to this RFP. The cost proposal must be included in each copy of the proposal. Any reworked version of this provided form that is intended to be a substitute for **PAGE 50 of these specifications**, that is provided by a Proposer may be determined as non-responsive, and may result in the proposal's disqualification.

7.3 EVALUATION COMMITTEE

Because of the diversity of the departments and activities of the County, the Purchasing Agent will appoint the Evaluation Committee for this Request for Proposals. The Purchasing Agent may appoint a chairperson and no less than two (2) other members for the committee. Typically, the committee will consist of at least one professional in the task required, a person knowledgeable about procurement practices, and either a representative of the department requesting the project, or the department executing the project. However, this structure is not binding and subject to change at the discretion of the Purchasing Agent. Other members may be appointed to the Evaluation Committee as necessary and appropriate, but the total number of persons committee shall not exceed five (5) persons. Committee appointments shall be in writing and shall briefly describe the scope of the project and, if necessary, the primary disciplines required to accomplish the project in order to assist the committee in developing a list of firms that might best accomplish the work required. Committee membership and project requirements will vary from project to project. Therefore, a firm rated number one for one project could be considered not qualified or ranked lower on another project.

7.4. EVALUATION PROCESS

RFP Submittals that do not conform to the instructions or which do not address all the services as specified within this RFP specifications packet may be eliminated from consideration. However, Jefferson County reserves the right to accept such a submittal if it is determined to be in the best interest of the County.

While Jefferson County appreciates a brief, straight-forward, and concise reply; proposer must fully understand that the evaluation is based on the information provided. Accuracy and completeness are essential. Omissions, ambiguous, and equivocal statements may be construed against the proposer. The proposal document may be incorporated into any contract which results from this RFP, and vendor(s) are cautioned not to make claims or statements it is not prepared to commit to contractually. Failure of the vendor to meet such claims will result in a requirement that the vendor provide resources necessary to meet submitted claims.

The Jefferson County Purchasing Department may initiate discussions with selected vendors; however, discussions may not be initiated by vendors.

The Jefferson County Purchasing Department expects to conduct discussions with vendor's representatives authorized to contractually obligate the vendor with an offer. **Vendors shall not contact any Jefferson County personnel during the RFP process without the express permission from the Jefferson County Purchasing Agent. The Purchasing Agent will disqualify any vendor who has made site visits, contacted Jefferson County personnel, or distributed any literature without authorization from the Jefferson County Purchasing Department.**

All correspondence relating to this RFP, from advertisement to award shall be sent to the Jefferson County Purchasing Department. All presentations and/or meetings between Jefferson County and the vendor relating to this RFP shall be coordinated by the Jefferson County Purchasing Department.

Selected vendors may be expected to make a presentation/product demonstration to an Evaluation Committee and Commissioners' Court. Proposals, vendor presentations, and product/service evaluations may develop into

negotiating sessions with the vendor(s) as selected by the Evaluation Committee. Jefferson County expects to conduct negotiations with vendor representatives authorized to contractually obligate the vendor with an offer. If vendor is unable to agree to contract terms and conditions, Jefferson County reserves the right to terminate contract negotiations with that vendor and initiate negotiations with another vendor. In addition to a presentation, visits by the Evaluation Committee to representative vendor client sites may be conducted where the proposed solution can be demonstrated in a production environment.

7.5 PROPOSAL EVALUATION CRITERIA:

a. RESPONSIVENESS – 15%

This refers to the proposal's complete responsiveness to all written specifications and requirements contained in this RFP. This includes all information required in this RFP.

b. IMPLEMENTATION PLAN – 25%

Emphasis is on the efficiency and comprehensiveness of the methods to be used in performing the services requested by this RFP and in managing the project. This is the implementation plan that will be used in making the Courthouse Café successful and sustainable.

c. PROPOSER QUALIFICATIONS – 25%

This refers to the overall qualifications of Proposer and its past experience in providing similar food services to those requested by this RFP. It also refers to an evaluation of the quality of Proposer's performance on previous local government projects.

d. FOOD SERVICE OFFERINGS – 25%

This refers to the food service menus of the proposer. A variety of food choices must be on the proposed menu including healthy options.

e. PROPOSED LEASE AMOUNT – 10%

This is the proposed lease amount. While this will be an important factor, it will be considered as just one factor in the evaluation and selection process.

PROPOSER: INSERT ALL ADDENDA BEHIND THIS PAGE.
PLEASE BE SURE TO COMPLETE, SIGN, ATTEST, AND DATE EACH ADDENDUM.

COST PROPOSAL FORM:

Using this form, each Proposer must state its proposed lease amount. Cost will be a factor in the County's selection process.

Proposed monthly lease amount	$
Name of Proposer:	
Signature:	
Title:	

REQUIRED FORM
<u>Proposer</u>:
Please complete this form and include with proposal submission.

NON-DISCLOSURE AGREEMENT

In consideration of Jefferson County retaining the services of a consultant and because of the sensitivity of certain information which may come under the care and control of Consultant, both parties agree that all information regarding the County or any selected County agency subject to this Contract; or gathered, produced, or derived from this project (Confidential Information) must remain confidential subject to release only by permission of the County, and more specifically agree as follows:

Media releases pertaining to this RFP and/or any resulting contract, or the services to which they relate, will not be made without the prior written consent of the County, and then only in accordance with explicit written instructions from the County. The disclosure of the contents of proposals prior to the award of a contract under this RFP, or any other violation of this section, may result in disqualification.

1. The Information may be used by Consultant only to assist Consultant in connection with its engagement with the County.
2. Consultant will not, at any time, use the Information in any fashion, form, or manner except in its capacity as independent consultant to the County.
3. Consultant agrees to maintain the confidentiality of any and all deliverables resulting from this Contract in the same manner that it protects the confidentiality of its own proprietary products of like kind.
4. The Information may not be copied or reproduced without the County's written consent.
5. All materials made available to Consultant, including copies thereof, must be returned to County upon the first to occur of; (a) completion of the project, or (b) request by the County.
6. The foregoing must not prohibit or limit Consultant use of the information (including, but not limited to, ideas, concepts, know-how, techniques and methodologies) (a) previously known to it, (b) independently developed by it, (c) acquired by it from a third party, or (d) which is or becomes part of the public domain through no breach to Consultant of this agreement.
7. This agreement shall become effective as of the date Information is first made available to Consultant and must survive the contract and be a continuing requirement.
8. The breach of this Nondisclosure Agreement by Consultant shall entitle the County to immediately terminate the Agreement upon written notice to Contractor for such breach. The parties acknowledge that the measure of damages in the event of a breach of this Nondisclosure Agreement may be difficult or impossible to calculate, depending on the nature of the breach. Regardless of whether the County elects to terminate the Agreement upon the breach hereof, the County may require Consultant to pay to the County the sum of $1,000 for each breach as liquidated damages. This amount is not intended to be in the nature of a penalty, but is intended to be a reasonable estimate of the amount of damages to the County in the event of a breach hereof by Consultant. Comptroller does not waive any right to seek additional relief, either equitable or otherwise, concerning any breach of this Agreement.

[Printed Name of Consultant]

_____

By: _____
Title: _____
Date: _____

REQUIRED FORM
<u>Proposer</u>:
Please complete this form and include with proposal submission.

RESPONDENT INFORMATION FORM

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

RFP Number & Name: (RFP 26-002/CG), Cafeteria Services for Jefferson County

Proposer's Company/Business Name: _____

Proposer's TAX ID Number: _____

If Applicable: **HUB Vendor No**. _____ **DBE Vendor No**. _____

Contact Person: _____ **Title:** _____

Phone Number (with area code): _____

Alternate Phone Number if available (with area code):_____

Fax Number (with area code):_____

Email Address: _____

Mailing Address (Please provide a <u>physical address for bid bond return</u>, *if applicable*):

_____
Address

_____
City, State, Zip Code

REQUIRED FORM
<u>Proposer</u>:
Please complete this form and include with proposal submission.

VENDOR REFERENCES FORM

Proposer: Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or similar products and/or services as contained in this specification package were recently provided.

REQUIRED FORM
Proposer: Please complete this form and include with proposal submission.

REFERENCE ONE

Government/Company Name: _____

Address: _____

Contact Person and Title: _____

Phone: _____ Fax: _____

Email Address: _____ Contract Period: _____

Scope of Work: _____

REFERENCE TWO

Government/Company Name: _____

Address: _____

Contact Person and Title: _____

Phone: _____ Fax: _____

Email Address: Contract Period: _____

Scope of Work: _____

REFERENCE THREE

Government/Company Name: _____

Address: _____

Contact Person and Title: _____

Phone: _____ Fax: _____

Email Address: Contract Period: _____

Scope of Work: _____

SIGNATURE PAGE

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would Respondent be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions?.....**Yes** ☐ **No** ☐

This Proposal/RFP Response shall remain in effect for **90 days** from RFP opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this proposal is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Request for Statements of Qualification, Conditions of RFP Response, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this RFP response in collusion with any other Respondent, and that the contents of this RFP response as to prices, terms or conditions of said response have not been communicated by the undersigned nor by any employee or agent to any other RFP Respondent or to any other person(s) engaged in this type of business prior to the official opening of this RFP. And further, that neither the Respondent nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to respond or not to respond thereon.

RFP Respondent (Entity Name)	Signature
Street & Mailing Address	Print Name
City, State & Zip	Date Signed
Telephone Number	Fax Number
E-mail Address	

REQUIRED FORM
<u>Proposer</u>:
Please complete this form and include with proposal submission.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

_____

Signature of Contractor's Authorized Official

_____

Name and Title of Contractor's Authorized Official *(Please Print)*

_____

Date

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether sub-awardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.

2. Identify the status of the covered Federal action.

3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.

4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the sub-awardee, e.g., the first sub-awardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.

5. If the organization filing the report in item 4 checks “Sub-awardee,” then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.

6. Enter the name of the federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.

7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.

8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitations for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Included prefixes, e.g., “RFP-DE-90-001.”

9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.

10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).

11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503

Approved by OMB
0348-0046

Disclosure of Lobbying Activities

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure)

Type of Federal Action: a. contract ____ b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	**Status of Federal Action:** a. bid/offer/application _____ b. initial award c. post-award	**Report Type:** a. initial filing _____ b. material change

Name and Address of Reporting Entity: ____ Prime _____ Sub-awardee Tier_____, if Known: **Congressional District, if known:**	**If Reporting Entity in No. 4 is Sub-awardee,** Enter Name and Address of Prime: **Congressional District, if known:**
Federal Department/Agency:	**7. Federal Program Name/Description:** CFDA Number, *if applicable*: _____
Federal Action Number, *if known:*	**9. Award Amount**, *if known:* **$**
10. a. Name and Address of Lobbying Registrant *(if individual, last name, first name, MI):*	**b. Individuals Performing Services** *(including address if different from No. 10a)* *(last name, first name, MI):*
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.	**Signature:** _____ **Print Name:** _____ **Title:** _____ **Telephone No.:** _____ **Date:** _____
Federal Use Only	**Authorized for Local Reproduction** **Standard Form - LLL (Rev. 7-97)**

REQUIRED FORM
<u>Proposer</u>:
Please complete this form and include with proposal submission.

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

(A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;

(B) a transaction conducted at a price and subject to terms available to the public; or

(C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

***

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds $2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than $100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

Form provided by Texas Ethics Commission www.ethics.state.tx.us Revised 11/30/2015

CONFLICT OF INTEREST QUESTIONNAIRE

CONFLICT OF INTEREST QUESTIONNAIRE — FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information in this section is being disclosed.**

_____
Name of Officer

This section (item 3 including subparts A, B, C, & D) must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more?

☐ Yes ☐ No

D. Describe each employment or business and family relationship with the local government officer named in this section.

4

_____ _____
Signature of vendor doing business with the governmental entity Date

Adopted 8/7/2015

REQUIRED FORM
<u>Proposer</u>:
Please complete this form and include with proposal submission.

LOCAL GOVERNMENT OFFICER
CONFLICTS DISCLOSURE STATEMENT – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM CIS

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20 _____, to certify which, witness my hand and seal of office.

_____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

Adopted 8/7/2015

THIS FORM IS FOR OFFICE USE ONLY

GOOD FAITH EFFORT (GFE)

Determination Checklist

This information must be submitted with your proposal.

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting HUBs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant, and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of HUB Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting HUB Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .

☐ Yes ☐ No 1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum HUB Subcontractor participation?

☐ Yes ☐ No 2. **Notify** in writing a reasonable number of HUBs, allowing sufficient time for effective participation of the planned work to be subcontracted?

☐ Yes ☐ No 3. **Provide** HUBs that were genuinely interested in bidding on a subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?

☐ Yes ☐ No 4. **Negotiate** in good faith with interested HUBs, and not reject bids from HUBs that qualify as lowest and responsive bidders?

☐ Yes ☐ No 5. **Document** reasons HUBs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected HUBs?

☐ Yes ☐ No 6. If Prime Contractor/Consultant has zero (0) HUB participation, **please explain the reasons why.**

If "No" was selected, please explain and include any pertinent documentation with your proposal.
If necessary, please use a separate sheet to answer the above questions.

Printed Name of Authorized Representative	Signature
Title	Date

REQUIRED FORM
<u>Proposer</u>:
Please complete this form and include with proposal submission.

Notice of Intent (NOI) to Subcontract with Historically Underutilized Business (HUB)

This information must be submitted with your proposal.

Proposer intends to utilize subcontractors/sub-consultants in the fulfillment of this contract (if awarded).
☐ Yes ☐ No

Instructions for Prime Contractor/Consultant: Proposer shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract. Please submit one form for each HUB Subcontractor/Sub-consultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: _____ HUB: p Yes p No

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____

Prime Contract Amount: $ _____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

_____ _____ _____
Printed Name of Contractor Representative Signature of Representative Date

_____ _____ _____
Printed Name of HUB Signature of Representative Date

NOTE: NOTHING ON THIS NOTICE OF INTENT FORM IS INTENDED TO CONFER ANY RIGHTS, EXPRESSED OR IMPLIED, TO ANY THIRD PARTIES.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "HUB Subcontractor/Sub-consultant Change Form" must be completed and faxed to 409-835-8456.

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

Page 1 of 4

This information must be submitted with your proposal.

Proposer intends to utilize subcontractors/sub-consultants in the fulfillment of this contract (if awarded).
☐ Yes ☐ No

Prime Contractor: _____ HUB: ☐ Yes ☐ No

HUB Status (Gender & Ethnicity): _____

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____ IFB/RFP No.: _____

Total Contract: $ _____ Total HUB Subcontract(s): $ _____

Construction HUB Goals: 12.8% MBE:: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African-American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR HUB OFFICE USE ONLY:

Verification date HUB Program Office reviewed and verified HUB Sub information Date: _____ Initials: _____

PART I. HUB SUCONTRACTOR DISCLOSURE

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

HUB Subcontractor Disclosure
PART I: Continuation Sheet (Duplicate as Needed)

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

All HUB Subcontractor Participation may be verified with the HUB Subcontractor(s) listed on PART I.

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING HUB SUBCONTRACTING GOALS

Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the HUB goals for this project for the following reasons:

- ☐ All subcontractors to be utilized are "Non-HUBs." *(Complete Part III)*
- ☐ HUBs were solicited but did not respond.
- ☐ HUBs solicited were not competitive.
- ☐ HUBs were unavailable for the following trade(s):
- ☐ Other: _____

Was the Jefferson County HUB Office contacted for assistance in locating HUBs? ☐ Yes ☐ No

PART III: DISCLOSURE OF OTHER "NON-HUB" SUBCONTRACTS

The Proposer shall use this area to provide a listing of all "Non-HUB" Subcontractors, including suppliers, that will perform under this project. A list of those "Non-HUB" Subcontractors the Proposer selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that Proposer is the apparent low Proposer. A list of those "Non-HUB" Subcontractors that are selected after contract award must be provided immediately after their selection.

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

Page 4 of 4

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *HUB Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attached any necessary support documentation as required**. I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): _____

Title: _____

Signature: _____

Date: _____

E-mail address: _____

Contact person that will be in charge of invoicing for this project:

Name (print or type): _____

Title: _____

Date: _____

E-mail address: _____

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

RESIDENCE CERTIFICATION/TAX FORM

Pursuant to Texas Government Code §2252.001 *et seq*., as amended, Jefferson County requests Resident Certification. §2252.001 *et seq*. of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Non-resident RFP Respondent" refers to a person who is not a resident.

(4) "Resident RFP Respondent" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☐ I certify that _____ [company name] is a Resident Respondent of Texas as defined in Government Code §2252.001.

☐ I certify that _____ [company name] is a Non-Resident Respondent as defined in Government Code §2252.001 and our principal place of business is _____ _____ (city and state).

Taxpayer Identification Number (T.I.N.):	
Company Name submitting bid/proposal/response:	
Mailing address:	
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

REQUIRED FORM
<u>Proposer</u>:
Please complete this form and include with proposal submission.

HOUSE BILL 89 VERIFICATION

I, _____, the undersigned representative of (company or business name)_____ (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and
2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. "**Boycott Israel**" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. "**Company**" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or an limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

_____
Signature of Company Representative

_____
Date

On this _____ day of _____, 20____, personally appeared

_____, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

_____
Notary Signature

_____
Date

REQUIRED FORM
<u>Proposer</u>:
Please complete this form and include with proposal submission.

SENATE BILL 252 CERTIFICATION

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

_____

Company Name

_____

IFB/RFP/RFQ number

Certification check performed by:

_____

Purchasing Representative

_____

Date

RESPONDENT'S AFFIDAVIT

I have carefully examined the Request for Proposal Specifications, and any other documents accompanying or made a part of this Request for Proposals.

I hereby propose to furnish the goods or services specified in the Request for Proposal. I agree that my proposal will remain firm for a period of up to **90 days** in order to allow Jefferson County adequate time to evaluate the qualifications submitted.

I verify that all information contained in this proposal is truthful to the best of my knowledge and belief. I further certify that I am duly authorized to submit this proposal on behalf of the firm as its act and deed and that the firm is ready, willing and able to perform if awarded the contract.

I further certify, under oath, that this proposal is made without prior understanding, agreement, connection, discussion, or collusion with any other person, firm or corporation submitting a proposal for the same product or service: no officer, employee or agent of Jefferson County or any other Respondent is interested in said proposal: and that the undersigned executed this Respondent's Certification with full knowledge and understanding of the matters therein contained and was duly authorized to do so.

_____
NAME OF BUSINESS

BY:

_____
SIGNATURE

_____
NAME & TITLE, TYPED OR PRINTED

_____
MAILING ADDRESS

_____
CITY, STATE, ZIP CODE

(___) _____
TELEPHONE NUMBER

Sworn to and subscribed before me
this _____day of
_____, 20___

_____
Notary Public

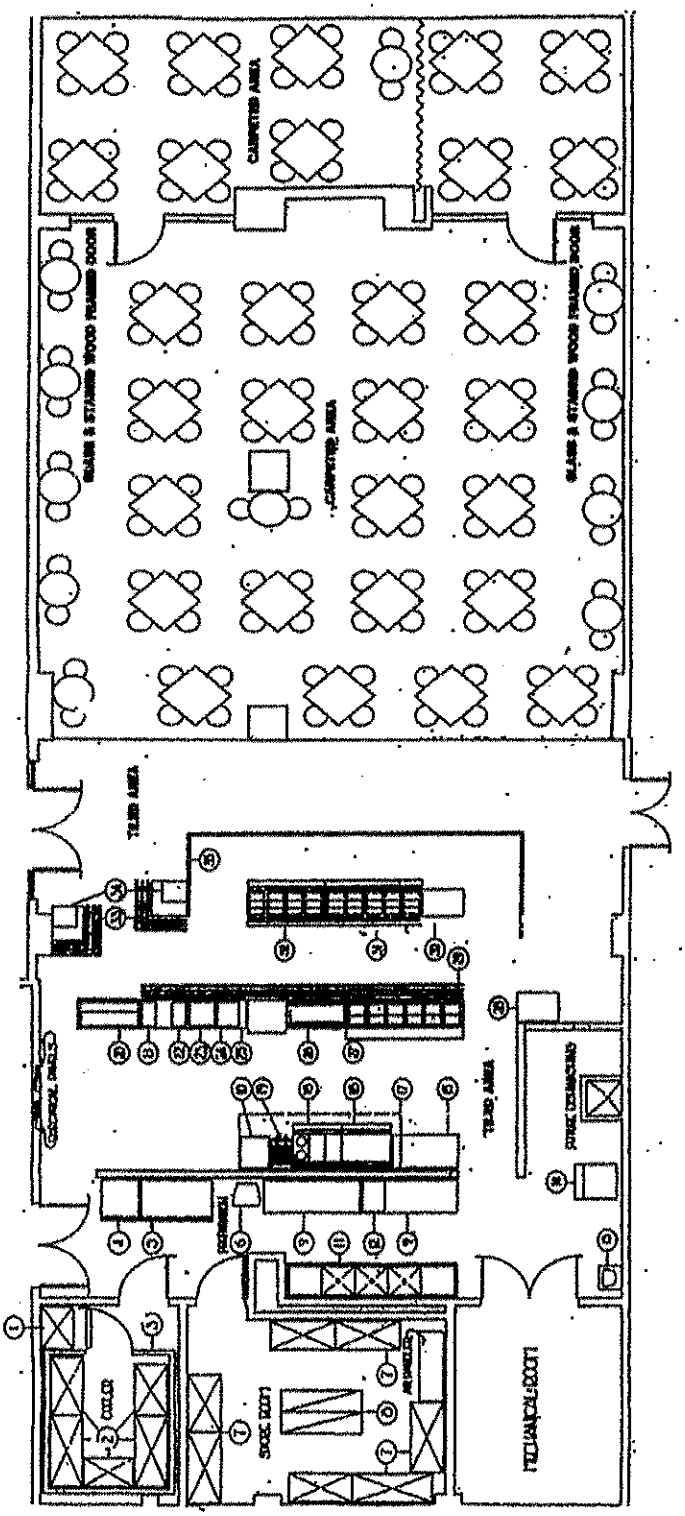
State of _____

My Commission Expires: _____

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

ATTACHMENT A

FLOOR PLAN



JEFFERSON COUNTY COURTHOUSE
CAFETERIA FLOOR PLAN

Daily Restaurant Cleaning Checklist Date: _____

Daily Front-of-House Cleaning Checklist:

- ◯ Wipe down the walls if necessary
- ◯ Sanitize the tables
- ◯ Inspect and wipe down the condiments and salt and pepper shakers
- ◯ Wipe down all the counters
- ◯ Clean the seats and benches
- ◯ Run cloth napkins, tablecloths, and wait staff aprons through the washing machine
- ◯ Vacuum the carpets
- ◯ Take out the trash and recycling
- ◯ Clean the interior and exterior of all the trash and recycling bins
- ◯ Sweep and mop the floors
- ◯ Clean and sanitize your bathrooms by:
  - ◯ Disinfecting the toilets
  - ◯ Wiping down the sinks
  - ◯ Emptying out feminine hygiene product bags
  - ◯ Taking out the trash
  - ◯ Sweeping and mopping the floors

Daily Back-of-House Cleaning Checklist:

- ◯ Wipe down the walls wherever there are splashes
- ◯ Clean the grill, griddle, range, flattop, and fryer. Make sure to get underneath the equipment, too
- ◯ Change the foil lining on top of the ranges, grills, and flattops
- ◯ Wipe down other equipment, such as coffee makers, microwaves, toasters, and meat slicers
- ◯ Disinfect prep area surfaces
- ◯ Clean beverage dispenser heads in the soda fountains. Bars should clean the tips of the soda guns
- ◯ Wash utensils, smallwares, flatware, and glassware and let them air dry overnight
- ◯ Clean the sinks
- ◯ Wash rags, towels, aprons, and uniforms in the washing machine
- ◯ Refill soap dispensers and replace empty paper towel rolls
- ◯ Sweep walk-in refrigerators and storage areas
- ◯ Take out the trash and recycling
- ◯ Disinfect the waste disposal area and clean the trash cans
- ◯ Sweep and mop the floors

Weekly and Monthly Restaurant Cleaning Checklist:

Weekly Front-of-House Cleaning Checklist:

- ◯ Dust and wipe down the light fixtures
- ◯ Wash glass windows and doors
- ◯ Disinfect the door handles

Monthly Front-of-House Cleaning Checklist:

- ◯ Dust any decorations or wall art
- ◯ Check the ceiling for cobwebs
- ◯ Wash the walls

Weekly Back-of-House Cleaning Checklist:

- ◯ Clean the ovens, including the walls, door, and racks
- ◯ Delime the sinks and faucets
- ◯ Boil out the deep fryer
- ◯ Wash and sanitize the walk-in refrigerators and freezers
- ◯ Clean any anti-fatigue mats
- ◯ Use drain cleaner on the floors

Monthly Back-of-House Cleaning Checklist:

- ◯ Wash behind the hot line to prevent clogs
- ◯ Run cleaning and sanitizing chemicals through the coffee or espresso machine to remove built-up grime
- ◯ Clean out and sanitize the ice machine (every 6 months)
- ◯ Clean and sanitize the freezer
- ◯ Clean refrigerator coils to remove dust
- ◯ Empty grease traps
- ◯ Wash walls and ceiling to remove grease buildup
- ◯ Wash vent hoods (every few months)
- ◯ Replace pest traps

Notes:

Employee Signature: _____

Supervisor Signature: _____

ATTACHMENT C

Best Management Practices

Fats, Oils, and Grease (FOG) Control Program

Fats:

Fats are solid at room temperature; butter, shortening, margarine, peanut butter, meat trimmings, uncooked poultry skins, and dairy.

Oils:

Oils are liquid at room temperature; vegetable, canola, corn, and cooking oils.

Grease:

Grease turns to liquid during cooking but solidifies when cooled; gravy, mayonnaise, melted meat fat, bacon, sausage, boiled poultry skin, and salad dressings.

Consequences of Improper FOG Disposal:

- Rancid odors
- Sewage overflow into businesses, yards, parks, and public streets due to clogged pipes
- Expensive cleanup, repair, and replacement of damaged property. Property owners are responsible for all pipes from their building out to the main line.
- Potential contact with microorganisms that can cause gastroenteritis and hepatitis

Inside the kitchen:

- Service and clean grease retention device on a regular basis.
- Educate staff on FOG management and requirements.
- Post "NO GREASE" signs above kitchen sinks and drains.
- "Dry wipe" all pots, pans, plates, and utensils before washing.
- Keep a Spill Kit in the kitchen that consists of material like kitty litter or absorbent pads.
- Dispose of food waste by recycling and/or solid waste removal.
- Routinely clean kitchen exhaust system filters and hoods.
- Install removable screens on kitchen drains with openings no bigger than 3/16in, clean frequently.
- Never put eggshells, coffee grounds, or kitty litter down the drain or in the toilet.

In the event of a FOG spill

- Begin cleanup immediately.
- Never use detergents or degreasers.
- Seal off any nearby storm drains.
- If the spill is unmanageable, contact a clean-up contractor and the appropriate agency.
- Never wash the spill or clean-up materials into the street or storm drains.
- Dispose of clean-up materials into a garbage bag.

*The café will also utilizes disposable products (take-away packaging) to serve food in eliminating the need to wash customer dishes.

Owner/Kitchen Manager Date

ATTACHMENT D

Conditional or Food Employee Reporting Agreement

The purpose of this agreement is to inform conditional employees or food employees of their responsibility to notify the person in charge when they experience any of the conditions listed so that the person in charge can take appropriate steps to preclude the transmission of foodborne illness.

I AGREE TO REPORT TO THE PERSON IN CHARGE:
Any Onset of the Following Symptoms, Either While at Work or Outside of Work, Including the Date of Onset

1. Diarrhea
2. Vomiting
3. Jaundice
4. Sore throat with fever
5. Infected cuts or wounds, or lesions containing pus on the hand, wrist, an exposed body part, or other body part and the cuts, wounds, or lesions are not properly covered(*such as boils and infected wounds, however small)*

Future Medical Diagnosis**:**
Whenever diagnosed as being ill with norovirus, typhoid fever (***Salmonella*** Typhi), shigellosis (***Shigella* spp.** infection), ***Escherichia coli*** O157:H7 or other EHEC/STEC infection, or hepatitis A (hepatitis A virus infection)

Future Exposure to Foodborne Pathogens**:**

1. Exposure to or suspicion of causing any confirmed disease outbreak of norovirus, typhoid fever, shigellosis, ***E. coli*** O157:H7 or other EHEC/STEC infection, or hepatitis A.
2. A household member diagnosed with norovirus, typhoid fever, shigellosis, illness due to EHEC/STEC, or hepatitis A.
3. A household member attending or working in a setting experiencing a confirmed disease outbreak of norovirus, typhoid fever, shigellosis, ***E. coli*** O157:H7 or other EHEC/STEC infection, or hepatitis A.

I have read (or had explained to me) and understand the requirements concerning my responsibilities under the Food Code **and this agreement to comply with:**

1. **Reporting requirements specified above involving symptoms, diagnoses, and exposure specified;**
2. **Work restrictions or exclusions that are imposed upon me; and**
3. **Good hygienic practices.**

I understand that failure to comply with the terms of this agreement could lead to action by the food establishment or the food regulatory authority that may jeopardize my employment and may involve actions against me.

Signature of Conditional or Food Employee_____
Conditional or Food Employee Name (please print) _____
Date _____

Signature of License Holder or Person-in Charge _____
Signature acknowledges responsibility of reporting, restricting, and excluding ill employees as required by law.

License Holder or Person-in-Charge Name (please print) _____
Date _____

COVER SHEET

Date: February 17, 2026

Proposal Name: Cafeteria Service for Jefferson County

Proposal Number: RFP 26-002/CG

Mail or Deliver To:
Jefferson County Purchasing Department
1149 Pearl Street
1st Floor
Beaumont, TX 77701

Proposer:
The Courtyard Cafe
4321 Lincoln Avenue
Groves, TX 77619
Email: Courtyard1@sbcglobal.net
Phone: (409) 962-2850
Owner: Karen Theis
Business Structure: Sole Proprietorship

Karen D Theis

Authorized Signature

JEFFERSON COUNTY PURCHASING DEPARTMENT

Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

LEGAL NOTICE
Advertisement for Request for Proposal

January 13, 2026

Notice is hereby given that sealed proposals will be accepted by the Jefferson County Purchasing Department for Request for Proposals (RFP 26-002/CG), **Cafeteria Services for Jefferson County, Pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-327. Specifications for this project may be obtained from the Jefferson County website,** https://jeffersoncountytx.gov/Purchasing/ **, or by calling 409-835-8593.**

Proposals are to be sealed and addressed to the Purchasing Agent with the proposal number and name marked on the outside of the envelope or box. Proposers shall forward an original and five (5) hard copies of their proposal to the address shown below. Late proposals will be rejected as non-responsive. Proposals will be publicly opened and only the firm name will be read aloud in the Jefferson County Engineering Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701 at the time and date below. Proposals shall be opened in a manner that avoids disclosure of the contents to competing Proposers and maintains the confidentiality of the proposals during negotiations. Proposals will be open for public inspection after the award of the contract, except for trade secrets and confidential information. Proposers are invited to attend the sealed proposal opening.

To arrange a site visit, contact Cindy Greene, Contract Specialist at 409-835-8593 or via email at cynthia.greene@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent at 409-835-8593 or via email at deb.clark@jeffersoncountytx.gov.

PROPOSAL NAME:	**Cafeteria Services for Jefferson County, Pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-327.**
PROPOSAL NUMBER:	**RFP 26-002/CG**
DUE DATE/TIME:	**11:00 AM CT, Wednesday, February 18, 2026**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

Any questions relating to these requirements should be directed to Cindy Greene, Contract Specialist at 409-835-8593 or via email at cynthia.greene@jeffersoncountytx.gov. If no response in 72 hours, contact Deborah Clark, Purchasing Agent at 409-835-8593 or via email at deb.clark@jeffersoncountytx.gov.

Jefferson County encourages Disadvantaged Business Enterprises (DBEs), Minority/Women Business Enterprises (M/WBEs), and Historically Underutilized Businesses (HUBs) to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment, or the provisions of services. Individuals requiring special accommodations are requested to contact our office at least seven (7) days prior to the bid due date at 409-835-8593.

All interested firms are invited to submit a proposal in accordance with the terms and conditions stated in this bid.

Proposers are strongly encouraged to carefully read the entire invitation, as failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

PUBLISH:
Beaumont Enterprise & Port Arthur News:
January 14, 2026
The Examiner:
January 15, 2026 & January 22, 2026

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PROPOSAL SUBMITTAL CHECKLIST

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

The Proposer's attention is especially called to the items listed below, which must be submitted in full as part of the proposal.

Failure to submit any of the documents listed below as a part of your proposal, or failure to acknowledge any addendum in writing with your proposal, or submitting a proposal on any condition, limitation, or provision not officially invited in this Request for Proposal (RFP) may cause for rejection of the proposal.

Proposer shall check each box indicating compliance.

THE ITEMS ON THE CHECKLIST BELOW MUST BE INCLUDED IN YOUR PROPOSAL SUBMISSION.

- ☐ Cover sheet identifying the contract/project being proposed, the name and address of the Proposer, the date of the proposal, and the email address, telephone, and facsimile numbers of Proposer.
- ☑ An acknowledgment and/or response to each section of the proposal.
- ☑ Form of business (e.g., corporation, sole proprietorship, partnership); if corporation the date and state of incorporation.
- ☐ Identification of three (3) entities for which the Proposer is providing or has provided Food Services of the type requested, including the name, position, and telephone number of a contact person at each entity.
- ☐ Completed and Signed FORM 1295.
- ☐ Copy of Certificate of Insurance (COI). The COI at a minimum should reflect your firm/company's general insurance coverage.
- ☐ Identification of all legal claims, demands, contracts terminated or lawsuits filed, threatened, or pending against the Proposer and/or its principal/officers for the last three (3) years, as well as identification of any administrative actions or warnings taken or issued by any federal, state, or local governmental agency to Proposer and/or its principals/officers with regard to the provision of the same or similar service as covered by this RFP, or the payment of monies under the terms of any agreement(s) relating to such services.
- ☐ **One (1) Original and five (5) Response Copies; with all copies to include a Completed Copy of this specifications packet, in its entirety.**

Each Proposer shall ensure that required parts of the response are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Please read the "Proposal Submittal Checklist" included in this package.

The Courtyard Company	409-962-2850 Telephone Number
4321 Lincoln Ave, Groves Address	N/A Fax Number
Karen Theis Authorized Representative (Please print)	Owner Title
Karen J Theis Authorized Signature	2/16/26 Date

SECTION 1: INTRODUCTION TO PROPOSERS AND GENERAL REQUIREMENTS

This Request for Proposal (RFP) is to receive proposals from qualified firms regarding services for Cafeteria Food Services.

The following items are provided as general information and specifications as required by the Jefferson County Purchasing Department.

1.1 VENDOR INSTRUCTIONS

Read the document carefully. Follow all instructions. Proposer is responsible for fulfilling all requirements and specifications. It is imperative

General Requirements apply to all advertised requests for proposals; however, these may be superseded, whole or in part, by the Scope of Services, Guidelines and Specifications, Requested Responses and Information, or other data contained herein. Be sure your proposal package is complete.

1.2 GOVERNING LAW

Proposer is advised that these requirements shall be fully governed by the laws of the State of Texas and that Jefferson County may request and rely on advice, decisions, and opinions of the Attorney General of Texas and the County Attorney concerning any portion of these requirements.

1.3 AMBIGUITY, CONFLICT, OR OTHER ERRORS IN THE RFP

If Proposer discovers any ambiguity, conflict, discrepancy, omission or other error in the RFP, Proposer shall immediately notify the County of such error in writing and request modification or clarification of the document. Modifications will be made by issuing Addenda. Written notice will be given to all parties who have been furnished with the RFP without divulging the source of the request for the same. If the Proposer fails to notify the County prior to the date and time fixed for submission of proposals of an error or ambiguity in the RFP known to Proposer, or an error or ambiguity that reasonably should have been known to Proposer, then Proposer shall not be entitled to compensation or additional time by reason of the error or ambiguity or its later resolution.

The County may also modify the RFP, no later than 48 hours prior to the date and time fixed for submission of proposals, by issuance of an Addendum to all parties who have received the RFP. All addenda will be numbered consecutively, beginning with 1.

1.4 NOTIFICATION OF MOST CURRENT ADDRESS

Firms in receipt of this RFP shall notify Deborah L. Clark, Jefferson County Purchasing Agent, of any address changes, contact person changes, and/or telephone number changes no later than 48 hours prior to the date and time fixed for submission of proposals.

1.5 PROPOSAL PREPARATION COST

Cost for developing proposals is entirely the responsibility of Proposers and shall not be charged to Jefferson County.

1.6 SIGNATURE OF PROPOSAL

A transmittal letter, which shall be considered an integral part of the proposal, shall be signed by an individual who is authorized to bind the Proposer contractually. If the Proposer is a corporation, the legal name of the corporation shall be provided together with the signature of the officer or officers authorized to sign on behalf of the corporation.

If the Proposer is a partnership, the true name of the firm shall be provided with the signature of the partner or partners authorized to sign.

If the Proposer is an individual, that individual shall sign. If signature is by an agent, other than an officer of a corporation or a member of a partnership, a power of attorney or equivalent document must be submitted to the Jefferson County Purchasing Department prior to the submission of the proposal or with the proposal.

1.7 ECONOMY OF PRESENTATION

Proposals shall not contain promotional or display materials, except as they may directly answer in whole or in part questions contained in the RFP. Such exhibits shall be clearly marked with the applicable reference number of the question in the RFP. Proposals must address the technical requirements as specified in the RFP. All questions posed by the RFP must be answered concisely and clearly. Proposals that do not address each criterion may be rejected and not considered.

1.8 PROPOSAL OBLIGATION

The contents of the proposal and any clarification thereof submitted by the selected Proposer shall become part of the contractual obligation and incorporated by reference into the ensuing contract.

1.9 INCORPORATION BY REFERENCE AND PRECEDENCE

This Agreement is derived from (1) the RFP, written clarifications to the RFP and County's response to questions; (2) the Contractor's Best and Final Offer, and (3) the Contractor's response to the RFP.

In the event of a dispute under this Agreement, applicable documents will be referred to for the purpose of clarification or for additional detail in the following order of precedence: (1) Amendments to the Agreement in reverse chronological order; (2) the Agreement, including the Scope of Work; (3) the Contractor's Best and Final Offer; (4) the RFP, including attachments thereto and written responses to questions and written clarifications; and (5) the Contractors response to the RFP.

1.10 GOVERNING FORMS

In the event of any conflict between the terms and provisions of these requirements and the specifications, the specifications shall govern. In the event of any conflict of interpretation of any part of this overall document, Jefferson County's interpretation shall govern.

1.11 IMPLIED REQUIREMENTS

Products and services not specifically mentioned in the RFP, but which are necessary to provide the functional capabilities described by the Proposer, shall be included in the proposal.

1.12 COMPLIANCE WITH RFP SPECIFICATIONS

It is intended that this Request for Proposals (RFP) describe the requirements and the response format in sufficient detail to secure comparable proposals. Failure to comply with all provisions of the RFP will result in disqualification.

1.13 VENDOR REGISTRATION: SAM (SYSTEM FOR AWARD MANAGEMENT)

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

In instances where a vendor has either an "Inactive" SAM Registration or is not currently registered with the System for Award Management, the Purchasing Department may *initially* accept proof (printout from the SAM website) that the vendor has begun the registration process in order for the IFB/RFQ/RFP submission to be considered as "responsive" to the specifications for the project.

However, the SAM Registration must be completed (showing "active" status, with no exclusions) prior to the award and/or execution of an agreement or contract for the project.

1.14 FORM 1295 (TEXAS ETHICS COMMISSION)

FORM 1295 SUBMISSION REQUIREMENT/INSTRUCTIONS FOR RFP PROPOSERS:

ALL NON-EXEMPT PROPOSERS ARE REQUIRED TO SUBMIT COMPLETED FORM 1295 WITH PROPOSAL SUBMISSION.

INSTRUCTIONS:

(1) Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information on Form 1295, and print a copy of the completed form.
The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department WITH RFP PROPOSAL SUBMISSION.

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

SAMPLE: A sample of a completed FORM 1295 is included on PAGE 7.

FORM 1295 Implementation Background:

In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

FORM 1295 EXEMPTIONS:

What type of contracts are exempt from the Form 1295 filing requirement under the amended law?
The amended law adds to the list of types of contract exempt from the Form 1295 filing requirement.

A completed Form 1295 is not required for:

- a sponsored research contract of an institution of higher education
- an interagency contract of a state agency or an institution of higher education
- a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and o any qualified vendor is eligible for the contract
- a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity
- a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code
- a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

SAMPLE COMPLETED FORM 1295

VENDOR: FORM 1295 MUST BE COMPLETED/SUBMITTED ON TEXAS ETHICS COMMISSION WEBSITE. HARD COPY OF FORM 1295 IS TO BE PRINTED, COMPLETED, SIGNED, AND SUBMITTED WITH BID/PROPOSAL/AGREEMENT/CONTRACT. JEFFERSON COUNTY WILL CONFIRM RECEIPT OF COMPLETED HARD COPY WITH THE TEXAS ETHICS COMMISSION.

CERTIFICATE OF INTERESTED PARTIES FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.
VENDOR: ENTER YOUR BUSINESS NAME, CITY, STATE, AND COUNTRY HERE

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.
JEFFERSON COUNTY, TEXAS

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.
VENDOR: ENTER BID/PROPOSAL/CONTRACT/AGREEMENT REF# AND TITLE HERE

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary
VENDOR: ENTER EACH PERSON HAVING INTEREST. OWNERS ARE THE CONTROLLING PARTIES.			
VENDOR: WORKERS (OR NON-OWNERS) IN YOUR COMPANY ARE INTERMEDIARY PARTIES.			

5 Check only if there is NO Interested Party. CHECK BELOW IF APPLICABLE ☐

6 UNSWORN DECLARATION VENDOR: COMPLETE, DATE, AND SIGN THIS DECLARATION SECTION.

My name is _____ and my date of birth is _____

My address is _____ _____ _____ _____ _____
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in _____ County, State of _____, on the _____ day of _____ 20____
(month) (year)

_____
Signature of authorized agent of contracting business entity
(Declarant)

ADD ADDITIONAL PAGES AS NECESSARY

Form provided by Texas Ethics Commission www.ethics.state.tx.us (Revised 11/03/2017)

NOTE: JEFFERSON COUNTY WILL KEEP A COPY OF THIS FORM ON FILE FOR EACH BID/PROPOSAL/CONTRACT/AGREEMENT AND EACH VENDOR RESPONDING TO BIDS/PROPOSALS.

Must file online at www.ethics.state.tx.us/File

PROPOSER: INSERT COMPLETED FORM 1295 BEHIND THIS PAGE.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2026-1421441

Date Filed:
02/16/2026

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.
The Courtyard Cafe
Groves, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.
Jefferson County

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.
RFP 26-002/CG
Cafeteria Services

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. [X]

6 UNSWORN DECLARATION

My name is Karen Theis, and my date of birth is June 23, 1964

My address is 6170 Jackson St., Groves (city), TX (state), 77619 (zip code), US (country).

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Jefferson County, State of TX, on the 16 day of Feb. (month), 2026 (year).

Karen Theis

Signature of authorized agent of contracting business entity
(Declarant)

Forms provided by Texas Ethics Commission www.ethics.state.tx.us Version V4.1.0.b6ef2aab

1.15 EMERGENCY/DECLARED DISASTER REQUIREMENTS

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, a contract (executed in response to this Request for Proposal) may be subjected to unusual usage. Contractor shall service the County during such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in the contract shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the contract, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's supplier(s). Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling and drayage fees may apply.

1.16 EVALUATION

Jefferson County reserves the right to use all pertinent information (also learned from sources other than disclosed in the RFP process) that might affect the County's judgment as to the appropriateness of an award to the best evaluated Proposer. This information may be appended to the proposal evaluation process results. Information on a service provider from reliable sources, and not within the service provider's proposal, may also be noted and made part of the evaluation file. Jefferson County shall have sole responsibility for determining a reliable source. Jefferson County reserves the right to conduct written and/or oral discussions/interviews after the proposal opening. The purpose of such discussions/interviews is to provide clarification and/or additional information to make an award is in the best interest of Jefferson County.

1.17 WITHDRAWAL OF PROPOSAL

The Proposer may withdraw its proposal by submitting a written request over the signature of an authorized individual, as described in paragraph 1.6, to the Purchasing Department any time prior to the submission deadline. The Proposer may thereafter submit a new proposal prior to the deadline. Modification or withdrawal of the proposal in any manner, oral or written, will not be considered if submitted after the deadline.

1.18 SMALL, MINORITY & WOMEN BUSINESS ENTERPRISE PARTICIPATION

It is the desire of Jefferson County to increase the participation of Small, Minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

Minority owned business may be eligible for contract procurement assistance with public and private sector entities from MBDA Centers

Dallas Fort Worth MBDA Business Center
8828 N. Stemmons Freeway, Ste. 550 B
Dallas, TX 75247
214-920-2436
Website: https://www.mbdadfw.com
Email: admin1@mbdadallas.com

El Paso MBDA Business Center
2401 East Missouri Avenue
El Paso, TX 79903
915-351-6232
Website: https://www.mbda.gov/business-center/el-paso-mbda-business-center
Email: treed@ephcc.org

San Antonio MBDA Business Center
501 W. Cesar E. Chavez Blvd., Ste. 3.324 B
San Antonio, TX 78207
210-458-2480
Website:
Email:

Small and woman-owned business may be eligible for assistance from U.S. Small Business Administration (SBA):
Website:

Dallas/Fort Worth District Office
150 West Parkway, Ste. 130
Euless, TX 76040
817-684-5500
Website:
Email:

El Paso District Office
211 N. Florence St, Ste. 201
El Paso, TX 79901
915-834-4600
Website:
Email:

Houston District Office
8701 S. Gessner Dr, Ste. 1200
Houston, TX 77074
713-773-6500
Website:
Email:

Lower Rio Grande Valley District Office
2422 E. Tyler Ave, Suite E
Harlingen, TX 78550
956-427-8533
Website:
Email:

San Antonio District Office
615 E. Houston St, Ste 298
San Antonio, TX 78205
210-403-5900
Website:
Email:

West Texas District Office
1205 Texas Ave, Room 408
Lubbock, TX 79401
806-472-7462
Website:
Email:

HUB certification information can be found at:

Statewide Procurement Division HUB Program
P.O. Box 13528
Austin, TX 78711
512-463-5872 or 888-863-5881
Website:
Email:

PROPOSER: INSERT HUB, SBE, MBE or WBE Certification behind this page.

1.19 AWARD

Jefferson County reserves the right to award this contract on the basis of the **Best Offer** in accordance with the laws of Texas, to waive any formality or irregularity, to make award to more than one Proposer, and/or to reject any or all proposals. In the event the highest dollar Proposer meeting specifications is not awarded a contract, the Proposer may appear before Commissioners' Court and present evidence concerning his responsibility.

1.20 OWNERSHIP OF PROPOSAL

All proposals become the property of Jefferson County and will not be returned to Proposers.

1.21 DISQUALIFICATION OF PROPOSAL

Upon signing this proposal document, a contractor offering to sell supplies, materials, services, or equipment to Jefferson County certifies that the Proposer has not violated the antitrust laws of this state codified in Section 15.01, et seq, Business & Commerce Code, or the Federal Antitrust Laws, and has not communicated directly or indirectly the offer made to any competitor or any other person engaged in such line of business. Any or all proposals may be rejected if the County believes that collusion exists among the Proposers.

1.22 CONTRACTUAL DEVELOPMENT

The contents of the RFP and the selected proposal will become an integral part of the contract, but may be modified by provisions of the contract as negotiated. Therefore, the Proposer must be amenable to inclusion in a contract of any information provided (in writing) either in response to this RFP or subsequently during the selection process.

1.23 ASSIGNMENT

The selected vendor may not assign, sell, or otherwise transfer this contract without written permission of the Jefferson County Commissioners' Court.

1.24 CONTRACT OBLIGATION

Jefferson County Commissioners' Court must award the contract, and the County Judge or other person authorized by Jefferson County Commissioners' Court must sign the contract before it becomes binding on Jefferson County or the Proposer. **Department heads are not authorized to sign agreements for Jefferson County.** Binding agreements shall remain in effect until all products and/or services covered by this proposal have been satisfactorily delivered and accepted.

1.25 TERMINATION

Jefferson County reserves the right to terminate the contract for default if the awarded vendor breached any of the terms therein, including warranties of proposal, or if the Proposer becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or services within the proper amount of time, and/or to properly perform any and all other requirements to Jefferson County's satisfaction, and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified.

1.26 INSPECTIONS

Jefferson County reserves the right to inspect any item(s) or service location(s) for compliance with specifications and requirements and needs of the using department. If a proposal cannot furnish a sample of a proposed item, where applicable, for review, or fails to satisfactorily show an ability to perform, the County can reject the Proposer as inadequate.

1.27 TESTING

Jefferson County reserves the right to test equipment, supplies, material and goods proposed for quality, compliance with specifications, and ability to meet the needs of the user. Demonstration units must be available for review. Should the goods or services fail to meet requirements and/or be unavailable for evaluation, the offer is subject to rejection.

1.28 LOSS, DAMAGE, OR CLAIM

The Proposer shall totally indemnify Jefferson County against all claims by its employees, agents, or representatives or personal injury arising from any cause. In addition, the Proposer shall totally indemnify Jefferson County against all claims of loss or damage to the Proposer's and Jefferson County's property, equipment, and/or supplies.

1.29 TAXES

The contractor and its subcontractors, agents and employees, as the case may be, will be responsible for the payment of all federal, state and local taxes, and deposits or contributions imposed or required by law.

1.30 NON-DISCRIMINATION

The successful Proposer will be required to comply with the Americans With Disabilities Act and with all provisions of federal, state, county and local (if any) laws and regulations to ensure that no employee or applicant for employment is discriminated against because of race, color, religion, sex, age, handicap or national origin.

1.31 CONFLICT OF INTEREST

The agreement entered into pursuant to this RFP will contain the Contractor's warranty that, except for bona-fide employees or selling agents maintained by the Contractor for the purpose of securing business, no person or selling agency has been employed or retained to solicit this contract upon an agreement or understanding for commission, percentage or contingency.

Further, the contractor will warrant that no kickbacks, gratuities, or contingency fees have been paid in connection with this RFP or contract and none has been promised contingent upon the award of contract. And, will still further warrant that to its knowledge and best belief, no one being paid under the agreement between the County and the contractor, is engaged in any activities which would constitute a conflict of interest with respect to the purposes of said agreement.

By submitting a proposal in response to this RFP, all Proposers affirm that they have not given, nor intend to give, at any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant or any employee or representative of same, in connection with this procurement.

Each Proposer must disclose any existing or potential conflict of interest relative to the performance of the requirements of this RFP. Examples of potential conflicts may include an existing business or personal relationship between the Proposer, its principal, or any affiliate or subcontractor, with the County or any other entity or person involved in any way in the project that is the subject of this RFP. Similarly, any personal or business relationship between the Proposer, the principals, or any affiliate or subcontractor, with any employee of the County or its suppliers must be disclosed. **Any such relationship that might be perceived or represented as a conflict must be disclosed. Failure to disclose any such relationship or reveal personal relationships with state employees may be cause for contract termination. The County will decide if an actual or perceived conflict should result in proposal disqualification.**

1.32 CONFIDENTIAL/PROPRIETARY INFORMATION

If any material in the proposal submission is considered by Proposer to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Proposer), **Proposer must clearly mark the applicable pages of Proposer's proposal submission to indicate each claim of confidentiality. Additionally, Proposer must include a statement on company letterhead identifying all Proposal section(s) and page(s) that have been marked as confidential.** Jefferson County will protect from public disclosure such portions of a proposal, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire proposal submission is protected from disclosure because it contains some proprietary information is not acceptable, and will make the entire proposal submission subject to release under the Texas Public Information Act.

By submitting a proposal, Proposer agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Proposer's proposal submission or other information submitted by Proposer.

1.33 WAIVER OF SUBROGATION

Proposer and Proposer's Insurance Carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from the Proposer's performance under this agreement.

1.34 AKNOWLEDGEMENT OF INSURANCE REQUIREMENTS

By signing its proposal, Proposer acknowledges that it has read and understands the insurance requirements for this proposal. Proposer also understands that evidence of required insurance must be submitted within fifteen (15) working days following notification of acceptance of its offer; otherwise, Jefferson County may rescind its acceptance of the Proposer's proposal. The insurance requirements are part of this package.

1.35 INSURANCE REQUIREMENTS

The contractor (including any and all subcontractors as defined in Section 1.36 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the contractor. These requirements do not establish limits of the contractor's liability. All policies of insurance shall waive all rights of subrogation against the County, its officers, employees and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an Insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public, Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):

Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation Statutory Coverage (See Section 1.36 Below)

1.36 WORKERS' COMPENSATION INSURANCE

1.36.1 **Definitions:**

1.36.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

1.36.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

1.36.1.3 **Persons providing services on the project ("subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

1.36.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.

1.36.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – refer to Section 1.35 above.

1.36.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

1.36.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

1.36.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

1.36.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

1.36.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

1.36.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

1.36.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

1.36.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

1.36.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees providing services on the project, for the duration of the project.

1.36.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

1.36.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

1.36.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

1.36.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

1.36.9.4.2 The coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

1.36.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

1.36.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

1.36.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs 1.36.1. – 1.36.7., with the certificates of coverage to be provided to the person for whom they are providing services.

1.36.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

1.36.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

PROPOSER: INSERT COPY OF CERTIFICATE OF INSURANCE (COI) BEHIND THIS PAGE.

Note: For proposal purposes, a general COI will suffice. However, a COI that includes the notation that "Jefferson County as an additional insured" will be required from Awarded Proposer(s) prior to the issuance of a Purchase Order.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 2/12/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Jay Richards
Richards - Integra Insurance 2420 Port Neches Ave., Ste. B Port Neches TX 77651	PHONE (A/C, No, Ext): (409) 460-0060 FAX (A/C, No): E-MAIL ADDRESS: jay@rigpn.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A: SCOTTSDALE INS CO	41297
INSURER B: EVANSTON INS CO	35378
INSURER C:	
INSURER D:	
INSURER E:	
INSURER F:	

INSURED
The Courtyard Cafe
4321 LINCOLN AVE
GROVES TX 77619-5347

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY PRO-JECT LOC OTHER:	Y	Y	NPP6109431	03/27/2025	03/27/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ INCLUDED
	AUTOMOBILE LIABILITY ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY	Y	Y				COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ $ $ $
B	UMBRELLA LIAB X OCCUR X EXCESS LIAB CLAIMS-MADE DED RETENTION $	Y	Y	CXS4048033	03/27/2025	03/27/2026	EACH OCCURRENCE AGGREGATE	$ 2,000,000 $ 2,000,000
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: Y If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	Y	NXTHV9VXPF00WC	03/28/2025	03/28/2026	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

CHENIERE OPERATING LLC
845 TEXAS AVE SUITE 1250
HOUSTON TX 77702

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
JAY RICHARDS III

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SECTION 2: FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) MANDATED CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY UNDER FEDERAL AWARDS REQUIRED BY 2 C.F.R. §200.327 APPENDIX II TO 2 CFR §200

2 CFR 200.327 Contract provisions. The non-Federal entity's contracts should contain applicable provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards. The non-Federal entity's contracts must contain the provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards, as applicable. ***Language as of January 3, 2025**

THRESHOLD	PROVISION	CITATION
>$250,000 (Simplified Acquisition Threshold)	Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. Although not required for contract at or below the SAT, FEMA suggests including a remedies provision. The NFE should consult their servicing legal counsel to determine whether and how remedies for breach of contract are permissible under applicable state, local, or tribal laws or regulations.	2 CFR 200 APPENDIX II (A)
>$10,000	*All contracts in excess of $10,000 must address termination for cause and for* convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement. FEMA suggests including a termination for cause and for convenience in all contracts even when not required. The NFE should consult their servicing legal counsel to determine whether and how termination provisions are permissible under applicable state, local, or tribal laws or regulations.	2 CFR 200 APPENDIX II (B)
None	Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor." 41 CFR 60-1.4 Equal opportunity clause. *b) Federally assisted construction contracts. (1) Except as otherwise provided,* each administering agency shall require the inclusion of the following language as a condition of any grant, contract, loan, insurance, or guarantee involving federally assisted construction which is not exempt from the requirements of the equal opportunity clause: The [recipient] hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause: During the performance of this contract, the contractor agrees as follows:	2 CFR 200 APPENDIX II (C) and 41 CFR §60-1.4(b)

The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through
(8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The [recipient] further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the [recipient] so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The [recipient] agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The [recipient] further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the [recipient] agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or

	all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the [recipient] under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such [recipient]; and refer the case to the Department of Justice for appropriate legal proceedings.	
>$2,000	Davis-Bacon Act, as amended ( ). When required by Federal program legislation, all prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (, and) as supplemented by Department of Labor regulations (, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non- Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act ( ), as supplemented by Department of Labor regulations (, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. **FEMA PA and HMGP do not require these clauses unless it is a requirement for matching funds by another federal program legislation such as CDBG-DR.** When required, prime construction contracts over $2,000 awarded by NFEs must include a provision for compliance with the Davis-Bacon Act. If applicable per the standard described above, the NFE must include the provisions at in full into all applicable contracts, and all applicable contractors must include these provisions in full in any subcontracts. In situations where the Davis-Bacon Act does not apply, neither does the Copeland "Anti-Kickback" Act. Sample contract clauses are provided in the	2 CFR 200 APPENDIX II (D); 40 U.S.C. §§ 3141-3144 and 3146-3148; supplemented by 29 C.F.R. Part 5; 40 U.S.C. § 3145; supplemented by 29 C.F.R. Part 3
> $100,000+ Mechanics or Laborers	Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a	2 CFR 200 APPENDIX II (E); 40 U.S.C. §§ 3701-3708; supplemented by 29 C.F.R. Part 5

half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

Applicability

This required contract provision applies to all procurements over $100,000 that involve the employment of mechanics, laborers, and construction work. These requirements *do not* apply to the purchase of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

Required Language

Compliance with the Contract Work Hours and Safety Standards Act.

1. *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
2. *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of
   $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.
3. *Withholding for unpaid wages and liquidated damages.* The (insert name of grant recipient or subrecipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
4. *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor

	shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section. **For contracts that are only subject to Contract Work Hours and Safety Standards Act and are not subject to the other statutes in 29 C.F.R. § 5.1 where an additional contract provision is required, FEMA suggests including the language below.** Suggested Language Further Compliance with the Contract Work Hours and Safety Standards Act. 1. The contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Records to be maintained under this provision shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Department of Homeland Security, the Federal Emergency Management Agency, and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.	
None	Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of , "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency. **This provision does not apply to all FEMA grant and cooperative agreement programs including PA and HMGP as awards under these programs do not meet the definition.**	2 CFR 200 APPENDIX II (F); Funding Agreement; definition found under 37 C.F.R. § 401.2(a).
>$150,000	Clean Air Act) and the Federal Water Pollution Control Act ( ), as amended - Contracts and subgrants of amounts in excess of $150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act ( ) and the Federal Water Pollution Control Act as amended ( ). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). Suggested Language: Clean Air Act The contractor agrees to comply with all applicable standards, orders or	2 CFR 200 APPENDIX II (G); 42 U.S.C. §§ 7401-7671q; 33 U.S.C. §§ 1251-1387

	regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 *et seq.* **The contractor agrees to report each violation to the (insert name of non-federal entity entering into the contract) and understands and agrees that the (insert name of the non-federal entity entering into the contract) will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office.** **The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal assistance provided by FEMA.** Federal Water Pollution Control Act **The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 *et seq.*** **The contractor agrees to report each violation to the (insert name of the non-federal entity entering into the contract) and understands and agrees that the (insert name of the non-federal entity entering into the contract) will, in turn, report each violation as required to assure notification to the (insert name of the pass-through entity, if applicable), Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office.** **The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal assistance provided by FEMA.**	
>$25,000	**Debarment and Suspension (Executive Orders 12549 and 12689) - A contract award (see must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.** **The following provides a debarment and suspension clause. It incorporates an optional method of verifying that contractors are not excluded or disqualified.** **Suggested Language:** **Suspension and Debarment** **This contract is a covered transaction for purposes of 2 C.F.R. Part 180 and 2 C.F.R. Part 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).** **The contractor must comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.** **This certification is a material representation of fact relied upon by (insert name of recipient/subrecipient/applicant). If it is later determined that the contractor did not comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part**	**2 CFR 200 APPENDIX II (H); 2 C.F.R. Part 180 (implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989)); 2 C.F.R. Part 3000 (Department of Homeland Security regulations for Non-procurement Debarment and Suspension, implementing 2 C.F.R. Part 180).**

	3000, subpart C, in addition to remedies available to (insert name of recipient/subrecipient/applicant), the federal government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.	
> $100,000; and Certification required for all contracts greater than $100,000	Byrd Anti-Lobbying Amendment ( ) - Contractors that apply or bid for an award exceeding $100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by . Each tier must also disclose any lobbying with non- Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award. **If applicable, contractors must sign and submit the following certification to the NFE with each bid or offer exceeding $100,000.** Required Certification: CERTIFICATION REGARDING LOBBYING (APPENDIX A, 44 C.F.R. PART 18)	2 CFR 200 APPENDIX II (I) and 24 CFR §570.303; (citing 31 U.S.C. § 1352); 44 C.F.R. § 18.110
	See 2 CFR §200.323.	2 CFR 200 APPENDIX II (J)
	See 2 CFR §200.216.	2 CFR 200 APPENDIX II (K)
	See 2 CFR §200.322.	2 CFR 200 APPENDIX II (L)
Work involves the use of materials, and the contract is for more than $10,000	A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired during the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines. Suggested Language: In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired— Competitively within a timeframe providing for compliance with the contract performance schedule; Meeting contract performance requirements; or At a reasonable price.	2 CFR 200.323; Pub. L. No. 89-272 (1965) (codified as amended by the Resource Conservation and Recovery Act at 42 U.S.C. § 6962)

	Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines webpage: https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.	
>$100,000	*§135.38 Section 3 clause* *All section 3 covered contracts shall include the following clause (referred to as the section 3 clause):* A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing. B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations. C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin. D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135. E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135. F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or	

	suspension from future HUD assisted contracts. G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).	
None; All FEMA declarations and awards issued on or after November 12, 2020.	Section 889(b)(1) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (FY2019 NDAA) and 2 C.F.R. § 200.216, as implemented by FEMA Policy 405-143-1, Prohibitions on Expending FEMA Award Funds for Covered Telecommunications Equipment or Services (Interim), prohibit the obligation or expending of federal award funds on certain telecommunication products or from certain entities for national security reasons. Effective August 13, 2020, FEMA recipients and subrecipients, as well as their contractors and subcontractors, may not obligate or expend any FEMA award funds to: Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to: (1) Procure or obtain; (2) Extend or renew a contract to procure or obtain; or (3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in , section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). (i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities). (ii) Telecommunications or video surveillance services provided by such entities or using such equipment. (iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country. (b) In implementing the prohibition under section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical	2 CFR 200.216

	support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained. (c) See , section 889 for additional information. (d) See also	
None	The Federal awarding agency must establish conflict of interest policies for Federal awards. The non-Federal entity must disclose in writing any potential conflict of interest to the Federal awarding agency or pass-through entity in accordance with applicable Federal awarding agency policy.	2 CFR 200.112
None	The Federal awarding agency and the non-Federal entity should, whenever practicable, collect, transmit, and store Federal award-related information in open and machine-readable formats rather than in closed formats or on paper in accordance with applicable legislative requirements. A machine-readable format is a format in a standard computer language (not English text) that can be read automatically by a web browser or computer system. The Federal awarding agency or pass-through entity must always provide or accept paper versions of Federal award-related information to and from the non-Federal entity upon request. If paper copies are submitted, the Federal awarding agency or pass-through entity must not require more than an original and two copies. When original records are electronic and cannot be altered, there is no need to create and retain paper copies. When original records are paper, electronic versions may be substituted through the use of duplication or other forms of electronic media provided that they are subject to periodic quality control reviews, provide reasonable safeguards against alteration, and remain readable.	2 CFR 200.336
None; All FEMA declarations and awards issued on or after November 12, 2020.	Suggested Language: If subcontracts are to be let, the prime contractor is required to take all necessary steps identified in 2 C.F.R. § 200.321(b)(1)-(5) listed below to ensure that small and minority businesses, women's business enterprises, and labor surplus area firms are used when possible. Contracting with HUB, small and minority businesses, women's business enterprises, and labor surplus area firms. (a) When possible, the recipient or subrecipient should ensure that small businesses, minority businesses, women's business enterprises, veteran-owned businesses, and labor surplus area firms (See U.S. Department of Labor's list) are considered as set forth below. (b) Such consideration means: (1) These business types are included on solicitation lists; (2) These business types are solicited whenever they are deemed eligible as potential sources; (3) Dividing procurement transactions into separate procurements to permit maximum participation by these business types; (4) Establishing delivery schedules (for example, the percentage of an order to be delivered by a given date of each month) that encourage participation by these business types; (5) Utilizing organizations such as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and (6) Requiring a contractor under a Federal award to apply this section to subcontracts.	2 C.F.R. § 200.321(b)(1)-(5)
None	Financial records, supporting documents, statistical records, and all other	2 CFR 200.334; and

	non- Federal entity records pertinent to a Federal award must be retained for a period of three years from the date of submission of the final expenditure report or, for Federal awards that are renewed quarterly or annually, from the date of the submission of the quarterly or annual financial report, respectively, as reported to the Federal awarding agency or pass-through entity in the case of a subrecipient. Federal awarding agencies and pass-through entities must not impose any other record retention requirements upon non-Federal entities. The only exceptions are the following: (a) If any litigation, claim, or audit is started before the expiration of the 3-year period, the records must be retained until all litigation, claims, or audit findings involving the records have been resolved and final action taken. (b) When the non-Federal entity is notified in writing by the Federal awarding agency, cognizant agency for audit, oversight agency for audit, cognizant agency for indirect costs, or pass-through entity to extend the retention period. (c) Records for real property and equipment acquired with Federal funds must be retained for 3 years after final disposition. (d) When records are transferred to or maintained by the Federal awarding agency or pass-through entity, the 3-year retention requirement is not applicable to the non-Federal entity. (e) Records for program income transactions after the period of performance. In some cases recipients must report program income after the period of performance. Where there is such a requirement, the retention period for the records pertaining to the earning of the program income starts from the end of the non-Federal entity's fiscal year in which the program income is earned. (f) Indirect cost rate proposals and cost allocations plans. This paragraph applies to the following types of documents and their supporting records: Indirect cost rate computations or proposals, cost allocation plans, and any similar accounting computations of the rate at which a particular group of costs is chargeable (such as computer usage chargeback rates or composite fringe benefit rates). (1) *If submitted for negotiation.* If the proposal, plan, or other computation is required to be submitted to the Federal Government (or to the pass-through entity) to form the basis for negotiation of the rate, then the 3-year retention period for its supporting records starts from the date of such submission. (2) *If not submitted for negotiation.* If the proposal, plan, or other computation is not required to be submitted to the Federal Government (or to the pass-through entity) for negotiation purposes, then the 3-year retention period for the proposal, plan, or computation and its supporting records starts from the end of the fiscal year (or other accounting period) covered by the proposal, plan, or other computation. Suggested Language for All Procurements: a. The Contractor agrees to provide (insert non-federal entity), the Texas Division of Emergency Management (TDEM), the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.	200.337

	b. The FIRM agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed. c. The CONTRACTOR agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract. d. In compliance with section 1225 of the Disaster Recovery Reform Act of 2018, the (insert name of the non-federal entity) and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.	
None	CONTRACTS WITH COMPANIES ENGAGED IN BUSINESS WITH IRAN, SUDAN, OR FOREIGN TERRORIST ORGANIZATION PROHIBITED. A governmental Corporation may not enter into a governmental contract with a company that is identified on a list prepared and maintained by the U.S. Department of Treasury under Executive Order 13224.The term "foreign terrorist organization" in this paragraph has the meaning assigned to such a term in Section 8 U.S.C.1189(a)(1) of the United States Code.	United States Code 19 U.S.C. 2511
>$100,000	PROVISION REQUIRED IN CONTRACT. (a) This section applies only to a contract that: (1) is between a governmental entity and a company with 10 or more full-time employees; and (2) has a value of $100,000 or more that is to be paid wholly or partly from public funds of the governmental entity. (b) A governmental Corporation may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and will not boycott Israel during the term of the contract.	(Adhere to your State's Local Government Code)
Option Contract Language for contracts awarded prior to Grant Award	The contract award is contingent upon the receipt of federal funds. If no such funds are awarded, the contract shall terminate.	Optional
	Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act. Suggested Language: The CONTRACTOR shall comply with the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).	42 U.S.C. 6201
	The Firm agrees that no otherwise qualified individual with disabilities shall, solely by reason of his/her disability, be denied the benefits of, or be subjected to discrimination, including discrimination in employment, under any program or activity receiving federal financial assistance.	Section 504 of the Rehabilitation Act of 1973, as amended.
	Pursuant to the *Violence Against Women Act Reauthorization of 2022*, the Grant Recipient must certify that local policies do not interfere with the residents' Right to Report Crime and Emergencies from One's Home. The certification will confirm that no ordinances, local regulations, or policies adopted by the local government and currently in effect contain any financial or regulatory penalty imposed on property owners or residents as a result of any use of emergency services, or that the Grant Recipient is actively addressing such local regulations.	Pub. L. 117-103, 136 Stat. 49

BYRD ANTI-LOBBYING CERTIFICATION

Certification for Contracts, Grants, Loans, and Cooperative Agreements-The undersigned certifies, to the best of his or her knowledge and belief, that:

1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor The Courtyard certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Karen Theis

Signature of Contractor's Authorized Official

Karen Theis, Owner

Name and Title of Contractor's Authorized Official

2/16/26

Date

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

DEBARMENT/SUSPENSION CERTIFICATION

Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (No procurement Debarment and Suspension).

This requirement applies to all FEMA grant and cooperative agreement programs.

Federal Executive Order (E .O.) 12549 "Debarment" requires that all contractors receiving individual awards, using federal funds, and all sub recipients certify that the organization and its principals are not debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency from doing business with the Federal Government. By signing this document, you certify that your organization and its principals are not debarred. Failure to comply or attempts to edit this language may disqualify your bid/proposal. Information on debarment is available at the following websites: and

The Contractor The Courtyard certifies or affirms by your signature that neither you nor your principal is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

Karen Theis

Signature of Contractor's Authorized Official

Karen Theis, Owner

Name and Title of Contractor's Authorized Official

2/16/26

Date

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

CIVIL RIGHTS COMPLIANCE PROVISIONS

1. EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause)
(For all awarded contracts that meet the definition of "federally assisted construction contract" provided in 41 CFR Part 60-1.3)

During the performance of this contract, the contractor agrees as follows:

1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

   Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or order this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

CIVIL RIGHTS COMPLIANCE PROVISIONS (CONTINUED)

8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

Karen Theis

Signature of Contractor's Authorized Official

Karen Theis, Owner

Name and Title of Contractor's Authorized Official

2-16-26

Date

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

SECTION 3. PROPOSAL SUBMISSION INSTRUCTIONS AND SPECIAL REQUIREMENTS

The following requirements and instructions **supersede** General Requirements where applicable.

3.1. SUBMISSION OF PROPOSAL

Each Respondent shall ensure that required parts of the RFP response are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Respondent is responsible for submitting: One (1) original and five (5) response copies; with all copies to include a completed copy of this specifications packet, in its entirety.

The County requests that response submissions NOT be bound by staples or glued spines.

Respondent shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or RFQ updates.

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Reponses must be submitted in complete original form by mail or messenger to the following address:
Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

Respondent shall submit response in a tightly sealed opaque envelope or box, plainly marked "SEALED RFP RESPONSE." The outside of the envelope of box shall also include the RFP Number, RFP Name, RFP Due Date, and the Respondent's Name and Address; and shall be addressed to the Purchasing Agent.

All submissions must be received by 11:00 am CT, Wednesday, February 18, 2026

- Late responses will not be accepted and will be returned unopened to the Respondent.
- Jefferson County will not accept any responsibility for responses being delivered by third party carriers.
- RFP responses will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.
- Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this RFP.
- All responses submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.
- All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

Please direct questions to Cindy Greene, Contract Specialist at 409-835-8593 or via email at . If no response in 72 hours, contact Deborah Clark, Purchasing Agent at 409-835-8593 or via email at .

Courthouse Security:
All visitors to the Courthouse must pass through Security. Respondents planning to hand deliver proposals must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal. Mondays and Tuesdays are particularly heavy days.

In response to the Covid-19 pandemic, Jefferson County will be implementing precautionary measures as currently recommended by the CDC within its facilities.

Respondents are strongly urged to plan accordingly.

COUNTY HOLIDAYS (2026):

~~January 1, 2026 (Thursday) – New Year's~~
January 19 (Monday) - Martin Luther King, Jr. Day
April 3 (Friday) - Good Friday
May 25 (Monday) - Memorial Day
June 19 (Friday) - Juneteenth
July 3 Observed (Friday) - Independence Day
September 7 (Monday) - Labor Day
November 11 (Wednesday) - Veteran's Day
November 26 & 27 (Thursday & Friday) - Thanksgiving
December 24 & 25 (Thursday & Friday) Christmas

Submissions During Time of Inclement Weather, Disaster, or Emergency:

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the RFP closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the RFP and urgent County requirements preclude amendment to the RFP, the time specified for receipt of Statements of Qualifications will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

3.2 PRE-PROPOSAL CONFERENCE

Due to the nature of this RFP, there will not be a Pre-Proposal Conference. If you would like to schedule a site visit, please contact. Cindy Greene, Contract Specialist at 409-835-8593 or via email at . If no response in 72 hours, contact Deborah Clark, Purchasing Agent at 409-835-8593 or via email at .

Proposals will be opened publicly in a manner to avoid public disclosure of contents; however, only names of Proposers will be read aloud.

3.3 QUESTIONS AND DEADLINE FOR QUESTION SUBMISSION

Questions may be emailed to **Cindy Greene, Contract Specialist at or faxed at: 409-835-8456. If no response in 72 hours, contact Deborah Clark, Purchasing Agent via email at .**

The Deadline for asking questions or requesting additional information (in writing) **is 5:00 pm, CT, Friday, January 30, 2026.**

3.4 TENTATIVE SCHEDULE OF EVENTS

January 13, 2026	**Issuance of Request for Proposal**
February 18, 2026	**Deadline Submission (late proposals will not be considered)**
February 20, 2026	**Proposals distributed to Evaluation Committee**
February 24, 2026	**Evaluation Committee Convenes to Tabulate Scoring and Determines Short List**
February 27, 2026	**If Applicable: Conduct Interview/Best and Final Offer/Short List**
March 4, 2026	**Recommendation for Award**

Please note:
The above schedule of events is *tentative* in nature. Dates listed are subject to change.

SECTION 4. PROPOSAL FORMAT REQUIREMENTS

4.1 INTRODUCTION TO PROPOSAL FORMAT REQUIREMENTS

Each proposal submitted in response to this RFP must be organized to correspond with those numbered sections of this RFP that require a response. Failure to arrange the proposal as requested may result in the disqualification of the proposal. Conciseness and clarity of content are emphasized and encouraged. Vague and general proposals will be considered non-responsive, and will result in disqualification. The response must be complete. Failure to provide the required information may result in the disqualification of the proposal. All pages of the proposal must be numbered and the proposal must contain an organized, paginated table of contents corresponding to the sections and pages of the proposal.

The County requests that proposal submissions NOT be bound by staples or glued spines.

4.2 ORGANIZATION OF PROPOSAL CONTENTS

Each proposal must be organized in the manner described below:

A. Transmittal Letter

B. Table of Contents

C. Executive Summary

D. Proposer Identifying Information

E. Proposer Personnel and Organization

F. Cost Proposal Form Page 50

G. Copy of RFP Specifications and any Addenda in their entirety.
(Note: All forms should be completed, and any information requested should be inserted/included)

4.3 TRANSMITTAL LETTER

The Proposer must submit a transmittal letter that identifies the entity submitting the proposal, and includes a commitment by that entity to provide the services required by the County. The transmittal letter must state that the proposal is valid for **(90)** days from the deadline for delivery of proposals to the County. Any proposal containing a term of less than **(90)** days for acceptance will be rejected as non-responsive.

The transmittal letter must be signed by a person legally authorized to bind the Proposer to the representations in the response. In the case of a joint proposal, each party must sign the transmittal letter. The Proposer also must indicate, in its transmittal letter, why it believes that it is the most qualified Proposer to provide the services described in this RFP.

The transmittal letter must include a statement of acceptance of the terms and conditions of the contract resulting from this RFP. If Proposer takes exception to any of the proposed terms and conditions stated in this RFP, those exceptions must be noted in the transmittal letter. However, Proposer must realize that failure to accept the terms specified in this proposal may result in disqualification of the proposal.

4.4 TABLE OF CONTENTS

Each proposal must be submitted with a table of contents that clearly identifies and denotes the location of each title and subtitle of the proposal. Additionally, the table of contents must clearly identify and denote the location of all enclosures of the proposal. The table of contents must follow the RFP's structure as much as is practical.

4.5 EXECUTIVE SUMMARY

The Proposer must provide an executive summary of its proposal that asserts that the Proposer is providing in its response all of the requirements of this RFP. The executive summary must not exceed three (3) pages, and must represent a full and concise summary of the contents of the proposal. The executive summary must not include any information concerning the cost of the proposal. The Proposer must identify any services that are provided beyond those specifically requested. If the Proposer is providing services that do not meet the specific requirements of this RFP, but in the opinion of the Proposer are equivalent or superior to those specifically requested, any such differences must be noted in the executive summary. However, the Proposer must realize that failure to provide the services specifically required may result in disqualification of the proposal.

4.6 PROPOSER IDENTIFYING INFORMATION

Proposers must provide the following identifying information with their proposal submission:

a. Name and address of business entity submitting the proposal;

b. Type of business entity (i.e., corporation, partnership);

c. Place of incorporation, if applicable;

d. Name and location of major offices and other facilities that relate to the Proposer's performance under the terms of this RFP;

e. Name, address, business and fax number of the Proposer's principal contact person regarding all contractual matters relating to this RFP;

f. The Proposer's Federal Employer Identification Number, Jefferson County Vendor Number and Jefferson County Business License Number, if any;

g. Full name and address for each member, partner, and employee of the Proposer (and any subcontractors) who will perform services on this project; and

h. A statement regarding the financial stability of the Proposer, including the ability of the Proposer to perform the functions required by this RFP and to provide those services represented by the Proposer in its response.

4.7 PROPOSER'S PERSONNEL AND ORGANIZATION

The Proposer must provide resumes of all key personnel that will be involved in performing the project, and must provide for each person:

a. Full name (including full middle name);

b. An employment history;

c. A specific description of relevant experience and skills that person has in connection with the conduct of financial advisory services that is the subject of this RFP (limit one page);

d. A specific indication of what role the individual will have in this project; and

e. Any additional helpful information to indicate the individual's ability to aid the Proposer in successfully performing the work involved in this RFP (limit to one page).

The resumes must present the required personnel in sufficient detail as to provide the County an indication that the personnel involved can perform the work specified in this RFP. All proposed personnel will be subject to the County approval.

Jefferson County is committed to using the selected Performance Review Company according to reasonable and well-planned timeframes, to the extent possible. Jefferson County is committed to making available its personnel in a similar manner to enable the Performance Review team able to perform its duties in a timely basis.

Each Proposer is required to make a statement as to the availability of key personnel to Jefferson County when required. The key personnel who are to work on this project, identified in the proposal as such, are considered to be essential to the services to be provided. No substitutions of key personnel following contract award will be made without the prior written consent of Jefferson County Commissioners' Court. All requested substitutes must be submitted to the Jefferson County Commissioners' Court, or, together with their resumes, for approval.

Each of the successful Proposer's personnel is subject to removal from this project by Jefferson County Commissioners' Court. In addition, if the person removed is among the project's key personnel, the replacement must be approved by Jefferson County Commissioners' Court. All replacements of key personnel will be paid at the same rate as the person who was replaced, unless the rate normally charged by the replacement is lower, in which case the lower rate will be paid. All replacements of key personnel must be of equal or superior experience as the person replaced.

If applicable, each Proposer must provide a detailed statement setting forth the proposed hourly billing rate for all key personnel, and for each additional staff member to be assigned to the project. The hours each of the key personnel and other staff members are projected to work on the project.

Each Proposer must provide any equipment, software, or data communication lines required by the successful Proposer's personnel to complete the work specified in this document. Each Proposer also must identify any personnel related through blood or marriage to the County or to any current employee of the County.

Each Proposer must provide an organizational chart covering the services offered in its proposal, indicating lines of authority, names, titles, and functions of individuals assigned. The Proposer must assign a contact person to the project.

SECTION 5. PROJECT OBJECTIVE AND SCOPE OF SERVICES

5.1 OBJECTIVE

Jefferson County seeks a Contractor to provide Cafeteria Services for Jefferson County Courthouse. The contractor shall occupy, staff and operate a café serving breakfast, lunch and break time offerings in a cafeteria style format within the space specified in Attachment A (floor plan). It is the intention of Jefferson County that the food and beverage service be of high quality. All food and beverage areas shall be kept clean, orderly and sanitary at all times and in strict accordance with all applicable food service establishment requirements, laws, ordinances, rules and regulations of this IFB. The successful contractor will pay Jefferson County a monthly lease. The cafeteria shall operate Monday through Friday, with the exception of County Holidays and Mandated Disaster Closures during the hours of/or about 7:00 am – 3:30 pm. The current County Holidays are as follows (this is subject to change):

New Year's Day
Martin Luther King, Jr. Day
Good Friday
Memorial Day
Juneteenth
Independence Day
Labor Day
Veterans' Day
Thanksgiving Day
Day after Thanksgiving
Christmas Eve
Christmas Day

5.2 BACKGROUND

Jefferson County has approximately 1200 full and part time employees. Members of the general public visiting the Courthouse are also available as a customer base. The existing 3,500 square foot cafeteria facility seats approximately 97 persons and is equipped with tables and chairs in the dining area. The kitchen/serving area is equipped with, but not limited to, basic modern commercial grade hardware for cooking, cooling and freezing, heating, baking, frying, mixing and washing. The cafeteria also has food preparation areas, cold and hot food serving lines, and seating areas. There are two conference rooms in the cafeteria area that the contractor can use.

5.3 REQUIRED INFORMATION

The following information shall be included in the offeror's proposal:

- Provide approach to making the Courthouse Café successful and approach to sustaining a versatile healthy and casual dining experience at a reasonable price.
- State any food service experience with a list of owned/operated food service establishments. Include time periods.
- Provide a versatile menu of items that the contractor will offer including pricing. The menu must include healthy food options (i.e. salads, grilled chicken, sandwiches). The sample menu must include full meal pricing as well as a la carte pricing. Breakfast, lunch and break time meals shall be included. Include proposed hours of operation. The following are the suggested time periods:
    - Breakfast: 7:00 am – 10:00 am
    - Break Time Snack: 10:00 am – 11:00 am and 1:30 pm – 3:30 pm
    - Lunch: 11:00 am – 1:30 pm

- Proposed monthly lease amount should be included on the Cost Proposal Form (page 50) of the RFP.
- Provide any additional information pertinent to the offeror's proposal.

5.4 RESPONSIBILITIES OF THE COUNTY

- Grant to the contractor for a stipulated period, subject to the contract requirements and conditions set herein, the right to establish, manage, and operate a cafeteria-type restaurant and snack bar within the County Courthouse and, in connection therewith, to prepare and sell food, non-alcoholic beverages, and other such products as the County may authorize.
- Approve any and all designs, furnishings, decorations, alterations, improvements, advertisements, etc. prior to any such action being taken by the contractor.
- Provide the cafeteria facility standard utilities at no charge to the contractor.
- Provide all preventative maintenance and repairs on all County owned equipment related to the cafeteria operation, including, but not limited to, refrigerators, coolers, freezers, ice machines, stoves, grills, warmers, serving lines, etc. that are used directly by the cafeteria operation.
- Maintain all building systems (HVAC, electrical, structural, etc.)
- Pest control services for the cafeteria will be provided by the County.
- Jefferson County carries the responsibility to correct any repair of County structures or County equipment as a result of inspection violation by state and local authorized health department offices, fire department and other agencies relative to safety requirements.
- Jefferson County will complete a background check and issue identification badges to all employees of the Contractor. These identification badges must be worn at all times. It is the responsibility of the Contractor to notify the County of any termination or hire of employees.
- Jefferson County will issue keys to the Contractor for the Cafeteria area. It is the responsibility of the Contractor to report any lost or damaged keys to the County.

5.5 RESPONSIBILITES OF THE CONTRACTOR - OPERATIONS

- Operate and manage, under the Contractor's name, a cafeteria type operation within the County Courthouse Cafeteria.
- Purchase, prepare and serve all cafeteria food items. Grilling and/or cooking of foods on site is desired. The menu offerings could be prepared off site and transported to the cafeteria; however, on-site is preferred. Food items prepared off-site must be prepared at a location and transported conforming to all food establishment and health department requirements of this Invitation for Bid. Breakfast, lunch and break food options must be provided. Meal service shall include dine-in and to-go orders.
- County is not responsible for any loss or damage resulting from a power failure, natural or man-made disaster.

- Provide all cookware, dishes and utensils need for food preparation and service.
- Provide all condiments, containers, plates, utensils, napkins and to-go containers for food service.
- Provide fountain drink dispensing machines and/or coolers.
- Contractor is responsible for maintaining their equipment.
- Ensure proper and adequate staffing to provide efficient services.
- Contractor shall comply with all laws (State and Federal), and local ordinances, as they may relate to employment practices.
- Proper food handling gloves and proper hair restraints are required.
- Provide all custodial and janitorial service to the cafeteria area during all normal hours of operation. Contractor will provide all cleaning supplies necessary to maintain the Courthouse Cafeteria. Trash must be removed daily.
- The business must be operated and maintained at all times in compliance with any and all applicable health and sanitary standards prescribed by Jefferson County Environmental Control. We have included a cleaning schedule as an example of our expectations and stewardship while leasing Jefferson County property. (Attachment B)
- Contractor will comply with Jefferson County Best Management Practices for Fats, Oil and Grease (FOG) Control Program. (Attachment C)
- Comply with FDA Code 2017 with the Texas Supplement.
- Contractor shall be responsible for all licenses and permits necessary to comply with all local, state and federal mandates pertaining to food service operations. The Food Permit is issued through Jefferson County Environmental Control.
- Contractor is responsible for correcting any violations issued by state and local authorized health department officials that do not pertain to the repair of County owned equipment or structures.
- Display all menu items and menu pricing. This includes meals, beverages and a la carte items. Make every effort to adhere to reasonable food cost ranges as submitted in the proposal. The pricing must be posted and displayed in a manner that is visible to all prospective patrons from a distance as well as close up. Menu board purchase shall be the responsibility of the Contractor and must be approved by the County.
- Contractor must accept cash, credit and debit cards as a method of payment for goods and services. All equipment and fees associated with credit and debit card transactions will be the responsibility of the Contractor. Any fees to be collected for any purchases when a credit or debit card is used must be approved by the County.
- Schedule outside vendors for conference room rental space in the cafeteria area and collect appropriate fees.

5.6 RESPONSIBILITES OF THE CONTRACTOR – EMPLOYEES

- All employees must pass a background check through the County.
- Employees must wear their County issued Identification Badge at all times.

- Provide any and all employees insurances and/or benefits to its employees. The County assumes absolutely no responsibility pertaining thereto.
- Assume full and total responsibility and liability for all employees and operation of the Contractor.
- One licensed Food Manager is required. All other staff must have a Food Handler License. The training course must be accredited by the Texas Department of State Health Services (DSHS) or American National Standards Institute (ANSI).
- All employees must complete a Conditional or Food Employee Reporting Agreement. (Attachment D)
- Ensure employees are properly attired/uniformed when performing work assignments.

5.7 TERMS

- Contract Term: One (1) year from the date of award with an option to renew for four (4) additional one-year renewals.
- The monthly lease payment is due by the 5th of each month.
- The physical facilities made available to the contractor under this contract shall only be used by the contractor during regular County business hours.
- Any modifications to the cafeteria space must be approved by Jefferson County due to historical purposes.
- Menu pricing changes must be approved by the County.

SECTION 6. PROPOSAL REQUIREMENTS

6.1 OBJECTIVE OF PROPOSAL

Each proposal must include a detailed work plan that addresses how work for Jefferson County would be performed. It shall include detailed personnel assignments. A detailed description of major deliverables to be provided must also be included.

The proposal must include a sample timeline for the completion of each major task included in the proposal to the extent practicable, as well as projected completion dates for each major activity required. All proposals submitted in response to this RFP become the property of Jefferson County.

6.2 PROPOSER EXPERIENCE

The Successful Proposer must demonstrate extensive experience in and understanding of the nature of research and analysis required in order to carry out the intent of this project.

The proposal must identify all key personnel who are to be part of the proposed consultant team and detail their experience. Jefferson County Commissioners' Court reserves the right to approve each member of the team and to request substitutions.

The Proposer must describe in detail the current and historical experience the Proposer and its subcontractors have that would be relevant to completing the project. The Proposer must provide descriptions and references for all engagements of comparable complexity and sensitivity to the requirements of this RFP that have been conducted within the past five (5) years. References must contain the name of key contacts and a telephone number. The description of experience must be detailed and cover all relevant contracts that the Proposer and its subcontractors, as applicable, have had and all experience similar to this contract that qualifies the Proposer to meet the requirements of this contract. Included must be the names, titles, addresses, and current telephone numbers of organizations that may be contacted to verify qualifying experience

The Proposer must indicate whether the organizations so listed are included for the purpose of verifying the Proposer's qualifying experience, or the qualifying experience of its subcontractors. Each experience statement also must include the name and types of services directly provided by the Proposer under the contract, and whether the Proposer was the contractor or subcontractor.

The Proposer must briefly state why it believes its proposed services best meet the County's needs and RFP requirements, and the Proposer also must concisely describe any additional features, aspects, or advantages of its services in any relevant area not covered elsewhere in its proposal.

6.3 TYPE OF SERVICES PROVIDED BY PROPOSER

A. A description of services that may be utilized under this RFP includes:

1. Food Services

6.4 LAWS AND REGULATIONS

The Food Service Firm(s) must comply with all laws, ordinances, and rules and regulations which govern the work specified in this contract.

SECTION 7. PROPOSAL EVALUATION AND SELECTION PROCESS

7.1 INTRODUCTION TO EVALUATION AND SELECTION PROCESS

The proposal evaluation and selection process is detailed in this section, as are other factors, and the format in which the cost response of each proposal must be submitted.

7.2 COST PROPOSAL

The Proposer must utilize the form provided on **PAGE 50 of these specifications** in its submission of a cost proposal in response to this RFP. **The cost proposal must be included in each copy of the proposal. Any reworked version of this provided form that is intended to be a substitute for PAGE 50 of these specifications, that is provided by a Proposer may be determined as non-responsive, and may result in the proposal's disqualification.**

7.3 EVALUATION COMMITTEE

Because of the diversity of the departments and activities of the County, the Purchasing Agent will appoint the Evaluation Committee for this Request for Proposals. The Purchasing Agent may appoint a chairperson and no less than two (2) other members for the committee. Typically, the committee will consist of at least one professional in the task required, a person knowledgeable about procurement practices, and either a representative of the department requesting the project, or the department executing the project. However, this structure is not binding and subject to change at the discretion of the Purchasing Agent. Other members may be appointed to the Evaluation Committee as necessary and appropriate, but the total number of persons committee shall not exceed five (5) persons. Committee appointments shall be in writing and shall briefly describe the scope of the project and, if necessary, the primary disciplines required to accomplish the project in order to assist the committee in developing a list of firms that might best accomplish the work required. Committee membership and project requirements will vary from project to project. Therefore, a firm rated number one for one project could be considered not qualified or ranked lower on another project.

7.4. EVALUATION PROCESS

RFP Submittals that do not conform to the instructions or which do not address all the services as specified within this RFP specifications packet may be eliminated from consideration. However, Jefferson County reserves the right to accept such a submittal if it is determined to be in the best interest of the County.

While Jefferson County appreciates a brief, straight-forward, and concise reply; proposer must fully understand that the evaluation is based on the information provided. Accuracy and completeness are essential. Omissions, ambiguous, and equivocal statements may be construed against the proposer. The proposal document may be incorporated into any contract which results from this RFP, and vendor(s) are cautioned not to make claims or statements it is not prepared to commit to contractually. Failure of the vendor to meet such claims will result in a requirement that the vendor provide resources necessary to meet submitted claims.

The Jefferson County Purchasing Department may initiate discussions with selected vendors; however, discussions may not be initiated by vendors.

The Jefferson County Purchasing Department expects to conduct discussions with vendor's representatives authorized to contractually obligate the vendor with an offer. **Vendors shall not contact any Jefferson County personnel during the RFP process without the express permission from the Jefferson County Purchasing Agent. The Purchasing Agent will disqualify any vendor who has made site visits, contacted Jefferson County personnel, or distributed any literature without authorization from the Jefferson County Purchasing Department.**

All correspondence relating to this RFP, from advertisement to award shall be sent to the Jefferson County Purchasing Department. All presentations and/or meetings between Jefferson County and the vendor relating to this RFP shall be coordinated by the Jefferson County Purchasing Department.

Selected vendors may be expected to make a presentation/product demonstration to an Evaluation Committee and Commissioners' Court. Proposals, vendor presentations, and product/service evaluations may develop into

negotiating sessions with the vendor(s) as selected by the Evaluation Committee. Jefferson County expects to conduct negotiations with vendor representatives authorized to contractually obligate the vendor with an offer. If vendor is unable to agree to contract terms and conditions, Jefferson County reserves the right to terminate contract negotiations with that vendor and initiate negotiations with another vendor. In addition to a presentation, visits by the Evaluation Committee to representative vendor client sites may be conducted where the proposed solution can be demonstrated in a production environment.

7.5 PROPOSAL EVALUATION CRITERIA:

a. RESPONSIVENESS – 15%

This refers to the proposal's complete responsiveness to all written specifications and requirements contained in this RFP. This includes all information required in this RFP.

b. IMPLEMENTATION PLAN – 25%

Emphasis is on the efficiency and comprehensiveness of the methods to be used in performing the services requested by this RFP and in managing the project. This is the implementation plan that will be used in making the Courthouse Café successful and sustainable.

c. PROPOSER QUALIFICATIONS – 25%

This refers to the overall qualifications of Proposer and its past experience in providing similar food services to those requested by this RFP. It also refers to an evaluation of the quality of Proposer's performance on previous local government projects.

d. FOOD SERVICE OFFERINGS – 25%

This refers to the food service menus of the proposer. A variety of food choices must be on the proposed menu including healthy options.

e. PROPOSED LEASE AMOUNT – 10%

This is the proposed lease amount. While this will be an important factor, it will be considered as just one factor in the evaluation and selection process.

Transmittal Letter

The Courtyard Cafe commits to providing service for the courthouse cafe.

The proposal is valid for 90 days from February 17, 2026

Karen Theis - Owner

Proposer's Personnel and organization

Karen D. Theis
Owner of The Courtyard - 2001

5.3 Required Information

The Courtyard Cafe will provide homemade food with quality and consistency to insure an atmosphere of convenience and freshly prepared food

The Courtyard Cafe has been owned and operated by Karen Theis since 2001

The Courtyard

4321 Lincoln Ave.
Groves, Texas
409-962-2850

My name is Karen Theis, I am the owner of The Courtyard café in Groves, TX. I have operated my business at my current location for just over 23 years.

I am submitting a proposal for providing food and services for the café at the courthouse in Beaumont, TX. What I am proposing is primarily a prepared meal, snacks, and desserts that customers can pick up quickly and conveniently. Tea, coffee, and canned and bottled drinks will also be available.
This plan is to help determine the revenue that the café will generate and be able to staff the café accordingly.

I currently provide meals in a marketplace at Cheniere refinery in Sabine Pass. I do have experience in preparing food and maintaining the quality of food for this type of set up.

The goal is to be able to grow this business into a full-service café while maintaining the quality and stability of the business.

I am excited about the opportunity to serve you.

Sincerely,
Karen Theis

The Courtyard Cafe

Grab & Go

Designed for convenience, our Express Location offers a variety of freshly Prepared Grab & Go options including breakfast, sandwiches, wraps, quesadillas, entrees, snacks and desserts.

Grab & Go at The Courtyard Café

We will offer a rotating variety of house-made snacks, breakfast favorites, fresh sandwiches, wraps, quesadillas, hearty entrees, and delicious desserts

SNACKS

"Fire" Crackers	$2.00
Charcuterie Box	$10.00
Deviled Eggs	$5.00
Elote	$4.00
Protein Box	$8.00
Snakle Box	$7.00
Spinach Dip	$5.00
Tamales & Queso	$5.00

BREAKFAST

Bacon Burrito - 2 pack	$6.00
Bacon English Muffin	$4.00
Biscuits & Gravy	$5.00
Breakfast Bowl	$7.00
Cinnamon Rolls	$6.00
French Toast	$5.00
Muffins	$3.00
Pancakes - 3 stack	$5.00
Sausage Buritto - 2 pack	$6.00
Sausage English Muffin	$4.00
Sausage, Egg & Cheese Biscuit	$4.00

SALADS

Broccoli Salad	$4.00
Ceasar Pasta Salad w/chicken	$8.00
Chef Salad	$8.00
Chicken/Chilled Pasta Salad	$10.00
Grilled Chicken Salad	$8.00
Pasta w/Mozzarella Bazil	$4.00
Potato Salad	$4.00
Shrimp/Chilled Pasta Salad	$10.00
Southwest Chicken Salad	$8.00

SANDWICHES

California Club w/Avocado	$10.00
Club Sandwich	$9.00
Dagwood Sandwich	$10.00
Deviled Egg Sandwich	$8.00
French Dip Sandwich	$12.00
Grinder Sandwich	$9.00
Ham & Cheese Slider	$12.00
Ham & Swiss Rye	$8.00
Muffuletta	$10.00

QUESADILLA & WRAPS

Boudin Pepperjack Quesadilla	$9.00
Brisket Quesadilla	$10.00
Buffalo Chicken Wrap	$10.00
Ceasar Wrap	$12.00
Cheese Steak Quesadilla	$10.00
Chicken Bacon Quesadilla	$9.00
Club Wrap	$12.00
Grilled Buffalo Chicken Wrap	$10.00
Grilled Chicken Wrap	$12.00
Southwest Wrap	$12.00

POTATOES

Brisket Stuffed Potato	$12.00
Chicken Fried Steak Potato	$12.00
Pulled Pork Potato	$10.00
Ribeye Baked Potato	$12.00
Taco Spud	$10.00

ENTRÉE'S	
4 Meat Pizzaidda	$10.00
7 Peppered Pork Mac	$10.00
Bacon Cheddar Ham Steak	$12.00
Beef & Bean Burrito	$8.00
Beef Enchilada Plate	$12.00
Boudin Mini Mac	$7.00
Brisket Mini Mac	$7.00
Burrito Bowl	$10.00
Burrito -Dilla	$10.00
Cajun Cracked Chicken	$7.00
Cheese Enchilada	$10.00
Chicken & Dumplings	$10.00
Chicken Alfredo	$10.00
Chicken Enchilada	$11.00
Chicken Fajitas	$12.00
Chicken Fettuccine	$10.00
Chicken Florentine	$10.00
Chicken Fried Rice	$10.00
Chicken Fried Steak	$13.00
Chicken Mini Mac	$7.00
Chicken Queso Flamedo	$11.00
Chili & Rice	$10.00
Chili Mini Mac	$7.00
Crawfish Cornbread	$10.00
Crawfish Etouffee	$12.00
Crawfish Mini Mac	$9.00
Creamy Garlic Chicken Mini	$7.00
Dirty Jambalaya Mini	$7.00
Hamburger Casserole	$10.00
Hamburger Steak	$12.00
King Ranch Casserole	$10.00
Lasanga	$10.00
Lasanga Bowl	$10.00
Meatloaf	$12.00
Mexican Cornbread	$10.00
Mexican Mini Mac	$7.00
Pork Fried Rice	$10.00
Pork, Rice/Gravy & Veggie	$10.00
Power Bowl Chicken	$11.00
Power Bowl Shrimp	$14.00
Quesabirria Ravioli	$10.00

ENTRÉE'S	
Red Beans/Rice & Zummo	$10.00
Ribeye Mini Mac	$7.00
Santa Fe Chicken	$11.00
Shrimp Alfredo	$10.00
Shrimp Creole	$10.00
Shrimp Etouffee	$12.00
Shrimp Fettuccine	$10.00
Shrimp Fried Rice	$10.00
Smothered Pork Chops	$10.00
Spaghetti & Meatballs	$10.00
Spaghetti Bake	$10.00
Spaghetti w/Sweet Sauce	$10.00
Stuffed Rigitoni	$10.00
Tamales	$10.00

DESSERTS	$4.00
Apple Pie	
Apple Spice Cake	
Banana Pudding	
Bread Pudding	
Brownies	
Buttermilk Pie	
Cajun Cake	
Caramel Surprise	
Cheesecake	
Cherry Pie	
Chocolate Pie	
Fruit Cup	
Keylime Pie	
Lemon Pie	
Peanut Butter Pie	
Pecan Pie	
Sopapilla Cake	
Strawberry Cream Cake	

PROPOSER: INSERT ALL ADDENDA BEHIND THIS PAGE.
PLEASE BE SURE TO COMPLETE, SIGN, ATTEST, AND DATE EACH ADDENDUM.

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Addendum to RFP

RFP NUMBER: RFP 26-002/CG

RFP TITLE: Cafeteria Services for Jefferson County

RFP DUE BY: 11:00 am, CST, Wednesday, February 18, 2026

ADDENDUM NO.: 2

ISSUED (DATE): February 2, 2026

To RFP Respondent: This Addendum is an integral part of the RFP package under consideration by you as a Respondent in connection with the subject matter herein identified. Jefferson County deems all sealed qualifications to have been proffered in recognition and consideration of the entire RFP Specifications Package – *including all addenda*. For purposes of clarification, **receipt of this present Addendum by a Respondent should be evidenced by returning it (signed) as part of the Respondent's sealed RFP response submission.** If the RFP response submission has already been received by the Jefferson County Purchasing Department, Respondent should return this addendum in a separate sealed envelope, clearly marked with the RFP Title, RFP Number, and RFP Opening Date and Time, as stated above.

Reason for Issuance of this Addendum: Vendor Question.

The information included herein is hereby incorporated into the documents of this present RFP matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

Witness

Rita B. Theis
Witness

Approved by ____ Date: _____

Karen Theis
Authorized Signature (Respondent)

Owner
Title of Person Signing Above

The Courtyard Cafe
Typed Name of Business or Individual

4321 Lincoln Ave, Groves, TX.
Address

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

1. **Question:** We are inquiring about the 3-door reach in refrigerator to see if it is included in the lease agreement.
   Answer: Yes, it is property of the County and included in the lease agreement.

COST PROPOSAL FORM:

Using this form, each Proposer must state its proposed lease amount. Cost will be a factor in the County's selection process.

Proposed monthly lease amount	$ 500.00
Name of Proposer:	Karen Theis dba The Courtyard
Signature:	Karen Theis
Title:	Owner

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

NON-DISCLOSURE AGREEMENT

In consideration of Jefferson County retaining the services of a consultant and because of the sensitivity of certain information which may come under the care and control of Consultant, both parties agree that all information regarding the County or any selected County agency subject to this Contract; or gathered, produced, or derived from this project (Confidential Information) must remain confidential subject to release only by permission of the County, and more specifically agree as follows:

Media releases pertaining to this RFP and/or any resulting contract, or the services to which they relate, will not be made without the prior written consent of the County, and then only in accordance with explicit written instructions from the County. The disclosure of the contents of proposals prior to the award of a contract under this RFP, or any other violation of this section, may result in disqualification.

1. The Information may be used by Consultant only to assist Consultant in connection with its engagement with the County.
2. Consultant will not, at any time, use the Information in any fashion, form, or manner except in its capacity as Independent consultant to the County.
3. Consultant agrees to maintain the confidentiality of any and all deliverables resulting from this Contract in the same manner that it protects the confidentiality of its own proprietary products of like kind.
4. The Information may not be copied or reproduced without the County's written consent.
5. All materials made available to Consultant, including copies thereof, must be returned to County upon the first to occur of; (a) completion of the project, or (b) request by the County.
6. The foregoing must not prohibit or limit Consultant use of the information (including, but not limited to, ideas, concepts, know-how, techniques and methodologies) (a) previously known to it, (b) independently developed by it, (c) acquired by it from a third party, or (d) which is or becomes part of the public domain through no breach to Consultant of this agreement.
7. This agreement shall become effective as of the date Information is first made available to Consultant and must survive the contract and be a continuing requirement.
8. The breach of this Nondisclosure Agreement by Consultant shall entitle the County to immediately terminate the Agreement upon written notice to Contractor for such breach. The parties acknowledge that the measure of damages in the event of a breach of this Nondisclosure Agreement may be difficult or impossible to calculate, depending on the nature of the breach. Regardless of whether the County elects to terminate the Agreement upon the breach hereof, the County may require Consultant to pay to the County the sum of $1,000 for each breach as liquidated damages. This amount is not intended to be in the nature of a penalty, but is intended to be a reasonable estimate of the amount of damages to the County in the event of a breach hereof by Consultant. Comptroller does not waive any right to seek additional relief, either equitable or otherwise, concerning any breach of this Agreement.

[Printed Name of Consultant]

By: Karen Dhein
Title: Owner
Date: 2-16-26

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

RESPONDENT INFORMATION FORM

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

RFP Number & Name: (RFP 26-002/CG), Cafeteria Services for Jefferson County

Proposer's Company/Business Name: The Courtyard

Proposer's TAX ID Number: 59-3832753

***If Applicable*:** **HUB Vendor No.** _____ **DBE Vendor No.** _____

Contact Person: Karen Theis **Title:** Owner

Phone Number (with area code): 409-293-1079

Alternate Phone Number if available (with area code): 409-962-2850

Fax Number (with area code): —

Email Address: courtyard1@sbcglobal.net

Mailing Address (Please provide a physical address for bid bond return, *if applicable*):

4321 Lincoln Ave
Address

Groves, TX 77619
City, State, Zip Code

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

VENDOR REFERENCES FORM

Proposer: Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or similar products and/or services as contained in this specification package were recently provided.

REQUIRED FORM
Proposer: Please complete this form and include with proposal submission.

REFERENCE ONE

Government/Company Name: Motiva

Address: 2555 Savannah Avenue, Ft Arthur, Tx 77640

Contact Person and Title: Caitlin Hernandez HSE Administrative Assistant

Phone: 409-989-7294 Fax:

Email Address: Caitlin.hernandez@motiva.com Contract Period: Currently

Scope of Work: Catering

REFERENCE TWO

Government/Company Name: Texas Family Care Network

Address:

Contact Person and Title: Shari Pullium Sr Community Engagement Director

Phone: 409-718-7220 Fax:

Email Address: Contract Period: Currently

Scope of Work: Catering

REFERENCE THREE

Government/Company Name: Thriving House Church

Address:

Contact Person and Title: April Blanchard

Phone: 409-719-3421 Fax:

Email Address: Contract Period: Currently

Scope of Work: Catering

SIGNATURE PAGE

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would Respondent be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions?.....Yes ☒ No ☑

This Proposal/RFP Response shall remain in effect for **90 days** from RFP opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this proposal is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Request for Statements of Qualification, Conditions of RFP Response, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this RFP response in collusion with any other Respondent, and that the contents of this RFP response as to prices, terms or conditions of said response have not been communicated by the undersigned nor by any employee or agent to any other RFP Respondent or to any other person(s) engaged in this type of business prior to the official opening of this RFP. And further, that neither the Respondent nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to respond or not to respond thereon.

The Courtyard RFP Respondent (Entity Name)	Karen Theis Signature
4321 Lincoln Ave Street & Mailing Address	Karen Theis Print Name
Groves, Tx 77619 City, State & Zip	2-16-26 Date Signed
409-962-2850 Telephone Number	N/A Fax Number

Courtyard1@sbcglobal.net
E-mail Address

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Karen Theis

Signature of Contractor's Authorized Official

Karen Theis, Owner

Name and Title of Contractor's Authorized Official *(Please Print)*

2-16-26

Date

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether sub-awardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.

2. Identify the status of the covered Federal action.

3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.

4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the sub-awardee, e.g., the first sub-awardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.

5. If the organization filing the report in item 4 checks "Sub-awardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.

6. Enter the name of the federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.

7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.

8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitations for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Included prefixes, e.g., "RFP-DE-90-001."

9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.

10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).

11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503

Approved by OMB
0348-0046

Disclosure of Lobbying Activities

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure)

Type of Federal Action:	**Status of Federal Action:**	**Report Type:**
a. contract ____ b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	a. bid/offer/application ____ b. initial award c. post-award	a. initial filing ____ b. material change

Name and Address of Reporting Entity:	**If Reporting Entity in No. 4 is Sub-awardee,** Enter Name and Address of Prime:
____ Prime _____ Sub-awardee Tier_____, if Known: N/A **Congressional District, if known:**	N/A **Congressional District, if known:**
Federal Department/Agency: N/A	**7. Federal Program Name/Description:** N/A CFDA Number, *if applicable*: _____
Federal Action Number, *if known:* N/A	**9. Award Amount,** *if known:* $ N/A
10. a. Name and Address of Lobbying Registrant *(if individual, last name, first name, MI):* N/A	**b. Individuals Performing Services** *(including address if different from No. 10a)* *(last name, first name, MI):* N/A
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.	**Signature:** Karen Theis **Print Name:** Karen Theis **Title:** Owner **Telephone No.:** 409-962-2858 **Date:** 2/16/26
Federal Use Only	**Authorized for Local Reproduction** **Standard Form - LLL (Rev. 7-97)**

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

(A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;

(B) a transaction conducted at a price and subject to terms available to the public; or

(C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

***

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds $2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than $100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

Form provided by Texas Ethics Commission www.ethics.state.tx.us Revised 11/30/2015

CONFLICT OF INTEREST QUESTIONNAIRE

CONFLICT OF INTEREST QUESTIONNAIRE — FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.	OFFICE USE ONLY
This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a). By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code. A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.	Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

N/A

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information in this section is being disclosed.**

_____
Name of Officer

This section (item 3 including subparts A, B, C, & D) must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☒ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐ Yes ☒ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more?

☐ Yes ☒ No

D. Describe each employment or business and family relationship with the local government officer named in this section.

4

Karen Ohm — Signature of vendor doing business with the governmental entity

2-16-26 — Date

Adopted 8 7 2015

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

LOCAL GOVERNMENT OFFICER
CONFLICTS DISCLOSURE STATEMENT – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT — FORM CIS

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20 _____, to certify which, witness my hand and seal of office.

_____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

Adopted 8/7/2015

THIS FORM IS FOR OFFICE USE ONLY

GOOD FAITH EFFORT (GFE)

Determination Checklist

This information must be submitted with your proposal.

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting HUBs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant, and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of HUB Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting HUB Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .

☐ Yes ☐ No 1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum HUB Subcontractor participation?

☐ Yes ☐ No 2. **Notify** in writing a reasonable number of HUBs, allowing sufficient time for effective participation of the planned work to be subcontracted?

☐ Yes ☐ No 3. **Provide** HUBs that were genuinely interested in bidding on a subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?

☐ Yes ☐ No 4. **Negotiate** in good faith with interested HUBs, and not reject bids from HUBs that qualify as lowest and responsive bidders?

☐ Yes ☑ No 5. **Document** reasons HUBs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected HUBs?

☐ Yes ☑ No 6. If Prime Contractor/Consultant has zero (0) HUB participation, **please explain the reasons why.** N/A

If "No" was selected, please explain and include any pertinent documentation with your proposal.
If necessary, please use a separate sheet to answer the above questions.

Karen Theis
Printed Name of Authorized Representative

Karen Theis
Signature

Owner
Title

2-16-26
Date

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

Notice of Intent (NOI) to Subcontract with Historically Underutilized Business (HUB)

This Information must be submitted with your proposal.

Proposer intends to utilize subcontractors/sub-consultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Instructions for Prime Contractor/Consultant: Proposer shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract. Please submit one form for each HUB Subcontractor/Sub-consultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: The Courtyard HUB: p Yes (p No)

Address: 4321 Lincoln Groves TX 77619
Street City State Zip

Phone (with area code): 409-962-2850 Fax (with area code): —

Project Title & No.: CAFETERIA SERVICES / RFP 26-002/CG

Prime Contract Amount: $ NA

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Karen Theis	Karen Theis	2-16-26
Printed Name of Contractor Representative	Signature of Representative	Date
_____	_____	_____
Printed Name of HUB	Signature of Representative	Date

NOTE: NOTHING ON THIS NOTICE OF INTENT FORM IS INTENDED TO CONFER ANY RIGHTS, EXPRESSED OR IMPLIED, TO ANY THIRD PARTIES.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "HUB Subcontractor/Sub-consultant Change Form" must be completed and faxed to 409-835-8456.

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

Page 1 of 4

This information must be submitted with your proposal.

Proposer intends to utilize subcontractors/sub-consultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Prime Contractor: The Courtyard HUB: ☐ Yes ☒ No

HUB Status (Gender & Ethnicity): N/A

Address: 4321 Lincoln Groves TX 77619
Street City State Zip

Phone (with area code): 409-962-2850 Fax (with area code): _____

Project Title & No.: Cafeteria Services IFB/RFP No.: RFP 26-002/CG

Total Contract: $ N/A Total HUB Subcontract(s): $ _____

Construction HUB Goals: 12.8% MBE:: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African-American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR HUB OFFICE USE ONLY:

Verification date HUB Program Office reviewed and verified HUB Sub information Date: _____ Initials: _____

PART I. HUB SUCONTRACTOR DISCLOSURE

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

Page 2 of 4

HUB Subcontractor Disclosure
PART I: Continuation Sheet (Duplicate as Needed)

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $_____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $_____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

All HUB Subcontractor Participation may be verified with the HUB Subcontractor(s) listed on PART I.

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING HUB SUBCONTRACTING GOALS

Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the HUB goals for this project for the following reasons:

- ☐ All subcontractors to be utilized are "Non-HUBs." *(Complete Part III)*
- ☐ HUBs were solicited but did not respond.
- ☐ HUBs solicited were not competitive.
- ☐ HUBs were unavailable for the following trade(s):
- ☐ Other: N/A

Was the Jefferson County HUB Office contacted for assistance in locating HUBs? ☐ Yes ☒ No

PART III: DISCLOSURE OF OTHER "NON-HUB" SUBCONTRACTS

The Proposer shall use this area to provide a listing of all "Non-HUB" Subcontractors, including suppliers, that will perform under this project. A list of those "Non-HUB" Subcontractors the Proposer selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that Proposer is the apparent low Proposer. A list of those "Non-HUB" Subcontractors that are selected after contract award must be provided immediately after their selection.

N/A

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: N/A

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

Historically Underutilized Business (HUB)
Subcontracting Participation Declaration Form

Subcontractor Name: N/A

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: N/A

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *HUB Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attached any necessary support documentation as required**. I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): Karen Theis

Title: Owner

Signature: Karen Theis

Date: 2-16-26

E-mail address: courtyard1@sbcglobal.net

Contact person that will be in charge of invoicing for this project:

Name (print or type): _____

Title: N/A

Date: _____

E-mail address: _____

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

RESIDENCE CERTIFICATION/TAX FORM

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Non-resident RFP Respondent" refers to a person who is not a resident.

(4) "Resident RFP Respondent" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☑ I certify that The Courtyard [company name] is a Resident Respondent of Texas as defined in Government Code §2252.001.

☐ I certify that _____ [company name] is a Non-Resident Respondent as defined in Government Code §2252.001 and our principal place of business is _____ _____ (city and state).

Taxpayer Identification Number (T.I.N.):	59-3832753
Company Name submitting bid/proposal/response:	The Courtyard
Mailing address:	4321 Lincoln Ave, Groves TX 77619
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**
0287 0000000360000000	5000 Doyle, Groves
0697 0000000240000000	5318 W. Groves Circle, Groves
	6170 Jackson St Groves
	6532 32nd St Groves

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

HOUSE BILL 89 VERIFICATION

I, Karen Theis, the undersigned representative of (company or business name) The Courtyard (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and
2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. **"Boycott Israel"** means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. **"Company"** means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or an limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

Karen Theis
Signature of Company Representative

2-16-26
Date

On this 17 day of February, 2026, personally appeared Karen Theis, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

AURONICA ANTOINE
My Notary ID # 130089722
Expires January 25, 2027

Auronica Antoine
Notary Signature

2/17/2026
Date

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

SENATE BILL 252 CERTIFICATION

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

The Courtyard
Company Name

RFP 26-002/CG
IFB/RFP/RFQ number

Certification check performed by:

_____
Purchasing Representative

_____
Date

RESPONDENT'S AFFIDAVIT

I have carefully examined the Request for Proposal Specifications, and any other documents accompanying or made a part of this Request for Proposals.

I hereby propose to furnish the goods or services specified in the Request for Proposal. I agree that my proposal will remain firm for a period of up to **90 days** in order to allow Jefferson County adequate time to evaluate the qualifications submitted.

I verify that all information contained in this proposal is truthful to the best of my knowledge and belief. I further certify that I am duly authorized to submit this proposal on behalf of the firm as its act and deed and that the firm is ready, willing and able to perform if awarded the contract.

I further certify, under oath, that this proposal is made without prior understanding, agreement, connection, discussion, or collusion with any other person, firm or corporation submitting a proposal for the same product or service: no officer, employee or agent of Jefferson County or any other Respondent is interested in said proposal: and that the undersigned executed this Respondent's Certification with full knowledge and understanding of the matters therein contained and was duly authorized to do so.

The Courtyard
NAME OF BUSINESS

BY: Karen Theis
SIGNATURE

Karen Theis, Owner
NAME & TITLE, TYPED OR PRINTED

4321 Lincoln Ave
MAILING ADDRESS

Groves TX 77619
CITY, STATE, ZIP CODE

(409) 962-2850
TELEPHONE NUMBER

Sworn to and subscribed before me
this 17th day of
February, 2026

Auronica Antoine
Notary Public

State of Texas

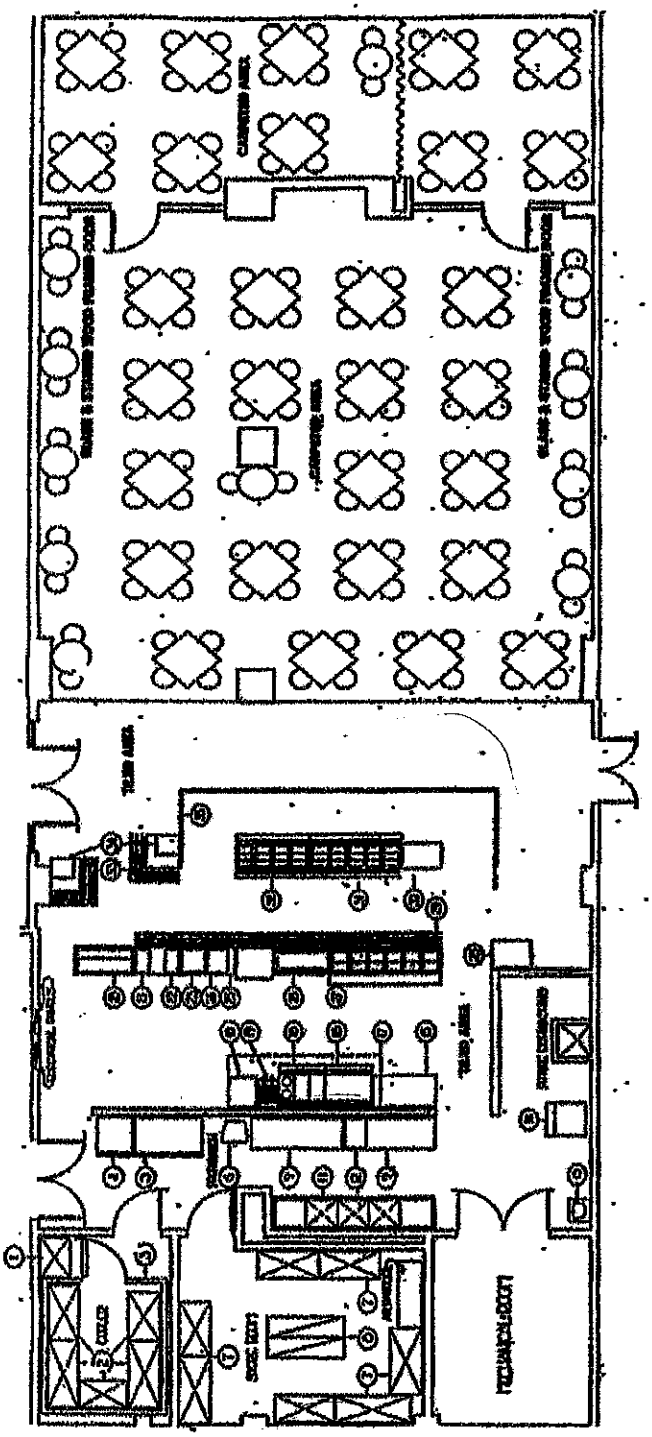
My Commission Expires: 1/25/2027

AURONICA ANTOINE
My Notary ID # 130089722
Expires January 25, 2027

REQUIRED FORM
Proposer:
Please complete this form and include with proposal submission.

ATTACHMENT A

FLOOR PLAN



JEFFERSON COUNTY COURTHOUSE
CAFETERIA FLOOR PLAN

ATTACHMENT B

Daily Restaurant Cleaning Checklist Date: _____

Daily Front-of-House Cleaning Checklist:

- ○ Wipe down the walls if necessary
- ○ Sanitize the tables
- ○ Inspect and wipe down the condiments and salt and pepper shakers
- ○ Wipe down all the counters
- ○ Clean the seats and benches
- ○ Run cloth napkins, tablecloths, and wait staff aprons through the washing machine
- ○ Vacuum the carpets
- ○ Take out the trash and recycling
- ○ Clean the interior and exterior of all the trash and recycling bins
- ○ Sweep and mop the floors
- ○ Clean and sanitize your bathrooms by:
  - ○ Disinfecting the toilets
  - ○ Wiping down the sinks
  - ○ Emptying out feminine hygiene product bags
  - ○ Taking out the trash
  - ○ Sweeping and mopping the floors

Daily Back-of-House Cleaning Checklist:

- ○ Wipe down the walls wherever there are splashes
- ○ Clean the grill, griddle, range, flattop, and fryer. Make sure to get underneath the equipment, too
- ○ Change the foil lining on top of the ranges, grills, and flattops
- ○ Wipe down other equipment, such as coffee makers, microwaves, toasters, and meat slicers
- ○ Disinfect prep area surfaces
- ○ Clean beverage dispenser heads in the soda fountains. Bars should clean the tips of the soda guns
- ○ Wash utensils, smallwares, flatware, and glassware and let them air dry overnight
- ○ Clean the sinks
- ○ Wash rags, towels, aprons, and uniforms in the washing machine
- ○ Refill soap dispensers and replace empty paper towel rolls
- ○ Sweep walk-in refrigerators and storage areas
- ○ Take out the trash and recycling
- ○ Disinfect the waste disposal area and clean the trash cans
- ○ Sweep and mop the floors

Weekly and Monthly Restaurant Cleaning Checklist:

Weekly Front-of-House Cleaning Checklist:

- ◯ Dust and wipe down the light fixtures
- ◯ Disinfect the door handles
- ◯ Wash glass windows and doors

Monthly Front-of-House Cleaning Checklist:

- ◯ Dust any decorations or wall art
- ◯ Wash the walls
- ◯ Check the ceiling for cobwebs

Weekly Back-of-House Cleaning Checklist:

- ◯ Clean the ovens, including the walls, door, and racks
- ◯ Wash and sanitize the walk-in refrigerators and freezers
- ◯ Delime the sinks and faucets
- ◯ Clean any anti-fatigue mats
- ◯ Boil out the deep fryer
- ◯ Use drain cleaner on the floors

Monthly Back-of-House Cleaning Checklist:

- ◯ Wash behind the hot line to prevent clogs
- ◯ Clean refrigerator coils to remove dust
- ◯ Run cleaning and sanitizing chemicals through the coffee or espresso machine to remove built-up grime
- ◯ Empty grease traps
- ◯ Wash walls and ceiling to remove grease buildup
- ◯ Clean out and sanitize the ice machine (every 6 months)
- ◯ Wash vent hoods (every few months)
- ◯ Clean and sanitize the freezer
- ◯ Replace pest traps

Notes:

Employee Signature:

_____

Supervisor Signature:

_____

ATTACHMENT C

Best Management Practices

Fats, Oils, and Grease (FOG) Control Program

Fats:

Fats are solid at room temperature; butter, shortening, margarine, peanut butter, meat trimmings, uncooked poultry skins, and dairy.

Oils:

Oils are liquid at room temperature; vegetable, canola, corn, and cooking oils.

Grease:

Grease turns to liquid during cooking but solidifies when cooled; gravy, mayonnaise, melted meat fat, bacon, sausage, boiled poultry skin, and salad dressings.

Consequences of Improper FOG Disposal:

- Rancid odors
- Sewage overflow into businesses, yards, parks, and public streets due to clogged pipes
- Expensive cleanup, repair, and replacement of damaged property. Property owners are responsible for all pipes from their building out to the main line.
- Potential contact with microorganisms that can cause gastroenteritis and hepatitis

Inside the kitchen:

- Service and clean grease retention device on a regular basis.
- Educate staff on FOG management and requirements.
- Post "NO GREASE" signs above kitchen sinks and drains.
- "Dry wipe" all pots, pans, plates, and utensils before washing.
- Keep a Spill Kit in the kitchen that consists of material like kitty litter or absorbent pads.
- Dispose of food waste by recycling and/or solid waste removal.
- Routinely clean kitchen exhaust system filters and hoods.
- Install removable screens on kitchen drains with openings no bigger than 3/16in, clean frequently.
- Never put eggshells, coffee grounds, or kitty litter down the drain or in the toilet.

In the event of a FOG spill

- **Begin cleanup immediately.**
- **Never use detergents or degreasers.**
- **Seal off any nearby storm drains.**
- **If the spill is unmanageable, contact a clean-up contractor and the appropriate agency.**
- **Never wash the spill or clean-up materials into the street or storm drains.**
- **Dispose of clean-up materials into a garbage bag.**

***The café will also utilizes disposable products (take-away packaging) to serve food in eliminating the need to wash customer dishes.**

Karen Thi 2-16-26

Owner/Kitchen Manager **Date**

Entergy Business Center
EBC, 425 West Capital Street, Little Rock AR
T 800-766-1648
ebc@entergy.com

Wednesday, March 4, 2026

JEFFERSON COUNTY AIRPORT

RE: Service Address - AIRPORT TER RADAR EQUIPMENT #740117401 , NEDERLAND, TX 77627

Account Number - 138199955

Dear: Valued Customer

We have some good news for you. Based on your prior usage, you could see an annual savings of $1,002.00 on your electric bill from Entergy Texas. We review our records each year to ensure that we offer service to customers at the most economical rate available, and are pleased to offer a more cost-effective option to you.

To take advantage of this new rate schedule, please complete the enclosed Customer Rate Change Request and return the original signed document to the Entergy Business Center at the address shown. To complete the change, your company may also be required to establish a new electric service agreement with us. If so, we will let you know when the agreement is ready for you to sign.

Your rate will change from TX_GS1 to TX_SGS if we receive your signed request form and signed agreement, (if required). The new rate would apply prospectively and your actual savings would depend on how closely your usage levels for the coming year match last year's, as well as other factors such as fuel costs.

If you have questions or would like to receive a detailed comparison, please contact the Entergy Business Center at 1-800-766-1648 during regular business hours.

Sincerely,

Paul Blackburn

Customer Service Mgr I

3/4/2026 6000 ARA 29960 Paul Blackburn

Entergy Business Center 641
EBC, 425 West Capital Street, Little Rock AR
T 800-766-1648
ebc@entergy.com

ENTERGY TEXAS
CUSTOMER RATE CHANGE REQUEST

JEFFERSON COUNTY AIRPORT

RE: Service Address - AIRPORT TER RADAR EQUIPMENT #740117401 , NEDERLAND, TX 77627

Account Number - 138199955

Please change the rate schedule applicable to my company's electric service to Entergy Texas. rate schedule TX_SGS. I understand that this new rate schedule will be applicable to my company's account. Consistent with Entergy Texas terms and conditions and the provisions of the new rate, I must take service under the new rate for a minimum term of year(s).

Upon acceptance by Entergy Texas, this Customer Rate Change Request shall serve to modify my company's current agreement for electric/gas service, only with regard to the rate schedule under which service is provided and the contract period applicable to my electric/gas service as specified in the rate schedule, Entergy Texas terms and conditions, and the agreement for electric/gas service with my company; all other terms and conditions of such agreement will remain unchanged and in full force and effect. I also understand, however, that Entergy Texas, in its sole discretion, may require that my company execute a new electric/gas service agreement in order to implement such change in rate schedules.

I certify that I am authorized by my Company to instruct you to make this change in rate schedules.

Signature and Date

Jeff Branick, County Judge
Print Name and Title

409-835-8466
Contact Phone Number

COMMISSIONERS COURT JEFFERSON COUNTY, TEXAS

Please Return to: Entergy Business Center
P.O. Box 551
Mail Unit: A-TCBY-24D
Little Rock, AR 72203

ATTEST

DATE 3/31/26

3/4/2026 6000 ARA 29960 Paul Blackburn

Entergy Business Center 642
EBC, 425 West Capital Street, Little Rock AR
T 800-766-1648
ebc@entergy.com

Wednesday, March 4, 2026

JEFFERSON COUNTY/MAINT DEPT
RE: Service Address - 1295 ORLEANS ST , BEAUMONT, TX 77701-3613
Account Number - 140787169

Dear: Valued Customer

We have some good news for you. Based on your prior usage, you could see an annual savings of $719.00 on your electric bill from Entergy Texas. We review our records each year to ensure that we offer service to customers at the most economical rate available, and are pleased to offer a more cost-effective option to you.

To take advantage of this new rate schedule, please complete the enclosed Customer Rate Change Request and return the original signed document to the Entergy Business Center at the address shown. To complete the change, your company may also be required to establish a new electric service agreement with us. If so, we will let you know when the agreement is ready for you to sign.

Your rate will change from TX_GS1 to TX_SGS if we receive your signed request form and signed agreement, (if required). The new rate would apply prospectively and your actual savings would depend on how closely your usage levels for the coming year match last year's, as well as other factors such as fuel costs.

If you have questions or would like to receive a detailed comparison, please contact the Entergy Business Center at 1-800-766-1648 during regular business hours.

Sincerely,

Paul Blackburn

Customer Service Mgr I

3/4/2026 6000 ARA 30079 Paul Blackburn

Entergy Business Center
EBC, 425 West Capital Street, Little Rock AR
T 800-766-1648
ebc@entergy.com

ENTERGY TEXAS
CUSTOMER RATE CHANGE REQUEST

JEFFERSON COUNTY/MAINT DEPT

RE: Service Address - 1295 ORLEANS ST , BEAUMONT, TX 77701-3613

Account Number - 140787169

Please change the rate schedule applicable to my company's electric service to Entergy Texas. rate schedule TX_SGS. I understand that this new rate schedule will be applicable to my company's account. Consistent with Entergy Texas terms and conditions and the provisions of the new rate, I must take service under the new rate for a minimum term of year(s).

Upon acceptance by Entergy Texas, this Customer Rate Change Request shall serve to modify my company's current agreement for electric/gas service, only with regard to the rate schedule under which service is provided and the contract period applicable to my electric/gas service as specified in the rate schedule, Entergy Texas terms and conditions, and the agreement for electric/gas service with my company; all other terms and conditions of such agreement will remain unchanged and in full force and effect. I also understand, however, that Entergy Texas, in its sole discretion, may require that my company execute a new electric/gas service agreement in order to implement such change in rate schedules.

I certify that I am authorized by my Company to instruct you to make this change in rate schedules.

Signature and Date

Jeff Branick, County Judge
Print Name and Title

409-835-8466
Contact Phone Number

COMMISSIONERS COURT JEFFERSON COUNTY, TEXAS

Please Return to: Entergy Business Center
P.O. Box 551
Mail Unit: A-TCBY-24D
Little Rock, AR 72203

ATTEST

DATE 3/31/26

JEFFERSON COUNTY, TEXAS

ANNUAL COMPREHENSIVE FINANCIAL REPORT

For The Fiscal Year Ended
September 30, 2025



JEFFERSON COUNTY, TEXAS

ANNUAL COMPREHENSIVE

FINANCIAL REPORT

FOR THE FISCAL YEAR ENDED

SEPTEMBER 30, 2025

Prepared by:
Jefferson County
Auditor's Office
1149 Pearl Street
Beaumont, Texas 77701

JEFFERSON COUNTY, TEXAS
ANNUAL COMPREHENSIVE FINANCIAL REPORT
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

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JEFFERSON COUNTY, TEXAS
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INTRODUCTORY SECTION

FRAN LEE
COUNTY AUDITOR
(409) 835-8500



1149 PEARL ST. - 7TH FLOOR
BEAUMONT, TEXAS 77701

March 20, 2026

Citizens of Jefferson County, Texas:

Honorable District Judges:
Randy Shelton, Presiding Judge, 279th District Court
John Stevens, Jr., Judge, Criminal District Court
Kent Walston, Judge, 58th District Court
Justin Sanderson, Judge, 60th District Court
Baylor Wortham, Judge, 136th District Court
Mitch Templeton, Judge, 172nd District Court
Raquel West, Judge, 252nd District Court
Gordon Friesz, Judge, 317th District Court

Honorable Commissioners' Court:
Jeff Branick, County Judge
Brandon Willis, Commissioner, Precinct No. 1
Cary Erickson, Commissioner, Precinct No. 2
Michael "Shane" Sinegal, Commissioner, Precinct No. 3
Everette "Bo" Alfred, Commissioner, Precinct No. 4

The County Auditor's Office ("the Auditor's Office") is pleased to present the Annual Comprehensive Financial Report ("Annual Report") of Jefferson County, Texas (the "County") for the fiscal year ended September 30, 2025. This report is submitted in accordance with Section 114.025 of the Texas Local Government Code and has been prepared by the County Auditor's staff.

Management assumes full responsibility for the completeness and reliability of the information contained in this report, based upon a comprehensive framework of internal controls that it has established for this purpose. Because the cost of internal controls should not exceed anticipated benefits, the objective is to provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatements.

Pattillo, Brown & Hill, LLP, Certified Public Accountants, has issued an unmodified ("clean") opinion on the County's financial statements for the year ended September 30, 2025. The independent auditors' report is located at the front of the financial section of this report.

Management's Discussion and Analysis (MD&A) immediately follows the independent auditors' report and provides a narrative introduction, overview, and analysis of the basic financial statements. The MD&A complements this letter of transmittal and should be read in conjunction with it.

PROFILE OF THE GOVERNMENT

Jefferson County was created in 1836 and organized in 1837 as one of the original counties of the Republic of Texas. It is a 954 square mile county that is located on the upper Texas Coast and is a component of the Beaumont-Port Arthur-Orange Metropolitan Statistical Area. According to the U.S. Department of Commerce-Bureau of the Census, the 2020 population of the County was 251,565. The County is empowered to levy a property tax on both real and personal property located within its boundaries.

Jefferson County is a political subdivision of the State of Texas and the Commissioners' Court is the governing body of the County. It is composed of the County Judge elected from the County at large, and four Commissioners, each elected from a separate precinct, all elected for four-year terms. The County Judge is the presiding officer of the Commissioners' Court.

The County (primary government) solely or in cooperation with other local governmental entities provides a full range of services authorized by the Texas Constitution and Statutes that includes construction and maintenance of roads and bridges, health and housing services, assistance to indigents, juvenile and adult justice programs, economic development, recreation and cultural enrichment, an airport, an entertainment complex, and general administration.

The combined financial statements of the County as a financial reporting entity report all activities, organizations, and functions of the County, both as the primary government and its legally separate components units for which (1) the elected officials of the County are financially accountable and/or (2) exclusion of component units activities would cause the County's financial statements to be misleading or incomplete. The County's component units have been reported as blended with the County as the primary government or as discrete (separate) component unit, as appropriate. Criteria used by the County for including activities in preparing these financial statements are in conformity with GASB 14, *The Financial Reporting Entity,* GASB 39, *Determining Whether Certain Organizations are Component Units,* GASB 61, *The Financial Reporting Entity: Omnibus- an amendment of GASB Statements No. 14 and No 34*, and GASB 80, *Blending Requirements for Certain Component Units.* Based on the requirements of these accounting standards, the County reports the Southeast Texas Government Employee Benefits Pool as a blended component unit.

The County is required to adopt a final budget no later than the close of the fiscal year. Annual budgets are adopted for the General Fund and Debt Service Funds. This annual budget serves as the foundation for the County's financial planning and control. The level of budgetary control is the department within the individual funds. The County maintains an encumbrance accounting system as a method to accomplish budgetary control. Department heads may transfer resources within a department as needed. These transfers are communicated to Commissioners' Court. Transfers between departments, however, require approval by Commissioners' Court.

FACTORS AFFECTING FINANCIAL CONDITIONS

Local economy

The information presented in the financial statements is perhaps best understood when it is considered from the broader perspective of the specific environment within which the County operates.

The area is served by deep-water ports located at Beaumont, Port Arthur, Orange, and Sabine Pass. The Sabine Neches Waterway provides deep-water access to ocean-going vessels, which are served by public ports within the County. The waterway is the third largest port in the U.S. by tonnage, the largest U.S. exporter of crude oil and LNG, and home to over 60% of the U.S. strategic petroleum reserves. With the completion of Golden Pass LNG and Sempra LNG approximately 600 ships annually will be added to the local waterways which we anticipate will make this area the 1st or 2nd largest U.S. port by tonnage. The waterway has recently seen a dramatic increase in natural gas liquids transits.

The County is traversed by Interstate Highway 10, U.S. Highways 90 and 69-96-287, State Highways 73, 87, and 105 and three farm-to-market roads. Highway 90 and the 287 portions of Highway 69-96-287 are currently the subject of Texas Department of Transportation studies for conversion to interstate status. Rail and motor freight carriers also provide freight service to the County. The County is served by three major railroads, Canadian Pacific/Kansas City South, Union Pacific, and BNSF. The Jack Brooks Regional Airport located between Beaumont and Port Arthur provides passenger and freight service and is currently serviced by one commercial commuter passenger air carrier.

The economy of the County is based primarily on petroleum refining; the production and processing of petrochemicals, bio-fuels other chemicals, and synthetic rubber; the fabrication of steel and steel products; shipping activity; the manufacture of wood, pulp, food and feed products; agriculture; and health care services. The County continues to diversify its economic base as evidenced by the increase of jobs in the services and government sectors. The County is also home to the largest military off-load port in the world. Jefferson County is home to Lamar University, Lamar Institute of Technology, and Lamar State College – Port Arthur. Lamar is recognized nationally as one of the premier institutions for providing engineering, business, education, nursing and pre-med degrees at a very cost-competitive value. Lamar Institute of Technology along with industry and union training organization are providing the preparation for tomorrow's careers in our ever-expanding industrial base.

In the last 2 years, numerous "green" or "blue" energy projects have begun in the County such as Arbor Renewables, which turns vegetative waste into gasoline which will be sold primarily in California and Europe. OCI and Linde are other global players beginning construction of environmentally friendly projects and the County is currently in discussions with several more multi-billion-dollar projects.

Several large projects are in construction, permitting, and development for the area and the County continues to work with other taxing entities to create a business environment conducive to this growth. These include such notables as Lucite, Air Products, Vitol, Golden Pass Products, OCI, Exxon Mobil, Golden Pass LNG, Sempra Energy, Valero, Total/BASF, Phillips 66, Entergy Transfer Partners, American Ethane, Sunoco Partners, Coastal Caverns, Golden Triangle Storage, Linde, and Iron Horse Terminals.

Hundreds of millions of dollars are being spent on terminal and pipeline facilities to support these projects. In addition, recent rail terminal facility expansions and new construction has significantly increased the transportation of Canadian tar sands oil and bitumen to our area for processing by area refineries. Additional rail expansions are currently in construction.

Cheniere, one of two companies with Liquefied Natural Gas Terminals on the border of the Texas/Louisiana Coast, is completing construction of a $10 billion liquefaction facility. Golden Pass LNG opened their terminal in mid-2011. With their opening, our ship channel is now home to over 40% of the nation's LNG capacity. Golden Pass LNG received permits allowing it to build a $10 billion gas liquefaction facility in Jefferson County and is currently under construction with over 4,700 construction workers on site. Sempra Energy has received permitting from federal authorities and has begun construction activities on a new natural gas liquefaction facility and have applied to the Federal Energy Regulatory Commission for permits to double the size of the project currently under construction, which the permit was recently approved.

The County has participated in a study by the U.S. Army Corps of Engineers into the feasibility of deepening the Sabine-Neches waterway. This will allow ports in Southeast Texas, the third largest in the nation, to accommodate newer deep draft vessels and thus remain competitive with other ports on the Gulf Coast. The U.S. Army Corps of Engineers has issued their "Chief's Report" which paves the way for federal funding of this project. The U.S. House and Senate recently passed legislation, which was signed by the President authorizing the construction of the waterway improvements at a cost in excess of $1 billion. Congressional appropriations for the project have been made and construction has begun. Just recently, the first "useable increment" of the waterway deepening was completed bringing further federal appropriations. More contracts have been let to continue the 65-mile project which will be completed within 5 years, with work ongoing. The Crops has recently approved allowing the Sabine-Neches Navigation District to let the contracts for the waterway deepening which will reduce costs and speed up completion.

The County continues to work with industry leaders, the Texas Workforce Commission, Lamar Institute of Technology, Lamar University, trade unions, and non-profit groups to supply a workforce able to handle the growing labor needs of the County. This is especially critical given the interest of the international community in locating facilities in our county.

The resurgence in U. S. oil and gas exploration and production has made the County the place of choice for those industrial sectors seeking to exploit opportunities to profit from historically low-priced energy commodities. Our excellent water bound, rail, highway, and pipeline infrastructure, the readily availability of water resources, and our business-friendly governmental environment,

coupled with a lower-than-average tax environment, has caught the attention of energy and manufacturing companies worldwide. We have also recently become the focus of many new clean hydrogen projects related to data storage facilities which make their own electricity and water utilizing proprietary hydrogen technologies. These are multi-billion-dollar projects that create numerous high paying careers.

The County is now a primary location for carbon sequestration and utilization storage and numerous leases have been entered into with both private landowners and the State of Texas for activities with related carbon neutral impacts. The subsurface geology in Jefferson County makes our area extremely attractive for future carbon capture activities.

The County has 16 separate abatement agreements with $6,446,141,153 in abated taxable value for fiscal year 2025. The County estimates these abatement agreements will roll off of abatement and become taxable over the next 12 years. The estimated taxes over the next 12 years to be collected based on the current rate of $.357 per $100 of valuation and the fiscal year 2025 market value is $23,012,723. The future estimated tax revenue will fluctuate as market values increase/decrease due to market conditions. The county's tax abatement policies and current agreements allow the County to remain competitive in the goal to increase the industrial tax base for continued job creation. The County fully expects a significant increase in industrial and commercial ad valorem values over the next ten years totaling in excess of 50 billion dollars.

Long-term financial planning & relevant financial policies

Commissioners' Court continues to follow their policy guideline for budgetary and planning purposes of building and maintaining an unassigned fund balance in the General Fund of at least 15% of total general fund expenditures and transfers. The County's General Fund ended the fiscal year with an unassigned fund balance of 47.9% of total general fund expenditures and transfers. This falls within the policy guidelines.

Major Initiatives

The Commissioners' Court set the property tax rate at $ .357 per $100 of assessed property valuation to provide funds for services and debt service for fiscal year 2025. Budget initiatives for fiscal year 2025 included:

- Provide a 3% salary increase for Sheriff Association union employees, Constable Association union employees, and all other employees. In addition, ensure all employees are budgeted at least 105% of their corresponding range and make increases to the longevity pay table.

- Commissioners' Court made a $2,500,000 transfer and utilized previously transferred funds to address necessary capital projects.

- Maintained capital expenditures for durable goods to replace needed equipment to necessary levels.

AWARDS

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to Jefferson County, Texas for its Annual Comprehensive Financial Report for the fiscal year ended September 30, 2024. This was the twenty-seventh consecutive year that the government achieved this prestigious award.

In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized annual comprehensive financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

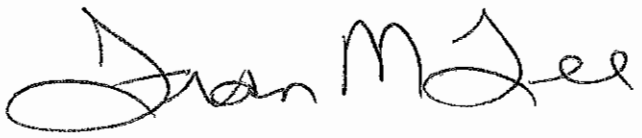
A Certificate of Achievement is valid for a period of one year only. We believe our current report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to GFOA to determine its eligibility for another certificate.

ACKNOWLEDGEMENTS

The preparation of this report could not have been accomplished without the dedicated services of the staff of the County Auditor's Office. I express my sincere appreciation to all the members of this office who contributed to its preparation. In addition, I express my appreciation to the members of the Commissioners' Court, their staff, and all other County officials and employees who have given their support in planning and conducting the financial operations of Jefferson County, Texas in a responsible manner.

REQUEST FOR INFORMATION

This financial report is designed to provide an overview of the County's finances for individuals who are interested in this information. Questions concerning any of the data provided in this report or requests for additional information should be addressed to the County Auditor's Office, 1149 Pearl Street 7th Floor, Beaumont, Texas 77701.



Fran Lee, C.P.A.
County Auditor
Jefferson County, Texas

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Jefferson County
Texas

For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

September 30, 2024

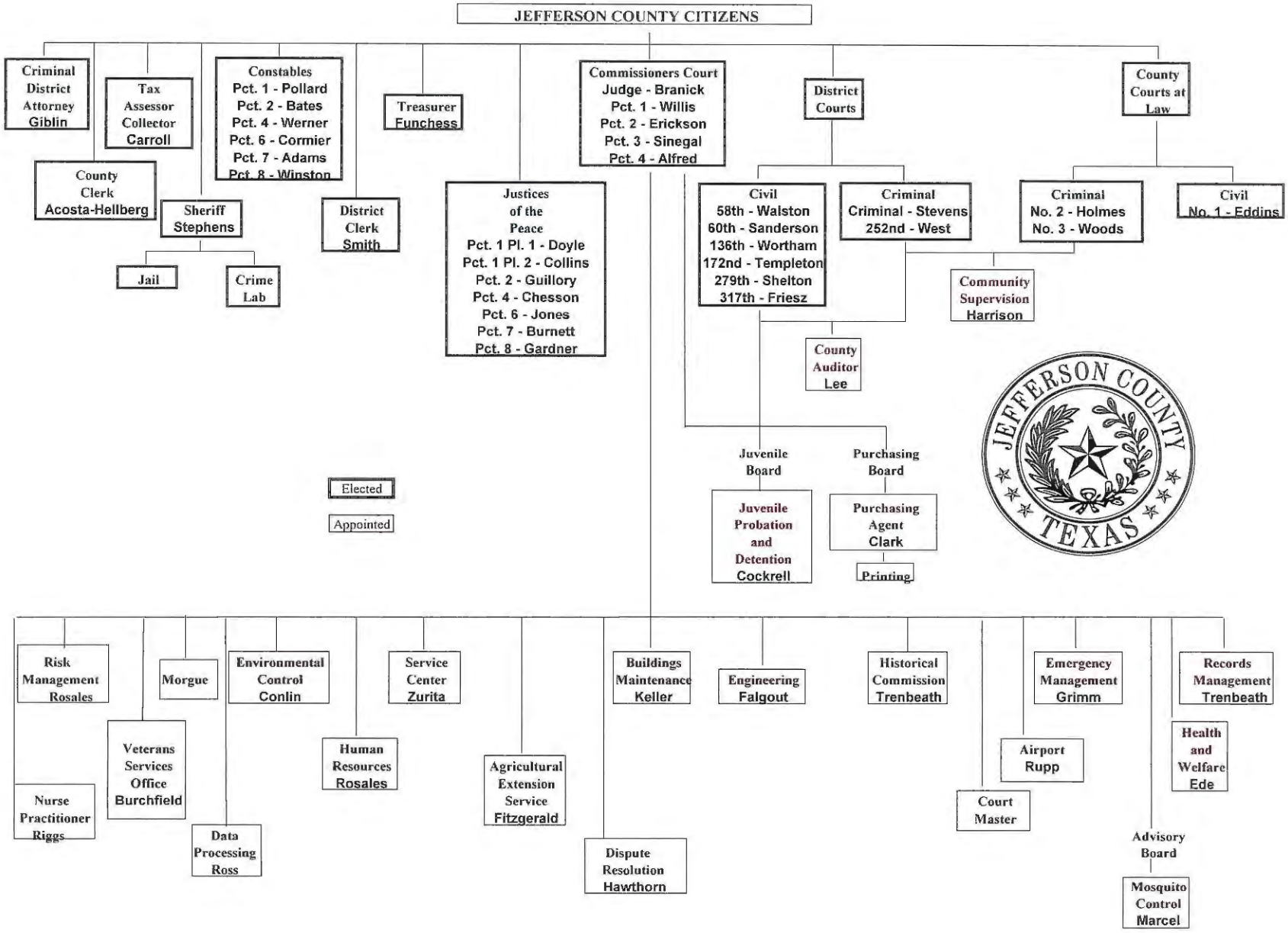
Christopher P. Morrill

Executive Director/CEO


JEFFERSON COUNTY
TEXAS

ORGANIZATION CHART OF JEFFERSON COUNTY

As of September 30, 2025



ELECTED OFFICIALS

As of September 30, 2025

COMMISSIONERS' COURT	
County Judge	Jeff Branick
Commissioner Pct. 1	Brandon Willis
Commissioner Pct. 2	Cary Erickson
Commissioner Pct. 3	Michael Sinegal
Commissioner Pct. 4	Bo Alfred
SHERIFF	Zena Stephens
TAX ASSESSOR - COLLECTOR	Kate Carroll
DISTRICT CLERK	Jamie Smith
COUNTY CLERK	Roxanne Acosta-Hellberg
COUNTY TREASURER	Tim Funchess
JUSTICES OF THE PEACE	
J.P. Pct. 1 Pl. 1	Naomi Doyle
J.P. Pct. 1 Pl. 2	Benjamin Collins
J.P. Pct. 2	Joseph Guillory II
J.P. Pct. 4	Justin Chesson
J.P. Pct. 6	Duce Jones
J.P. Pct. 7	Brad Burnett
J.P. Pct. 8	Kalan Gardner
CONSTABLES	
Constable Pct. 1	Jevonne Smith-Pollard
Constable Pct. 2	Christopher Bates
Constable Pct. 4	Bryan Werner
Constable Pct. 6	Everett Cormier, Sr.
Constable Pct. 7	Bobby Adams
Constable Pct. 8	Gene Winston Jr.
COUNTY COURTS AT LAW	
County Court at Law No. 1	Gerald Eddins
County Court at Law No. 2	Terrence Holmes
County Court at Law No. 3	Clint Woods
DISTRICT JUDGES	
Criminal Court	John Stevens, Jr.
252nd District Court	Raquel West
58th District Court	Kent Walston
60th District Court	Justin Sanderson
136th District Court	Baylor Wortham
172nd District Court	Mitch Templeton
279th District Court	Randy Shelton
317th District Court	Gordon Friesz
DISTRICT ATTORNEY	Keith Giblin

APPOINTED OFFICIALS

As of September 30, 2025

Agricultural Extension Service	Tyler Fitzgerald
Airport	Alex Rupp
Auditor	Fran Lee
Auto Service Center	Jose Zurita
Buildings Maintenance	Greg Keller
Community Supervision	Peggy Harrison
Court Master	Vacant
Data Processing	Jeff Ross
Dispute Resolution Center	Kara Hawthorn
Emergency Management	Robert Grimm
Engineering	Michelle Falgout
Environmental Control	Ronda Conlin
Health and Welfare	Dr. Ezea Ede
Human Resources	Verenice Rosales
Juvenile Probation & Detention	Edward Cockrell
Mosquito Control	Denise Marcel
Nurse Practitioner	Leslie Riggs
Purchasing Agent\Printing	Deborah Clark
Risk Management	Verenice Rosales
Veterans Services Office	Pam Burchfield-Miller


JEFFERSON COUNTY
TEXAS

FINANCIAL

SECTION

PB&H

PATTILLO, BROWN & HILL, L.L.P.
401 West State Highway
Waco, Texas 7671
254.772.4901 pbhcpa.com

INDEPENDENT AUDITOR'S REPORT

Honorable County Judge
and Commissioners' Court
Jefferson County, Texas

Report on the Audit of the Financial Statements

Opinions

We have audited the financial statements of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of Jefferson County, Texas (the "County") as of and for the year ended September 30, 2025, and the related notes to the financial statements, which collectively comprise the County's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements present fairly, in all material respects, the respective financial position of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of the County as of September 30, 2025, and the respective changes in financial position, and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinions

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the County and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Emphasis of Matter - Change of Accounting Principle

As described in the notes to the financial statements, in fiscal year 2025 the County adopted new accounting guidance, Governmental Accounting Standards Board (GASB) Statement No. 101, *Compensated Absences.* Our opinions are not modified with respect to this matter.

Responsibilities of Management for the Financial Statements

The County's management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the County's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the County's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the County's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control–related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, budgetary comparison information, and pension and OPEB information, as listed in the table of contents, be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the County's basic financial statements. The combining and individual nonmajor fund financial statements and schedules are presented for the purpose of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the combining and individual nonmajor fund financial statements and schedules are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Other Information included in the Annual Comprehensive Financial Report

Management is responsible for the other information included in the annual comprehensive financial report (ACFR). The other information comprises the introductory section and statistical section but does not include the financial statements and our auditor's report thereon. Our opinions on the financial statements do not cover the other information, and we do not express an opinion or any form of assurance thereon. In connection with our audit of the financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated March 20, 2026, on our consideration of the County's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the County's internal control over financial reporting and compliance.

Pattillo, Brown & Hill, L.L.P.

Waco, Texas
March 20, 2026


JEFFERSON COUNTY
TEXAS

As management of Jefferson County, we offer readers of the Jefferson County's financial statements this narrative overview and analysis of the financial activities of the county for the fiscal year ended September 30, 2025. Please read it in conjunction with the additional information that we have furnished in our letter of transmittal, which can be found in the introductory section of this report.

Financial Highlights

- The assets and deferred outflows of resources of Jefferson County exceeded its liabilities and deferred inflows of resources at the close of fiscal year 2025 by $124,319,988, an increase of $65,795,738 in net position from the previous year. As a result, the County's overall financial position has improved from the previous year.

- Of the net position, $165,767,999 is net investment in capital assets, $57,077,112 is restricted for specific uses, and $(98,525,123) is unrestricted.

- As of the close of fiscal year 2025, Jefferson County's governmental funds reported combined ending fund balances of $155,530,169, an increase of $17,908,209 in comparison with the prior year. About 49% of the total amount, $76,525,604 is available for spending at the County's discretion (unassigned fund balance).

- At the end of fiscal year 2025, unassigned fund balance for the General Fund was $78,802,455, or 47.9% of total General Fund expenditures and transfers. In addition, the General Fund had a nonspendable fund balance of $1,453,052 and assigned fund balance of $19,997,704.

- The LPPF fund is classified as a major fund. It had restricted fund balance of $6,078,540.

- The ARPA Coronavirus fund is classified as a major fund. It had zero fund balance.

- The County's total bonds payable decreased by $5,472,095 during the current fiscal year.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the County's basic financial statements, which are comprised of the following three components: 1) Government-wide financial statements, 2) Fund financial statements, and 3) Notes to the basic financial statements. This report also contains other supplementary information which is included in addition to the basic financial statements themselves.

Government-wide Financial Statements are designed to provide readers with a broad overview of County finances, in a manner similar to a private-sector business.

The Statement of Net Position presents information on all County assets, deferred outflows of resources, liabilities, and deferred inflows of resources, with the difference representing net position. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of the County is improving or deteriorating.

The Statement of Activities presents information that indicates how net position changed during the most recent fiscal year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. Thus, revenues and expenses are reported in this statement for some items that will result in cash flows in future fiscal periods.

Both of these government-wide financial statements distinguish functions of the County that are principally supported by taxes and intergovernmental revenues (governmental activities) from other functions that are intended to recover all or in part a portion of their costs through user fees and charges (business-type activities). The governmental activities of the County include general government, judicial and law enforcement, education and recreation, health and welfare, and maintenance of equipment and structures. The business-type activities of the County include an airport and an entertainment complex.

Component units are included in our basic financial statements and consist of legally separate entities for which the County is financially accountable and they have substantially the same board as the County or provide services entirely to the County. The County's component unit, Southeast Texas Government Employee Benefits Pool, has been reported as blended with the County as the primary government. For more detailed information on this component unit refer to Note 1A and Note 13 of the basic financial statements.

Fund Financial Statements are groupings of related accounts that are used to maintain control over resources that have been segregated for specific activities or objectives. The County, like other state and local governments, uses fund accounting to ensure and demonstrate finance-related legal compliance. All of the funds of the County can be divided into three categories: governmental funds, proprietary funds, and fiduciary funds.

Governmental funds are used to account for essentially the same functions reported as governmental activities in the government-wide financial statements. However, unlike the government-wide financial statements, governmental funds financial statements focus on near-term inflows and outflows of spendable resources, as well as on balances of spendable resources available at the end of the fiscal year. Such information may be useful in evaluating the County's near-term financing requirements.

Because the focus of governmental funds is narrower than that of the government-wide financial statements, it is useful to compare the information presented for governmental funds with similar information presented for governmental activities in the government-wide financial statements. By doing so, readers may better understand the long-term impact of the government's near-term financing decisions. Both the governmental funds balance sheet and the governmental funds statement of revenues, expenditures, and

changes in fund balance provide a reconciliation to facilitate this comparison between governmental funds and governmental activities.

The County maintains 69 individual governmental funds. Information is presented separately in the governmental funds balance sheet and in the governmental funds statement of revenues, expenditures, and changes in fund balances for the major governmental funds. Data from other governmental funds are combined into a single, aggregated presentation. Individual fund data for each of these non-major governmental funds is provided in the form of combining statements elsewhere in this report.

Proprietary funds are maintained two ways. An enterprise fund is used to report the same functions presented as business-type activities in the government-wide financial statements. The County uses enterprise funds to account for the operations of an airport and entertainment complex. Internal service funds are an accounting device used to accumulate and allocate costs internally among the County's various functions. The County uses internal service funds to account for its liability activities, workers' compensation, and the public entity risk pool that provides health insurance benefits. Because these services predominantly benefit governmental rather than business-type functions, they have been included within governmental activities in the government-wide financial statements.

Proprietary funds provide the same type of information as the government-wide financial statements, only in more detail. Both of the enterprise funds are considered to be major funds of the County. The County's internal service funds are combined into a single, aggregated presentation in the proprietary funds financial statements. Individual fund data for the internal service funds is provided in the form of combining statements elsewhere in this report.

Fiduciary funds are used to account for resources held for the benefit of parties outside the government. Fiduciary funds are not reflected in the government-wide financial statements because the resources of those funds are not available to support the County's own programs. The County's fiduciary funds are one investment trust fund and 9 custodial funds.

Notes to the Basic Financial Statements provide additional information that is essential to a full understanding of the data provided in the government-wide and fund financial statements. The notes can be found starting on page 31 of this report.

Required Supplementary Information is presented concerning the County's General Fund budgetary schedule. The County adopts an annual budget for this fund. A budgetary comparison schedule, which includes the original and final amended budget and actual figures, has been provided to demonstrate compliance with this budget. Also included are schedules for pensions and other post-employment benefits. As part of the section are a schedule showing the changes in net pension liability and related ratios, a schedule of employer contributions to the retirement system with notes about these contributions, and

a schedule of the changes in total other post-employment benefits liability and related ratios. Required supplementary information can be found starting on page 71 of this report.

The combining and individual fund statements and schedules referred to earlier provide information for non-major governmental funds and internal service funds and are presented immediately following the required supplementary information.

Government-Wide Financial Analysis

As noted earlier, net position may serve over time as a useful indicator of a government's financial position. In the case of the County, assets and deferred outflows of resources exceeded its liabilities and deferred inflows of resources by $124,319,988. For fiscal year 2024, assets and deferred outflows of resources exceeded its liabilities and deferred inflows of resources by $61,562,466.

The largest portion of the County's current fiscal year net position ($165,767,999) reflects its investments in capital assets (e.g. land, improvements, buildings, equipment, and infrastructure); less any related debt used to acquire those assets that is still outstanding plus any unspent bond proceeds. The main use of these capital assets is to provide services to citizens; consequently, these assets are not available for future spending. Although the County's investment in its capital assets is reported net of related debt, it should be noted that resources needed to repay this debt must be provided from other sources, since the capital assets themselves cannot be used to liquidate these liabilities. Another portion of the County's current fiscal year net position ($57,077,112) represents resources that are subject to external restrictions on how they may be used. The County's current fiscal year net position is reduced by ($98,525,123) for the negative unrestricted net position. Unrestricted net position may be negative when entities incur long-term liabilities which are not offset by corresponding assets or when it covers post-retirement benefits on a pay-as-you-go basis rather than advance-funding such costs in a trust account.

Condensed Statement of Net Position
September 30, 2025
Primary Government

	Governmental Activities	Business-type Activities	Reclassifications	Total
Current and other assets	$ 197,774,317	$ 76,034,977	$ -	$ 273,809,294
Capital Assets	105,059,272	12,961,538	-	118,020,810
Total Assets	$ 302,833,589	$ 88,996,515	$ -	$ 391,830,104
Total Deferred Outflows of Resources	$ 19,934,168	$ 256,710	$ -	$ 20,190,878
Current and other liabilities	$ 26,876,800	$ 2,477,170	$ -	$ 29,353,970
Long-term liabilities	190,157,069	744,045	-	190,901,114
Total Liabilities	$ 217,033,869	$ 3,221,215	$ -	$ 220,255,084
Total Deferred Inflows of Resources	$ 60,817,377	$ 6,628,533	$ -	$ 67,445,910
Net Position:				
Net investment in capital assets	$ 89,419,604	$ 76,961,538	$ (613,143)	$ 165,767,999
Restricted net position	57,077,112	-	-	57,077,112
Unrestricted net position	(101,580,205)	2,441,939	613,143	(98,525,123)
Total Net Position	$ 44,916,511	$ 79,403,477	$ -	$ 124,319,988

Condensed Statement of Net Position
September 30, 2024
Primary Government

	Governmental Activities	Business-type Activities	Reclassifications	Total
Current and other assets	$ 197,426,244	$ 12,630,788	$ -	$ 210,057,032
Capital Assets	102,557,925	78,336,902	-	180,894,827
Total Assets	$ 299,984,169	$ 90,967,690	$ -	$ 390,951,859
Total Deferred Outflows of Resources	$ 26,451,919	$ 263,678	$ -	$ 26,715,597
Current and other liabilities	$ 44,575,115	$ 3,935,221	$ -	$ 48,510,336
Long-term liabilities	269,482,659	903,058	-	270,385,717
Total Liabilities	$ 314,057,774	$ 4,838,279	$ -	$ 318,896,053
Total Deferred Inflows of Resources	$ 32,551,938	$ 4,656,999	$ -	$ 37,208,937
Net Position:				
Net investment in capital assets	$ 86,011,824	$ 78,336,902	$ (5,339,987)	$ 159,008,739
Restricted net position	55,344,944	-	-	55,344,944
Unrestricted net position	(161,530,392)	3,399,188	5,339,987	(152,791,217)
Total Net Position	$ (20,173,624)	$ 81,736,090	$ -	$ 61,562,466

During the current year, the County adopted new accounting guidance for compensated absences with the adoption of GASB Statement No. 101, *Compensated Absences*. The information above for 2025 has been restated to reflect this change, but in accordance with GASB pronouncements, 2024 was not adjusted above. See Note 7 and Note 16 to the financial statements for more information.

At the end of the fiscal year 2025 and the 2024 fiscal year, the County reported positive net position in two of the three categories as a whole. The County reported positive balances in two of the three categories of net position for its governmental activities for fiscal year 2025 and fiscal year 2024. Business-type activities had positive balances in two categories of net position for fiscal year 2025 and fiscal year 2024.

The County had a reclassification of $613,143 in fiscal year 2025 and $5,339,987 in fiscal year 2024 to move the debt associated with the construction of Ford Park from Unrestricted net position to net investment in capital assets. The capital assets are reported in the business-type activities and the debt is reported in the governmental activities.

The County's net position increased by $65,795,738 during the current fiscal year. The following table indicates changes in net position for governmental and business-type activities:

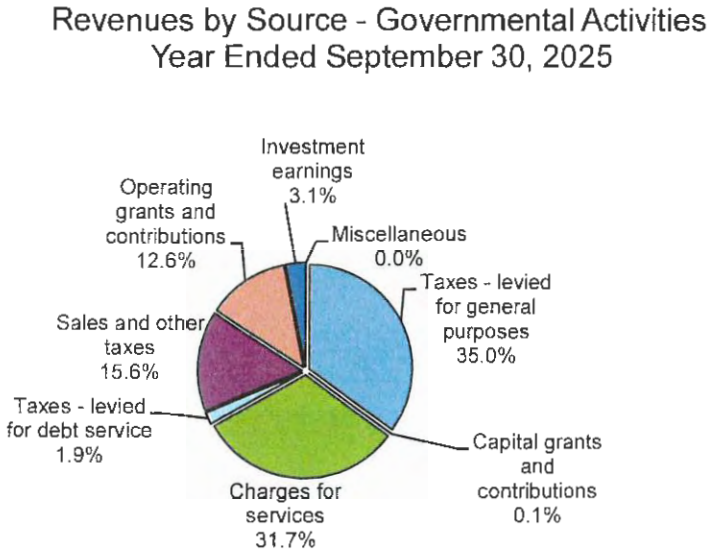
Statement of Activities
For the Year Ended September 30, 2025

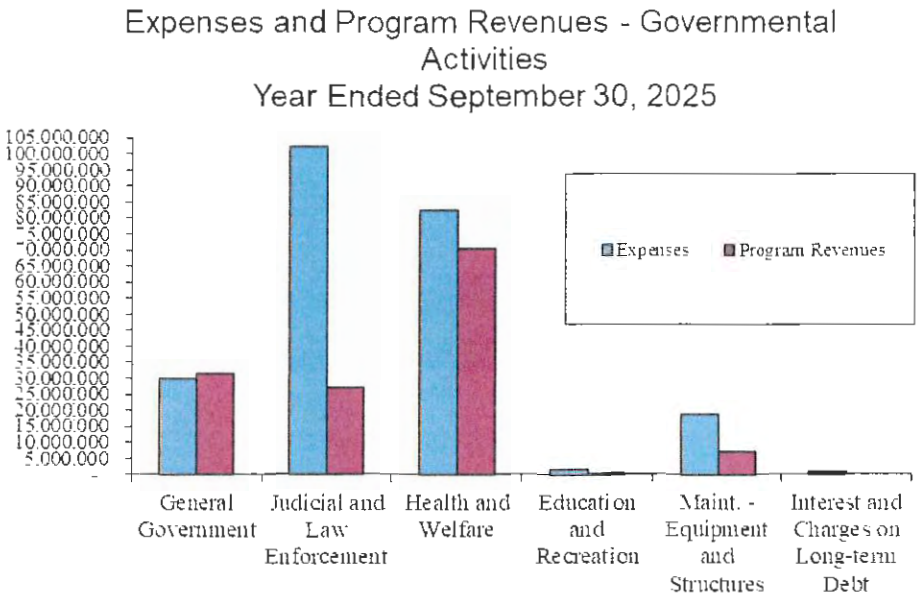
	Governmental Activities	Business-type Activities	Total
Revenues:			
Program revenues:			
Charges for services	$ 97,428,187	$ 11,092,902	$ 108,521,089
Operating grants and contributions	38,889,665	107,092	38,996,757
Capital grants and contributions	150,870	301,999	452,869
General revenues:			
Taxes - levied for general purposes	107,771,873	-	107,771,873
Taxes - levied for debt service	5,806,272	-	5,806,272
Sales and other taxes	48,090,714	-	48,090,714
Investment earnings	9,422,215	318,239	9,740,454
Miscellaneous	37,714	-	37,714
Total revenues	307,597,510	11,820,232	319,417,742
Expenses:			
General government	29,838,494	-	29,838,494
Judicial and law enforcement	102,335,299	-	102,335,299
Education and recreation	1,544,599	-	1,544,599
Health and welfare	82,445,864	-	82,445,864
Maintenance - equipment and structures	18,580,426	-	18,580,426
Interest and charges on long-term debt	542,454	-	542,454
Airport	-	7,507,611	7,507,611
Entertainment Complex	-	10,827,257	10,827,257
Total expenses	235,287,136	18,334,868	253,622,004
Excess (deficiency) before transfers	72,310,374	(6,514,636)	65,795,738
Transfers	(4,263,419)	4,263,419	-
Change in net position	68,046,955	(2,251,217)	65,795,738
Net position - beginning	(20,173,624)	81,736,090	61,562,466
Restatements	(2,956,820)	(81,396)	(3,038,216)
Net position - beginning - restated	(23,130,444)	81,654,694	58,524,250
Net position - ending	$ 44,916,511	$ 79,403,477	$ 124,319,988

Statement of Activities
For the Year Ended September 30, 2024

	Governmental Activities	Business-type Activities	Total
Revenues:			
Program revenues:			
Charges for services	$ 73,707,099	$ 8,925,361	$ 82,632,460
Operating grants and contributions	26,845,107	5,876,407	32,721,514
Capital grants and contributions	1,251,571	2,398,359	3,649,930
General revenues:			
Taxes - levied for general purposes	102,998,204	-	102,998,204
Taxes - levied for debt service	5,629,234	-	5,629,234
Sales and other taxes	42,425,421	-	42,425,421
Investment earnings	12,456,111	417,333	12,873,444
Miscellaneous	38,748	-	38,748
Total revenues	265,351,495	17,617,460	282,968,955
Expenses:			
General government	24,196,951	-	24,196,951
Judicial and law enforcement	98,891,287	-	98,891,287
Education and recreation	1,592,678	-	1,592,678
Health and welfare	64,855,915	-	64,855,915
Maintenance - equipment and structures	18,994,852	-	18,994,852
Interest and charges on long-term debt	378,604	-	378,604
Airport	-	7,308,686	7,308,686
Entertainment Complex	-	9,094,900	9,094,900
Total expenses	208,910,287	16,403,586	225,313,873
Excess (deficiency) before transfers	56,441,208	1,213,874	57,655,082
Transfers	(3,227,350)	3,227,350	-
Change in net position	53,213,858	4,441,224	57,655,082
Net position - beginning	(73,387,482)	77,294,866	3,907,384
Net position - ending	$(20,173,624)	$ 81,736,090	$ 61,562,466

Governmental activities





Governmental activities increased the County's net position by $68,046,955.

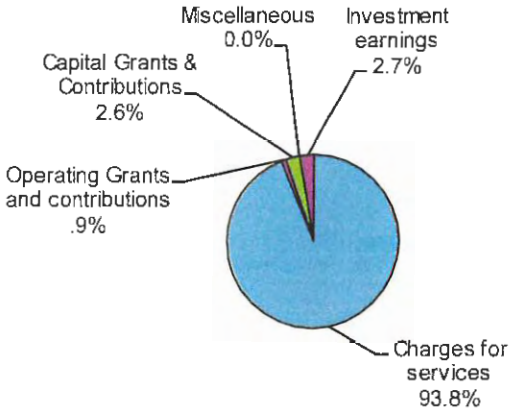
This increase is due to a net of multiple factors. The net effect of pension related liability, deferred inflows and outflows account for $8.6 million of the increase. OPEB related liability, deferred inflows and outflows account for another $32.9 million of the increase. Additionally, $5.2 million for in principal payments for bonds and financing arrangements account for and portion of the increase in County's net position. Revenue from Property

tax increased $4.9 million from prior year for increases in property valuations. Revenue from Sales tax has increased by about $5.7 million due to purchases for area industrial expansion. For the most part, other changes (increases/decreases) in expenses typically had corresponding changes in revenues as programs or projects ramp up or wind down.

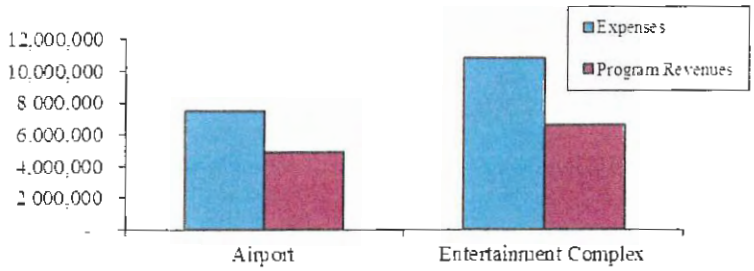
Business-type activities

Business-type activities decreased the County's net position by $2,251,217. The largest area of decrease is in Net Investment in Capital Assets due to the continued depreciation of assets and only small capital purchases during the fiscal year. Unrestricted also saw about $1 million decrease due to less non-capital intergovernmental funding. The County continues to look for additional revenues sources as well as cost-saving measures to have these business-type activities self-supporting without having to rely on transfers from the General Fund to subsidize operations.

Revenue by Source - Business-type Activities
Year Ended September 30, 2025



Expenses and Program Revenues - Business-type Activities
Year Ended September 30, 2025



Financial Analysis of the Government's Funds

Governmental Funds. The focus of the County's governmental funds is to provide information on near-term inflows, outflows, and balances of spendable resources. Such information is useful in assessing the County's financing requirements. In particular, unreserved fund balance may serve as a useful measure of a government's net resources available for spending at the end of the fiscal year.

As of the end of the current fiscal year, Jefferson County's governmental funds reported combined ending fund balances of $155,530,169 an increase of $17,908,209 in comparison with the prior year. About 49% of this total amount ($76,525,604) constitutes unassigned fund balance, which is available for spending at the County's discretion. The remainder of fund balance is nonspendable, committed, restricted, or assigned to indicate that it is not available for new spending.

The General Fund is the chief operating fund of the County. At the end of the current fiscal year, unassigned fund balance of the General Fund was $78,802,455 while total fund balance reached $100,253,211. As a measure of the General Fund's liquidity, it may be useful to compare both unassigned fund balance and total fund balance to total fund expenditures and transfers. Unassigned fund balance represents 47.9% of total General Fund expenditures and transfers, while total fund balances represents 61% of that same amount.

The fund balance of the County's General Fund increased by $14,683,552 during the current fiscal year. This increase is in mostly due to an increase of $5.2 million for property tax revenue due to increased property valuations. Revenue from Sales Tax also increased by $5.5 million due to construction for industrial expansions. Other increases in revenue had corresponding offsetting increases in expenditures. Additional transfers were to made to Capital Project fund for necessary projects.

The LPPF (Local Provider Participation Funds) fund had an ending fund balance of $6,078,540. The fund balance decrease by $4,234,537 due to increase in expenditures for intergovernmental transfer to the State for various programs. The County will continue administrating the local providers' mandatory payments for health care related expenditures.

The ARPA Coronavirus Recovery had an ending fund balance of zero. The County will continue administrating the local allocation of the American Rescue Plan Act of 2021.

Proprietary Funds. The County's proprietary fund statements provide the same type of information found in the business type activities of the government-wide financial statements, but in more detail.

The Jack Brooks Regional Airport Fund is used to account for the day-to-day operations of the County airport. As of September 30, 2025, unrestricted net position is positive $2,552,226, a decrease of $1,022,948 from the prior year unrestricted net position. This

decrease is mostly due to a decrease in grant funding from FAA for operations and revenue from interest.

The Ford Park Fund is used to account for the day-to-day operations of Ford Park. As of September 30, 2025, unrestricted net position is negative $110,287, an increase of $65,699 from the prior year negative net position. This decrease is mostly due to an additional transfer from the General Fund to subsidize operations.

General Fund Budgetary Highlights

The total original budget adopted on September 17, 2024 did not have to be amended during the year. Budget transfers were done during the year to adjust departments as needed.

During the year actual revenues and other financing sources including transfers in were more than budgetary estimates by $18,749,571. Actual expenditures and transfers out were less than budgetary estimates by $13,496,714. The budget had a projected reduction of $17,562,733 to the fund balance. The net effect of over-realization of revenues and under-utilization of appropriations resulted in a positive variance of $32,246,285 thus increasing the existing fund balance by $14,683,552 on a budgetary basis.

The largest positive variance of $13,461,759 is due to an increase in Sales Tax revenue. The area continues several large industrial expansions.

Revenue from Property Taxes had the largest negative variance of $766,246 due to adjustments to property valuations after the adoption of the budget.

Many departments achieved savings over the fiscal year mostly due to unfilled staff positions and moving employees through their salary ranges whereby leaving unspent funds. The total amount of savings for salary and fringe benefits was about $8.7 million. Departments also did well in controlling their spending in other budgetary areas.

Budget variances are not expected to impact future services or liquidity.

Capital Assets and Debt Administration

Capital Assets. The County's investment in capital assets for its governmental and business-type activities as of September 30, 2025, amounted to $182,020,810 (net of accumulated depreciation). This investment in capital assets includes land, improvements, structures, park improvements and facilities, infrastructure, equipment, vehicles, machinery, other tangible and intangible assets, and construction in progress.

Major capital asset events during the current fiscal year included the following:

- The County had a variety of building improvements, purchases of equipment, roads and bridges construction, construction of airport facilities, and energy conservation projects.

- At September 30, 2025, the ending fund balance for all capital projects funds was $20.38 million.

For further information regarding capital assets, see Note 5.

Governmental Activities:	Balance September 30, 2025	Balance September 30, 2024
Land	$ 3,840,787	$ 3,840,787
Construction in progress	8,028,580	3,709,596
Infrastructure	66,596,910	66,596,910
Buildings & Improvements	143,033,638	141,861,596
Equipment	66,727,921	61,557,327
SBITA, right to use	8,588,424	7,622,743
	296,816,260	285,188,959
Less: Accumulated depreciation	(191,756,988)	(182,631,034)
Total governmental activities	$ 105,059,272	$ 102,557,925
Business-type Activities:		
Land	$ 5,154,600	$ 5,154,600
Construction in progress	-	7,016,284
Buildings & Improvements	159,176,014	150,334,897
Equipment	13,517,851	12,455,064
	177,848,465	174,960,845
Less: Accumulated depreciation	(100,886,927)	(96,623,943)
Total business-type activities	$ 76,961,538	$ 78,336,902

Long-Term Liabilities. At September 30, 2025, the County had total long-term liabilities outstanding of $35,116,336. Note that the table below reflects the County's implementation of GASB Statement No. 101, *Compensated Absences*, for 2025 and 2024. The liability now includes the estimated portion of accumulated sick leave that will be paid in future years. The other portion of compensated absences related to vacation and compensation time payable was not significantly affected by GASB 101. Refer to Note 7 for further information on the County's long-term liabilities. County officials, citizens, and investors will find the ratio of net bonded debt to assessed valuation and the amount of bonded debt per capita as useful indicators of the County's debt position. This information is presented in the statistical section of this report.

Governmental Activities:	Outstanding at September 30, 2025	Outstanding at September 30, 2024 - restated
Bonds Payable	$ 12,800,486	$ 18,272,581
Financing Arrangements	8,325	106,304
SBITA Liability	3,444,000	3,593,120
Claims & Judgments	3,581,509	4,226,492
Compensated Absences	14,986,307	14,590,104
Total governmental activities	$ 34,820,627	$ 37,831,781
Business-type Activities:		
Compensated Absences	$ 295,709	$ 278,527
Total business-type activities	$ 295,709	$ 278,527

The bond rating services of Moody's Investors Services, Inc. and Standard & Poor's Ratings services have assigned the County's long term bond ratings of Aa2 and AA- respectively.

Economic Factors and Next Year's Budgets and Rates

The Commissioner's Court adopted the County's 2025-2026 budget on August 26, 2025 for the General Fund and Debt Service funds. The budget was adopted based on estimated balances that would be available at the end of fiscal year 2025 and estimated revenues to be received in fiscal year 2026. The total resources for all funds for fiscal year 2026 are estimated to be $273.8 million. The budget was adopted with estimated expenditures in the amount of $193.2 million. The 2025-2026 budget forecast utilizing $19,997,704 of fund balance.

For 2025-2026, the property tax rate will be maintained at $.357 per $100 of taxable assessed value and taxable assessed property values are anticipated to increase by 5.2% for the 2025-2026 budget year.

The average unemployment rate for Jefferson County for September 2025 was 6.0%; this is a decrease from the prior year rate of 6.4%. The state's average unemployment rate for September 2025 was 4.4%.

Request for Information

This financial report is designed to provide a general overview of the County's finances for all those with an interest in the County finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the County Auditor's Office, 1149 Pearl St. – 7th Floor, Beaumont, Texas 77701.

BASIC

FINANCIAL STATEMENTS

JEFFERSON COUNTY, TEXAS
STATEMENT OF NET POSITION
SEPTEMBER 30, 2025

	PRIMARY GOVERNMENT			
	GOVERNMENTAL ACTIVITIES	BUSINESS-TYPE ACTIVITIES	RECLASSIFICATIONS	TOTAL
ASSETS:				
CASH AND CASH EQUIVALENTS	$ 120,152,759	3,818,055	-	123,970,814
INVESTMENTS	57,963,166	-	-	57,963,166
INTEREST RECEIVABLE	541,620	19,057	-	560,677
ACCOUNTS RECEIVABLE, Net	1,009,840	659,332	-	1,669,172
DUE FROM OTHER GOVERNMENTAL ENTITIES	9,751,459	261,908	-	10,013,367
INVENTORIES, At Cost	934,974	199,135	-	1,134,109
PREPAID ITEMS	550,036	318,206	-	868,242
DELINQUENT TAXES RECEIVABLE, Net	2,988,868	-	-	2,988,868
PENALTY AND INTEREST RECEIVABLE, Net	1,991,637	-	-	1,991,637
FINE AND COURT COST RECEIVABLE, Net	1,607,062	-	-	1,607,062
LEASE RECEIVABLE	165,896	6,759,284	-	6,925,180
DEPOSITS	117,000	-	-	117,000
CAPITAL ASSETS:				
LAND	3,840,787	5,154,600	-	8,995,387
CONSTRUCTION IN PROGRESS	8,028,580	-	-	8,028,580
OTHER CAPITAL ASSETS, Net of depreciation	93,189,905	71,806,938	-	164,996,843
TOTAL ASSETS	$ 302,833,589	88,996,515	-	391,830,104
DEFERRED OUTFLOWS OF RESOURCES:				
DEFERRED OUTFLOWS RELATED TO PENSIONS	$ 14,004,948	256,710	-	14,261,658
DEFERRED OUTFLOWS RELATED TO OPEB	5,929,220	-	-	5,929,220
TOTAL DEFERRED OUTFLOWS OF RESOURCES	$ 19,934,168	256,710	-	20,190,878
LIABILITIES:				
ACCOUNTS PAYABLE	$ 10,704,614	1,780,025	-	12,484,639
INTEREST PAYABLE	67,025	-	-	67,025
DUE TO OTHER GOVERNMENTAL ENTITIES	360	-	-	360
UNEARNED REVENUE	16,104,801	620,015	-	16,724,816
CUSTOMER DEPOSITS	-	77,130	-	77,130
NONCURRENT LIABILITIES:				
DUE WITHIN ONE YEAR				
LONG-TERM DEBT	6,469,167	23,867	-	6,493,034
TOTAL OPEB LIABILITY	7,680,000	-	-	7,680,000
DUE IN MORE THAN ONE YEAR				
LONG-TERM DEBT	28,351,460	271,842	-	28,623,302
TOTAL OPEB LIABILITY	123,197,217	-	-	123,197,217
NET PENSION LAIBILITY	24,459,225	448,336	-	24,907,561
TOTAL LIABILITIES	$ 217,033,869	3,221,215	-	220,255,084
DEFERRED INFLOWS OF RESOURCES:				
DEFERRED INFLOWS RELATED TO LEASES	$ 160,214	6,494,583	-	6,654,797
DEFERRED INFLOWS RELATED TO PENSIONS	7,307,716	133,950	-	7,441,666
DEFERRED INFLOWS RELATED TO OPEB	53,349,447	-	-	53,349,447
TOTAL DEFERRED INFLOWS OF RESOURCES	$ 60,817,377	6,628,533	-	67,445,910
NET POSITION (DEFICIT)				
NET INVESTMENT IN CAPITAL ASSETS	$ 89,419,604	76,961,538	(613,143)	165,767,999
RESTRICTED FOR:				
DEBT SERVICE	874,486	-	-	874,486
ENVIRONMENTAL PROJECTS	8,930,242	-	-	8,930,242
PUBLIC INTEREST	5,158,247	-	-	5,158,247
JUDICAL & LAW ENFORCEMENT	12,169,601	-	-	12,169,601
EDUATION & RECREATION	6,165,287	-	-	6,165,287
HEALTH & WELFARE	11,749,697	-	-	11,749,697
MAINTENANCE OF STRUCTURES & EQUIPMENT	12,029,552	-	-	12,029,552
UNRESTRICTED	(101,580,205)	2,441,939	613,143	(98,525,123)
TOTAL NET POSITION	$ 44,916,511	79,403,477	-	124,319,988

The reclassification is for the debt associated with the construction of Ford Park. The asset is accounted for in the Business-type activities column and the debt is accounted for in the Governmental Activities column.

The notes to the financial statements are an integral part of this statement.

JEFFERSON COUNTY, TEXAS
STATEMENT OF ACTIVITIES
FOR THE YEAR ENDED SEPTEMBER 30, 2025

FUNCTIONS/PROGRAMS	EXPENSES	PROGRAM REVENUES: CHARGES FOR SERVICES	PROGRAM REVENUES: OPERATING GRANTS AND CONTRIBUTIONS	PROGRAM REVENUES: CAPITAL GRANTS AND CONTRIBUTIONS
PRIMARY GOVERNMENT				
GOVERNMENTAL ACTIVITIES:				
GENERAL GOVERNMENT	$ 29,838,494	$ 29,499,264	$ 1,970,405	$ -
JUDICIAL AND LAW ENFORCEMENT	102,335,299	11,529,598	15,523,042	11,582
EDUCATION AND RECREATION	1,544,599	239,946	-	-
HEALTH AND WELFARE	82,445,864	49,883,241	20,601,638	-
MAINTENANCE - EQUIPMENT AND STRUCTURES	18,580,426	6,276,138	794,580	139,288
INTEREST ON LONG-TERM DEBT	542,454	-	-	-
TOTAL GOVERNMENTAL ACTIVITIES	$ 235,287,136	$ 97,428,187	$ 38,889,665	$ 150,870
BUSINESS-TYPE ACTIVITIES:				
AIRPORT	7,507,611	4,585,770	107,092	231,999
ENTERTAINMENT COMPLEX	10,827,257	6,507,132	-	70,000
TOTAL BUSINESS-TYPE ACTIVITIES	$ 18,334,868	$ 11,092,902	$ 107,092	$ 301,999
TOTAL PRIMARY GOVERNMENT	$ 253,622,004	$ 108,521,089	$ 38,996,757	$ 452,869
GENERAL REVENUES				
TAXES:				
PROPERTY TAXES LEVIED FOR GENERAL PURPOSES				
PROPERTY TAXES LEVIED FOR DEBT SERVICE				
SALES AND OTHER TAXES				
UNRESTRICTED INVESTMENT EARNINGS				
MISCELLANEOUS				
TRANSFERS				
TOTAL GENERAL REVENUE AND TRANSFERS				
CHANGE IN NET POSITION				
NET POSITION - BEGINNING				
RESTATEMENTS				
NET POSITION - BEGINNING, Restated				
NET POSITION - ENDING				

The notes to the financial statements are an integral part of this statement.

NET (EXPENSES) REVENUES AND CHANGES IN NET POSITION		
PRIMARY GOVERNMENT		
GOVERNMENTAL ACTIVITIES	BUSINESS-TYPE ACTIVITIES	TOTAL
$ 1,631,175	$ -	$ 1,631,175
(75,271,077)	-	(75,271,077)
(1,304,653)	-	(1,304,653)
(11,960,985)	-	(11,960,985)
(11,370,420)	-	(11,370,420)
(542,454)	-	(542,454)
$ (98,818,414)	$ -	$ (98,818,414)
-	(2,582,750)	(2,582,750)
-	(4,250,125)	(4,250,125)
$ -	$ (6,832,875)	$ (6,832,875)
$ (98,818,414)	$ (6,832,875)	$ (105,651,289)
$ 107,771,873	$ -	$ 107,771,873
5,806,272	-	5,806,272
48,090,714	-	48,090,714
9,422,215	318,239	9,740,454
37,714	-	37,714
(4,263,419)	4,263,419	-
$ 166,865,369	$ 4,581,658	$ 171,447,027
$ 68,046,955	$ (2,251,217)	$ 65,795,738
(20,173,624)	81,736,090	61,562,466
(2,956,820)	(81,396)	(3,038,216)
$ (23,130,444)	$ 81,654,694	$ 58,524,250
$ 44,916,511	$ 79,403,477	$ 124,319,988

JEFFERSON COUNTY, TEXAS
BALANCE SHEET
GOVERNMENTAL FUNDS
SEPTEMBER 30, 2025

	GENERAL	LPFF	ARPA CORONAVIRUS RECOVERY	NONMAJOR GOVERNMENTAL FUNDS	TOTAL GOVERNMENTAL FUNDS
ASSETS:					
CASH AND CASH EQUIVALENTS	$ 37,010,398	6,078,540	16,793,774	52,743,963	112,626,675
INVESTMENTS	57,963,166	-	-	-	57,963,166
ACCOUNTS RECEIVABLE, Net	279,424	-	-	318,623	598,047
INTEREST RECEIVABLE	249,236	-	-	106,168	355,404
DUE FROM OTHER FUNDS	2,601,332	-	-	65,477	2,666,809
DUE FROM OTHER GOVERNMENTAL ENTITIES	7,341,264	-	-	1,775,168	9,116,432
DELINQUENT TAXES RECEIVABLE, Net	2,828,132	-	-	160,736	2,988,868
PENALTY AND INTEREST RECEIVABLE, Net	1,884,531	-	-	107,106	1,991,637
FINES AND FEES RECEIVABLE, Net	1,607,062	-	-	-	1,607,062
LEASE RECEIVABLE	165,896	-	-	-	165,896
INVENTORIES, At Cost	916,914	-	-	18,060	934,974
PREPAID ITEMS	536,138	-	-	13,898	550,036
TOTAL ASSETS	$ 113,383,493	6,078,540	16,793,774	55,309,199	191,565,006
LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCE					
LIABILITIES:					
ACCOUNTS PAYABLE	$ 6,699,165	-	1,596,152	2,377,332	10,672,649
COMPENSATED ABSENCES PAYABLE	59,994	-	-	39,751	99,745
DUE TO OTHER FUNDS	-	-	-	2,666,809	2,666,809
DUE TO OTHER GOVERNMENTAL ENTITIES	360	-	-	-	360
UNEARNED REVENUE	197,062	-	15,197,622	710,117	16,104,801
TOTAL LIABILITIES	$ 6,956,581	-	16,793,774	5,794,009	29,544,364
DEFERRED INFLOWS OF RESOURCES:					
DEFERRED INFLOWS RELATED TO LEASES	$ 160,214	-	-	-	160,214
UNAVAILABLE REVENUE- PROPERTY TAXES	4,406,425	-	-	251,373	4,657,798
UNAVAILABLE REVENUE- FINES AND FEES	1,607,062	-	-	-	1,607,062
UNAVAILABLE REVENUE- GRANTS	-	-	-	65,399	65,399
TOTAL DEFERRED INFLOWS OF RESOURCES	$ 6,173,701	-	-	316,772	6,490,473
FUND BALANCES:					
NONSPENDABLE FOR:					
INVENTORY	$ 916,914	-	-	18,060	934,974
PREPAID ITEMS	536,138	-	-	13,898	550,036
RESTRICTED FOR:					
DEBT SERVICE	-	-	-	849,068	849,068
CONSTRUCTION	-	-	-	8,930,242	8,930,242
PUBLIC INTEREST	-	-	-	5,158,247	5,158,247
JUDICIAL & LAW ENFORCEMENT	-	-	-	12,142,776	12,142,776
EDUCATION & RECREATION	-	-	-	6,160,154	6,160,154
HEALTH & WELFARE	-	6,078,540	-	5,671,157	11,749,697
MAINTENANCE OF STRUCTURES & EQUIPMENT	-	-	-	12,029,552	12,029,552
COMMITTED FOR:					
CONSTRUCTION CONTRACTS	-	-	-	502,115	502,115
ASSIGNED FOR ADOPTED BUDGET UTILIZATION OF FUND BALANCE	19,997,704	-	-	-	19,997,704
UNASSIGNED (DEFICIT)	78,802,455	-	-	(2,276,851)	76,525,604
TOTAL FUND BALANCES	$ 100,253,211	6,078,540	-	49,198,418	155,530,169
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCES	$ 113,383,493	6,078,540	16,793,774	55,309,199	191,565,006

The notes to the financial statements are an integral part of this statement.

JEFFERSON COUNTY, TEXAS
RECONCILIATION OF THE GOVERNMENTAL FUNDS BALANCE SHEET
TO THE STATEMENT OF NET POSITION
SEPTEMBER 30, 2025

Total fund balances for governmental funds		$ 155,530,169
Total net position reported for governmental activities in the statement of net position is different because:		
Capital assets used in governmental activities are not financial resources and therefore are not reported in the funds. Those assets consist of:		
Land	$ 3,840,787	
Construction in progress	8,028,580	
Infrastructure, net of $51,069,793 accumulated depreciation	15,527,117	
Buildings, net of $89,725,372 accumulated depreciation	53,308,266	
Equipment, net of $47,158,875 accumulated depreciation	19,569,046	
SBITA, right to use, net of $3,802,948 accumulated depreciation	4,785,476	
Total capital assets		105,059,272
Long-term liabilities applicable to Jefferson County's activities are not due and payable in the current period and accordingly are not reported as fund liabilities. Interest on long-term debt is not accrued in governmental funds, but rather is recognized as an expenditure when due. All liabilities - both current and long-term are reported in the Statement of Net Position. Balances as of September 30, 2025 were:		
Accrued interest on bonds and loans	$ (67,025)	
Bonds payable	(12,005,000)	
SBITA Liability	(3,444,000)	
Total OPEB Liabilities	(130,877,217)	
Net Pension Liability	(24,459,225)	
Financing Arrangement	(8,325)	
Compensated absences	(14,886,562)	
Pensions - Contributions after 12/31/2024	13,231,881	
Pensions - Economic/demographic losses	(6,518,130)	
Pensions - Investment (gains) or losses (Inflows)	(789,586)	
Pensions - Investment (gains) or losses Outflows	773,067	
OPEB - Changes in Assumption Outflows	3,107,081	
OPEB - Economic/demographic Outflows	2,822,139	
OPEB - Changes in Assumption (Inflows)	(22,805,421)	
OPEB - Economic/demographic (Inflows)	(30,544,026)	
Premium/Discounts on Bonds	(795,486)	
		(227,265,835)
Internal service funds are used by the County. The assets and liabilities of the internal service funds are included in the governmental activities in the Statement of Net Position. Internal service fund net position is:		5,091,505
Interest on investements is not accrued in governmental funds, but rather is recognized as revenue when due.		171,141
Some of the County's revenues will be collected after year-end but are not available soon enough to pay for the current period's expenditures and therefore are reported as unavailable resources in the funds.		6,330,259
Total net position of governmental activities		$ 44,916,511

The notes to the financial statements are an integral part of this statement.

JEFFERSON COUNTY, TEXAS
STATEMENT OF REVENUES, EXPENDITURES,
AND CHANGES IN FUND BALANCES
GOVERNMENTAL FUNDS
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

	GENERAL	LPPF	ARPA CORONAVIRUS RECOVERY	NONMAJOR GOVERNMENTAL FUNDS	TOTAL GOVERNMENTAL FUNDS
REVENUES:					
PROPERTY TAXES	$ 107,751,279	-	-	5,808,471	113,559,750
SALES AND OTHER TAXES	46,161,759	-	-	1,928,955	48,090,714
FEES	9,863,137	49,249,616	-	4,484,683	63,597,436
LICENSES	436,910	-	-	-	436,910
INTERGOVERNMENTAL	2,038,920	-	18,876,042	18,118,889	39,033,851
SALES, RENTAL & SERVICES	4,053,234	-	-	1,789,089	5,842,323
FINES AND FORFEITURES	1,832,539	-	-	274,351	2,106,890
INTEREST	6,075,057	512,195	-	2,383,788	8,971,040
MISCELLANEOUS	37,714	-	-	-	37,714
CONTRIBUTIONS AND DONATIONS	940	-	-	9,547	10,487
TOTAL REVENUES	$ 178,251,489	49,761,811	18,876,042	34,797,773	281,687,115
EXPENDITURES:					
CURRENT					
GENERAL GOVERNMENT	$ 31,972,936	-	187,729	2,185,248	34,345,913
JUDICIAL AND LAW ENFORCEMENT	95,571,209	-	3,835,197	16,474,380	115,880,786
EDUCATION AND RECREATION	463,567	-	-	1,310,218	1,773,785
HEALTH AND WELFARE	12,596,478	53,996,348	14,592,412	3,110,714	84,295,952
MAINTENANCE OF STRUCTURES AND EQUIPMENT	16,888,554	-	260,704	24,523	17,173,781
CAPITAL OUTLAY	-	-	-	2,807,835	2,807,835
DEBT SERVICE					
PRINCIPAL	97,979	-	-	5,100,000	5,197,979
INTEREST AND COMMISSION	2,221	-	-	570,480	572,701
TOTAL EXPENDITURES	$ 157,592,944	53,996,348	18,876,042	31,583,398	262,048,732
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	$ 20,658,545	(4,234,537)	-	3,214,375	19,638,383
OTHER FINANCING SOURCES (USES):					
TRANSFERS IN	$ -	-	-	4,521,602	4,521,602
TRANSFERS OUT	(6,831,360)	-	-	(276,783)	(7,108,143)
ISSUANCE OF SBITA	856,367	-	-	-	856,367
TOTAL OTHER FINANCING SOURCES (USES)	$ (5,974,993)	-	-	4,244,819	(1,730,174)
NET CHANGE IN FUND BALANCES	$ 14,683,552	(4,234,537)	-	7,459,194	17,908,209
FUND BALANCES, BEGINNING	$ 85,569,659	10,313,077	-	41,739,224	137,621,960
FUND BALANCES, ENDING	$ 100,253,211	6,078,540	-	49,198,418	155,530,169

The notes to the financial statements are an integral part of this statement.

JEFFERSON COUNTY, TEXAS
RECONCILIATION OF THE STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES OF GOVERNMENTAL FUNDS TO THE STATEMENT OF ACTIVITIES
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

Net change in fund balances - total governmental funds		$ 17,908,209
Governmental funds report capital outlays as expenditures. However, in the statement of activities the cost of these assets is allocated over their estimated useful lives and reported as depreciation expense.		
Capital Expenditures	$ 15,447,906	
Capital asset donations to Business type activities	(1,676,878)	
Net adjustment for sale or disposal of capital assets	(9,748)	
Depreciation Expense	(11,259,933)	
Net adjustment		2,501,347
Debt proceeds are reported as financing sources in governmental funds and thus contribute to the change in fund balance. In the statement of net position, however, issuing debt increases long-term liabilities and does not affect the Statement of Activities. Similarly, repayment of principal is an expenditure in the governmental funds but reduces the liability in the Statement of Net Position.		
Debt issued:		
SBITA, right to use	(856,367)	
Repayments:		
To paying agent for bond principal	5,100,000	
Principal on SBITA liability	1,005,487	
Financing arrangement principal	97,979	
Net adjustment		5,347,099
Under the modified accrual basis of accounting used in the governmental funds, expenditures are not recognized for transactions that are not normally paid with expendable available financial resources. In the statement of activities, however, which is presented on the accrual basis, expenses and liabilities are reported regardless of when financial resources are available. In addition, interest on long-term debt is not recognized under the modified accrual basis of accounting until due, rather as it accrues. The adjustment combines the net changes of the following balances.		
Compensated absences	$ (447,638)	
Total OPEB Liabilities	62,261,410	
Net Pension Liability	14,053,026	
Pensions - Economic/demographic outflows	(7,852,542)	
Pensions - Investment (gains) of losses inflows	1,173,984	
Pensions - Investment (gains) of losses outflows	1,086,576	
Pensions - Difference in Contributions	181,223	
OPEB - Change in assumptions outflows	(2,524,040)	
OPEB - Change in assumptions inflows	(303,328)	
OPEB - Economic/demographic outflows	(3,527,672)	
OPEB - Economic/demographic inflows	(22,979,885)	
Amortization of bond premium	372,095	
Amortization of refunding difference	(85,917)	
Accrued interest on debt	27,617	
Combined adjustment		41,434,909
Internal service funds are used by the County. The change in net position of the internal service funds are reported with governmental activities.		1,084,376
Because some revenues will not be collected for several months after the County's fiscal year end, they do not provide current financial resources and they are not reported as revenues in the funds.		(228,985)
Total change in net position of governmental activities		$ 68,046,955

The notes to the financial statements are an integral part of this statement.

JEFFERSON COUNTY, TEXAS
STATEMENT OF NET POSITION - PROPRIETARY FUNDS
SEPTEMBER 30, 2025

	ENTERPRISE FUNDS			
	JACK BROOKS REGIONAL AIRPORT	FORD PARK	TOTAL	INTERNAL SERVICE FUNDS
ASSETS:				
CURRENT ASSETS:				
CASH AND CASH EQUIVALENTS	$ 2,953,602	864,453	3,818,055	7,526,084
ACCOUNTS RECEIVABLE, Net	96,610	562,722	659,332	411,793
INTEREST RECEIVABLE	18,331	726	19,057	15,075
DUE FROM OTHER GOVERNMENTAL ENTITIES	261,908	-	261,908	635,027
LEASE RECEIVABLE	6,759,284	-	6,759,284	-
PREPAID ITEMS	92,946	225,260	318,206	-
INVENTORY, At Cost	141,384	57,751	199,135	-
DEPOSITS	-	-	-	117,000
TOTAL CURRENT ASSETS	$ 10,324,065	1,710,912	12,034,977	8,704,979
NONCURRENT ASSETS:				
CAPITAL ASSETS:				
LAND	3,024,815	2,129,785	5,154,600	-
OTHER CAPITAL ASSETS, NET OF DEPRECIATION	36,634,704	35,172,234	71,806,938	-
TOTAL NONCURRENT ASSETS	$ 39,659,519	37,302,019	76,961,538	-
TOTAL ASSETS	$ 49,983,584	39,012,931	88,996,515	8,704,979
DEFERRED OUTFLOWS OF RESOURCES:				
DEFERRED OUTFLOWS RELATED TO PENSIONS	$ 256,710	-	256,710	-
TOTAL DEFERRED OUTFLOWS OF RESOURCES	$ 256,710	-	256,710	-
LIABILITIES:				
CURRENT LIABILITIES:				
ACCOUNTS PAYABLE	$ 585,675	1,194,350	1,780,025	31,965
CLAIMS LIABILITY	-	-	-	3,581,509
CURRENT PORTION - COMPENSATED ABSENCES	23,867	-	23,867	-
UNEARNED REVENUE	45,296	574,719	620,015	-
CUSTOMER DEPOSITS	25,000	52,130	77,130	-
TOTAL CURRENT LIABILITIES	$ 679,838	1,821,199	2,501,037	3,613,474
NONCURRENT LIABILITIES:				
NONCURRENT PORTION - COMPENSATED ABSENCES	271,842	-	271,842	-
NET PENSION LIABILITY	448,336	-	448,336	-
TOTAL NONCURRENT LIABILITIES	$ 720,178	-	720,178	-
TOTAL LIABILITIES	$ 1,400,016	1,821,199	3,221,215	3,613,474
DEFERRED INFLOWS OF RESOURCES:				
DEFERRED INFLOWS RELATED TO LEASES	$ 6,494,583	-	6,494,583	-
DEFERRED INFLOWS RELATED TO PENSIONS	133,950	-	133,950	-
TOTAL DEFERRED INFLOWS OF RESOURCES	$ 6,628,533	-	6,628,533	-
NET POSITION:				
NET INVESTMENT IN CAPITAL ASSETS	$ 39,659,519	37,302,019	76,961,538	-
UNRESTRICTED	2,552,226	(110,287)	2,441,939	5,091,505
TOTAL NET POSITION	$ 42,211,745	37,191,732	79,403,477	5,091,505

The notes to financial statements are an integral part of this statement.

JEFFERSON COUNTY, TEXAS
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION - PROPRIETARY FUNDS
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

	ENTERPRISE FUNDS			
	JACK BROOKS REGIONAL AIRPORT	FORD PARK	TOTAL	INTERNAL SERVICE FUNDS
OPERATING REVENUES:				
CHARGES FOR SERVICES	$ 4,580,927	6,507,132	11,088,059	24,265,827
EMPLOYEE CONTRIBUTIONS	-	-	-	3,088,304
TOTAL OPERATING REVENUES	$ 4,580,927	6,507,132	11,088,059	27,354,131
OPERATING EXPENSES:				
SALARIES & BENEFITS	$ 2,194,545	1,700,969	3,895,514	-
MATERIALS AND SUPPLIES	137,321	107,045	244,366	-
MAINTENANCE AND REPAIRS	158,375	475,778	634,153	-
UTILITIES	185,889	929,188	1,115,077	-
COST OF GOODS SOLD	2,187,946	4,026,857	6,214,803	-
MISCELLANEOUS	671,150	18,501	689,651	-
ADMINISTRATIVE	-	1,128,721	1,128,721	2,433,562
INCURRED & ESTIMATED CLAIMS	-	-	-	27,385,418
DEPRECIATION	1,972,385	2,361,860	4,334,245	-
TOTAL OPERATING EXPENSES	$ 7,507,611	10,748,919	18,256,530	29,818,980
OPERATING INCOME (LOSS)	$ (2,926,684)	(4,241,787)	(7,168,471)	(2,464,849)
NONOPERATING REVENUES (EXPENSES):				
INTEREST REVENUE	$ 310,387	7,852	318,239	319,904
GAIN/(LOSS) ON SALE OF CAPITAL ASSETS	4,258	(78,338)	(74,080)	-
INTERGOVERNMENTAL	107,092	-	107,092	-
REFUNDS AND RECOVERIES	585	-	585	3,229,321
TOTAL NONOPERATING REVENUES	$ 422,322	(70,486)	351,836	3,549,225
INCOME (LOSS) BEFORE TRANSFERS AND CAPITAL CONTRIBUTIONS	$ (2,504,362)	(4,312,273)	(6,816,635)	1,084,376
CAPITAL CONTRIBUTIONS	231,999	1,746,878	1,978,877	-
TRANSFER IN	-	2,586,541	2,586,541	-
CHANGE IN NET POSITION	$ (2,272,363)	21,146	(2,251,217)	1,084,376
NET POSITION, BEGINNING	44,565,504	37,170,586	81,736,090	4,007,129
RESTATEMENTS	(81,396)	-	(81,396)	-
NET POSITION, BEGINNING - Restated	$ 44,484,108	37,170,586	81,654,694	4,007,129
NET POSITION, ENDING	$ 42,211,745	37,191,732	79,403,477	5,091,505

The notes to the financial statements are an integral part of this statement.

JEFFERSON COUNTY, TEXAS
STATEMENT OF CASH FLOWS -
PROPRIETARY FUNDS
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

	ENTERPRISE FUNDS			
	JACK BROOKS REGIONAL AIRPORT	FORD PARK	TOTAL	INTERNAL SERVICE FUNDS
CASH FLOWS FROM OPERATING ACTIVITIES:				
RECEIPTS FROM CUSTOMERS AND USERS	$ 4,508,066	5,014,635	9,522,701	2,757,615
RECEIPTS FROM EMPLOYEES	-	-	-	3,086,764
PAYMENTS TO SUPPLIERS	(4,171,190)	(6,517,430)	(10,688,620)	(2,431,343)
PAYMENTS TO EMPLOYEES	(2,335,775)	(1,700,969)	(4,036,744)	-
INTERNAL ACTIVITY-RECEIPTS FROM OTHER FUNDS	-	-	-	21,252,379
CLAIMS PAID	-	-	-	(28,030,401)
OTHER RECEIPTS	585	-	585	3,782,055
NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES	$ (1,998,314)	(3,203,764)	(5,202,078)	417,069
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES:				
RECEIPTS FROM GRANTS	$ 43,976	-	43,976	-
TRANSFERS (TO) FROM OTHER FUNDS	-	2,586,541	2,586,541	-
NET CASH PROVIDED (USED) BY NONCAPITAL FINANCING ACTIVITIES	$ 43,976	2,586,541	2,630,517	-
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:				
CAPITAL GRANTS FROM FEDERAL ENTITIES	$ 578,818	-	578,818	-
ACQUISITION AND CONSTRUCTION OF CAPITAL ASSETS	(148,360)	(645,107)	(793,467)	-
PROCEEDS FROM SALE OF CAPITAL ASSETS	4,258	-	4,258	-
NET CASH PROVIDED (USED) BY CAPITAL FINANCING ACTIVITIES	$ 434,716	(645,107)	(210,391)	-
CASH FLOWS FROM INVESTMENT ACTIVITIES:				
RECEIPTS OF INTEREST	314,869	8,324	323,193	326,865
NET CASH PROVIDED BY INVESTMENT ACTIVITIES	$ 314,869	8,324	323,193	326,865
NET INCREASE (DECREASE) IN CASH	$ (1,204,753)	(1,254,006)	(2,458,759)	743,934
CASH AND CASH EQUIVALENTS - BEGINNING	4,158,355	2,118,459	6,276,814	6,782,150
CASH AND CASH EQUIVALENTS - ENDING	$ 2,953,602	864,453	3,818,055	7,526,084
RECONCILIATION OF OPERATING INCOME(LOSS) TO NET CASH PROVIDED(USED) BY OPERATING ACTIVITIES:				
OPERATING INCOME(LOSS)	$ (2,926,684)	(4,241,787)	(7,168,471)	(2,464,849)
ADJUSTMENTS TO RECONCILE OPERATING INCOME (LOSS) TO NET CASH PROVIDED BY OPERATING ACTIVITIES:				
DEPRECIATION	1,972,385	2,361,860	4,334,245	-
OTHER NON-OPERATING REVENUES (EXPENSES)	585	-	585	3,229,321
CHANGES IN ASSETS AND LIABILITIES:				
ACCOUNTS RECEIVABLE	674	(160,552)	(159,878)	551,194
DUE FROM OTHER GOVERNMENTAL ENTITIES	-	-	-	(255,833)
LEASE RECEIVABLE	(1,956,403)	-	(1,956,403)	-
PREPAID ITEMS	(6,861)	(23,248)	(30,109)	-
INVENTORY	4,434	(9,649)	(5,215)	-
DEFERRED OUTFLOWS	6,968	-	6,968	-
CUSTOMER DEPOSITS	-	52,130	52,130	-
ACCOUNTS PAYABLE	(828,082)	178,309	(649,773)	2,219
CLAIMS LIABILITY	-	-	-	(644,983)
DEFERRED INFLOWS	1,971,534	-	1,971,534	-
OTHER LIABILITIES	(236,864)	(1,360,827)	(1,597,691)	-
NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES	$ (1,998,314)	(3,203,764)	(5,202,078)	417,069
NON-CASH OPERATING, CAPITAL AND RELATED FINANCING, AND INVESTING ACTIVITIES				
CAPITAL CONTRIBUTIONS	$ -	1,746,878	1,746,878	-

The notes to the financial statements are an integral part of this statement.

JEFFERSON COUNTY, TEXAS
STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2025

		INVESTMENT TRUST FUND	CUSTODIAL FUNDS
ASSETS			
CASH AND CASH EQUIVALENTS	$	2,894,507	21,740,354
ACCOUNTS RECEIVABLE, NET		-	15
DUE FROM OTHER GOVERNMENTAL ENTITIES		-	220,901
TOTAL	$	2,894,507	21,961,270
LIABILITIES			
DUE TO OTHER GOVERNMENTAL ENTITIES		-	688,827
TOTAL	$	-	688,827
NET POSITION			
RESTRICTED FOR:			
POOL PARTICIPANTS	$	2,894,507	-
INDIVIDUALS AND ORGANIZATIONS		-	21,272,443
TOTAL NET POSITION	$	2,894,507	21,272,443

The notes to the financial statements are an integral part of this statement.

JEFFERSON COUNTY, TEXAS
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

		INVESTMENT TRUST FUND	CUSTODIAL FUNDS
ADDITIONS			
CONTRIBUTIONS FROM JUDGEMENTS	$	937,767	12,739,655
BONDS RECEIVED		-	1,520,064
DEPOSITS HELD		-	6,419,840
TAXES COLLECTED ON BEHALF OF TAXING ENTITIES		-	640,633,487
PROBATIONER PAYMENTS		-	748,680
INTEREST INCOME		52,014	55,703
TOTAL ADDITIONS	$	989,781	662,117,429
DEDUCTIONS			
BONDS REFUNDED	$	-	1,349,713
COLLECTIONS DISTRIBUTED		370,160	5,268,789
DEPOSITS RETURNED		-	6,232,716
DISBURSEMENTS TO BENEFICIARIES		-	18,184,956
TAXES DISBURSED TO TAXING ENTITIES		-	641,035,249
TOTAL DEDUCTIONS	$	370,160	672,071,423
NET INCREASE (DECREASE) IN FIDUCIARY NET POSITION	$	619,621	(9,953,994)
NET POSITION - BEGINNING		2,274,886	31,226,437
NET POSITION - ENDING	$	2,894,507	21,272,443

The notes to the financial statements are an integral part of this statement.

Note 1 - Summary of Significant Accounting Policies

The financial statements of Jefferson County, Texas ("County") have been prepared in conformity with generally accepted accounting principles ("GAAP") as applied to governmental units. The Governmental Accounting Standards Board ("GASB") is the accepted standard setting body for establishing governmental and financial reporting principles. The most significant accounting and reporting policies of the County are described in the following notes to the financial statements.

A. Reporting Entity

The County is a public corporation and a political subdivision of the State of Texas. The County is governed by Commissioners' Court, composed of four County Commissioners and the County Judge, all of whom are elected officials.

The County provides a vast array of services, which include public safety, administration of justice, health and human services, recreation services, public improvements, and general administration.

As required by GAAP, the financial statements of the reporting entity include those of the County (the primary government) and its component units in conformity with GASB Statement No. 14, *The Financial Reporting Entity* ("GASB 14"), GASB Statement No. 39, *Determining Whether Certain Organizations are Component Units* ("GASB 39"), GASB Statement No. 61, *The Financial Reporting Entity: Omnibus-an amendment of GASB Statements No. 14 and No. 34*, ("GASB 61"), GASB Statement No. 80, *Blending Requirements for Certain Component Units*, clarifies the financial statement presentation requirements for certain component units which are incorporated as not-for-profit entities.

In accordance with these standards, a financial reporting entity consists of the primary government and its components units. Component units are legally separate organizations for which the elected officials of the County are financially accountable, or the relationship to the County is such that exclusion would cause the County's financial statements to be misleading or incomplete. Blended component units, although legally separate entities, are, in substance, part of the County's operations, and so data from these units are combined with data of the County.

The criteria used to determine whether an organization is a component unit of the County and whether it is a discretely or a blended component unit includes: financial accountability of Jefferson County for the component unit, appointment of a voting majority, ability to impose the County's will on the component unit, fiscal dependency criterion, whether there is a financial benefit to or burden to the County or if operational responsibility for the component unit rests with management of the County, and whether services are provided entirely or almost entirely to the primary government.

Blended Component Units:

For financial reporting purposes, the Southeast Texas Government Employee Benefits Pool (The Pool) is included in the operations and activities of the County as a blended component unit. The

Note 1 - Summary of Significant Accounting Policies (continued)

Pool is a public entity risk pool (see Note 13), which the County is the sponsor government. The County provides roughly 75% of the revenue source and its employees and retirees account for about 93% of the total participants of the Pool. The entire board members are made up by a combination of members of the Commissioners' Court, appointees of the Court, and County Management. The Pool is accounted for as an internal service fund.

Excluded from the reporting entity:

The following agencies were considered in the determination of component units of the County's financial reporting entity. It was determined that these entities should not be included as component units of the primary government: Jefferson County Navigation District, Drainage District #3, Drainage District #6, Drainage District #7, Foreign Trade Zone, Pleasure Island Park Board, Jefferson County Health Facilities Development Corporation, Jefferson County Housing Finance Corporation, Local Emergency Planning Committee (LEPC), and Jefferson County Industrial Development Corporation.

B. Implementation of New Standards

In the current year, the County implemented the following new standards:

GASB Statement No. 101, Compensated Absences – The objective of this Statement is to better meet the information needs of financial statement users by updating the recognition and measurement guidance for compensated absences. That objective is achieved by aligning the recognition and measurement guidance under a unified model and by amending certain previously required disclosures. Implementation of GASB 101 is reflected in the County's reporting financial statements. Accordingly, the cumulative effect of the account change has been recognized in a restatement of beginning net position for the year ended September 30, 2024.

GASB Statement No. 102, Certain Risk Disclosures – ("GASB 102"), The objective of this Statement is to provide users of government financial statements with essential information about risks related to a government's vulnerabilities due to certain concentrations or constraints. Implementation of GASB 102 did not have an impact on the County's reporting disclosures.

C. Financial Statement Presentation, Measurement Focus, and Basis of Accounting

Government-wide Statements
Government-wide financial statements consist of the Statement of Net Position and the Statement of Activities. These statements report information on all of the non-fiduciary activities of the primary government and its component units. For the most part, the effect of interfund activity has been removed from these statements. However, interfund services provided and used are not eliminated in the process of consolidation. Governmental activities, which normally are supported by taxes and intergovernmental revenues, are reported separately from business-type activities, which rely to a significant extent on fees and charges for support. Likewise, the primary government is financially accountable.

Note 1 - Summary of Significant Accounting Policies (continued)

The government-wide financial statements are prepared using the economic resources measurement focus and the accrual basis of accounting. Under this measurement focus, revenues are recorded when earned and expenses are recorded at the time liabilities are incurred, regardless of the timing of cash flows. Property taxes are recognized as revenues in the year for which they are levied. Fines and forfeitures are recognized when they have been assessed, adjudicated, and earned. Grants and similar items are recognized as revenue as soon as all eligibility requirements imposed by the provider have been met.

The Statement of Activities demonstrates the degree to which the direct expenses of the County's programs are offset by those programs' revenues. Program revenues include: 1) charges to customers or applicants who purchase, use, or directly benefit from goods, services, or privileges provided by the program, and 2) grants and contributions that are restricted to meeting the operational and/or capital requirements of a particular program. Program revenues include those generated from General Government, Judicial and Law Enforcement, Education and Recreation, Health and Welfare, Contract Services, and Maintenance of Equipment and Structures. Taxes and other items not included among program revenues are reported instead as general revenues.

Miscellaneous general revenues consist of non-program specific contributions.

Fiduciary funds are excluded in the government-wide presentation of the financial statements.

Fund-level Statements

All governmental funds use the modified accrual basis of accounting. Under the modified accrual basis of accounting, revenues are recognized when susceptible to accrual (i.e., when they become both measurable and available). "Measurable" means the amount of the transaction can be determined and "available" means collectible within the current period or soon enough thereafter to be used to pay liabilities of the current period. The County considers property taxes and other revenues as available if they are collected within 60 days after year-end. Expenditures are recorded when the related fund liability is incurred. Principal and interest on governmental long-term debt are recorded as fund liabilities when due or when amounts have been accumulated in the debt service fund for payments to be made early in the following year. Grant and entitlement revenues are also susceptible to accrual. Encumbrances are used during the year and any remaining encumbrances are liquidated at fiscal year end. These funds are accounted for on a spending "financial flow" measurement focus. This means that only current assets, deferred outflows (inflows) of resources, and current liabilities are generally included on their balance sheets. Their reported fund balance (net position) is considered a measure of "available spendable resources." Governmental fund operating statements present increases (revenues and other financing sources) and decreases (expenditures and other financing uses) in net current assets. Accordingly, they are said to present a summary of sources and uses of "available spendable resources" during a period.

All proprietary funds, including the enterprise funds and internal service funds, and fiduciary funds, are accounted for using the accrual basis of accounting. Revenues are recognized when

Note 1 - Summary of Significant Accounting Policies (continued)

earned, and expenses when they are incurred. Claims incurred but not reported are included in payables and expenses. These funds are accounted for using an economic resources measurement focus. This means that all assets and liabilities (whether current or non-current) associated with their activity are included in the funds' statement of net position.

The accounts of the County are organized and operated on the basis of funds, each of which is considered a separate accounting entity. The operations of each fund are accounted for with a separate set of self-balancing accounts that comprise its assets, deferred outflows of resources, liabilities, deferred inflows of resources, fund equity, revenues, and expenditures/expenses. Government resources are allocated to and accounted for in individual funds based on the purpose for which they are to be spent and the means by which spending activities are controlled.

Funds are classified into three categories: Governmental, Proprietary, and Fiduciary. The County reports the following major funds:

GOVERNMENTAL FUNDS: Used to account for all or most of a government's general activity.

General Fund – used to account for the general operations of the County.

LPPF – used to account for the funding provided by local providers for mandatory payments of their net patient revenue and the intergovernmental transfers on their behalf for health care expenditures.

ARPA Coronavirus Recovery – used to account for the funding provided for by the American Rescue Plan Act of 2021.

PROPRIETARY FUNDS: Used to account for operations that are financed in a manner similar to those in the private sector, where the determination of net income is appropriate for sound financial administration.

Jack Brooks Regional Airport – used to account for the day-to-day operation of the County airport. These facilities are financed primarily through user charges.

Ford Park – used to account for the day-to-day operation of Ford Park. These facilities are financed primarily through user charges.

Additionally, the County reports the following fund types:

Internal Service Funds – used to account for the financing of goods and services provided by one department or agency of the County to other County departments or agencies on a cost reimbursement basis. The County reports three internal service fund: 1) Liability Insurance – to account for the County's contribution and payment for liability claims, 2) Workers' Compensation – to account for County's contribution and payment for workers' compensation claims, and 3) Southeast Texas Government Employee Benefits Pool - to account for the County's Public Entity

Note 1 - Summary of Significant Accounting Policies (continued)

Risk Pool, which provides group health insurance programs for member governments including comprehensive major medical and dental care.

FIDUCIARY FUNDS: Used to report assets held in a trustee or fiduciary capacity for others and therefore cannot be used to support the government's own programs. Fiduciary funds are used to account for assets held by the County as an agent on behalf of a third party. The County reports ten fiduciary funds held by the County as an agent on behalf for various third parties outside the primary government: Treasurer Maintained Fund, County Clerk Fund, District Clerk Fund, Sheriff's Fund, Justice of the Peace Fund, Tax Assessor/Collector Fund, District Attorney's Seizure Fund, Community Supervision Fund, Juvenile Probation Fund, and one Investment Trust Fund for the District Clerk Trust.

Proprietary funds distinguish operating revenues and expenses from non-operating items. Operating revenues and expenses generally result from providing services and producing goods in connection with the proprietary fund's principal operations. The principal operating revenues of the Jack Brooks Regional Airport and Ford Park are user fees. Operating revenues in the Internal Service Funds consist primarily of charges to the various County departments. Operating expenses in the enterprise and internal service funds include the cost of sales and services, administrative expenses, incurred and estimated claims, salaries & benefits, materials & supplies, maintenance & repairs, utilities, miscellaneous, and depreciation on capital assets. All revenues and expenses not meeting these definitions are reported as non-operating revenues and expenses.

When both restricted and unrestricted resources are available for use, it is the County's policy to use restricted resources first, then unrestricted resources to the extent they are needed.

D. Budgets

The County follows these procedures in establishing the budgetary data reflected in the financial statements.

- Department annual budget requests are submitted by the Department or Agency Head to the County Auditor's office during the third quarter of the fiscal year for the upcoming fiscal year to begin October 1.

- The County Auditor's office prepares an estimate of available resources for the upcoming fiscal year.

- The County Auditor's office prepares the proposed annual operating budget to be presented to the Commissioners' Court for their consideration. The budget represents the financial plan for the new fiscal year.

- Public hearings are held on the proposed budget.

Note 1 - Summary of Significant Accounting Policies (continued)

- The Commissioners' Court must adopt an annual operating budget by a majority vote of the Commissioners' Court before October 1. The adopted budget must be balanced; that is, available resources must be sufficient to support annual appropriations.

- The department is the legal level of budgetary control. Commissioners' Court approval is necessary to transfer appropriations between departments. Transfers may not increase the total budget.

- The Commissioners' Court may approve expenditures as an amendment to the budget in an emergency situation that could not have been foreseen at the time the original budget was approved.

- Annual budgets are legally adopted for the General Fund and Debt Service Funds. Budgets for Grant Funds are established pursuant to grant awards and budgets for Capital Projects are established on a project basis.

- Appropriations lapse at year-end for all budgeted funds.

- Budgets are prepared on a basis consistent with GAAP.

E. Deposits and Investments

The County's cash and cash equivalents are considered to be cash on hand, demand deposits, certificates of deposits, balances in privately managed local government investments pools, and short-term investments with original maturities of three months or less from the date of acquisition.

The County's local government investments pools are recorded at amortized cost, which approximates fair value, as permitted by accounting standards.

State statute authorizes the County to invest in obligations of the U.S. Treasury and Federal Agencies, commercial paper, repurchase agreements, Bankers' acceptances, money market mutual funds, public funds investments pools, and direct obligations of the State of Texas.

Investments for the County are stated at fair value, which is based on quoted market prices with the difference between the purchase price and market price being recorded as earnings on investments.

F. Encumbrances

Encumbrances represent commitments related to unperformed contracts for goods and services. Encumbrance accounting, under which purchase orders, contracts, and other commitments for the expenditure of funds are recorded in order to reserve that portion of the applicable appropriation, is employed. All encumbrances are liquidated at fiscal year end.

Note 1 - Summary of Significant Accounting Policies (continued)

G. Receivables and Payables

Property taxes are levied based on taxable value at January 1 prior to September 30 and become due October 1, 2024 and past due after January 31, 2025. Accordingly, receivables and revenues for property taxes are reflected on the government-wide statement based on the full accrual method of accounting. Property tax receivables for prior year's levy are shown net of an allowance for uncollectible.

Receivables from other governments include amount due from grantors for approved grants for specific programs and reimbursements for services performed by the County. Program grants are recorded as receivables and revenues at the time all eligibility requirements established by the provider have been met.

Reimbursements for services performed are recorded as receivables and revenues when they are earned in the government-wide statements. Included are fines and costs assessed by court action and billable services for certain contracts. Revenues received in advance of the costs being incurred are recorded as unearned revenue in the fund statements. Receivables are shown net of an allowance for uncollectible.

Lending or borrowing between funds is reflected as "due to" or "due from" (current portion) or "advances to/from other funds" (non-current). Advances between funds, as reported in the fund financial statements, are offset by a fund balance reserve account in applicable governmental funds to indicate that they are not available for appropriation and are not expendable available financial resources. Interfund activity reflected in "due to" or "due from" is eliminated on the government-wide statements.

H. Interfund Transactions

During the course of normal operations, the County has many transactions between funds. The accompanying fund level financial statements reflect as transfers the resources provided and the expenditures used to provide services, construct assets, and meet debt service requirements. The effect of interfund activity has been eliminated in the government-wide financial statements, except for transactions between governmental and business-type activities.

I. Inventories and Prepaid Items

Inventories are valued at cost, which approximates market, using the "first-in/first-out" method. Reported inventories in the governmental funds are offset by a fund balance reserve, which indicates they are unavailable for appropriations even though they are a component of net current assets. Inventory policy on government-wide statements is consistent with fund statements.

Note 1 - Summary of Significant Accounting Policies (continued)

Certain payments to vendors reflect cost applicable to future accounting periods and are recorded as prepaid items in both government-wide and fund financial statements and in the fund financial statements are offset by a fund balance reserve, which indicates they are unavailable for appropriations even though they are a component of net current assets.

The cost of governmental fund type inventories and prepaid items are recorded as expenditures when consumed rather than when they are purchased (consumption method).

J. Capital Assets and Infrastructure

Capital assets include: land, land improvements, buildings and building improvements, park improvements and facilities, equipment, machinery, vehicles, other tangible and intangible assets, and infrastructure that are used in the County's operations and benefits more than a single fiscal year. Infrastructure assets are long-lived assets that are generally stationary in nature and can typically be preserved for a significantly greater number of years than other capital assets. Infrastructure assets of the County include roads and bridges.

Capital assets of the County are defined as assets with individual costs of $10,000 or more and estimated useful lives in excess of one year. All capital assets are stated at historical cost or estimated historical cost if actual cost is not available. Donated capital assets are recorded at acquisition cost, which is the price that would be paid to acquire an asset with equivalent service potential at the acquisition date.

It is the County's policy not to capitalize interest on construction for capital assets reported in the governmental activities of the government-wide financial statements.

Capital assets are depreciated in the government-wide financial statements using the straight-line method over the following useful lives:

Asset	Years
Runways	20-35
Buildings	40
Building Improvements	15-25
Equipment	3-7
Machinery	15
Vehicles	4-15
Other tangible assets	7-10
Computer software	3-5
Infrastructure:	
Bridges	25
Roads	40

Note 1 - Summary of Significant Accounting Policies (continued)

K. Subscription-Based Information Technology Arrangements

The County is a participant in several non-cancellable subscription-based IT arrangement (SBITAs). The County recognizes a liability and intangible right-to-use assets in the government-wide financial statements.

At the commencement of a SBITA, the County initially measures the lability at the present value of payments expected to be made during the agreement term. Subsequently, the liability is reduced by the principal portion of payments made. The asset is initially measured as the initial amount of the liability, adjusted for payments made at or before the commencement date, place certain initial direct costs. Subsequently, the asset is amortized on a straight-line basis over its useful life.

Key estimates and judgements related to SBITAs include how the County determines (1) the discount rate it used to discount the expected payments to present value, (2) agreement term, and (3) agreed upon payments.

- The County uses the interest rate charged by the vendor as the discount rate. When the interest rate charged by the vendor is not provided, the County general uses its estimated incremental borrowing rate as the discount rate.
- The agreement term includes the non-cancellable period of the SBITA.
- The agreed upon payments included in the measurement of the liability are composed of fixed payments and purchase option price that the County is reasonably certain to exercise.

The County monitors changes in circumstances that would require a re-measurement of its SBITA and will re-measure the asset and lability if certain changes occur that are expected to significantly affect the amount of the liability.

These right to use assets are reported with other capital assets and liabilities are reported with long-term debt on the statement of net position.

L. Compensated Absences

Accumulated compensatory leave, vacation, and sick leave that have matured (reimbursable leave still outstanding following an employee's resignation or retirement) are reported as expenditures in the respective governmental funds. Accumulated compensated absences that have not matured are reported as long-term liabilities in the governmental activities column of the government-wide Statement of Net Position. The majority of these have typically been liquidated from the General Fund in previous years. Accumulated compensated absences of Proprietary Funds are recorded as an expense and liability in the respective fund and the business-type activities column of the government-wide Statement of Activities as the benefit accrues for the employee.

Note 1 - Summary of Significant Accounting Policies (continued)

Employees are allowed to accrue 13 days of sick leave per year. Sick leave benefits are recognized as expenditures as they are used by the employees. Employees may accumulate up to 1,440 hours of sick leave. For employees with 8 years of service and hired prior to October 1, 2002, unused sick leave benefits are paid at 50% at termination. For employees with 8 years of service and hired after October 1, 2002, unused sick leave benefits are paid at 10% at termination. The County estimates that 60% of sick leave balances are more likely than not to be used in future years; thus, the compensated absences liability includes 60% of outstanding sick leave balances at year-end.

Employees with more than one year of service accrue from two to five weeks of vacation per year, depending on years of service. Unused vacation benefits lapse on March 15 for the previous calendar year. Upon termination from County employment, an employee shall be entitled to payment for total accrued but unused hours of vacation.

Non-exempt employees earn compensatory time at one and one-half times their full rate of pay times the excess of 40 hours per week worked. The compensatory time balance for non-exempt employees may not exceed 80 hours except for law enforcement employees, which may accumulate up to 480 hours. Hours in excess of the maximum must be paid to the non-exempt employee at the rate of one and a half times the regular rate. Upon termination, non-exempt employees will be paid for compensatory time at their wage rate at time of termination. Compensatory time is carried forward indefinitely.

M. Long-Term Obligations

In the government-wide financial statements, and proprietary fund types in the fund financial statements, long-term debt and other long-term obligations are reported as liabilities in the applicable governmental activities, business-type activities, or proprietary fund type statement of net position.

Bond premiums and discounts are deferred and amortized over the life of the bonds using the effective interest method. Bonds payable are reported net of the applicable bond premium or discount. In the fund financial statements, governmental fund types recognize bond premiums and discounts during the current period. The face amount of debt issued is reported as other financing sources. Premiums received on debt issuances are reported as other financial sources while discounts on debt issuances are reported as other financing uses.

N. Deferred outflows/inflows of resources

In addition to assets, the statement of net position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, deferred outflows of resources, represents a consumption of net assets that applies to a future period(s) and so will not be recognized as an outflow of resources (expense/expenditure) until then. The County has three items that qualify for reporting in this category. The first is deferred loss on refunding bonds reported in the government-wide statement of net position. A deferred loss on refunding bonds results from the difference in the carrying value of refunded debt and its reacquisition price. This

Note 1 - Summary of Significant Accounting Policies (continued)

amount is deferred and amortized over the shorter of the life of the refunded or refunding debt. The second is deferred outflows related to pensions. The third is deferred outflows related to OPEB.

In addition to liabilities in the statement of financial position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net assets that applies to a future period(s) and so will not be recognized as an inflow of resources (revenue) until that time. The County has four items that qualify for reporting in this category. The first arises only under a modified accrual basis of accounting, which qualifies for reporting in this category. Accordingly, that item, *unavailable revenue*, is reported only in the governmental funds balance sheet. The governmental funds report unavailable revenues from property taxes and grants. These amounts are deferred and recognized as an inflow of resources in the period that the amounts become available. The second item is deferred inflows related to leases. The deferred inflow of resources is initially measured as the initial amount of the lease receivable and recognized as revenue over the life of the lease term. The third item is deferred inflows related to pensions and is only recorded in the government-wide financials. The fourth item is deferred inflows related to OPEB and is only recorded in the government-wide financials.

O. Pensions

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expenses, information about the Fiduciary Net Position of the Texas County and District Retirement System (TCDRS) and additions to/deductions from TCDRS's Fiduciary Net Position have been determined on the same basis as they are reported by TCDRS. For this purpose, plan contributions are legally due. Benefit payments and refunds are recognized when due and payable in accordance with the benefits terms. Investments are reported at fair value.

P. Other Post-employment benefits

For purposes of measuring the total OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expenses, the amounts have been determined by an actuary in accordance with accounting standards. The County does not pre-fund benefits and the current funding policy is to pay benefits directly from general assets on a pay-as-you-go basis. The total OPEB liability is the portion of actuarial present value of projects benefit payments that is attributable to past periods of member service using the Entry Age Normal cost method. The deferred outflows and deferred inflows of resources represent the portion of changes in total OPEB liability that is not immediately recognized in OPEB expense, which can include differences between expected and actual experience, changes in assumptions, and differences between expected and actual earnings on plan investments.

Note 1 - Summary of Significant Accounting Policies (continued)

Q. Net Position and Fund Balances

Net Position Classifications

Net position represents the difference between assets, deferred outflows (inflows) of resources, and liabilities.

Net position in the proprietary fund financial statements and the government-wide financial statements are classified in three categories: 1) Net investment in capital assets, 2) Restricted net position, and 3) Unrestricted net position.

In the proprietary fund financial statements and in the government-wide financial statements, restricted net position is reported for amounts that are externally restricted by 1) creditors (eg. bond covenants), grantors, contributions, or laws and regulations of other governments, or 2) law through constitutional provision or enabling legislation.

Fund Balance Classification

The governmental fund financial statements present fund balances based on classifications that comprise a hierarchy that is based primarily on the extent to which the County is bound to honor constraints on the specific purposes for which amounts in the respective governmental funds can be spent. The classifications used in the governmental fund financial statements are as follows:

- Nonspendable: This classification includes amounts that cannot be spent because they are either (a) not in spendable form or (b) are legally or contractually required to be maintained intact. Nonspendable items are not expected to be converted to cash or not expected to be converted to cash within the next year.

- Restricted: This classification includes amounts for which constraints have been placed on the use of the resources either (a) externally imposed by creditors, grantors, contributions, or laws or regulations of other governments, or (b) imposed by law through constitutional provisions or enabling legislation.

- Committed: This classification includes amounts that can be used only for specific purposes pursuant to constraints imposed by court resolution of the Commissioners' Court, the County's highest level of decision making authority. These amounts cannot be used for any other purpose unless the Commissioners' Court removes or changes the specified use by taking the same type of action that was employed when the funds were initially committed. This classification also includes contractual obligations to the extent that existing resources have been specifically committed for use in satisfying those contractual requirements.

Note 1 - Summary of Significant Accounting Policies (continued)

- Assigned: This classification includes amounts that are constrained by the County's intent to be used for a specific purpose but are neither restricted nor committed. When it is appropriate for fund balance to be assigned, the Commissioners' Court retains the responsibility to assign funds. Assignments may occur subsequent to fiscal year end.

- Unassigned: This classification includes the residual fund balances for the General Fund. The unassigned classification also includes negative residual fund balance of any other governmental fund that cannot be eliminated by offsetting of assigned fund balance amounts.

When expenditures are incurred for purposes for which both restricted and unrestricted fund balance is available, the County considers restricted funds to have been spent first. When expenditures are incurred for which committed, assigned, or unassigned fund balances are available, the County considers amounts to have been spent first out of committed funds, then assigned funds, and finally unassigned.

R Statement of Cash Flows

For purposes of cash flows, the County considers all highly liquid investments (including restricted) with a maturity of three months or less when purchased to be cash equivalents.

S. Use of Estimates

The preparation of financial statements in conformity with general accepted accounting principles in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

T. Leases – Lessor

The County is a lessor for a non-cancellable lease of various County-owned land and buildings. These include land and jail facilities for governmental-type activities. For business-type activities, the County's airport conducts a major part of its operations from leased facilities, which include office and parking lot spaces, terminal space, hanger space, and land space for the Private Hangar Park or land surrounding the Airport. The County recognizes a lease receivable and a deferred inflow of resources in the government-wide, governmental fund, and proprietary fund financial statements.

At the commencement of a lease, the County initially measures the lease receivable at the present value of payments expected to be received during the lease term. Subsequently, the lease receivable is reduced by the principal portion of lease payments received. The deferred inflow of resources is initially measured as the initial amount of the lease receivable, adjusted for lease payments

Note 1 - Summary of Significant Accounting Policies (continued)

received at or before the lease commencement date. Subsequently, the deferred inflow of resources is recognized as revenue over the life of the lease term.

Key estimates and judgements include how the County determines 1) the discount rate it uses to discount the expected lease payments to present value, 2) lease term, and 3) lease receipts.

- The County uses its estimated incremental borrowing rate as the discount rate for the leases.
- The lease term includes the non-cancellable period of the lease. Lease receipts included in the measurement of the lease receivable is composed of fixed payments from the lessee.

The County monitors changes in circumstances that would require a re-measurement of its leases, and will re-measure the lease receivable and deferred inflows of resources if certain changes occur that are expected to significantly affect the amount of the lease receivable.

Note 2 - Deposits and Investments

The County categorizes its fair value measurements within the fair value hierarchy established by general accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; and Level 3 inputs are significant unobservable inputs. As of September 30, 2025, the County held the following fair value measurements:

Investment Type	Fair Value/ Amortized Cost	Percentage of Portfolio	Weighted Average Maturity (days)
U. S. Agency Securities	$ 57,963,166	74.35%	1,050
Texas CLASS Investment Pool	20,000,000	25.65%	30
	$ 77,963,166	100.00%	768

Of the County's investments carried at fair value, $57,963,166 (U S Agency Securities) were all Level 2 and were priced using the option-adjusted discount cash flow model.

Texas Cooperative Liquid Assets Securities System Trust ("Texas CLASS) is a local government investment pool organized under the authority of the Inter-local Cooperation Act, chapter 791, Texas Government Code, and the Public Funds Investment Act (PFIA). Texas CLASS was established in 1996. Pursuant to the Trust Agreement, Texas CLASS is supervised by a Board of Trustees who are elected by the Participants. The Board of Trustees supervises the Trust and its affairs and acts as the liaison between the Participants, the Custodian, and the Program Administrator. Cutwater Investor Services Corp. serves as Program Administrator. Cutwater Investor Services Corp. is a subsidiary of Cutwater Asset Management. It maintains a Net Asset Value of approximately $1 per share.

Note 2 - Deposits and Investments (continued)

In accordance with accounting standards, the local government investments pools do not have any limitations and restrictions on withdrawals such as notice periods or maximum transaction amounts. These pools do not impose any liquidity fees or redemption gates.

Interest Rate Risk – Fair value fluctuates with interest rates and increasing rates may cause fair value to decline below cost. In compliance with the County's Investment Policy, the County minimized interest rate risk by limiting the weighted average maturity of the portfolio to 1,096 days with a stated final maturity date not to exceed 3 years from the date of purchase. In addition, the portfolio is structured so that securities mature to meet cash flow requirements, thereby avoiding the need to sell securities prior to maturity and below the original cost.

Credit Risk – In compliance with the County's investment policy, as of September 30, 2025, all of the County's purchased investments in U.S. Agency Securities were rated AA+ and Aaa by Standard & Poor's and Moody's respectively. Texas CLASS was rated AAA by Standard & Poor's.

Concentration Risk – The County's investment policy is to diversify its portfolio to eliminate the risk of loss resulting from over concentration of assets in a specific maturity, a specific issuer, or a specific class of investment. As of September 30, 2025, the County had eight investments that was with Federal Home Loan Bank (FHLB), three investments that was with Federal National Mortgage Association (FNMA), one investment that was with Federal Farm Credit Bank (FFCB), and one investment that was with Federal Agricultural Mortgage Corporation (FAMCA).

Custodial credit risk - Deposits – In the case of deposits, this is the risk that in the event of a bank failure, the County's deposits may not be returned to it. The County's investment policy is to have all checking accounts placed at the County Depository Bank under a depository contract. The $130,266,797 bank balance was covered by federal depository insurance or collateralized with securities held by the Bank of New York Mellon Trust Company.

Custodial credit risk – Investments – Custodial credit risk for investments is the risk that, in the event of a failure of the counterparty (e.g. broker/dealer) to a transaction, a government will not be able to recover the value of its investments or collateral securities that are in the possession of another party. The County's policy requires that the investments of the County be secured through third-party custodial and safekeeping procedures as designated by the County. The County's agent hold securities in the County's name; therefore, the County is not exposed to custodial credit risk.

Note 3 - Property Taxes, Other Receivables and Unearned Revenues

Property taxes attach as an enforceable lien on property as of January 1. Taxes are levied on October 1 and payable by January 31 of the following year. The County bills and collects its own property taxes and it also bills and collects taxes for Jefferson County Navigation District, Jefferson County Drainage District #3, #6, and #7, Port of Beaumont, Port of Port Arthur, Water District #10, Nederland Independent School District, Northwest Forest Municipal Utility District, Emergency Services District #1, #2, #3, #4, Trinity Bay Conservation District, Port of Sabine Pass,

Note 3 - Property Taxes, Other Receivables and Unearned Revenues (continued)

Sabine Pass Independent School District, Port Arthur Independent School District, City of Port Arthur, Hamshire Fannett Independent School District, Port Neches-Groves Independent School District, Beaumont Independent School District, City of Beaumont, City of Groves, City of Nederland, City of Port Neches, City of Bevil Oaks, and City of Taylor Landing. Collections of these taxes and remittance of them to the various districts are accounted for in the Tax Assessor - Collector Agency Fund. The County is permitted by the State Constitution to levy taxes up to $.80 per $100 of assessed valuation for general government services and the payment of principal and interest on Long-Term Debt. In addition to its taxes subject to the $.80 tax limitation, the County's voters have authorized the levy of a special tax of $.15 per $100 assessed valuation solely for road maintenance expenses. The County is also authorized by the voters to levy the Farm to Market and Lateral Road Tax of $.30 per $100 of assessed value for the purpose of maintaining roads and bridges.

For the year ended September 30, 2025, the combined tax rate to finance general government services and the payment of principal and interest on long-term debt was $.357.

On February 1 of the following calendar year the tax bill becomes delinquent and penalty and interest is assessed by the County. The County Commissioners issue a tax levy for the County's General and Debt Service Funds. The levy and collections are restricted to the funds they are allocated for. The delinquent tax receivables and penalty and interest receivables represent the past thirty years of uncollected tax levies. The allowance for uncollectible was set at 65% of the gross tax receivable and 65% on penalty and interest as of September 30, 2025. The allowance has been recorded for Property Taxes and Penalty and Interest, which are estimated to be uncollectible as required by generally accepted accounting.

Property tax receivables of $2,988,868 as of September 30, 2025 are reported net of an allowance for uncollectible taxes of $5,550,753.

Penalty and Interest receivables of $1,991,637 as of September 30, 2025 are reported net of an allowance for uncollectible accounts of $3,698,757.

Receivables as of September 30, 2025 consist of the following:

Note 3 - Property Taxes, Other Receivables and Unearned Revenues (continued)

	General	Non Major Funds	Jack Brooks Regional Airport	Ford Park	Internal Service Funds	Total
Receivables:						
Accounts	$ 278,856	$ 318,147	$ 96,610	$ 562,722	$ 411,793	$ 1,668,128
Employee	568	476	-	-	-	1,044
Interest	249,236	106,168	18,331	726	15,075	389,536
Taxes	8,080,376	459,245	-	-	-	8,539,621
Penalty & Interest	5,384,375	306,019	-	-	-	5,690,394
Fines & Court Cost	4,735,155	-	-	-	-	4,735,155
Inter-governmental	7,341,264	1,775,168	261,908	-	635,027	10,013,367
Gross Receivables	$ 26,069,830	$ 2,965,223	$ 376,849	$ 563,448	$ 1,061,895	$ 31,037,245
Allowance for Uncollectible	(11,880,181)	(497,422)	-	-	-	(12,377,603)
Net total receivables	$ 14,189,649	$ 2,467,801	$ 376,849	$ 563,448	$ 1,061,895	$ 18,659,642

As of September 30, 2025, the various components of unearned revenue reported in the governmental funds were as follows:

	Unearned
Advanced Funding (General Fund)	$ 197,062
Advanced Funding (ARPA Coronavirus Recovery)	15,197,622
Advanced Funding (Non-major Special Revenue Funds)	710,117
Total Unearned Revenue for Governmental Funds	$16,104,801

As of September 30, 2025, the various components of unearned revenue reported in the business-type funds were as follows:

	Unearned
Advanced Funding (Jack Brooks Regional Airport)	$ 45,296
Advanced Funding (Ford Park)	574,719
Total Unearned Revenue for Business-type Funds	$ 620,015

Note 4 – Interfund Receivables, Payables, and Transfers

In the fund financial statements, interfund balances are the result of normal transactions between funds and will be liquidated in the subsequent fiscal year. Balances between individual governmental funds and between governmental funds and enterprise funds or internal services funds are eliminated in the government-wide financial statements.

Note 4 – Interfund Receivables, Payables, and Transfers

The composition of interfund balances as of September 30, 2025, is as follows:

Due to/from other funds:

Receivable Fund	Payable Fund	Amount
General Fund	Non-major governmental funds	$ 2,601,332
Non-major governmental funds	Non-major governmental funds	65,477
	Total	$ 2,666,809

All of the due to/from transactions are routine in nature and are typically a result of timing differences between the payment for expenditures and receipt of the corresponding revenues.

The following is a summary of the County's transfers for the year ended September 30, 2025:

	Transfers Out:		
	General Fund	Non-major Governmental	Total
Transfers In:			
General	$ -	$ -	$ -
Non-major Funds	4,244,819	276,783	4,521,602
Ford Park	2,586,541	-	2,586,541
	$ 6,831,360	$ 276,783	$ 7,108,143

Transfers in the amount of $2,586,541 to Ford Park were to subsidize operations of the complex. All other transfers are routine in nature such as grant matches, ongoing capital projects, and residual fund balance transfers for close out of funds.

Transfers in the amount of $1,676,878 for Ford Park were made between governmental activities and business-type activities for capital assets purchases which were donated to business-type activities in the government wide statements.

Note 5 – Capital Assets

Capital asset activity for the year ended September 30, 2025 was as follows:

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Note 5 – Capital Assets (continued)

	Balance October 1, 2024	Additions	Deletions	Transfer	Balance September 30, 2025
Governmental Activities:					
Land	$ 3,840,787	$ -	$ -	$ -	$ 3,840,787
Construction work in progress	3,709,596	6,099,151	-	(1,780,167)	8,028,580
Total capital assets not depreciated	$ 7,550,383	$ 6,099,151	$ -	$ (1,780,167)	$ 11,869,367
Infrastructure	66,596,910	-	-	-	66,596,910
Buildings & Improvements	141,861,596	557,081	-	614,961	143,033,638
Equipment	61,557,327	5,873,028	(1,867,640)	1,165,206	66,727,921
SBITA, right to use	7,622,743	1,241,768	(276,087)	-	8,588,424
Total capital assets depreciated	$ 277,638,576	$ 7,671,877	$ (2,143,727)	$ 1,780,167	$ 284,946,893
Less accumulated depreciation for:					
Infrastructure	(50,285,432)	(784,361)	-	-	(51,069,793)
Buildings & Improvements	(86,128,900)	(3,598,776)	2,304	-	(89,725,372)
Equipment	(43,861,597)	(5,152,866)	1,855,588	-	(47,158,875)
SBITA, right to use	(2,355,105)	(1,723,930)	276,087	-	(3,802,948)
Total accumulated depreciation	$ (182,631,034)	$ (11,259,933)	$ 2,133,979	$ -	$ (191,756,988)
Total capital assets depreciated, net	$ 95,007,542	$ (3,588,056)	$ (9,748)	$ 1,780,167	$ 93,189,905
Governmental activities capital assets, net	$ 102,557,925	$ 2,511,095	$ (9,748)	$ -	$ 105,059,272

	Balance October 1, 2024	Additions	Deletions	Transfer	Balance September 30, 2025
Business-type Activities:					
Land	$ 5,154,600	$ -	$ -	$ -	$ 5,154,600
Construction work in progress	7,016,284	85,647	-	(7,101,931)	-
Total capital assets not depreciated	$ 12,170,884	$ 85,647	$ -	$ (7,101,931)	$ 5,154,600
Buildings & Improvements	150,334,897	1,953,813	(133,570)	7,020,874	159,176,014
Equipment	12,455,064	997,758	(16,028)	81,057	13,517,851
Total capital assets depreciated	$ 162,789,961	$ 2,951,571	$ (149,598)	$ 7,101,931	$ 172,693,865
Less accumulated depreciation for:					
Buildings & Improvements	(87,062,557)	(3,891,238)	55,232	-	(90,898,563)
Equipment	(9,561,386)	(443,006)	16,028	-	(9,988,364)
Total accumulated depreciation	$ (96,623,943)	$ (4,334,244)	$ 71,260	$ -	$ (100,886,927)
Total capital assets depreciated, net	$ 66,166,018	$ (1,382,673)	$ (78,338)	$ 7,101,931	$ 71,806,938
Business-type activities capital assets, net	$ 78,336,902	$ (1,297,026)	$ (78,338)	$ -	$ 76,961,538

Depreciation expense was charged to the programs of the primary government as follows:

Note 5 – Capital Assets (continued)

Governmental activities:

General Government	$ 2,562,844
Judicial & Law Enforcement	3,194,784
Education & Recreation	18,481
Health & Welfare	411,781
Maintenance - Equipment & Structures	5,072,043
Total depreciation expense - governmental activities	$11,259,933

Business-type activities:

Jack Brooks Regional Airport	$ 1,972,385
Ford Park	2,361,860
Total depreciation expense - business-type activities	$ 4,334,245

Note 6 - Leases

Lease Receivable

As of September 30, 2025, the County has 2 active leases for governmental type activities and 43 active leases for business type activities.

Governmental Activities

Purpose of Lease	Interest Rate	Amounts Receivable at 9/30/2025	Ending Deferred Inflows
Right-to-use land	1.46%	$ 61,379	$ 59,820
Right-to-use Jail Building	3.65%	$ 104,517	$ 100,394
Total Governmental Activities		$ 165,896	$ 160,214

Business Type Activities

Purpose of Lease	Interest Rate	Amounts Receivable at 9/30/2025	Ending Deferred Inflows
Right-to-use Airport Buildings	0.529% - 1.462%	$ 1,935,189	$1,907,709
Right-to-use Airport Land/Hangers	3.409%-4.174%	$ 4,824,095	$4,586,874
Total Business Type Activities		$ 6,759,284	$6,494,583

Note 6 - Leases (continued)

Future revenues expected are as follows:

Governmental Activities			
Fiscal Year	Principal Payments	Interest Payments	Total Payments
2026	$ 48,929	$ 4,071	$ 53,000
2027	50,360	2,640	53,000
2028	51,838	1,162	53,000
2029	14,769	65	14,834
	$ 165,896	$ 7,938	$ 173,834

Business-Type Activities			
Fiscal Year	Principal Payments	Interest Payments	Total Payments
2026	$ 679,386	$ 179,196	$ 858,582
2027	519,045	164,027	683,072
2028	537,955	150,692	688,647
2029	553,094	136,680	689,774
2030	337,370	123,295	460,665
2031-2035	533,122	563,749	1,096,871
2036-2040	632,709	482,923	1,115,632
2041-2045	630,532	389,524	1,020,056
2046-2050	451,959	309,814	761,773
2051-2055	391,564	246,778	638,342
2056-2060	467,760	184,107	651,867
2061-2065	533,724	111,550	645,274
2066-2070	491,064	28,470	519,534
	$ 6,759,284	$ 3,070,805	$ 9,830,089

Note 7 - Long-Term Liabilities

General Obligation Bonds

The County issues general obligation bonds to provide funds for the acquisition and construction of major capital facilities. Approximately 5% ($575,039) of the 2019 Certificates of Obligation funded and benefited business-type activities, though resources of the governmental activities are being used to liquidate the debt. All other General obligation bonds have been issued for governmental-type activities The total original amount of general obligation bonds issued is $15,395,000.

General obligation bonds are direct obligation and pledge the full faith and credit on the government. General obligation bonds currently outstanding are as follows:

Note 7 - Long-Term Liabilities (continued)

$15,395,000 2019 Certificates of Obligation due in annual installments from $500,000 to $1,040,000 through August 1, 2039; interest rates ranging from 3.0% to 5.0%	$ 12,005,000
Total General Obligation Bonds	$ 12,005,000

Annual debt service requirements to maturity for general obligation bonds are as follows:

Governmental Activities

Fiscal Year Ended September 30	Principal	Interest	Total
2026	$ 665,000	$ 402,150	$ 1,067,150
2027	700,000	368,900	1,068,900
2028	735,000	333,900	1,068,900
2029	775,000	297,150	1,072,150
2030	795,000	273,900	1,068,900
2031-2035	4,355,000	996,750	5,351,750
2036-2039	3,980,000	303,000	4,283,000
Total	$ 12,005,000	$ 2,975,750	$ 14,980,750

There is currently $849,068 available in the Debt Service Funds to service the general obligation bonds. The County has no authorized but unissued bonds at September 30, 2025.

There are a number of limitations and restrictions contained in the various bond debentures regarding authorized uses of bond proceeds. The County is in compliance with all significant limitations and restrictions.

Should the County default on its outstanding bonds, any registered owner of the certificates is entitled to seek a writ of mandamus from a court of proper jurisdiction requiring specific performance from the County.

Financing Arrangement Obligations:

In 2020, a tax-exempt Series Master Equipment-Purchase Agreement was issued with maturities ranging from $6,976 to $8,325 with an interest rate of 3.6%, to be paid from the General Fund. The original issue amount was $457,860 and the current outstanding balance is 8,350. The asset acquired through a financing arrangement is recorded at $457,860 for governmental funds for 71 copiers.

Annual debt service requirements to maturity for financing arrangement obligations are as follows:

Note 7 - Long-Term Liabilities (continued)

Fiscal Year Ended September 30	Governmental Activities Principal	Interest	Total
2026	$ 8,325	$ 25	$ 8,350
Total	$ 8,325	$ 25	$ 8,350

SBITAs Liability:

As of 9/30/2025, the County has 13 active subscriptions for the use of software. The subscriptions have payments that range from $15,144 to $794,046 and interest rates that range from 2.31% to 3.67%. As of 9/30/2025, total combined value of the subscription liability is $3,444,000, and the total combined value of the short-term subscription is $1,112,470. The County is required to make annual fixed payments between $165,455 and $1,210,479.

The annual principal and interest payments are as follows:

Fiscal Year Ended September 30	Governmental Activities Principal	Interest	Total
2026	$ 1,112,470	$ 98,009	$ 1,210,479
2027	1,075,478	66,210	1,141,688
2028	931,894	35,403	967,297
2029	155,571	9,884	165,455
2030	168,587	5,140	173,727
Total	$ 3,444,000	$ 214,646	$ 3,658,646

Conduit Debt Obligations

The County has issued Housing Finance Corporation Bonds and Industrial Development Corporation Bonds to provide financial assistance to private-sector entities for the acquisition and construction of facilities deemed to be in the public interest. The bonds are secured by the property financed and are payable solely from payments received on the underlying loans. Upon repayment of the bonds, ownership of the acquired facilities transfers to the private-sector entity serviced by the bond issuance. Neither the County, the State, nor any political subdivision thereof is obligated in any manner for repayment of the bonds. Accordingly, the bonds are not reported as liabilities in the accompanying financial statements. As of September 30, 2025, there were two series of Jefferson County Housing Finance Corporation Bonds with an aggregate principal amount payable

Note 7 - Long-Term Liabilities (continued)

of $23,250,000, and one series of Jefferson Industrial Development Bonds with an aggregate principal amount payable of $8,330,000.

Arbitrage Rebate Liability

The Tax Reform Act of 1986 established regulations for the rebate to the federal government of arbitrage earnings on certain local government bonds issued after December 31, 1985, and all local governmental bonds issued after August 31, 1986. Issuing governments must calculate any rebate due and remit the amount due at least every five years. As of September 30, 2025, there are no estimated liabilities for arbitrage rebate on governmental debt. The Debt Service Fund and the residual balance in the Capital Project Fund have typically been used to liquidate the arbitrage liability in previous years.

Changes in long-term liabilities

Long-term liability activity for the year ended September 30, 2025 was as follows:

	Beginning Balance - Restated	Additions	Reductions	Ending Balance	Due within One Year
Governmental Activities:					
Bonds Payable					
General obligation bonds	$ 17,105,000	$ -	$ (5,100,000)	$ 12,005,000	$ 665,000
Premiums	1,167,581	-	(372,095)	795,486	-
Total bonds payable	$ 18,272,581	$ -	$ (5,472,095)	$ 12,800,486	$ 665,000
Financing Arrangements	106,304	-	(97,979)	8,325	8,325
SBITA Liability	3,593,120	1,183,358	(1,332,478)	3,444,000	1,112,470
Claims and Judgments	4,226,492	29,818,982	(30,463,965)	3,581,509	3,581,509
Compensated Absences	14,590,104	396,203	-	14,986,307	1,101,863
Governmental Activities					
Long-term liabilities	$ 40,788,601	$ 31,398,543	$ (37,366,517)	$ 34,820,627	$ 6,469,167
Business-type Activities:					
Compensated Absences	$ 278,527	$ 58,880	$ (41,698)	$ 295,709	$ 23,867
Business-type Activities					
Long-term liabilities	$ 278,527	$ 58,880	$ (41,698)	$ 295,709	$ 23,867

Compensated absences liabilities are normally liquidated by the general fund for governmental activities and by the corresponding enterprise fund for business type activities. The Compensated absences liability is reported as a net change. Claims and judgments of governmental funds are normally paid from the corresponding internal service fund. Claims and judgments of the public entity risk pool are normally paid from the corresponding internal service fund.

Note 8 – Defined Benefit Pension Plan

Plan Description. The County participates in a nontraditional defined benefit pension plan in the statewide Texas County and District Retirement System ("TCDRS"). The Board of Trustees of TCDRS is responsible for the administration of the statewide agent, multiple-employer, public employee retirement system consisting of nontraditional defined benefit pension plans. TCDRS issues a publicly available annual comprehensive financial report ("Annual report") that can be obtained at *www.tcdrs.org*.

All full and part-time non-temporary employees participate in the plan, regardless of the number of hours they work in a year. Employees in a temporary position are not eligible for membership.

Benefits Provided. TCDRS provides retirement, disability and death benefits for all eligible employees. Benefit terms are established by the TCDRS act. The benefit terms may be amended as of January 1, each year, but must remain in conformity with the Act.

Members can retire at age 60 and above with 8 or more years of service, with 30 years of service regardless of age, or when the sum of their age and years of service equals 75 or more. Members are vested after eight years of service, but must leave their accumulated contributions in the plan to receive any employer-financed benefit. Members who withdraw their personal contributions in a lump sum are not entitled to any amounts contributed by their employer.

Benefit amounts are determined by the sum of the employee's contributions to the plan, with interest, and employer-financed monetary credits. The level of these monetary credits is adopted by the Commissioners' Court, within the actuarial constraints imposed by the TCDRS Act so that the resulting benefits can be expected to be adequately financed by the employer's commitment to contribute. By law, employee accounts earn 7% interest. At retirement, death or disability, the benefit is calculated by converting the sum of the employee's accumulated contributions and the employer-financed monetary credits to a monthly annuity using annuity purchase rates prescribed by the TCDRS Act. The County's current match is 200%.

Employees covered by benefit terms

At the December 31, 2024 valuation and measurement date, the following employees were covered by the benefit terms:

Inactive employees or beneficiaries currently receiving benefits	1,127
Inactive employees entitled to but not yet receiving benefits	934
Active employees	1,124
	3,185

Contributions. The contribution rates for employees in TCDRS are either 4%, 5%, 6%, or 7% of employee gross earnings, as adopted by the employer's governing body. Participating employers are required to contribute at actuarially determined rates to ensure adequate funding for each employer's plan. Under the state law governing TCDRS, the contribution rate for each entity is

Note 8 – Defined Benefit Pension Plan (continued)

determined annually by the actuary and approved by the TCDRS Board of Trustees. The replacement life entry age actuarial cost method is used in determining the contribution rate. The actuarially determined rate is the estimated amount necessary to fund benefits in an orderly manner for each participate over his or her career so that sufficient funds are accumulated by the time benefit payments begin, with an additional amount to finance any unfunded accrued liability.

Employees for the County were required to contribute 7% of their annual gross earnings during the fiscal year. The contribution rates for the County were 20.60% and 20.35% in calendar years 2024 and 2025, respectively. The County's contributions to TCDRS for the year ended September 30, 2025, were $16,676,032, and were equal to the required contributions.

Net Pension Liability (Asset). The County's Net Pension Liability (NPL) or Net Pension Asset (NPA) was measured as of December 31, 2024, and the Total Pension Liability (TPL) used to calculate the Net Pension Liability (Asset) was determined by an actuarial valuation as of that date.

Actuarial Assumptions

The Total Pension Liability in the December 31, 2024, actuarial valuation was determined using the following actuarial assumptions:

Inflation	2.50% per year
Overall payroll growth	3.00% per year
Investment rate of return	7.5%, net of pension plan investment expense, including inflation

The plan does not have an automatic cost-of-living adjustment ("COLA") and one is not considered to be substantively automatic under accounting standards. Therefore, no assumption for future cost-of-living adjustments is included in the GASB calculation or in the funding valuation. Each year, the plans may elect an ad-hoc COLA for its retirees.

Mortality rates for active members, retirees, and beneficiaries were based on the following:

Depositing members	135% of the Pub-2010 General Employees Amount-Weighted Mortality Table for males and 120% Pub-2010 General Employees Amount-Weighted Mortality Table for females, both projected with 100% of the MP-2021 Ultimate scale after 2010.
Service retirees, beneficiaries and non-depositing members	135% of the Pub-2010 General Retirees Amount-Weighted Mortality Table for males and 120% Pub-2010 General Retirees Amount-Weighted Mortality Table for females, both projected with 100% of the MP-2021 Ultimate scale after 2010.
Disabled retirees	160% of the Pub-2010 General Disabled Retirees Amount-Weighted Mortality Table for males and 125% Pub-2010 General Disabled Retirees Amount-Weighted Mortality Table for females, both projected with 100% of the MP-2021 Ultimate scale after 2010.

Note 8 – Defined Benefit Pension Plan (continued)

The actuarial cost method was Entry Age Normal, as required by accounting standards. Straight-line amortization over Expected Working Life with a 5 year smoothing period, and a non-asymptotic recognition method with no corridor were utilized in the actuarial calculation.

The actuarial assumptions that determined the total pension liability as of December 31, 2024, were based on the results of an actuarial experience study for the period January 1, 2019 through December 31, 2022.

The long-term expected rate of return on pension plan investments is 7.60%. The pension plan's policy in regard to the allocation of invested assets is established and may be amended by the TCDRS Board of Trustees. The long-term expected rate of return on TCDRS is determined by adding inflation to expected long-term real returns, and reflecting expected volatility and correlation. The capital market assumptions and information below are based on January 2025 information for a 10-year time horizon. The valuation assumption for long-term expected return is re-assessed at a minimum of every four years, and is set based on a 10-year time horizon; the most recent analysis was performed in 2025. The target allocation and best estimates of geometric real rates return for each major assets class are summarized in the following table:

Note 8 – Defined Benefit Pension Plan (continued)

Asset Class	Benchmark	Target Allocation[1]	Geometric Real Rate of Return[2]
U.S. Equities	Dow Jones U.S. Total Stock Market Index	13.00%	5.35%
Global Equities	MSCI World (net) Index	4.00%	5.15%
Int'l Equities - Developed Markets	MSCI World Ex USA (net) Index	6.00%	4.75%
Int'l Equities - Emerging Markets	MSCI Emerging Markets (net) Index	0.00%	4.75%
Investment-Grade Bonds	Bloomberg U.S. Aggregate Bond Index	3.00%	2.55%
Strategic Credit	FTSE High-Yield Cash-Pay Capped Index	9.00%	3.70%
Direct Lending	Morningstar LSTA US Leveraged Loan TR USD Index	16.00%	6.85%
Distressed Debt	Cambridge Associates Distressed Securities Index[3]	4.00%	6.80%
REIT Equities	67% FTSE NAREIT All Equity REITs Index + 33% S&P Global REIT (net) Index	2.00%	3.95%
Master Limited Partnerships	Alerian MLP Index	2.00%	4.95%
Commodities	Bloomberg Commodities Index	2.00%	1.00%
Private Real Estate Partnerships	Cambridge Associates Real Estate Index[4]	6.00%	5.70%
Private Equity	Cambridge Associates Global Private Equity & Venture Capital Index[5]	25.00%	8.15%
Hedge Funds	Hedge Fund Research, Inc. (HFRI) Fund of Funds Composite Index	6.00%	3.60%
Cash Equivalents	90-Day U. S. Treasury	2.00%	1.10%

(1) Target asset allocation adopted at the March 2025 TCDRS Board meeting.

(2) Geometric real rates of return equal the expected return for the asset class minus the assumed inflation rate of 2.35%, per Cliffwater's 2025 capital market assumptions.

(3) Includes vintage years 2005-present of Quarter Pooled Horizon IRRs.

(4) Includes vintage years 2007-present of Quarter Pooled Horizon IRRs.

(5) Includes vintage years 2006-present of Quarter Pooled Horizon IRRs.

Discount Rate

The discount rate used to measure the Total Pension Liability was 7.6%. The projection of cash flows used to determine the discount rate assumed that employee and employer contributions will be made at the rates specified in statue. Based on that assumption, the pension plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all period of projected benefit payments to determine the Total Pension Liability.

Note 8 – Defined Benefit Pension Plan (continued)

Changes in the Net Pension (Asset) Liability

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (Asset) (a) - (b)
Balance at 12/31/2023	$ 626,301,850	$ 587,083,672	$ 39,218,178
Changes for the year:			
Service cost	11,283,973	-	11,283,973
Interest on total pension liability [1]	47,039,379	-	47,039,379
Effect on plan changes [2]	6,942,514	-	6,942,514
Effect of economic/demographic gains or losses	1,049,649	-	1,049,649
Effect of assumptions changes or inputs	-	-	-
Refund of contributions	(933,282)	(933,282)	-
Benefit payments	(37,055,581)	(37,055,581)	-
Administrative expenses	-	(342,794)	342,794
Member contributions	-	5,620,922	(5,620,922)
Net investment income	-	59,507,648	(59,507,648)
Employer contributions	-	16,541,566	(16,541,566)
Other [3]	-	(701,210)	701,210
Balance at 12/31/2024	$ 654,628,502	$ 629,720,941	$ 24,907,561

[1] Reflects the change in the liability due to the time value of money. TCDRS does not charge fees or interest.

[2] Reflects plan changes adopted effective in 2025.

[3] Relates to allocation of system-wide items.

Sensitivity Analysis

The following presents the net pension liability (asset) of the County, calculated using the discount rate of 7.6%, as well as what the County's net pension liability (asset) would be if it were calculated using a discount rate that is 1-percentage-point lower (6.6%) or 1-percentage-higher (8.6%) than the current rate:

	1% Decrease 6.6%	Current Discount Rate 7.6%	1% Increase 8.6%
Total pension liability	$ 731,639,919	$ 654,628,502	$ 589,312,441
Fiduciary net position	629,720,941	629,720,941	629,720,941
Net pension liability/(asset)	$ 101,918,978	$ 24,907,561	$ (40,408,500)

Note 8 – Defined Benefit Pension Plan (continued)

Pension Plan Fiduciary Net Position

Detailed information about the pension plan's Fiduciary Net Position is available in a separately-issued TCDRS financial report. The report may be obtained on the internet at *www.tcdrs.org*.

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the year ended September 30, 2025, the County recognized pension (income) expense of $7,782,776 and $142,659 in the governmental and business-type activities, respectively.

At September 30, 2025, the County reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Inflows of Resources	Deferred Outflows of Resources
Differences between expected and actual economic experience	$ 804,059	$ 787,237
Changes in actuarial assumptions	-	-
Net difference between projected and actual investment earnings	6,637,607	-
Contributions subsequent to the measurement date	-	13,474,421
Total	$ 7,441,666	$ 14,261,658

$13,474,421, reported as deferred outflows of resources related to pension resulting from contributions made after the measurement date of the net pension liability/collective net pension liability but before the end of the County's fiscal year ending September 30, 2025, will be recognized as a reduction of the net pension liability or collective net pension liability in the subsequent fiscal year rather than in the current fiscal year. Other amounts reported as deferred outflows and inflows of resources related to pensions will be recognized in pension expenses as follows:

For the Year Ended December 31,	
2025	$ (5,924,332)
2026	8,998,110
2027	(6,624,482)
2028	(3,103,725)
	$ (6,654,429)

Note 9 – Other Post-Employment Benefits

Plan Description. The County sponsors a single-employer defined benefit post-employment benefit (OPEB) plan for health and dental care benefits.

Benefits Provided.

Retirees Benefits

The County provides post-retirement health and dental care benefits to all employees who retired on or after April 9, 1990. Effective January 1, 1997, Commissioners' Court adopted the following policy detailing eligibility requirements for participation in this benefit:

A) employee must have retired under the Texas County and District Retirement System (TCDRS) guidelines described in Note 8; and

B) employee must have at least 8 years of TCDRS credible service with Jefferson County.

For retirees prior to February 1, 2003, the County pays 100 percent of health insurance premiums for those retirees that qualify. After February 1, 2003, the County will pay on the following scale for retirees that qualify:

Years of Service	Percentage Paid by Retiree	Percentage Paid by County
8-11	30%	70%
12-15	20%	80%
16-19	10%	90%
20+	0%	100%

Effective January 1, 2016, all new employees will not be eligible for County paid post-retirement health care benefits.

Retiree Spouse Benefits

The employee's spouse is eligible for County paid health and dental insurance benefits following the employee's retirement if:

A) employee met the above requirements A and B; hired prior to January 1, 2016, and

B) employee's spouse was enrolled in the health plan either as a dependent or an active County employee.

Spouse participation will end in the event of a divorce, at which time COBRA continuation will be offered as described below.

Note 9 – Other Post-Employment Benefits (continued)

For retirees prior to February 1, 2003, the County pays 100 percent of health and dental insurance premiums for those retirees' spouses that qualify. For retirees between February 1, 2003 and February 28, 2005, the County will pay the same scale as described above for retirees' spouses that qualify. For retirees after February 28, 2005, the County requires the following premiums to be paid for retirees' spouses that qualify:

Age of Spouse	Premium Amount Due
Less than 65 during ten year maximum	Equal to the active employee contribution made for a spouse
Less than 65 after ten year maximum	Full Premium
Over 65	Same percentage as retiree see table above

Individuals covered by benefits terms

At the October 1, 2024 valuation date, the following individuals were covered by the benefits terms:

Active employees hired prior to January 1, 2016	396
Retirees	633
Spouses of Retires	238
Beneficiaries	41
	1,308

Assets. There are no assets accumulated in a trust that meets the criteria of GASB codification P22.101 or P52.101 to pay related benefits for the OPEB plan.

Contributions. The Plan is funded on a pay-as-you-go basis and is not administered through an irrevocable trust. The County does not make contributions as defined by GASB 75. For the fiscal year 2025, the County did make payments as established by Commissioners' Court under the Plan based on the combination of premiums and prior year costs of the self-funded portion of the plan of $7,046,884.

Total OPEB Liability. The County's Total OPEB liability of $130,877,217 was measured as of September 30, 2025 and was determined by an actuarial valuation as of the valuation date, calculated based on the discount rate and actuarial assumptions below, and was then projected forward to the measurement date. Any significant changes during this period have been reflected as prescribed by accounting standards.

Actuarial Assumptions and Other Inputs

The Total OPEB Liability in the October 1, 2024, actuarial valuation was determined using the following actuarial assumptions:

Note 9 – Other Post-Employment Benefits (continued)

Discount Rate	4.90%
20 Year Tax-Exempt Municipal Bond Yield	4.90%
Inflation	2.30%
Salary increases included inflation	3.00%

The discount rate was based on the Bond Buyer General Obligation 20-Bond Municipal Index.

The actuarial cost method was Entry Age normal. The trend rates for medical of 6.8% for pre-65 for 2024 will then trend downward yearly to ultimately reaching trend medical rates of 3.7% for years 2072 and beyond. The trend rated for medical post-65 of 6.8% and 4.0% for dental rates for 2024 will trend downward yearly to ultimately reaching trend medical rates of 3.7% for post-65, and dental rates of 3.7% for years 2072 and beyond.

There has not been a separate, audited GAAP-basis postemployment benefit plan report issued.

Changes in the Total OPEB Liability

	Increase (Decrease) Total OPEB Liability
Balance at 9/30/2024	$ 193,138,627
Changes for the year:	
Service cost	2,358,940
Interest on total OPEB liability	7,315,470
Effect on economic/demographic gains/losses	(44,951,586)
Effect of assumptions changes or inputs	(19,937,350)
Benefit payments	(7,046,884)
Balance at 9/30/2025	$ 130,877,217

Sensitivity Analysis

The following presents the total OPEB liability of the County, calculated using the discount rate of 4.90%, as well as what the County's total OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower (3.90%) or 1-percentage-higher (5.90%) than the current rate:

	1% Decrease 3.90%	Current Discount Rate 4.90%	1% Increase 5.90%
Total OPEB liability	$ 148,292,153	$ 130,877,217	$ 116,499,625

Note 9 – Other Post-Employment Benefits (continued)

The following presents the total OPEB liability of the County, calculated using the current healthcare cost trends as well as what the County's total OPEB liability would be if it were calculated using trend rates that are 1-percentage-point lower or 1-percentage-higher than the current rate:

	1% Decrease	Current Trend Rate	1% Increase
Total OPEB liability	$ 114,332,325	$ 130,877,217	$ 151,251,532

OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

For the year ended September 30, 2025, the County recognized OPEB expense (income) of ($25,879,601).

At September 30, 2025, the County reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Inflows of Resources	Deferred Outflows of Resources
Differences between expected and actual economic experience	$ 30,544,026	$ 2,822,139
Change in actuarial assumptions	22,805,421	3,107,081
Total	$ 53,349,447	$ 5,929,220

Amounts reported as deferred outflows and inflows of resources related to other postemployment benefits will be recognized in OPEB expenses as follows:

For the Year Ended September 30,	
2026	$ (25,507,687)
2027	(19,416,812)
2028	(2,495,728)
	$ (47,420,227)

Note 10 - Deferred Compensation Plan

Employees of Jefferson County, Texas may participate in a deferred compensation plan adopted under the provisions of Internal Revenue Code Section 457 (Deferred Compensation Plans with Respect to Service for State and Local Governments).

The deferred compensation plan is administered by an unrelated financial institution. Amendments to the laws governing Section 457 deferred compensation plans substantially became

Note 10 - Deferred Compensation Plan (continued)

effective January 1, 1997. The County approved plan amendments such that plan assets are held in trust by a third party custodian, for the exclusive benefit of the plan participants and their beneficiaries. The assets will not be diverted to any other purpose. The County's beneficial ownership of plan assets will be held for the further exclusive benefit of the plan for the exclusive benefit of participants and beneficiaries.

Accordingly, the County performs minimal administrative functions and does not perform any investment functions for the plan. Consequently, the assets held by the custodian are not included in the financial statements as of September 30, 2025.

Note 11 - Individual Funds Deficit Equity Balances

The following funds had deficit equity balances as of September 30, 2025:

Governmental Activities	
Juvenile Grant A - State Aid	$ 9,267
Mentally Impaired Offenders Program	798
Community Corrections	4,247
Drug Diversion Program	12,502
General Land Office Grants	481,444
Sheriff Training Grant	6,210
JAG Grant	17,199
Auto Theft	24,127
BRIC/FMA Grant	1,208,948
Family Treatment Court	3,429
Environment Grants	1,300
Community Wildfire Prevention Program	5,265
Total for Governmental Activities	$1,774,736

If funding does not become available to cover these deficit fund balances from other governmental entities, the County plans to transfer funds from General Fund to cover the deficit fund balance.

Note 12 - Risk Management

The Liability Insurance Fund was established to account for the contributions from the General Fund for payment of general liability claims. Under the laws of the State of Texas, claims for torts are limited to $100,000 per person and $300,000 per incident. The Liability Fund records a claim as payable when information prior to the issuance of the financial statements indicates that it is probable that a liability has been incurred at the date of the financial statements and the amount of the loss can be reasonably estimated. Liabilities of the fund are reported when it is probable that a loss has occurred and the amount of the loss can be reasonably estimated. Liabilities include an amount for claims that have been incurred but not reported. Claim liabilities are calculated considering recent claim settlement trends. Changes in the Liability Insurance Fund's claims liability (including an estimate for claims incurred but not reported) were:

Note 12 - Risk Management (continued)

	2025	2024
Liability for claims, beginning of fiscal year	$354,467	$354,777
Incurred claims and changes in estimates	393,885	321,677
Claim payments	(391,687)	(321,987)
Liability for claims, end of fiscal year	$356,665	$354,467

The Workers' Compensation Fund was established to account for the County's workers' compensation claims. Contributions are made from the General, Special Revenue, and Enterprise Funds for employees covered under the County's workers' compensation policy. Contributions to the fund are determined by position class code within each department. From October 1, 1999, to February 14, 2005 the County was fully insured for workers' compensation claims and employers' liability. As of February 15, 2005, the County is self insured for workers' compensation claims and employers' liability. The County has excess coverage for workers' compensation claims and employers' liability claims limiting the County's liability to $750,000 for law enforcement or firefighters and $500,000 for all others per occurrence for losses occurring prior to October 1, 1999 and after February 15, 2005. Settled claims have not exceeded commercial coverages in any of the past three fiscal years. Liabilities of the fund are reported when it is probable that a loss has occurred and the amount of the loss can be reasonably estimated. Liabilities include an amount for claims that have been incurred but not reported. Claim liabilities are calculated considering recent claim settlement trends. Changes in the Worker's Compensation Fund's claims liability (including an estimate for claims incurred but not reported) were:

	2025	2024
Liability for claims, beginning of fiscal year	$1,393,926	$1,873,990
Incurred claims and changes in estimates	543,824	161,468
Claim payments	(692,327)	(641,532)
Liability for claims, end of fiscal year	$1,245,423	$1,393,926

Note 13 – Public Entity Risk Pool

On November 27, 2000, the Jefferson County Commissioners' Court pursuant to Texas Local Government Code Ann. Sec. 172.001 organized the Southeast Texas Government Employee Benefits Pool (The Pool). The Pool was organized for the benefit of Texas Political Subdivisions and Special Districts to make available accident, life, and health benefits for Pool member employees. Twelve trustees govern the Pool. Five of these trustees are the Jefferson County Auditor, Jefferson County Insurance and Benefits Manager, Jefferson County Human Resources Director, Jefferson County Purchasing Agent, and the Jefferson County Assistant District Attorney. Two of the trustees are members of Commissioners' Court. The remaining five trustees are appointed by Commissioners' Court.

Note 13 – Public Entity Risk Pool (continued)

The Pool is responsible for adopting underwriting standards, qualifications for membership in the pool, and establishing the types of benefits to be provided and associated fees for these benefits. The members of the Pool are responsible for their members' eligibility in the Pool and payment of monthly contributions for participation in the Pool. The Pool members are not subject to supplemental assessments in the event of deficiencies. If the assets of the Pool were to be exhausted, members would not be responsible for the Pool's liabilities. Pool members currently include Jefferson County, Texas (reporting entity), Jefferson County Drainage District #3, and Jefferson County Drainage District #6. The total number of members in the Pool is 1,850. Operations of the Pool are accounted for as an internal service fund.

The Pool uses reinsurance agreements to reduce its exposure to large losses on medical and prescription claims. For the fiscal year ended September 30, 2025, the Pool had stop loss insurance contracts to limit the medical and prescription claims per individual member to $325,000 in a calendar year with a $125,000 aggregating specific deductible. The Pool did exceed these limits during fiscal year 2025 by $1,489,455, did not exceed these limits during fiscal year 2024, and, did exceed these limits during fiscal year 2023 by $376,425.

Liabilities of the Pool are reported when it is probable that a loss has occurred and the amount of the loss can be reasonably estimated. Liabilities include an amount for claims that have been incurred but not reported. Claim liabilities are calculated considering recent claim settlements trends.

Changes in the Pool's claims liability (including an estimate of claims incurred but not reported and claim adjustment expenses) were:

	2025	2024
Liability for claims, beginning of fiscal year	$2,478,099	$1,766,882
Incurred claims and changes in estimates	28,881,272	26,027,912
Claim payments	(29,379,950)	(25,316,695)
Liability for claims, end of fiscal year	$1,979,421	$2,478,099

Additional information including ten-year revenue and claim development are addressed in a separate annual report. The annual report may be obtained from Southeast Texas Governmental Employee Benefits Pool, 215 Franklin Street Suite 200, Beaumont, Texas 77701.

Note 14 – Encumbrances, Construction Contracts, and Other Significant Commitments

As of September 30, 2025, the County had the following encumbrances, construction contracts, and other significant commitments with respect to unfinished projects:

Note 14 – Encumbrances, Construction Contracts, and Other Significant Commitments (continued)

	Project	Remaining Commitment	Expected Date of Completion
Governmental Activities			
Major Funds			
ARPA Coronavirus Recovery	American Rescue Plan projects	$ 15,281,886	12/31/2026
Nonmajor funds			
Capital Project Funds	Jail Improvements	$ 1,971,520	6/30/2026
BRIC/FMA Grant	FEMA Home Elevations program	385,512	12/31/2026
Rural Law Enforcement Grant	Law Enforcement Security Equipment	307,319	3/31/2027
Total Nonmajor Funds		$ 2,664,351	
Total Governmental Activities		$ 17,946,237	

Note 15 - Contingent Liabilities

Amounts received or receivable from grantor agencies are subject to audit and adjustment by grantor agencies, principally the State of Texas. Any disallowed expenditures or claims, including amounts already collected, may constitute a liability of the applicable funds. The amount, if any, of expenditures which may be disallowed by the grantor cannot be determined at this time although the County expects such amounts, if any, to be immaterial.

The County is involved in lawsuits and other claims in the ordinary course of operations. The outcome of these lawsuits and other claims are not presently determinable and the resolutions of these matters are not expected to have a material effect on the financial condition of the County.

Note 16 – Tax Abatements

The County enters into property tax abatement agreements with local businesses under the state Property Redevelopment and Tax Abatement Act, Chapter 312 of the Texas Tax Code, as well as its own guidelines and criteria, which is required under the Act. Under the Act, including its guidelines and criteria, the County may grant property tax abatements for creation of additional value to eligible facilities. The creation must be made subsequent to and specified in an abatement agreement between the County and the property owner or lessee. In addition, the County requires the following economic qualifications in order to grant the tax abatement:

(1)Must create an increased appraised ad valorem tax value based upon the Jefferson County Appraisal District's assessment of the eligible property; and

(2)Must prevent the loss of payroll or retain, increase or create payroll (full-time employment) on a permanent basis in the County.

(3)Must not have the effect of displacing workers or transferring employment from one part of the County to another.

Note 16 – Tax Abatements (continued)

(4)Must demonstrate by an independent economic impact analysis that the local economic benefit will be substantially in excess of the amount of anticipated foregone tax revenues resulting from the abatement.

The County's guidelines and criteria focus on creating new wealth to the community rather than recirculating dollars within the community, and attracting industries that have demonstrated a commitment to protecting our environment—all without creating a substantial adverse effect on the competitive position of existing companies operating in the County. The agreement used for this purpose provides for termination of the agreement in the event its counterparty discontinues producing product as well as recapturing property taxes abated in that calendar year. These abatements may be granted for up to ten years.

The County has also entered into one agreement under the state County Development and Growth, Chapter 381 of the Texas Local Government code that will rebate a percentage of property taxes for up to twenty years. The agreement was granted for twenty years.

For the fiscal year ended September 30, 2025, the County abated property tax revenue totaling $23,012,723 based on property tax values of $6,446,141,153 for 16 entities.

Note 17 – Restatements

Change in Accounting Principle

During fiscal year 2025, the County implemented GASB Statement No. 101, *Compensated Absences*. The adoption of this standard resulted in the recognition of additional liabilities for compensated absences. The cumulative effect of the accounting change increased liabilities and decreased net position by $2,956,820 for governmental-type activities and $81,396 for business-type activities for the Jack Brooks Regional Airport Enterprise Fund. The restated beginning net position for governmental-type activities is ($23,130,444) and for business-type activities is 81,654,694.

Note 18 – Recent Accounting Pronouncements

GASB Statement No. 103, Financial Reporting Model Improvements – The objective of this Statement is to improve key components of the financial reporting model to enhance its effectiveness in providing information that is essential for decision making and assessing a government's accountability. This Statement also addresses certain application issues. This Statement will be implemented by the County in the fiscal year ending September 30, 2026, and the impact has not yet been determined.

GASB Statement No. 104, Disclosure of Certain Capital Assets – The objective of this Statement is to provide users of government financial statements with essential information about certain types of capital assets. This Statement requires certain types of capital assets to be presented separately in the note disclosures, including right-to-use assets related to leases, Subscription-

Note 18 – Recent Accounting Pronouncements (continued)

Based Information Technology Arrangements, and public-private or public-public partnerships. Other intangible assets are also required to be presented separately by major class. Additional disclosures have also been required for capital assets held for sale. This Statement will be implemented by the County in the fiscal year ending September 30, 2026, and the impact has not yet been determined.

GASB Statement No. 105, Subsequent Events – The primary objective of this statement is to improve the financial reporting requirements for subsequent events, thereby enhancing consistency in their application and better meeting the information needs of financial statement users. This Statement will be implemented by the County in the fiscal year ending September 30, 2026, and the impact has not yet been determined.

Note 19 – Subsequent Events

The County is in the process of defeasance and optional redemption of $4,905,000 outstanding debt from the 2019 Certificates of Obligation.

REQUIRED SUPPLEMENTARY INFORMATION

JEFFERSON COUNTY, TEXAS
REQUIRED SUPPLEMENTARY INFORMATION
GENERAL FUND
SCHEDULE OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES - BUDGET AND ACTUAL (GAAP)
FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 2025

	BUDGETED AMOUNTS		ACTUAL	VARIANCE WITH
	ORIGINAL	FINAL	AMOUNT	FINAL BUDGET
REVENUES:				
TAXES:				
PROPERTY	$ 108,517,525	108,517,525	107,751,279	(766,246)
SALES AND OTHER TAXES	32,700,000	32,700,000	46,161,759	13,461,759
FEES	8,885,510	8,885,510	9,863,137	977,627
LICENSES	383,000	383,000	436,910	53,910
SALES, RENTALS, AND SERVICES	3,120,500	3,120,500	4,053,234	932,734
INTERGOVERNMENTAL	1,629,600	1,629,600	2,038,920	409,320
FINES AND FORFEITURES	1,405,000	1,405,000	1,832,539	427,539
INTEREST	3,680,000	3,680,000	6,075,057	2,395,057
MISCELLANEOUS	37,000	37,000	37,714	714
CONTRIBUTIONS AND DONATIONS	150	150	940	790
TOTAL REVENUES	$ 160,358,285	160,358,285	178,251,489	17,893,204
EXPENDITURES:				
GENERAL GOVERNMENT	$ 35,375,481	34,768,951	31,972,936	2,796,015
JUDICIAL AND LAW ENFORCEMENT	101,632,033	101,760,564	95,571,209	6,189,355
EDUCATION AND RECREATION	512,699	512,699	463,567	49,132
HEALTH AND WELFARE	14,506,800	14,602,966	12,596,478	2,006,488
MAINTENANCE - EQUIPMENT AND STRUCTURES	18,629,667	19,147,644	16,888,554	2,259,090
CAPITAL OUTLAY	-	-	-	-
DEBT SERVICE				
PRINCIPAL	97,979	97,979	97,979	-
INTEREST AND COMMISSION	2,221	2,221	2,221	-
TOTAL EXPENDITURES	$ 170,756,880	170,893,024	157,592,944	13,300,080
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	$ (10,398,595)	(10,534,739)	20,658,545	31,193,284
OTHER FINANCING SOURCES (USES):				
ISSUANCE OF SBITA	$ -	-	856,367	856,367
TRANSFERS OUT	(7,164,138)	(7,027,994)	(6,831,360)	196,634
TOTAL OTHER FINANCING SOURCES (USES)	$ (7,164,138)	(7,027,994)	(5,974,993)	1,053,001
NET CHANGE IN FUND BALANCES	$ (17,562,733)	(17,562,733)	14,683,552	32,246,285
FUND BALANCES, BEGINNING	$ 85,569,659	85,569,659	85,569,659	-
FUND BALANCES, ENDING	$ 68,006,926	68,006,926	100,253,211	32,246,285

JEFFERSON COUNTY, TEXAS
NOTES TO THE REQUIRED SUPPLEMENTARY INFORMATION
SEPTEMBER 30, 2025

1. Budgetary Basis

- Budgets are prepared on a basis consistent with GAAP.
- The department is the legal level of budgetary control. Commissioners' Court approval is necessary to transfer appropriations between departments. Transfers may not increase the total budget.
- Annual budgets are legally adopted for the General Fund and the Debt Service Funds.

2. Analysis of Significant Expenditure Variances from Original Budget

Commissioners' Court approved $209,475 in budget transfers over the original budget for Transfers out in order to provide additional funding for necessary capital projects for improvement to the County Correctional facilities.

Commissioners' Court approved $425,000 in budget transfers over the original budget for Road and Bridge Precinct 1 capital to replace road machinery.

In addition, the Court approved approximately $266,00 in budget transfers over the original budget for additional cost for indigent defense as court cases are continue to be higher to address the backlog due to the impacts of Covid-19 on the Court system.

These transfers were not part of the original budget. The above budget transfers were funded with the savings from various departments. Commissioners' Court was able to achieve $13,796,714 in actual savings from the total budget, with the assistance from all County departments.

JEFFERSON COUNTY, TEXAS
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
LAST TEN MEASUREMENT YEARS

Plan Year Ended December 31	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total Pension Liability										
Service Cost	$ 9,087,096	$ 10,064,449	$ 9,240,166	$ 9,167,537	$ 8,921,172	$ 9,316,375	$ 10,534,103	$ 10,388,366	$ 10,459,070	$ 11,283,973
Interest total pension liability	32,905,759	34,577,662	36,386,446	38,052,890	39,598,336	41,229,591	42,541,830	43,862,245	45,654,250	47,039,379
Effect of plan changes	(1,753,160)	-	-	-	-	-	-	6,085,700	-	6,942,514
Effect of assumption changes or inputs	4,437,711	-	1,469,816	-	-	30,344,488	(1,277,021)	-	-	-
Effect of economic/demographic (gains) or losses	(1,826,418)	(3,026,782)	(699,117)	(678,722)	37,525	(698,248)	(1,565,772)	(1,553,147)	(1,247,319)	1,049,649
Benefit payments/refunds of contributions	(20,730,737)	(22,041,227)	(25,201,451)	(26,323,006)	(28,143,943)	(29,509,218)	(31,811,374)	(33,649,325)	(36,961,015)	(37,988,863)
Net change in total pension liability	$ 22,120,251	$ 19,574,102	$ 21,195,860	$ 20,218,699	$ 20,413,090	$ 50,682,988	$ 18,421,766	$ 25,133,839	$ 17,904,986	$ 28,326,652
Total pension liability - beginning	410,636,269	432,756,520	452,330,622	473,526,482	493,745,181	514,158,271	564,841,259	583,263,025	608,396,864	626,301,850
Total pension liability - ending (a)	$ 432,756,520	$ 452,330,622	$ 473,526,482	$ 493,745,181	$ 514,158,271	$ 564,841,259	$ 583,263,025	$ 608,396,864	$ 626,301,850	$ 654,628,502
Plan Fiduciary Net Position										
Employer contributions	$ 12,012,562	$ 11,654,736	$ 11,611,789	$ 12,199,912	$ 12,767,990	$ 14,337,862	$ 14,386,981	$ 14,971,996	$ 15,690,666	$ 16,541,566
Member contributions	4,761,495	4,632,780	4,758,530	4,616,186	4,776,915	4,951,412	5,030,415	5,175,508	5,407,918	5,620,922
Investment income net of investment expenses	1,207,991	26,503,470	55,064,738	(8,008,077)	66,649,542	47,623,237	107,955,529	(33,612,380)	59,648,780	59,507,648
Benefit payments refunds of contributions	(20,730,737)	(22,041,227)	(25,201,451)	(26,323,006)	(28,143,943)	(29,509,218)	(31,811,374)	(33,649,325)	(36,961,016)	(37,988,863)
Administrative expenses	(259,107)	(288,421)	(282,006)	(325,932)	(351,445)	(364,375)	(320,819)	(318,898)	(306,554)	(342,794)
Other	72,744	(1,075,190)	(121,010)	(418,931)	(297,899)	(257,411)	(213,914)	(1,388,350)	(573,971)	(701,210)
Net change in plan fiduciary net position	$(2,935,052)	$ 19,386,148	$ 45,830,590	$(18,259,848)	$ 55,401,160	$ 36,781,507	$ 95,026,818	$(48,821,449)	$ 42,905,823	$ 42,637,269
Plan fiduciary net position - beginning	361,767,975	358,832,923	378,219,071	424,049,661	405,789,813	461,190,973	497,972,480	592,999,298	544,177,849	587,083,672
Plan fiduciary net position - ending (b)	$ 358,832,923	$ 378,219,071	$ 424,049,661	$ 405,789,813	$ 461,190,973	$ 497,972,480	$ 592,999,298	$ 544,177,849	$ 587,083,672	$ 629,720,941
Net pension liability - ending (a) - (b)	$ 73,923,597	$ 74,111,551	$ 49,476,821	$ 87,955,368	$ 52,967,298	$ 66,868,779	$(9,736,273)	$ 64,219,015	$ 39,218,178	$ 24,907,561
Fiduciary net position as a percentage of total pension liability	82.92%	83.62%	89.55%	82.19%	89.70%	88.16%	101.67%	89.44%	93.74%	96.20%
Pensionable covered payroll	$ 68,021,353	$ 66,182,567	$ 67,510,440	$ 65,945,517	$ 68,241,637	$ 70,734,450	$ 71,863,073	$ 73,935,832	$ 77,255,965	$ 80,298,884
Net pension liability as a percentage of covered payroll	108.68%	111.98%	73.29%	133.38%	77.62%	94.53%	-13.55%	86.86%	50.76%	31.02%

JEFFERSON COUNTY, TEXAS
REQUIRED SUPPLEMENTARY INFORMATION
TEXAS COUNTY AND DISTRICT RETIREMENT SYSTEM
SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year Ended	Actuarially Determined Contribution	Actual Employer Contribution	Contribution Deficiency (Excess)	Pensionable Covered Payroll (1)	Actual Contribution as a % of Covered Payroll
2016	$ 11,644,582	$ 11,644,582	$ -	$ 66,074,018	17.6%
2017	11,699,132	11,699,132	-	67,589,717	17.3%
2018	11,920,988	11,920,988	-	65,695,117	18.1%
2019	12,532,809	12,532,809	-	67,188,223	18.7%
2020	14,035,386	14,035,386	-	70,719,630	19.8%
2021	14,330,834	14,330,834	-	71,342,609	20.1%
2022	15,333,200	15,333,200	-	75,943,576	20.2%
2023	15,524,374	15,524,374	-	76,489,369	20.3%
2024	16,333,450	16,333,450	-	79,548,968	20.5%
2025	16,676,032	16,676,032	-	81,709,650	20.4%

(1) Payroll is calculated based on contributions as reported to TCDRS.

JEFFERSON COUNTY, TEXAS
REQUIRED SUPPLEMENTARY INFORMATION
NOTES TO SCHEDULE OF EMPLOYER CONTRIBUTIONS
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

Valuation Date	Actuarially determined contribution rates are calculated each December 31, two years prior to the end of the fiscal year in which the contributions are reported.

Methods and assumptions used to determine contribution rates:

Actuarial Cost Method	Entry Age
Amortization Method	Level percentage of payroll, closed
Remaining Amortization Period	11.1 years (based on contribution rate calculated in 12/31/2024 valuation)
Asset Valuation Method	5-year smoothed fair value
Inflation	2.50%
Salary Increases	Varies by age and service. 4.7% average over career including inflation.
Investment Rate of Return	7.5%, net of administrative and investment expenses, including inflation
Retirement Age	Members who are eligible for service retirement are assumed to commence receiving benefit payments based on age. The average age at service retirement for recent retirees is 61.
Mortality	135% of the Pub-2020 General Retirees Table for males and 120% of the Pub-2010 General Retirees Table for females, both projected with 100% of the MP-2021 Ultimate scale after 2010.
Changes in Assumptions and Methods Reflected in the Schedule of Employer Contributions*	2015: New inflation, mortality and other assumptions were reflected. 2017: New mortality assumptions were reflected 2019: New inflation, mortality and other assumptions were reflected. 2022: New investement return and inflation assumptions were reflected.
Changes in Plan Provisions Reflected in the Schedule*	2015: No changes in plan provisions. 2016: No changes in plan provisions. 2017: New Annuity Purchase Rates were reflected for benefits earned after 2017 2018: No changes in plan provisions. 2019: No changes in plan provisions. 2020: No changes in plan provisions. 2021: No changes in plan provisions. 2022: No changes in plan provisions. 2023: Employer contributions reflect that a 2% flat COLA was adopted. 2024: No changes in plan provisions.

JEFFERSON COUNTY, TEXAS
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF CHANGES IN TOTAL OPEB LIABILITY AND RELATED RATIOS
LAST EIGHT FISCAL YEARS

Plan Year Ended September 30	2018	2019	2020	2021	2022	2023	2024	2025
Total OPEB Liability								
Service Cost	$ 9,576,801	$ 6,020,230	$ 7,703,213	$ 6,133,513	$ 6,656,313	$ 3,708,424	$ 3,054,253	$ 2,358,940
Interest total OPEB liability	8,585,089	9,428,912	6,354,719	5,874,025	4,858,279	6,858,179	7,472,628	7,315,470
Effect of plan changes	-	-	-	-	-	-	-	-
Effect of assumption changes or inputs	(19,171,693)	48,420,854	20,744,958	(15,464,588)	(45,840,440)	(3,983,229)	6,559,395	(19,937,350)
Effect of economic/demographic (gains) or losses	-	(46,197,295)	-	(41,182,537)	-	13,405,155	-	(44,951,586)
Benefit payments/refunds of contributions	(5,544,058)	(5,898,029)	(6,138,914)	(6,535,363)	(6,883,610)	(7,336,020)	(7,125,048)	(7,046,884)
Net change in total pension liability	$(6,553,861)	$ 11,774,672	$ 28,663,976	$(51,174,950)	$(41,209,458)	$ 12,652,509	$ 9,961,228	$(62,261,410)
Total OPEB liability - beginning	229,024,511	222,470,650	234,245,322	262,909,298	211,734,348	170,524,890	183,177,399	193,138,627
Total OPEB liability - ending	$ 222,470,650	$ 234,245,322	$ 262,909,298	$ 211,734,348	$ 170,524,890	$ 183,177,399	$ 193,138,627	$ 130,877,217
OPEB covered-employee payroll	$ 55,723,780	$ 45,105,747	$ 45,105,747	$ 40,373,418	$ 40,373,418	$ 35,783,829	$ 37,251,000	$ 30,705,073
Total OPEB liability as a percentage of covered-employee payroll	399.24%	519.32%	582.87%	524.44%	422.37%	511.90%	518.48%	426.24%

Note: There are no assets accumulated in a trust that meets the criteria of GASB codification P22.101 or P52.101 to pay related benefits for the OPEB plan.

* Reporting began in fiscal year 2018. Additional years will be reported as it becomes available.

COMBINING AND INDIVIDUAL FUND INFORMATION AND OTHER SUPPLEMENTARY INFORMATION

JEFFERSON COUNTY, TEXAS
GENERAL FUND
SCHEDULE OF EXPENDITURES - BUDGET AND ACTUAL (GAAP)
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

	BUDGETED AMOUNTS		ACTUAL	VARIANCE WITH
	ORIGINAL	FINAL	AMOUNT	FINAL BUDGET
GENERAL GOVERNMENT:				
TAX ASSESSOR-COLLECTOR	$ 5,028,035	5,028,035	4,382,346	645,689
HUMAN RESOURCES	605,061	605,061	536,277	68,784
COUNTY AUDITOR	1,959,962	1,959,962	1,826,734	133,228
COUNTY CLERK	2,804,907	2,775,907	2,440,079	335,828
COUNTY JUDGE	1,195,416	1,195,416	1,016,396	179,020
RISK MANAGEMENT	389,355	389,355	219,910	169,445
COUNTY TREASURER	402,067	402,067	389,450	12,617
PRINTING DEPARTMENT	169,184	169,184	134,449	34,735
PURCHASING AGENT	722,788	722,788	657,354	65,434
GENERAL SERVICES	16,474,494	15,808,757	15,204,471	604,286
DATA PROCESSING	3,989,310	4,048,517	3,821,871	226,646
VOTERS REGISTRATION DEPARTMENT	188,072	188,072	132,561	55,511
ELECTIONS DEPARTMENT	1,031,531	1,060,531	866,365	194,166
VETERANS SERVICE	415,299	415,299	344,673	70,626
TOTAL GENERAL GOVERNMENT	$ 35,375,481	34,768,951	31,972,936	2,796,015
JUDICIAL AND LAW ENFORCEMENT:				
DISTRICT ATTORNEY	$ 8,722,716	8,780,981	8,322,364	458,617
DISTRICT CLERK	2,611,350	2,623,850	2,542,165	81,685
CRIMINAL DISTRICT COURT	1,987,303	2,212,303	2,168,344	43,959
58TH DISTRICT COURT	375,119	375,119	352,071	23,048
60TH DISTRICT COURT	404,440	404,440	375,684	28,756
136TH DISTRICT COURT	390,667	390,667	377,636	13,031
172ND DISTRICT COURT	375,864	375,864	372,567	3,297
252ND DISTRICT COURT	1,445,739	1,445,739	1,364,414	81,325
279TH DISTRICT COURT	718,030	829,030	806,270	22,760
317TH DISTRICT COURT	624,479	524,479	420,834	103,645
JURY	633,247	633,247	589,154	44,093
J.P. PRECINCT NO. 1 - PLACE NO. 1	471,448	471,448	455,122	16,326
J.P. PRECINCT NO. 1 - PLACE NO. 2	484,810	484,859	480,403	4,456
J.P. PRECINCT NO. 2	463,389	463,340	444,736	18,604
J.P. PRECINCT NO. 4	481,073	481,073	474,692	6,381
J.P. PRECINCT NO. 6	473,782	473,782	443,504	30,278
J.P. PRECINCT NO. 7	484,086	484,086	467,754	16,332
J.P. PRECINCT NO. 8	470,011	470,011	384,987	85,024
COUNTY COURT AT LAW NO. 1	601,838	601,838	578,875	22,963
COUNTY COURT AT LAW NO. 2	798,053	798,053	673,263	124,790
COUNTY COURT AT LAW NO. 3	994,914	994,914	899,289	95,625
COURT MASTER	609,736	609,736	588,611	21,125
DISPUTE RESOLUTION CENTER	346,891	346,891	325,191	21,700
COMMUNITY SUPERVISION	19,319	19,319	17,156	2,163
SHERIFF	18,752,320	18,752,320	17,506,897	1,245,423
CRIME LABORATORY	2,070,108	2,070,108	1,684,848	385,260
JAIL	45,361,610	45,152,135	43,333,550	1,818,585
JUVENILE CORRECTIONAL PROBATION	1,979,891	1,979,891	1,563,866	416,025
JUVENILE DETENTION HOME	2,768,767	2,768,767	2,335,510	433,257
CONSTABLE PRECINCT NO. 1	926,671	926,671	902,276	24,395
CONSTABLE PRECINCT NO. 2	623,493	632,611	613,459	19,152
CONSTABLE PRECINCT NO. 4	582,711	582,711	528,243	54,468
CONSTABLE PRECINCT NO. 6	714,709	727,715	688,233	39,482
CONSTABLE PRECINCT NO. 7	659,283	668,400	654,351	14,049
CONSTABLE PRECINCT NO. 8	604,166	604,166	566,674	37,492
COUNTY MORGUE	1,600,000	1,600,000	1,268,216	331,784
TOTAL JUDICIAL AND LAW ENFORCEMENT	$ 101,632,033	101,760,564	95,571,209	6,189,355

[CONTINUED]

JEFFERSON COUNTY, TEXAS
GENERAL FUND
SCHEDULE OF EXPENDITURES - BUDGET AND ACTUAL (GAAP)
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

	BUDGETED AMOUNTS		ACTUAL	VARIANCE WITH
	ORIGINAL	FINAL	AMOUNT	FINAL BUDGET
EDUCATION AND RECREATION:				
AGRICULTURAL EXTENSION SERVICE	$ 512,699	512,699	463,567	49,132
TOTAL EDUCATION AND RECREATION	$ 512,699	512,699	463,567	49,132
HEALTH AND WELFARE:				
PUBLIC HEALTH UNIT 1	$ 1,646,684	1,646,018	1,463,211	182,807
PUBLIC HEALTH UNIT 2	1,497,182	1,545,265	1,321,373	223,892
NURSE PRACTITIONER	437,956	437,956	418,362	19,594
CHILD WELFARE	95,000	95,000	94,999	1
ENVIRONMENTAL CONTROL	522,705	522,705	453,047	69,658
INDIGENT MEDICAL SERVICE	5,218,971	5,267,720	4,854,600	413,120
MOSQUITO CONTROL	4,533,094	4,533,094	3,467,176	1,065,918
EMERGENCY MANAGEMENT	305,208	305,208	273,710	31,498
TOBACCO SETTLEMENT FUND	250,000	250,000	250,000	-
TOTAL HEALTH AND WELFARE	$ 14,506,800	14,602,966	12,596,478	2,006,488
MAINTENANCE - EQUIPMENT & STRUCTURES:				
COURTHOUSE & ANNEXES	$ 3,107,148	3,159,506	2,705,606	453,900
PORT ARTHUR BUILDINGS	994,121	994,121	891,338	102,783
MID-COUNTY BUILDINGS	281,111	281,111	202,867	78,244
ROAD & BRIDGE PCT. 1	2,592,540	3,017,540	2,711,963	305,577
ROAD & BRIDGE PCT. 2	2,859,877	2,859,877	2,686,339	173,538
ROAD & BRIDGE PCT. 3	2,706,041	2,706,969	2,384,895	322,074
ROAD & BRIDGE PCT. 4	2,815,035	2,780,654	2,389,765	390,889
ENGINEERING	1,463,807	1,463,807	1,188,824	274,983
PARKS & RECREATION	265,656	264,728	179,399	85,329
SERVICE CENTER	1,544,331	1,619,331	1,547,558	71,773
TOTAL MAINTENANCE - EQUIPMENT & STRUCTURES	$ 18,629,667	19,147,644	16,888,554	2,259,090
CAPITAL OUTLAY:	$ -	-	-	-
DEBT SERVICE:				
PRINCIPAL	$ 97,979	97,979	97,979	-
INTEREST AND COMMISSION	2,221	2,221	2,221	-
TOTAL DEBT SERVICE	$ 100,200	100,200	100,200	-
TOTAL OPERATING EXPENDITURES	$ 170,756,880	170,893,024	157,592,944	13,300,080
OTHER FINANCING USES:				
TRANSFERS OUT	$ 7,164,138	7,027,994	6,831,360	196,634
TOTAL OTHER FINANCING USES	$ 7,164,138	7,027,994	6,831,360	196,634
TOTAL EXPENDITURES AND OTHER FINANCING USES	$ 177,921,018	177,921,018	164,424,304	13,496,714

NONMAJOR GOVERNMENTAL FUNDS

JEFFERSON COUNTY, TEXAS
COMBINING BALANCE SHEET
NONMAJOR GOVERNMENTAL FUNDS - SUMMARY
SEPTEMBER 30, 2025

	SPECIAL REVENUE	CAPITAL PROJECTS	DEBT SERVICE	TOTAL NONMAJOR GOVERNMENTAL FUNDS
ASSETS:				
CASH AND CASH EQUIVALENTS	$ 31,282,570	20,630,584	830,809	52,743,963
ACCOUNTS RECEIVABLE, Net	318,623	-	-	318,623
INTEREST RECEIVABLE	59,475	44,903	1,790	106,168
DUE FROM OTHER FUNDS	65,477	-	-	65,477
DUE FROM OTHER GOVERNMENTAL ENTITIES	1,775,168	-	-	1,775,168
DELINQUENT TAXES RECEIVABLE, Net	-	-	160,736	160,736
PENALTY AND INTEREST RECEIVABLE, Net	-	-	107,106	107,106
INVENTORY, At Cost	18,060	-	-	18,060
PREPAID ITEMS	13,898	-	-	13,898
TOTAL ASSETS	$ 33,533,271	20,675,487	1,100,441	55,309,199
LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCE				
LIABILITIES:				
ACCOUNTS PAYABLE	$ 2,076,870	300,462	-	2,377,332
COMPENSATED ABSENCES	39,751	-	-	39,751
DUE TO OTHER FUNDS	2,666,809	-	-	2,666,809
UNEARNED REVENUE	710,117	-	-	710,117
TOTAL LIABILITIES	$ 5,493,547	300,462	-	5,794,009
DEFERRED INFLOWS OF RESOURCES:				
UNAVAILABLE REVENUE- PROPERTY TAXES	$ -	-	251,373	251,373
UNAVAILABLE REVENUE- GRANTS	65,399	-	-	65,399
TOTAL DEFERRED INFLOWS OF RESOURCES	$ 65,399	-	251,373	316,772
FUND BALANCES:				
NONSPENDABLE FOR:				
INVENTORY	$ 18,060	-	-	18,060
PREPAID ITEMS	13,898	-	-	13,898
RESTRICTED FOR:				
DEBT SERVICE	-	-	849,068	849,068
ENVIRONMENTAL PROJECTS	-	8,930,242	-	8,930,242
PUBLIC INTEREST	5,158,247	-	-	5,158,247
JUDICIAL & LAW ENFORCEMENT	12,142,776	-	-	12,142,776
EDUCATION & RECREATION	6,160,154	-	-	6,160,154
HEALTH & WELFARE	5,671,157	-	-	5,671,157
MAINTENANCE OF STRUCTURES & EQUIPMENT	584,769	11,444,783	-	12,029,552
COMMITTED FOR:				
CONTRACTS	502,115	-	-	502,115
UNASSIGNED (DEFICIT)	(2,276,851)	-	-	(2,276,851)
TOTAL FUND BALANCES	$ 27,974,325	20,375,025	849,068	49,198,418
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCES	$ 33,533,271	20,675,487	1,100,441	55,309,199

JEFFERSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENDITURES,
AND CHANGES IN FUND BALANCES
NONMAJOR GOVERNMENTAL FUNDS - SUMMARY
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

		SPECIAL REVENUE	CAPITAL PROJECTS	DEBT SERVICE	TOTAL NONMAJOR GOVERNMENTAL FUNDS
REVENUES:					
PROPERTY TAXES	$	-	-	5,808,471	5,808,471
SALES AND OTHER TAXES		1,928,955	-	-	1,928,955
FEES		4,484,683	-	-	4,484,683
INTERGOVERNMENTAL		16,713,621	1,405,268	-	18,118,889
SALES, RENTAL & SERVICES		1,789,089	-	-	1,789,089
FINES AND FORFEITURES		274,351	-	-	274,351
CONTRIBUTIONS AND DONATIONS		9,547	-	-	9,547
INTEREST		1,393,555	850,866	139,367	2,383,788
TOTAL REVENUES	$	26,593,801	2,256,134	5,947,838	34,797,773
EXPENDITURES:					
CURRENT					
GENERAL GOVERNMENT	$	2,185,248	-	-	2,185,248
JUDICIAL AND LAW ENFORCEMENT		16,474,380	-	-	16,474,380
EDUCATION AND RECREATION		1,310,218	-	-	1,310,218
HEALTH AND WELFARE		3,110,714	-	-	3,110,714
MAINTENANCE OF STRUCTURES AND EQUIPMENT		24,523	-	-	24,523
CAPITAL OUTLAY		-	2,807,835	-	2,807,835
DEBT SERVICE					
PRINCIPAL		-	-	5,100,000	5,100,000
INTEREST AND COMMISSION		-	-	570,480	570,480
TOTAL EXPENDITURES	$	23,105,083	2,807,835	5,670,480	31,583,398
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	$	3,488,718	(551,701)	277,358	3,214,375
OTHER FINANCING SOURCES (USES):					
TRANSFERS IN	$	1,542,924	2,978,678	-	4,521,602
TRANSFERS OUT		(276,783)	-	-	(276,783)
TOTAL OTHER FINANCING SOURCES (USES)	$	1,266,141	2,978,678	-	4,244,819
NET CHANGE IN FUND BALANCES	$	4,754,859	2,426,977	277,358	7,459,194
FUND BALANCES, BEGINNING	$	23,219,466	17,948,048	571,710	41,739,224
FUND BALANCES, ENDING	$	27,974,325	20,375,025	849,068	49,198,418

SPECIAL REVENUE FUNDS

SPECIAL REVENUE FUNDS

The Special Revenue Funds are used to account for the proceeds of specific revenue sources other than expendable trusts, or major capital projects that are legally restricted to expenditures for specified purposes. Included in this heading are the following individual funds:

Lateral Road Funds - This fund is used to account for expenditures of materials incurred in the maintenance of the lateral roads of the County. Financing is provided by contributions from the State.

Breath Alcohol Testing Fund - This fund is used to account for fees collected by the courts on D.W.I. convictions and the expenditure of those funds.

Law Library Fund - This fund is used to account for the maintenance of the County Law Library. Financing is provided by fees from law suits filed in the District Courts and County Courts-at-Law.

Juvenile Probation and Detention Fund - This fund is used to account for receipts specifically designated for use in juvenile programs.

County Clerk Records Management and Preservation Fund - This fund is used to account for fees collected by the County Clerk for the maintenance of their records and the expenditure of those funds.

County Clerk Records Archive Fund - This fund is used to account for fees collected by the County Clerk for the preservation of records prior to 1990 and the expenditure of those funds.

Local Truancy Prevention - This fund is used to account for fees collected by the courts and the expenditure of those funds for juvenile programs.

Justice Court Support Fund - This fund is used to account for fees collected by the courts and the expenditure of those funds to assist the judiciary.

Court Facility Fund - This fund is used to account for fees collected by the courts and the expenditure of those funds for construction, renovation, or improvement of court facilities.

Language Access Fund - This fund is used to account for fees collected by the courts and the expenditure of those funds to provide individual translation and other language access for judicial matters.

County Records Management and Preservation Fund - This fund is used to account for fees collected by the County Clerk, District Clerk, and Sheriff for the maintenance of County records and the expenditure of those funds.

Justice Court Building Security - This fund is used to account for fees collected by the justice courts to finance security services and equipment for justice courts not located in the County courthouse.

Hotel Occupancy Tax Fund - This fund is used to account for the collection of a 2% Hotel/Motel Occupancy tax. Revenues collected from this tax are to be used for tourism projects in the County.

Diversion Center Fund – This fund is used to account for funds received and expenditures for multiple agency diversion center.

County and District Court Technology Fund – This fund is used to account for fees collected from defendants convicted in a County, Statutory County, or District court and the expenditures of those funds on technological enhancements for the previously mentioned courts.

Sheriff and Constable Education Fund - This fund is used to account for the expenditures associated with the education of Sheriff's deputies and Constables of the County.

Tax Office Auto Dealer Fund - This fund is used to account for taxes collected from Local Auto Dealerships to be used by the County's Tax Office.

Unclaimed Funds Management Fund - This fund is used to account for Unclaimed Funds for all County departments.

Family Protection Fund - This fund is used to account for fees collected by the District Clerk for family violence prevention or intervention and the expenditure of this money.

District Attorney Special Funds - This fund is used to account for the fees and forfeitures received by the District Attorney associated with District Attorney

Forfeitures from criminal convictions and Hot Check fees for the prosecution of hot check offenders and the expenditure of those funds.

JC Assistance District 4 Fund - This fund is used to account for sales taxes received by the special district of JP Assistance District 4 and the expenditure of those funds.

Justice of the Peace Courtroom Technology Fund – This fund is used to account for the fees collected by the Justices of the Peace on misdemeanor convictions and the expenditure of those funds on technological enhancements for the justices' courts.

District Clerk Records Management Fund - This fund is used to account for fees collected by the District Clerk for the maintenance of their records and the expenditure of those funds.

County Clerk Election Contracts - This fund is used to account for fees collected by the County Clerk for election contracts with local governments and the expenditure of those funds.

Child Abuse Prevention - This fund is used to account for fees collected for certain child sexual assault and related convictions and the expenditure of those funds.

Sheriff's Special Revenue Funds - This fund is used to account for fees, forfeitures, and other revenue received by the Sheriff in association with Security Fees, Law Officer Training fees, D.A.R.E. Contributions, Sheriff's Forfeitures, Sheriff's Commissary, Sheriff – Spindletop Grant, and the Marine Division reimbursements, and the expenditure of those funds.

Guardianship Fee Fund - This fund is used to account for fees collected by the County Clerk to supplement the support of the judiciary in cases involving guardianships.

Juvenile Delinquency Prevention - This fund is used to account for fees collected by the courts for certain offenses and the expenditures associated with juvenile delinquency prevention and graffiti eradication measures.

District Court Records Technology - This fund is used to account for fees collected by the District Clerk for the preservation and restoration of District Court records.

Probation Department Funds - These funds are used to account for the expenditures of maintaining probation services as authorized by the County and District Courts.

Financing is provided by State grant and probationary fees. Included in this heading are the following individual funds:

Juvenile Probation and Detention - State Aid
Pretrial Diversion Programs
IV-E Foster Care Fund
Juvenile Grant A – State Aid
Mentally Impaired Offenders
Community Supervision
Juvenile TJPC Supplement
Community Corrections
DWI Pretrial Diversion
Drug Diversion Program

Grant Funds - These funds are used to account for receipts of Federal and State grants designated for special projects or services. Included in this heading are the following individual funds:

Family Group Conferencing
General Land Office Grants
Sheriff Training Grant
JAG Grant
Sheriff Dept Grants
SCAAP Grant
LATCF Federal Grant
FEMA Emergency
Regional Communication
Crime Victims Clearing
EMPG Grant
Crime Lab CJD Grant
Cyber Security Grants
Auto Theft Grant
Rural Law Enforcement Grant
BRIC/FMA Grant
District Attorney SB 22 Grant
Violence Against Women
Family Treatment Court
Environment Grants
Community Wildfire Prevention Program
CJD Sheriff Grants


JEFFERSON COUNTY
TEXAS

JEFFERSON COUNTY, TEXAS
COMBINING BALANCE SHEET
NONMAJOR GOVERNMENTAL FUNDS - SPECIAL REVENUE
SEPTEMBER 30, 2025

	LATERAL ROAD FUNDS	BREATH ALCOHOL TESTING FUND	LAW LIBRARY FUND	JUVENILE PROBATION & DETENTION FUND
ASSETS:				
CASH AND CASH EQUIVALENTS	$ 583,499	22,349	668,951	835,601
ACCOUNTS RECEIVABLE, Net	-	-	-	824
INTEREST RECEIVABLE	1,270	48	1,420	1,890
DUE FROM OTHER FUNDS	-	-	-	65,477
DUE FROM OTHER GOVERNMENTAL ENTITIES	-	-	-	8,366
INVENTORY, At Cost	-	-	-	-
PREPAID ITEMS	-	-	-	-
TOTAL ASSETS	$ 584,769	22,397	670,371	912,158
LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCE				
LIABILITIES:				
ACCOUNTS PAYABLE	$ -	457	8,123	30,613
COMPENSATED ABSENCES	-	-	-	2,060
DUE TO OTHER FUNDS	-	-	-	-
UNEARNED REVENUE - GRANTS	-	-	-	-
TOTAL LIABILITIES	$ -	457	8,123	32,673
DEFERRED INFLOWS OF RESOURCES:				
UNAVAILABLE REVENUE-GRANTS	$ -	-	-	-
TOTAL DEFERRED INFLOWS OF RESOURCES	$ -	-	-	-
FUND BALANCES:				
NONSPENDABLE FOR:				
INVENTORY	$ -	-	-	-
PREPAID ITEMS	-	-	-	-
RESTRICTED FOR:				
PUBLIC INTEREST	-	-	-	-
JUDICIAL & LAW ENFORCEMENT	-	21,940	-	879,485
EDUCATION & RECREATION	-	-	662,248	-
HEALTH & WELFARE	-	-	-	-
MAINTENANCE OF STRUCTURES & EQUIPMENT	584,769	-	-	-
COMMITTED FOR:				
CONTRACTS	-	-	-	-
UNASSIGNED (DEFICIT)	-	-	-	-
TOTAL FUND BALANCES	$ 584,769	21,940	662,248	879,485
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCES	$ 584,769	22,397	670,371	912,158

COUNTY CLERK RECORDS MGMT. AND PRESERVATION FUND	COUNTY CLERK RECORDS ARCHIVE FUND	LOCAL TRUANCY PREVENTION	JUSTICE COURT SUPPORT FUND	COURT FACILITY FUND	LANGUAGE ACCESS FUND	COUNTY RECORDS MGMT. AND PRESERVATION FUND
2,160,485	1,980,262	197,812	330,986	386,650	27,079	204,224
-	-	-	-	-	-	-
4,559	4,176	423	667	821	49	439
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
2,165,044	1,984,438	198,235	331,653	387,471	27,128	204,663
30	273,336	-	9,961	-	3,454	2,568
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
30	273,336	-	9,961	-	3,454	2,568
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
2,165,014	1,711,102	-	-	-	-	202,095
-	-	198,235	321,692	387,471	23,674	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
2,165,014	1,711,102	198,235	321,692	387,471	23,674	202,095
2,165,044	1,984,438	198,235	331,653	387,471	27,128	204,663

[CONTINUED]

JEFFERSON COUNTY, TEXAS
COMBINING BALANCE SHEET
NONMAJOR GOVERNMENTAL FUNDS - SPECIAL REVENUE
SEPTEMBER 30, 2025

	JUSTICE COURT BUILDING SECURITY	HOTEL OCCUPANCY TAX FUND	DIVERSION CENTER FUND	COUNTY & DISTRICT COURT TECHNOLOGY FUND
ASSETS:				
CASH AND CASH EQUIVALENTS	$ 365,903	5,461,742	2,630,328	18,530
ACCOUNTS RECEIVABLE, Net	-	187,936	-	-
INTEREST RECEIVABLE	789	11,533	5,725	39
DUE FROM OTHER FUNDS	-	-	-	-
DUE FROM OTHER GOVERNMENTAL ENTITIES	-	-	-	-
INVENTORY, At Cost	-	-	-	-
PREPAID ITEMS	-	5,133	-	-
TOTAL ASSETS	$ 366,692	5,666,344	2,636,053	18,569
LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCE				
LIABILITIES:				
ACCOUNTS PAYABLE	$ -	163,305	2,839	-
COMPENSATED ABSENCES	-	-	-	-
DUE TO OTHER FUNDS	-	-	-	-
UNEARNED REVENUE - GRANTS	-	-	-	-
TOTAL LIABILITIES	$ -	163,305	2,839	-
DEFERRED INFLOWS OF RESOURCES:				
UNAVAILABLE REVENUE-GRANTS	$ -	-	-	-
TOTAL DEFERRED INFLOWS OF RESOURCES	$ -	-	-	-
FUND BALANCES:				
NONSPENDABLE FOR:				
INVENTORY	$ -	-	-	-
PREPAID ITEMS	-	5,133	-	-
RESTRICTED FOR:				
PUBLIC INTEREST	-	-	-	-
JUDICIAL & LAW ENFORCEMENT	366,692	-	2,633,214	18,569
EDUCATION & RECREATION	-	5,497,906	-	-
HEALTH & WELFARE	-	-	-	-
MAINTENANCE OF STRUCTURES & EQUIPMENT	-	-	-	-
COMMITTED FOR:				
CONTRACTS	-	-	-	-
UNASSIGNED (DEFICIT)	-	-	-	-
TOTAL FUND BALANCES	$ 366,692	5,503,039	2,633,214	18,569
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCES	$ 366,692	5,666,344	2,636,053	18,569

SHERIFF AND CONSTABLE EDUCATION FUND	TAX OFFICE AUTO DEALER FUND	UNCLAIMED FUNDS MANAGEMENT FUND	FAMILY PROTECTION FUND	DISTRICT ATTORNEY SPECIAL FUNDS	JC ASSISTANCE DISTRICT 4 FUND	JP COURTROOM TECHNOLOGY FUND
154,542	395,743	2,500	4	516,886	576,776	199,511
3	-	-	-	-	-	-
336	861	-	-	-	1,255	428
-	-	-	-	-	-	-
-	-	-	-	-	25,535	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
154,881	396,604	2,500	4	516,886	603,566	199,939
4,907	33,667	2,462	-	-	22	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
4,907	33,667	2,462	-	-	22	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	362,937	38	-	-	-	-
149,974	-	-	4	516,886	603,544	199,939
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
149,974	362,937	38	4	516,886	603,544	199,939
154,881	396,604	2,500	4	516,886	603,566	199,939

[CONTINUED]

JEFFERSON COUNTY, TEXAS
COMBINING BALANCE SHEET
NONMAJOR GOVERNMENTAL FUNDS - SPECIAL REVENUE
SEPTEMBER 30, 2025

	DISTRICT CLERK RECORDS MANAGEMENT	COUNTY CLERK ELECTION CONTRACTS	CHILD ABUSE PREVENTION	SHERIFF'S SPECIAL REVENUE FUNDS
ASSETS:				
CASH AND CASH EQUIVALENTS	$ 171,405	195,968	34,915	3,117,719
ACCOUNTS RECEIVABLE, Net	-	-	-	129,384
INTEREST RECEIVABLE	351	427	76	598
DUE FROM OTHER FUNDS	-	-	-	-
DUE FROM OTHER GOVERNMENTAL ENTITIES	-	32,551	-	884,701
INVENTORY, At Cost	-	-	-	18,060
PREPAID ITEMS	-	-	-	8,695
TOTAL ASSETS	$ 171,756	228,946	34,991	4,159,157
LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCE				
LIABILITIES:				
ACCOUNTS PAYABLE	$ 3,128	-	-	278,327
COMPENSATED ABSENCES	-	-	-	-
DUE TO OTHER FUNDS	-	32,551	-	785,999
UNEARNED REVENUE - GRANTS	-	-	-	-
TOTAL LIABILITIES	$ 3,128	32,551	-	1,064,326
DEFERRED INFLOWS OF RESOURCES:				
UNAVAILABLE REVENUE-GRANTS	$ -	-	-	-
TOTAL DEFERRED INFLOWS OF RESOURCES	$ -	-	-	-
FUND BALANCES:				
NONSPENDABLE FOR:				
INVENTORY	$ -	-	-	18,060
PREPAID ITEMS	-	-	-	8,695
RESTRICTED FOR:				
PUBLIC INTEREST	-	196,395	-	-
JUDICIAL & LAW ENFORCEMENT	168,628	-	34,991	3,068,076
EDUCATION & RECREATION	-	-	-	-
HEALTH & WELFARE	-	-	-	-
MAINTENANCE OF STRUCTURES & EQUIPMENT	-	-	-	-
COMMITTED FOR:				
CONTRACTS	-	-	-	-
UNASSIGNED (DEFICIT)	-	-	-	-
TOTAL FUND BALANCES	$ 168,628	196,395	34,991	3,094,831
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCES	$ 171,756	228,946	34,991	4,159,157

GUARDIANSHIP FEE FUND	JUVENILE DELINQUENCY PREVENTION	DISTRICT COURT RECORDS TECHNOLOGY	PROBATION DEPARTMENT FUNDS	GRANT FUNDS	TOTAL
553,368	119	1,791	3,449,129	6,037,793	31,282,570
-	-	-	476	-	318,623
1,198	-	4	7,080	13,013	59,475
-	-	-	-	-	65,477
-	-	-	174,006	650,009	1,775,168
-	-	-	-	-	18,060
-	-	-	70	-	13,898
554,566	119	1,795	3,630,761	6,700,815	33,533,271
33,900	-	-	541,579	684,192	2,076,870
-	-	-	37,691	-	39,751
-	-	-	65,477	1,782,782	2,666,809
-	-	-	682,330	27,787	710,117
33,900	-	-	1,327,077	2,494,761	5,493,547
-	-	-	-	65,399	65,399
-	-	-	-	65,399	65,399
-	-	-	-	-	18,060
-	-	-	70	-	13,898
520,666	-	-	-	-	5,158,247
-	119	1,795	2,330,428	217,420	12,142,776
-	-	-	-	-	6,160,154
-	-	-	-	5,671,157	5,671,157
-	-	-	-	-	584,769
-	-	-	-	502,115	502,115
-	-	-	(26,814)	(2,250,037)	(2,276,851)
520,666	119	1,795	2,303,684	4,140,655	27,974,325
554,566	119	1,795	3,630,761	6,700,815	33,533,271

JEFFERSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES
NONMAJOR GOVERNMENTAL FUNDS - SPECIAL REVENUE
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

	LATERAL ROAD FUND	BREATH ALCOHOL TESTING FUND	LAW LIBRARY FUND	JUVENILE PROBATION & DETENTION FUND
REVENUES:				
TAXES	$ -	-	-	-
FEES	-	5,203	191,305	5,760
FINES AND FORFEITURES	-	-	-	-
SALES, RENTAL & SERVICES	-	-	-	-
INTERGOVERNMENTAL	28,676	-	-	232,030
INTEREST	26,005	1,019	25,874	58,332
CONTRIBUTIONS AND DONATIONS	-	-	-	-
TOTAL REVENUES	$ 54,681	6,222	217,179	296,122
EXPENDITURES:				
GENERAL GOVERNMENT	$ -	-	-	-
JUDICIAL AND LAW ENFORCEMENT	-	4,841	-	314,806
EDUCATION AND RECREATION	-	-	44,176	-
HEALTH AND WELFARE	-	-	-	-
MAINTENANCE OF STRUCTURES AND EQUIPMENT	2,164	-	-	-
CAPITAL OUTLAY	-	-	-	-
TOTAL EXPENDITURES	$ 2,164	4,841	44,176	314,806
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	$ 52,517	1,381	173,003	(18,684)
OTHER FINANCING SOURCES (USES):				
TRANSFERS IN	$ -	-	-	71,340
TRANSFERS OUT	-	-	-	-
TOTAL OTHER FINANCING SOURCES (USES)	$ -	-	-	71,340
NET CHANGE IN FUND BALANCES	$ 52,517	1,381	173,003	52,656
FUND BALANCES, BEGINNING	$ 532,252	20,559	489,245	826,829
FUND BALANCES, ENDING	$ 584,769	21,940	662,248	879,485

COUNTY CLERK RECORDS MGMT. AND PRESERVATION FUND	COUNTY CLERK RECORDS ARCHIVE FUND	LOCAL TRUANCY PREVENTION	JUSTICE COURT SUPPORT FUND	COURT FACILITY FUND	LANGUAGE ACCESS FUND	COUNTY RECORDS MGMT. AND PRESERVATION FUND
-	-	-	-	-	-	-
391,736	345,561	36,601	226,624	108,944	43,537	28,083
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
91,928	94,675	7,948	13,991	14,574	1,285	9,270
-	-	-	-	-	-	-
483,664	440,236	44,549	240,615	123,518	44,822	37,353
217,073	1,249,449	-	-	-	-	68,595
-	-	-	252,594	-	66,622	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
217,073	1,249,449	-	252,594	-	66,622	68,595
266,591	(809,213)	44,549	(11,979)	123,518	(21,800)	(31,242)
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
266,591	(809,213)	44,549	(11,979)	123,518	(21,800)	(31,242)
1,898,423	2,520,315	153,686	333,671	263,953	45,474	233,337
2,165,014	1,711,102	198,235	321,692	387,471	23,674	202,095

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JEFFERSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES
NONMAJOR GOVERNMENTAL FUNDS - SPECIAL REVENUE
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

	JUSTICE COURT BUILDING SECURITY	HOTEL OCCUPANCY TAX FUND	DIVERSION CENTER FUND	COUNTY & DISTRICT COURT TECHNOLOGY FUND
REVENUES:				
TAXES	$ -	1,803,050	-	-
FEES	35,884	-	-	3,963
FINES AND FORFEITURES	-	-	-	-
SALES, RENTAL & SERVICES	-	48,641	-	-
INTERGOVERNMENTAL	-	-	540,000	-
INTEREST	15,438	216,402	113,663	833
CONTRIBUTIONS AND DONATIONS	-	-	-	-
TOTAL REVENUES	$ 51,322	2,068,093	653,663	4,796
EXPENDITURES:				
GENERAL GOVERNMENT	$ -	-	-	-
JUDICIAL AND LAW ENFORCEMENT	-	-	70,421	4,037
EDUCATION AND RECREATION	-	1,266,042	-	-
HEALTH AND WELFARE	-	-	-	-
MAINTENANCE OF STRUCTURES AND EQUIPMENT	-	-	-	-
CAPITAL OUTLAY	-	-	-	-
TOTAL EXPENDITURES	$ -	1,266,042	70,421	4,037
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	$ 51,322	802,051	583,242	759
OTHER FINANCING SOURCES (USES):				
TRANSFERS IN	$ -	-	-	-
TRANSFERS OUT	-	-	-	-
TOTAL OTHER FINANCING SOURCES (USES)	$ -	-	-	-
NET CHANGE IN FUND BALANCES	$ 51,322	802,051	583,242	759
FUND BALANCES, BEGINNING	$ 315,370	4,700,988	2,049,972	17,810
FUND BALANCES, ENDING	$ 366,692	5,503,039	2,633,214	18,569

SHERIFF AND CONSTABLE EDUCATION FUND	TAX OFFICE AUTO DEALER FUND	UNCLAIMED FUNDS MANAGEMENT FUND	FAMILY PROTECTION FUND	DISTRICT ATTORNEY SPECIAL FUNDS	JC ASSISTANCE DISTRICT 4 FUND	JP COURTROOM TECHNOLOGY FUND
-	-	-	-	-	125,905	-
-	10,779	-	-	-	-	30,469
-	-	-	-	102,374	-	-
-	-	-	-	-	-	-
51,544	-	-	-	-	-	-
6,735	78,334	-	-	16,947	23,720	8,453
-	-	-	-	-	-	-
58,279	89,113	-	-	119,321	149,625	38,922
-	98,603	-	-	-	-	-
26,547	-	-	299	91,397	-	21,381
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	22,359	-
-	-	-	-	-	-	-
26,547	98,603	-	299	91,397	22,359	21,381
31,732	(9,490)	-	(299)	27,924	127,266	17,541
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
31,732	(9,490)	-	(299)	27,924	127,266	17,541
118,242	372,427	38	303	488,962	476,278	182,398
149,974	362,937	38	4	516,886	603,544	199,939

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JEFFERSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES
NONMAJOR GOVERNMENTAL FUNDS - SPECIAL REVENUE
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

	DISTRICT CLERK RECORDS MANAGEMENT	COUNTY CLERK ELECTION CONTRACTS	CHILD ABUSE PREVENTION	SHERIFF'S SPECIAL REVENUE FUNDS
REVENUES:				
TAXES	$ -	-	-	-
FEES	127,146	-	1,859	436,227
FINES AND FORFEITURES	-	-	-	171,977
SALES, RENTAL & SERVICES	-	50,787	-	1,689,661
INTERGOVERNMENTAL	-	121,779	-	3,022,036
INTEREST	6,632	7,512	1,525	110,445
CONTRIBUTIONS AND DONATIONS	-	-	-	-
TOTAL REVENUES	$ 133,778	180,078	3,384	5,430,346
EXPENDITURES:				
GENERAL GOVERNMENT	$ -	-	-	-
JUDICIAL AND LAW ENFORCEMENT	134,201	121,779	-	5,687,514
EDUCATION AND RECREATION	-	-	-	-
HEALTH AND WELFARE	-	-	-	-
MAINTENANCE OF STRUCTURES AND EQUIPMENT	-	-	-	-
CAPITAL OUTLAY	-	-	-	-
TOTAL EXPENDITURES	$ 134,201	121,779	-	5,687,514
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	$ (423)	58,299	3,384	(257,168)
OTHER FINANCING SOURCES (USES):				
TRANSFERS IN	$ -	-	-	672,882
TRANSFERS OUT	-	-	-	-
TOTAL OTHER FINANCING SOURCES (USES)	$ -	-	-	672,882
NET CHANGE IN FUND BALANCES	$ (423)	58,299	3,384	415,714
FUND BALANCES, BEGINNING	$ 169,051	138,096	31,607	2,679,117
FUND BALANCES, ENDING	$ 168,628	196,395	34,991	3,094,831

GUARDIANSHIP FEE FUND	JUVENILE DELINQUENCY PREVENTION	DISTRICT COURT RECORDS TECHNOLOGY	PROBATION DEPARTMENT FUNDS	GRANT FUNDS	TOTAL
-	-	-	-	-	1,928,955
35,160	-	393	2,419,449	-	4,484,683
-	-	-	-	-	274,351
-	-	-	-	-	1,789,089
-	-	-	5,588,709	7,128,847	16,713,621
23,963	5	117	158,752	259,178	1,393,555
-	-	-	-	9,547	9,547
59,123	5	510	8,166,910	7,397,572	26,593,801
46,600	-	-	-	504,928	2,185,248
-	-	2,847	8,200,895	1,474,199	16,474,380
-	-	-	-	-	1,310,218
-	-	-	-	3,110,714	3,110,714
-	-	-	-	-	24,523
-	-	-	-	-	-
46,600	-	2,847	8,200,895	5,089,841	23,105,083
12,523	5	(2,337)	(33,985)	2,307,731	3,488,718
-	-	-	276,783	521,919	1,542,924
-	-	-	(276,783)	-	(276,783)
-	-	-	-	521,919	1,266,141
12,523	5	(2,337)	(33,985)	2,829,650	4,754,859
508,143	114	4,132	2,337,669	1,311,005	23,219,466
520,666	119	1,795	2,303,684	4,140,655	27,974,325


JEFFERSON COUNTY
TEXAS

JEFFERSON COUNTY, TEXAS
COMBINING BALANCE SHEET - NONMAJOR GOVERNMENTAL FUNDS - SPECIAL REVENUE - PROBATION DEPARTMENT FUNDS
SEPTEMBER 30, 2025

	JUVENILE PROBATION AND DETENTION-- STATE AID	PRETRIAL DIVERSION PROGRAMS	IV-E FOSTER CARE FUND	JUVENILE GRANT A - STATE AID
ASSETS:				
CASH AND CASH EQUIVALENTS	$ -	177,279	519,738	-
ACCOUNTS RECEIVABLE, Net	-	-	-	-
INTEREST RECEIVABLE	-	382	1,131	-
DUE FROM OTHER GOVERNMENTAL ENTITIES	7,370	-	-	141,967
PREPAID ITEMS	-	-	-	-
TOTAL ASSETS	$ 7,370	177,661	520,869	141,967
LIABILITIES AND FUND BALANCES				
LIABILITIES:				
ACCOUNTS PAYABLE	$ 3,661	1,363	-	100,679
COMPENSATED ABSENCES	-	-	-	-
DUE TO OTHER FUNDS	3,709	-	-	50,555
UNEARNED REVENUE	-	-	-	-
TOTAL LIABILITIES	$ 7,370	1,363	-	151,234
FUND BALANCES:				
NONSPENDABLE FOR: PREPAID ITEMS	$ -	-	-	-
RESTRICTED FOR: JUDICIAL & LAW ENFORCEMENT	-	176,298	520,869	-
UNASSIGNED (DEFICIT)	-	-	-	(9,267)
TOTAL FUND BALANCES	$ -	176,298	520,869	(9,267)
TOTAL LIABILITIES AND FUND BALANCES	$ 7,370	177,661	520,869	141,967

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JEFFERSON COUNTY, TEXAS
COMBINING BALANCE SHEET - NONMAJOR GOVERNMENTAL FUNDS - SPECIAL REVENUE - PROBATION DEPARTMENT FUNDS
SEPTEMBER 30, 2025

	MENTALLY IMPAIRED OFFENDERS PROGRAM	COMMUNITY SUPERVISION	JUVENILE TJPC SUPPLEMENT
ASSETS:			
CASH AND CASH EQUIVALENTS	$ 48,420	2,065,400	-
ACCOUNTS RECEIVABLE, Net	-	476	-
INTEREST RECEIVABLE	-	4,905	-
DUE FROM OTHER GOVERNMENTAL ENTITIES	-	-	24,669
PREPAID ITEMS	-	70	-
TOTAL ASSETS	$ 48,420	2,070,851	24,669
LIABILITIES AND FUND BALANCES			
LIABILITIES:			
ACCOUNTS PAYABLE	$ 25,857	197,962	13,456
COMPENSATED ABSENCES	-	37,691	-
DUE TO OTHER FUNDS	-	-	11,213
UNEARNED REVENUE	23,361	501,278	-
TOTAL LIABILITIES	$ 49,218	736,931	24,669
FUND BALANCES:			
NONSPENDABLE FOR PREPAID ITEMS	$ -	70	-
RESTRICTED FOR: JUDICIAL & LAW ENFORCEMENT	-	1,333,850	-
UNASSIGNED (DEFICIT)	(798)	-	-
TOTAL FUND BALANCES	$ (798)	1,333,920	-
TOTAL LIABILITIES AND FUND BALANCES	$ 48,420	2,070,851	24,669

COMMUNITY CORRECTIONS	DWI PRETRIAL DIVERSION	DRUG DIVERSION PROGRAM	TOTAL
200,755	303,915	133,622	3,449,129
-	-	-	476
-	662	-	7,080
-	-	-	174,006
-	-	-	70
200,755	304,577	133,622	3,630,761
121,687	5,166	71,748	541,579
-	-	-	37,691
-	-	-	65,477
83,315	-	74,376	682,330
205,002	5,166	146,124	1,327,077
-	-	-	70
-	299,411	-	2,330,428
(4,247)	-	(12,502)	(26,814)
(4,247)	299,411	(12,502)	2,303,684
200,755	304,577	133,622	3,630,761


JEFFERSON COUNTY
TEXAS

JEFFERSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES - NONMAJOR GOVERNMENTAL FUNDS - SPECIAL REVENUE - PROBATION DEPARTMENT FUNDS
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

	JUVENILE PROBATION AND DETENTION-- STATE AID	PRETRIAL DIVERSION PROGRAMS	IV-E FOSTER CARE FUND	JUVENILE GRANT A - STATE AID
REVENUES:				
FEES	$ -	17,399	-	2,652
INTERGOVERNMENTAL	55,199	-	-	1,691,594
INTEREST	-	7,416	23,104	-
TOTAL REVENUES	$ 55,199	24,815	23,104	1,694,246
EXPENDITURES:				
JUDICIAL AND LAW ENFORCEMENT	$ 55,199	1,363	84	1,757,387
CAPITAL OUTLAY	-	-	-	-
TOTAL EXPENDITURES	$ 55,199	1,363	84	1,757,387
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	$ -	23,452	23,020	(63,141)
OTHER FINANCIAL SOURCES (USES):				
TRANSFERS IN	$ -	-	-	-
TRANSFERS OUT	-	-	-	-
TOTAL OTHER FINANCING SOURCES (USES)	$ -	-	-	-
NET CHANGE IN FUND BALANCES	$ -	23,452	23,020	(63,141)
FUND BALANCES, BEGINNING	-	152,846	497,849	53,874
FUND BALANCES, ENDING	$ -	176,298	520,869	(9,267)

[CONTINUED]

JEFFERSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES - NONMAJOR GOVERNMENTAL FUNDS - SPECIAL REVENUE - PROBATION DEPARTMENT FUNDS
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

	MENTALLY IMPAIRED OFFENDERS PROGRAM	COMMUNITY SUPERVISION	JUVENILE TJPC SUPPLEMENT
REVENUES:			
FEES	$ -	2,354,111	-
INTERGOVERNMENTAL	114,420	2,606,788	321,452
INTEREST	-	113,687	-
TOTAL REVENUES	$ 114,420	5,074,586	321,452
EXPENDITURES:			
JUDICIAL AND LAW ENFORCEMENT	$ 144,452	4,648,599	321,452
CAPITAL OUTLAY	-	-	-
TOTAL EXPENDITURES	$ 144,452	4,648,599	321,452
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	$ (30,032)	425,987	-
OTHER FINANCIAL SOURCES (USES):			
TRANSFERS IN	$ 1,922	-	-
TRANSFERS OUT	-	(276,783)	-
TOTAL OTHER FINANCING SOURCES (USES)	$ 1,922	(276,783)	-
NET CHANGE IN FUND BALANCES	$ (28,110)	149,204	-
FUND BALANCES, BEGINNING	27,312	1,184,716	-
FUND BALANCES, ENDING	$ (798)	1,333,920	-

COMMUNITY CORRECTIONS	DWI PRETRIAL DIVERSION	DRUG DIVERSION PROGRAM	TOTAL
-	45,287	-	2,419,449
397,807	-	401,449	5,588,709
-	14,545	-	158,752
397,807	59,832	401,449	8,166,910
538,338	106,408	627,613	8,200,895
-	-	-	-
538,338	106,408	627,613	8,200,895
(140,531)	(46,576)	(226,164)	(33,985)
89,528	-	185,333	276,783
-	-	-	(276,783)
89,528	-	185,333	-
(51,003)	(46,576)	(40,831)	(33,985)
46,756	345,987	28,329	2,337,669
(4,247)	299,411	(12,502)	2,303,684

JEFFERSON COUNTY, TEXAS
COMBINING BALANCE SHEET - NONMAJOR GOVERNMENTAL FUNDS - SPECIAL REVENUE - GRANT FUNDS
SEPTEMBER 30, 2025

	FAMILY GROUP CONFERENCING PROJECT	GENERAL LAND OFFICE GRANTS	SHERIFF TRAINING GRANT	JAG GRANT	SHERIFF DEPT GRANTS
ASSETS:					
CASH AND CASH EQUIVALENTS	$ 32,407	-	-	-	-
INTEREST RECEIVABLE	71	-	-	-	-
DUE FROM OTHER GOVERNMENTAL ENTITIES	-	320,007	11,273	17,199	4,550
TOTAL ASSETS	$ 32,478	320,007	11,273	17,199	4,550
LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCE					
LIABILITIES:					
ACCOUNTS PAYABLE	$ 630	32,878	851	-	555
DUE TO OTHER FUNDS	-	755,547	10,422	17,199	3,995
UNEARNED REVENUE	-	-	-	-	-
TOTAL LIABILITIES	$ 630	788,425	11,273	17,199	4,550
DEFERRED INFLOWS OF RESOURCES:					
UNAVAILABLE REVENUE-GRANTS	$ -	13,026	6,210	17,199	-
TOTAL DEFERRED INFLOWS OF RESOURCES	$ -	13,026	6,210	17,199	-
FUND BALANCES:					
RESTRICTED FOR:					
JUDICIAL & LAW ENFORCEMENT	$ 31,848	-	-	-	-
HEALTH & WELFARE	-	-	-	-	-
COMMITTED FOR:					
CONTRACTS	-	80,008	-	-	-
UNASSIGNED (DEFICIT)	-	(561,452)	(6,210)	(17,199)	-
TOTAL FUND BALANCES	$ 31,848	(481,444)	(6,210)	(17,199)	-
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCES	$ 32,478	320,007	11,273	17,199	4,550

SCAAP GRANT	LATCF FEDERAL GRANT	FEMA EMERGENCY	REGIONAL COMMUNICATION	CRIME VICTIMS CLEARING	EMPG GRANT	CRIME LAB CJD GRANT
143,661	27,787	5,342,884	23,459	-	12,798	-
313	-	11,629	-	-	28	-
-	-	111,427	7,798	17,742	-	33,200
143,974	27,787	5,465,940	31,257	17,742	12,826	33,200
-	-	127,816	-	15,540	1,083	-
-	-	-	7,798	2,202	-	33,200
-	27,787	-	-	-	-	-
-	27,787	127,816	7,798	17,742	1,083	33,200
-	-	-	-	-	-	-
-	-	-	-	-	-	-
143,974	-	-	23,459	-	-	-
-	-	5,338,124	-	-	11,743	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
143,974	-	5,338,124	23,459	-	11,743	-
143,974	27,787	5,465,940	31,257	17,742	12,826	33,200

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JEFFERSON COUNTY, TEXAS
COMBINING BALANCE SHEET - NONMAJOR GOVERNMENTAL FUNDS -
SPECIAL REVENUE - GRANT FUNDS
SEPTEMBER 30, 2025

	CYBER SECURITY GRANTS	AUTO THEFT GRANT	RURAL LAW ENFORCEMENT GRANT	BRIC/FMA GRANT	DISTRICT ATTORNEY SB 22 GRANT
ASSETS:					
CASH AND CASH EQUIVALENTS	$ -	-	428,887	-	18,100
INTEREST RECEIVABLE	-	-	933	-	39
DUE FROM OTHER GOVERNMENTAL ENTITIES	-	70,175	-	-	-
TOTAL ASSETS	$ -	70,175	429,820	-	18,139
LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCE					
LIABILITIES:					
ACCOUNTS PAYABLE	$ -	5,123	108,530	369,810	-
DUE TO OTHER FUNDS	-	65,052	-	839,138	-
UNEARNED REVENUE	-	-	-	-	-
TOTAL LIABILITIES	$ -	70,175	108,530	1,208,948	-
DEFERRED INFLOWS OF RESOURCES:					
UNAVAILABLE REVENUE-GRANTS	$ -	24,127	-	-	-
TOTAL DEFERRED INFLOWS OF RESOURCES	$ -	24,127	-	-	-
FUND BALANCES:					
RESTRICTED FOR:					
JUDICIAL & LAW ENFORCEMENT	$ -	-	-	-	18,139
HEALTH & WELFARE	-	-	321,290	-	-
COMMITTED FOR:					
CONTRACTS	-	-	-	385,512	-
UNASSIGNED (DEFICIT)	-	(24,127)	-	(1,594,460)	-
TOTAL FUND BALANCES	$ -	(24,127)	321,290	(1,208,948)	18,139
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCES	$ -	70,175	429,820	-	18,139

VIOLENCE AGAINST WOMEN	FAMILY TREATMENT COURT	ENVIRONMENT GRANTS	COMMUNITY WILDFIRE PREVENTION PROGRAM	CJD SHERIFF GRANTS	TOTAL
7,810	-	-	-	-	6,037,793
-	-	-	-	-	13,013
-	10,618	1,300	44,720	-	650,009
7,810	10,618	1,300	44,720	-	6,700,815
7,810	1,411	-	12,155	-	684,192
-	9,099	1,300	37,830	-	1,782,782
-	-	-	-	-	27,787
7,810	10,510	1,300	49,985	-	2,494,761
-	3,537	1,300	-	-	65,399
-	3,537	1,300	-	-	65,399
-	-	-	-	-	217,420
-	-	-	-	-	5,671,157
-	-	-	36,595	-	502,115
-	(3,429)	(1,300)	(41,860)	-	(2,250,037)
-	(3,429)	(1,300)	(5,265)	-	4,140,655
7,810	10,618	1,300	44,720	-	6,700,815

JEFFERSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES - NONMAJOR GOVERNMENTAL FUNDS - SPECIAL REVENUE - GRANT FUNDS
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

	FAMILY GROUP CONFERENCING PROJECT	GENERAL LAND OFFICE GRANTS	SHERIFF TRAINING GRANT	JAG GRANT	SHERIFF DEPT GRANTS
REVENUES:					
INTERGOVERNMENTAL	$ -	4,520,827	24,409	3,763	21,022
INTEREST	1,421	-	-	-	-
CONTRIBUTIONS AND DONATIONS	-	-	-	-	-
TOTAL REVENUES	$ 1,421	4,520,827	24,409	3,763	21,022
EXPENDITURES:					
GENERAL GOVERNMENT	$ -	-	-	-	-
JUDICIAL AND LAW ENFORCEMENT	372	-	23,123	17,199	27,035
HEALTH & WELFARE	-	2,042,414	-	-	-
CAPITAL OUTLAY	-	-	-	-	-
TOTAL EXPENDITURES	$ 372	2,042,414	23,123	17,199	27,035
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	$ 1,049	2,478,413	1,286	(13,436)	(6,013)
OTHER FINANCING SOURCES (USES):					
TRANSFERS IN	$ -	-	-	-	6,013
TOTAL OTHER FINANCING SOURCES (USES)	$ -	-	-	-	6,013
NET CHANGE IN FUND BALANCES	$ 1,049	2,478,413	1,286	(13,436)	-
FUND BALANCES, BEGINNING	30,799	(2,959,857)	(7,496)	(3,763)	-
FUND BALANCES, ENDING	$ 31,848	(481,444)	(6,210)	(17,199)	-

SCAAP GRANT	LATCF FEDERAL GRANT	FEMA EMERGENCY	REGIONAL COMMUNICATION	CRIME VICTIMS CLEARING	EMPG GRANT	CRIME LAB CJD GRANT
33,597	325,760	742,513	49,194	92,123	-	39,821
6,637	-	222,119	-	-	703	-
-	-	-	-	-	-	-
40,234	325,760	964,632	49,194	92,123	703	39,821
-	325,760	-	-	-	-	-
29,978	-	-	31,195	427,032	-	39,821
-	-	-	7,673	-	7,719	-
-	-	-	-	-	-	-
29,978	325,760	-	38,868	427,032	7,719	39,821
10,256	-	964,632	10,326	(334,909)	(7,016)	-
-	-	-	-	334,909	-	-
-	-	-	-	334,909	-	-
10,256	-	964,632	10,326	-	(7,016)	-
133,718	-	4,373,492	13,133	-	18,759	-
143,974	-	5,338,124	23,459	-	11,743	-

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JEFFERSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES - NONMAJOR GOVERNMENTAL FUNDS - SPECIAL REVENUE - GRANT FUNDS
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

		CYBER SECURITY GRANTS	AUTO THEFT GRANT	RURAL LAW ENFORCEMENT GRANT	BRIC/FMA GRANT	DISTRICT ATTORNEY SB 22 GRANT
REVENUES:						
INTERGOVERNMENTAL	$	159,292	125,987	500,000	-	275,000
INTEREST		-	-	22,139	-	6,159
CONTRIBUTIONS AND DONATIONS		-	-	-	9,547	-
TOTAL REVENUES	$	159,292	125,987	522,139	9,547	281,159
EXPENDITURES:						
GENERAL GOVERNMENT	$	179,168	-	-	-	-
JUDICIAL AND LAW ENFORCEMENT		-	138,914	200,849	-	269,043
HEALTH & WELFARE		-	-	-	995,890	-
CAPITAL OUTLAY		-	-	-	-	-
TOTAL EXPENDITURES	$	179,168	138,914	200,849	995,890	269,043
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	$	(19,876)	(12,927)	321,290	(986,343)	12,116
OTHER FINANCING SOURCES (USES):						
TRANSFERS IN	$	19,876	58,326	-	-	-
TOTAL OTHER FINANCING SOURCES (USES)	$	19,876	58,326	-	-	-
NET CHANGE IN FUND BALANCES	$	-	45,399	321,290	(986,343)	12,116
FUND BALANCES, BEGINNING		-	(69,526)	-	(222,605)	6,023
FUND BALANCES, ENDING	$	-	(24,127)	321,290	(1,208,948)	18,139

VIOLENCE AGAINST WOMEN	FAMILY TREATMENT COURT	ENVIRONMENT GRANTS	COMMUNITY WILDFIRE PREVENTION PROGRAM	CJD SHERIFF GRANTS	TOTAL
80,000	35,357	5,733	44,720	49,729	7,128,847
-	-	-	-	-	259,178
-	-	-	-	-	9,547
80,000	35,357	5,733	44,720	49,729	7,397,572
-	-	-	-	-	504,928
180,065	39,844	-	-	49,729	1,474,199
-	-	7,033	49,985	-	3,110,714
-	-	-	-	-	-
180,065	39,844	7,033	49,985	49,729	5,089,841
(100,065)	(4,487)	(1,300)	(5,265)	-	2,307,731
100,065	-	-	2,730	-	521,919
100,065	-	-	2,730	-	521,919
-	(4,487)	(1,300)	(2,535)	-	2,829,650
-	1,058	-	(2,730)	-	1,311,005
-	(3,429)	(1,300)	(5,265)	-	4,140,655


JEFFERSON COUNTY
TEXAS

CAPITAL PROJECTS FUNDS

CAPITAL PROJECTS FUNDS

The Capital Projects Funds are used to account for all resources used for the acquisition or construction of capital facilities except those financed by Enterprise Funds or Internal Service Funds. Included in this heading are the following individual funds:

Coastal Restoration Projects - This fund is used to account for the proceeds received related to Coastal Restoration projects including the BP Deepwater Horizon lawsuit settlement and the Gulf of Mexico Energy Security Act. Planned expenditures for these proceeds will be for the County shoreline and dune restoration project starting in Sabine Pass to High Island.

Capital Projects Fund - This fund is used to account for all other capital projects of the County for which a separate fund has not been established.

CETRZ Grant - This fund is used to account for the revenues and expenditures related to the County Energy Transportation Reinvestment Zone (CETRZ) Grant from the State of Texas. This grant will be used to rehabilitate County roads within all the Road & Bridge precincts.


JEFFERSON COUNTY
TEXAS

JEFFERSON COUNTY, TEXAS
COMBINING BALANCE SHEET
NONMAJOR GOVERNMENTAL FUNDS - CAPITAL PROJECTS
SEPTEMBER 30, 2025

	COASTAL RESTORATION PROJECTS	CAPITAL PROJECTS FUND
ASSETS:		
CASH AND CASH EQUIVALENTS	$ 8,910,847	11,719,737
INTEREST RECEIVABLE	19,395	25,508
TOTAL ASSETS	$ 8,930,242	11,745,245
LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCE		
LIABILITIES:		
ACCOUNTS PAYABLE	$ -	300,462
TOTAL LIABILITIES	$ -	300,462
FUND BALANCES:		
RESTRICTED FOR:		
ENVIRONMENTAL PROJECTS	$ 8,930,242	-
MAINTENANCE OF STRUCTURES & EQUIPMENT	-	11,444,783
UNASSIGNED (DEFICIT)	-	-
TOTAL FUND BALANCES	$ 8,930,242	11,444,783
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCES	$ 8,930,242	11,745,245

CETRZ GRANT	TOTAL
-	20,630,584
-	44,903
-	20,675,487
-	300,462
-	300,462
-	8,930,242
-	11,444,783
-	-
-	20,375,025
-	20,675,487

JEFFERSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENDITURES,
AND CHANGES IN FUND BALANCES
NONMAJOR GOVERNMENTAL FUNDS - CAPITAL PROJECTS
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

	COASTAL RESTORATION PROJECTS	CAPITAL PROJECTS FUND
REVENUES:		
INTERGOVERNMENTAL	$ 1,265,980	-
INTEREST	373,567	477,299
TOTAL REVENUES	$ 1,639,547	477,299
EXPENDITURES:		
CAPITAL OUTLAY	$ -	2,633,725
TOTAL EXPENDITURES	$ -	2,633,725
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	$ 1,639,547	(2,156,426)
OTHER FINANCING SOURCES (USES):		
TRANSFERS IN	$ -	2,943,856
TOTAL OTHER FINANCING SOURCES (USES)	$ -	2,943,856
NET CHANGE IN FUND BALANCES	$ 1,639,547	787,430
FUND BALANCES, BEGINNING	7,290,695	10,657,353
FUND BALANCES, ENDING	$ 8,930,242	11,444,783

CETRZ GRANT	TOTAL
139,288	1,405,268
-	850,866
139,288	2,256,134
174,110	2,807,835
174,110	2,807,835
(34,822)	(551,701)
34,822	2,978,678
34,822	2,978,678
-	2,426,977
-	17,948,048
-	20,375,025


JEFFERSON COUNTY
TEXAS

DEBT SERVICE FUNDS

DEBT SERVICE FUNDS

The Debt Service Funds are used to account for each specific long -term debt. These funds account for the accumulation of resources and subsequent disbursement of such resources to pay principal, interest, and commissions. Included in this heading are the following individual funds:

2012 Refunding Bond - This fund is used to account for the revenues and expenditures associated with the $47,305,000 General Obligation Refunding Bonds issued in May 2012.

2019 Certificates of Obligation - This fund is used to account for the revenues and expenditures associated with the $15,395,000 Certificate of Obligation Bonds issued in June 2019.

JEFFERSON COUNTY, TEXAS
COMBINING BALANCE SHEET
NON MAJOR GOVERNMENTAL FUNDS - DEBT SERVICE
SEPTEMBER 30, 2025

		2012 REFUNDING BOND	2019 CERTIFICATES OF OBLATION	TOTAL
ASSETS:				
CASH AND CASH EQUIVALENTS	$	-	830,809	830,809
INTEREST RECEIVABLE		-	1,790	1,790
DELINQUENT TAXES RECEIVABLE, Net		-	160,736	160,736
PENALTY AND INTEREST RECEIVABLE, Net		-	107,106	107,106
TOTAL ASSETS	$	-	1,100,441	1,100,441
LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCES				
DEFERRED INFLOWS OF RESOURCES				
UNAVAILABLE REVENUE-PROPERTY TAXES	$	-	251,373	251,373
TOTAL DEFERRED INFLOWS OF RESOURCES	$	-	251,373	251,373
FUND BALANCES:				
RESTRICTED FOR DEBT SERVICE	$	-	849,068	849,068
TOTAL FUND BALANCES	$	-	849,068	849,068
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCES	$	-	1,100,441	1,100,441

JEFFERSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENDITURES,
AND CHANGES IN FUND BALANCES
NONMAJOR GOVERNMENTAL FUNDS - DEBT SERVICE FUNDS
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

		2012 REFUNDING BOND	2019 CERTIFICATES OF OBLIGATION	TOTAL
REVENUES:				
PROPERTY TAXES	$	4,036,272	1,772,199	5,808,471
INTEREST		100,212	39,155	139,367
TOTAL REVENUES	$	4,136,484	1,811,354	5,947,838
EXPENDITURES:				
DEBT SERVICE:				
PRINCIPAL	$	4,465,000	635,000	5,100,000
INTEREST AND COMMISSION		135,350	435,130	570,480
TOTAL EXPENDITURES	$	4,600,350	1,070,130	5,670,480
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	$	(463,866)	741,224	277,358
NET CHANGE IN FUND BALANCES	$	(463,866)	741,224	277,358
FUND BALANCES, BEGINNING		463,866	107,844	571,710
FUND BALANCES, ENDING	$	-	849,068	849,068

JEFFERSON COUNTY, TEXAS
COMBINED SCHEDULE OF REVENUES, EXPENDITURES,
AND CHANGES IN FUND BALANCES - BUDGET AND ACTUAL (GAAP)
DEBT SERVICE FUNDS
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

	BUDGETED AMOUNTS		ACTUAL	VARIANCE WITH FINAL
	ORIGINAL	FINAL	AMOUNTS	BUDGET
REVENUES:				
PROPERTY TAXES	$ 5,608,544	5,608,544	5,808,471	199,927
INTEREST	71,250	71,250	139,367	68,117
TOTAL REVENUES	$ 5,679,794	5,679,794	5,947,838	268,044
EXPENDITURES:				
DEBT SERVICE:				
PRINCIPAL	$ 5,100,000	5,100,000	5,100,000	-
INTEREST AND COMMISSION	572,850	572,850	570,480	2,370
TOTAL EXPENDITURES	$ 5,672,850	5,672,850	5,670,480	2,370
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	$ 6,944	6,944	277,358	270,414
NET CHANGE IN FUND BALANCES	$ 6,944	6,944	277,358	270,414
FUND BALANCES, BEGINNING	571,710	571,710	571,710	-
FUND BALANCES, ENDING	$ 578,654	578,654	849,068	270,414

JEFFERSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES,
AND CHANGES IN FUND BALANCES - BUDGET AND ACTUAL (GAAP)
DEBT SERVICE - 2012 REFUNDING BONDS
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

	BUDGETED AMOUNTS		ACTUAL	VARIANCE WITH FINAL
	ORIGINAL	FINAL	AMOUNTS	BUDGET
REVENUES:				
PROPERTY TAXES	$ 4,088,432	4,088,432	4,036,272	(52,160)
INTEREST	60,000	60,000	100,212	40,212
TOTAL REVENUES	$ 4,148,432	4,148,432	4,136,484	(11,948)
EXPENDITURES:				
DEBT SERVICE:				
PRINCIPAL	$ 4,465,000	4,465,000	4,465,000	-
INTEREST AND COMMISSION	136,450	136,450	135,350	1,100
TOTAL EXPENDITURES	$ 4,601,450	4,601,450	4,600,350	1,100
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	$ (453,018)	(453,018)	(463,866)	(10,848)
NET CHANGE IN FUND BALANCE	$ (453,018)	(453,018)	(463,866)	(10,848)
FUND BALANCES, BEGINNING	463,866	463,866	463,866	-
FUND BALANCES, ENDING	$ 10,848	10,848	-	(10,848)

JEFFERSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES,
AND CHANGES IN FUND BALANCES - BUDGET AND ACTUAL (GAAP)
DEBT SERVICE - 2019 CERTIFICATES OF OBLIGATION
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

	BUDGETED AMOUNTS		ACTUAL	VARIANCE WITH FINAL
	ORIGINAL	FINAL	AMOUNTS	BUDGET
REVENUES:				
PROPERTY TAXES	$ 1,520,112	1,520,112	1,772,199	252,087
INTEREST	11,250	11,250	39,155	27,905
TOTAL REVENUES	$ 1,531,362	1,531,362	1,811,354	279,992
EXPENDITURES:				
DEBT SERVICE:				
PRINCIPAL	$ 635,000	635,000	635,000	-
INTEREST AND COMMISSION	436,400	436,400	435,130	1,270
TOTAL EXPENDITURES	$ 1,071,400	1,071,400	1,070,130	1,270
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	$ 459,962	459,962	741,224	281,262
NET CHANGE IN FUND BALANCE	$ 459,962	459,962	741,224	281,262
FUND BALANCES, BEGINNING	107,844	107,844	107,844	-
FUND BALANCES, ENDING	$ 567,806	567,806	849,068	281,262


JEFFERSON COUNTY
TEXAS

INTERNAL SERVICE FUNDS

INTERNAL SERVICE FUNDS

The Internal Service Funds are used to account for the financing of goods and services provided by one department or agency to other agencies of the government and to other government units, on a cost reimbursement basis. Included in this heading are the following individual funds:

Liability Insurance Fund - This fund is used to account for the County's contribution and payment for liability claims.

Workers' Compensation Fund - This fund is used to account for the County's contribution and payment for workers' compensation claims.

Southeast Texas Government Employee Benefits Pool – This fund is used to account for the County's group health insurance program, which includes comprehensive major medical and dental care.

JEFFERSON COUNTY, TEXAS
COMBINING STATEMENT OF NET POSITION -
INTERNAL SERVICE FUNDS
SEPTEMBER 30, 2025

	LIABILITY INSURANCE FUND	WORKERS' COMPENSATION FUND	SOUTHEAST TEXAS GOVERNMENT EMPLOYEE BENEFITS POOL FUND	TOTAL
ASSETS:				
CASH AND CASH EQUIVALENTS	$ 437,737	1,347,006	5,741,341	7,526,084
ACCOUNTS RECEIVABLE	-	1,108	410,685	411,793
INTEREST RECEIVABLE	779	1,735	12,561	15,075
DUE FROM OTHER GOVERNMENTAL ENTITIES	-	-	635,027	635,027
INSURANCE DEPOSIT	-	-	117,000	117,000
TOTAL ASSETS	$ 438,516	1,349,849	6,916,614	8,704,979
LIABILITIES:				
ACCOUNTS PAYABLE	$ -	-	31,965	31,965
CLAIMS LIABILITY	356,665	1,245,423	1,979,421	3,581,509
TOTAL LIABILITIES	$ 356,665	1,245,423	2,011,386	3,613,474
NET POSITION:				
UNRESTRICTED	$ 81,851	104,426	4,905,228	5,091,505
TOTAL NET POSITION	$ 81,851	104,426	4,905,228	5,091,505

JEFFERSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION - INTERNAL SERVICE FUNDS
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

	LIABILITY INSURANCE FUND	WORKERS' COMPENSATION FUND	SOUTHEAST TEXAS GOVERNMENT EMPLOYEE BENEFITS POOL FUND	TOTAL
OPERATING REVENUES:				
EMPLOYEE CONTRIBUTIONS	$ -	-	3,088,304	3,088,304
CHARGES FOR SERVICES	430,624	1,000,000	22,835,203	24,265,827
TOTAL OPERATING REVENUES	$ 430,624	1,000,000	25,923,507	27,354,131
OPERATING EXPENSES:				
ADMINISTRATIVE	$ -	-	2,433,562	2,433,562
INCURRED & ESTIMATED CLAIMS	393,885	543,824	26,447,709	27,385,418
TOTAL OPERATING EXPENSES	$ 393,885	543,824	28,881,271	29,818,980
OPERATING INCOME (LOSS)	$ 36,739	456,176	(2,957,764)	(2,464,849)
NONOPERATING REVENUES:				
INTEREST	$ 21,412	39,862	258,630	319,904
REFUNDS AND RECOVERIES	-	1,438	3,227,883	3,229,321
TOTAL NONOPERATING REVENUES	$ 21,412	41,300	3,486,513	3,549,225
CHANGE IN NET POSITION	$ 58,151	497,476	528,749	1,084,376
NET POSITION, BEGINNING	23,700	(393,050)	4,376,479	4,007,129
NET POSITION, ENDING	$ 81,851	104,426	4,905,228	5,091,505

JEFFERSON COUNTY, TEXAS
COMBINING STATEMENT OF CASH FLOWS -
INTERNAL SERVICE FUNDS
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

	LIABILITY INSURANCE FUND	WORKERS' COMPENSATION FUND	SOUTHEAST TEXAS GOVERNMENT EMPLOYEE BENEFITS POOL FUND	TOTAL
CASH FLOWS FROM OPERATING ACTIVITIES:				
RECEIPTS FROM CUSTOMERS AND USERS	$ -	-	2,757,615	2,757,615
RECEIPTS FROM EMPLOYEES	-	-	3,086,764	3,086,764
PAYMENTS TO SUPPLIERS	-	-	(2,431,343)	(2,431,343)
INTERNAL ACTIVITY-RECEIPTS FROM OTHER FUNDS	430,624	1,000,000	19,821,755	21,252,379
CLAIMS PAID	(391,687)	(692,327)	(26,946,387)	(28,030,401)
OTHER RECEIPTS	-	330	3,781,725	3,782,055
NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES	$ 38,937	308,003	70,129	417,069
CASH FLOWS FROM INVESTMENT ACTIVITIES:				
INTEREST	$ 21,897	40,769	264,199	326,865
NET CASH PROVIDED BY INVESTMENT ACTIVITIES	$ 21,897	40,769	264,199	326,865
NET INCREASE (DECREASE) IN CASH	$ 60,834	348,772	334,328	743,934
CASH AND CASH EQUIVALENTS - BEGINNING	376,903	998,234	5,407,013	6,782,150
CASH AND CASH EQUIVALENTS - ENDING	$ 437,737	1,347,006	5,741,341	7,526,084
RECONCILIATION OF OPERATING INCOME(LOSS) TO NET CASH PROVIDED(USED) BY OPERATING ACTIVITIES:				
OPERATING INCOME(LOSS)	$ 36,739	456,176	(2,957,764)	(2,464,849)
ADJUSTMENTS TO RECONCILE OPERATING INCOME (LOSS) TO NET CASH PROVIDED BY OPERATING ACTIVITIES:				
OTHER NON-OPERATING REVENUES	-	1,438	3,227,883	3,229,321
CHANGES IN ASSETS AND LIABILITIES:				
ACCOUNTS RECEIVABLE	-	(1,108)	552,302	551,194
DUE FROM OTHER GOVERNMENTAL ENTITIES	-	-	(255,833)	(255,833)
ACCOUNTS PAYABLE	-	-	2,219	2,219
CLAIMS LIABILITY	2,198	(148,503)	(498,678)	(644,983)
NET CASH PROVIDED BY OPERATING ACTIVITIES	$ 38,937	308,003	70,129	417,069


JEFFERSON COUNTY
TEXAS

FIDUCIARY FUNDS

FIDUCIARY FUNDS

The Fiduciary Funds are used to account for assets held by the County as a trustee or agent for individuals, private organizations, and other units of government. Such funds are operated by carrying out specific terms of trust indentures, ordinances, grant requirements, or other governing regulations. Included in this heading are the following individual funds:

Custodial Funds:

Treasurer Maintained Fund - This fund is used to account for various monies deposited with the County Treasurer for distribution to other individuals and/or government entities.

County Clerk Fund - This fund is used to account for the collection and distribution of money held by the Clerk of the County Courts.

District Clerk Fund - This fund is used to account for the collection and distribution of the money held by the Clerk of the District Courts.

Sheriff's Fund - This fund is used to account for the collection and distribution of money held by the Sheriff.

Justice of the Peace Fund - This fund is used to account for the collection and distribution of money held by the Justices of the Peace.

Tax Assessor/Collector Fund - This fund is used to account for the collection and distribution of money held by the Tax Assessor/Collector .

District Attorney's Seizure Fund - This fund is used to account for the seizure and subsequent distribution of seized personal property.

Community Supervision Fund - This fund is used to account for the collection and distribution of money held by the Community Supervision Department.

Juvenile Probation Fund - This fund is used to account for the collection and distribution of money held by the Juvenile Probation Department.


JEFFERSON COUNTY
TEXAS

JEFFERSON COUNTY, TEXAS
COMBINING STATEMENT OF FIDUCIARY NET POSITION
ALL FIDUCIARY FUNDS
SEPTEMBER 30, 2025

		TREASURER MAINTAINED FUND	COUNTY CLERK FUND
ASSETS			
CASH AND CASH EQUIVALENTS	$	507,685	7,720,449
ACCOUNTS RECEIVABLE, NET		15	-
DUE FROM OTHER GOVERNMENTAL ENTITIES		120,805	509
TOTAL	$	628,505	7,720,958
LIABILITIES			
DUE TO OTHER GOVERNMENTAL ENTITIES		353,920	-
TOTAL	$	353,920	-
NET POSITION			
RESTRICTED FOR:			
INDIVIDUALS AND ORGANIZATIONS	$	274,585	7,720,958
TOTAL NET POSITION	$	274,585	7,720,958

DISTRICT CLERK FUND	SHERIFF'S FUND	JUSTICE OF THE PEACE FUND
5,304,931	447,803	108,528
	-	-
22,973	7,369	-
5,327,904	455,172	108,528
22,994	-	-
22,994	-	-
5,304,910	455,172	108,528
5,304,910	455,172	108,528

[CONTINUED]

JEFFERSON COUNTY, TEXAS
COMBINING STATEMENT OF FIDUCIARY NET POSITION
FIDUCIARY FUNDS
SEPTEMBER 30, 2025

		TAX ASSESSOR COLLECTOR FUND	DISTRICT ATTORNEY'S SEIZURE FUND
ASSETS			
CASH AND CASH EQUIVALENTS	$	7,011,746	276,608
ACCOUNTS RECEIVABLE, NET		-	-
DUE FROM OTHER GOVERNMENTAL ENTITIES		69,245	-
TOTAL	$	7,080,991	276,608
LIABILITIES			
DUE TO OTHER GOVERNMENTAL ENTITIES		-	-
TOTAL	$	-	-
NET POSITION			
RESTRICTED FOR:			
INDIVIDUALS AND ORGANIZATIONS	$	7,080,991	276,608
TOTAL NET POSITION	$	7,080,991	276,608

COMMUNITY SUPERVISION FUND	JUVENILE PROBATION FUND	TOTAL CUSTODIAL FUNDS
357,491	5,113	21,740,354
-	-	15
-	-	220,901
357,491	5,113	21,961,270
311,913	-	688,827
311,913	-	688,827
45,578	5,113	21,272,443
45,578	5,113	21,272,443

JEFFERSON COUNTY, TEXAS
COMBINING STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
ALL FIDUCIARY FUNDS
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

		TREASURER MAINTAINED FUND	COUNTY CLERK FUND
ADDITIONS			
CONTRIBUTIONS FROM JUDGEMENTS	$	1,363,208	5,939,497
BONDS RECEIVED		-	92,049
DEPOSITS HELD		-	-
TAXES COLLECTED ON BEHALF OF TAXING ENTITIES		-	-
PROBATIONER PAYMENTS		-	-
INTEREST INCOME		-	-
TOTAL ADDITIONS	$	1,363,208	6,031,546
DEDUCTIONS			
BONDS REFUNDED	$	41,176	236,007
COLLECTIONS DISTRIBUTED		1,363,208	350,581
DEPOSITS RETURNED		-	-
DISBURSEMENTS TO BENEFICIARIES		-	1,907,353
TAXES DISBURSED TO TAXING ENTITIES		-	-
TOTAL DEDUCTIONS	$	1,404,384	2,493,941
NET INCREASE (DECREASE) IN FIDUCIARY NET POSITION	$	(41,176)	3,537,605
NET POSITION - BEGINNING		315,761	4,183,353
NET POSITION - ENDING	$	274,585	7,720,958

DISTRICT CLERK FUND	SHERIFF'S FUND	JUSTICE OF THE PEACE FUND
2,259,625	2,130,078	1,047,247
491,867	907,232	28,916
-	2,447,955	-
-	-	-
-	-	-
-	-	-
2,751,492	5,485,265	1,076,163
193,218	849,346	29,966
360,868	2,130,078	1,031,622
-	2,320,780	-
16,277,532	-	-
-	-	-
16,831,618	5,300,204	1,061,588
(14,080,126)	185,061	14,575
19,385,036	270,111	93,953
5,304,910	455,172	108,528

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JEFFERSON COUNTY, TEXAS
COMBINING STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
ALL FIDUCIARY FUNDS
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2025

		TAX ASSESSOR COLLECTOR FUND	DISTRICT ATTORNEY'S SEIZURE FUND
ADDITIONS			
CONTRIBUTIONS FROM JUDGEMENTS	$	-	-
BONDS RECEIVED		-	-
DEPOSITS HELD		3,776,163	195,722
TAXES COLLECTED ON BEHALF OF TAXING ENTITIES		640,633,487	-
PROBATIONER PAYMENTS		-	-
INTEREST INCOME		55,501	-
TOTAL ADDITIONS	$	644,465,151	195,722
DEDUCTIONS			
BONDS REFUNDED	$	-	-
COLLECTIONS DISTRIBUTED		-	-
DEPOSITS RETURNED		3,721,157	190,779
DISBURSEMENTS TO BENEFICIARIES		-	-
TAXES DISBURSED TO TAXING ENTITIES		640,329,076	-
TOTAL DEDUCTIONS	$	644,050,233	190,779
NET INCREASE (DECREASE) IN FIDUCIARY NET POSITION	$	414,918	4,943
NET POSITION-BEGINNING		6,666,073	271,665
NET POSITION - ENDING	$	7,080,991	276,608

COMMUNITY SUPERVISION FUND	JUVENILE PROBATION FUND	TOTAL CUSTODIAL FUNDS
-	-	12,739,655
-	-	1,520,064
-	-	6,419,840
-	-	640,633,487
748,609	71	748,680
-	202	55,703
748,609	273	662,117,429
-	-	1,349,713
32,329	103	5,268,789
-	-	6,232,716
-	71	18,184,956
706,173	-	641,035,249
738,502	174	672,071,423
10,107	99	(9,953,994)
35,471	5,014	31,226,437
45,578	5,113	21,272,443


JEFFERSON COUNTY
TEXAS

STATISTICAL SECTION

STATISTICAL SECTION

This part of the Jefferson County, Texas annual comprehensive financial report presents detailed information as a context for understanding what the information in the financial statements, note disclosures, and required supplementary information says about the County's overall financial health.

Contents **Page**

Financial Trends 139

These schedules contain trend information to help the reader understand how the County's financial performance and well-being have changed over time.

Revenue Trends 146

These schedules contain information to help the reader assess the County's most significant local revenue source, the property tax.

Debt Capacity 150

These schedules present information to help the reader access the affordability of the County's current levels of outstanding debt and the County's ability to issue additional debt in the future.

Demographic and Economic Information 154

These schedules offer demographic and economic indicators to help the reader understand the environment within which the County's financial activities take place.

Operating Information 156

These schedules contain service and infrastructure data to help the reader understand how the information in the County's financial report relates to the services the County provides and the activities it performs.

Sources: Unless otherwise noted, the information in these schedules is derived from the annual comprehensive financial reports for the relevant year.


JEFFERSON COUNTY
TEXAS

TABLE 1

JEFFERSON COUNTY, TEXAS
NET POSITION BY COMPONENT
LAST TEN FISCAL YEARS
(accrual basis of accounting)

	Fiscal Year									
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Governmental activities:										
Net Investment in capital assets	$ 96,137,672	$ 91,366,714	$ 91,380,403	$ 88,843,451	$ 85,447,244	$ 84,359,502	$ 85,316,873	$ 86,504,831	$ 86,011,824	$ 89,419,604
Restricted	25,282,712	24,514,807	22,333,791	32,663,849	25,307,410	27,893,333	29,356,699	36,866,636	55,344,944	57,077,112
Unrestricted	(122,326,487)	(146,062,087)	(269,515,413)	(279,038,253)	(271,061,003)	(262,255,747)	(222,723,706)	(196,758,949)	(161,530,392)	(101,580,205)
Total governmental activities net position	$ (906,103)	$ (30,180,566)	$ (155,801,219)	$ (157,530,953)	$ (160,306,349)	$ (150,002,912)	$ (108,050,134)	$ (73,387,482)	$ (20,173,624)	$ 44,916,511
Business-type activities:										
Net Investment in capital assets	$ 82,294,523	$ 81,842,002	$ 79,849,183	$ 79,014,242	$ 78,206,312	$ 74,958,578	$ 72,396,053	$ 75,732,711	$ 78,336,902	$ 76,961,538
Unrestricted	55,359	96,202	(20,118)	(348,276)	(1,265,379)	421,525	556,118	1,562,155	3,399,188	2,441,939
Total business-type activities net position	$ 82,349,882	$ 81,938,204	$ 79,829,065	$ 78,665,966	$ 76,940,933	$ 75,380,103	$ 72,952,171	$ 77,294,866	$ 81,736,090	$ 79,403,477
Reclassifications:										
Net Investment in capital assets	$ (37,614,654)	$ (33,254,522)	$ (29,615,115)	$ (25,890,708)	$ (21,393,888)	$ (18,683,446)	$ (14,445,644)	$ (9,970,948)	$ (5,339,987)	$ (613,143)
Unrestricted	37,614,654	33,254,522	29,615,115	25,890,708	21,393,888	18,683,446	14,445,644	9,970,948	5,339,987	613,143
Total reclassifications	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Primary government:										
Net Investment in capital assets	$ 140,817,541	$ 139,954,194	$ 141,614,471	$ 141,966,985	$ 142,259,668	$ 140,634,634	$ 143,267,282	$ 152,266,594	$ 159,008,739	$ 165,767,999
Restricted	25,282,712	24,514,807	22,333,791	32,663,849	25,307,410	27,893,333	29,356,699	36,866,636	55,344,944	57,077,112
Unrestricted	(84,656,474)	(112,711,363)	(239,920,416)	(253,495,821)	(250,932,494)	(243,150,776)	(207,721,944)	(185,225,846)	(152,791,217)	(98,525,123)
Total primary government net position	$ 81,443,779	$ 51,757,638	$ (75,972,154)	$ (78,864,987)	$ (83,365,416)	$ (74,622,809)	$ (35,097,963)	$ 3,907,384	$ 61,562,466	$ 124,319,988

Note: The reclassification is for the debt associated with the construction of Ford Park and for Energy Conservation measures for Ford Park and the Airport.
The assets are accounted for in the Business-type activities column and the debt is accounted for in the Governmental activities column.

TABLE 2

JEFFERSON COUNTY, TEXAS
CHANGES IN NET POSITION
LAST TEN FISCAL YEARS
(accrual basis of accounting)

	Fiscal Year									
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Expenses										
Governmental activities:										
General Government	$ 40,583,261	$ 44,626,177	$ 36,877,298	$ 40,243,871	$ 40,371,411	$ 25,978,115	$ 15,840,118	$ 20,812,231	$ 24,196,951	$ 29,838,494
Judicial and Law Enforcement	84,656,946	85,700,169	82,243,174	90,143,691	90,135,263	90,685,785	82,657,612	104,105,919	98,891,287	102,335,299
Education and Recreation	1,214,705	1,275,949	1,232,840	1,360,492	1,219,082	1,192,114	1,295,046	1,570,136	1,592,678	1,544,599
Health and Welfare	10,490,353	17,478,616	20,779,392	13,299,080	16,942,064	13,619,698	19,216,823	56,998,278	64,855,915	82,445,864
Maintenance - Equipment and Structures	14,693,137	18,698,878	12,446,937	17,101,085	16,722,371	15,437,913	15,674,637	19,132,255	18,994,852	18,580,426
Interest on Long-term Debt	1,320,790	1,181,005	1,016,850	1,371,705	1,240,987	1,055,497	844,313	606,216	378,604	542,454
Total governmental activities expenses	$ 152,959,192	$ 168,960,794	$ 154,596,491	$ 163,519,924	$ 166,631,178	$ 147,969,122	$ 135,528,549	$ 203,225,035	$ 208,910,287	$ 235,287,136
Business-type activities:										
Airport	$ 5,478,254	$ 5,492,750	$ 5,703,795	$ 5,801,068	$ 5,194,816	$ 5,761,526	$ 7,401,297	$ 7,888,941	$ 7,308,686	$ 7,507,611
Entertainment Complex	7,510,076	7,286,876	7,515,064	7,226,121	7,298,085	6,243,292	8,109,800	9,190,124	9,094,900	10,827,257
Total Business-type expenses	$ 12,988,330	$ 12,779,626	$ 13,218,859	$ 13,027,189	$ 12,492,901	$ 12,004,818	$ 15,511,097	$ 17,079,065	$ 16,403,586	$ 18,334,868
Total primary government expenses	$ 165,947,522	$ 181,740,420	$ 167,815,350	$ 176,547,113	$ 179,124,079	$ 159,973,940	$ 151,039,646	$ 220,304,100	$ 225,313,873	$ 253,622,004
Program Revenues										
Governmental activities:										
Charges for services:										
General Government	$ 5,219,872	$ 6,211,869	$ 5,672,872	$ 7,490,710	$ 7,992,079	$ 6,875,215	$ 7,279,825	$ 8,814,792	$ 6,161,535	$ 29,499,264
Judicial and Law Enforcement	10,307,890	9,322,352	10,545,334	10,027,836	9,153,446	5,218,486	10,696,598	9,944,859	11,753,882	11,529,598
Education and Recreation	13,428	37,096	61,387	64,113	60,233	119,480	182,187	251,398	213,585	239,946
Health and Welfare	401,391	1,471,797	589,599	463,627	521,311	516,103	498,051	46,635,171	49,459,576	49,883,241
Maintenance - Equipment and Structures	5,612,682	5,470,153	6,294,131	6,124,206	5,438,640	5,617,353	5,449,344	5,712,650	6,118,521	6,276,138
Operating grants and contributions	11,359,382	14,563,279	13,995,269	20,646,204	18,734,846	15,657,720	19,179,275	19,392,588	26,845,107	38,889,665
Capital grants and contributions	4,246,945	5,432,451	703,625	715,238	1,558,225	1,007,189	2,704,770	1,023,977	1,251,571	150,870
Total governmental activities program revenues	$ 37,161,590	$ 42,508,997	$ 37,862,217	$ 45,531,934	$ 43,458,780	$ 35,011,546	$ 45,990,050	$ 91,775,435	$ 101,803,777	$ 136,468,722
Business-type activities:										
Charges for services:										
Airport	$ 2,780,094	$ 3,253,212	$ 3,281,881	$ 3,215,924	$ 2,464,946	$ 2,887,422	$ 4,273,919	$ 4,159,704	$ 4,411,410	$ 4,585,770
Entertainment Complex	3,288,418	3,249,799	3,528,209	3,497,310	3,504,785	2,892,895	4,019,666	5,013,389	4,513,951	6,507,132
Operating grants and contributions	50,000	50,000	50,000	50,000	1,162,165	2,315,118	2,440,867	2,736,246	5,876,407	107,092
Capital grants and contributions	3,012,750	2,382,339	1,360,827	2,066,091	85,012	790,697	498,841	6,738,811	2,398,359	301,999
Total business-type activities program revenues	$ 9,131,262	$ 8,935,350	$ 8,220,917	$ 8,829,325	$ 7,216,908	$ 8,886,132	$ 11,233,293	$ 18,648,150	$ 17,200,127	$ 11,501,993
Total primary government program revenues	$ 46,292,852	$ 51,444,347	$ 46,083,134	$ 54,361,259	$ 50,675,688	$ 43,897,678	$ 57,223,343	$ 110,423,585	$ 119,003,904	$ 147,970,715
Net (expense)/revenue										
Governmental activities	$ (115,797,602)	$ (126,451,797)	$ (116,734,274)	$ (117,987,990)	$ (123,172,398)	$ (112,957,576)	$ (89,538,499)	$ (111,449,600)	$ (107,106,510)	$ (98,818,414)
Business-type activities	(3,857,068)	(3,844,276)	(4,997,942)	(4,197,864)	(5,275,993)	(3,118,686)	(4,277,804)	1,569,085	796,541	(6,832,875)
Total primary government net expense	$ (119,654,670)	$ (130,296,073)	$ (121,732,216)	$ (122,185,854)	$ (128,448,391)	$ (116,076,262)	$ (93,816,303)	$ (109,880,515)	$ (106,309,969)	$ (105,651,289)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
General Revenues and Other Changes in Net Position										
Governmental activities:										
Taxes:										
Property taxes	$ 80,099,108	$ 78,728,457	$ 80,487,467	$ 82,425,768	$ 87,216,353	$ 88,187,762	$ 92,255,738	$ 101,052,220	$ 108,627,438	$ 113,578,145
Sales taxes	24,595,048	24,984,470	30,911,766	32,759,242	33,497,873	33,621,425	37,288,969	38,156,787	39,732,953	45,204,339
Alcoholic Beverage Tax	673,135	689,240	743,739	753,954	590,925	755,519	912,052	904,098	917,970	957,420
Hotel Occupancy Tax	1,211,569	1,187,625	1,696,852	1,422,345	1,537,054	1,507,187	1,452,286	1,529,168	1,655,386	1,803,050
County Assistance District Tax	n/a ^	n/a ^	n/a ^	48,980	95,332	76,404	80,676	114,093	119,112	125,905
Investment earnings	353,495	238,304	425,510	1,836,916	1,095,256	217,947	998,493	6,835,413	12,456,111	9,422,215
Miscellaneous	27,589	33,113	24,062	31,605	348,503	449,595	39,918	38,994	38,748	37,714
Transfers	(3,733,600)	(3,430,561)	(2,868,585)	(3,020,554)	(3,984,294)	(1,554,826)	(1,536,855)	(2,518,521)	(3,227,350)	(4,263,419)
Total governmental activities	$ 103,226,344	$ 102,430,648	$ 111,420,811	$ 116,258,256	$ 120,397,002	$ 123,261,013	$ 131,491,277	$ 146,112,252	$ 160,320,368	$ 166,865,369
Business-type activities:										
Investment earnings	$ 1,111	$ 1,516	$ 4,318	$ 14,211	$ 5,955	$ 2,802	$ 103,488	$ 253,510	$ 417,333	$ 318,239
Miscellaneous	-	521	15,900	-	5,276	228	209,529	1,579	-	-
Transfers	3,733,600	3,430,561	2,868,585	3,020,554	3,984,294	1,554,826	1,536,855	2,518,521	3,227,350	4,263,419
Total business-type activities	$ 3,734,711	$ 3,432,598	$ 2,888,803	$ 3,034,765	$ 3,995,525	$ 1,557,856	$ 1,849,872	$ 2,773,610	$ 3,644,683	$ 4,581,658
Total primary government	$ 106,961,055	$ 105,863,246	$ 114,309,614	$ 119,293,021	$ 124,392,527	$ 124,818,869	$ 133,341,149	$ 148,885,862	$ 163,965,051	$ 171,447,027
Changes in Net Position										
Governmental activities	$ (12,571,258)	$ (24,021,149)	$ (5,313,463)	$ (1,729,734)	$ (2,775,296)	$ 10,303,437	$ 41,952,778	$ 34,662,652	$ 53,213,858	$ 68,046,955
Business-type activities	(122,357)	(411,678)	(2,109,139)	(1,163,099)	(1,280,468)	(1,560,830)	(2,427,932)	4,342,695	4,441,224	(2,251,217)
Total primary government	$ (12,693,615)	$ (24,432,827)	$ (7,422,602)	$ (2,892,833)	$ (4,055,864)	$ 8,742,607	$ 39,524,846	$ 39,005,347	$ 57,655,082	$ 65,795,738

^ District was formed and began collecting sales taxes in FY 2019.

TABLE 3

JEFFERSON COUNTY, TEXAS
GOVERNMENTAL ACTIVITIES TAX REVENUES BY SOURCE
LAST TEN FISCAL YEARS
(accrual basis of accounting)

Fiscal Year	Property Tax	Sales Tax	Alcoholic Beverage Tax	Hotel Occupancy Tax	County Assistance District Tax	Total
2016	$ 80,099,108	$ 24,595,048	$ 673,135	$ 1,211,569	n/a ^	$ 106,578,860
2017	78,728,457	24,984,470	689,240	1,187,625	n/a ^	105,589,792
2018	80,487,467	30,911,766	743,739	1,696,852	n/a ^	113,839,824
2019	82,425,768	32,759,242	753,954	1,422,345	$ 48,980	117,410,289
2020	87,216,353	33,497,873	590,925	1,537,054	95,332	122,937,537
2021	88,187,762	33,621,425	755,519	1,507,187	76,404	124,148,297
2022	92,255,738	37,288,969	912,052	1,452,286	80,676	131,989,721
2023	101,052,220	38,156,787	904,098	1,529,168	114,093	141,756,366
2024	108,627,438	39,732,953	917,970	1,655,386	119,112	151,052,859
2025	113,578,145	45,204,339	957,420	1,803,050	125,905	161,668,859

^ District was formed and began collecting sales taxes in FY 2019.

TABLE 4

JEFFERSON COUNTY, TEXAS
FUND BALANCES OF GOVERNMENTAL FUNDS
LAST TEN FISCAL YEARS
(modified accrual basis of accounting)

	Fiscal Year									
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
General Fund:										
Nonspendable	$ 889,865	$ 903,116	$ 926,860	$ 847,849	$ 1,130,195	$ 1,237,726	$ 1,544,576	$ 1,353,542	$ 1,525,676	$ 1,453,052
Assigned	12,478,022	12,922,519	12,736,699	13,494,504	14,938,314	16,809,047	15,141,657	17,857,682	17,562,733	19,997,704
Unassigned	34,142,140	31,652,055	35,632,532	39,868,798	42,701,205	42,916,483	47,771,158	57,413,280	66,481,250	78,802,455
Total general fund	$ 47,510,027	$ 45,477,690	$ 49,296,091	$ 54,211,151	$ 58,769,714	$ 60,963,256	$ 64,457,391	$ 76,624,504	$ 85,569,659	$ 100,253,211
All other governmental funds:										
Nonspendable	$ 32,858	$ 16,396	$ 22,029	$ 67,190	$ 272,086	$ 57,504	$ 9,523	$ 30,844	$ 33,279	$ 31,958
Restricted	25,229,322	24,490,362	21,973,717	32,082,766	25,035,324	27,868,558	29,347,176	36,789,050	55,284,999	57,019,736
Committed	532,034	-	259,134	3,992,895	172,231	1,199,419	1,054,545	2,055,588	1,833,379	502,115
Assigned	1,664,791	1,536,694	-	-	-	-	-	-	-	-
Unassigned (Deficit)	(583,320)	(19,668)	(439,515)	(2,149,518)	(441,774)	(1,764,919)	(2,114,926)	(4,492,991)	(5,099,356)	(2,276,851)
Total all other governmental funds	$ 26,875,685	$ 26,023,784	$ 21,815,365	$ 33,993,333	$ 25,037,867	$ 27,360,562	$ 28,296,318	$ 34,382,491	$ 52,052,301	$ 55,276,958

TABLE 5

JEFFERSON COUNTY, TEXAS
CHANGES IN FUND BALANCES OF GOVERNMENTAL FUNDS
LAST TEN FISCAL YEARS
(modified accrual basis of accounting)

	Fiscal Year									
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
REVENUES:										
Property Taxes	$ 80,400,650	$ 78,856,965	$ 80,704,782	$ 82,794,242	$ 87,564,321	$ 88,722,128	$ 92,517,279	$ 101,094,814	$ 108,173,920	$ 113,559,750
Sales and Other Taxes	26,479,752	26,861,335	33,352,357	34,984,521	35,721,184	35,960,535	39,733,983	40,704,146	42,425,421	48,090,714
Fees	14,111,539	13,562,054	14,702,517	14,065,127	13,170,695	13,604,653	15,380,820	59,926,453	62,474,154	63,597,436
Licenses	502,532	437,175	875,585	741,707	722,912	805,528	455,206	477,572	1,720,514	436,910
Intergovernmental	16,558,057	17,962,425	14,128,320	19,000,069	18,953,897	14,444,228	22,248,185	20,535,367	26,946,342	39,033,851
Sales, Rental & Services	3,085,858	3,850,471	3,292,213	3,885,848	3,496,591	4,895,024	3,599,628	4,366,312	6,270,069	5,842,323
Fines and Forfeitures	2,081,063	1,905,652	2,824,377	1,974,510	1,698,652	1,690,113	1,731,853	1,482,758	2,392,901	2,106,890
Interest	332,235	222,285	395,424	1,860,589	1,086,297	216,675	914,305	6,721,165	12,149,305	8,971,040
Miscellaneous	27,589	33,113	24,062	31,605	28,173	31,042	29,918	32,935	38,748	37,714
Contributions and Donations	12,123	31,970	4,362	1,471,149	2,062,787	223,566	38,238	50	62,740	10,487
Total Revenues	$ 143,591,398	$ 143,723,445	$ 150,303,999	$ 160,809,367	$ 164,505,509	$ 160,593,492	$ 176,649,415	$ 235,341,572	$ 262,654,114	$ 281,687,115
EXPENDITURES:										
General Government	$ 22,470,110	$ 24,286,380	$ 24,215,125	$ 25,591,885	$ 26,582,152	$ 27,804,916	$ 31,681,053	$ 35,495,175	$ 31,451,850	$ 34,345,913
Judicial and Law Enforcement	81,871,609	79,315,978	82,172,119	83,964,269	91,197,309	92,849,625	95,438,048	99,498,439	110,584,716	115,880,786
Education and Recreation	1,264,975	1,919,925	1,317,498	1,448,817	1,629,890	1,209,156	1,508,007	2,025,239	2,721,811	1,773,785
Health and Welfare	10,267,776	14,208,718	20,728,899	12,870,996	16,779,028	13,593,349	19,758,966	56,934,407	65,666,436	84,295,952
Maintenance of Structures and Equipment	11,850,940	11,674,025	12,491,590	12,887,696	14,076,969	13,076,323	15,116,178	18,327,245	17,268,109	17,173,781
Capital Outlay	7,818,394	6,039,315	1,987,390	15,363,395	10,740,633	1,256,043	1,501,600	2,378,426	570,346	2,807,835
Debt Services										
Principal	4,913,395	5,022,110	3,981,008	3,799,636	4,481,214	4,355,108	4,595,750	4,836,180	5,024,518	5,197,979
Interest and Commission	1,586,336	1,453,179	1,298,050	1,593,007	1,604,116	1,422,992	1,213,850	977,670	737,182	572,701
Total Expenditures	$ 142,043,535	$ 143,919,630	$ 148,191,679	$ 157,519,701	$ 167,091,311	$ 155,567,512	$ 170,813,452	$ 220,472,781	$ 234,024,968	$ 262,048,732
Excess (Deficiency) of Revenues Over Expenditures	$ 1,547,863	$ (196,185)	$ 2,112,320	$ 3,289,666	$ (2,585,802)	$ 5,025,980	$ 5,835,963	$ 14,868,791	$ 28,629,146	$ 19,638,383

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
OTHER FINANCING SOURCES (USES):										
Transfer In	$ 1,498,879	$ 1,521,015	$ 4,800,783	$ 4,062,875	$ 1,179,196	$ 1,410,775	$ 1,334,548	$ 1,484,375	$ 9,444,663	$ 4,521,602
Transfer Out	(5,169,565)	(4,250,626)	(7,303,121)	(6,884,199)	(3,240,627)	(2,796,931)	(2,740,620)	(3,383,311)	(11,633,617)	(7,108,143)
Insurance of SBITA	-	-	-	-	-	-	-	5,283,431	174,773	856,367
Capital Lease Obligations	-	-	-	-	-	457,860	-	-	-	-
Insurance Proceeds	-	-	-	-	320,330	418,553	-	-	-	-
Issuance of Debt	-	-	-	15,395,000	-	-	-	-	-	-
Premium on Debt Issued	-	-	-	1,159,686	-	-	-	-	-	-
Total Other Financing Sources (Uses)	$ (3,670,686)	$ (2,729,611)	$ (2,502,338)	$ 13,733,362	$ (1,741,101)	$ (509,743)	$ (1,406,072)	$ 3,384,495	$ (2,014,181)	$ (1,730,174)
Net Change In Fund Balances	$ (2,122,823)	$ (2,925,796)	$ (390,018)	$ 17,023,028	$ (4,326,903)	$ 4,516,237	$ 4,429,891	$ 18,253,286	$ 26,614,965	$ 17,908,209
Debt Service As A Percentage of Noncapital Expenditures	4.9%	4.7%	3.7%	3.5%	4.0%	3.9%	3.6%	2.8%	2.6%	2.3%

JEFFERSON COUNTY, TEXAS
GENERAL GOVERNMENTAL TAX REVENUES BY SOURCE
LAST TEN FISCAL YEARS
(modified accrual basis of accounting)

Fiscal Year	Property Tax	Sales Tax	Alcoholic Beverage Tax	Hotel Occupancy Tax	County Assistance District Tax	Total
2016	$ 80,400,650	$ 24,595,048	$ 673,135	$ 1,211,569	n/a ^	$ 106,880,402
2017	78,856,965	24,984,470	689,240	1,187,625	n/a ^	105,718,300
2018	80,704,782	30,911,766	743,739	1,696,852	n/a ^	114,057,139
2019	82,794,242	32,759,242	753,954	1,422,345	$ 48,980	117,778,763
2020	87,564,321	33,497,873	590,925	1,537,054	95,332	123,285,505
2021	88,722,128	33,621,425	755,519	1,507,187	76,404	124,682,663
2022	92,517,279	37,288,969	912,052	1,452,286	80,676	132,251,262
2023	101,094,814	38,156,787	904,098	1,529,168	114,093	141,798,960
2024	108,173,920	39,732,953	917,970	1,655,386	119,112	150,599,341
2025	113,559,750	45,204,339	957,420	1,803,050	125,905	161,650,464

^ District was formed and began collecting sales taxes in FY 2019.

TABLE 6

JEFFERSON COUNTY, TEXAS
ASSESSED VALUE AND ESTIMATED ACTUAL VALUE OF TAXABLE PROPERTY
LAST TEN FISCAL YEARS

Fiscal Year Ended September 30	Real Property		Personal Property		Less: Tax Exempt Real Property	Total Taxable Assessed Value	Total Direct Tax Rate	Estimated Actual Taxable Value	Assessed Value (a) as a Percentage of Actual Value
	Residential Property	Commercial Property	Motor Vehicles	Other					
2016	$ 8,279,899,361	$ 17,082,882,495	$ 75,061,930	$ 5,867,214,193	$ 6,399,625,866	$ 24,905,432,113	$ 0.365000	$ 24,916,084,230	79.59%
2017	8,568,478,324	16,366,360,029	79,893,490	5,363,369,718	6,033,364,824	24,344,736,737	0.365000	24,362,151,992	80.20%
2018	8,889,166,293	17,403,345,487	79,433,190	5,725,297,404	7,709,373,774	24,387,868,600	0.364977	24,399,250,958	76.02%
2019	8,730,543,858	17,128,750,951	89,422,160	6,291,014,537	7,921,774,579	24,317,956,927	0.364977	24,325,403,054	75.45%
2020	9,358,201,823	18,275,367,049	81,563,400	6,641,611,442	8,807,616,190	25,549,127,524	0.364977	25,587,225,039	74.48%
2021	9,852,804,731	17,725,271,180	85,760,892	6,461,341,223	9,328,538,631	24,796,639,395	0.364977	24,815,196,078	72.72%
2022	12,133,582,380	16,957,209,512	81,176,376	5,685,262,267	8,934,010,700	25,923,219,835	0.363184	26,654,433,042	76.47%
2023	13,298,445,108	18,069,241,825	92,190,551	6,956,407,510	9,802,337,309	28,613,947,685	0.363184	29,369,753,974	76.45%
2024	14,543,787,692	20,545,823,107	95,038,677	8,064,958,028	11,833,705,963	31,415,901,541	0.359000	32,224,548,270	74.51%
2025	15,743,486,768	21,978,354,404	98,345,671	8,363,675,943	13,323,773,385	32,860,089,401	0.357000	33,724,291,928	73.02%

Source: Jefferson County Appraisal District

Note: Property in the county is reassessed annually. The county assesses property at 100% of actual value for all types of real and personal property. However, each homestead residential property can only increase by a maximum of 10% in any given year. Estimated actual value is calculated by adding back the loss to the limit on homestead residential properties to the total taxable assessed value. Tax rates are per $100 of assessed value.

(a) Includes tax-exempt property.

TABLE 7

JEFFERSON COUNTY, TEXAS
PROPERTY TAX RATES
DIRECT AND OVERLAPPING (a) GOVERNMENTS
LAST TEN FISCAL YEARS

				Overlapping Rates							
				Cities			School Districts				
Fiscal Year	Operating Rate	Debt Service Rate	Total County Rate	Operating Rate	Debt Service Rate	Total City Rate	Operating Rate	Debt Service Rate	Total School Rate	Special Districts	Total Direct & Overlapping Rates
2016	0.342	0.023	0.365	0.441	0.175	0.616	1.059	0.259	1.318	0.206	2.505
2017	0.339	0.026	0.365	0.422	0.147	0.569	1.059	0.267	1.326	0.203	2.463
2018	0.345	0.020	0.365	0.426	0.150	0.576	1.099	0.238	1.337	0.201	2.479
2019	0.346	0.019	0.365	0.488	0.145	0.633	1.117	0.236	1.353	0.308	2.659
2020	0.342	0.023	0.365	0.443	0.140	0.583	1.015	0.284	1.299	0.231	2.478
2021	0.341	0.024	0.365	0.443	0.134	0.577	1.002	0.304	1.306	0.223	2.471
2022	0.341	0.022	0.363	0.411	0.116	0.527	0.949	0.333	1.282	0.211	2.383
2023	0.343	0.020	0.363	0.393	0.115	0.508	0.916	0.340	1.256	0.199	2.326
2024	0.340	0.019	0.359	0.380	0.109	0.489	0.754	0.331	1.085	0.205	2.138
2025	0.339	0.018	0.357	0.374	0.105	0.479	0.763	0.306	1.069	0.178	2.083

Source: Jefferson County Tax Assessor Collector

(a) Overlapping rates are those of local governments that apply to property owners within Jefferson County. Not all overlapping rates apply to all Jefferson County property owners. (e.g., the rates for special districts apply only to the proportion of the County's property owners whose property is located within the geographic boundaries of the special district.)

Note: Rates are per $100 of taxable value. Rates for overlapping entities are an average tax rate of all cities (7), school districts (7), and special districts (15) located within Jefferson County. For fiscal year 2025, total rates ranged between .131 and .686 for cities, .967 and 1.318 for school districts, and .012 and .516 for special districts.

TABLE 8

JEFFERSON COUNTY, TEXAS
PRINCIPAL TAXPAYERS
CURRENT YEAR AND NINE YEARS AGO

	2025			2016		
Taxpayers	Taxable Assessed Value (b)	Rank	Percentage of Total Taxable Assessed Value	Taxable Assessed Value (b)	Rank	Percentage of Total Taxable Assessed Value
ExxonMobil Oil Corporation	$ 2,494,422,829	1	7.59%	$ 2,171,142,814	2	8.72%
Motiva Refinery	2,389,162,247	2	7.27%	4,661,412,430	1	18.72%
Premcor Refining Group Inc	1,251,513,363	3	3.81%	1,223,104,595	3	4.91%
Enterprise Texas Pipeline LP	699,259,934	4	2.13%	312,939,530	10	1.26%
Entergy Texas Inc.	633,699,284	5	1.93%	320,208,240	9	1.29%
Total Petrochemicals USA	549,432,958	6	1.67%	773,215,900	4	3.10%
Indorama Ventures Oxides LLC	486,415,680	7	1.48%	-		-
Sunoco Partners Mktg & Term LP	413,248,348	8	1.26%	387,879,120	6	1.56%
Phillips 66 Gulf Coast Prop LLC	337,726,543	9	1.03%	-		-
Golden Pass Pipeline LLC	323,670,353	10	0.98%	-		-
Huntsman Petrochemical Corp	-		-	431,378,937	5	1.73%
Chevron Phillips Chemical Co	-		-	362,534,040	7	1.46%
BASF-Atofina Joint Venture	-		-	362,145,120	8	1.45%
TOTAL	$ 9,578,551,539		29.15%	$11,005,960,726		44.20%

Source: Jefferson County Appraisal District.

(b) Amounts shown for these taxpayers do not include assessed values attributable to certain subsidiaries and affiliates which are not grouped on the tax roll with the taxpayers shown.

TABLE 9

JEFFERSON COUNTY, TEXAS
PROPERTY TAX LEVIES AND COLLECTIONS
LAST TEN FISCAL YEARS

Fiscal Year Ended September 30	Total Tax Levy for Fiscal Year	Collected within the Fiscal Year of the Levy		Collections in Subsequent Years	Total Collections to Date	
		Amount	Percentage of Levy		Amount	Percentage of Levy
2016	$ 88,871,524	$ 87,788,574	98.78%	$ 833,578	$ 88,622,152	99.72%
2017	87,366,106	86,272,257	98.75%	845,609	87,117,866	99.72%
2018	87,834,613	86,900,639	98.94%	664,825	87,565,464	99.69%
2019	83,587,722	82,230,903	98.38%	1,052,044	83,282,947	99.64%
2020	87,889,202	86,812,624	98.78%	730,518	87,543,142	99.61%
2021	87,850,715	86,846,043	98.86%	618,873	87,464,916	99.56%
2022	91,237,250	90,519,594	99.21%	132,214	90,651,808	99.36%
2023	100,554,888	99,455,205	98.91%	209,934	99,665,139	99.12%
2024	108,653,107	106,874,126	98.36%	346,442	107,220,568	98.68%
2025	113,828,734	111,196,274	97.69%	-	111,196,274	97.69%

TABLE 10

JEFFERSON COUNTY, TEXAS
RATIO OF OUTSTANDING DEBT BY TYPE
LAST TEN FISCAL YEARS

Fiscal Year	General Obligation Bonds	SBITA Liability	Financing Arrangements	Total Primary Government	Percentage of Personal Income (a)	Per Capita (a)
2016	$ 39,437,454	$ -	$ 1,383,968	$ 40,821,422	0.38%	$ 161
2017	34,337,146	-	1,051,858	35,389,004	0.31%	139
2018	30,319,638	-	710,850	31,030,488	0.27%	121
2019	43,027,646	-	361,214	43,388,860	0.35%	170
2020	38,472,633	-	-	38,472,633	0.27%	153
2021	33,767,620	-	372,752	34,140,372	0.26%	133
2022	28,817,607	-	292,002	29,109,609	0.21%	115
2023	23,637,594	4,655,432	200,822	28,493,848	0.20%	114
2024	18,272,581	3,593,120	106,304	21,972,005	0.15%	87
2025	12,800,486	3,444,000	8,325	16,252,811	0.11%	64

Note: Details regarding the County's outstanding debt can be found in the notes to the financial statements.

(a) See the Schedule of Demographic and Economics Statistics in Table 14 for personal income and population data.

TABLE 11

JEFFERSON COUNTY, TEXAS
RATIO OF GENERAL BONDED DEBT OUTSTANDING
LAST TEN FISCAL YEARS

Fiscal Year	General Obligation Bonds	Less: Amounts Available in Debt Fund	Total	Percentage of Estimated Actual Taxable Value (a) of Property	Per Capita (b)
2016	$ 39,437,454	$ 602,071	$ 43,348,272	0.17%	$ 170
2017	34,337,146	700,149	38,835,383	0.16%	152
2018	30,319,638	550,264	33,636,997	0.14%	131
2019	43,027,646	450,811	29,769,374	0.12%	117
2020	38,472,633	205,094	38,267,539	0.15%	152
2021	33,767,620	434,551	33,333,069	0.13%	130
2022	28,817,607	477,012	28,340,595	0.11%	112
2023	23,637,594	496,853	23,140,741	0.08%	92
2024	18,272,581	598,376	17,674,205	0.05%	70
2025	12,800,486	849,068	11,951,418	0.04%	47

Note: Details regarding the County's outstanding debt can be found in the notes to the financial statements.

(a) See the Schedule of Assessed Value and Estimated Actual Value of Taxable Property in Table 6 for property value data.

(b) See the Schedule of Demographic and Economics Statistics in Table 14 for population data.

TABLE 12

JEFFERSON COUNTY, TEXAS
DIRECT AND OVERLAPPING GOVERNMENTAL ACTIVITIES DEBT
AS OF SEPTEMBER 30, 2025

Governmental Unit	Debt Outstanding	Estimated Percentage Applicable (a)	Estimated Share of Overlapping Debt
JEFFERSON COUNTY DIRECT DEBT	$16,252,811	100.0%	$16,252,811
Total Direct Debt			**$16,252,811**
OVERLAPPING DEBT REPAID WITH PROPERTY TAXES:			
CITIES:			
BEAUMONT	197,830,000	100.0%	197,830,000
BEVIL OAKS	-	100.0%	-
GROVES	9,360,000	100.0%	9,360,000
NEDERLAND	17,465,000	100.0%	17,465,000
PORT ARTHUR	82,156,621	100.0%	82,156,621
PORT NECHES	18,005,000	100.0%	18,005,000
TAYLOR LANDING	-	100.0%	-
SCHOOL DISTRICTS:			
BEAUMONT	173,320,000	100.0%	173,320,000
HAMSHIRE FANNETT	47,030,000	100.0%	47,030,000
HARDIN JEFFERSON	46,075,000	54.1%	24,926,575
NEDERLAND	130,980,000	100.0%	130,980,000
PORT ARTHUR	298,990,000	100.0%	298,990,000
PORT NECHES	171,175,000	100.0%	171,175,000
SABINE PASS	88,206,366	100.0%	88,206,366
PORT DISTRICTS:			
BEAUMONT	64,155,000	100.0%	64,155,000
PORT ARTHUR	83,990,000	100.0%	83,990,000
SABINE PASS	8,343,908	100.0%	8,343,908
DRAINAGE DISTRICTS:			
DRAINAGE DISTRICTS #3	-	100.0%	-
DRAINAGE DISTRICTS #6	-	100.0%	-
DRAINAGE DISTRICTS #7	10,755,000	100.0%	10,755,000
NAVIGATION DISTRICTS:			
SABINE NECHES	191,195,000	100.0%	191,195,000
MUNICIPAL UTILITY DISTRICTS:			
NORTHWEST FOREST	-	100.0%	-
WATER DISTRICTS:			
WATER DISTRICT #10	8,960,000	100.0%	8,960,000
EMERGENCY SERVICE DISTRICTS:			
EMERGENCY SERVICE DISTRICT #1	-	100.0%	-
EMERGENCY SERVICE DISTRICT #2	-	100.0%	-
EMERGENCY SERVICE DISTRICT #3	-	100.0%	-
EMERGENCY SERVICE DISTRICT #4	-	100.0%	-
EMERGENCY SERVICE DISTRICT #5	-	100.0%	-
CONSERVATION DISTRICTS:			
TRINITY BAY	-	1.0%	-
IMPROVEMENT DISTRICT:			
CARDINAL MEADOWS	-	100.0%	-
Total Overlapping Debt			**$1,626,843,470**
TOTAL DIRECT AND OVERLAPPING DEBT			**$1,643,096,281**

Sources: Debt outstanding data was provided by each of the taxing entities.

Note: Overlapping governments are those that coincide, at least in part, with the geographic boundaries of the County. This schedule estimates the portion of the outstanding debt of those overlapping governments that is borne by the residents and businesses of Jefferson County. This process recognizes that, when considering the County's ability to issue and repay long-term debt, the entire debt burden borne by the residents and businesses should be taken into account. However, this does not imply that every taxpayer is a resident, and therefore responsible for repaying the debt, of each overlapping government.

(a) The percentage of overlapping debt applicable is estimated using taxable assessed property values. Applicable percentages were estimated by determining the portion of taxing entity that is within the County's boundaries and dividing it by the taxing entity's total taxable assessed value.

TABLE 13

JEFFERSON COUNTY, TEXAS
LEGAL DEBT MARGIN INFORMATION
LAST TEN FISCAL YEARS
(amounts expressed in thousands)

	Fiscal Year									
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Debt limit	$ 6,340,696	$ 6,233,710	$ 6,573,128	$ 6,464,824	$ 6,908,392	$ 6,894,519	$ 7,272,698	$ 7,841,922	$ 8,772,403	$ 9,430,460
Total net debt applicable to limit	35,468	30,680	27,190	39,234	35,360	30,860	26,303	21,538	16,507	11,156
Legal debt margin	$ 6,156,286	$ 6,305,228	$ 6,203,030	$ 6,545,938	$ 6,425,590	$ 6,863,659	$ 7,246,395	$ 7,820,384	$ 8,755,896	$ 9,419,304
Total net debt applicable to the limit as a percentage of debt limit	0.56%	0.49%	0.41%	0.61%	0.51%	0.45%	0.36%	0.27%	0.19%	0.12%

Legal Debt Margin Calculation for Fiscal Year 2025

Assessed Value of Real Property	$	37,721,841
Debt limit (25% of assessed value of real property)		9,430,460
Debt applicable to limit:		
General obligation bonds		12,005
Less: Amount set aside for repayment of general obligation debt		849
Total net debt applicable to limit	$	11,156
Legal debt margin	$	9,419,304

Note: Under Article III, Section 52 of the State Constitution , Jefferson County's outstanding general obligation debt should not exceed 25% of assessed valuation of real property. By law, the general obligation debt subject to the limitation may be offset by amounts set aside for repaying general obligation bonds.

TABLE 14

JEFFERSON COUNTY, TEXAS
DEMOGRAPHIC AND ECONOMIC STATISTICS
LAST TEN FISCAL YEARS

Fiscal Year	Population (a)	Personal Income (amounts expressed in thousands)	Per Capita Personal Income (a)	Median Age (a)	School Enrollment (a)	Unemployment Rate (b)
2016	254,308	$ 10,809,362	$ 42,505	35.9	60,809	7.4%
2017	254,679	$ 11,451,641	$ 44,965	36.0	59,927	8.5%
2018	256,299	$ 11,524,485	$ 44,965	36.0	59,927	6.2%
2019	255,001	$ 12,358,113	$ 48,463	36.0	59,845	5.6%
2020	251,565	$ 14,036,572	$ 55,797	37.1	59,784	13.1%
2021	256,526	$ 13,146,444	$ 51,248	37.1	59,784	8.3%
2022	253,704	$ 13,601,833	$ 53,613	36.3	47,418	6.6%
2023	250,830	$ 14,371,054	$ 57,294	36.9	44,017	6.2%
2024	251,496	$ 15,073,161	$ 59,934	37.5	44,175	6.4%
2025	253,948	$ 15,243,483	$ 60,026	37.0	44,367	6.0%

Data sources
(a) Bureau of Census
(b) Texas Workforce Commission

TABLE 15

JEFFERSON COUNTY, TEXAS
PRINCIPAL EMPLOYERS
CURRENT YEAR AND NINE YEARS AGO

	2025			2016		
Employer	Employees	Rank	Percentage of Total County Employment	Employees	Rank	Percentage of Total County Employment
State of Texas	4,101	1	3.75%	4,308	1	4.24%
Beaumont ISD	2,550	2	2.33%	2,700	2	2.66%
ExxonMobil Oil Corporation	2,152	3	1.97%	2,000	3	1.97%
Memorial Hermann Baptist Hospital	1,846	4	1.69%	1,500	5	1.48%
Christus Health Southeast Texas	1,723	5	1.58%	1,750	4	1.72%
Motiva Enterprises	1,687	6	1.54%	1,500	6	1.48%
Port Arthur ISD	1,373	7	1.26%	1,250	7	1.23%
City of Beaumont	1,262	8	1.16%	1,243	8	1.22%
Jefferson County	1,134	9	1.04%	1,213	9	1.19%
Valero	791	10	0.72%	813	10	0.80%
TOTAL	18,619		17.04%	18,277		17.99%

Source: Employment numbers provided by each entity

TABLE 16

JEFFERSON COUNTY, TEXAS
FULL-TIME EQUIVALENT COUNTY EMPLOYEES BY FUNCTION
LAST TEN FISCAL YEARS

	Full-time Equivalent Employees as of September 30									
Function	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
General Government	168	155	161	163	157	157	152	153	149	157
Judicial & Law Enforcement										
Deputies	146	148	145	141	135	134	136	138	137	136
Detention Officers	237	231	232	230	221	216	205	193	232	232
Others	439	415	419	413	409	410	391	396	395	396
Education & Recreation	15	12	14	15	13	15	14	15	15	15
Health & Welfare	61	52	59	58	57	52	59	53	56	57
Maintenance - Equipment & Structures										
Road & Bridges	64	61	64	68	65	65	66	63	64	69
Engineering	10	9	10	10	9	10	9	9	9	9
Maintenance	28	25	26	26	27	27	27	25	26	27
Jack Brooks Regional Airport	24	24	24	23	25	24	24	23	22	23
Ford Park	21	22	22	19	12	15	15	14	13	13
TOTAL	1,213	1,154	1,176	1,166	1,130	1,125	1,098	1,082	1,118	1,134

Sources: County and Ford Park payroll records

TABLE 17

JEFFERSON COUNTY, TEXAS
OPERATING INDICATORS BY FUNCTION
LAST TEN FISCAL YEARS

Function	FISCAL YEAR 2016	2017	2018	2019	2020*	2021*	2022	2023	2024	2025
Judicial & Law Enforcement										
Courts										
Number of Indigent Cases Heard	3,969	3,252	2,944	3,336	2,751	4,202	4,548	3,787	4,711	4,858
Number of Justice of Peace Cases	28,130	31,835	33,428	36,461	26,313	26,381	25,633	23,670	22,482	26,772
Sheriff										
Number of Arrests	5,337	4,644	5,227	5,159	3,045	3,054	2,769	2,567	1,285	1,519
Number of Citations	1,861	2,231	2,240	2,970	1,994	1,887	1,952	1,675	1,737	1,650
Jail										
Average Daily Population of Inmates	819	731	713	752	732	920	872	825	854	867
Constables										
Number of Papers Served	16,618	16,561	15,831	16,053	11,965	12,555	12,323	22,235	9,195	9,475
Education & Recreation										
Visitor Center										
Number of Visitors	53,050	64,536	58,938	46,661	-	11,746	22,537	23,522	24,000	19,552
Health & Welfare										
Health & Welfare										
Number of Patients Seen in Clinic	10,401	11,937	8,508	8,794	7,936	7,494	8,921	9,009	8,651	8,834
Mosquito Control										
Number of Acreage Sprayed	839,680	594,148	789,504	451,840	377,856	150,528	603,648	412,160	1,327,104	431,360
Maintenance - Equipment & Structures										
Road & Bridge										
Road Miles Maintained	369	366	366	376	371	373	374	374	375	375
Airport										
Number of Aircraft Operations	14,842	15,757	17,755	18,310	16,863	17,945	16,932	22,396	24,279	29,511
Number of Enplaned	27,245	24,934	25,514	28,498	10,098	15,506	23,807	23,628	32,995	33,479
Number of Deplaned	28,098	24,467	24,705	27,619	9,700	15,190	23,334	22,696	32,167	32,133
Health Insurance Risk Pool										
Number of Participants in Plan	1,667	1,702	1,722	1,734	1,743	1,739	1,760	1,769	1,799	1,850
Entertainment Complex										
Number of Events	183	40	102	99	91	92	99	94	86	115
Total Attendance	336,555	348,710	361,468	302,903	125,722	186,613	313,460	304,099	301,419	345,750

Sources: Various county departments
Note: Indicators are not available for the general government functions.

* COVID-19 Pandemic

TABLE 18

JEFFERSON COUNTY, TEXAS
CAPITAL ASSET STATISTICS BY FUNCTION
LAST TEN FISCAL YEARS

Function	FISCAL YEAR									
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Judicial & Law Enforcement										
Sheriff										
Patrol Units	141	132	142	141	139	133	137	139	151	137
Aviation Units	3	4	4	4	4	4	4	4	4	4
Marine Units	10	10	10	10	10	12	10	10	12	12
Jail										
Dorms	23	23	23	23	24	24	24	24	24	24
Bed Capacity	1,268	1,268	1,268	1,268	1,268	1,268	1,268	1,268	1,268	1,268
Constables										
Patrol Units	34	28	33	24	24	22	24	29	27	25
Health & Welfare										
Mosquito Control										
Mosquito Spray Trucks	8	8	8	8	8	8	8	8	8	8
Weed Control Trucks	2	2	2	2	2	2	2	2	2	2
Aviation Units	3	3	3	3	3	3	3	3	3	3
Maintenance - Equipment & Structures										
Road (miles)	369	366	366	376	371	373	374	374	375	375
Bridges	65	65	65	65	65	65	65	65	65	65
Airport										
Runways (linear feet)	11,820	11,820	11,820	11,820	11,820	11,820	11,820	11,820	11,820	11,820
T-Hangar & Open Span Hangars (square feet)	150,470	150,470	150,470	108,270	108,270	108,270	108,270	108,270	108,270	108,270
Office Space (square feet)	45,850	45,850	45,850	44,304	44,304	44,304	44,304	44,304	44,304	44,304
Entertainment Complex										
Number of venues	5	5	5	5	5	5	5	5	5	5
Softball Fields	12	12	12	12	12	12	12	12	12	12
Exhibit Floor Space (square feet)	142,000	142,000	142,000	142,000	142,000	142,000	142,000	142,000	142,000	142,000
Seating Capacity	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500

Sources: Various county departments
Note: Indicators are not available for the general government function.


JEFFERSON COUNTY
TEXAS

JEFFERSON COUNTY, TEXAS

FEDERAL SINGLE AUDIT REPORT

For the Fiscal Year Ended
September 30, 2025

JEFFERSON COUNTY, TEXAS

FEDERAL SINGLE AUDIT REPORT

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PATTILLO, BROWN & HILL, L.L.P.
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INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

Honorable County Judge
and Commissioners' Court
Jefferson County, Texas

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of Jefferson County, Texas (the "County"), as of and for the year ended September 30, 2025, and the related notes to the financial statements, which collectively comprise the County's basic financial statements, and have issued our report thereon dated March 20, 2026.

Report on Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered the County's internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the County's internal control. Accordingly, we do not express an opinion on the effectiveness of the County's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that have not been identified.

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether the County's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards.*

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AICPA GAQC Member

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Pattillo, Brown & Hill, L.L.P.

Waco, Texas
March 20, 2026

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INDEPENDENT AUDITOR'S REPORT ON COMPLIANCE FOR EACH MAJOR FEDERAL PROGRAM AND REPORT ON INTERNAL CONTROL OVER COMPLIANCE IN ACCORDANCE WITH THE UNIFORM GUIDANCE

Honorable County Judge
and Commissioners' Court
Jefferson County, Texas

Report on Compliance for Each Major Federal Program

Opinion on Each Major Federal Program

We have audited Jefferson County, Texas' (the "County") compliance with the types of compliance requirements identified as subject to audit in the *U.S. Office of Management and Budget (OMB) Compliance Supplement* that could have a direct and material effect on each of the County's major federal programs for the year ended September 30, 2025. The County's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

In our opinion, the County complied, in all material respects, with the compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended September 30, 2025.

Basis for Opinion on Each Major Federal Program

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America (GAAS); the standards applicable to financial audits contained in Government Auditing Standards issued by the Comptroller General of the United States (*Government Auditing Standards*); and the audit requirements of Title 2 U.S. Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Our responsibilities under those standards and the Uniform Guidance are further described in the Auditor's Responsibilities for the Audit of Compliance section of our report.

We are required to be independent of the County and to meet our other ethical responsibilities, in accordance with relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on compliance for each major federal program. Our audit does not provide a legal determination of the County's compliance with the compliance requirements referred to above.

Responsibilities of Management for Compliance

Management is responsible for compliance with the requirements referred to above and for the design, implementation, and maintenance of effective internal control over compliance with the requirements of laws, statutes, regulations, rules and provisions of contracts or grant agreements applicable to the County's federal programs.

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AICPA GAQC Member

Auditor's Responsibilities for the Audit of Compliance

Our objectives are to obtain reasonable assurance about whether material noncompliance with the compliance requirements referred to above occurred, whether due to fraud or error, and express an opinion on the County's compliance based on our audit. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS, *Government Auditing Standards* and the Uniform Guidance always detect material noncompliance when it exists. The risk of not detecting material noncompliance resulting from fraud is higher than for that resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Noncompliance with the compliance requirements referred to above is considered material if there is a substantial likelihood that, individually or in the aggregate, it would influence the judgment made by a reasonable user of the report on compliance about the County's compliance with the requirements of each major federal program as a whole.

In performing an audit in accordance with GAAS, *Government Auditing Standards*, and the Uniform Guidance we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material noncompliance, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the County's compliance with the compliance requirements referred to above and performing such other procedures as we considered necessary in the circumstances.
- Obtain an understanding of the County's internal control over compliance relevant to the audit in order to design audit procedures that are appropriate in the circumstances and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of the County's internal control over compliance. Accordingly, no such opinion is expressed.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and any significant deficiencies and material weaknesses in internal control over compliance that we identified during the audit.

Report on Internal Control Over Compliance

A *deficiency in internal control over compliance* exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal or state program will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the Auditor's Responsibilities for the Audit of Compliance section above and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies in internal control over compliance. Given these limitations, during our audit we did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses, as defined above. However, material weaknesses or significant deficiencies in internal control over compliance may exist that were not identified.

Our audit was not designed for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, no such opinion is expressed.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

Report on Schedule of Expenditures of Federal Awards Required by the Uniform Guidance

We have audited the financial statements of the governmental activities, each major fund, and the aggregate remaining fund information of the County as of and for the year ended September 30, 2025, and the related notes to the financial statements, which collectively comprise the County's basic financial statements. We issued our report thereon, dated March 20, 2026, which contained unmodified opinions on those financial statements. Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the basic financial statements. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis as required by the Uniform Guidance and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements and certain additional procedures including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards is fairly stated in all material respects in relation to the basic financial statements as a whole.

Pattillo, Brown & Hill, L.L.P.

Waco, Texas
March 20, 2026

JEFFERSON COUNTY, TEXAS

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

FOR THE YEAR ENDED SEPTEMBER 30, 2025

Grantor/Pass-through Grantor/ Program Title	Assistance Listing Number	Grantor's ID Number	Expenditures	Pass Through Expenditures
FEDERAL PROGRAMS				
U.S. Department of Agriculture				
Passed through the Texas Department of Agriculture:				
Summer Food Service Program (Child Nutrition Cluster)	10.559	NT4XL1YGLGC5	$ 21,261	$ -
Total Passed through the Texas Department of Agriculture			21,261	-
Total U.S. Department of Agriculture			21,261	-
U.S. Department of Housing and Urban Development				
Passed through the Texas General Land Office:				
Community Development Block Grant/States Program - Harvey Infrastructure	14.228	20-065-121-C408	2,689,101	-
Community Development Block Grant/States Program - Harvey Home Buy Out	14.228	20-065-121-C242	1,210,266	-
Subtotal ALN 14.228			3,899,367	-
Total Passed through the Texas General Land Office			3,899,367	-
Total U.S. Department of Housing and Urban Development			3,899,367	-
U.S. Department of Justice				
Passed through the Office of the Governor, Criminal Justice Division:				
Crime Victim Assistance - Crime Victim's Clearinghouse	16.575	21032-13	92,123	-
Violence Against Women Formula Grants	16.588	13466-27	80,000	-
Total Passed through the Office of the Governor, Criminal Justice Division			172,123	-
Passed through the City of Beaumont:				
Edward Byrne Memorial Formula Grant Program	16.738	15-PBJA-24-GG-05231-JAGX	17,199	-
Total Passed through the City of Beaumont			17,199	-
Direct Programs:				
State Criminal Alien Assistance Program (SCAAP)	16.606	15PBJA-23-RR-05942-SCAA	33,597	-
Coverdell Forensic Science Improvement-Crime Lab Improvement	16.742	44061-03	39,821	-
Equitable Sharing Funds	16.922	N/A	2,684	-
Total Direct Programs			76,102	-
Total U.S. Department of Justice			265,424	-
U.S. Department of Transportation				
Passed through Federal Aviation Administration:				
Taxiway Alpha Rehabilitation & Reallignment	20.106	3-48-0018-046-2025	7,092	-
Taxiway Alpha Rehabilitation & Reallignment	20.106	3-48-0018-039-2022	33,207	-
Subtotal ALN 20.106			40,299	-
Total Passed through Federal Aviation Administration			40,299	-
Passed through the Texas Department of Transportation:				
Step Impaired Driver Mobilization (Highway Safety Cluster)	20.600	2025-JeffersonCoSO-S-1YG-00119	21,022	-
Total Passed Through the Texas Department of Transportation			21,022	-
Total U.S. Department of Transportation			61,321	-

The accompanying notes are an integral part of this schedule.

JEFFERSON COUNTY, TEXAS

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

FOR THE YEAR ENDED SEPTEMBER 30, 2025

Grantor/Pass-through Grantor/ Program Title	Assistance Listing Number	Grantor's ID Number	Expenditures	Pass Through Expenditures
FEDERAL PROGRAMS (continued)				
U.S. Department Of Treasury				
Direct Programs:				
Equitable Sharing Funds	21.016	N/A	66,720	-
COVID-19 Local Assitance and Tribal Consistency Fund	21.032	LATCF-1021	325,760	-
COVID-19 American Recovery Funds	21.027	SLT-0883	18,876,042	14,559,428
Total Direct Programs			19,268,522	14,559,428
Total U.S. Department Of Treasury			19,268,522	14,559,428
U.S. Department of Health & Human Services				
Passed through Food and Drug Administration:				
NEHA Grant - Jefferson County Training Program	93.103	G-202411-06854	1,300	-
NEHA Grant - Jefferson County Standard 3	93.103	G-BDEV2-202310-05032	5,733	-
Subtotal ALN 93.103			7,033	-
Total Passed Through Food and Drug Administration			7,033	-
Passed through the Texas Department of Family & Protective Services:				
Legal Services	93.658	HHS000285100022	163,239	-
Total Passed Through Texas Department of Family & Protective Services			163,239	-
Total U.S. Department of Health & Human Services			170,272	-
Office of the National Drug Control Policy				
Direct Program:				
High Intensity Drug Trafficking Area Program	95.001	G24HN0029A	10,578	-
Total Direct Program			10,578	-
Total Office of the National Drug Control Policy			10,578	-
U.S. Department of Homeland Security				
Passed through the Texas Office of the Governor:				
FEMA Emergency Hurricane Harvey	97.036	FEMA-4332-DR-Hurricane Harvey	337,804	-
FEMA - Covid	97.036	FEMA-4485-Texas Covid-19 Pandemic	398,175	-
Subtotal ALN 97.036			735,979	-
LETPA Sustaining Tactical Response	97.067	5032001	49,729	-
ES- County Clerk Security	97.067	5112601	121,779	-
Subtotal ALN 97.067			171,508	-
Mitigation - Backups	97.137	5037501	11,592	-
Assessment & Evaluation - Automated Asset Discovery	97.137	5039101	24,300	-
Mitigation - Activie Directory Forrest Recovery	97.137	5039201	22,500	-
Mitigation - Hardware & Software Replacement	97.137	5157701	67,698	-
SLCG - Mitigation Firewalls	97.137	5157801	33,201	-
Subtotal ALN 97.137			159,291	-
Total Passed Through Texas Office of the Governor			1,066,778	-
Total U.S. Department of Homeland Security			1,066,778	-
Total Expenditures of Federal Awards			$24,763,523	$ 14,559,428

JEFFERSON COUNTY, TEXAS

NOTES TO SCHEDULE OF EXPENDITURES
OF FEDERAL AWARDS

SEPTEMBER 30, 2025

1. Special Revenue Funds are used to account for resources restricted to, or designated for, specific purposes by a grantor. Capital Projects Funds are used to account for all resources used for the acquisition or construction of capital facilities. Federal and state financial assistance generally is accounted for in a Special Revenue Fund, Capital Projects Funds, Enterprise Funds or the General Fund. Accounting standards allow grants used for the construction or acquisition of capital assets to be accounted for in the Capital Projects Funds. Generally, unused balances are returned to the grantor at the close of specified project periods.

2. The accounting and financial reporting treatment applied to a fund is determined by its measurement focus. The governmental fund types and private purpose trust fund types are accounted for using a current financial resources measurement focus. Most federal grant funds were accounted for in the Special Revenue Funds, Capital Projects Funds, or the General Fund, components of the governmental fund type. With this measurement focus, only current assets and current liabilities generally are included on the balance sheet. Operating statements of these funds present increases (i.e., revenues and other financing sources) and decreases (i.e., expenditures and other financing uses) in net current assets.

The modified accrual basis of accounting is used for the governmental funds. This basis of accounting recognizes revenue in the accounting period in which they become susceptible to accrual, i.e., both measurable and available, and expenditures in the accounting period in which the fund liability is incurred, if measurable, except for unmatured interest on general long-term debt, which is recognized when due, and certain compensated absences and claims and judgments, which are recognized when the obligations are expected to be liquidated with expendable available financial resources. The County also accounts for grants in its enterprise funds. The accrual basis of accounting is used for enterprise funds.

Federal grant funds are considered to be earned to the extent of expenditures made under the provisions of the grant, and, accordingly, when such funds are received, they are recorded as unearned revenues until earned.

3. The period of availability for federal grant funds for the purpose of liquidation of outstanding obligations made on or before the ending date of the federal project period, extended 30 days beyond the federal project period ending date, in accordance with provisions in Section H.

4. The County did not elect to apply the de minimis indirect cost rate.

JEFFERSON COUNTY, TEXAS

SCHEDULE OF FINDINGS AND QUESTIONED COSTS

FOR THE YEAR ENDED SEPTEMBER 30, 2025

Summary of Auditor's Results

Financial Statements:	
Type of auditors' report issued	Unmodified
Internal control over financial reporting:	
Material weakness(es) identified?	None
Significant deficiency(ies) identified?	None reported
Noncompliance material to financial statements noted?	None
Federal Awards:	
Internal control over major programs:	
Material weakness(es) identified?	None
Significant deficiency(ies) identified?	None reported
Type of auditors' report issued on compliance for major programs	Unmodified
Any audit findings disclosed that are required to be reported in accordance with Section 200.516(a) of Uniform Guidance	None

Identification of major programs:

Assistance Listing Number(s)	Name of Federal Program or Cluster:
21.027	COVID-19 American Recovery Funds

Dollar threshold used to distinguish between type A and type B federal programs	$1,000,000
Auditee qualified as low-risk auditee for federal single audit?	Yes

Findings Relating to the Financial Statements Which Are Required to be Reported in Accordance With Generally Accepted Government Auditing Standards

None

Findings and Questioned Costs for Federal Awards

None

FRAN LEE
COUNTY AUDITOR
1149 PEARL ST – 7TH FLOOR
BEAUMONT, TEXAS 77701
(409) 835-8500

SUMMARY SCHEDULE OF PRIOR AUDIT FINDINGS

FOR THE YEAR ENDED SEPTEMBER 30, 2025

None.

JEFFERSON COUNTY, TEXAS

STATE SINGLE AUDIT REPORT

Fiscal Year Ended
September 30, 2025

JEFFERSON COUNTY, TEXAS

STATE SINGLE AUDIT REPORT

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PATTILLO, BROWN & HILL, L.L.P.
401 West State Highway 6
Waco, Texas 76710
254.772.4901 | pbhcpa.com

INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

Honorable County Judge
and Commissioners Court
Jefferson County, Texas

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of Jefferson County, Texas (the "County") as of and for the year ended September 30, 2025, and the related notes to the financial statements, which collectively comprise the County's basic financial statements, and have issued our report thereon dated March 20, 2026.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered the County's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the County's internal control. Accordingly, we do not express an opinion on the effectiveness of the County's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the County's financial statements will not be prevented or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over financial reporting was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over financial reporting that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over financial reporting that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that have not been identified.

OFFICE LOCATIONS
TEXAS | Waco | Temple | Hillsboro | Houston
NEW MEXICO | Albuquerque

AICPA GAQC Member

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether the County's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards.*

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the County's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the County's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Pattillo, Brown & Hill, L.L.P.

Waco, Texas
March 20, 2026

PATTILLO, BROWN & HILL, L.L.P.
401 West State Highway 6
Waco, Texas 76710
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INDEPENDENT AUDITOR'S REPORT ON COMPLIANCE FOR EACH MAJOR STATE PROGRAM AND REPORT ON INTERNAL CONTROL OVER COMPLIANCE IN ACCORDANCE WITH THE TEXAS GRANT MANAGEMENT STANDARDS

Honorable County Judge
and Commissioners' Court
Jefferson County, Texas

Report on Compliance for Each Major State Program

Opinion on Each Major State program

We have audited Jefferson County, Texas' (the "County") compliance with the types of compliance requirements described in the State of Texas Grant Management Standards (TxGMS) that could have a direct and material effect on each of the County's major state programs for the year ended September 30, 2025. The County's major state programs are identified in the summary of auditors' results section of the accompanying schedule of findings and questioned costs.

In our opinion, the County complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major state programs for the year ended September 30, 2025.

Basis for Opinion on Each Major State program

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America (GAAS); the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States (*Government Auditing Standards*); and the audit requirements of TxGMS. Our responsibilities under those standards and TxGMS are further described in the Auditor's Responsibilities for the Audit of Compliance section of our report.

We are required to be independent of the County and to meet our other ethical responsibilities, in accordance with relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on compliance for each major state program. Our audit does not provide a legal determination of the County's compliance with the compliance requirements referred to above.

Responsibilities of Management for Compliance

Management is responsible for compliance with the requirements referred to above and for the design, implementation, and maintenance of effective internal control over compliance with the requirements of laws, statutes, regulations, rules and provisions of contracts or grant agreements applicable to the County's state programs.

OFFICE LOCATIONS
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NEW MEXICO | Albuquerque

AICPA GAQC Member

Auditor's Responsibilities for the Audit of Compliance

Our objectives are to obtain reasonable assurance about whether material noncompliance with the compliance requirements referred to above occurred, whether due to fraud or error, and express an opinion on the County's compliance based on our audit. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS, *Government Auditing Standards* and TxGMS will always detect material noncompliance when it exists. The risk of not detecting material noncompliance resulting from fraud is higher than for that resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Noncompliance with the compliance requirements referred to above is considered material, if there is a substantial likelihood that, individually or in the aggregate, it would influence the judgment made by a reasonable user of the report on compliance about County's compliance with the requirements of each major state program as a whole.

In performing an audit in accordance with GAAS, *Government Auditing Standards* and TxGMS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material noncompliance, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the County's compliance with the compliance requirements referred to above and performing such other procedures as we considered necessary in the circumstances.
- Obtain an understanding of the County's internal control over compliance relevant to the audit in order to design audit procedures that are appropriate in the circumstances and to test and report on internal control over compliance in accordance with TxGMS, but not for the purpose of expressing an opinion on the effectiveness of the County's internal control over compliance. Accordingly, no such opinion is expressed.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and any significant deficiencies and material weaknesses in internal control over compliance that we identified during the audit.

Report on Internal Control Over Compliance

A *deficiency in internal control over compliance* exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct noncompliance with a type of compliance requirement of a state programs on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or combination of deficiencies in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a state programs will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* in *internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a state programs that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the Auditor's Responsibilities for the Audit of Compliance section above and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Our audit was not designed for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, no such opinion is expressed.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the TxGMS. Accordingly, this report is not suitable for any other purpose.

Report on Schedule of Expenditures of State Awards Required by Texas Grant Management Standards

We have audited the financial statements of the governmental activities, each major fund, and the aggregate remaining fund information of the County as of and for the year ended September 30, 2025, and the related notes to the financial statements, which collectively comprise the County's basic financial statements. We issued our report thereon, dated March 20, 2026, which contained unmodified opinions on those financial statements. Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the basic financial statements. The accompanying schedule of expenditures of state awards is presented for purposes of additional analysis as required by TxGMS and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements and certain additional procedures including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of state awards is fairly stated in all material respects in relation to the basic financial statements as a whole.

Pattillo, Brown & Hill, L.L.P.

Waco, Texas
March 20, 2026

JEFFERSON COUNTY, TEXAS

SCHEDULE OF EXPENDITURES OF STATE AWARDS

FOR THE YEAR ENDED SEPTEMBER 30, 2025

State Grantor/Program Title	State Grantors Number	Total State Expenditures	Passed Through to Subrecipients
Office of the Attorney General			
Direct program:			
SAVNS	C-01726	$ 31,194	$ -
Total Office of the Attorney General		31,194	-
Texas Department of Motor Vehicles			
Direct programs:			
Texas Automobile Theft Prevention Authority	608-25-1230100	7,693	-
Texas Automobile Theft Prevention Authority	608-24-1230100	72,895	-
Total Texas Department of Motor Vehicles		80,588	-
Texas Department of Transportation			
Direct programs:			
Routine Airport Maintenance Grant	M2024BMPT	100,000	-
County Transportation Infrastructure Fund Grant	2020CallProgram	139,288	-
Total Texas Department of Transportation		239,288	-
Texas Department of Criminal Justice			
Direct programs:			
Family Intervention Recovery Service Treatment (FIRST)	18690-20	3,537	-
Family Intervention Recovery Service Treatment (FIRST)	18690-19	35,357	-
Total Texas Department of Criminal Justice		38,894	-
Office of the Governor			
Passed through Texas Division of Emergency Management:			
Hurricane Harvey Assistance	PA-06-TX-4332	6,534	-
Total Passed through Texas Division of Emergency Management		6,534	-
Texas Comptroller of Public Accounts			
Direct programs:			
Rural Prosecutor's Office Salary Assistance Grant	IA-0000000786	275,000	-
Rural Law Enforcement Grant	IA-0000000932	500,000	-
Total Texas Comptroller of Public Accounts		775,000	-
Texas Commission on Environment Quality			
Local Emergency Planning Committee Grant Program	582-25-03015	18,000	-
Total Texas Commission on Environment Quality		18,000	-
Texas Indigent Defense Commission			
Direct programs:			
Indigent Defense Formula Grant FY25	N/A	130,663	-
Total Texas Indigent Defense Commission		130,663	-
Total Expenditures of State Awards		$ 1,320,161	$ -

The accompanying notes are an integral part of this schedule.

JEFFERSON COUNTY, TEXAS

NOTES TO SCHEDULE OF EXPENDITURES
OF STATE AWARDS

FOR THE YEAR ENDED SEPTEMBER 30, 2025

Note 1 - Basis of Presentation

The accompanying Schedule of Expenditures of State Awards (the "Schedule") includes the state grant activity of the County under programs of the State of Texas for the year ended September 30, 2025. The information in this schedule is presented in accordance with the requirements of Texas Grant Management Standards. Because the schedule presents only a selected portion of the operations of the County, it is not intended and does not present the financial position, changes in net position/fund balance or cash flows of the County.

Note 2 - Summary of Significant Accounting Policies

Jefferson County, Texas, accounts for state funding using the modified accrual method of accounting. This basis of accounting recognizes revenues in the accounting period in which they become susceptible to accrual, i.e., both measurable and available, and expenditures in the accounting period in which the liability is incurred, if measurable, except for certain compensated absences, claims and judgments, which are recognized when the obligations are expected to be liquidated with expendable available financial resources. Equipment purchases for grant purposes are treated as expenditures in the Schedule of Expenditures of State Awards. State grant funds are considered to be earned to the extent of qualifying expenditures made under the provisions of the grant. Accordingly, when such funds are received, they are recorded as unearned revenue until earned. Generally, unused balances are returned to the grantor at the close of specified project periods.

JEFFERSON COUNTY, TEXAS

SCHEDULE OF FINDINGS AND QUESTIONED COSTS

FOR THE YEAR ENDED SEPTEMBER 30, 2025

Summary of Auditor's Results

Financial Statements:	
Type of auditors' report issued	Unmodified
Internal control over financial reporting:	
Material weakness(es) identified?	No
Significant deficiency(ies) identified?	None reported
Noncompliance material to financial statements noted?	No
State Awards:	
Internal control over major programs:	
Material weakness(es) identified?	No
Significant deficiency(ies) identified?	None reported
Type of auditors' report issued on compliance for major programs	Unmodified
Any audit findings disclosed that are required to be reported in accordance with Texas Grant Management Standards	No
Identification of major programs:	
State Grant Number	Name of State Program
IA-0000000786 / IA-0000000932	Rural Prosecutors Office Salary Assistance/Rural Law Enforcement Grant
Dollar threshold used to distinguish between type A and type B programs	$1,000,000

Findings Relating to the Financial Statements Which Are Required to be Reported in Accordance With Generally Accepted Government Auditing Standards

None

Findings and Questioned Costs for State Awards

None

FRAN LEE
COUNTY AUDITOR
1149 PEARL ST – 7TH FLOOR
BEAUMONT, TEXAS 77701
(409) 835-8500

SUMMARY SCHEDULE OF PRIOR AUDIT FINDINGS

FOR THE YEAR ENDED SEPTEMBER 30, 2025

None.

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JEFFERSON COUNTY, TEXAS

FINANCIAL & OPERATING STATEMENTS - COUNTY FUNDS ONLY

For the Three Months Ending December 31, 2025

Fran Lee - County Auditor

FRAN LEE
COUNTY AUDITOR
(409) 835-8500

1149 PEARL ST. – 7TH FLOOR
BEAUMONT, TEXAS 77701

March 25, 2026

Honorable Commissioners Court:
Judge Jeff R. Branick
Commissioner Brandon Willis
Commissioner Cary Erickson
Commissioner Michael "Shane" Sinegal
Commissioner Everette "Bo" Alfred

Gentlemen:

In compliance with Section 114.023 of the Local Government Code, I herewith present the monthly report of the financial condition of Jefferson County as of December 31, 2025 together with the results of operations of the budget for the third period then ended.

Revenue:

Total budgeted revenue collected for the three months ending December 31, 2025 is $35,580,206. Budgeted Revenues are $172,708,871 leaving $137,128,665 in revenue to be collected in order to meet our budgetary revenue goals. Highlights of revenues are as follows:

Property Taxes:

Property tax collections are $27,992,595 for the first three months of the year. This amount represents 23% of the budgeted amount of $120,291,046.

Sales Taxes:

Eleven percent of budgeted revenue for sales taxes has been collected. Sales Tax revenue is budgeted to be $32,900,000.

Licenses & Permits:

Revenue from Licenses & Permits has exceeded the budgeted amount of $376,000 by $48,355.

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Intergovernmental:

Sixteen percent of Intergovernmental Revenue has been collected. Intergovernmental Revenue is budgeted to be $1,656,350.

Fees:

Seventeen percent of the budgeted revenue for Fees has been collected. Revenue from Fees is budgeted to be $11,960,475 for the year.

Fines and Forfeitures:

Seventeen percent of Fines and Forfeitures have been collected. Revenues from Fines and Forfeitures are budgeted to be $1,600,000.

Interest:

Twenty-one percent of Interest have been collected. Revenues from Interest are budgeted to be $3,895,000.

Other Revenues:

Nothing of Other Revenues have been collected. Revenues from Other Revenues are budgeted to be $30,000 for the year.

Expenditures:

Overall for the County's budgeted funds, twenty-seven percent of the expenditures have been spent.

Page Three

Expenditures are budgeted to be $185,904,541, which includes General Funds and debt service funds, excluding budgeted transfers of $7,266,299 for the fiscal year ending September 30, 2026.

Please call me if you have any questions on the enclosed report.

Sincerely,

Fran Lee
County Auditor

JEFFERSON COUNTY, TEXAS
FINANCIAL & OPERATING
STATEMENTS - COUNTY FUNDS ONLY
FOR THE THREE MONTHS ENDING DECEMBER 31, 2025
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Jefferson County, Texas
Consolidated Balance Sheet
For The Three Months Ending Decenber 31, 2025

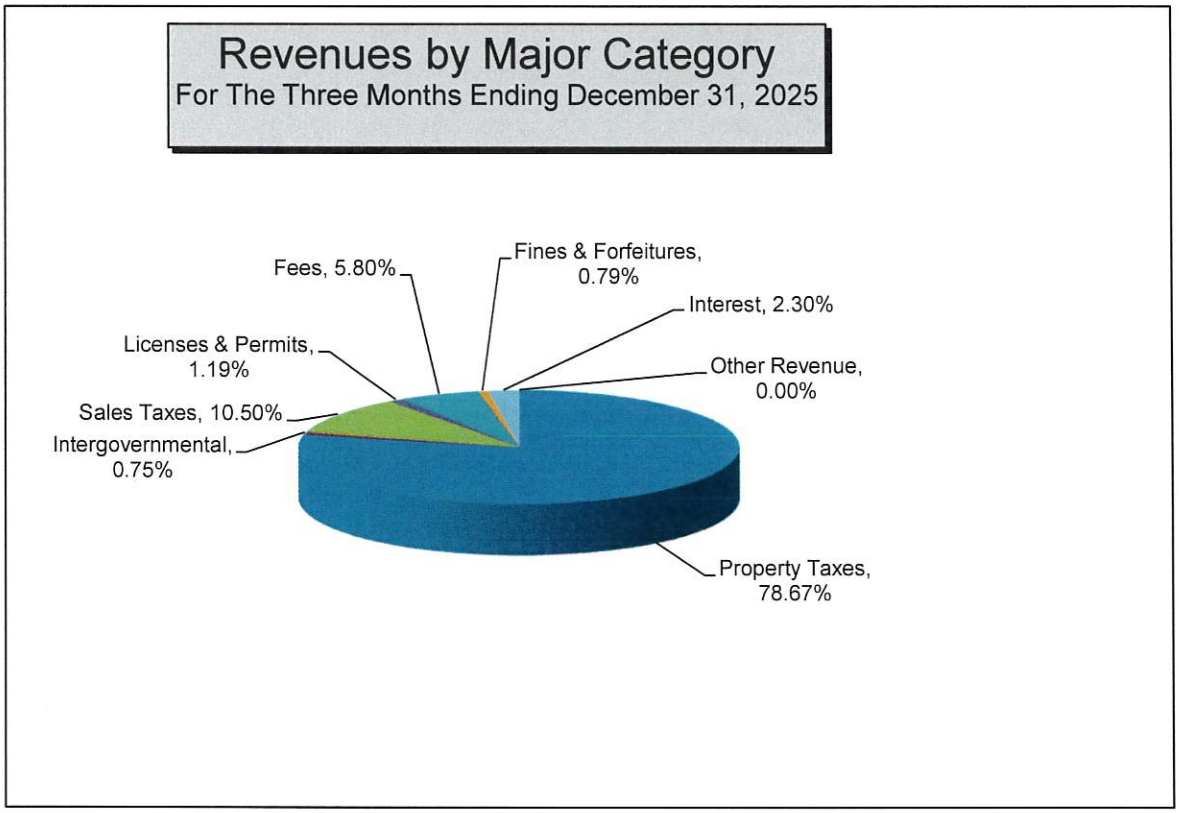
	General Funds	Special Revenue Funds	Capital Project Funds	Debt Service Funds	Enterprise Funds	Internal Service Funds	Total
ASSETS							
Cash and Cash Equivalents	$ 97,605,242	51,406,626	19,582,999	2,190,015	2,525,415	7,873,040	$ 181,183,337
Receivables & Prepaids	6,371,157	545	-	267,842	68,941	-	6,708,485
Intergovernmental Receivables	94,844	-	-	-	-	-	94,844
Due From Other Funds	150,000	-	-	-	-	-	150,000
Inventory	916,914	18,060	-	-	141,384	-	1,076,358
Other Assets	165,896	-	-	-	83,977,531	-	84,143,427
Total Assets	$ 105,304,053	$ 51,425,231	$ 19,582,999	$ 2,457,857	$ 86,713,271	$ 7,873,040	$ 273,356,451
LIABILITIES AND FUND BALANCE/EQUITY							
Payables	$ 4,095,120	543,472	-	-	679,347	3,255,492	$ 8,573,431
Intergovernmental Payables	360	71	-	-	25	-	456
Other Liabilities	6,628,854	682,330	-	251,373	7,054,243	-	14,616,800
Fund Balance/Equity	94,579,719	50,199,358	19,582,999	2,206,484	78,979,656	4,617,548	250,165,764
Total Liabilities and Fund Balance/Equity	$ 105,304,053	$ 51,425,231	$ 19,582,999	$ 2,457,857	$ 86,713,271	$ 7,873,040	$ 273,356,451

Jefferson County, Texas
Statement of Changes in Fund Balances
For The Three Months Ending Decenber 31, 2025

	9/30/2025	Three Months Ending December 31, 2025				12/31/2025
	Fund Balance	Receipts	Disbursements	Transfers In(/Out)	Prior Period Adjustment	Fund Balance
Jury Fund	$ 29,344	$ 128,971	$ 115,155	$ -	$ -	$ 43,160
Road & Bridge Pct. 1	4,984,321	394,399	645,879	-	-	4,732,841
Road & Bridge Pct. 2	1,654,722	394,082	602,302	-	-	1,446,502
Road & Bridge Pct. 3	566,227	394,082	589,417	-	-	370,892
Road & Bridge Pct. 4	3,236,030	394,176	983,317	-	-	2,646,889
Engineering Fund	273,455	312,578	283,166	-	-	302,867
Parks & Recreation	104,013	47,422	31,806	-	-	119,629
General Fund	84,478,426	31,647,796	33,993,365	(590,982)	-	81,541,875
Mosquito Control Fund	1,662,110	484,444	1,810,893	-	-	335,661
Tobacco Settlement Fund	3,264,563	24,840	250,000	-	-	3,039,403
Total General Funds	100,253,211	34,222,790	39,305,300	(590,982)	-	94,579,719
Total Special Revenue Funds	34,052,865	39,945,496	23,911,117	112,114	-	50,199,358
Total Capital Project Funds	20,375,025	160,258	952,284	-	-	19,582,999
Total Debt Service Funds	849,068	1,357,416	-	-	-	2,206,484
Total Enterprise Funds	79,689,834	568,587	1,757,633	478,868	-	78,979,656
Total Internal Service Funds	5,091,505	6,243,186	6,717,143	-	-	4,617,548
Total Balances	$ 240,311,508	$ 82,497,733	$ 72,643,477	$ -	$ -	$ 250,165,764

Jefferson County Texas
Statement of Revenues by Category - Compared with Budget Allocation
For The Three Months Ending December 31, 2025

Category	Cumulative Actual	Annual Budget	Unrealized Balance	Percentage Unrealized
Property Taxes	$ 27,992,595	$ 120,291,046	$ 92,298,451	76.73%
Sales Taxes	3,736,362	32,900,000	29,163,638	88.64%
Licenses & Permits	424,355	376,000	(48,355)	-12.86%
Intergovernmental	266,134	1,656,350	1,390,216	83.93%
Fees	2,062,610	11,960,475	9,897,865	82.75%
Fines & Forfeitures	279,869	1,600,000	1,320,131	82.51%
Interest	818,281	3,895,000	3,076,719	78.99%
Other Revenue	-	30,000	30,000	100.00%
	$ 35,580,206	$ 172,708,871	$ 137,128,665	79.40%



Jefferson County, Texas

Statement of Revenues - Compared With Budget Allocation

For The Three Months Ending December 31, 2025

	October 2025 -December	Cumulative Total	Annual Budget	Unrealized Balance
Jury Fund				
Current Taxes	$ 72,073	$ 72,073	$ 311,759	$ 239,686
Delinquent Taxes	497	497	1,414	917
Jury Fees	10,991	10,991	70,000	59,009
Other Revenue	45,410	45,410	275,600	230,190
Road & Bridge Pct. 1				
Current Taxes	229,814	229,814	994,082	764,268
Delinquent Taxes	3,354	3,354	9,549	6,195
Auto Registration Fees	-	-	675,000	675,000
Road & Bridge Fees	116,289	116,289	525,000	408,711
Sales, Rentals & Services	317	317	-	(317)
Fines and Forfeitures	44,625	44,625	250,000	205,375
Road & Bridge Pct. 2				
Current Taxes	229,814	229,814	994,082	764,268
Delinquent Taxes	3,354	3,354	9,549	6,195
Auto Registration Fees	-	-	675,000	675,000
Road & Bridge Fees	116,289	116,289	525,000	408,711
Fines and Forfeitures	44,625	44,625	250,000	205,375
Road & Bridge Pct. 3				
Current Taxes	229,814	229,814	994,082	764,268
Delinquent Taxes	3,354	3,354	9,549	6,195
Auto Registration Fees	-	-	675,000	675,000
Road & Bridge Fees	116,289	116,289	525,000	408,711
Sales, Rentals & Services	-	-	-	-
Fines and Forfeitures	44,625	44,625	250,000	205,375
Road & Bridge Pct. 4				
Current Taxes	229,814	229,814	994,082	764,268
Delinquent Taxes	3,354	3,354	9,549	6,195
Intergovernmental Revenue	-	-	15,000	15,000
Auto Registration Fees	-	-	675,000	675,000
Road & Bridge Fees	116,289	116,289	525,000	408,711
Sales, Rentals & Services	94	94	-	(94)
Fines and Forfeitures	44,625	44,625	250,000	205,375

Jefferson County, Texas

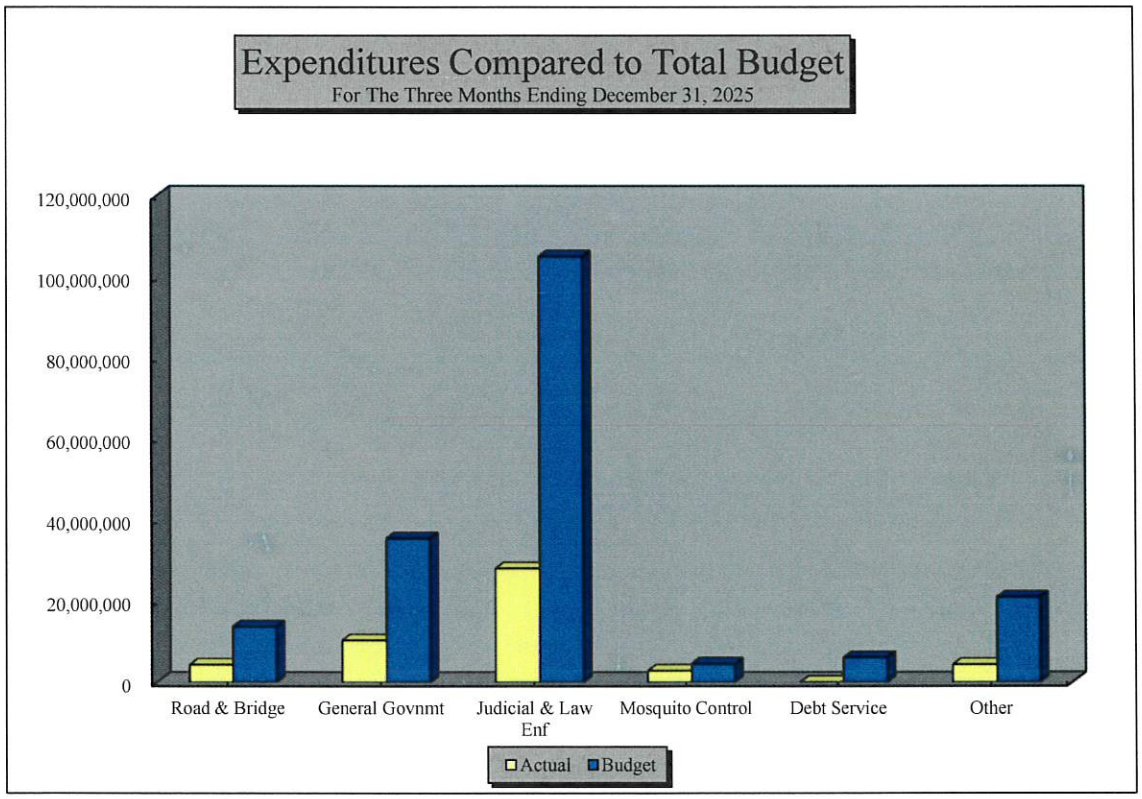
Statement of Revenues - Compared With Budget Allocation

For The Three Months Ending December 31, 2025

	October 2025 -December	Cumulative Total	Annual Budget	Unrealized Balance
Engineering Fund				
Current Taxes	$ 303,780	$ 303,780	$ 1,314,032	$ 1,010,252
Delinquent Taxes	4,428	4,428	12,605	8,177
Licenses and Permits	2,870	2,870	5,500	2,630
Sales, Rentals & Services	1,500	1,500	2,000	500
Parks & Recreation				
Current Taxes	35,897	35,897	155,279	119,382
Delinquent Taxes	705	705	2,006	1,301
Sales, Rentals & Services	10,820	10,820	65,300	54,480
General Fund				
Current Taxes	24,463,945	24,463,945	105,811,265	81,347,320
Delinquent Taxes	349,310	349,310	994,430	645,120
Sales Taxes	3,736,362	3,736,362	32,900,000	29,163,638
Other Taxes	-	-	30,000	30,000
Licenses and Permits	421,485	421,485	370,500	(50,985)
Intergovernmental Revenue	220,724	220,724	1,365,750	1,145,026
Fees of Office	791,893	791,893	3,564,825	2,772,932
Other Sales, Rentals & Svcs.	781,839	781,839	3,458,350	2,676,511
Fines & Forfeitures	101,369	101,369	600,000	498,631
Interest	780,869	780,869	3,780,000	2,999,131
Mosquito Control Fund				
Current Taxes	469,459	469,459	2,030,687	1,561,228
Delinquent Taxes	14,985	14,985	42,660	27,675
Tobacco Settlement Fund				
Interest	24,840	24,840	90,000	65,160
Debt Service				
Current Taxes	1,322,229	1,322,229	5,541,696	4,219,467
Delinquent Taxes	22,615	22,615	58,689	36,074
Interest	12,572	12,572	25,000	12,428
Total	$ 35,580,206	$ 35,580,206	$ 172,708,871	$ 137,128,665

Jefferson County, Texas
Statement of Expenditures - Compared With Budget Allocation - 25% of Budget Expended
For The Three Months Ending December 31, 2025

	Cumulative Actual	Annual Budget	Unencumbered Balance	Percentage Unencumbered
Jury Fund	$ 123,367	$ 663,633	$ 540,266	81.41%
Road & Bridge Funds	3,945,999	11,901,328	7,955,329	66.84%
Engineering Fund	284,264	1,554,245	1,269,981	81.71%
Parks & Recreation Fund	56,039	282,301	226,262	80.15%
General Fund:				
General Government	10,341,616	35,550,422	25,208,806	70.91%
Judicial	5,619,910	25,336,541	19,716,631	77.82%
Law Enforcement	22,335,044	79,063,957	56,728,913	71.75%
Education	108,315	527,472	419,157	79.47%
Health & Welfare	1,617,517	9,818,346	8,200,829	83.53%
Maintenance	1,661,396	5,066,738	3,405,342	67.21%
Other	692,836	5,269,400	4,576,564	86.85%
Mosquito Control Fund	2,805,556	4,530,508	1,724,952	38.07%
Tobacco Settlement	250,000	250,000	-	-
Debt Service Funds	-	6,089,650	6,089,650	100.00%
	$ 49,841,859	$ 185,904,541	$ 136,062,682	73.19%



Jefferson County, Texas

Statement of Expenditures - Compared With Budget Allocation

For The Three Months Ending December 31, 2025

	October 2025 December	Encumbrances	Cumulative Total	Annual Budget	Unencumbered Balance
Jury Fund	$ 115,155	$ 8,212	$ 123,367	$ 663,633	$ 540,266
Road & Brdg Pct. 1	645,879	439,535	1,085,414	3,304,769	2,219,355
Road & Brdg Pct. 2	602,302	470,978	1,073,280	2,825,658	1,752,378
Road & Brdg Pct. 3	589,417	76,042	665,459	2,730,044	2,064,585
Road & Brdg Pct. 4	983,317	138,529	1,121,846	3,040,857	1,919,011
Engineering	283,166	1,098	284,264	1,554,245	1,269,981
Parks & Recreation	31,806	24,233	56,039	282,301	226,262
Tax Assessor/Coll.	1,180,354	92,115	1,272,469	5,235,997	3,963,528
Human Resources	138,929	6,795	145,724	616,027	470,303
County Auditor	414,886	270	415,156	1,984,368	1,569,212
County Clerk	584,693	11,664	596,357	2,852,955	2,256,598
County Judge	243,250	-	243,250	1,219,004	975,754
Risk Management	48,448	877	49,325	386,331	337,006
County Treasurer	90,294	-	90,294	409,014	318,720
Printing Department	24,308	12,325	36,633	173,328	136,695
Purchasing Department	157,188	24,750	181,938	720,382	538,444
General Services	4,008,862	164,192	4,173,054	15,783,115	11,610,061
MIS	2,489,728	44,006	2,533,734	4,774,619	2,240,885
Voter's Registration	58,499	-	58,499	248,094	189,595
Elections	494,420	50,763	545,183	1,147,188	602,005
District Attorney	1,911,567	155,336	2,066,903	9,072,508	7,005,605
District Clerk	643,524	74,625	718,149	2,756,774	2,038,625
Criminal Dist. Court	415,727	303	416,030	2,041,514	1,625,484
58th Dist. Court	84,056	-	84,056	388,683	304,627
60th Dist. Court	90,009	178	90,187	410,454	320,267
136th Dist. Court	88,303	-	88,303	404,524	316,221
172nd Dist. Court	87,991	3,382	91,373	391,977	300,604
252nd Dist. Court	236,232	3,231	239,463	1,454,337	1,214,874
279th Dist. Court	226,620	325	226,945	781,897	554,952
317th Dist. Court	120,996	399	121,395	594,918	473,523
J.P. Pct. 1 Pl 1	103,206	717	103,923	480,726	376,803
J.P. Pct. 1 Pl 2	111,291	-	111,291	495,821	384,530
J.P. Pct. 2	96,493	577	97,070	473,173	376,103
J.P. Pct. 4	109,952	320	110,272	494,101	383,829
J.P. Pct. 6	105,432	204	105,636	486,000	380,364
J.P. Pct. 7	113,069	32	113,101	501,334	388,233
J.P. Pct. 8	99,710	209	99,919	475,897	375,978
Cnty. Court at Law 1	146,449	135	146,584	668,308	521,724
Cnty. Court at Law 2	162,264	-	162,264	904,965	742,701
Cnty. Court at Law 3	206,139	137	206,276	1,086,879	880,603
Court Master	143,165	344	143,509	617,185	473,676

Jefferson County, Texas

Statement of Expenditures - Compared With Budget Allocation

For The Three Months Ending December 31, 2025

	October 2025 December	Encumbrances	Cumulative Total	Annual Budget	Unencumbered Balance
Dispute Resolution	$ 77,261	$ -	$ 77,261	$ 354,566	$ 277,305
Comm. Supervision	3,602	-	3,602	22,416	18,814
Sheriff's Dept.	4,326,660	805,386	5,132,046	19,614,193	14,482,147
Crime Lab	460,557	272,289	732,846	2,483,017	1,750,171
Jail	9,102,601	4,901,851	14,004,452	46,098,701	32,094,249
Juvenile Probation	397,876	3,200	401,076	2,003,343	1,602,267
Juvenile Detention	526,323	146,574	672,897	2,783,816	2,110,919
Constable Pct. 1	281,186	68,070	349,256	1,194,689	845,433
Constable Pct. 2	128,774	-	128,774	600,134	471,360
Constable Pct. 4	129,401	54,714	184,115	648,242	464,127
Constable Pct. 6	167,440	1,798	169,238	724,277	555,039
Constable Pct. 7	140,390	-	140,390	624,299	483,909
Constable Pct. 8	193,546	4,240	197,786	666,830	469,044
County Morgue	215,476	3,090	218,566	1,600,000	1,381,434
Agriculture Ext.	105,461	2,854	108,315	527,472	419,157
Mobile Unit	54,864	899	55,763	327,806	272,043
Public Health # 1	337,535	89	337,624	1,585,505	1,247,881
Public Health # 2	298,627	661	299,288	1,481,631	1,182,343
Nurse Practitioner	97,838	-	97,838	445,846	348,008
Child Welfare	-	-	-	95,000	95,000
Env. Control	109,643	36,976	146,619	576,674	430,055
Ind. Medical Svcs.	235,508	336,324	571,832	4,943,871	4,372,039
Emergency Mgmt.	55,948	52,605	108,553	362,013	253,460
Beaumont Maintenance	663,828	566,192	1,230,020	3,736,007	2,505,987
Port Arthur Maint.	202,102	124,913	327,015	1,029,701	702,686
Mid-County Maint.	58,590	45,771	104,361	301,030	196,669
Service Center	297,241	306,562	603,803	1,509,039	905,236
Veteran Service	89,033	-	89,033	423,998	334,965
Mosquito Control	1,810,893	994,663	2,805,556	4,530,508	1,724,952
Tobacco Settlement	250,000	-	250,000	250,000	-
Debt Service Funds	-	-	-	6,089,650	6,089,650
Contingency	-	-	-	3,336,363	3,336,363
Total	$ 39,305,300	$ 10,536,559	$ 49,841,859	$ 185,904,541	$ 136,062,682

Jefferson County, Texas
Statement of Bonded Indebtedness
For The Three Months Ending December 31, 2025

Issue	Beginning Amount Outstanding	2025-2026 Requirements				2025-2026 Payments				Ending Amount Outstanding
		Principal	Interest	Fees	Total	Principal	Interest	Fees	Total	
2019 Certificates of Obligation	12,005,000	665,000	402,150	2,500	1,069,650	-	-	-	-	12,005,000
	$ 12,005,000	$ 665,000	$ 402,150	$ 2,500	$ 1,069,650	$ -	$ -	$ -	$ -	$ 12,005,000

Jefferson County, Texas
Statement of Transfers In and Out
For The Three Months Ending December 31, 2025

	Fund	Transfers In		Transfers Out	
120	General Fund	-		478,868	(a)
120	General Fund	-		112,114	(b)
230	Commuity Supervision Fund	-		292,265	(a)
233	Mentally Impaired Offender	16,584	(a)	-	
237	Community Corrections Program	86,020	(a)	-	
239	Drug Diversion Program	189,661	(a)	-	
241	Sheriff Department Grants	1,263	(b)	-	
245	Crime Victim's Clearing	63,171	(b)	-	
257	Auto Theft Grant	5,952	(b)	-	
263	VAWA Fund	11,750	(b)	-	
265	Check Water & Sewer Phase 5	-	(b)	-	
282	VAWA Fund	-	(b)	-	
550	SETEC Fund	478,868	(a)	-	
876	Sheriff-Spindletop Grant	29,978	(b)	-	
		$883,247		$883,247	

(a) Budgeted Transfer
(b) Grant Match

Jefferson County, Texas
Statement of Comp-Time Liability
For The First Quarter - December 31, 2025

Department	Cumulative Hours	Current Liability
Road & Bridge # 1	363.25	$ 10,671.14
Road & Bridge # 2	413.75	13,461.76
Road & Bridge # 3	504.00	14,889.21
Road & Bridge # 4	3.25	92.16
Engineering	33.37	1,276.31
Tax Assessor/Collector	270.79	7,877.52
Human Resources	-	-
County Auditor	62.11	2,001.04
County Clerk	354.65	9,752.47
County Judge	0.01	0.13
Treasurer	0.01	0.12
Printing	-	-
Purchasing Department	8.50	228.54
MIS	404.01	14,496.83
Voter Registration	14.52	495.60
Elections Department	310.80	9,308.52
District Attorney	53.12	1,610.03
District Clerk	732.96	19,564.08
Criminal District Court	79.51	2,619.79
58th District Court	1.62	53.54
172nd District Court	-	-
252nd District Court	2.37	94.64
317th District Court	-	-
Justice of Peace Pct. 1 Pl. 1	169.76	4,906.49
Justice of Peace Pct. 1 Pl. 2	193.50	5,418.14
Justice of Peace Pct. 2	-	-
Justice of Peace Pct. 4	-	-
Justice of Peace Pct. 6	4.87	142.10
Justice of Peace Pct. 7	0.01	0.16
Justice of Peace Pct. 8	-	-
County Court at Law #2	48.88	1,610.62
County Court at Law #3	0.01	0.11
Court Master	0.01	0.16
Dispute Resolution Center	125.62	3,351.81
Sheriff's Department	12,717.82	555,221.19
Crime Lab	141.86	6,595.16
Correctional Facility	9,845.95	329,851.65
Juvenile Probation	114.14	3,199.15
Juvenile Detention Home	222.17	4,651.75
Constable Pct. 1	375.13	14,345.63

Jefferson County, Texas
Statement of Comp-Time Liability
For The First Quarter - December 31, 2025

Department	Cumulative Hours	Current Liability
Constable Pct. 2	2.00	$ 100.56
Constable Pct. 4	18.00	752.42
Constable Pct. 6	147.80	3,936.08
Constable Pct. 7	20.54	985.54
Constable Pct. 8	24.00	629.84
Public Health No. 1	58.75	1,356.58
Public Health No. 2	32.57	781.26
Nurse Practitioner	18.38	609.33
Environmental Control	-	-
Indigent Health	-	-
Emergency Management	79.50	2,881.97
Mosquito Control	533.50	15,723.43
Maintenance - Beaumont	341.33	8,891.91
Maintenance - Port Arthur	322.22	9,190.03
Maintenance- Mid County	80.00	2,446.50
Service Center	97.00	2,850.64
Veterans' Services Office	63.75	1,841.71
Airport	1,273.23	32,144.27
Visitors' Center	118.00	2,297.15
Grant A Basic Probation	17.75	504.87
Grant A Mental Health Service	0.25	9.16
Grant A Community Programs	114.37	3,503.70
Grant A Pre and Post Adjudication	0.26	6.12
Judicial Support	16.00	477.39
Community Supervision	287.03	8,031.77
Adult Surveillance Program	7.62	123.67
Community Corrections	31.50	729.00
High Need Program	21.50	586.57
TJPC Grant Contract M	33.13	1,026.28
Drug Diversion	15.38	418.25
Juvenile Probation and Detention	18.00	296.84
Mentally Impaired Offender	18.00	491.08
Auto Theft	140.75	5,906.74
Sheriff Mental Health Liaison -Cnty	104.75	4,395.96
Sheriff Mental Health Liaison	31.75	1,340.55
Marine Division	3,920.49	171,575.10
Courthouse Security	460.00	20,713.65
District Clerk Records	26.87	606.03
Total	36,068.30	$ 1,345,949.50
Comp-Time Liability at 12/31/2024	38,008.87	$1,374,562.69

JEFFERSON COUNTY, TEXAS

FINANCIAL & OPERATING STATEMENTS - COUNTY FUNDS ONLY

For the Month Ending January 31, 2026

Fran Lee - County Auditor

FRAN LEE
COUNTY AUDITOR
(409) 835-8500



1149 PEARL ST. – 7TH FLOOR
BEAUMONT, TEXAS 77701

March 25, 2026

Honorable Commissioners Court:
Judge Jeff R. Branick
Commissioner Brandon Willis
Commissioner Cary Erickson
Commissioner Michael "Shane" Sinegal
Commissioner Everette "Bo" Alfred

Gentlemen:

In compliance with Section 114.023 of the Local Government Code, I herewith present the monthly report of the financial condition of Jefferson County as of January 31, 2026 together with the results of operations of the budget for the fourth period then ended.

Revenue:

Total budgeted revenue collected for the four months ending January 31, 2026 is $86,874,067. Budgeted Revenues are $172,708,871 leaving $85,834,804 in revenue to be collected in order to meet our budgetary revenue goals. Highlights of revenues are as follows:

Property Taxes:

Property tax collections are $73,914,230 for the first four months of the year. This amount represents sixty-one percent of the budgeted amount of $120,291,046.

Sales Taxes:

Twenty-two percent of budgeted revenue for sales taxes has been collected. Sales Tax revenue is budgeted to be $32,900,000.

Licenses & Permits:

Revenue from Licenses & Permits has exceeded the budgeted amount of $376,000 by $83,128.

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Intergovernmental:

Twenty-one percent of Intergovernmental Revenue has been collected. Intergovernmental Revenue is budgeted to be $1,656,350.

Fees:

Twenty-seven percent of the budgeted revenue for Fees has been collected. Revenue from Fees is budgeted to be $11,960,475 for the year.

Fines and Forfeitures:

Twenty-six percent of Fines and Forfeitures have been collected. Revenues from Fines and Forfeitures are budgeted to be $1,600,000.

Interest:

Thirty-five percent of Interest have been collected. Revenues from Interest are budgeted to be $3,895,000.

Other Revenues:

Nothing of Other Revenues have been collected. Revenues from Other Revenues are budgeted to be $30,000 for the year.

Expenditures:

Overall for the County's budgeted funds, thirty-four percent of the expenditures have been spent.

Page Three

Expenditures are budgeted to be $185,904,541, which includes General Funds and debt service funds, excluding budgeted transfers of $7,266,299 for the fiscal year ending September 30, 2026.

Please call me if you have any questions on the enclosed report.

Sincerely,

Fran Lee
County Auditor

JEFFERSON COUNTY, TEXAS
FINANCIAL & OPERATING
STATEMENTS - COUNTY FUNDS ONLY
FOR THE MONTH ENDING JANUARY 31, 2026
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Jefferson County, Texas
Consolidated Balance Sheet
For The Month Ending January 31, 2026

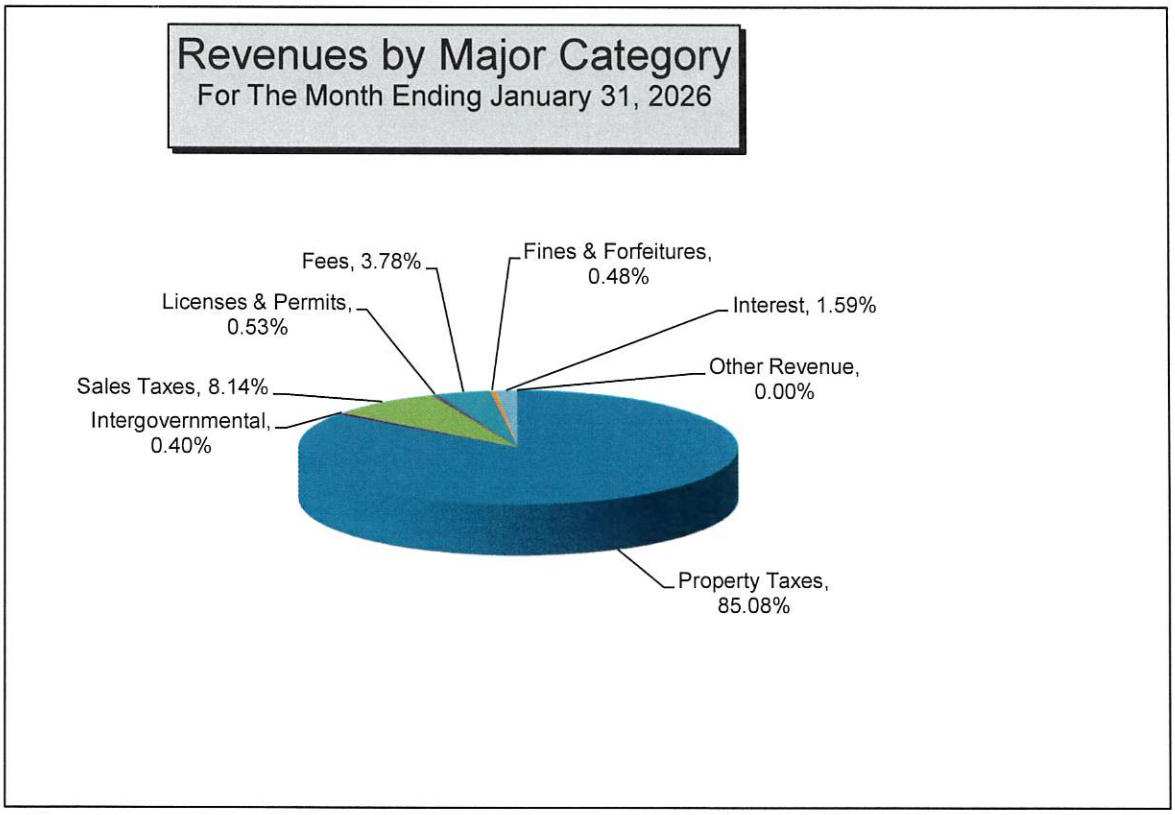
	General Funds	Special Revenue Funds	Capital Project Funds	Debt Service Funds	Enterprise Funds	Internal Service Funds	Total
ASSETS							
Cash and Cash Equivalents	$ 130,068,755	55,534,876	19,608,763	4,205,436	2,422,008	8,279,086	$ 220,118,924
Receivables & Prepaids	6,396,942	545	-	267,842	68,941	-	6,734,270
Intergovernmental Receivables	94,019	-	-	-	-	-	94,019
Due From Other Funds	150,000	-	-	-	-	-	150,000
Inventory	916,914	18,060	-	-	141,384	-	1,076,358
Other Assets	165,896	-	-	-	83,977,531	-	84,143,427
Total Assets	$ 137,792,526	$ 55,553,481	$ 19,608,763	$ 4,473,278	$ 86,609,864	$ 8,279,086	$ 312,316,998
LIABILITIES AND FUND BALANCE/EQUITY							
Payables	$ 4,095,120	543,472	-	-	679,347	3,255,492	$ 8,573,431
Intergovernmental Payables	360	-	-	-	-	-	360
Other Liabilities	6,831,965	682,330	-	251,373	7,054,243	-	14,819,911
Fund Balance/Equity	126,865,081	54,327,679	19,608,763	4,221,905	78,876,274	5,023,594	288,923,296
Total Liabilities and Fund Balance/Equity	$ 137,792,526	$ 55,553,481	$ 19,608,763	$ 4,473,278	$ 86,609,864	$ 8,279,086	$ 312,316,998

Jefferson County, Texas
Statement of Changes in Fund Balances
For The Month Ending January 31, 2026

	12/31/2025	Month Ending January 31, 2026				1/31/2026
	Fund Balance	Receipts	Disbursements	Transfers In(/Out)	Prior Period Adjustment	Fund Balance
Jury Fund	$ 43,160	$ 124,967	$ 53,251	$ -	$ -	$ 114,876
Road & Bridge Pct. 1	4,732,841	530,853	184,759	-	-	5,078,935
Road & Bridge Pct. 2	1,446,502	529,957	192,720	-	-	1,783,739
Road & Bridge Pct. 3	370,892	529,957	232,210	-	-	668,639
Road & Bridge Pct. 4	2,646,889	529,753	172,362	-	-	3,004,280
Engineering Fund	302,867	506,532	175,439	-	-	633,960
Parks & Recreation	119,629	62,557	13,116	-	-	169,070
General Fund	81,541,875	45,463,254	15,512,355	(107,535)	-	111,385,239
Mosquito Control Fund	335,661	786,066	146,311	-	-	975,416
Tobacco Settlement Fund	3,039,403	11,524	-	-	-	3,050,927
Total General Funds	94,579,719	49,075,420	16,682,523	(107,535)	-	126,865,081
Total Special Revenue Funds	50,199,358	8,618,485	4,490,401	237	-	54,327,679
Total Capital Project Funds	19,582,999	74,063	48,299	-	-	19,608,763
Total Debt Service Funds	2,206,484	2,218,441	203,020	-	-	4,221,905
Total Enterprise Funds	78,979,656	502,195	712,875	107,298	-	78,876,274
Total Internal Service Funds	4,617,548	2,811,207	2,405,161	-	-	5,023,594
Total Balances	$ 250,165,764	$ 63,299,811	$ 24,542,279	$ -	$ -	$ 288,923,296

Jefferson County Texas
Statement of Revenues by Category - Compared with Budget Allocation
For The Month Ending January 31, 2026

Category	Cumulative Actual	Annual Budget	Unrealized Balance	Percentage Unrealized
Property Taxes	$ 73,914,230	$ 120,291,046	$ 46,376,816	38.55%
Sales Taxes	7,074,978	32,900,000	25,825,022	78.50%
Licenses & Permits	459,128	376,000	(83,128)	-22.11%
Intergovernmental	350,372	1,656,350	1,305,978	78.85%
Fees	3,284,835	11,960,475	8,675,640	72.54%
Fines & Forfeitures	412,323	1,600,000	1,187,677	74.23%
Interest	1,378,201	3,895,000	2,516,799	64.62%
Other Revenue	-	30,000	30,000	100.00%
	$ 86,874,067	$ 172,708,871	$ 85,834,804	49.70%



Jefferson County, Texas

Statement of Revenues - Compared With Budget Allocation

For The Month Ending January 31, 2026

	October 2025 -December	January	Cumulative Total	Annual Budget	Unrealized Balance
Jury Fund					
Current Taxes	$ 72,073	$ 119,374	$ 191,447	$ 311,759	$ 120,312
Delinquent Taxes	497	282	779	1,414	635
Jury Fees	10,991	5,311	16,302	70,000	53,698
Other Revenue	45,410	-	45,410	275,600	230,190
Road & Bridge Pct. 1					
Current Taxes	229,814	380,638	610,452	994,082	383,630
Delinquent Taxes	3,354	1,905	5,259	9,549	4,290
Auto Registration Fees	-	66,564	66,564	675,000	608,436
Road & Bridge Fees	116,289	58,275	174,564	525,000	350,436
Sales, Rentals & Services	317	896	1,213	-	(1,213)
Fines and Forfeitures	44,625	22,575	67,200	250,000	182,800
Road & Bridge Pct. 2					
Current Taxes	229,814	380,637	610,451	994,082	383,631
Delinquent Taxes	3,354	1,905	5,259	9,549	4,290
Auto Registration Fees	-	66,564	66,564	675,000	608,436
Road & Bridge Fees	116,289	58,275	174,564	525,000	350,436
Fines and Forfeitures	44,625	22,576	67,201	250,000	182,799
Road & Bridge Pct. 3					
Current Taxes	229,814	380,637	610,451	994,082	383,631
Delinquent Taxes	3,354	1,905	5,259	9,549	4,290
Auto Registration Fees	-	66,564	66,564	675,000	608,436
Road & Bridge Fees	116,289	58,275	174,564	525,000	350,436
Fines and Forfeitures	44,625	22,576	67,201	250,000	182,799
Road & Bridge Pct. 4					
Current Taxes	229,814	380,637	610,451	994,082	383,631
Delinquent Taxes	3,354	1,905	5,259	9,549	4,290
Intergovernmental Revenue	-	-	-	15,000	15,000
Auto Registration Fees	-	66,564	66,564	675,000	608,436
Road & Bridge Fees	116,289	58,275	174,564	525,000	350,436
Sales, Rentals & Services	94	(204)	(110)	-	110
Fines and Forfeitures	44,625	22,576	67,201	250,000	182,799

Jefferson County, Texas

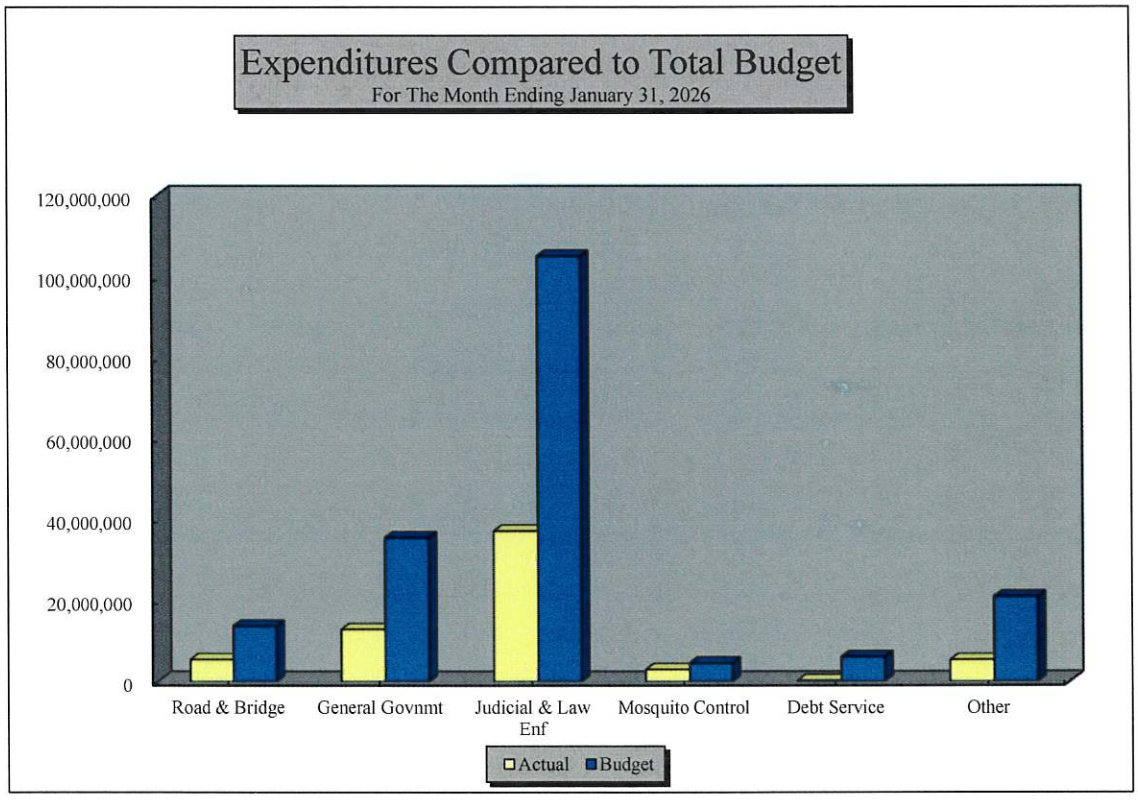
Statement of Revenues - Compared With Budget Allocation

For The Month Ending January 31, 2026

	October 2025 -December	January	Cumulative Total	Annual Budget	Unrealized Balance
Engineering Fund					
Current Taxes	$ 303,780	$ 503,148	$ 806,928	$ 1,314,032	$ 507,104
Delinquent Taxes	4,428	2,514	6,942	12,605	5,663
Licenses and Permits	2,870	370	3,240	5,500	2,260
Sales, Rentals & Services	1,500	500	2,000	2,000	-
Parks & Recreation					
Current Taxes	35,897	59,457	95,354	155,279	59,925
Delinquent Taxes	705	400	1,105	2,006	901
Sales, Rentals & Services	10,820	2,700	13,520	65,300	51,780
General Fund					
Current Taxes	24,463,945	40,519,322	64,983,267	105,811,265	40,827,998
Delinquent Taxes	349,310	198,346	547,656	994,430	446,774
Sales Taxes	3,736,362	3,338,616	7,074,978	32,900,000	25,825,022
Other Taxes	-	-	-	30,000	30,000
Licenses and Permits	421,485	34,403	455,888	370,500	(85,388)
Intergovernmental Revenue	220,724	84,238	304,962	1,365,750	1,060,788
Fees of Office	791,893	323,139	1,115,032	3,564,825	2,449,793
Other Sales, Rentals & Svcs.	781,839	390,527	1,172,366	3,458,350	2,285,984
Fines & Forfeitures	101,369	42,151	143,520	600,000	456,480
Interest	780,869	532,512	1,313,381	3,780,000	2,466,619
Other Revenue	-	-	-	-	-
Mosquito Control Fund					
Current Taxes	469,459	777,557	1,247,016	2,030,687	783,671
Delinquent Taxes	14,985	8,509	23,494	42,660	19,166
Tobacco Settlement Fund					
Interest	24,840	11,524	36,364	90,000	53,636
Debt Service					
Current Taxes	1,322,229	2,189,988	3,512,217	5,541,696	2,029,479
Delinquent Taxes	22,615	12,569	35,184	58,689	23,505
Interest	12,572	15,884	28,456	25,000	(3,456)
Total	$ 35,580,206	$ 51,293,861	$ 86,874,067	$ 172,708,871	$ 85,834,804

Jefferson County, Texas
Statement of Expenditures - Compared With Budget Allocation - 33% of Budget Expended
For The Month Ending January 31, 2026

	Cumulative Actual	Annual Budget	Unencumbered Balance	Percentage Unencumbered
Jury Fund	$ 176,310	$ 663,633	$ 487,323	73.43%
Road & Bridge Funds	4,882,438	11,901,328	7,018,890	58.98%
Engineering Fund	462,342	1,554,245	1,091,903	70.25%
Parks & Recreation Fund	69,834	282,301	212,467	75.26%
General Fund:				
General Government	12,888,722	35,550,422	22,661,700	63.75%
Judicial	8,113,894	25,346,735	17,232,841	67.99%
Law Enforcement	28,883,618	79,063,957	50,180,339	63.47%
Education	161,927	527,472	365,545	69.30%
Health & Welfare	2,132,697	9,818,346	7,685,649	78.28%
Maintenance	1,950,898	5,066,738	3,115,840	61.50%
Other	809,135	5,259,206	4,450,071	84.61%
Mosquito Control Fund	2,951,820	4,530,508	1,578,688	34.85%
Tobacco Settlement	250,000	250,000	-	-
Debt Service Funds	203,020	6,089,650	5,886,630	96.67%
	$ 63,936,655	$ 185,904,541	$ 121,967,886	65.61%



Jefferson County, Texas

Statement of Expenditures - Compared With Budget Allocation

For The Month Ending January 31, 2026

	October 2025 December	January	Encumbrances	Cumulative Total	Annual Budget	Unencumbered Balance
Jury Fund	$ 115,155	$ 53,251	$ 7,904	$ 176,310	$ 663,633	$ 487,323
Road & Brdg Pct. 1	645,879	184,759	584,198	1,414,836	3,304,769	1,889,933
Road & Brdg Pct. 2	602,302	192,720	469,611	1,264,633	2,825,658	1,561,025
Road & Brdg Pct. 3	589,417	232,210	105,479	927,106	2,730,044	1,802,938
Road & Brdg Pct. 4	983,317	172,362	120,184	1,275,863	3,040,857	1,764,994
Engineering	283,166	175,439	3,737	462,342	1,554,245	1,091,903
Parks & Recreation	31,806	13,116	24,912	69,834	282,301	212,467
Tax Assessor/Coll.	1,180,354	487,152	89,748	1,757,254	5,235,997	3,478,743
Human Resources	138,929	51,454	7,129	197,512	616,027	418,515
County Auditor	414,886	216,829	357	632,072	1,984,368	1,352,296
County Clerk	584,693	287,994	10,636	883,323	2,852,955	1,969,632
County Judge	243,250	110,791	41	354,082	1,219,004	864,922
Risk Management	48,448	22,769	864	72,081	386,331	314,250
County Treasurer	90,294	43,315	415	134,024	409,014	274,990
Printing Department	24,308	12,458	11,044	47,810	173,328	125,518
Purchasing Department	157,188	75,651	23,988	256,827	720,382	463,555
General Services	4,008,862	893,896	144,403	5,047,161	15,783,115	10,735,954
MIS	2,489,728	361,203	24,630	2,875,561	4,774,619	1,899,058
Voter's Registration	58,499	12,835	735	72,069	248,094	176,025
Elections	494,420	26,757	37,769	558,946	1,147,188	588,242
District Attorney	1,911,567	930,273	154,487	2,996,327	9,072,508	6,076,181
District Clerk	643,524	279,422	73,907	996,853	2,756,774	1,759,921
Criminal Dist. Court	415,727	172,719	-	588,446	2,041,514	1,453,068
58th Dist. Court	84,056	42,485	-	126,541	388,683	262,142
60th Dist. Court	90,009	44,384	10,269	144,662	420,648	275,986
136th Dist. Court	88,303	42,890	61	131,254	404,524	273,270
172nd Dist. Court	87,991	43,549	5,098	136,638	391,977	255,339
252nd Dist. Court	236,232	117,897	1,672	355,801	1,454,337	1,098,536
279th Dist. Court	226,620	52,601	271	279,492	781,897	502,405
317th Dist. Court	120,996	58,567	618	180,181	594,918	414,737
J.P. Pct. 1 Pl 1	103,206	50,315	733	154,254	480,726	326,472
J.P. Pct. 1 Pl 2	111,291	55,271	101	166,663	495,821	329,158
J.P. Pct. 2	96,493	48,251	592	145,336	473,173	327,837
J.P. Pct. 4	109,952	54,587	264	164,803	494,101	329,298
J.P. Pct. 6	105,432	52,744	50	158,226	486,000	327,774
J.P. Pct. 7	113,069	53,518	55	166,642	501,334	334,692
J.P. Pct. 8	99,710	49,274	520	149,504	475,897	326,393
Cnty. Court at Law 1	146,449	74,535	46	221,030	668,308	447,278
Cnty. Court at Law 2	162,264	73,695	1,292	237,251	904,965	667,714
Cnty. Court at Law 3	206,139	84,867	168	291,174	1,086,879	795,705
Court Master	143,165	63,075	30	206,270	617,185	410,915

Jefferson County, Texas

Statement of Expenditures - Compared With Budget Allocation

For The Month Ending January 31, 2026

	October 2025 December	January	Encumbrances	Cumulative Total	Annual Budget	Unencumbered Balance
Dispute Resolution	$ 77,261	$ 37,044	$ 2,241	$ 116,546	$ 354,566	$ 238,020
Comm. Supervision	3,602	565	-	4,167	22,416	18,249
Sheriff's Dept.	4,326,660	2,321,340	436,409	7,084,409	19,614,193	12,529,784
Crime Lab	460,557	198,919	233,004	892,480	2,483,017	1,590,537
Jail	9,102,601	5,436,079	2,850,819	17,389,499	46,098,701	28,709,202
Juvenile Probation	397,876	196,454	2,472	596,802	2,003,343	1,406,541
Juvenile Detention	526,323	267,079	130,295	923,697	2,783,816	1,860,119
Constable Pct. 1	281,186	181,849	3,591	466,626	1,194,689	728,063
Constable Pct. 2	128,774	64,307	45	193,126	600,134	407,008
Constable Pct. 4	129,401	117,380	70	246,851	648,242	401,391
Constable Pct. 6	167,440	79,178	3,337	249,955	724,277	474,322
Constable Pct. 7	140,390	68,706	-	209,096	624,299	415,203
Constable Pct. 8	193,546	68,106	2,984	264,636	666,830	402,194
County Morgue	215,476	146,798	-	362,274	1,600,000	1,237,726
Agriculture Ext.	105,461	51,912	4,554	161,927	527,472	365,545
Mobile Unit	54,864	34,362	1,671	90,897	327,806	236,909
Public Health # 1	337,535	163,644	279	501,458	1,585,505	1,084,047
Public Health # 2	298,627	143,174	1,636	443,437	1,481,631	1,038,194
Nurse Practitioner	97,838	48,180	383	146,401	445,846	299,445
Child Welfare	-	-	-	-	95,000	95,000
Env. Control	109,643	53,065	37,469	200,177	576,674	376,497
Ind. Medical Svcs.	235,508	93,468	280,936	609,912	4,943,871	4,333,959
Emergency Mgmt.	55,948	83,921	546	140,415	362,013	221,598
Beaumont Maintenance	663,828	326,738	427,688	1,418,254	3,736,007	2,317,753
Port Arthur Maint.	202,102	92,349	116,131	410,582	1,029,701	619,119
Mid-County Maint.	58,590	21,002	42,470	122,062	301,030	178,968
Service Center	297,241	125,571	254,030	676,842	1,509,039	832,197
Veteran Service	89,033	43,142	118	132,293	423,998	291,705
Mosquito Control	1,810,893	146,311	994,616	2,951,820	4,530,508	1,578,688
Tobacco Settlement	250,000	-	-	250,000	250,000	-
Debt Service Funds	-	203,020	-	203,020	6,089,650	5,886,630
Contingency	-	-	-	-	3,326,169	3,326,169
Total	$ 39,305,300	$ 16,885,543	$ 7,745,812	$ 63,936,655	$ 185,904,541	$ 121,967,886

Jefferson County, Texas
Statement of Bonded Indebtedness
For The Month Ending January 31, 2026

Issue	Beginning Amount Outstanding	2025-2026 Requirements Principal	Interest	Fees	Total	2025-2026 Payments Principal	Interest	Fees	Total	Ending Amount Outstanding
2019 Certificates of Obligation	12,005,000	665,000	402,150	2,500	1,069,650	-	201,075	1,945	203,020	12,005,000
	$ 12,005,000	$ 665,000	$ 402,150	$ 2,500	$ 1,069,650	$ -	$ 201,075	$ 1,945	$ 203,020	$ 12,005,000

Jefferson County, Texas
Statement of Transfers In and Out
For The Month Ending January 31, 2026

	Fund	Transfers In		Transfers Out	
120	General Fund	-		586,166	(a)
120	General Fund	-		112,351	(b)
230	Commuity Supervision Fund	-		292,265	(a)
233	Mentally Impaired Offender	16,584	(a)	-	
237	Community Corrections Program	86,020	(a)	-	
239	Drug Diversion Program	189,661	(a)	-	
241	Sheriff Department Grants	1,500	(b)	-	
245	Crime Victim's Clearing	63,171	(b)	-	
257	Auto Theft Grant	5,952	(b)	-	
263	VAWA Fund	11,750	(b)	-	
550	SETEC Fund	586,166	(a)	-	
876	Sheriff-Spindletop Grant	29,978	(b)	-	
		$990,782		$990,782	

(a) Budgeted Transfer
(b) Grant Match

PATTILLO, BROWN & HILL, L.L.P.
401 West State Highway 6
Waco, Texas 76710
254.772.4901 | pbhcpa.com

Honorable County Judge
and Commissioners Court
Jefferson County, Texas

We have audited the financial statements of Jefferson County, Texas (the "County"), as of and for the year ended September 30, 2025, and have issued our report thereon dated March 20, 2026. Professional standards require that we advise you of the following matters relating to our audit.

Our Responsibility in Relation to the Financial Statement Audit

As communicated in our engagement letter dated July 3, 2025, our responsibility, as described by professional standards, is to form and express opinions about whether the financial statements that have been prepared by management with your oversight are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America. Our audit of the financial statements does not relieve you or management of your respective responsibilities.

Our responsibility, as prescribed by professional standards, is to plan and perform our audit to obtain reasonable, rather than absolute, assurance about whether the financial statements are free of material misstatement. An audit of financial statements includes consideration of internal controls over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control over financial reporting. Accordingly, as part of our audit, we considered the internal control of Jefferson County, Texas solely for the purpose of determining our audit procedures and not to provide any assurance concerning such internal control.

We are also responsible for communicating significant matters related to the audit that are, in our professional judgment, relevant to your responsibilities in overseeing the financial reporting process. However, we are not required to design procedures for the purpose of identifying other matters to communicate to you.

Planned Scope and Timing of the Audit

We conducted our audit consistent with the planned scope and timing we previously communicated to you.

Compliance with All Ethics Requirements Regarding Independence

The engagement team, others in our firm, as appropriate, our firm, and our network firms have complied with all relevant ethical requirements regarding independence.

As a part of the engagement, we assisted in preparing the financial statements, related notes to the financial statements and the schedule of federal and state awards in conformity with U.S. generally accepted accounting principles. These non-audit services do not constitute an audit under *Government Auditing Standards* and such services were not conducted in accordance with *Government Auditing Standards.*

In order to reduce threats to our independence caused by these nonattest services to an acceptable level, we applied certain safeguards. These safeguards include a concurring review, which is a review of the financial statements and key audit areas which is performed by a partner or manager who has adequate experience in audits of local governments, but who was not involved in this audit engagement. The concurring reviewer serves as an evaluator of the performance of the engagement team and the nonattest services provided.

In addition, management assumed responsibility for the financial statements, related notes to the financial statements, schedule of expenditures of federal and state awards, and any other nonaudit services we provided. Management acknowledged, in the management representation letter, our assistance with the preparation of the financial statements, related notes to the financial statements and the schedule of expenditures of federal and state awards, and that these items were reviewed and approved prior to their issuance and accepted responsibility for them. Further, the nonaudit services were overseen by an individual within management that has the suitable skill, knowledge, or experience; evaluated the adequacy and results of the services; and accepted responsibility for them.

Significant Risks Considered

We have identified the following significant risks during our audit process, which required special audit consideration. None of these risks resulted in a significant matter, finding or issue.

Significant Risk Identified	Reasoning for Special Audit Consideration
Management override of controls	The risk that members of management could circumvent well-designed and effective internal controls.
Bank accounts	Like many Texas counties, Jefferson County has a large number of bank accounts at multiple depositories with different signors. No one person has signatory authority for the whole County. Increased risk of improperly reconciled cash or omitted bank accounts.

Qualitative Aspects of the Entity's Significant Accounting Practices

Significant Accounting Policies

Management has the responsibility to select and use appropriate accounting policies. A summary of the significant accounting policies adopted by the County is included in the notes to the financial statements. As described in the notes to the financial statements, during the year, the entity implemented Governmental Accounting Standards Board (GASB) Statement No. 101, *Compensated Absences*. No matters have come to our attention that would require us, under professional standards, to inform you about (1) the methods used to account for significant unusual transactions and (2) the effect of significant accounting policies in controversial or emerging areas for which there is a lack of authoritative guidance or consensus.

Significant Accounting Estimates

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's current judgments. Those judgments are normally based on knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ markedly from management's current judgments.

The most sensitive accounting estimates affecting the financial statements are:

Management's estimate of the allowance for doubtful accounts for property tax and adjudicated fines receivable is based on a historical analysis of the collectability of these receivables. We evaluated key factors and assumptions used to develop the allowance in determining that it is reasonable in relation to the financial statements taken as a whole.

Management's estimates of the accumulated depreciation, the related useful lives of capital assets, and the allowance for uncollectible fines. We evaluated the key factors and assumptions used to develop these estimates in determining that it is reasonable in relation to the financial statements taken as a whole.

Management's estimate of the fair values of investments is based on current and historical market trade data and information provided by investment advisors. We evaluated the key factors and assumptions used to develop the fair value estimates and determined that they are reasonable in relation to the basic financial statements taken as a whole and in relation to the applicable opinion units.

Management's estimates of the pension liability, OPEB liability, and pension and OPEB expense are based on actuarial assumptions which are determined by the demographics of the plan and future projections that the actuarial makes based on historical information of the plan and the investment market. We evaluated the key factors and assumptions used to develop the pension liability, OPEB liability, and pension and OPEB expense and determined that they are reasonable in relation to the basic financial statements taken as a whole and in relation to the applicable opinion units.

Management's estimate of the compensated absence amounts more likely than not to be used is based on historical usage patterns, current employee leave balances, and applicable policies. We evaluated the key factors and assumptions used to develop this estimate and determined that it is reasonable in relation to the basic financial statements taken as a whole and in relation to the applicable opinion units

Financial Statement Disclosures

Certain financial statement disclosures involve significant judgment and are particularly sensitive because of their significance to financial statement users. The most sensitive disclosures affecting Jefferson County, Texas' financial statements relate to the pension and OPEB liabilities.

Significant Difficulties Encountered during the Audit

We encountered no significant difficulties in dealing with management relating to the performance of the audit.

Uncorrected and Corrected Misstatements

For purposes of this communication, professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that we believe are trivial, and communicate them to the appropriate level of management. Further, professional standards require us to also communicate the effect of uncorrected misstatements related to prior periods on the relevant classes of transactions, account balances or disclosures, and the financial statements as a whole and each applicable opinion unit. Management has corrected all identified misstatements.

In addition, professional standards require us to communicate to you all material, corrected misstatements that were brought to the attention of management as a result of our audit procedures. None of the misstatements identified by us as a result of audit procedures and corrected by management were material, either individual or in aggregate, to the financial statements taken as a whole.

Disagreements with Management

For purposes of this letter, professional standards define a disagreement with management as a matter, whether or not resolved to our satisfaction, concerning a financial accounting, reporting, or auditing matter, which could be significant to the County's financial statements or the auditor's report. No such disagreements arose during the course of the audit.

Circumstances that Affect the Form and Content of the Auditor's Report

For purposes of this letter, professional standards require that we communicate any circumstance that affect the form and content of our auditor's report. No such circumstances exist.

Representations Requested from Management

We have requested certain written representations from management, which are included in the management representation letter dated March 20, 2026.

Management's Consultations with Other Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters. Management informed us that, and to our knowledge, there were no consultations with other accountants regarding auditing and accounting matters.

Other Significant Matters, Findings, or Issues

In the normal course of our professional association with the County, we generally discuss a variety of matters, including the application of accounting principles and auditing standards, operating and regulatory conditions affecting the entity, and operational plans and strategies that may affect the risks of material misstatement. None of the matters discussed resulted in a condition to our retention as Jefferson County, Texas' auditors.

New Accounting Pronouncements

The Governmental Accounting Standards Board (GASB) issued the following statements which will become effective in subsequent fiscal years:

GASB Statement No. 103, *Financial Reporting Model Improvements* – The objective of this Statement is to improve key components of the financial reporting model to enhance its effectiveness in providing information that is essential for decision making and assessing a government's accountability. This Statement also addresses certain application issues. This Statement will become effective for reporting periods beginning after June 15, 2025, and the impact has not yet been determined.

GASB Statement No. 104, *Disclosure of Certain Capital Assets* – The objective of this Statement is to provide users of government financial statements with essential information about certain types of capital assets. This Statement requires certain types of capital assets to be presented separately in the note disclosures, including right-to-use assets related to leases, Subscription-Based Information Technology Arrangements, and public-private or public-public partnerships. Other intangible assets are also required to be presented separately by major class. Additional disclosures have also been required for capital assets held for sale. This Statement will become effective for reporting periods beginning after June 15, 2025, and the impact has not yet been determined.

GASB Statement No. 105, *Subsequent Events* – The objective of this Statement is to improve the financial reporting requirements for subsequent events, thereby enhancing consistency in their application and better meeting the information needs of financial statement users. This statement will become effective for fiscal years beginning after June 15, 2026, and the impact has not yet been determined.

Restrictions on Use

This report is intended solely for the information and use of the Commissioners' Court, and management of Jefferson County, Texas and is not intended to be, and should not be, used by anyone other than these specified parties.

Pattillo, Brown & Hill, L.L.P.

Waco, Texas
March 20, 2026

NAME	AMOUNT	CHECK NO.907	TOTAL
JURY FUND			
DAWN DONUTS	43.50	537987	
CHAPMAN VENDING	1,068.74	538020	
			1,112.24**
ROAD & BRIDGE PCT.#1			
BEAUMONT TRACTOR COMPANY	175.54	537843	
M&D SUPPLY	1.95	537868	
AT&T	47.60	537885	
SOUTHERN TIRE MART, LLC	144.95	537895	
VERIZON WIRELESS	181.80	537927	
ADVANCE AUTO PARTS	119.25	537974	
GULF COAST	7,429.05	538006	
			8,100.14**
ROAD & BRIDGE PCT.#2			
SETZER HARDWARE, INC.	102.08	537878	
ACE IMAGEWEAR	20.76	537879	
TRIANGLE ENGINE DIST.	107.24	537888	
BUMPER TO BUMPER	25.68	537946	
CENTERPOINT ENERGY RESOURCES CORP	91.44	537947	
MARTIN PRODUCT SALES LLC	517.00	537950	
NORTH & EAST TX CTY JUDGES & COMM	275.00	538016	
CHARTER COMMUNICATIONS	196.64	538030	
AMAZON CAPITAL SERVICES	86.59	538044	
			1,422.43**
ROAD & BRIDGE PCT. # 3			
FARM & HOME SUPPLY	12.05	537851	
ENTERGY	254.26	537856	
TRI-CITY FASTENER & SUPPLY	57.00	537889	
SOUTHERN TIRE MART, LLC	884.32	537895	
VERIZON WIRELESS	76.04	537927	
CHARTER COMMUNICATIONS	180.86	538027	
			1,464.53**
ROAD & BRIDGE PCT.#4			
ABLE FASTENER, INC.	63.15	537837	
CINTAS, INC.	272.22	537846	
BEAUMONT ENTERPRISE	348.00	537849	
M&D SUPPLY	502.28	537868	
SMARTS TRUCK & TRAILER INC	900.96	537881	
VULCAN MATERIALS CO.	499,092.10	537892	
PURVIS BEARING SERVICE	91.59	537954	
ON TIME TIRE	259.00	537971	
ASCO	4,678.75	537976	
SHOPPA'S FARM SUPPLY	6,507.88	537983	
O'REILLY AUTO PARTS	346.78	537999	
GULF COAST	1,557.90	538006	
			514,620.61**
ENGINEERING FUND			
CDW COMPUTER CENTERS, INC.	1,208.70	537896	
MICHELLE FALGOUT	346.00	538021	
AMAZON CAPITAL SERVICES	362.99	538044	
			1,917.69**
PARKS & RECREATION			
ENTERGY	650.43	537856	
VERIZON WIRELESS	37.21	537927	
			687.64**
GENERAL FUND			
TAX OFFICE			
HERNANDEZ OFFICE SUPPLY, INC.	122.06	537858	
PITNEY BOWES INC	930.35	537874	
UNITED STATES POSTAL SERVICE	868.43	537932	
KATHLEEN SPENCER	179.22	537985	
ELISHA MONTIEL	153.56	537992	
			2,253.62*
COUNTY HUMAN RESOURCES			

NAME	AMOUNT	CHECK NO.908	TOTAL
UNITED STATES POSTAL SERVICE	4.44	537932	
BAPTIST PHYSICIAN NETWORK	56.00	537934	
OUTSOLVE, LLC	3,795.00	538038	
			3,855.44*
AUDITOR'S OFFICE			
UNITED STATES POSTAL SERVICE	3.70	537932	
			3.70*
COUNTY CLERK			
UNITED STATES POSTAL SERVICE	203.49	537932	
			203.49*
COUNTY JUDGE			
LAIRON DOWDEN, JR.	500.00	537848	
CATHERINE BRUNEY	500.00	537860	
UNITED STATES POSTAL SERVICE	14.16	537932	
ROCKY LAWDERMILK	2,250.00	537936	
THOMAS O. MOSES	500.00	537948	
KIMBERLY PHELAN, P.C.	1,350.00	537949	
DUNHAM HALLMARK PLLC	300.00	537965	
GREGORY LAW FIRM	500.00	537968	
MONTGOMERY COUNTY CLERK	425.00	537972	
VALECIA R TIZENO ATTORNEY AT LAW	500.00	538055	
			6,839.16*
RISK MANAGEMENT			
UNITED STATES POSTAL SERVICE	5.15	537932	
			5.15*
COUNTY TREASURER			
UNITED STATES POSTAL SERVICE	239.33	537932	
			239.33*
PRINTING DEPARTMENT			
PARKER BUSINESS FORMS	440.02	537958	
CINTAS CORPORATION	118.12	537990	
AMAZON CAPITAL SERVICES	571.20	538044	
			1,129.34*
PURCHASING DEPARTMENT			
UNITED STATES POSTAL SERVICE	5.55	537932	
INSIGHT PUBLIC SECTOR INC	66.29	537982	
			71.84*
GENERAL SERVICES			
CASH ADVANCE ACCOUNT	65.00	537864	
SPINDLETOP MHMR	38,984.75	537867	
CROWN CASTLE INTERNATIONAL	2,059.98	537944	
CHARTER COMMUNICATIONS	2,442.83	538025	
CHARTER COMMUNICATIONS	231.22	538028	
CHARTER COMMUNICATIONS	241.69	538029	
CHARTER COMMUNICATIONS	74.78	538035	
CHARTER COMMUNICATIONS	623.17	538036	
CHARTER COMMUNICATIONS	961.57	538037	
			45,684.99*
DATA PROCESSING			
CDW COMPUTER CENTERS, INC.	72.01	537896	
VERIZON WIRELESS	175.98	537927	
TYLER TECHNOLOGIES INC	185.00	538008	
ODP BUSINESS SOLUTIONS, LLC	13.29	538039	
AMAZON CAPITAL SERVICES	34.40	538044	
			480.68*
VOTERS REGISTRATION DEPT			
UNITED STATES POSTAL SERVICE	598.43	537932	
			598.43*
ELECTIONS DEPARTMENT			
DEPARTMENT OF INFORMATION RESOURCES	.01	537899	
UNITED STATES POSTAL SERVICE	4.73	537932	
PENSKE TRUCK LEASING CO LP	1,246.80	537941	
			1,251.54*
DISTRICT ATTORNEY			

NAME	AMOUNT	CHECK NO. 909	TOTAL
TBLS - TEXAS BOARD OF LEGAL	200.00	537886	
TEXAS DISTRICT & COUNTY ATTY ASSN.	500.00	537887	
STEPHEN HINTON	25.53	537897	
UNITED STATES POSTAL SERVICE	107.40	537932	
NMS LABS	3,464.23	537961	
THOMSON REUTERS-WEST	4,961.09	537977	
STENO AGENCY, INC	1,161.50	538022	
AMAZON CAPITAL SERVICES	270.59	538044	
VERISMA SYSTEMS INC	136.34	538067	
			10,826.68*
DISTRICT CLERK			
KIRKSEY'S SPRINT PRINTING	53.90	537865	
UNITED STATES POSTAL SERVICE	380.60	537932	
ODP BUSINESS SOLUTIONS, LLC	20.33	538039	
AMAZON CAPITAL SERVICES	27.69	538044	
			482.52*
CRIMINAL DISTRICT COURT			
NATHAN REYNOLDS, JR.	1,700.00	537876	
JOHN D WEST	3,500.00	537901	
UNITED STATES POSTAL SERVICE	3.99	537932	
LANGSTON ADAMS	1,500.00	537938	
LAURIE PEROZZO	800.00	537959	
MATUSKA LAW FIRM	900.00	537981	
JENNIFER DELAGE	3,500.00	537991	
			11,903.99*
58TH DISTRICT COURT			
SOUTHEAST TEXAS WATER	44.95	537883	
			44.95*
60TH DISTRICT COURT			
BLUE TRITON BRANDS INC	37.47	538057	
			37.47*
136TH DISTRICT COURT			
UNITED STATES POSTAL SERVICE	2.64	537932	
LEXIS-NEXIS	125.00	537933	
			127.64*
172ND DISTRICT COURT			
AMAZON CAPITAL SERVICES	572.72	538044	
			572.72*
252ND DISTRICT COURT			
THOMAS J. BURBANK PC	2,768.95	537845	
MIKE VAN ZANDT	8,750.00	537891	
UNITED STATES POSTAL SERVICE	.74	537932	
THOMSON REUTERS-WEST	206.00	537977	
EXODUS CONSULTING AND PSYCHOLOGICAL	1,000.00	538066	
			12,725.69*
279TH DISTRICT COURT			
ALISA RAUMAKER, CSR	263.20	537841	
NATHAN REYNOLDS, JR.	781.00	537876	
SOUTHEAST TEXAS WATER	83.62	537884	
UNITED STATES POSTAL SERVICE	1.48	537932	
LANGSTON ADAMS	2,145.00	537938	
JOEL WEBB VAZQUEZ	495.00	537945	
KIMBERLY PHELAN, P.C.	1,210.00	537949	
BRITTANIE HOLMES	110.00	537973	
THOMSON REUTERS-WEST	63.00	537977	
THE PARDUE LAW FIRM, PLLC	220.00	538013	
KELLEY BURNS	3,057.30	538042	
EVA COLETTE SHELANDER	1,650.00	538059	
			10,079.60*
317TH DISTRICT COURT			
LANGSTON ADAMS	440.00	537938	
JOEL WEBB VAZQUEZ	435.00	537945	
KIMBERLY PHELAN, P.C.	220.00	537949	
			1,095.00*
JUSTICE COURT-PCT 1 PL 1			

NAME	AMOUNT	CHECK NO.910	TOTAL
SOUTHEAST TEXAS WATER	38.17	537882	
UNITED STATES POSTAL SERVICE	119.63	537932	
			157.80*
JUSTICE COURT-PCT 1 PL 2			
UNITED STATES POSTAL SERVICE	4.57	537932	
			4.57*
JUSTICE COURT-PCT 2			
THOMSON REUTERS-WEST	137.38	537977	
AMAZON CAPITAL SERVICES	58.99	538044	
			196.37*
JUSTICE COURT-PCT 4			
DEPARTMENT OF INFORMATION RESOURCES	.10	537899	
TEXAS ASSOCIATION OF COUNTIES	70.00	537995	
			70.10*
JUSTICE COURT-PCT 6			
UNITED STATES POSTAL SERVICE	37.22	537932	
			37.22*
JUSTICE COURT-PCT 7			
AT&T	48.16	537885	
ODP BUSINESS SOLUTIONS, LLC	22.03	538039	
			70.19*
JUSTICE OF PEACE PCT. 8			
TEXAS ASSOCIATION OF COUNTIES	70.00	537995	
			70.00*
COUNTY COURT AT LAW NO.1			
UNITED STATES POSTAL SERVICE	9.62	537932	
EFFIE ROJO	85.00	537989	
TINA M GRANGER	138.25	538062	
			232.87*
COUNTY COURT AT LAW NO. 2			
TODD W LEBLANC	700.00	537838	
DAVID GROVE	775.00	537839	
JACK LAWRENCE	775.00	537840	
DONALD BOUDREAUX	700.00	537844	
JOHN EUGENE MACEY	775.00	537869	
MARVA PROVO	400.00	537875	
CHARLES ROJAS	700.00	537898	
UNITED STATES POSTAL SERVICE	2.22	537932	
LANGSTON ADAMS	350.00	537938	
LAW OFFICE OF GILES R COLE & ASSOC	400.00	538018	
THE LAW OFFICE OF CHRISTY L CAUTHEN	700.00	538049	
BLUE TRITON BRANDS INC	87.94	538058	
			6,365.16*
COUNTY COURT AT LAW NO. 3			
TODD W LEBLANC	775.00	537838	
A. MARK FAGGARD	600.00	537850	
MARVA PROVO	400.00	537875	
LANGSTON ADAMS	425.00	537938	
JOEL WEBB VAZQUEZ	1,050.00	537945	
KIMBERLY PHELAN, P.C.	1,050.00	537949	
JENNIFER DELAGE	775.00	537991	
			5,075.00*
COURT MASTER			
UNITED STATES POSTAL SERVICE	1.48	537932	
LAWRENCE E THORNE III	5,138.31	537960	
KENT W JOHNS	1,500.00	537964	
			6,639.79*
SHERIFF'S DEPARTMENT			
FISHER SCIENTIFIC	487.58	537853	
MOORMAN & ASSOCIATES, INC.	1,530.00	537870	
DEPARTMENT OF INFORMATION RESOURCES	537.28	537899	
VERIZON WIRELESS	2,617.83	537929	

NAME	AMOUNT	CHECK NO. 911	TOTAL
UNITED STATES POSTAL SERVICE	1,484.89	537932	
NIGHT FLIGHT CONCEPTS INC	450.11	537969	
RITA HURT	600.00	537970	
SILSBEE FORD INC	2,274.38	537980	
GALLS LLC	396.75	537986	
COTTON CARGO	230.00	538004	
AMAZON CAPITAL SERVICES	265.08	538044	
BEAUMONT OCCUPATIONAL SERVICES	151.80	538045	
IDI	6,332.50	538064	
			17,358.20*
CRIME LABORATORY			
CDW COMPUTER CENTERS, INC.	52.58	537896	
VERIZON WIRELESS	37.99	537928	
			90.57*
JAIL - NO. 2			
BOB BARKER CO., INC.	1,831.80	537842	
CITY OF BEAUMONT - WATER DEPT.	32,708.91	537847	
W.W. GRAINGER, INC.	546.73	537855	
KOMMERCIAL KITCHENS	371.10	537866	
ULINE SHIPPING SUPPLY SPECIALI	130.40	537890	
WHOLESALE ELECTRIC SUPPLY CO.	308.00	537893	
WORTH HYDROCHEM OF THE GULF COAST	390.00	537894	
LOWE'S HOME CENTERS, INC.	34.89	537935	
GALLS LLC	479.10	537986	
MOORE-ALL TEX SUPPLY	70.41	537998	
TRINITY SERVICES GROUP INC	53,560.43	538005	
BOSWORTH PAPERS	154.25	538017	
AMMCO SOLUTIONS GROUP LLC	1,683.84	538060	
AMERICAN WELDING AND GAS INC	132.21	538065	
			92,402.07*
JUVENILE PROBATION DEPT.			
FED EX	47.03	537852	
VERIZON WIRELESS	54.33	537927	
UNITED STATES POSTAL SERVICE	3.70	537932	
			105.06*
JUVENILE DETENTION HOME			
CITY OF BEAUMONT - WATER DEPT.	6,030.39	537847	
CENTERPOINT ENERGY RESOURCES CORP	641.38	537947	
			6,671.77*
CONSTABLE PCT 1			
VERIZON WIRELESS	305.14	537927	
UNITED STATES POSTAL SERVICE	42.90	537932	
AXON ENTERPRISE INC	44.60	537994	
TEXAS ASSOCIATION OF COUNTIES	180.00	537996	
COTTON CARGO	34.64	538004	
			607.28*
CONSTABLE-PCT 2			
VERIZON WIRELESS	113.97	537927	
			113.97*
CONSTABLE-PCT 4			
VERIZON WIRELESS	113.97	537927	
			113.97*
CONSTABLE-PCT 6			
VERIZON WIRELESS	113.97	537927	
UNITED STATES POSTAL SERVICE	13.84	537932	
MUNRO'S SAFETY APPAREL, LLC	17.70	537939	
ODP BUSINESS SOLUTIONS, LLC	55.98	538039	
			201.49*
CONSTABLE PCT. 7			
AT&T	48.16	537885	
VERIZON WIRELESS	113.97	537927	
			162.13*
CONSTABLE PCT. 8			

NAME	AMOUNT	CHECK NO.912	TOTAL
VERIZON WIRELESS	113.97	537927	
			113.97*
COUNTY MORGUE			
FORENSIC MEDICAL	108,000.00	538001	
			108,000.00*
AGRICULTURE EXTENSION SVC			
M&D SUPPLY	54.08	537868	
TEXAS AGRILIFE EXTENSION SERVICE	65.00	537955	
AMAZON CAPITAL SERVICES	65.98	538044	
REBECCA CARPENTER	370.48	538047	
TREVIPAY	59.54	538061	
			615.08*
MOBILE UNIT			
VERIZON WIRELESS	75.20	537927	
			75.20*
HEALTH AND WELFARE NO. 1			
UNITED STATES POSTAL SERVICE	118.75	537932	
RACHEL DRAGULSKI	200.00	537937	
CONNIE M ROBERTS	68.00	537951	
KAYLEE BENNETT	47.85	538011	
EZEA D EDE MD	3,647.95	538014	
MUNRO'S UNIFORM SERVICES, LLC	19.80	538041	
			4,102.35*
HEALTH AND WELFARE NO. 2			
GABRIEL FUNERAL HOME, INC.	257.34	537854	
AT&T	48.16	537885	
EZEA D EDE MD	3,647.95	538014	
			3,953.45*
NURSE PRACTITIONER			
SERVET MUHITTIN SATIR	1,000.00	538019	
			1,000.00*
CHILD WELFARE UNIT			
TEXAS FAMILY CARE NETWORK	95,000.00	538053	
			95,000.00*
MAINTENANCE-BEAUMONT			
CITY OF BEAUMONT - WATER DEPT.	14,385.39	537847	
ENTERGY	29,414.06	537856	
HYDRO-CLEAN SERVICES, INC.	554.25	537861	
SANITARY SUPPLY, INC.	1,606.69	537877	
ACE IMAGEWEAR	287.46	537879	
AT&T	120.22	537885	
DEPARTMENT OF INFORMATION RESOURCES	.98	537899	
TEXAS FIRE & COMMUNICATIONS	225.00	537900	
OTIS ELEVATOR COMPANY	2,808.46	537943	
FIRETROL PROTECTION SYSTEMS, INC.	1,955.00	537957	
LANDSCAPER'S WHOLESALE MARKET	49.90	537963	
CINTAS CORPORATION	125.11	537990	
REXEL USA INC	101.94	537997	
CHARTER COMMUNICATIONS	117.51	538033	
AAA ACTION SEPTIC SERVICE LLC	425.00	538048	
			52,176.97*
MAINTENANCE-PORT ARTHUR			
AT&T	72.06	537885	
TEXAS GAS SERVICE	621.85	537940	
BAKER DISTRIBUTING COMPANY	87.92	537942	
BONIN ROOFING	14,254.00	537978	
CHARTER COMMUNICATIONS	379.25	538032	
PARKER'S BUILDING SUPPLY	285.39	538043	
AMAZON CAPITAL SERVICES	398.77	538044	
MASSEY SERVICES INC	57.00	538051	
			16,156.24*
MAINTENANCE-MID COUNTY			
SANITARY SUPPLY, INC.	171.06	537877	

NAME	AMOUNT	CHECK NO.[913]	TOTAL
ACE IMAGEWEAR	42.09	537879	
CENTERPOINT ENERGY RESOURCES CORP	162.40	537947	
MASSEY SERVICES INC	52.50	538051	
			428.05*
SERVICE CENTER			
HI-LINE	476.00	537859	
J.K. CHEVROLET CO.	863.34	537862	
M&D SUPPLY	68.58	537868	
PHILPOTT MOTORS, INC.	27.70	537873	
JEFFERSON CTY. TAX OFFICE	7.50	537902	
JEFFERSON CTY. TAX OFFICE	7.50	537903	
JEFFERSON CTY. TAX OFFICE	7.50	537904	
JEFFERSON CTY. TAX OFFICE	7.50	537905	
JEFFERSON CTY. TAX OFFICE	7.50	537906	
JEFFERSON CTY. TAX OFFICE	7.50	537907	
JEFFERSON CTY. TAX OFFICE	7.50	537908	
JEFFERSON CTY. TAX OFFICE	7.50	537909	
JEFFERSON CTY. TAX OFFICE	7.50	537910	
JEFFERSON CTY. TAX OFFICE	7.50	537911	
JEFFERSON CTY. TAX OFFICE	7.50	537912	
JEFFERSON CTY. TAX OFFICE	7.50	537913	
JEFFERSON CTY. TAX OFFICE	7.50	537914	
JEFFERSON CTY. TAX OFFICE	7.50	537915	
JEFFERSON CTY. TAX OFFICE	7.50	537916	
JEFFERSON CTY. TAX OFFICE	7.50	537917	
JEFFERSON CTY. TAX OFFICE	7.50	537918	
JEFFERSON CTY. TAX OFFICE	7.50	537919	
JEFFERSON CTY. TAX OFFICE	7.50	537920	
JEFFERSON CTY. TAX OFFICE	7.50	537921	
JEFFERSON CTY. TAX OFFICE	7.50	537922	
JEFFERSON CTY. TAX OFFICE	7.50	537923	
JEFFERSON CTY. TAX OFFICE	7.50	537924	
JEFFERSON CTY. TAX OFFICE	7.50	537925	
BUMPER TO BUMPER	1,148.34	537946	
AMERICAN TIRE DISTRIBUTORS	881.40	537956	
MIGHTY OF SOUTHEAST TEXAS	99.60	537966	
ADVANCE AUTO PARTS	168.83	537974	
1800RADIATOR & AC	180.00	537984	
JCN OIL SERVICE	140.00	538012	
REBECCA CARPENTER	100.02	538047	
			4,333.81*
VETERANS SERVICE			
UNITED STATES POSTAL SERVICE	2.17	537932	
ODP BUSINESS SOLUTIONS, LLC	28.38	538039	
PANORAMIC SOFTWARE INC	2,080.00	538050	
			2,110.55*
			535,324.22**
MOSQUITO CONTROL FUND			
OVERHEAD DOOR CO.	1,554.00	537872	
PHILPOTT MOTORS, INC.	49.65	537873	
SETZER HARDWARE, INC.	74.65	537878	
ACE IMAGEWEAR	108.60	537879	
CENTERPOINT ENERGY RESOURCES CORP	339.06	537947	
TEXAS DEPARTMENT OF AGRICULTURE	150.00	537988	
CY-FAIR TIRE	68.35	538003	
			2,344.31**
SECURITY FEE FUND			
ALLIED UNIVERSAL SECURITY SERVICES	10,788.86	538010	
			10,788.86**
JUVENILE PROB & DET. FUND			
VERIZON WIRELESS	71.26	537927	
			71.26**
COMMUNITY SUPERVISION FND			
DEPARTMENT OF INFORMATION RESOURCES	.02	537899	
UNITED STATES POSTAL SERVICE	54.02	537932	
REDWOOD TOXICOLOGY LABORATORY INC	117.22	537952	
CHARTER COMMUNICATIONS	225.83	538031	

NAME	AMOUNT	CHECK NO.	TOTAL
ODP BUSINESS SOLUTIONS, LLC	991.04	538039	
			1,388.13**
COUNTY RECORDS MANAGEMENT			
LAURIE LEISTER	110.05	538040	
			110.05**
DEPUTY SHERIFF EDUCATION			
CASH ADVANCE ACCOUNT	1,304.40	537864	
			1,304.40**
J.P. COURTROOM TECH. FUND			
VERIZON WIRELESS	151.96	537927	
			151.96**
HOTEL OCCUPANCY TAX FUND			
CINTAS, INC.	167.71	537846	
ENTERGY	1,304.96	537856	
HALL-MCSWEEN CANVAS & UPHOLSTERY	192.50	537857	
M&D SUPPLY	39.96	537868	
DEPARTMENT OF INFORMATION RESOURCES	1.03	537899	
LA RUE ROUGEAU	222.58	537953	
SIGN DOCTOR, INC	330.00	537962	
FERGUSON ENTERPRISES INC	303.74	537993	
COTTON CARGO	480.00	538004	
VICTORIA SCHULTZ	292.90	538007	
GEORGE WEST	26.83	538024	
CHARTER COMMUNICATIONS	130.63	538026	
ODP BUSINESS SOLUTIONS, LLC	7.46	538039	
			3,485.38**
CAPITAL PROJECTS FUND			
L&L GENERAL CONTRACTORS	329,080.00	537975	
TIM RICHARDSON	9,000.00	537979	
			338,080.00**
AIRPORT FUND			
CINTAS, INC.	142.89	537846	
SHERWIN-WILLIAMS	207.96	537880	
VERIZON WIRELESS	37.99	537927	
LOWE'S HOME CENTERS, INC.	117.55	537935	
CENTERPOINT ENERGY RESOURCES CORP	275.02	537947	
DELTA INDUSTRIAL SERVICE & SUPPLY	2,084.00	537967	
TITAN AVIATION FUELS	93,355.08	538000	
BEARCOM / KAY ELECTRONICS	925.00	538002	
CHARTER COMMUNICATIONS	125.65	538034	
ODP BUSINESS SOLUTIONS, LLC	72.62	538039	
HD SUPPLY FACILITIES MAINTENANCE	403.52	538063	
			97,747.28**
SE TX EMP. BENEFIT POOL			
UNITED HEALTHCARE SERVICES INC	909.00	538009	
LANTERN SPECIALTY CARE	35,743.74	538056	
UNITED HEALTHCARE BENEFIT SERVICES	838.37	538068	
			37,491.11**
SETEC FUND			
H.B. NEILD & SONS, INC.	1,095.78	537871	
TEXAS MATERIALS	810.00	538054	
			1,905.78**
D. A. HOT CHECK FUND			
HERNANDEZ OFFICE SUPPLY, INC.	10,241.10	537858	
			10,241.10**
PAYROLL FUND			
JEFFERSON CTY. - FLEXIBLE SPENDING	21,323.12	537817	
CLEAT	3,360.00	537818	
JEFFERSON CTY. TREASURER	11,925.32	537819	
INTERNAL REVENUE SERVICE	208.00	537820	
JEFFERSON CTY. COMMUNITY SUP.	6,472.33	537821	
JEFFERSON CTY. TREASURER - HEALTH	593,173.38	537822	
JEFFERSON CTY. TREASURER - GENERAL	10.00	537823	

NAME	AMOUNT	CHECK NO.[915]	TOTAL
JEFFERSON CTY. TREASURER - PAYROLL	2,197,779.47	537824	
JEFFERSON CTY. TREASURER - PAYROLL	720,961.20	537825	
POLICE & FIRE FIGHTERS' ASSOCIATION	5,271.77	537826	
TEXAS CHILD SUPPORT SDU	415.38	537827	
JEFFERSON CTY. TREASURER - TCDRS	840,126.18	537828	
JEFFERSON COUNTY TREASURER	3,682.71	537829	
JEFFERSON COUNTY - TREASURER -	12,587.27	537830	
NECHES FEDERAL CREDIT UNION	30,351.56	537831	
JEFFERSON COUNTY - NATIONWIDE	61,098.85	537832	
CBE GROUP INC	214.56	537833	
CHUBB	6,113.08	537834	
JEFFERSON CTY. TREASURER - VISION	2,835.16	537835	
THE HARTFORD INSURANCE GROUP	7,535.99	537836	
			4,525,445.33**
JUSTICE COURT SUPPORT FND			
VERIZON WIRELESS	37.99	537927	
			37.99**
LANGUAGE ACCESS FUND			
MASTERWORD SERVICES, INC	9,173.14	538023	
RUBEN ZAPATA	800.00	538046	
ERIKA BURGE	1,200.00	538052	
			11,173.14**
ARPA CORONAVIRUS RECOVERY			
TIDAL BASIN GOVERNMENT CONSULTING	17,297.50	538015	
			17,297.50**
CNTY & DIST COURT TECH FD			
VERIZON WIRELESS	113.97	537927	
			113.97**
MARINE DIVISION			
JACK BROOKS REGIONAL AIRPORT	1,008.77	537863	
VERIZON WIRELESS	197.95	537930	
			1,206.72**
SHERIFF-SPINDLETOP GRANT			
VERIZON WIRELESS	114.39	537926	
			114.39**
			6,125,148.16***

MEMORANDUM

TO: COMMISSIONERS COURT

FROM: **FRAN LEE**

SUBJECT: BUDGET TRANSFER

DATE: MARCH 24, 2026

The following budget transfer for the County Judge is necessary to replace the laptop for probate.

120-1015-413-6002	Capital - Computer Hardware	1,700	
120-1015-413-5077	Contractual Services		1,700

DELL Technologies

A quote for your consideration.

To retrieve this eQuote online, log in to your **Dell Premier Page** and search for your eQuote number under "Quotes" in the top menu bar.

Quote No.:	3000200588953.1
Total (USD):	$1,691.26
eQuote Name:	County Judge
eQuote Creator:	amy.serrant@jeffersoncountytx.gov
Quoted On:	Mar. 24, 2026
Expires By:	Apr. 07, 2026
Company Name:	JEFFERSON COUNTY
Customer Number:	530018967807
Phone:	4098358593
Premier Page Name:	Jefferson County
Contract Name:	STATE OF TEXAS DEPARTMENT OF INFORMATION RESOURCES
Contract Code:	C000001269299
Customer Agreement Number:	DIR-CPO-5792

Billing Address:
JEFFERSON COUNTY
PAYABLE ACCOUNTS
1149 PEARL ST
STE 6TH
BEAUMONT , TX 77701-3634

Pricing Summary

	Qty	Unit Price	Discounted Unit Price	Subtotal
14" laptop non-touch with image	1	$3,407.10	$1,691.26	$1,691.26
Premier discount		- $1,715.84		
			Subtotal:	$1,691.26
			Shipping:	$0.00
			Estimated Tax:	$0.00
			Total (USD):	$1,691.26

Shipping Address:
JEFFERSON COUNTY MIS 6TH FLOOR
SERRANT AMY
1149 PEARL STREET
BEAUMONT , TX 77701

Shipping Method:
FREE Standard Delivery

Product Details

	Qty	Unit Price	Subtotal
 **14" laptop non-touch with image (210-BPDR)** Order Code: rcrc1288351-8605407	1	$1,691.26	$1,691.26

Module	Description	Product Code	SKU	Qty
Base	Dell Pro 14 Plus (PB14250) XCTO Base	G9URSAY	210-BPDR	1
Processor	Intel® Core™ Ultra 5 235U, vPro® (12 TOPS NPU, 12 cores, up to 4.9 GHz)	G3K8ACN	379-BFXD	1
Operating System	Windows 11 Pro	G0VA5W2	619-BBQD	1
Memory	16 GB: 2 x 8 GB, DDR5, 5600 MT/s (5200 MT/s with Intel® Core™ processors)	G1SX8UY	370-BCNF	1
Base Options	Integrated Intel® graphics for Intel® Core™ Ultra 5 235U vPro® processor	G28WLNM	338-CRMP	1
Storage	256 GB, TLC, SSD	GHXSUR9	400-BSLV	1
Operating System Language Pack	English, French, Spanish, Brazilian Portuguese	GALH68M	619-BBPD	1
Display	14", Non-Touch, FHD+ 1920 x 1200, 60Hz, IPS, Anti-Glare, 400 nit, 45% NTSC, FHD+IR Cam	GASY3KZ	391-BKLJ	1
PalmRest	No Fingerprint Reader, No Smart Card Reader, RJ-45	GVU6OLQ	346-BLCZ	1
Camera	FHD HDR + IR Camera, Facial Recognition, TNR, Camera Shutter, Microphone	GVATBU9	319-BBKH	1
Keyboard	English US backlit Copilot key keyboard	GN6BZYA	583-BMLQ	1
Mouse	No Mouse	G8043UZ	570-AADK	1
Wireless Driver	Intel® AX211 WLAN Driver	GR4F3UZ	555-BLNY	1
Wireless	Intel® Wi-Fi 6E AX211, 2x2, 802.11ax, Bluetooth® 5.3 card	GNH2VCT	555-BLLZ	1
Mobile Broadband	No Mobile Broadband Card	GR957IY	556-BBCD	1
Primary Battery	3-cell, 55 Wh, ExpressCharge™ Capable, ExpressCharge™ Boost Capable	GN0UXD5	451-BDKX	1
AC Adapter	65W USB-C AC adapter	GA2KE8W	492-BDTG	1
Power Cord	E4 Power Cord 1M for US	GCOU30Q	470-BCXK	1
Setup and Features Guides	Quick Start Guide	GBLUVZ4	340-DSJG	1
Documentation	Documentation	GUX97AW	340-DNBV	1
ENERGY STAR	ENERGY STAR Qualified	G6J34SM	387-BBLW	1
FGA Module	No FGA	NOFGA	817-BBBB	1
Packaging	ARL CPU+65W Adapter,Clamshell	GABYZ9H	340-DTNX	1
Transportation from ODM to region	Standard Shipment (VS)	G1IR983	800-BBQK	1
EAN POD Label	No UPC/EAN Label	G8WGTYN	389-BCGW	1
EPEAT 2018	EPEAT Gold with Climate+	GBU8CHM	379-BDZB	1

Systems Management	Intel® vPro® Enterprise Technology Enabled	GHYC9G5	631-BBZZ	1
Chassis Options	No WWAN (WLAN only) Tray, includes RJ-45, Clamshell	GAJES8V	321-BLPD	1
ICPS	Intel® Connectivity Performance Suite	GJ9CG51	640-BBTF	1
Intel Responsiveness Technologies	Intel® Rapid Storage Technology Driver	G9ENPSR	409-BCYM	1
Processor Label	Intel® Core™ Ultra 5 vPro Processor Label	G2LX5CW	389-FJMH	1
Additional System Options	CFI Information Swizzle,No Up,Foot,Factory Install	-1266221810	364-9118	1
Additional System Options	CFI Routing SKU	-1266264867	365-0257	1
Additional System Options	Image Load - Custom Image, Fac tory Install	-1266573645	366-0147	1
Additional System Options	CFI,Information Client,Only	-1266600834	371-0941	1
Additional System Options	CFI,Information,CSRouting,Elig ible,Factory Install	-1266616678	375-3088	1
Additional System Options	CFI,Information,GPTBR,PART,DNR ,Factory Install	-1266656953	376-6666	1
Additional System Options	CFI,Information,DYNAMIC,IMAGEA SSIST-SI,Factory Install	-1266443503	376-7610	1
Additional System Options	CFI,SW,GPT,Image,GNRC,Domestic ,Factory Install	-1266495514	377-3166	1
Additional System Options	CFI,INFO,WIN 11 PRO,VLA,Factor y Install	-1266522656	382-4439	1
Additional System Options	CFI,INFO,WIN11,UPDT,24H2,FACT	-1262640609	587-BKWZ	1
Additional System Options	CFI,INFO,CONNECTION EVAL,Facto ry Install	-1262680656	587-BQGM	1
Standard Hardware Support Service	5Y ProSupport Plus with ProSupport and AD and KYHD with Technical Customer Success Mgr	GMRKE31	714-0464,714-6667,997-8367,714-6710,714-6695,714-6709,714-6711,975-3461	1
Windows AutoPilot	No AutoPilot	GYEO2AP	340-CKSZ	1
Microsoft Office	Activate Your Microsoft 365 For A 30 Day Trial	GHKU96A	630-ABBT	1
Non-Microsoft Application Software	Dell Additional Software - Dell Pro Laptop	G3PHAG2	658-BFVB	1
Home and Small Business Security solutions	None	GD4K19S	650-AAAM	1
Operating System Recovery Options	OS-Windows Media Not Included	GLA9OQ1	620-AALW	1

FEDERAL SURPLUS

APPLICATION FOR ELIGIBILITY

INSTRUCTIONS FOR COMPLETING THE APPLICATION TO RECEIVE FEDERAL SURPLUS PROPERTY (41 CFR 102-37)

- Complete pages 2-7 and return per the instructions at the bottom of this page.
- Page 6 must be signed by your organization's AUTHORIZING OFFICIAL. An "Authorizing Official" is the chief executive or financial officer for the applicant organization with authority to execute legal documents on your organization's behalf.
- Some organizations must submit supporting documentation with the application. See pages 9-12 for details.
- Public/government agencies are eligible. Certain nonprofit organizations, Veterans Service Organizations, Service Educational Activities, volunteer fire/EMS/search & rescue departments and small businesses may also qualify. To determine if your organization may be eligible, please refer to the categories listed on pages 2 and 9-12 or contact us.
- All organizations must reapply every three (3) years.
- INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED. IF YOU HAVE QUESTIONS OR NEED ASSISTANCE, PLEASE CONACT US AT (512) 962-4167 OR federal.surplus@tfc.texas.gov.
- Narrative Forms, Add/Delete Representative Forms, and all other program forms are available for download from the "Forms" section of our website: www.SurplusTexas.gov/federal.
- Instructions for completing page 2:
  - **SECTION I:** Provide the full legal name of your organization and Federal Employer ID #. Provide the complete mailing address of your organization as recognized by the U.S. Postal Service. If the street address is different from the mailing address, provide that address or directions if located on a rural or remote area. Provide a phone number (required), fax number (optional) and an email address (required). E-mail addresses provided will receive notices about program updates, account status, compliance actions, and available property.
  - **SECTION II:** Check the box that best describes your organization's type or primary purpose. If you are unable to determine which box to check, please see pages 9-12 for an explanation of the eligibility requirements for each type of organization or contact our office for assistance.
  - **SECTION III:** Check only one box.
  - **SECTION IV:** Indicate source(s) of funding for your organization. Depending on your organization type, you may need to include a description of programs/services and facilities and/or supporting documentation regarding funding source(s). Public agencies (i.e., cities, counties, state agencies, public schools) are not required to submit additional documentation for this section.
  - **SECTION V:** Nonprofit organizations must provide a current, valid IRS Tax Exemption Letter indicating your organization is exempt under Section 501 of Internal Revenue Code. The name of the organization on the IRS letter must match the name provided in Section I of this application. If not, applicant must include sufficient evidence, such as amendments to Articles of Incorporation or Assumed Name filing certificates, to establish the connection. Public/government agencies, small businesses, Veterans Service Organizations, and VFDs are not required to submit documentation for this section.
  - **SECTION VI:** Most nonprofit organizations are required to submit evidence of current approval, accreditation or license from a nationally recognized accrediting or licensing organization. SBA 8(a) and Veteran owned small businesses must submit proof of approval from the SBA. Public/government agencies and VFDs are not required to submit additional documentation for this section.

SUBMIT PAGES 2-7 OF APPLICATION TO:

Applications may be emailed, faxed or mailed.

TEXAS FACILITIES COMMISSION
FEDERAL SURPLUS PROPERTY PROGRAM
P.O. BOX 13047
AUSTIN, TX 78711-3047
TEL: (512) 962-4167 FAX: (512) 236-6173
federal.surplus@tfc.texas.gov

For more information about the Federal Surplus Property Program and to view available inventory, please visit: www.SurplusTexas.gov/federal.

FEDERAL SURPLUS

APPLICATION FOR ELIGIBILITY

I. ORGANIZATION NAME & INFORMATION:

Jefferson County, Texas — LEGAL NAME OF ORGANIZATION *(include DBA name if applicable)*
74-6000291 — FEDERAL EMPLOYER ID (EIN)

1149 Pearl, 4th Floor — STREET ADDRESS *(no P.O. Boxes)*
Beaumont — CITY
TX — STATE
77701 — ZIP CODE

Same — MAILING ADDRESS *(if different from above)*
Same — CITY
STATE
ZIP CODE

Jefferson — COUNTY
409-835-8466 — PHONE #
409 839-2311 — FAX #

FISCAL YEAR END DATE: 9/31/2026
EMAIL: fred.jackson@jeffersoncountytx.gov

II. TYPE/PURPOSE OF ORGANIZATION: *(Check the box that best describes your organization. See pages 9-12 for requirements for specific types of organizations.)*

- ☐ City
- ☑ County
- ☐ State Agency
- ☐ Economic Development or COG
- ☐ Educational Radio or TV Station
- ☐ Library
- ☐ Museum
- ☐ Zoo, Planetarium or Aquarium
- ☐ Conservation *(i.e., soil, water, or utility district)*
- ☐ Public School, School District or ESC
- ☐ Open-Enrollment Charter School
- ☐ College or University
- ☐ Child Care Center or Pre-school
- ☐ Foster Care or Adoption Services
- ☐ Service Educational Activity *(e.g., Scouts)*
- ☐ Residential Treatment Center
- ☐ Health Center *(i.e., clinic, hospital)*
- ☐ Sheltered Workshop / Vocational Rehabilitation Program
- ☐ Volunteer Fire Dept., EMS or Rescue Squad
- ☐ Emergency Services District
- ☐ Provider of Assistance to Impoverished Persons
- ☐ Provider of Assistance to Homeless Persons
- ☐ Program Funded for Older Americans
- ☐ SBA 8(a) Business
- ☐ Veteran Owned Small Business
- ☐ Veterans' Service Organization
- ☐ Historic Light Station

III. APPLICANT STATUS: *(check one)*

☑ Public/Government agency *(includes public schools & vol. fire depts.)* ☐ Small business ☐ Nonprofit organization

IV. SOURCE(S) OF FUNDING: ☑ Tax-supported ☐ Grants ☐ Contributions ☐ Other: _____

V. HAS THE ORGANIZATION BEEN DETERMINED TO BE TAX EXEMPT UNDERSECTION 501 OF THE INTERNAL REVENUE CODE OF 1986? *(Required for nonprofit organizations only)* ☐ Yes ☐ No

VI. IS THE ORGANIZATION APPROVED, ACCREDITED, OR LICENSED? ☐ Yes ☑ No

(Required for nonprofit education or health organizations, conservation organizations, Veterans' Service Organizations, small businesses, and Service Educational Activities.)

IF YES, BY WHAT AUTHORITY? _____

AUTHORIZED REPRESENTATIVES

I. All representatives listed in prior applications or account updates will be deleted from the account.
II. An "Authorized Representative" is a person authorized to sign for the release of property on your organization's behalf. **Authorized Representatives must sign in the "Signature" space below to sign for the release of property.**
III. Those who sign below represent that they have read and understand all information contained in this application (including the fine print) and they will abide by the conditions, agreements, certifications, assurances and statements.
IV. Persons listed below without a signature may visit our warehouses and will receive email notices regarding program updates, account status, compliance actions, and available property, but will not be able to sign for the release of property.
V. Valid driver's license or state issued photo ID may be required prior to entering state or federal facilities.
VI. **The Authorizing Official (signing on page 6 of the application) will automatically be included as an Authorized Representative unless indicated below:**

a. _____ (*initial here*) I, as the Authorizing Official, do NOT want to be an Authorized Representative able to sign for property. (*Leave blank if the Authorizing Official should be an Authorized Representative.)*

IMPORTANT NOTE REGARDING SIGNATURES: Unauthenticated digital signatures, signature stamps or signature images will not be accepted. A physical signature is preferred. If a physical signature cannot be obtained, we can also accept digital signatures authenticated by a third party such as Docu-Sign or Adobe Acrobat.

FIRST & LAST NAME	TITLE	PHONE & EMAIL ADDRESS	SIGNATURE
(*example*) John Doe	County Judge	(512) 123-4567 John.doe@gmail.com	John Doe
Jeff R. Branick	County Judge	409-835-8466 jeff.branick@jeffersoncountytx.gov	
Brandon Willis	Commissioner Pct. 1	409-835-8422 brandon.willis@jeffersoncountytx.gov	
Cary Erickson	Commissioner Pct. 2	409-719- 5950 cary.erickson@jeffersoncountytx.gov	Cary Erickson
Michael S. Sinegal	Commissioner Pct. 3	409-983-8300 michael. sinegal@jeffersoncountytx.gov	
Everette Alfred	Commissioner Pct. 4	409-935-8443 everette.alfred@jeffersoncountytx.gov	
Russel Lemke	Road & Bridge Pct. 1	409-835- 8422 russel.lemke@jeffersoncountytx.gov	
Mike Trahan	Road & Bridge Pct. 2	409-719-5150 mike.trahan@jeffersoncountytx.gov	
Fran Lee	Auditor	409-835-8500 fran.lee@jeffersoncountytx.gov	
Robert Grimm	Emergency Management	409-835-8757 robert.grimm@ jeffersoncountytx.gov	

AUTHORIZED REPRESENTATIVES

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III. Those who sign below represent that they have read and understand all information contained in this application (including the fine print) and they will abide by the conditions, agreements, certifications, assurances and statements.
IV. Persons listed below without a signature may visit our warehouses and will receive email notices regarding program updates, account status, compliance actions, and available property, but will not be able to sign for the release of property.
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FIRST & LAST NAME	TITLE	PHONE & EMAIL ADDRESS	SIGNATURE
(*example*) John Doe	County Judge	(512) 123-4567 John.doe@gmail.com	John Doe
Jeff R. Branick	County Judge	409-835-8466 jeff.branick@jeffersoncountytx.gov	
Brandon Willis	Commissioner Pct. 1	409-835-8422 brandon.willis@jeffersoncountytx.gov	
Cary Erickson	Commissioner Pct. 2	409-719- 5950 cary.erickson@jeffersoncountytx.gov	Cary Erickson
Michael S. Sinegal	Commissioner Pct. 3	409-983-8300 michael.sinegal@jeffersoncountytx.gov	
Everette Alfred	Commissioner Pct. 4	409-935-8443 everette.alfred@jeffersoncountytx.gov	
Russel Lemke	Road & Bridge Pct. 1	409-835- 8422 russel.lemke@jeffersoncountytx.gov	
Mike Trahan	Road & Bridge Pct. 2	409-719-5150 mike.trahan@jeffersoncountytx.gov	Mike Trahan
Fran Lee	Auditor	409-835-8500 fran.lee@jeffersoncountytx.gov	
Robert Grimm	Emergency Management	409-835-8757 robert.grimm@jeffersoncountytx.gov	

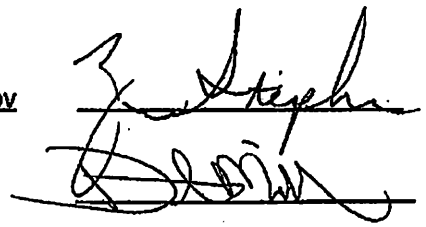
Pag2 Authorized Representatives for Federal Surplus

Zena Stephens, Sheriff zena.stehpens@jeffersoncountytx.gov

Donta Miller, Sheriff Department
donta.miller@jeffersoncountytx.gov

Jeffrey Collins, Pct. 3 jeffrey.collins@jeffersoncountytx.gov

Bart Foster, Mosquito Control bart.foster@jeffersoncountytx.gov



NONDISCRIMINATION ASSURANCE

Jefferson county, the donee, agrees that the program for or in connection with
(Legal name of applicant organization)
which any property is donated to the donee will be conducted in compliance with, and the donee will comply with and will require any other person (any legal entity) who through contractual or other arrangements with the donee is authorized to provide services or benefits under said program to comply with all requirements imposed by or pursuant to the regulations of the General Services Administration (41 CFR 101-6.2 and 101-8) issued under the provisions of Title VI of the Civil Rights Act of 1964, as amended, Section 606 of Title VI of the Federal Property and Administrative Services Act of 1949, as amended, Section 504 of the Rehabilitation Act of 1973, as amended, Title IX of the Education Amendments of 1972, as amended, Section 303 of the Age Discrimination Act of 1975, and the Civil Right Restoration Act of 1987, to the end that no person in the United States shall on the ground of race, color, national origin, sex, or age, or that no otherwise qualified handicapped person shall solely by reason of the handicap, be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity for which the donee received Federal assistance from the General Services Administration; and hereby gives assurance that it will immediately take any measures necessary to effectuate this agreement. The donee further agrees (1) that this agreement shall be subject in all respects to the provisions of said Federal statutes and regulations (2) that this agreement obligates the donee for the period during which it retains ownership or possession of the property, (3) that the United States shall have the right to seek judicial enforcement of this agreement, and (4) that this agreement shall be binding upon any successor in interest of the donee and the word "donee" as used herein includes any such successor in interest.

COUNTY/COUNTIES SERVED BY APPLICANT ORGANIZATION: Jefferson County

PAYMENT INFORMATION

Payment is due 30 days from the invoice date. Payment for property must be in the form of a check or credit card from the account of your organization (or parent/charter organization). A "Refund Policy Agreement for Credit Cards" must be signed by the Authorizing Official and submitted prior to the initial transaction. Credit card payments must be made in person at an FSP warehouse for the full amount of the invoice and, the credit card being used must match the name of the donee organization. **State agencies** must pay via Interagency Transaction Voucher (ITV). Our agency code is 303. If you have questions about how to submit a payment, please contact us at 512-962-4167 or federal.surplus@tfc.texas.gov.

NEW ACCOUNTS for **nonprofit organizations, small businesses, and volunteer fire / EMS / search & rescue departments**, please submit the following with your application:

- A voided check or deposit slip, copy of recent bank statement or letter from bank certifying payment account name. The name on the account must match the name on your application and IRS letter (if applicable). If your organization has a "DBA" that you will be submitting payment under and that is *not* listed on your IRS letter, then you must submit evidence that your "DBA" has been registered with the proper authority.
- If a parent/charter organization will be submitting payment on your behalf, then you must also provide an explanation of the relationship between your organization and parent organization.

ACCOUNT RENEWALS for **nonprofit organizations, small businesses, and volunteer fire / EMS / search & rescue departments,** please check one of the following:

☑ Our organization will continue using the same payment account in our organization's name.
☐ Our organization will have a parent organization pay on our behalf.

Name of Parent Organization: _____

Relationship: _____

ALL applicant organizations must provide a payment point of contact who will receive notices regarding overdue payments:

Name: Fran Lee Title: Auditor

Email: fran.lee@jeffersoncountytx.gov Phone: 409-835-8500

DONEE CERTIFICATIONS & AGREEMENTS

NOTE: "State agency" = Texas Facilities Commission; "Donee" = your organization

(a) THE DONEE CERTIFIES THAT:

(1) It is a public agency, a nonprofit institution or organization exempt from taxation under section 501 of the Internal Revenue code of 1954, a Veteran-Owned Small Business or an SBA 8(a) business; within the meaning of section 203(j) of the Federal Property and Administrative Services Act of 1949, as amended, and/or the regulations of the General Services Administration (GSA), the Department of Veterans Affairs (VA) or Small Business Administration (SBA).

(2) If a public agency, the property is needed and will be used by the recipient for carrying out or promoting for the residents of a given political area one or more public purposes, or if a nonprofit tax-exempt institution or organization, the property is needed for and will be used by the recipient for educational or public health purposes, including research for any such purpose, or for programs for older individuals, or SEA organizations, or assistance to homeless/impoverished, or assistance to Veterans.

(3) If an SBA 8(a) business or Veteran-Owned Small Business, the business is located and operated within the State, and that it will use the acquired surplus personal property in the normal conduct of its business activities. Personal or non-business use is prohibited.

(4) The property is not being acquired for any other use or purpose, or for sale or other distribution; or for permanent use outside the State, except with prior approval of the State agency and GSA.

(5) Funds are available to pay all costs and charges incident to donation.

(6) This transaction shall be subject to the nondiscrimination regulations governing the donation of surplus personal property issued under Title VI of the Civil Rights Act of 1964, Title VI Section 606 of the Federal Property and Administrative Services Act of 1949, as amended, and Section 504 of the Rehabilitation Act of 1973, as amended, Title IX of the Education Amendments of 1972, as amended, and Section 303 of the Age Discrimination Act of 1975 and the Civil Right Restoration Act of 1987.

(7) In accordance with 28 C.F.R. Section 42.401-42.415, the Federal Surplus Property Program collects information related to a donees race and national origin in order to provide GSA officials, upon request, with enough information for determining compliance with applicable civil rights laws. Data is collected for those donees who; (1) are eligible to participate in the FSP Program; (2) those actually participating in the recipient's programs and activities; (3) those denied participation in the recipient's program.

(8) If an SBA 8(a) business, the terms identified in (b), (c), and (d) may not apply. SBA 8(a) businesses must follow SBA guidelines.

(b) THE DONEE AGREES TO THE FOLLOWING FEDERAL CONDITIONS:

(1) All items of property shall be placed in use for the purpose(s) for which acquired within one year of receipt. Property shall be continued in use for such purposes for at least one year from the date the property was placed in use. Some property must be used longer than one year (see Section (c)). In the event the property is not so placed in use, or continued in use, the donee shall immediately notify the State agency, and at the donee's expense, return such property to the State agency, or otherwise make the property available for transfer or other disposal by the State agency, provided the property is still usable as determined by the State agency.

(2) Such special handling or use limitations as are imposed by General Services Administration (GSA) on any item(s) or property.

(3) In the event the property is not used or handled as required by (b)(1) and (2), title and right to the possession of such property shall at the option of GSA revert to the United States of America and upon demand the donee shall release such property to such person as GSA or its designee shall direct.

(c) THE DONEE AGREES TO THE FOLLOWING FEDERAL CONDITIONS, APPLICABLE TO ITEMS WITH A UNIT ORIGINAL ACQUISITION COST OF $5,000 OR MORE AND PASSENGER MOTOR VEHICLES, REGARDLESS OF ACQUISTION COST. THE FOLLOWING CONDITIONS DO NOT APPLY TO VESSELS 50 FEET OR MORE IN LENGTH AND AIRCRAFT, FOREIGN GIFTS OR OTHER ITEMS OF PROPERTY REQUIRING SPECIAL HANDLING OR USE LIMITATIONS, REGARDLESS OF THE ACQUISTION COST OR PURPOSE FOR WHICH ACQUIRED:

(1) The property shall be used only for the purpose(s) for which acquired and for no other purpose(s).

(2) There shall be a period of restriction which will expire after such property has been used for the purpose(s) for which acquired for a period of 18 months from the date the property is placed in use. *Not applicable to Service Educational Activities (SEAs).*

(3) In the event the property is not used or handled as required by (b)(1) and (2) and (c)(1) and (2), title and right to the possession of such property shall at the option of GSA revert to the United States of America and upon demand the donee shall release such property to such person as GSA or its designee shall direct.

(d) THE DONEE AGREES TO THE FOLLOWING TERMS, RESERVATIONS, AND RESTRICTIONS:

(1) From the date it receives the property and through period(s) of time the conditions imposed by (b), (c) and (f) remain in effect, the donee shall not sell, trade, lease, lend, bail, cannibalize, encumber, or otherwise dispose of such property, or remove it permanently, for use outside the State, without the prior approval of GSA under (b) and (f), or the State agency under (c) and (f). The proceeds from any sale, trade, lease, loan, bailment, encumbrance or other disposal of the property shall be remitted promptly by the donee to GSA or the State agency, as the case may be. SBA 8(a) businesses and Veteran-Owned Small Businesses must also obtain prior approval from SBA in addition to the State agency and GSA.

(2) In the event any of the property is sold, traded leased, loaned, bailed, cannibalized, encumbered, or otherwise disposed of by the donee from the date it receives the property through the period(s) of time the conditions imposed by (b), (c) and (f) remain in effect, without prior approval of GSA or the State agency, the donee, at the option of GSA or the State agency, shall pay to GSA or the State agency, as the case may be, the proceeds of the disposal or the fair market value or the fair rental value of the property at the time of such disposal, as determined by GSA or the State agency.

(3) If at any time, from the date it receives the property through the period(s) of time the conditions imposed by (b), (c) and (f) remain in effect, any of the property is no longer suitable, usable, or further needed by the donee for the purpose(s) for which acquired, the donee shall promptly notify the State agency, and shall, as directed by the State agency, return the property to the State agency, release the property to another donee or another State agency, a department or agency of the United States, sell or otherwise dispose of the property. The proceeds from any sale shall be remitted promptly by the donee to the State agency.

(4) The donee shall make reports to the State agency on the use, condition, and location of the property and on other pertinent matters as may be required time to time by the State agency.

(5) At the option of the State agency, the donee may abrogate the State conditions set forth in (c) and the State terms, reservations, and restrictions pertinent thereto in (d) by payment of any amount as determined by the State agency.

(e) THE DONEE AGREES TO THE FOLLOWING CONDITIONS, APPLICABLE TO ALL ITEMS OF PROPERTY:

(1) The property acquired by the donee is on an "as is, where is" basis, without warranty of any kind, and the Government of the United States of America, the State of Texas, its agencies or assigns, and employees thereof will be held harmless from any or all debts, liabilities, judgments, costs, demands, suits, actions, or claims of any nature arising from or incident to the donation of the property, its use, or final disposition.

(2) Where a donee carries insurance against damages to or loss of property due to fire or other hazards and where loss of or damage to donated property with unexpired terms, conditions, reservations or restrictions occurs, GSA or the State agency, as the case may be, will be entitled to reimbursement from the donee out of the insurance proceeds, of any amount equal to the unamortized portion of the fair market value of the damaged or destroyed donated items.

(f) THE DONEE AGREES TO THE FOLLOWING ADDITIONAL TERMS AND CONDITIONS APPLICABLE TO THE DONATION OF AIRCRAFT AND VESSELS (50 FEET OR MORE IN LENGTH) HAVING AN ACQUISITION COST OF $5,000 OR MORE, AND FOREIGN GIFTS OR OTHER ITEMS OF PROPERTY REQUIRING SPECIAL HANDLING OR USE LIMITATIONS, REGARDLESS OF THE ACQUISITION COST OR THE PURPOSE FOR WHICH ACQUIRED:

(1) The donation shall be subject to the additional special terms, conditions, reservations, and restrictions set forth in the Conditional Transfer Document or other agreements executed by the authorized donee representative.

(g) THE DONEE CERTIFIES by signing and submitting this lower tier proposal, the prospective lower tier participant, as defined in 41 CFR 105-68, certifies to the best of its knowledge and belief that it and its principals: (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. (b) Where the prospective lower tier participant is unable to certify to any of the above, such prospective participant shall attach an explanation to this proposal.

(h) THE DONEE UNDERSTANDS that by execution of this document, it is considered a sub recipient of federal financial assistance pursuant to the Single Audit Act of 1984 and further agrees to provide the State agency with results of the audit required by 2 CFR 200.

(i) THE DONEE UNDERSTANDS that e-mail addresses provided may receive notices about program updates and available property. **Additionally, information on property donated to your organization, including pictures and service charge(s) paid, may be used by Federal Surplus Property Program for marketing and outreach purposes.**

PROPERTY COMPLIANCE PERIOD

Participating organizations (referred to as "donees") are required to use the property obtained through the program for a specific amount of time before the property can be sold, transferred or otherwise disposed of. The compliance period is often determined by the "original acquisition cost" of the item. The "original acquisition cost" is defined as the amount the federal government paid when it was initially purchased.

- Property must be used for the program(s) approved for participation in the Federal Surplus Property program.
- All property must be placed into use within one year of the invoice date.
- Property is considered "in use" as soon as it is ready and able to serve its intended purpose.
- The compliance period varies according to item and donee type but is **at least** 12 months from date put into use.
    - For property valued at less than $5,000 in original acquisition cost, the compliance period is 12 months from the date put into use.
    - For property valued at $5,000 or more in original acquisition cost and all passenger motor vehicles, the compliance period is 18 months from the date put into use. *Not applicable to Service Educational Activities.*
- TFC staff performs scheduled and unscheduled onsite property compliance visits to ensure the property is being used as represented. The donee agrees to make the property available for visual inspection by TFC staff in a timely manner.
- If the property is not paid for in full or is not being used or handled as required, the donee will be required, at its expense, to return the property to TFC or offer for transfer to another donee, as instructed by TFC.
- Property must be used and stored at the street address listed on page 2 of this application, or at other appropriate donee-managed satellite locations in Texas (for example, county precinct barns, district fire stations, school campuses, maintenance/transportation warehouse). Property may not be removed indefinitely from an approved location, or from the State of Texas, without prior, written approval from TFC.
- Property may not be stored at a personal residence, unrelated business or storage facility, or any other location that is not managed by the donee organization. Property is not for personal use; it must be readily accessible to all donee staff.
- Donees are required to complete reports regarding property use as a condition of participating in the program.
- **During the compliance period, the donee may not sell, trade, lease, lend, bail, cannibalize, encumber, or otherwise dispose of such property, or remove it permanently, for use outside the State, without the prior, written approval of TFC and/or GSA. SBA approval may also be required for small businesses.**
- **If property is sold, transferred, or otherwise disposed of during the compliance period, the donee may be subject to penalties and fines, as well as possible state or federal prosecution.**

IMPORTANT NOTE FOR SBA 8(a) APPLICANTS: If applying as an SBA 8(a) business, I understand that the property compliance terms identified above do not apply to my business and that as an SBA 8(a) business I must follow SBA property compliance guidelines. Additionally, I understand that I may not have access to certain items – including aircraft or property with an original acquisition cost of $5,000 or more – if my business is due to graduate from the SBA 8(a) program with insufficient time to cover the entire federally required compliance period for that item.

IMPORTANT NOTE FOR VETERAN OWNED SMALL BUSINESS APPLICANTS: If applying as a veteran-owned small business, I certify that the small business is unconditionally owned and controlled by one or more eligible veterans, service-disabled veterans, or surviving spouses; and the business has registered, and is in "certified" status in the SBA's Dynamic Small Business Search under the procedures found in 13 CFR § 128.

IMPORTANT NOTE REGARDING SIGNATURES: Unauthenticated digital signatures, signature stamps or signature images will not be accepted. A physical signature is preferred. If a physical signature cannot be obtained, we can also accept digital signatures authenticated by a third party such as Docu-Sign or Adobe Acrobat.

I certify that the information provided on this application is accurate and up to date to the best of my knowledge. I understand and agree to the terms and conditions listed on pages 2-6 of the "Application for Eligibility" including terms regarding nondiscrimination, property compliance & reporting, and the Certifications & Agreements. I also certify that I have executive authority to execute legal documents on behalf of the applicant organization.

ATTEST

Jeff R. Branick
FIRST & LAST NAME (typed or printed)

County Judge
TITLE

DATE 3/31/26

X
SIGNATURE OF AUTHORIZING OFFICIAL
(ex. Chief Executive or Financial Officer, Mayor/City Manager, County Judge, Superintendent, President, Fire Chief)

3-31-26
DATE

DONEE PROPERTY REQUEST LIST

*Section now required

Donee Organization Name: _____

Please use the checkboxes and lines below to record items desired by your organization.

- ☑ Aircraft & aircraft parts
- ☐ Cargo trucks
- ☐ Engines
- ☑ Generators & compressors
- ☐ Medical equipment & supplies
- ☑ Passenger vehicles
- ☑ Tanks & pumps
- ☑ Vehicle parts & accessories
- ☑ Boats & marine equipment
- ☑ Clothes, shoes & personal gear
- ☐ Forklifts
- ☐ Heavy equipment
- ☐ Musical instruments & equipment
- ☐ Rescue & safety equipment
- ☐ Tools & shop equipment
- ☐ Other *(please be as specific as possible (e.g., make, model, size, type, etc.)*
- ☐ Camping equipment
- ☐ Electronics
- ☐ Furniture
- ☐ Kitchen equipment
- ☐ Office equipment & supplies
- ☐ Storage, containers & shelters
- ☐ Trailers

_____

_____

_____

_____

_____

Who should we contact when the requested property becomes available?

Name: Fred Jackson Title: Staff Attorney

Email: fred.jackson@jeffersoncountytx.gov Phone: 409-835-8466

Name: Jeff Branick Title: County Judge

Email: jeff.branick@jeffersoncountytx.gov Phone: 409-835-8466

DONEE FEEDBACK SURVEY

Completing this section is optional but highly encouraged

How did you hear about us?

☐ Co-worker ☐ VA ☐ SBA ☐ Email broadcast ☐ From another similar organization

☐ At an event (please specify): _____

☐ Other (please explain): _____

Where would you prefer to shop? ☐ San Antonio Warehouse ☐ Fort Worth Warehouse ☐ Both

How do you prefer to shop? (*check as many as you like*)

- ☑ Looking at the "New Arrivals & Specials" email broadcasts
- ☑ Browsing our online inventory
- ☑ In-person at the warehouse

What attracted you to using the FSP program (when compared to buying brand new)? (*check as many as you like*)

- ☑ Low fees
- ☑ Variety/type of items available
- ☑ Ability to submit requests
- ☑ Convenience/quicker process compared to your organization's traditional purchasing process
- ☑ Level of customer service/past positive experience with Federal Surplus Property Program
- ☐ Only option due to limited budget
- ☐ Other (please explain) _____

FEDERAL SURPLUS

REFUND POLICY AGREEMENT FOR CREDIT CARDS

Submitting this page with your organization's application is optional and can be submitted at any time prior to making credit card payments.

The Federal Surplus Property Program has recently received approval to accept credit card payments from our donee organizations. We are excited to offer our donees an additional option for making payments for invoices and hope that this added ability will benefit your organization.

NOTE: The physical credit card being used must match the name of the donee organization.

Donee Account Name

This agreement must be signed by the donee's Authorizing Official prior to making any credit card payments. Once completed, this form will be uploaded to the donee's account and added to their eligibility file.

I understand that credit card payments will only be accepted in person at one of the federal surplus warehouses and no credit card refunds will be given for returns of property paid for by credit card. Credit towards other invoices will be available. **There are no exceptions to this policy.** If you do not wish to sign this agreement, you may continue to make payments with a check in your organization's name.

FIRST & LAST NAME
(Printed or typed)

TITLE

SIGNATURE OF AUTHORIZING OFFICIAL
(e.g., Chief Executive or Financial Officer, Mayor/City Manager, County Judge, Superintendent, President, Fire Chief)

DATE

FORT WORTH WAREHOUSE
2826 North Beach Street
Fort Worth, TX 76111
Phone: (817) 831-6767
Fax: (817) 838-6428
fortworth.surplus@tfc.texas.gov

SAN ANTONIO WAREHOUSE
2103 Ackerman Road
San Antonio, TX 78219
Phone: (210) 661-2381
Fax: (512) 236-6186
sanantonio.surplus@tfc.texas.gov

DETAILED REQUIREMENTS FOR SPECIFIC TYPES OF ORGANIZATIONS

Please review to determine which eligibility category best describes your organization, and if you are required to submit additional documentation. Questions? Please contact us at (512) 962-4167 or federal.surplus@tfc.texas.gov.

Government or Public Agency

1. Public agency includes (a) State or department, agency, or instrumentality thereof; (b) Political subdivision of the state, including any unit of local government or economic development district or any department, agency or instrumentality thereof; or (c) Instrumentality created by contract or other agreement between states or political subdivisions. Public agency purposes include, but are not limited to, programs such as conservation, economic development, education, parks and recreation, public health and public safety, and to provide services to homeless or impoverished persons.
2. Cities, counties, state agencies and public schools are NOT required to submit any additional documentation.
3. Other public agencies must submit proof of public agency status (i.e., charter or statute creating agency or evidence of tax-supported status) and/or a narrative describing the services provided by agency. See other categories listed below for details.

Emergency Services District

1. Required additional documentation that must be submitted with application:
    a. Narrative that contains information on the department, including:
        i. number of firefighters and/or emergency services personnel;
        ii. geographical area(s) covered; and
        iii. training schedule.
    b. Proof of Public Agency Status (i.e., election results, charter, enabling legislation, reference in state or local law,organizing document, or other evidence of approval by proper government authority or tax-supported status).
    (Required for initial application; may not be required for account renewal if still on file.)

Volunteer Fire Department, Search & Rescue, or Emergency Medical Services

1. To be eligible under this category, must be funded annually in whole or part by state, county, city or emergency services district. "Funding" may be in the form of monetary support or the provision of other support (e.g., facilities, vehicles/equipment). Must submit funding information annually.
2. Required additional documentation that must be submitted with application:
    a. Narrative that contains information on the department, including:
        i. number of firefighters and/or emergency services personnel;
        ii. geographical area(s) covered; and
        iii. training schedule.
    b. Evidence that department is endorsed by AND receives funding from a government entity, such as the state, county, city or emergency services district. Examples: letter of endorsement from the head of the government entity (e.g., county judge, city mayor/administrator, or ESD president) or a copy of a current, signed contract.
    c. Signed articles of incorporation, bylaws, charter or other organizing document *(optional)*.

Conservation *(includes both public agencies and nonprofits)*

1. Includes soil, water, irrigation, and utility districts, and nonprofit water supply corporations. Must be a public agency (i.e., city-owned) or nonprofit organization. For-profit organizations do not qualify under this category.
2. Required additional documentation that must be submitted with application: (Required for initial application. May not be required for account renewal if still on file.)
    a. Certificate of approval or charter from proper authority demonstrating services are provided to the public (i.e., Certificate of Convenience and Necessity from Texas Commission on Environmental Quality or Public Utility Commission, or creation documentation/charter/enabling legislation).
    b. *(Nonprofits only)* IRS letter certifying tax-exempt status. Signed articles of incorporations, bylaws, or other organizing document *(optional)*.

Health Organization (Public Agency)

1. Required additional documentation that must be submitted with application:
    a. Proof of Public Agency Status (e.g., election results, charter, enabling legislation, reference in state or local law,organizing document, or other evidence of approval by proper government authority or tax-supported status. *(Required for initial application; may not be required for account renewal if still on file.)*
    b. Narrative about agency, including:
        i. description of services provided;
        ii. number and type of patients served;
        iii. location and description of facilities, including number of beds (if applicable);
        iv. number and status of total staff (# paid/volunteer, # full-time/part-time); and
        v. list of key staff and their qualifications.

SBA 8(a) Business

1. Businesses that are currently part of the U.S. Small Business Administration's 8(a) Business Development Program may participate in the FSP program. Businesses are only eligible to receive property during their nine (9) year membership in the 8(a) program. **IMPORTANT NOTE**: Some terms and conditions on pages 5-6 do not apply to SBA 8(a) businesses. As an SBA 8(a) business, you must follow SBA property compliance guidelines. Please contact your SBA District Office for its complete terms and conditions.
2. Required additional documentation that must be submitted with initial application *(not required for account renewal)*:
    a. Letter from U.S. Small Business Administration certifying membership in 8(a) Business Development Program.

DETAILED REQUIREMENTS FOR SPECIFIC TYPES OF ORGANIZATIONS

Please review to determine which eligibility category best describes your organization, and if you are required to submit additional documentation. Questions? Please contact us at (512) 962-4167 or federal.surplus@tfc.texas.gov.

Service Educational Activity

1. The following Service Educational Activities are eligible: American National Red Cross, Armed Services YMCA of the USA, Big Brothers/Big Sisters of America, Boys & Girls Clubs of America, Boy Scouts of America, Camp Fire, Inc., Center for Excellence in Education, Girl Scouts of the USA, Little League Baseball, Inc., Marine Cadets of America, National Association for Equal Opportunity in Higher Education, National Civilian Community Corps, National Ski Patrol System, Inc., Naval Sea Cadet Corps, United Service Organizations, Inc., U.S. Olympic Committee, Young Marines of the Marine Corps, and League/Marine Corps League.
2. Required additional documentation that must be submitted with application:
   a. Proof of association with the national organization (e.g., Charter from Boy Scouts of America).

Education Organization (Nonprofit) **Public schools & colleges should see the Government or Public Agency category on page 8.*

1. This category includes charter schools, private schools, research organizations, child care centers and vocational rehabilitation programs/ sheltered workshops receiving grants from Texas Workforce Commission to train persons with physical or mental disabilities.
2. Must be accredited or approved by nationally recognized accrediting agency (i.e., Texas Education Agency, Texas Private School Accreditation Commission, Southern Association of Colleges & Schools' Commission on Colleges, Texas Department of Family and Protective Services or Texas Workforce Commission) or the current recipient of research grants by a recognized authority (e.g., National Institute of Education) or a similar national advisory organization.
3. Required additional documentation that must be submitted with application:
   a. Certificate of accreditation or letter of approval from a nationally recognized accrediting agency OR research grant from National Institute of Education or similar national advisory organization.
   b. Letter from IRS certifying status as a 501 nonprofit. If letter does not list current name and address, please include brief explanation. (Required for initial application. May not be required for account renewals if still on file and name/address has not changed.)
   c. Narrative about organization, including:
      i. course/degrees offered;
      ii. current enrollment;
      iii. description of facility and location;
      iv. number and status of total staff (# paid/volunteer, # full-time/part-time);
      v. list of key staff and their qualifications; and
      vi. criteria for admission including any religious requirements, (must be accepting of all faiths to be eligible).
   d. Financial information (e.g., latest annual financial statement, tax return, year-end bank statement, or budget).
   e. Signed articles of incorporation, bylaws, charter or other organizing document *(optional)*.
   f. List of additional research grants awarded *(optional)*.

Provider of Assistance to Impoverished Persons (Nonprofit)

1. Services to impoverished persons (as defined in section 673 of the Community Services Block Grant Act) (42 U.S.C. 9902) must be primary function. If applicant operates a broad spectrum of programs through which assistance to impoverished is peripheral and incidental, the applicant is not eligible. If located in or around a religious facility, food banks must have a direct entrance not requiring entrance through a place of worship to be eligible.
2. Required additional documentation that must be submitted with application:
   a. Letter from IRS certifying status as a 501 nonprofit. If letter does not list current name and address, include brief explanation. *(Required for initial application; may not be required for account renewal if still on file and name/address has not changed.)*
   b. Public Recognition as an Impoverished Assistance Provider. Please provide letter from a chief public official (Mayor, City Manager, County Judge, County Commissioner, State Representative, or the head of a public agency) indicating services provided. The letter must be on letterhead, signed and dated, and the name must match the IRS document. It also must indicate that assistance to impoverished persons is the organization's primary focus.
   c. Narrative about organization, including:
      i. complete description of services (assistance to impoverished must be primary mission);
      ii. number of individuals receiving assistance and frequency of assistance (daily, weekly or monthly);
      iii. requirements for clients to be eligible to receive services, including any required fees;
      iv. description of facilities;
      v. hours/days of operation;
      vi. description of funding source(s) with supporting documentation, (e.g., latest annual financial statement, tax return, year-end bank statement, or budget);
      vii. number and status of total staff (# paid/volunteer, # full-time/part-time); and
      viii. list of key staff and their qualifications.
   d. Description of how the organization determines eligibility to receive assistance and if that person is impoverished. Organization's primary function must be to provide money, goods, or services to families or individuals whose annual incomes are below the poverty line as defined in section 673 of the Community Services Block Grant Act (42 U.S.C. 9902). If recipients are required to complete an application before receiving services, please attach a sample application.
   e. Proof of current accreditation, approval or licensing if appropriate (e.g., child care or medical/health center).
   f. Signed articles of incorporation, bylaws, charter or other organizing document.
   g. Brochures (or other printed materials) or link to website *(optional)*.

DETAILED REQUIREMENTS FOR SPECIFIC TYPES OF ORGANIZATIONS

Please review to determine which eligibility category best describes your organization, and if you are required to submit additional documentation. Questions? Please contact us at (512) 962-4167 or federal.surplus@tfc.texas.gov.

Provider of Assistance to Homeless Persons (Nonprofit)

1. Examples of eligible programs include:
   a. Overnight, daytime and around-the-clock shelters, including shelters for battered spouses, abused children, and orphans; *(Child care/day care centers should see "Education Organization (Nonprofit)" category.)*
   b. Foster care and adoption agencies;
   c. Transitional housing for temporary residence of parolees, or persons with mental health or addiction issues; and
   d. Food banks that provide food directly to facilities where homeless people are fed. If located in or around religious facility, food banks must have direct entrance not requiring entrance through place of worship.
2. Services to homeless persons must be the primary mission. Applicants who operate a broad spectrum of programs through which assistance to homeless persons is peripheral and incidental are not eligible.
3. Required additional documentation that must be submitted with application:
   a. Letter from IRS certifying status as a 501 nonprofit. If letter does not list current name and address, please include brief explanation. *(Required for initial application. May not be required for account renewal if still on file and name/address has not changed.)*
   b. Public Recognition as a Homeless Assistance Provider. Please provide letter from a chief public official (Mayor, City Manager, County Judge, County Commissioner, State Representative, or the head of a public agency) indicating services provided. The letter must be on letterhead, be signed and dated, and the name must match the IRS document. It also must indicate that assistance to homeless persons is the organization's primary focus.
   c. Narrative about organization, including:
      i. complete description of services provided (assistance to homeless must be primary mission);
      ii. number of individuals receiving assistance and frequency of assistance (daily, weekly or monthly);
      iii. requirements for clients to be eligible to receive services, including any required fees;
      iv. description of facilities;
      v. hours/days of operation;
      vi. description of funding source(s) with supporting documentation (e.g., latest annual financial statement, tax return, year-end bank statement, or budget);
      vii. number and status of total staff (# paid/volunteer, # full-time/part-time); and
      viii. list of key staff and their qualifications.
   d. Proof of current accreditation, approval or licensing if appropriate (e.g., child care or medical/health center);
   e. Signed articles of incorporation, bylaws, charter or another organizing document;
   f. Brochures (or other printed materials) or link to website *(optional)*.

Provider of Assistance to Older Individuals (Nonprofit)

1. Includes adult day care, multi-purpose senior centers, and social, transportation, nutrition or legal services.
2. Required additional documentation that must be submitted with application:
   a. Letter from IRS certifying status as a 501 nonprofit. If letter does not list current name and address, please include brief explanation. *(Required for initial application. May not be required for account renewal if still on file and name/address has not changed.)*
   b. Certification establishing that applicant is receiving state, federal or local government funds for operation of program under the Older Americans Act of 1965, Title IV or Title XX of the Social Security Act, Titles VIII and X of the Economic Opportunity Act of 1964, or Community Services Block Grant Act.
   c. Narrative about organization, including:
      i. description of services provided;
      ii. description of facilities;
      iii. number of individuals receiving assistance and frequency of assistance (daily, weekly or monthly);
      iv. number and status of total staff (# paid/volunteer, # full-time/part-time); and
      v. list of key staff and their qualifications.
   d. Proof of current accreditation, approval or licensing if appropriate (e.g., medical center).
   e. Signed articles of incorporation, bylaws, charter or other organizing document *(optional)*.

Health Organization (Nonprofit)

1. Includes, but not limited to, hospitals, clinics, residential treatment centers, rehabilitation facilities, and blood/tissue banks.
2. Required additional documentation that must be submitted with application:
   b. Letter from IRS certifying status as a 501 nonprofit. If letter does not list current name and address, please include brief explanation. *(Required for initial application. May not be required for account renewal if still on file and name/address has not changed.)*
   c. Narrative about organization, including:
      i. description of services provided;
      ii. number and type of patients served;
      iii. location and description of facilities, including number of beds (if applicable);
      iv. number and status of total staff (# paid/volunteer, # full-time/part-time); and
      v. list of key staff and their qualifications.
   d. Certificate of accreditation, license, or letter of approval from a nationally recognized accrediting or licensing agency (i.e., Health & Human Services Commission, Dept. of State Health Services) OR research grant from National Institutes of Health or similar national advisory organization.
   e. Financial information, (e.g., latest annual financial statement, tax return, year-end bank statement, or budget).
   f. Signed articles of incorporation, bylaws, charter or other organizing document *(optional)*.

DETAILED REQUIREMENTS FOR SPECIFIC TYPES OF ORGANIZATIONS

Please review to determine which eligibility category best describes your organization, and if you are required to submit additional documentation. Questions? Please contact us at (512) 962-4167 or federal.surplus@tfc.texas.gov.

Museum, Library, Nature Center, Planetarium, Aquarium or Zoo

1. Must be open to the public, and, at minimum, accede to any request submitted for access during "business hours" (interpreted to be approximately 9:00 am to 4:00 pm, although reasonable variation from these hours may be considered due to individual circumstances, such as a museum located in a commercial location with strict business hours, or restrictions based on zoning or other state or local ordinances). Exhibits must be primary focus and must not be incidental to the primary function of the institution. Also, must have a minimum of one full-time staff member or the equivalent (i.e., one staff member who works 40 hours per week or two staff members who work 20 hours each per week).
2. Required additional documentation that must be submitted with application:
   a. Letter from IRS certifying status as a 501 nonprofit. If letter does not list current name and address, please include brief explanation. *(Required for initial application. May not be required for account renewals if still on file and name/address has not changed.)*
   b. Narrative about organization, including:
      i. description of type(s) of exhibits & location(s);
      ii. staff roster, including name of curator (or equivalent) whose primary job is to care for the museum and its exhibits, and average number of hours each staff member works per week (may be volunteer or paid);
      iii. days and hours open to the public;
      iv. admission fee (if any);
      v. description of the local community and population served by the museum; and
      vi. square footage of the museum.
   c. Pictures of exhibits, exhibit signage, facilities, and posted hours of operation.
   d. Signed articles of incorporations, bylaws, charter or other organizing document.
   e. Financial information (e.g., latest annual financial statement, tax return, year-end bank statement, or budget).
   f. Museum Access Agreement. Available for download from "Forms" section of our website: www.SurplusTexas.gov/federal.
   g. Brochures, pamphlets, website, or other promotional materials *(optional)*.
   h. Organizational Memberships *(optional)*.

Veterans' Service Organization

1. The Department of Veterans Affairs maintains a searchable database of recognized Veterans Service Organizations. Examples of organizations and its local chapters/districts that may be eligible: African American PTSD Association, American Ex-Prisoners of War, Inc., American GI Forum National Veterans Outreach Program, American Legion, AMVETS, Armed Forces Services Corporation, Army and Navy Union, U.S.A., Inc., Associates of Vietnam Veterans of America, Blinded Veterans Association, Catholic War Veterans of the U.S.A., Inc., Disabled American Veterans, Fleet Reserve Association, Gold Star Wives of America, Inc., Italian American War Veterans of the United States, Inc., Jewish War Veterans of the U.S.A., Legion of Valor of the United States of America, Inc., Marine Corps League, Military Order of the Purple Heart, National Amputation Foundation, Inc., National Association for Black Veterans, Inc., National Association of County Veterans Service Officers, Navy Mutual Aid Association, Non Commissioned Officers Association of the U.S.A, Paralyzed Veterans of America, Polish Legion of American Veterans, U.S.A, The Retired Enlisted Association, United Spanish War Veterans, United Spinal Association, Inc., Veterans of Foreign Wars of the United States, Veterans of the Vietnam War, Inc. & the Veterans Coalition, Vietnam Era Veterans Association, and Vietnam Veterans of America.
2. Required additional documentation that must be submitted with application:
   a. Narrative about organization, including:
      i. description of services provided;
      ii. percentage of membership comprised of veterans; and
      iii. facility information & location.
   b. Proof of affiliation with an eligible veterans organization recognized by the Secretary of Veterans Affairs under section 5902 of title 38 of the FORVETS Act of 2013. See Dept. of Veterans Affairs' website for complete list: http://www.va.gov/ogc/apps/accreditation/index.asp. *(Required for initial application. May not be required for account renewals if still on file and name/address has not changed.)*

Veteran Owned Small Business

1. Business must be registered and in "certified" status in the U.S. Small Business Administration's (SBA) Dynamic Small Business Search found at https://dsbs.sba.gov.
2. Business must be approved for operations in Texas.
3. Required additional documentation that must be submitted with application:
   a. Narrative about the business, including:
      i. description of services provided and/or products sold;
      ii. description of customers served (e.g., direct to consumer, business to business, government);
      iii. address of location(s). If multiple locations, description of each location, including which location is primary;
      iv. number of employees;
      v. list of key staff and their roles; and
      vi. website/social media *(optional)*.

Proclamation

STATE OF TEXAS	§	COMMISSIONERS COURT
	§	
COUNTY OF JEFFERSON	§	OF JEFFERSON COUNTY, TEXAS

BE IT REMEMBERED at a meeting of Commissioners' Court of Jefferson County, Texas, held on the 31st day of March, 2026, on a motion made and seconded, the following Proclamation was adopted:

Sexual Assault Awareness Month

"Together We Act, United We Change"

WHEREAS, National Sexual Assault Awareness Month calls attention to the fact that sexual violence is widespread and impacts every person in this community: and,

WHEREAS, the goal of National Sexual Assault Awareness Month is to raise public awareness about sexual violence, educate communities on how to prevent it, and make the perpetrators accountable; and,

WHEREAS, over 53% of women and 29% of men reported experiencing contact sexual violence. Adolescents who experience sexual violence are likely to become victims again as adults; and

WHEREAS, the theme this year for National Sexual Assault Awareness Month is, **"Together We Act, United We Change",** highlights the importance of working together to address and prevent sexual abuse, assault and harassment. This campaign focuses on enhancing the public understanding of sexual violence, amplifying the voices of underserved communities, and empowering collective action to promote health equity; and,

WHEREAS, by aligning these efforts with broader social change and long-term strategies for community engagement, we can sustain the movement toward a future free from violence and create an environment where everyone feels safe, respected and supported; and

WHEREAS, we can partner with the Rape and Suicide Crisis Center of Southeast Texas and its partnering agencies to exercise courageous leadership by educating ourselves and others on the issue and impacts of sexual violence, speaking out against harmful attitudes and actions, and supporting efforts to help survivors heal.

NOW, THEREFORE, BE IT RESOLVED, that the Jefferson County Commissioners Court, does proclaim the month of April, 2026 as Sexual Assault Awareness Month and hereby encourages all to stand with survivors of sexual assault and eradicate this crime from our community, expressing our sincere gratitude to all those community members, victim service providers, and criminal justice professionals who are committed to improving our response to all survivors of sexual violence.

Signed this 31st day of March, 2026

JUDGE JEFF R. BRANICK
County Judge

COMMISSIONER BRANDON WILLIS
Precinct No. 1

COMMISSIONER MICHAEL SINCLAIR
Precinct No. 3

COMMISSIONER CARY ERICKSON
Precinct No. 2

COMMISSIONER EVERETTE D. ALFRED
Precinct No. 4

DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency

935

OVERVIEW & CONCURRENCE FORM

OMB Control Number: 1660-0016
Expiration: 1/31/2024

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 1 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless it displays a valid OMB control number. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 500 C Street, SW, Washington, DC 20472 , Paperwork Reduction Project (1660-0016). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

PRIVACY ACT STATEMENT

AUTHORITY: The National Flood Insurance Act of 1968, Public Law 90-448, as amended by the Flood Disaster Protection Act of 1973, Public Law 93-234.
PRINCIPAL PURPOSE(S): This information is being collected for the purpose of determining an applicant's eligibility to request changes to National Flood Insurance Program (NFIP) Flood Insurance Rate Maps (FIRM).
ROUTINE USE(S): The information on this form may be disclosed as generally permitted under 5 U.S.C § 552a(b) of the Privacy Act of 1974, as amended. This includes using this information as necessary and authorized by the routine uses published in DHS/FEMA/NFIP/LOMA-1 National Flood Insurance Program (NFIP); Letter of Map Amendment (LOMA) February 15, 2006, 71 FR 7990.
DISCLOSURE: The disclosure of information on this form is voluntary; however, failure to provide the information requested may delay or prevent FEMA from processing a determination regarding a requested change to a (NFIP) Flood Insurance Rate Maps (FIRM).

A. REQUESTED RESPONSE FROM DHS-FEMA

This request is for a (check one):

☐ CLOMR: A letter from DHS-FEMA commenting on whether a proposed project, if built as proposed, would justify a map revision, or proposed hydrology changes (See 44 CFR Ch. 1, Parts 60, 65 & 72). All CLOMRs require documentation of compliance with the Endangered Species Act. Refer to the Instructions for details.

☐ LOMR: A letter from DHS-FEMA officially revising the current NFIP map to show the changes to floodplains, regulatory floodway or flood elevations. (See 44 CFR Ch. 1, Parts 60, 65 & 72).

B. OVERVIEW

1. The NFIP map panel(s) affected for all impacted communities is (are):

Community No.	Community Name	State	Map No.	Panel No.	Effective Date

2. a. Flooding Source:

b. Types of Flooding: ☐ Riverine ☐ Coastal ☐ Shallow Flooding (e.g., Zones AO and AH)
☐ Alluvial Fan ☐ Lakes ☐ Other (Attach Description)

3. Project Name/Identifier:

4. FEMA zone designations (choices: A, AH, AO, A1-A30, A99, AE, AR, V, V1-V30, VE, B, C, D, X)

a. Effective:

b. Revised:

5. Basis for Request and Type of Revision:

a. The basis for this revision request is (check all that apply)

☒ Physical Change	☒ Improved Methodology/Data	☐ Regulatory Floodway Revision	☐ Base Map Changes
☒ Coastal Analysis	☒ Hydraulic Analysis	☐ Hydrologic Analysis	☐ Corrections
☐ Weir-Dam Changes	☒ Levee Certification	☐ Alluvial Fan Analysis	☐ Natural Changes
☒ New Topographic Data	☐ Other (Attach Description)		

Note: A photograph and narrative description of the area of concern is not required, but is very helpful during review.

b. The area of revision encompasses the following structures (check all that apply)

Structures:	☐ Channelization	☒ Levee/Floodwall	☐ Bridge/Culvert
	☐ Dam	☒ Fill	☐ Other (Attach Description)

6. ☒ Documentation of ESA compliance is submitted (required to initiate CLOMR review). Please refer to the instructions for more information.

C. REVIEW FEE

Has the review fee for the appropriate request category been included? ☒ Yes Fee amount: $ 7,000

☐ No, Attach Explanation

- **Please see the DHS-FEMA Web site at http://www.fema.gov/forms-documents-and-software/flood-map-related-fees for Fee Amounts and Exemptions.**

D. SIGNATURES

1. REQUESTOR'S SIGNATURE

All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Name: Jim Thompson	Company: PALNG Common Facilities Company, LLC
Mailing Address: 1500 Post Oak Blvd., Suite 1000 Houston, TX 77056	Daytime Telephone: 832.284.5685 Fax No.: E-mail Address: jdthompson@sempraglobal.com Date:

Signature of Requestor (required):

2. COMMUNITY CONCURRENCE

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this Letter of Map Revision (LOMR) or conditional LOMR request. Based upon the community's review, we find the completed or proposed project meets or is designed to meet all of the community floodplain management requirements, including the requirements for when fill is placed in the regulatory floodway, and that all necessary Federal, State, and local permits have been, or in the case of a conditional LOMR, will be obtained. For Conditional LOMR requests, the applicant has documented Endangered Species Act (ESA) compliance to FEMA prior to FEMA's review of the Conditional LOMR application. For LOMR requests, I acknowledge that compliance with Sections 9 and 10 of the ESA has been achieved independently of FEMA's process. For actions authorized, funded, or being carried out by Federal or State agencies, documentation from the agency showing its compliance with Section 7(a)(2) of the ESA will be submitted. In addition, we have determined that the land and any existing or proposed structures to be removed from the SFHA are or will be reasonably safe from flooding as defined in 44CFR 65.2(c), and that we have available upon request by FEMA, all analyses and documentation used to make this determination.

Community Official's Name and Title: Jeff Branick, County Judge

Mailing Address: Jefferson County Courthouse 1149 Pearl St. Beaumont, Texas 77701	Community Name: Jefferson County Daytime Telephone: (409)835-8466 Fax No.: (409)839-2311 E-mail Address: Jeff.Branick@jeffersoncountytx.gov

Community Official's Signature (required): Date: 3-31-2026

COMMISSIONERS COURT JEFFERSON COUNTY, TEXAS

ATTEST

DATE 3/31/26

3. CERTIFICATION BY REGISTERED PROFESSIONAL ENGINEER AND/OR LAND SURVEYOR

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information data, hydrologic and hydraulic analysis, and any other supporting information as per NFIP regulations paragraph 65.2(b) and as described in the MT-2 Forms Instructions. All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name:		License No.:	Expiration Date:
Company Name:		Mailing Address:	
Telephone No.:	Fax No.:		
E-mail Address:			
Signature:			Date:

Ensure the forms that are appropriate to your revision request are included in your submittal.

Form Name and (Number)	Required if …
☐ Riverine Hydrology and Hydraulics Form (Form 2)	New or revised discharges or water-surface elevations
☐ Riverine Structures Form (Form 3)	Channel is modified, addition/revision of bridge/culverts, addition/revision of levee/floodwall, addition/revision of dam
☐ Coastal Analysis Form (Form 4)	New or revised coastal elevations
☐ Coastal Structures Form (Form 5)	Addition/revision of coastal structure
☐ Alluvial Fan Flooding Form (Form 6)	Flood control measures on alluvial fans

Seal (Optional)

PORT ARTHUR LIQUEFACTION PROJECT

Hydrology & Hydraulics (H&H) CLOMR Technical Report

Prepared For

Port Arthur LNG

Prepared By

C. H. Fenstermaker & Associates, L.L.C.

January 2026

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STATE OF TEXAS
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159589
LICENSED
PROFESSIONAL ENGINEER
Tyler Young 01/26/2026

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GLOSSARY & ACRONYMS

Advanced CIRCulation (ADCIRC) — a finite-element hydrodynamic model that simulates coastal and estuarine water levels and currents driven by tides, wind, and pressure (often coupled with SWAN for waves).

Annual Exceedance Probability (AEP) — Probability that a given flood magnitude will be equaled or exceeded in any year (e.g., 1% AEP ≈ 100-year).

Base Flood Elevation (BFE) — The computed elevation of the base (1% annual-chance) flood as established by the National Flood Insurance Program (NFIP), representing the regulatory water-surface level that defines the Special Flood Hazard Area (SFHA) on a Flood Insurance Rate Map (FIRM)

Base Level Engineering (BLE) — FEMA regional modeling products providing foundational hydrologic/hydraulic data (parent model for this study).

Coastal Hazard Analysis and Mapping Program (CHAMP) — FEMA's toolset and workflow—providing a GUI and data utilities—to prepare, run, and document coastal analyses (e.g., WHAFIS transects, runup inputs) for use in Flood Insurance Studies and map revisions.

Conditional Letter of Map Revision (CLOMR) — FEMA's conditional determination of map change before final mapping.

Correlation Coefficient (CORR) — Linear correlation coefficient between observed and simulated time series.

Louisiana Coastal Protection and Restoration Authority (CPRA) — the State of Louisiana's lead agency for coastal policy, planning, and project delivery—developing the Coastal Master Plan and producing regional datasets

ΔWSEL — Difference in maximum modeled water-surface elevation between two scenarios (e.g., Proposed – Existing).

Flood Insurance Rate Map (FIRM) — FEMA's official map for a community that shows flood risk information

Flood Insurance Study (FIS) — The technical report/study that accompanies a community's FIRM

Federal Geographic Data Committee (FGDC) — a U.S. interagency committee that sets national geospatial data standards and coordinates federal mapping activities—most notably the metadata standards used to document GIS and modeling datasets.

Future Without Action (FWOA) — A planning scenario (used in CPRA datasets) that projects future coastal/flood conditions assuming no new risk-reduction projects are implemented, accounting for sea-level rise, subsidence, and landscape change.

Hydrologic Engineering Center's Hydrologic Modeling System (HEC-HMS) — a modeling platform by USACE that simulates rainfall-runoff processes—transforming precipitation into watershed flows for use in hydraulic and flood studies.

Hydrologic Engineering Center's River Analysis System (HEC-RAS) — a modeling platform made by USACE for 1-D/2-D hydraulic simulations of water-surface profiles, unsteady flow, sediment, and related river mechanics.

HUC-8/10— A Hydrologic Unit Code designating a sub-basin level watershed in the USGS hierarchy used for regional hydrologic modeling and mapping. HUC 10 is smaller than HUC 8.

Light Detection and Ranging (LiDAR) — Airborne laser scanning used to produce high-resolution topographic elevation data.

The Limit of Moderate Wave Action (LiMWA) —line indicating where 1.5–3 ft waves may occur in coastal flooding**.**

Letter of Map Revision (LOMR) — FEMA's final Letter of Map Revision that officially updates a community's FIRM.

Louisiana Watershed Initiative (LWI) — a statewide program led by the State of Louisiana to reduce flood risk by managing watersheds.

Mean Absolute Error (MAE) — the average of the absolute differences between observed and simulated (or predicted) values

MT-2 — FEMA's submittal process and guidance for CLOMR/LOMR map-revision requests and digital deliverables**.**

National Oceanic and Atmospheric Administration (NOAA) — National provider of tide, surge, and coastal observations.

NGOM2 - FEMA's Northern Gulf of America, Phase 2 LiDAR dataset—a ~1-meter resolution coastal topography collection (TX–FL Panhandle) widely used as base terrain for flood studies and mapping.

Nash–Sutcliffe Efficiency (NSE) — a goodness-of-fit metric where 1.0 indicates perfect agreement.

Peak Wave Period (T_p / Tp) — The dominant wave period corresponding to the peak of the wave energy spectrum.

Quality Assurance/Quality Control (QA/QC) —processes that ensure technical accuracy and document integrity.

RAS Mapper — The HEC-RAS module used for terrain management, mapping, and spatial post-processing of model outputs.

Root Mean Square Error (RMSE) —quantifies the average magnitude of simulation error relative to observations.

Runup — The maximum vertical extent of wave uprush above the stillwater level on a structure or slope.

Stillwater Elevation (SWEL) — The combined tide and surge water level without local wave setup or runup.

Simulating WAves Nearshore (SWAN) — a spectral wave model frequently coupled with ADCIRC.

Technical Advisory Committee for Water Retaining Structures (TAW) — an expert committee that developed empirical methods and guidance for estimating wave runup, overtopping, and hydraulic loading on coastal and flood-protection structures, widely referenced in FEMA and international coastal engineering practice.

Transect — A cross-shore line used in coastal studies (e.g., WHAFIS/CHAMP) to model overland wave propagation and decay.

U.S. Army Corps of Engineers (USACE) — s a federal agency within the Department of the Army that plans, builds, operates, and regulates civil-works water resources projects.

U.S. Geological Survey (USGS) — a federal science agency that monitors and studies natural resources and hazards

VE / AE Zones — FEMA coastal (VE) and riverine/coastal (AE) flood zones that define regulatory flood hazards and BFEs.

Wave Setup — The increase in mean water level at the shoreline due to breaking waves**.**

Wave Height Analysis for Flood Insurance Studies (WHAFIS) — FEMA's computational method (and software) that calculates how ocean waves propagate and decay overland along transects to determine wave heights and wave-crest elevations used in coastal flood mapping.

Water-Surface Elevation (WSEL) — Water-Surface Elevation referenced to the project datum (NAVD 88)**.**

APPENDICES

APPENDIX A - PALNG HEC-RAS MODEL

APPENDIX B - PALNG HYDRAULIC CALIBRATION

APPENDIX C - PALNG COASTAL MODEL AND CALCULATIONS

APPENDIX D - PALNG MT-2 FILES

APPENDIX E - SUPPLEMENTAL FILES

(All Appendices can be found in folders included with the submission of this report)

SECTION 1: EXECUTIVE SUMMARY

C.H. Fenstermaker & Associates, L.L.C. prepared this Hydrology and Hydraulics (H&H) Technical Report to support a Conditional Letter of Map Revision (CLOMR) for the Port Arthur LNG (PALNG) project in Jefferson County, Texas. The project includes construction of a perimeter levee system and associated facilities, with some accessory buildings located outside the levee. The levee is designed to provide flood protection for the proposed facility within the protected area.

Hydrologic, hydraulic, and coastal analyses were performed using FEMA-approved methodologies and modeling tools consistent with the requirements of the National Flood Insurance Program (NFIP). The Sabine Lake Base Level Engineering (BLE) model was used as the foundational dataset and refined to represent existing and proposed conditions associated with PALNG development. Coastal boundary conditions, including stillwater elevations and wave effects, were established using FEMA's current coastal analysis framework.

The analysis was conducted to evaluate potential off-site impacts to base flood elevations and to assess compliance with applicable floodplain management criteria for Zone AE and Zone V areas without a designated regulatory floodway. Results demonstrate that the proposed PALNG facility development, including the perimeter levee, do not result in adverse impacts to surrounding floodplain conditions and satisfy the technical and regulatory requirements for FEMA's conditional review under *Title 44 of the Code of Federal Regulations* (44 CFR) *Parts 60 and 65*.

SECTION 2: PROJECT DESCRIPTION AND HISTORY

2.1 PURPOSE AND SCOPE

The purpose of this report is to document the technical analyses supporting a CLOMR request for the PALNG facility. The CLOMR provides FEMA with the basis for a conditional review and evaluation of the proposed perimeter flood-protection levee system and associated drainage features, prior to construction and final map revision.

This study demonstrates compliance with applicable Federal floodplain management regulations. Development criteria for the project are governed by *44 CFR §60.3,* which establishes requirements for floodplain encroachments, while *44 CFR §65.10* defines the procedural requirements for FEMA's conditional review and approval of proposed actions that may affect Base Flood Elevations (BFEs). Compliance with these provisions ensures the proposed levee system is consistent with FEMA's regulatory framework and National Flood Insurance Program (NFIP) floodplain management standards.

As scoped in the accepted C.H. Fenstermaker proposal dated September 11, 2025, this CLOMR effort includes coordination with FEMA Region VI and the Jefferson County Floodplain Administrator. The submittal will culminate in a complete MT-2 application package documenting hydrologic, hydraulic, and coastal analyses in accordance with FEMA's *Guidance for Flood Risk Analysis and Mapping: MT-2 Requests (2023*). Federal authorization and interagency coordination relevant to the project are documented in the *FERC Final Environmental Impact Statement (2019)* and the *Facility Construction Authorization (2019)*.

This submittal provides FEMA with the technical basis to conditionally evaluate the proposed levee system and associated development for potential effects on surrounding floodplain conditions prior to issuance of a final Letter of Map Revision (LOMR). The intent of the subsequent LOMR submittal is to formally revise the effective flood hazard mapping such that the PALNG facility located within the levee is removed from the regulatory floodplain. Following FEMA's conditional determination, the project team will submit as-built certification data, operation-and-maintenance documentation, and levee accreditation materials with the post-construction LOMR package, consistent with *Facility Construction Authorization Condition 19* and the requirements of *44 CFR §65.10*.

2.2 PROJECT BACKGROUND

The PALNG site is located along the Sabine Neches Canal, south of Port Arthur. **Figure 2-1** shows the project location. The area is characterized by low-lying coastal terrain with direct hydraulic connectivity to Sabine Lake and the Intracoastal Waterway.

The PALNG Project was authorized by the Federal Energy Regulatory Commission (Order 167 FERC ¶ 61,052; 2019) and will be developed by Sempra Infrastructure, with Bechtel Energy Inc. serving as the engineering, procurement, and construction (EPC) contractor. The authorized design includes four liquefaction trains (Trains 1 and 2 constructed in Phase 1, with Trains 3 and 4 constructed in Phase 2) with a total permitted capacity of approximately 13.5 million metric tons per annum for the initial phase and additional capacity associated with full buildout, three 160,000 m^3 full-containment LNG storage tanks, a marine slip with two LNG berths, on-site gas-turbine power generation (~240 MW), and associated utilities and support facilities situated on roughly 898 acres within a 2,900-acre property west of the Sabine Neches Canal.

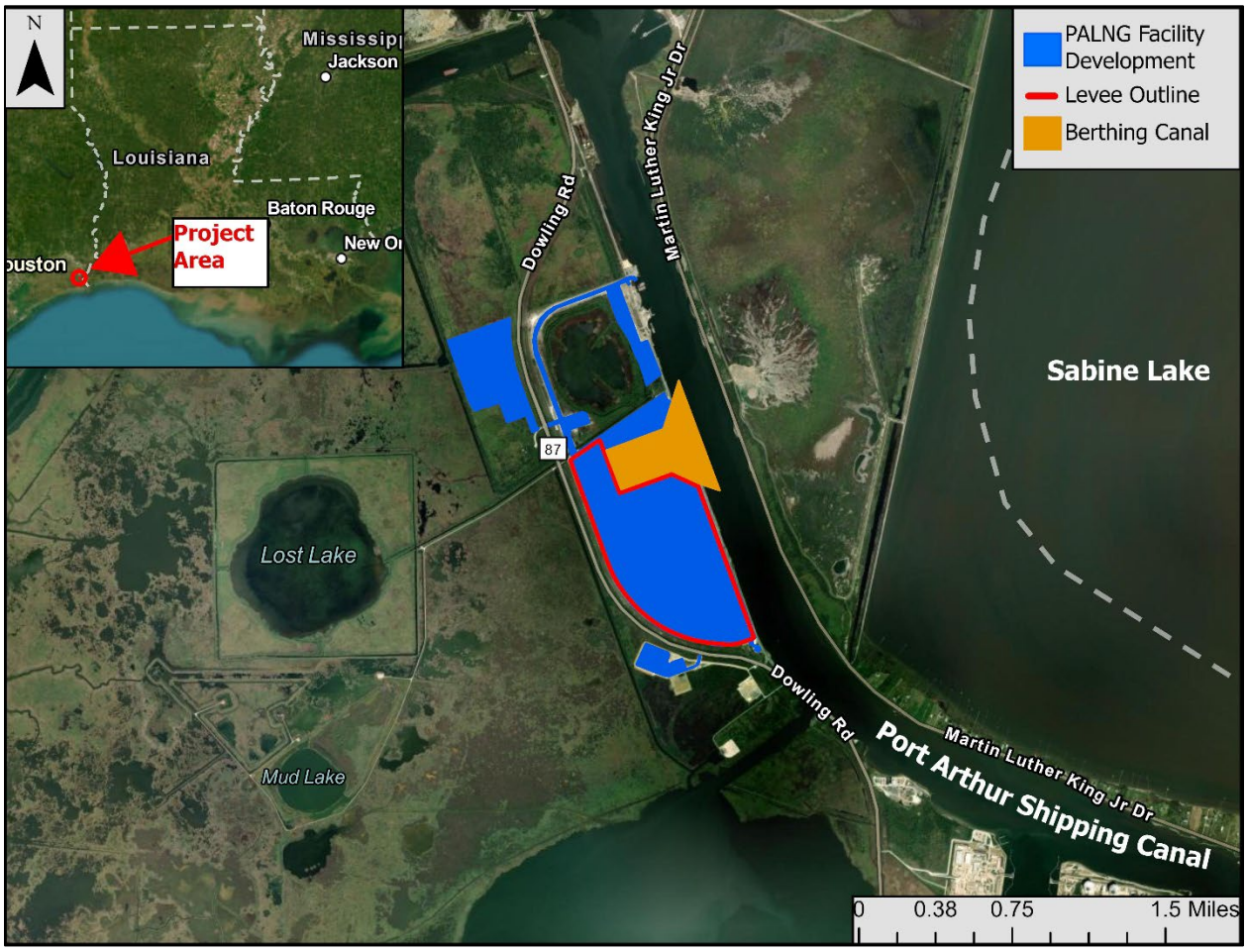


Figure 2-1: PALNG Project Vicinity

The project includes a perimeter earthen levee system with a peak elevation of 20.6ft NAVD88 providing external flood protection for the LNG process and storage areas. This CLOMR documents the Proposed construction hydraulic modeling and floodplain impact evaluation required for FEMA's conditional map-revision review in accordance with *44 CFR* §*65.12* and FEMA's *Guidance for Flood Risk Analysis and Mapping: MT-2 Requests (2023)*.

2.3 EXISTING FLOOD HAZARD MAPPING AND FIS

The PALNG facility is located within FEMA Flood Insurance Rate Map (FIRM) Panels 4803850440D (Jefferson County) and 4854990055F (City of Port Arthur), both derived from a 1992 Flood Insurance Study (FIS). Subsequent adjustments to municipal boundaries place the entire project area outside the City of Port Arthur limits and solely within Jefferson County jurisdiction.

Under the effective FIRMs, the site is mapped as Zone A15, an obsolete flood zone designation equivalent to the current Zone AE. The effective FIS relied on early coastal flood analysis techniques, including simplified transect-based wave height evaluations. These methodologies predate FEMA's current coastal modeling standards, digital terrain datasets, and hydrodynamic modelling based workflows, and do not include Limit of Moderate Wave Action (LiMWA) delineations or explicit overland wave propagation analyses.

The effective coastal study also predates the use of WHAFIS or comparable modern tools for simulating wave transformation and inland propagation. As a result, effective mapping does not reflect contemporary FEMA coastal analysis practices or datasets.

In contrast, the Preliminary FIS incorporates updated coastal modeling methodologies and data, including revised stillwater elevations, offshore wave conditions, and overland wave propagation analyses developed using FEMA's current coastal framework and application of WHAFIS. These preliminary datasets represent FEMA's best available coastal information at the time of this CLOMR submittal and are intended to support future FIRM updates. Both the effective and preliminary FIS reports are included in **Appendix E.**

SECTION 3: HYDRAULIC MODEL DEVELOPMENT

This section describes the hydraulic model development process for the PALNG CLOMR. The model was derived from FEMA's Sabine Lake BLE dataset and adapted to represent existing and proposed project conditions. Modeling was performed in HEC-RAS Version 6.6 to simulate 2-D, unsteady-flow conditions incorporating stillwater elevations and local hydrology.

3.1 FEMA MODEL SOURCE AND CONVERSION

The FEMA Sabine Lake BLE model (Compass PTS JV, 2021) served as the parent dataset for the PALNG CLOMR hydraulic analysis. The BLE model was originally developed in HEC-RAS Version 5.0.7 and represents a continuous 2-D flow domain extending from the Gulf of America through Sabine Pass into the inland Sabine Neches Canal system.

For the CLOMR, the BLE model was upgraded to HEC-RAS Version 6.6 to leverage improvements in numerical stability, mesh control, and boundary-condition handling. A sensitivity check confirmed that the software upgrade did not alter system hydraulics.

3.1.1 HYDROLOGIC BOUNDARY CONDITIONS FRAMEWORK

Hydrologic boundary conditions for the CLOMR were adopted directly from the FEMA Sabine Lake Base Level Engineering (BLE) model. The BLE model provides rainfall–runoff parameters and precipitation inputs developed from National Oceanic and Atmospheric Administration (NOAA) Atlas 14 frequency analyses for the 100-, and 500-year events. These inputs were applied without modification to maintain consistency with FEMA's regional hydrologic framework.

The BLE hydrologic modeling was originally developed using HEC-HMS Version 4.6.1. All precipitation inputs and watershed parameters from the BLE model were carried forward directly into the CLOMR analysis to ensure alignment with FEMA-approved methodologies and established regional design standards.

3.2 BREAKOUT MODEL DEVELOPMENT

A breakout model (hereinafter referred to as the PALNG Breakout Model) was developed from the parent FEMA Sabine Lake Base Level Engineering (BLE) domain to focus computational resolution on the hydraulically significant area surrounding the Port Arthur LNG facility. The regional BLE model corresponds to Hydrologic Unit Code (HUC) 8 watershed 12040201 (Sabine Lake), which encompasses the broader Sabine–Neches Canal system and associated coastal influences.

The breakout model includes three contributing HUC-10 watersheds within the HUC-8 basin that directly influence hydraulic conditions at the PALNG site. These sub-basins were retained to ensure proper representation of regional flow conveyance, storage, and coastal backwater effects affecting the project area. **Figure 3-1** and **Table 3-1** identify the contributing HUC-10 areas that form the breakout model domain.

Terrain refinements and geometric updates were incorporated into the breakout model to develop representative Existing and Proposed condition geometries. The Proposed condition reflects construction of the PALNG facility and perimeter levee system. Interior drainage features within the leveed area, such as site-specific runoff collection, conveyance, and subsurface systems, were not explicitly modeled, as the CLOMR scope is limited to evaluating potential off-site impacts to Base Flood Elevations (BFEs) in the surrounding floodplain.

Table 3-1: HUC's in BLE and PALNG (Breakout) Boundaries

HUC #	HUC Name	In Breakout Model Boundary?
1204020101	Lower Neches Valley Authority Canal-Taylor Bayou	No
1204020102	Hillebrandt Bayou	No
1204020103	Salt Bayou	Yes
1204020105	Sabine Lake	Yes
1204020104	Johnson Bayou-Frontal Sabine Lake	Yes

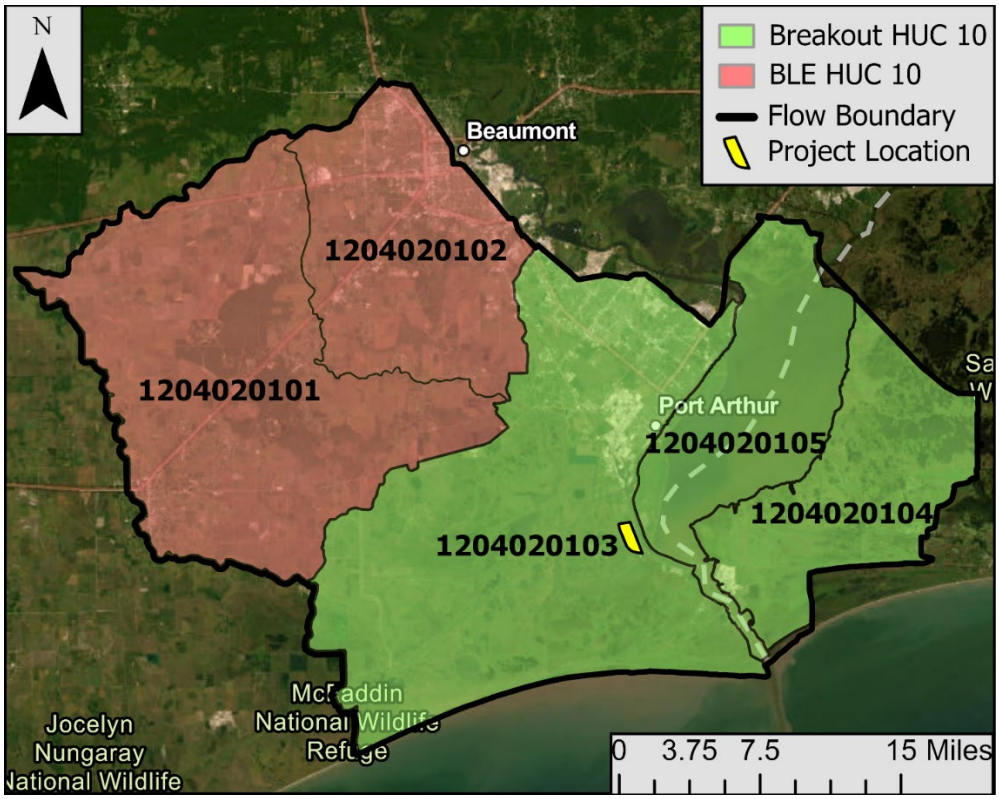


Figure 3-1: Breakout Model Boundary and HUC-10's

3.3 MESH REFINEMENT AND SENSITIVITY TESTING

Following domain refinement, the computational mesh was redesigned to balance hydraulic detail and runtime efficiency. The BLE model mesh used a uniform 300 × 300 ft base mesh refined to 50 × 50 ft in urban areas and coarsened to 500 × 500 ft in open-water zones, totaling approximately 1,573,451 cells and a runtime of 649 minutes (using the PALNG Breakout Model Boundary).

For the PALNG breakout model, the mesh was simplified to a 1,250 × 1,250 ft base grid, refined to 250 ft in urban areas, 200–500 ft in channels, and 50 ft within the PALNG levee corridor. This configuration reduced the total cell count to approximately 69,642 and the average simulation time to 4.25 minutes while maintaining fidelity in areas of interest.

Sensitivity testing compared maximum WSELs across coarse, standard, and fine mesh configurations. Results were compared to confirm that the adopted resolution provides accurate flow-path representation while significantly improving computational performance. An example of the mesh configuration optimization is shown in **Figure 3-2**.

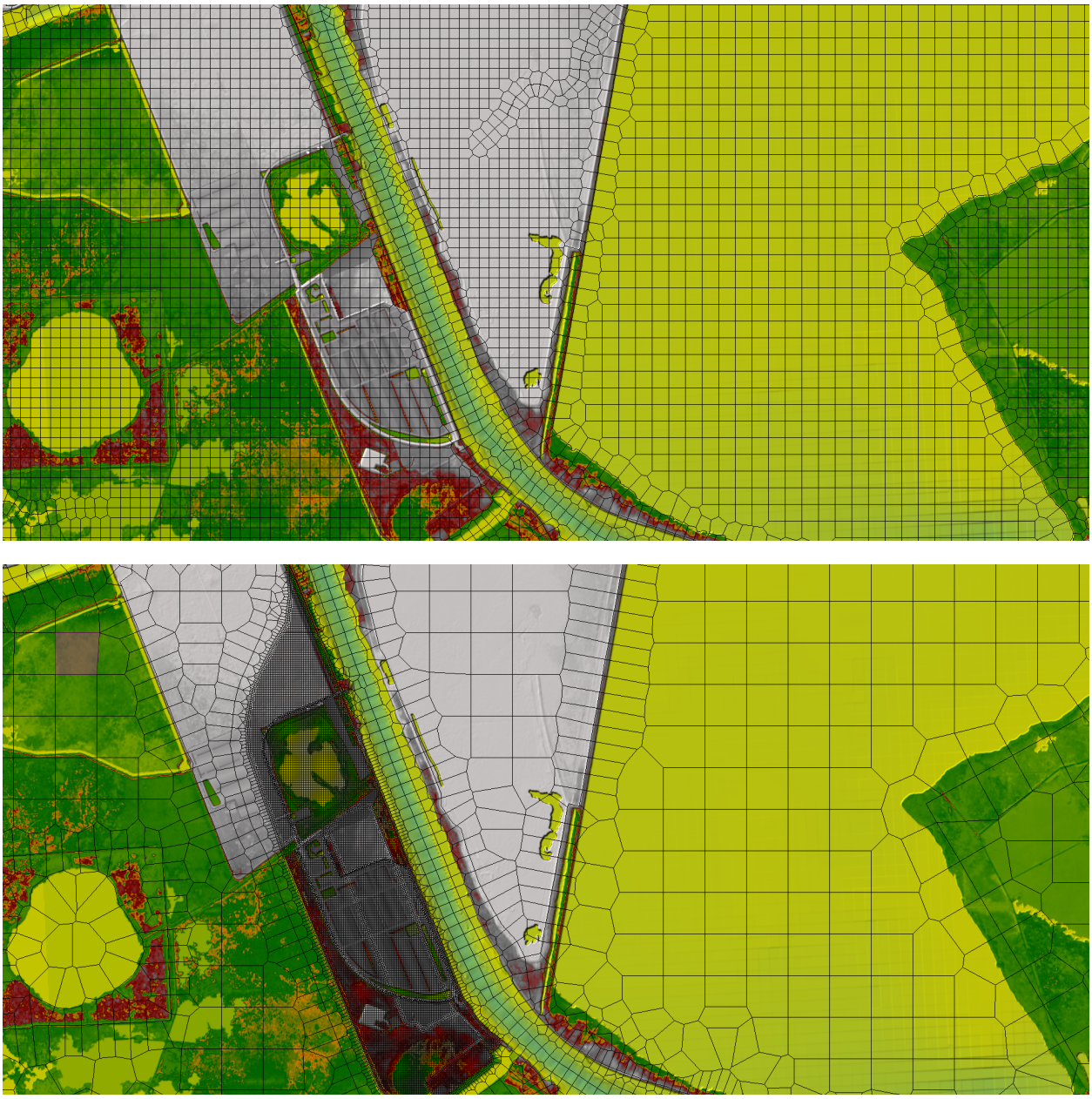


Figure 3-2: RAS Mesh Comparison - BLE (top) Vs. PALNG (bottom)

3.4 TERRAIN UPDATES AND LEVEE INTEGRATION

Terrain data used in the PALNG CLOMR was developed through a combination of FEMA and project-specific datasets to ensure consistency with the Sabine Lake BLE model while accurately representing current topographic conditions within the project area. The BLE terrain (**Figure 3-3)** was constructed exclusively from 10-ft resolution LiDAR-derived elevation data covering the full Sabine Lake watershed. The LiDAR was collected between 2017 and 2018 across Texas and Louisiana and processed into a seamless Digital Elevation Model (DEM) for FEMA Region VI. This LiDAR-based surface provided the foundation for all subsequent terrain modifications.

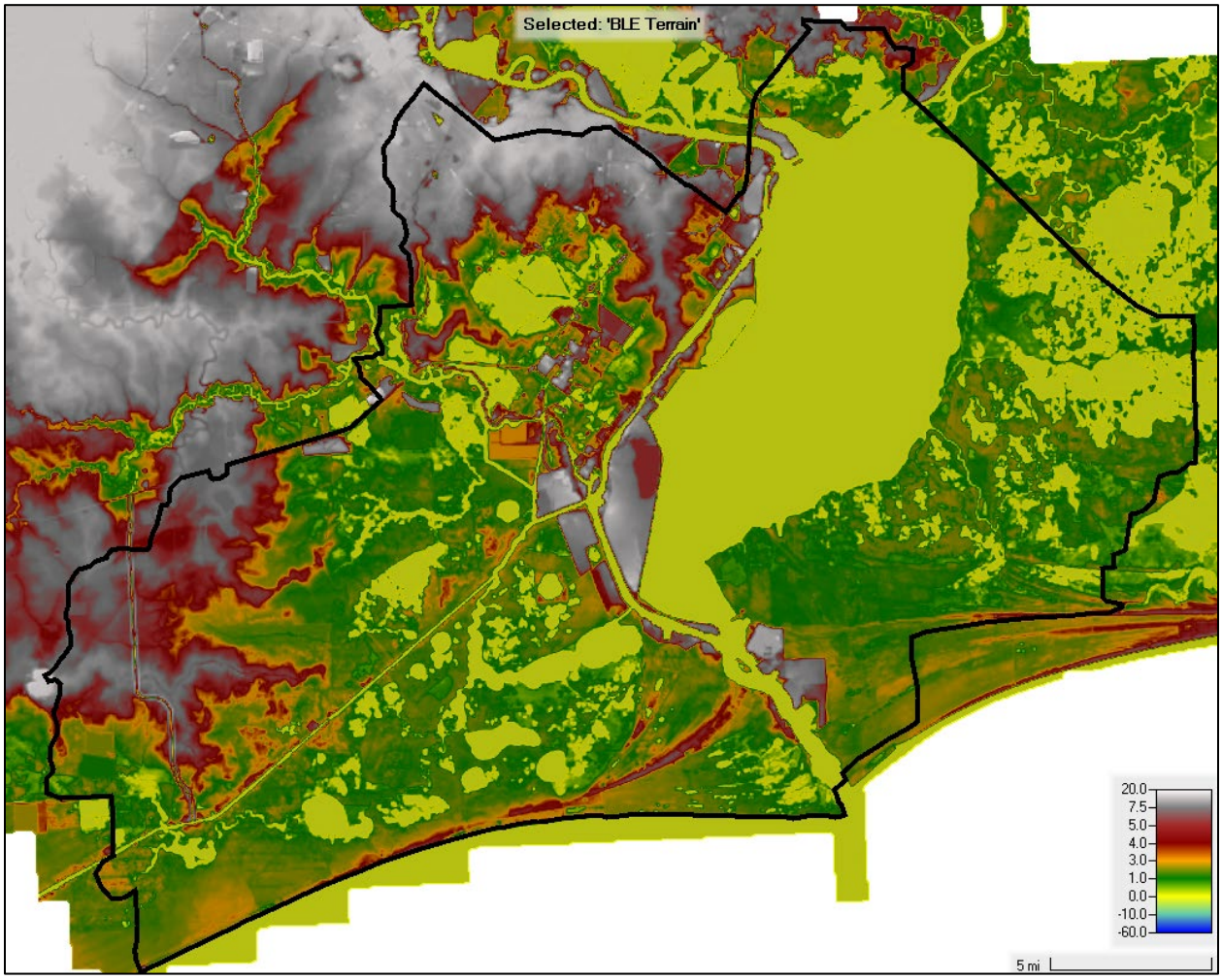


Figure 3-3: Original (LiDAR-based) BLE Terrain

For this CLOMR, an updated PALNG Existing Conditions terrain (**Figure 3-4**) was created by merging the BLE terrain with FEMA NGOM2 LiDAR and surveyed topographic data collected prior to facility construction. The pre-construction survey data captured

ground elevations across the future PALNG footprint and surrounding floodplain, ensuring that the existing-condition surface reflects the natural landscape before levee and facility development.

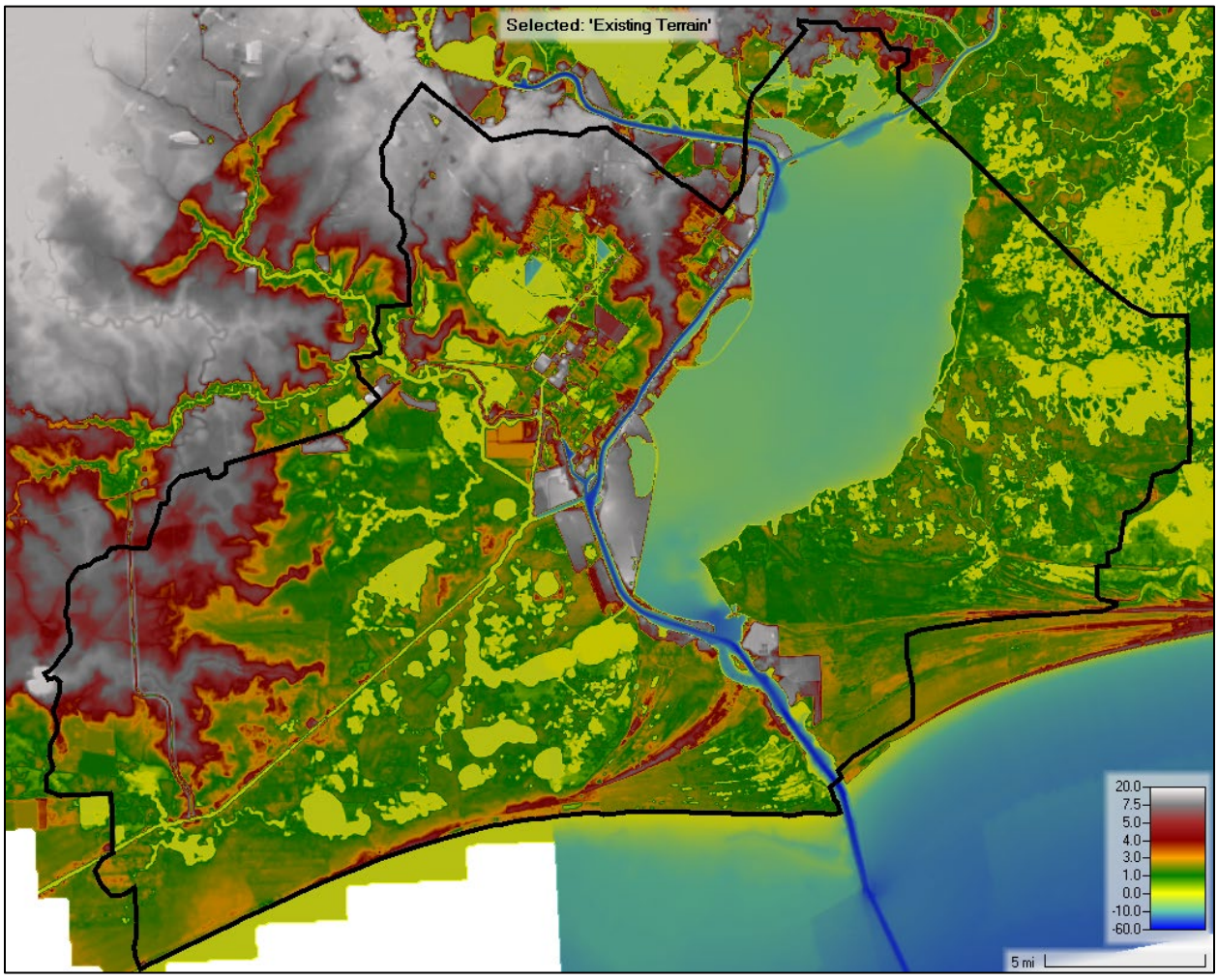


Figure 3-4: Existing Terrain (NGOM2 Bathymetry added to BLE Terrain)

A corresponding PALNG proposed-condition terrain was developed by adding the facility pad and perimeter levee embankment to the existing-condition surface. The levee geometry, including crest elevation (20.6 ft NAVD88), alignment, and side slopes, was incorporated from final design information provided by Bechtel Energy Inc. The levee was modeled as a continuous embankment enclosing the LNG process area. This approach accurately represents site hydraulics, as the levee system contains no hydraulic penetrations and interior stormwater will be managed through a pumped drainage system discharging to the exterior.

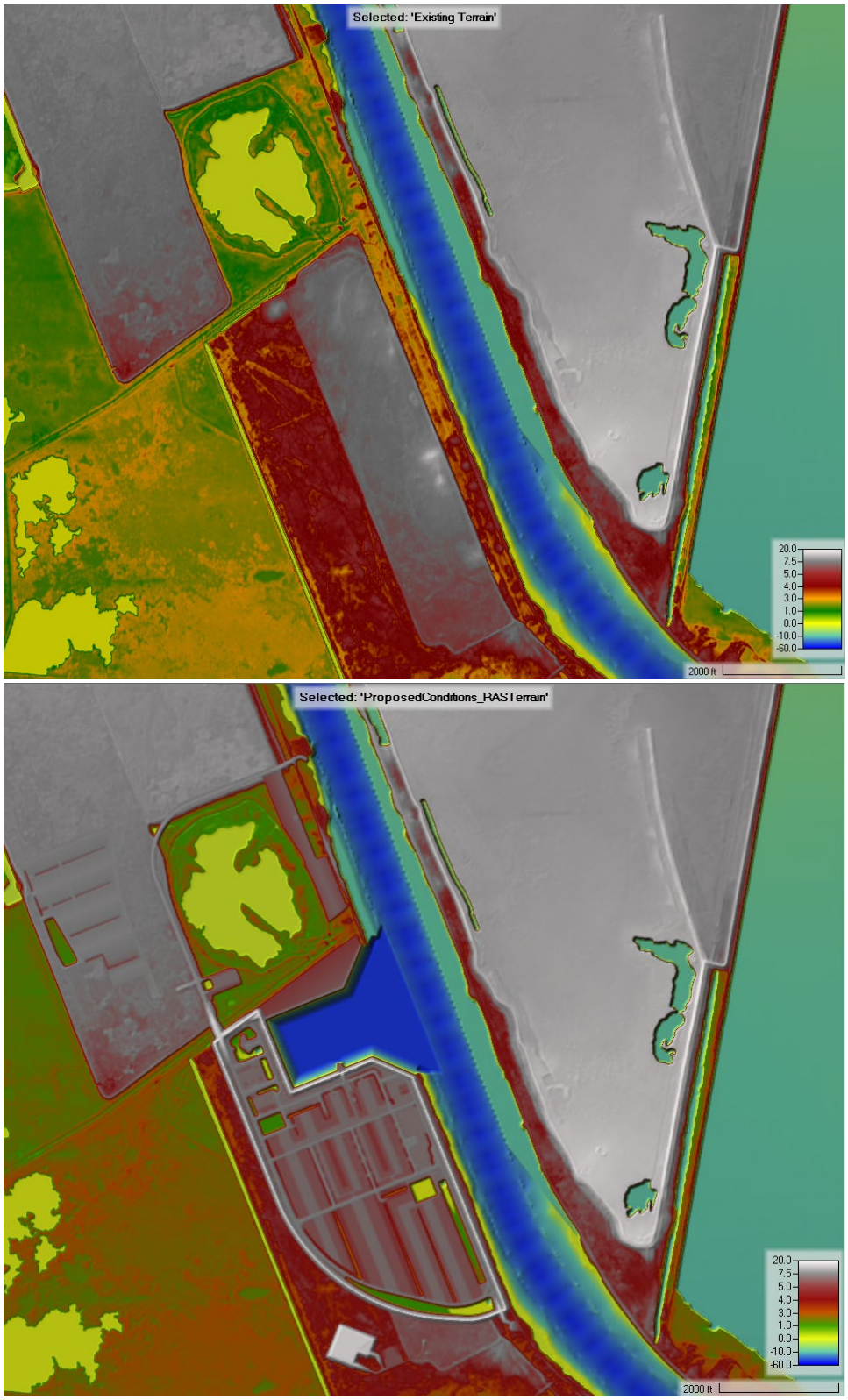


Figure 3-5: Existing (Top) Vs. Proposed (Bottom) RAS Terrain

A comparison of the Existing and Proposed conditions terrains can be seen in **Figure 3-5**. Both terrains were processed in RASMapper within the HEC-RAS 6.6 environment and referenced to NAVD88 (U.S. feet). The only modification between the existing and proposed conditions was the addition of the levee and associated facility footprint. All raster files used to create these RAS Terrains can be found in **Appendix E**.

3.5 MODEL CALIBRATION AND HISTORICAL EVENT COMPARISON

Model calibration for the PALNG CLOMR was conducted using Hurricane Harvey (Harvey) which happened in 2017. Harvey was the only historical event simulated for calibration purposes; it produced record rainfall and extensive flooding throughout the Sabine Neches Canal and Sabine Lake region, providing a comprehensive dataset for verifying the model's hydrodynamic response. The Harvey simulation used the existing-condition terrain to represent the pre-construction topography.

3.5.1 CALIBRATION METHODOLOGY

Calibration focused on reproducing observed stage hydrographs across a network of NOAA, USGS, and Coastal Reference Monitoring System (CRMS) gauges distributed throughout the study area. The objective was to validate the model's ability to simulate tidal, riverine, and estuarine dynamics under historical storm forcing. Observed and simulated hydrographs were compared using the quantitative performance metrics shown in **Table 3-2**.

Table 3-2: Calibration Metrics Formulas

Metric	Formula	Ideal Value	Goal Value
CORR *(Correlation Coefficient)*	$r = \frac{\sum(O_i - \bar{O})(S_i - \bar{S})}{\sqrt{\sum(O_i - \bar{O})^2 \sum(S_i - \bar{S})^2}}$	**1.0**	**> 0.9**
MAE *(Mean Absolute Error)*	$MAE = \frac{1}{n}\sum_{i=1}^{n} \lvert S_i - O_i \rvert$	**0.0**	**< 1.0**
RMSE *(Root Mean Square Error)*	$\text{RMSE} = \sqrt{\frac{1}{n}\sum(S_i - O_i)^2}$	**0.0**	**< 1.0**
NSE *(Nash–Sutcliffe Efficiency)*	$\text{NSE} = 1 - \frac{\sum(S_i - O_i)^2}{\sum(O_i - \bar{O})^2}$	**1.0**	**> 0.6**

Where: O_i= observed stage (ft), S_i= simulated stage (ft), $\bar{O}$= mean of observed stages, $\bar{S}$= mean of simulated stages, n= number of paired observations

Performance statistics were computed at each calibration point to assess timing, amplitude, and overall fit between modeled and observed stages.

3.5.2 CALIBRATION GAUGES

Calibration was performed using eight stage gauges located across the Sabine Lake watershed. These gauges represent a range of coastal, marsh, and inland conditions shown in **Table 3-3** and **Figure 3-6**.

Table 3-3: Stage Calibration Gauges

ID	Agency & Gauge ID	Gauge Name / Description	Purpose
1	USGS 08042522	Hillebrandt Bayou near Port Arthur	Riverine backwater calibration
2	NOAA 8770475	Sabine Pass North	Primary tidal calibration point
3	CRMS 0684	Sabine Refuge (West)	Interior estuarine calibration
4	CRMS 2189	Sabine Lake West Shore	Coastal floodplain calibration
5	CRMS 0669	Calcasieu–Sabine Marsh (North)	Interior marsh response
6	CRMS 2156	Sabine Lake East Shore	Coastal floodplain calibration
7	CRMS 0683	Sabine Refuge (East)	Interior estuarine calibration

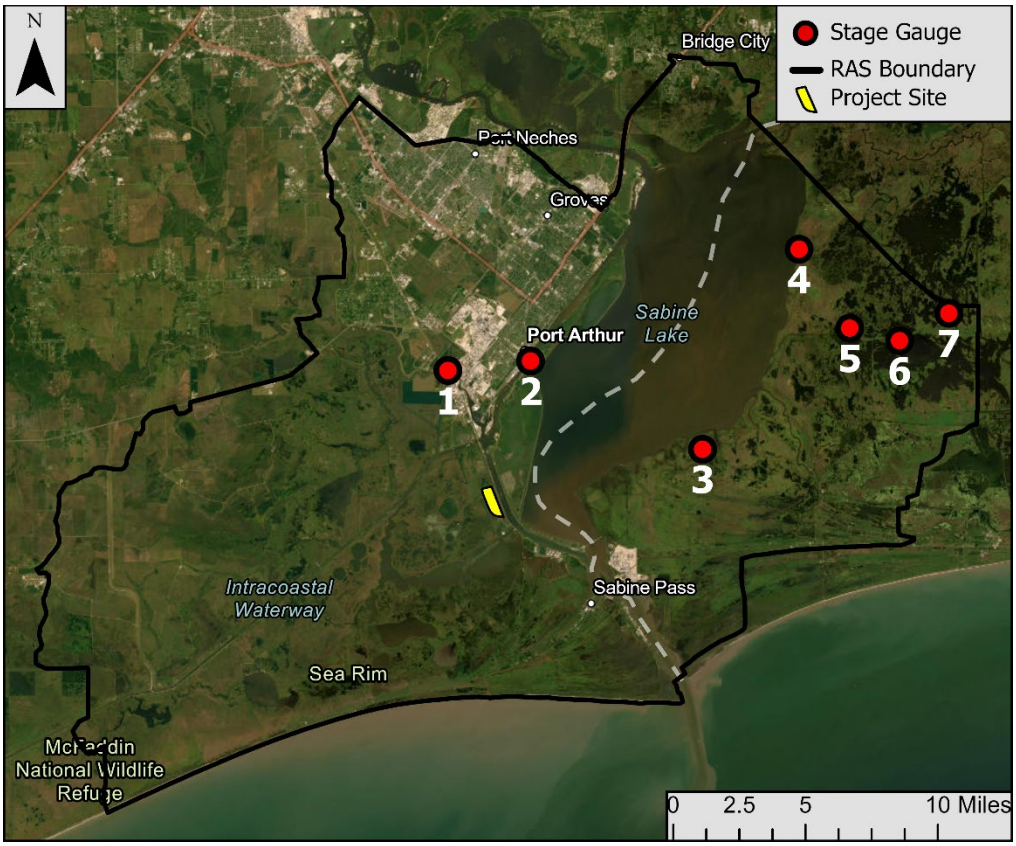


Figure 3-6: Stage Calibration Gauge Locations

3.5.3 CALIBRATION BOUNDARY CONDITION CONFIGURATION

Boundary conditions for the Harvey simulation were established using a combination of observed and derived inputs to replicate the hydrologic and tidal system response:

- Upstream flow boundaries – Hydrographs from USGS 08041780 (Neches River near Evadale, TX) and USGS 08030500 (Taylor Bayou near LaBelle, TX).
- Downstream stage boundary – Time-varying stage hydrograph from NOAA 8770822 (Sabine Pass, TX).
- Precipitation input – Louisiana Watershed Initiative (LWI) Region 4 gridded rainfall dataset (Halff Associates, 2023), combining MRMS QPE, AORC, and NCEP Stage IV data at 1-hour, 500-m resolution.
- Lateral boundaries – All other perimeter cells not assigned flow or stage data were set to normal-depth conditions to ensure free outflow and stability during transient surge propagation.

These inputs collectively reproduce the combined rainfall, inflow, and tidal forcing during Harvey while preserving the BLE model's hydraulic connectivity. Refer to **Table 3-4** and **Figure 3-7** for spatial understanding of the boundary condition setup.

Table 3-4: Historical Storm Boundary Condition Gauges

ID	Agency & Gauge ID	Gauge Name	Type	Boundary Application
A	**USGS 08041780**	Neches River near Evadale	Flow	Upstream inflow hydrograph
B	**USGS 08030500**	Taylor Bayou near LaBelle	Flow	Upstream inflow hydrograph
C	**NOAA 8770822**	Sabine Pass	Stage	Downstream tidal stage

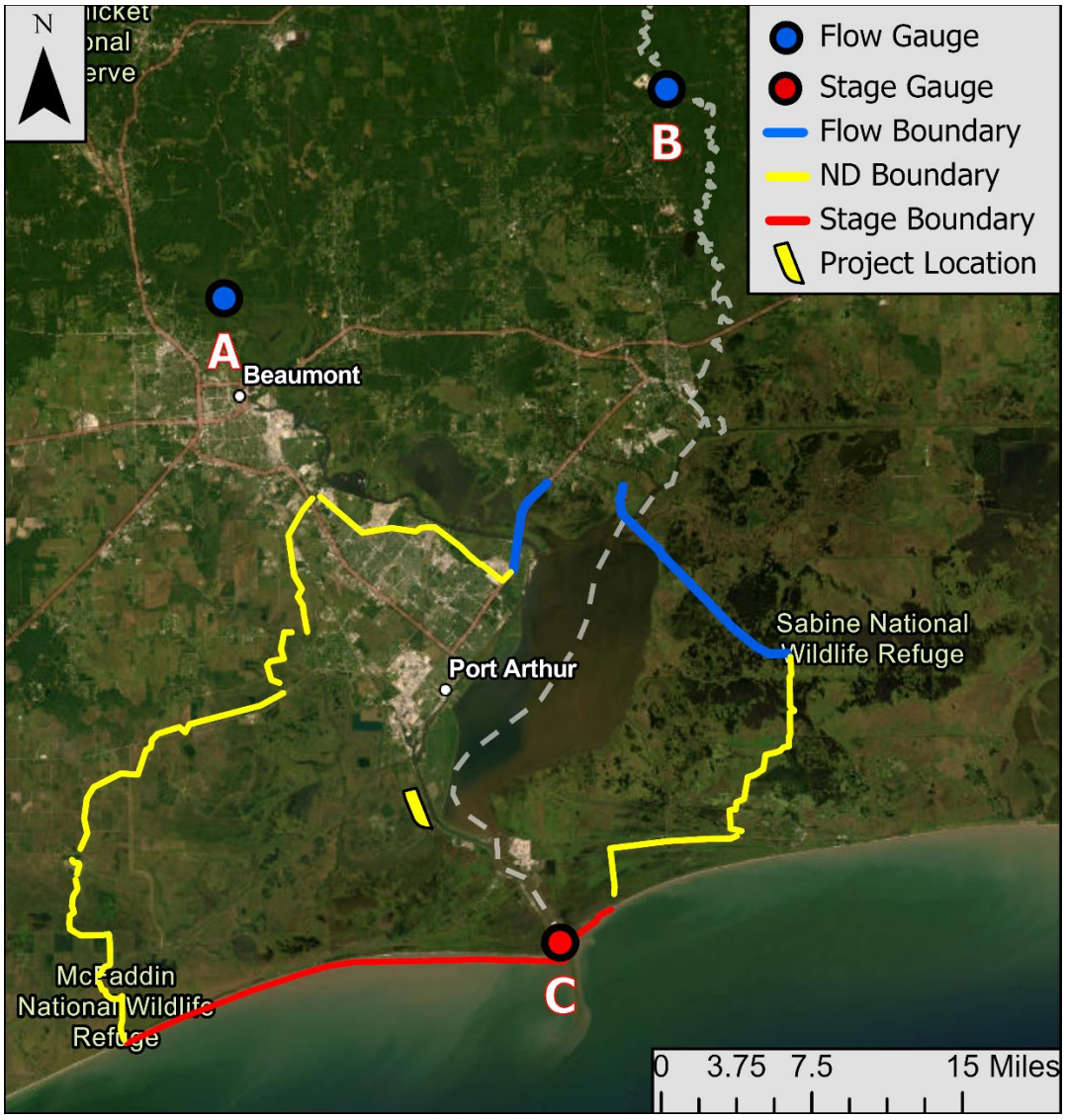


Figure 3-7: Historical Storm Boundary Conditions Gauges

3.5.4 CALIBRATION RESULTS

Model results reproduced the observed stage timing and magnitude at all calibration locations. Mean Absolute Error (MAE) and Root Mean Square Error (RMSE) values averaged 0.24 ft and 0.44 ft respectively with correlation coefficients averaging 0.94 and NSE values averaging 0.97, indicating strong agreement between observed and simulated conditions.

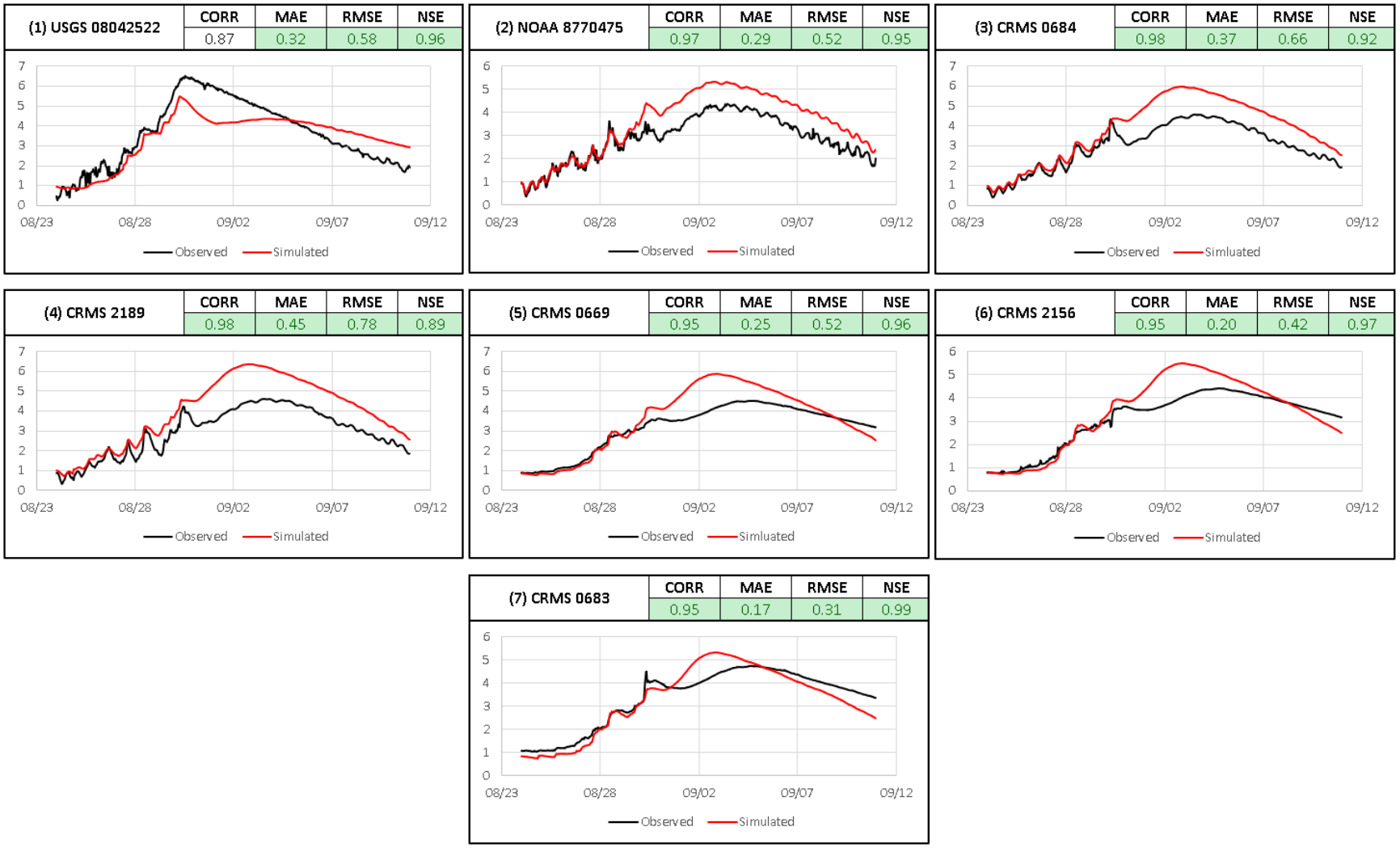


Figure 3-8: Harvey Calibration Results Graphs and Statistics

These findings validate that the calibrated model accurately represents the regional hydrologic and tidal system and is suitable for assessing levee performance and floodplain impacts in support of FEMA's CLOMR review. Calibration hydrographs and detailed statistics, as well as the HEC-RAS model used for calibration, are provided in **Appendix B**.

3.6 DESIGN STORM BOUNDARY CONDITIONS AND SIMULATION PARAMETERS

All historical forcing and gauge data used for calibration (**Section 3.5**) were removed, and the design runs were driven solely by AEP-based inflows and coastal stillwater boundaries. Design storm simulations for the PALNG CLOMR were configured to evaluate hydraulic conditions for the 100 and 500-year events, consistent with FEMA's BLE framework.

All simulations were executed in HEC-RAS Version 6.6 using a fully 2-D, unsteady-flow solution. The model geometry, computational mesh, and friction parameters were identical to those used for the Harvey calibration to ensure consistency between observed and design scenarios. Boundary condition locations match those found in the historical event model, shown in **Figure 3-7**.

3.6.1 UPSTREAM BOUNDARIES

Upstream boundaries were primarily defined using normal-depth conditions to allow natural hydraulic gradients within the domain. Two inflow points, the Sabine River and Neches River, were assigned steady discharge inputs representing the 100- and 500- year flows adopted from the FEMA Sabine Lake BLE hydrology.

These inflows ensure the design-event simulations are directly aligned with FEMA's regional frequency analyses and maintain hydrologic consistency between the breakout model and the parent watershed system.

3.6.2 DOWNSTREAM (COASTAL) BOUNDARIES

Coastal boundary conditions for this CLOMR were obtained from both the Effective FIS (1992) and Preliminary FIS (completed in 2011). Two coastal boundary condition setups were incorporated into the HEC-RAS model: one using stillwater elevations from the effective FIS at transect 8 and one using stillwater elevations from the preliminary FIS at transect J19. Existing- and Proposed-condition simulations were performed for each downstream boundary condition scenario to evaluate the sensitivity of floodplain response to differing coastal stage assumptions.

This configuration provides a seamless linkage between the hydraulic model and the coastal analysis, enabling accurate inland translation of surge water levels through the Sabine Neches Canal system.

The effective FIS references elevations in the NGVD29 (ft) vertical datum, whereas the preliminary FIS is reported in NAVD88 (ft). The preliminary FIS documentation indicates a datum conversion factor of −0.004 feet from NGVD29 to NAVD88 for Jefferson County. Independent verification using NOAA's Online Vertical Datum Transformation tool suggests that NGVD29-to-NAVD88 offsets across the study area generally range from approximately −0.9 to −1.4 feet. Copies of the Effective and Preliminary FIS reports, along with supporting documentation, can be found in **Appendix E**.

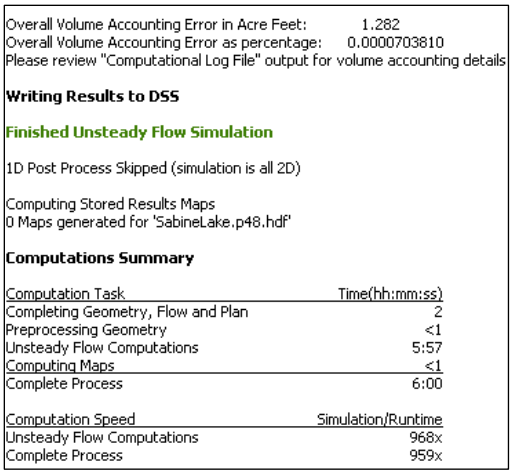
For consistency with the referenced FEMA materials and to maintain a conservative and reproducible modeling framework, the −0.004-foot conversion factor documented in the preliminary FIS was applied in this analysis. The stillwater elevations used for the Effective FIS downstream boundary condition are 16.4 ft and 13.5 ft NAVD88 for the 500-year and 100-year events, respectively. The stillwater elevations used for the Preliminary FIS downstream boundary condition are 17.3 ft and 12.7 ft NAVD88 for the 500-year and 100-year events, respectively. For future studies, application of site-specific, updated vertical datum transformations is recommended as the values used in this study are more conservative than required.

3.6.3 SIMULATION CONFIGURATION

All design-event simulations were performed as 2-D, unsteady-flow runs in HEC-RAS v6.6. Computational settings, mesh resolution, and hydraulic parameters were inherited from the historical calibration model and held constant between the existing and proposed scenarios. The only geometric difference between scenarios is the addition of the facility pad and perimeter levee in the proposed terrain.

3.6.4 MODEL STABILITY AND QUALITY ASSURANCE

Continuity errors were within acceptable tolerance, and no numerical instability was observed along the levee or coastal boundary.



Overall Volume Accounting Error in Acre Feet: 1.282
Overall Volume Accounting Error as percentage: 0.0000703810
Please review "Computational Log File" output for volume accounting details

Writing Results to DSS

Finished Unsteady Flow Simulation

1D Post Process Skipped (simulation is all 2D)

Computing Stored Results Maps
0 Maps generated for 'SabineLake.p48.hdf'

Computations Summary

Computation Task	Time(hh:mm:ss)
Completing Geometry, Flow and Plan	2
Preprocessing Geometry	<1
Unsteady Flow Computations	5:57
Computing Maps	<1
Complete Process	6:00

Computation Speed	Simulation/Runtime
Unsteady Flow Computations	968x
Complete Process	959x

Figure 3-9: Example RAS Compute Message from PALNG Model

3.7 HYDRAULIC MODEL RESULTS

Due to this model's 2-D unsteady-flow domain, the floodplain impact evaluation was conducted using reference lines as cross-sections placed strategically within the model to assess localized differences in computed water-surface elevations between existing and proposed conditions. Reference lines were established near the PALNG project area to extract water-surface profiles and evaluate changes in hydraulic grade through key flow paths.

Channel profile lines were aligned along the centerlines of the Port Arthur Canal, extending from south of the project area to north of the project area, as well as within the Intracoastal Waterway to the north and Keith Lake to the south. In addition, three cross-sections were placed within the Port Arthur Canal: one downstream of the project, one centered on the project footprint, and one upstream of the project.

This approach provided a consistent spatial framework for comparing modeled WSELs between existing and proposed conditions, ensuring that any computed differences reflect true hydraulic response to the levee construction rather than grid alignment or interpolation artifacts. The spatial locations of these reference lines, and the results from them can be found in **Table 3-5**, **Table 3-6** and **Figure 3-10**.

A final version of the Design storm HEC-RAS model with results rasters can be found in **Appendix A.**

Table 3-5:100-YR WSEL Comparisons at Reference Lines (Effective FIS Downstream)

ID	Type	Existing WSEL (ft NAVD88)	Proposed WSEL (ft NAVD88)	Δ WSEL (ft)
0	Channel Profile	12.2	12.2	0.0
1	Channel Profile	12.1	12.1	0.0
2	Channel Profile	12.7	12.7	0.0
3	Cross-Section	12.3	12.3	0.0
4	Cross-Section	12.3	12.2	-0.1
5	Cross-Section	12.0	12.0	0.0

Table 3-6:100-YR WSEL Comparisons at Reference Lines (Preliminary FIS Downstream)

ID	Type	Existing WSEL (ft NAVD88)	Proposed WSEL (ft NAVD88)	Δ WSEL (ft)
0	Channel Profile	11.6	11.6	0.0
1	Channel Profile	11.5	11.5	0.0
2	Channel Profile	12.0	12.0	0.0
3	Cross-Section	11.7	11.6	-0.1
4	Cross-Section	11.6	11.6	0.0
5	Cross-Section	11.5	11.4	-0.1

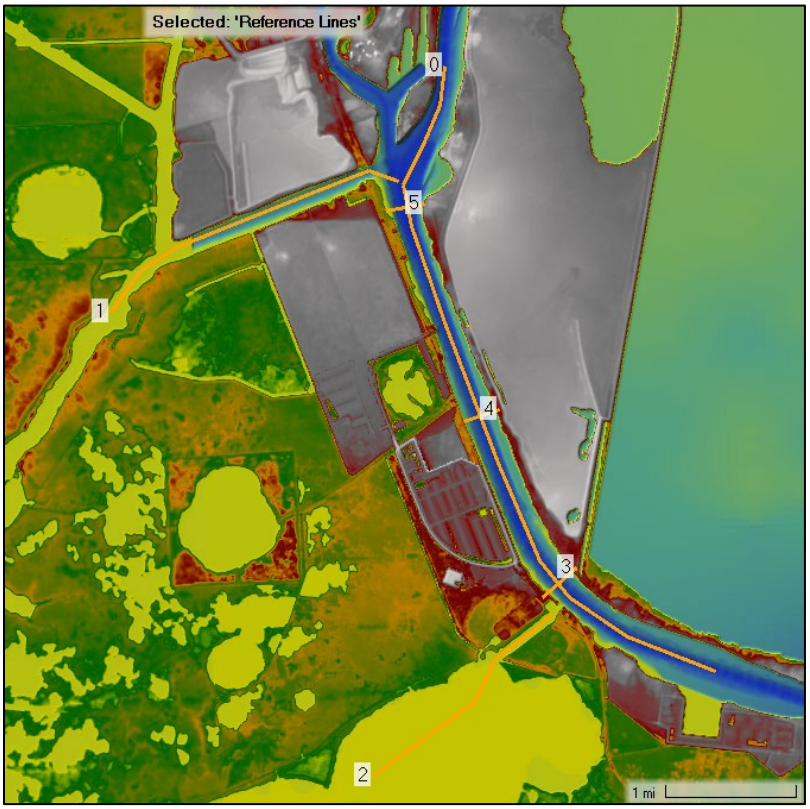


Figure 3-10: WSEL Comparison Reference Line Locations

3.7.1 RESULTS SUMMARY

Results of the floodplain impact evaluation indicate that the proposed PALNG levee and facility development do not result in measurable increases in flood elevations at the evaluated reference locations for any of the modeled design events. The assessment compared maximum water-surface elevations between existing and proposed conditions across the full two-dimensional model domain for 1-percent annual exceedance probability event.

The tabular results presented in **Table 3-5** and **Table 3-6**, based on reference lines and monitoring locations, show either no change or a slight decrease in water-surface elevation under proposed conditions relative to existing conditions. Spatial water-surface elevation difference rasters further indicate that any minor variations are generally confined to areas immediately adjacent to the project.

It should be noted that the proposed levee system results in localized increases in water-surface elevation of less than 0.1 ft in areas west of the levee alignment. These increases are limited in spatial extent and do not propagate into the broader external floodplain or affect the evaluated reference lines.

3.7.2 COMPLIANCE WITH 44 CFR §65.12

The results demonstrate that the proposed PALNG levee system results in minor localized increases in water-surface elevation, generally less than 0.1 ft, occurring west of the levee in unpopulated AE and V zones. These changes are limited in spatial extent, do not propagate beyond the general vicinity of the project, and do not result in adverse hydraulic impacts to upstream, downstream, or adjacent properties. It is also notable that within the Sabine Neches Canal and other areas to the East of the project, there are minor benefits to the system.

Accordingly, the analysis satisfies the technical basis for FEMA's conditional review under *44 CFR §65.12* and supports issuance of a Conditional Letter of Map Revision for the project

SECTION 4: COASTAL ANALYSIS AND WAVE EVALUATION

4.1 OVERVIEW OF COASTAL CONDITIONS

The PALNG facility is located within a low-lying transitional inland–coastal environment influenced by both fluvial and coastal processes. Flood behavior in the project vicinity is governed not only by rainfall-driven runoff and riverine discharge within the Sabine Lake watershed, but also by astronomical tides, storm surge, and wave action propagating inland from the Gulf of America through Sabine Pass, the Sabine Neches Canal, and Sabine Lake. These interconnected water bodies provide a pathway for coastal surge to influence water levels within the project area during major storm events.

To properly represent these coastal influences in support of the CLOMR, a site-specific coastal analysis was conducted using information from both the Effective and Preliminary FIS for the project area. The currently effective FIS for the project area dates to 1992. While this study provides the regulatory Stillwater elevations applicable to the site, the underlying coastal modeling files associated with the effective FIS (including WHAFIS input cards and supporting datasets) were not available for use and were developed using legacy coastal modeling methodology that do not reflect FEMA's current Coastal Guidelines and Specifications.

In contrast, the preliminary FEMA FIS reflects FEMA's modern coastal modeling framework and provides detailed coastal datasets suitable for technical evaluation. Available information includes updated coastal transect geometries, WHAFIS input cards defining station–elevation data and overland roughness characteristics, offshore wave conditions, wave periods, and supporting ground elevation profiles. These datasets allow for transparent and reproducible simulation of overland wave propagation consistent with current FEMA standards. However, because the preliminary FIS has not yet been adopted as effective, results derived solely from the preliminary study are not regulatory and cannot independently govern floodplain management determinations.

The nearest coastal transect from the effective FIS intersecting with the project vicinity is Transect 8 (**Figure 4-1**), which provides the effective regulatory SWEL applicable to the site and has a corresponding 1-percent-annual-chance SWEL of 13.5 ft (NGVD29). In contrast, the preliminary FIS includes Transects J19 and J20, both of which directly intersect the PALNG project area and were therefore selected for detailed overland wave propagation and coastal evaluation. The preliminary FIS assigns a 1-percent-annual-

chance SWEL of 12.7 ft (NAVD88) to Transects J19 and J20. For the effective Stillwater elevation, the same conservative value was used for both hydraulic and coastal models.

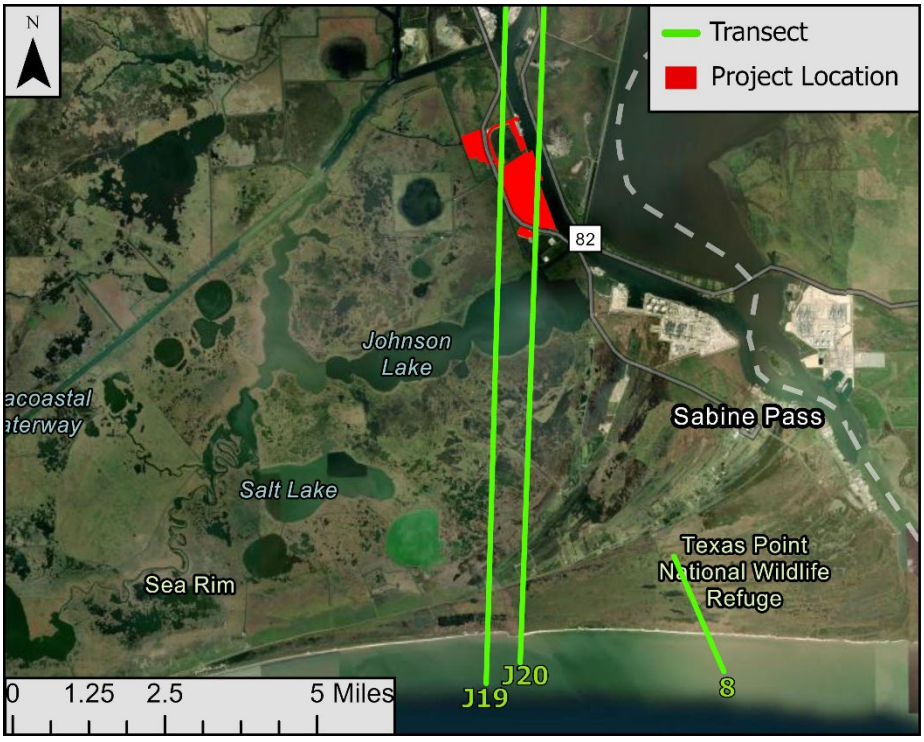


Figure 4-1: Location of FEMA FIS Coastal Transects Used

Based on the available data, a Corrected-Effective coastal model was developed for this study. This approach leverages the modern transect configurations from the preliminary FIS and applies the WHAFIS input structure and overland roughness characterization defined therein. However, the model is driven by the effective regulatory Stillwater elevations published in the effective FIS. This hybrid methodology represents best practice for coastal evaluations where effective coastal models are unavailable or outdated. It ensures compliance with FEMA regulatory flood elevations while incorporating the most current and technically defensible representation of coastal transect geometry and wave transformation processes. Subsequent sections of this coastal analysis reference this corrected effective modeling framework unless otherwise noted.

4.2 COASTAL DATA SOURCES AND REGULATORY BASIS

Coastal boundary conditions for the project were obtained from both the effective and preliminary FEMA FIS, consistent with the Corrected-Effective coastal modeling framework described in **Section 4.1**. Detailed coastal inputs, including offshore wave

heights, wave periods, transect geometry, ground elevations, and overland roughness characteristics, were obtained from preliminary FIS materials provided directly by FEMA for the Sabine Pass / Port Arthur area. These datasets reflect FEMA's current coastal modeling framework and provide the technical basis for WHAFIS simulations.

Effective FIS documentation was used to define the governing regulatory Stillwater elevations applicable to the site. These effective SWELs were applied within the corrected effective modeling framework to ensure consistency with FEMA regulatory requirements, while avoiding reliance on outdated effective coastal modeling methodologies.

The coastal evaluation focused on the 1-percent-annual-chance (100-year) and 0.2-percent-annual-chance (500-year) events, which are the controlling regulatory events for coastal floodplain mapping and freeboard evaluation. No 10- or 2-percent annual chance coastal conditions were required.

4.3 STILLWATER ELEVATION (SWEL)

SWELs represent the combined effects of astronomical tide and storm surge, excluding direct wave effects such as wave setup and wave runup. For this study, SWELs corresponding to the 100-year and 500-year annual chance events were defined using FEMA FIS documentation and applied within the corrected effective coastal modeling framework.

The effective FIS Stillwater elevations (**Table 4-1**) were adopted as the governing regulatory boundary conditions and applied to Transects J19 and J20, which directly intersect the project area. This approach ensures compliance with FEMA regulatory requirements while utilizing an updated and technically defensible transect configuration.

These SWELs were applied consistently across both the hydraulic and coastal analyses, serving as downstream stage boundary conditions for the HEC-RAS breakout model (**Section 4.6**) and Seaward boundary water levels for the WHAFIS coastal transect simulations.

In addition, a supplemental set of simulations was performed using Stillwater elevations published in the preliminary FIS for the purpose of comparing results between preliminary and effective regulatory water levels. These comparative simulations were

conducted solely to evaluate relative differences in coastal response and do not control the regulatory conclusions of this study.

Table 4-1 : Design Stillwater Elevations Used in Coastal Modeling

AEP (EVENT)	RETURN PERIOD (YEARS)	SWEL (Effective FIS) (FT, NAVD88)	SWEL (Preliminary FIS) (FT, NAVD88)
1 %	100	13.5	12.70 / 12.65
0.2 %	500	16.4	17.30 / 17.11
	Source:	*Preliminary FEMA FIS Coastal Data*	*Effective FEMA FIS Coastal Data*

Effective FIS SWELs were originally published in NGVD29 and converted to NAVD88 using the FEMA-specified −0.004 ft conversion factor.

The effective SWELs represent the design-level Stillwater conditions incorporated into the PALNG hydraulic model to define downstream boundary stages for each AEP simulation. As discussed previously in **Section 3.6.2**, the preliminary FIS documentation specifies a datum conversion factor of −0.004 feet when converting elevations from NGVD29 to NAVD88 for Jefferson County. The comparison of the preliminary and effective SWELs indicates that the effective SWELs are more conservative. Accordingly, results based on effective-condition modeling are presented in detail in the main body of this report. For completeness and transparency, results from both the preliminary- and effective-based modeling scenarios are included in **Appendix C**.

Mean tidal conditions (MHW and MLW) were identified for completeness within the CHAMP interface and to provide tidal context for the Stillwater elevations and to ensure consistency with FEMA coastal flood hazard analysis procedures. These tidal datums are used to relate the modeled Stillwater elevations to the normal astronomical tidal range and to support quality control of coastal boundary conditions within CHAMP/WHAFIS. The MHW and MLW values were obtained from the preliminary FEMA coastal model provided for this study and were reviewed for reasonableness by comparison to published NOAA tide gauge data in the vicinity of the project area, confirming that the values are of consistent order of magnitude:

- Mean High Water (MHW): 1.07 ft NAVD88
- Mean Low Water (MLW): 0.28 ft NAVD88

These values are used internally by WHAFIS for wave transformation calculations and do not affect regulatory flood elevations.

4.4 WHAFIS TRANSECT DEVELOPMENT AND OVERLAND WAVE PROPAGATION

Overland wave propagation and wave height attenuation were evaluated using FEMA's WHAFIS Version 4.0G implemented through the CHAMP graphical interface under the corrected effective coastal modeling framework. WHAFIS simulates the physical processes of wave shoaling, breaking, and energy dissipation as waves move inland over variable topography and land cover.

Two coastal transects provided in the corrected effective coastal model, Transects J19 and J20, intersect the PALNG project area and were used for the analysis. These transects are oriented generally perpendicular to the shoreline and represent representative cross-sections of open water, topographic features, and the proposed project frontage. The transects were used to simulate overland wave propagation for both existing and proposed conditions **Figure 4-1**.

The only modification between the existing- and proposed-condition transects was the inclusion of the proposed PALNG perimeter levee. Existing terrain elevations, land cover, and surface roughness conditions were otherwise unchanged. This approach isolates the effect of the levee on wave propagation and ensures that the analysis directly supports evaluation of coastal influences on base flood elevations in adjacent Zone AE areas under the applicable floodplain management criteria of *44 CFR §60.3(c)(10)*.

WHAFIS computes residual wave heights along each transect by applying depth-limited breaking criteria and energy dissipation functions as waves move inland. Wave crest elevations are calculated internally as the sum of the Stillwater elevation and the remaining wave height at each transect station. Model results presented in **Appendix C** indicate that wave energy dissipates prior to reaching the project frontage.

Wave setup is implicitly incorporated within the WHAFIS simulations through the combined treatment of surge level and depth-limited wave transformation, consistent with FEMA coastal modeling guidance.

WHAFIS output includes spatially varying wave-decay curves and wave-crest elevations (SWEL plus residual wave height) along each transect. For the PALNG site, the analyses demonstrate that wave effects are confined to the coastal margin and do not propagate inland beyond the proposed levee alignment. As a result, the transition from coastal high-hazard (VE) conditions to lower-energy coastal zones occurs well seaward of the project footprint, consistent with FEMA coastal mapping practices and the preliminary FIS framework.

4.5 WAVE RUNUP EVALUATION

Wave runup along the proposed PALNG perimeter levee was evaluated to quantify the maximum vertical uprush of waves above the Stillwater elevation during extreme coastal storm events. Wave runup represents a localized and transient process that occurs at the interface between incident waves and the face of a coastal structure and is not fully captured by overland wave propagation models such as WHAFIS. Accordingly, wave runup was evaluated separately using FEMA-recommended empirical procedures, with WHAFIS outputs used as input to the runup calculations.

The analysis focused on the 100-year coastal event, which governs regulatory freeboard and overtopping considerations for the proposed levee. Runup calculations were performed independently for Transects J19 and J20, which intersect the PALNG project area and represent the most critical coastal exposure locations along the facility frontage.

4.5.1 METHODOLOGY AND INPUT PARAMETERS

Wave runup was calculated using the Technical Advisory Committee for Water Retaining Structures (TAW) empirical methodology, which is recommended by FEMA for estimating wave runup on engineered, sloped, armored coastal structures. The TAW method is particularly well suited for levees and revetments with uniform slopes subject to surge-driven wave action, such as the PALNG perimeter levee.

Input wave conditions for the run-up analysis were obtained directly from the WHAFIS simulations. The controlling wave height (H_C) and spectral peak wave period (T_P) were extracted at the station immediately seaward of the levee toe along each transect. These values represent the attenuated wave conditions reaching the structure after accounting for overland wave decay across the shallow coastal platform. The corresponding SWELs were taken from the preliminary FEMA coastal datasets used consistently throughout the hydraulic and coastal analyses.

The proposed PALNG levee has a uniform 1 vertical to 3 horizontal (1V:3H) seaward slope and is proposed to be concrete armored on the seaward face. These geometric and material characteristics directly influence wave runup behavior and are explicitly incorporated into the TAW methodology through slope-dependent and surface-roughness reduction factors.

4.5.2 GOVERNING EQUATIONS

The TAW methodology expresses wave runup as a function of wave steepness, structure slope, and surface roughness. It estimates the 2-percent exceedance runup level, which is consistent with FEMA coastal freeboard evaluation practices. A key intermediate parameter is the spectral Iribarren number (ξ_{0m}), also known as the surf similarity parameter, which characterizes the mode of wave breaking and runup on a sloped structure. The Iribarren number is defined as:

$$\xi_{0m} = \frac{\tan(\alpha)}{\sqrt{H_C/L_0}}$$

where $\tan(\alpha)$ is the levee slope, H_C is the controlling wave height at the structure toe, and L_0 is the deepwater wavelength. The deepwater wavelength is computed from the spectral peak wave period as:

$$L_0 = \frac{gT_p^2}{2\pi}$$

Physically, the Iribarren number reflects the balance between wave steepness and structural slope. Larger values (ξ_{0m}) of indicate a runup-dominated regime in which waves surge up the structure face rather than breaking abruptly at the toe. For the PALNG levee, computed Iribarren numbers of 7.14 for Transect J19 and 10.20 for Transect J20 indicate that wave runup, rather than depth-limited breaking, governs the maximum wave response at the structure.

For runup-dominated conditions ($\xi_{0m} \geq 1.8$), the TAW formulation for the 2-percent exceedance runup height ($R_{2\%}$) is expressed as:

$$R_{2\%} = \gamma_f \gamma_\beta \gamma_b H_C \left(4.3 - \frac{1.6}{\sqrt{\xi_{0m}}}\right)$$

Where:

- γ_f is the surface roughness reduction factor,
- γ_β is the wave obliquity (angle of attack) factor,
- γ_b is the berm influence factor (taken as 1.0 where no berm is present),

For the PALNG levee, conservative values of $\gamma_f = 1.0$, $\gamma_\beta = 1.0$, and $\gamma_b = 1.0$ were applied. These selections reflect a smooth, concrete-armored surface, near-normal wave approach, and the absence of a wave-dissipating berm on the seaward slope.

4.5.3 RUNUP RESULTS

Application of the TAW equations resulted in 2-percent exceedance runup heights of 5.04 ft for Transect J19 and 2.90 ft for Transect J20. The higher runup at Transect J19 reflects the larger controlling wave height reaching the levee toe along that transect, while the lower runup at Transect J20 reflects greater wave attenuation prior to reaching the structure.

The computed runup values were added to the corresponding Stillwater elevations to determine the maximum wave-affected water surface elevations (WSELs) at the levee face. These combined elevations represent conservative estimates of the highest water levels that could occur during the design coastal event, accounting for both surge and wave action.

- **Transect J19**: $SWEL + R = 13.50 + 5.04 = 18.54\ ft\ (NAVD88)$
- **Transect J20:** $SWEL + R = 13.50 + 2.90 = 16.40\ ft\ (NAVD88)$

The results indicate that, despite offshore wave activity associated with major coastal storms, wave energy reaching the PALNG levee is substantially reduced by propagation across the shallow coastal platform and marsh environment. The engineered slope geometry and smooth armor surface limit wave uprush to levels well below the proposed levee crest elevation.

No wave overtopping is predicted for the evaluated scenarios, and wave runup does not control the design of the WSEL at the project site. The wave runup analysis therefore supports the conclusion that the proposed PALNG perimeter levee provides adequate protection against coastal wave effects and is consistent with FEMA regulatory guidance for coastal flood hazard evaluations.

4.6 FREEBOARD EVALUATION AND COMPLIANCE WITH FEMA CRITERIA

The adequacy of freeboard for the proposed PALNG perimeter levee was evaluated by comparing the computed wave-affected WSELS to the proposed levee crest elevation of 20.6 ft NAVD88. Freeboard checks were performed in accordance with FEMA MT-2 guidance and NFIP requirements, including comparisons to:

(1) the 1-percent annual-chance wave crest elevation plus one foot,

(2) the sum of runup and Stillwater elevation plus one foot, and

(3) the 1-percent annual-chance Stillwater elevation plus two feet.

For Transect J19, the governing freeboard checks require elevations of 16.03 ft, 19.54 ft, and 15.50 ft, respectively. For Transect J20, the corresponding required elevations are 15.35 ft, 17.40 ft, and 15.50 ft. In all cases, the proposed levee crest elevation of 20.6 ft NAVD88 exceeds the required elevations by a substantial margin.

These results confirm that the proposed PALNG perimeter levee provides adequate freeboard above both Stillwater and wave runup effects, and that no wave overtopping is anticipated under the evaluated 1-percent annual-chance coastal event. The freeboard evaluation supports compliance with FEMA coastal floodplain management criteria and confirms that the proposed improvements do not increase coastal flood hazards to adjacent properties.

4.7 SUMMARY OF COASTAL FINDINGS

Coastal flooding at the PALNG site is influenced by storm surge and wave energy propagating inland from the Gulf of America through Sabine Pass and Sabine Lake. A Corrected-Effective coastal modeling framework was applied to evaluate these coastal processes, utilizing updated coastal transect configurations and modern modeling inputs while being driven by effective FIS regulatory Stillwater elevations. This approach provides a conservative and FEMA-compliant representation of current regulatory conditions while addressing the limitations of the legacy effective coastal modeling framework (1992), which does not reflect modern coastal modeling practices.

Effective design Stillwater elevations governing the analysis are 13.50 ft NAVD88 for the 1-percent-annual-chance (100-year) event and 16.40 ft NAVD88 for the 0.2-percent-annual-chance (500-year) event at Transects J19 and J20.

Overland wave propagation analyses performed using WHAFIS Version 4.0G along these transects indicate that wave energy dissipates significantly across the shallow coastal platform and marsh environment.

Wave runup evaluated using the Technical Advisory Committee for Water Retaining Structures (TAW) empirical methodology for the 100-year coastal event resulted in runup heights of 5.04 ft at Transect J19 and 2.90 ft at Transect J20, producing maximum combined water surface elevations (SWEL plus runup) of 18.54 ft NAVD88 and 16.40 ft NAVD88, respectively, at the levee face.

The proposed levee crest elevation of 20.6 ft NAVD88 exceeds all applicable FEMA freeboard criteria, including SWEL-based, wave-crest-based, and runup-based checks.

No wave overtopping is predicted for the evaluated coastal events, VE conditions remain seaward of the project area, and the analysis confirms that the proposed PALNG perimeter levee does not increase coastal flood hazards and is consistent with FEMA MT-2 requirements and 44 CFR §65.

SECTION 5: CONCLUSIONS AND RECOMMENDATIONS

The results demonstrate that the proposed PALNG levee system produces only minor, localized increases in water-surface elevations, generally less than 0.1 ft, occurring west of the levee within unpopulated AE and V Zones. These changes are limited in spatial extent, do not extend beyond the immediate project vicinity, and do not result in adverse hydraulic impacts to upstream, downstream, or adjacent properties. Additionally, minor reductions in water-surface elevations are observed within the Sabine Neches Canal and other areas east of the project, indicating localized hydraulic benefits.

Based on these findings, the analysis satisfies the technical criteria for FEMA's conditional review under 44 CFR §65.12 and supports issuance of a Conditional Letter of Map Revision for the PALNG project. The required documentation for CLOMR Submittal can be found in **Appendix D**.

To ensure continuity between the CLOMR and future post-construction LOMR submittal, the following recommendations are provided:

• Conduct an as-built survey of the completed levee system to verify crest elevations, side slopes, and tie-in locations relative to the effective FIS floodplain.

• Update HEC-RAS model geometry and terrain surfaces with as-built data following completion of construction.

• Re-evaluate hydraulic and coastal conditions using observed storm tide and surge data, if available, to validate model performance.

• Coordinate early with FEMA Region VI and the local floodplain administrators (City of Port Arthur and Jefferson County) for review of post-construction submittals.

• Include operation and maintenance documentation and freeboard verification in the LOMR package to support potential FEMA levee accreditation under *44 CFR §65.10*.

By following these recommendations, the project team can streamline FEMA's review process for the final map revision and ensure that the constructed PALNG levee system is accurately reflected on the community's FIRM

SECTION 6: REFERENCES

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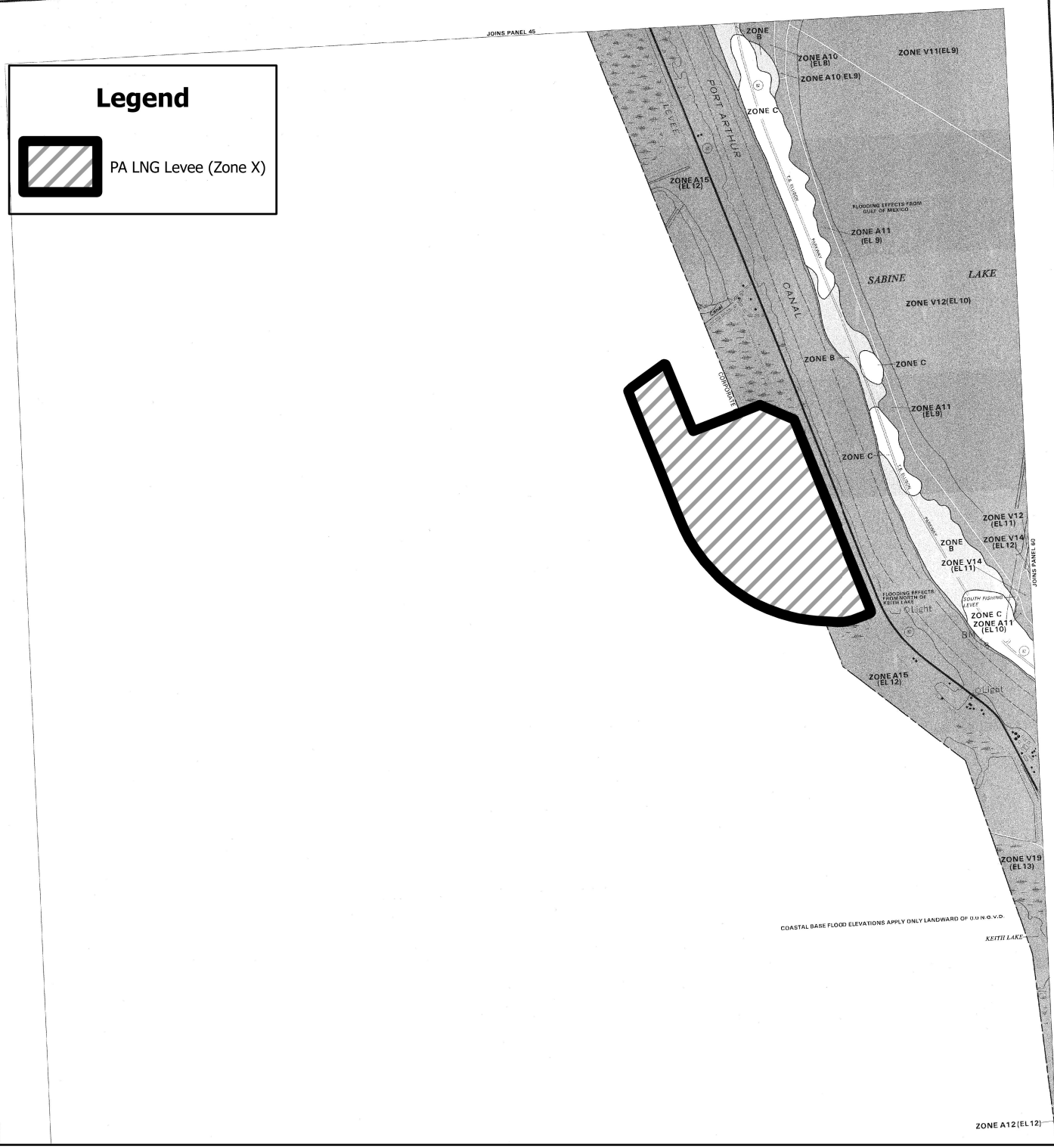


KEY TO MAP

500-Year Flood Boundary	ZONE B
100-Year Flood Boundary	ZONE A1
Zone Designations*	ZONE A5
100-Year Flood Boundary	ZONE B
500-Year Flood Boundary	
Base Flood Elevation Line With Elevation In Feet**	513
Base Flood Elevation in Feet Where Uniform Within Zone**	(EL 987)
Elevation Reference Mark	RM7x
Zone D Boundary	
River Mile	•M1.5

UNDEVELOPED COASTAL BARRIERS†

Identified 1983 — Identified 1990 — Otherwise Protected Areas

†Coastal barrier areas are normally located within or adjacent to special flood hazard areas.

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The community map repository should be consulted for possible updated flood hazard information prior to use of this map for property purchase or construction purposes.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of special flood hazard (100-year flood) include Zones A, A1-A30, AH, AO, A99, V, and V1-V30.

Certain areas not in the special Flood Hazard Areas may be protected by flood control structures.

For adjacent map panels see separately printed Map Index.

INITIAL IDENTIFICATION:
MAY 26, 1970

FLOOD HAZARD BOUNDARY MAP REVISION:
NONE

FLOOD INSURANCE RATE MAP EFFECTIVE:
MAY 26, 1970

FLOOD INSURANCE RATE MAP REVISIONS:

Interim Map revision effective July 1, 1974 to change Zone Designations

Interim Map revision effective January 3, 1975 by letter

Map revised October 8, 1976 to reflect Continuous Flood Boundary and to add Special Flood Hazard Areas

Map revised March 20, 1981 to add, decrease and increase Base Flood Elevations, to revise Zone Designations, and to revise Special Flood Hazard Areas

Map revised October 1, 1983 to incorporate approximate boundaries of Coastal Barriers established under the Coastal Barrier Resources Act (PL97-348)

Map revised April 17, 1984 to change Zone Designations and Base Flood Elevations reflecting wave action effects

May 4, 1992 to remove undeveloped coastal barriers and to add otherwise protected areas

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.

APPROXIMATE SCALE
1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

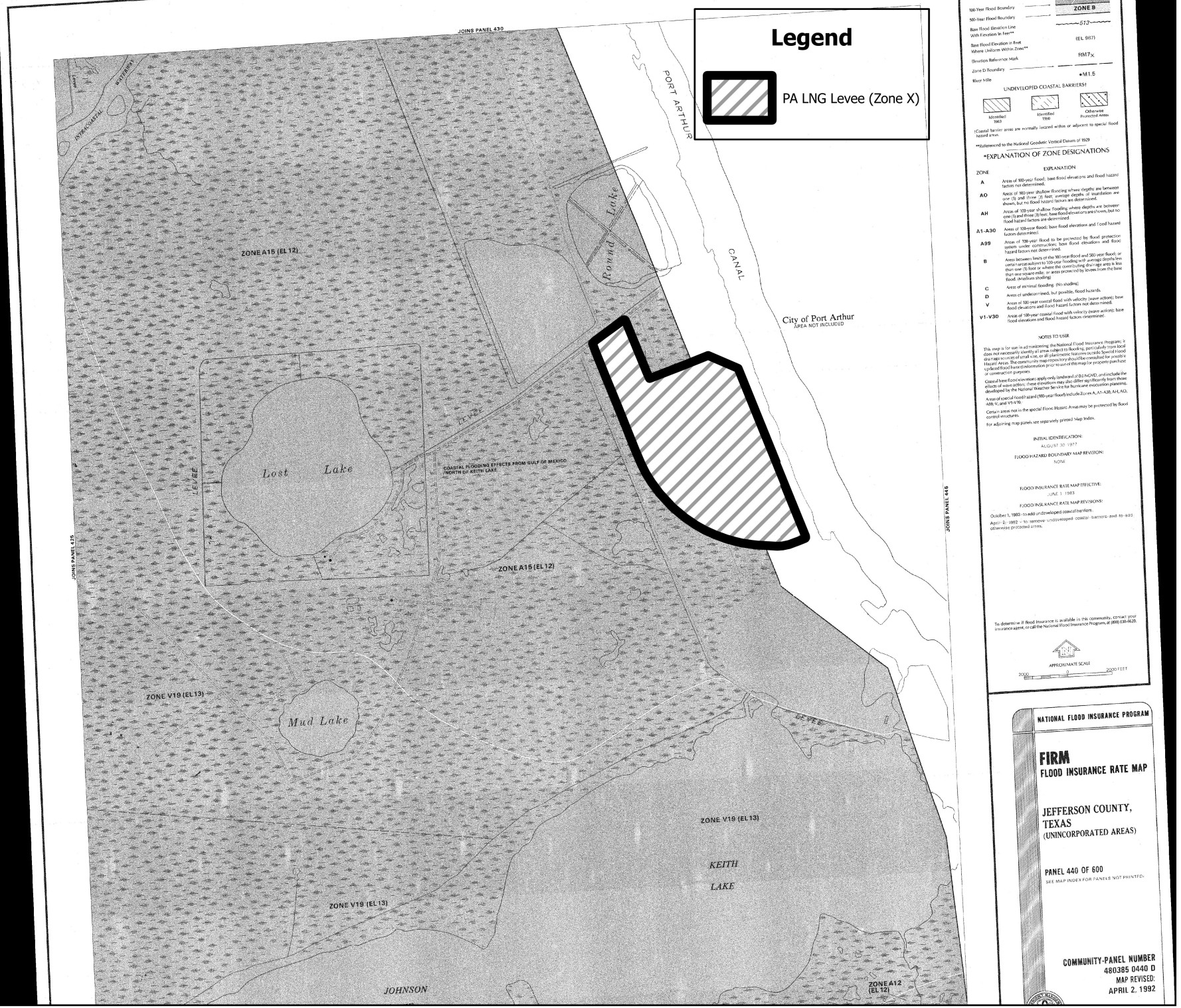
FIRM
FLOOD INSURANCE RATE MAP

CITY OF
PORT ARTHUR,
TEXAS
JEFFERSON COUNTY

PANEL 55 OF 80
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
485499 0055 F

MAP REVISED:
MAY 4, 1992


Legend
PA LNG Levee (Zone X)
JOINS PANEL 430
JOINS PANEL 425
JOINS PANEL 445
PORT ARTHUR CANAL
Round Lake
Lost Lake
Mud Lake
KEITH LAKE
JOHNSON
LEVEE
ZONE A15 (EL 12)
ZONE V19 (EL 13)
ZONE A12 (EL 12)
COASTAL FLOODING EFFECTS FROM GULF OF MEXICO NORTH OF KEITH LAKE
City of Port Arthur
AREA NOT INCLUDED
INTRACOASTAL WATERWAY
KEY TO MAP
500-Year Flood Boundary
100-Year Flood Boundary
Zone Designations*
ZONE B
ZONE A1
ZONE AB
ZONE B
100-Year Flood Boundary
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Base Flood Elevation Line With Elevation In Feet**
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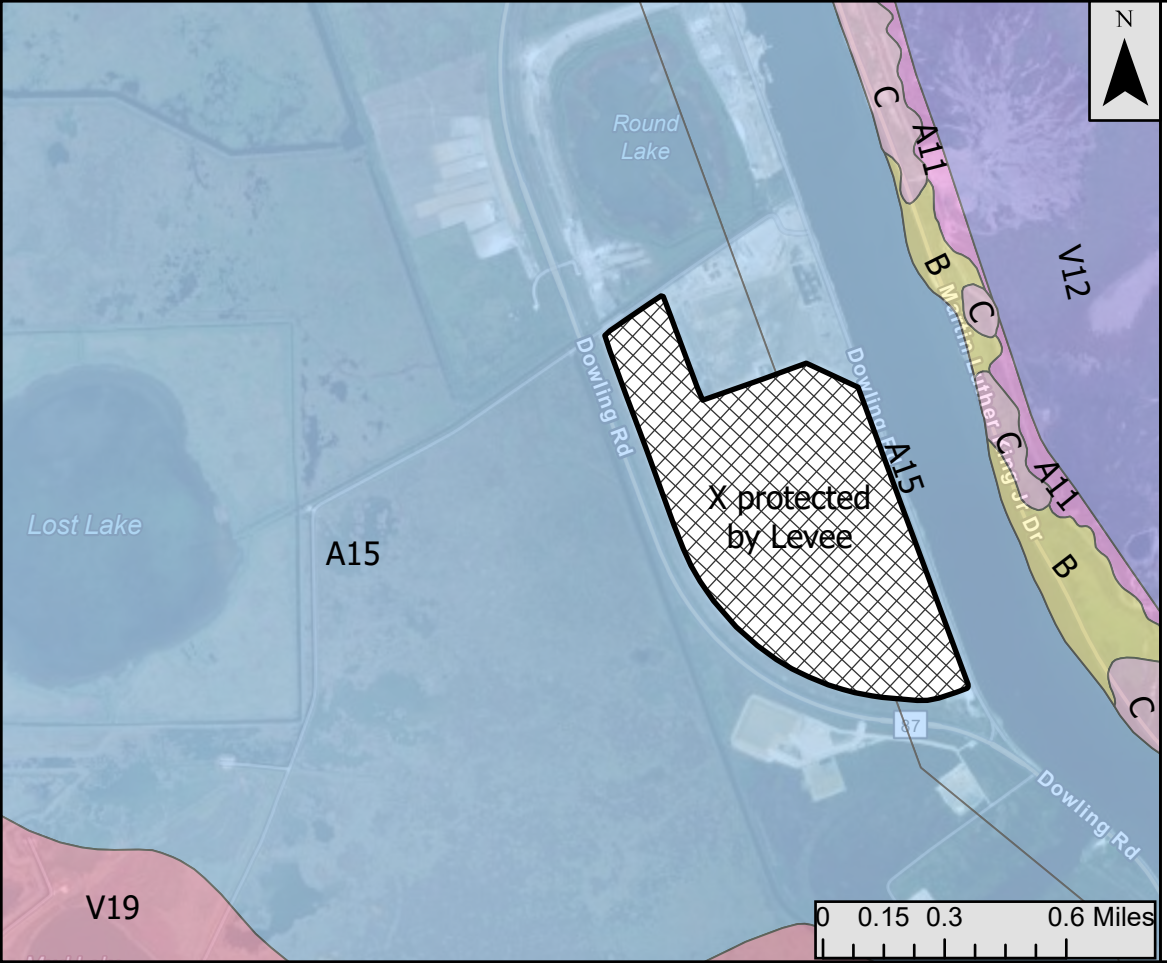
Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30
Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99
Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B
Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C
Areas of minimal flooding. (No shading)
D
Areas of undetermined, but possible, flood hazards.
V
Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30
Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.
NOTES TO USER
This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The community map repository should be consulted for possible updated flood hazard information prior to use of this map for property purchase or construction purposes.
Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.
Area of special flood hazard (100-year flood) include Zones A, A1-A30, AH, AO, A99, V, and V1-V30.
Certain areas not in the special Flood Hazard Areas may be protected by flood control structures.
For adjoining map panels see separately printed Map Index.
INITIAL IDENTIFICATION:
AUGUST 30, 1977
FLOOD HAZARD BOUNDARY MAP REVISION:
NONE
FLOOD INSURANCE RATE MAP EFFECTIVE:
JUNE 1, 1983
FLOOD INSURANCE RATE MAP REVISIONS:
October 1, 1983 - to add undeveloped coastal barriers.
April 2, 1992 - to remove undeveloped coastal barriers and to add otherwise protected areas.
To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.
APPROXIMATE SCALE
2000 0 2000 FEET
NATIONAL FLOOD INSURANCE PROGRAM
FIRM
FLOOD INSURANCE RATE MAP
JEFFERSON COUNTY, TEXAS
(UNINCORPORATED AREAS)
PANEL 440 OF 600
SEE MAP INDEX FOR PANELS NOT PRINTED
COMMUNITY-PANEL NUMBER
480385 0440 D
MAP REVISED:
APRIL 2, 1992



FENSTERMAKER

C. H. Fenstermaker & Associates, L.L.C.

Port Arthur LNG Topographic Floodplain Work Map Port Arthur, TX

Legend

- X PROTECTED BY LEVEE

Effective SFHA

- A10
- A11
- A12
- A15
- B
- C
- V11
- V12
- V14
- V19

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

The AE Zone category has been divided by a **Limit of Moderate Wave Action (LiMWA)**. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. The effects of wave hazards between the VE Zone and the LiMWA (or between the shoreline and the LiMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Texas State Plane South Central Zone (FIPS zone 4204). The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713- 3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on FIRM panels produced for this study was provided in digital format by Jefferson County Appraisal District. This Data was created in State Plane NAD 83 coordinates, U.S. Survey Feet and was produced at scales 1:2,200 (1"=100'); 1:4,800 (1"=400'). Aerial Photography of the area was captured in 2006.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map,** how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange (FMIX)** at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.

Legend

PA LNG Levee (Zone X)



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- Limit of Moderate Wave Action
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- A — A — Cross section line
- 23 — 23 — Transect line
- Culvert
- Bridge
- 45° 02' 08", 93° 02' 12" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 3100000 FT — 5000-foot ticks: Texas State Plane South Central Zone (FIPS Zone 4204), Lambert Conformal Conic projection
- $^{4}89^{000m}$ N — 1000-meter Universal Transverse Mercator grid values, zone 15N
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'

1000 0 2000 4000 FEET

600 0 600 1200 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0475F

FIRM

FLOOD INSURANCE RATE MAP

JEFFERSON COUNTY, TEXAS (AND INCORPORATED AREAS)

PANEL 475 OF 675

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

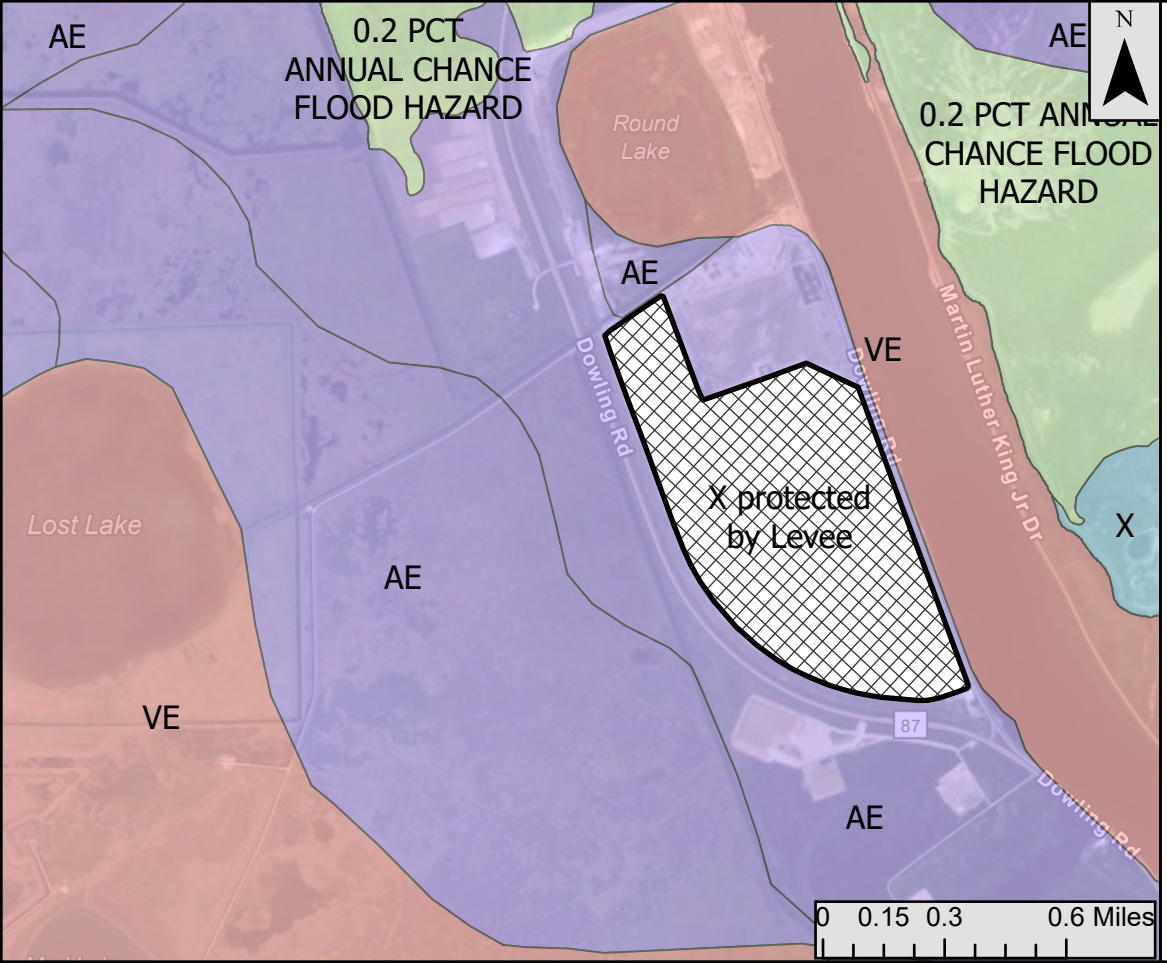
CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JEFFERSON COUNTY	480385	0475	F
PORT ARTHUR, CITY OF	485499	0475	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48245C0475F
EFFECTIVE DATE

Federal Emergency Management Agency



FENSTERMAKER 985

C. H. Fenstermaker & Associates, L.L.C.

Port Arthur LNG
Topographic Floodplain
Work Map
Port Arthur, TX

Legend

- X PROTECTED BY LEVEE

Preliminary SFHA

- 0.2 PCT ANNUAL CHANCE FLOOD HAZARD
- AE
- VE
- X
- X PROTECTED BY LEVEE

FEDERAL EMERGENCY MANAGEMENT AGENCY

PAYMENT INFORMATION FORM

Community Name:

Project Identifier:

THIS FORM MUST BE MAILED, ALONG WITH THE APPROPRIATE FEE, TO THE ADDRESS BELOW OR E-MAILED TO THE E-MAIL ADDRESS BELOW.

Please make check or money order payable to the National Flood Insurance Program.

Type of Request:

☐ MT-1 application
☐ MT-2 application

LOMC Clearinghouse
3601 Eisenhower Ave. Suite 500 Alexandria, VA
22304-6426
Attn.: LOMC Manager

☐ EDR application

FEMA Project Library
3601 Eisenhower Ave. Suite 500 Alexandria, VA
22304-6426
E-mail: FEMA-EngineeringLibrary@fema.dhs.gov

Request No. (if known): _____ **Check No.:** _____ **Amount:** _____

☐ INITIAL FEE* ☐ FINAL FEE ☐ FEE BALANCE** ☐ MASTER CARD ☐ VISA ☐ CHECK ☐ MONEY ORDER

*Note: Check only for EDR and/or Alluvial Fan requests (as appropriate).

****Note: Check only if submitting a corrected fee for an ongoing request.**

COMPLETE THIS SECTION *ONLY* IF PAYING BY CREDIT CARD

CARD NUMBER EXP. DATE

				–				–				–					–		
1	2	3	4		5	6	7	8	9	10	11	12	13	14	15	16	Month		Year

_____ _____
Date Signature

NAME *(AS IT APPEARS ON CARD)*: _____
(please print or type)

ADDRESS: _____
(*for your credit card receipt-please print or type*) _____

DAYTIME PHONE: _____

DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency

987

OVERVIEW & CONCURRENCE FORM

OMB Control Number: 1660-0016
Expiration: 1/31/2024

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 1 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless it displays a valid OMB control number. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 500 C Street, SW, Washington, DC 20472 , Paperwork Reduction Project (1660-0016). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

PRIVACY ACT STATEMENT

AUTHORITY: The National Flood Insurance Act of 1968, Public Law 90-448, as amended by the Flood Disaster Protection Act of 1973, Public Law 93-234.
PRINCIPAL PURPOSE(S): This information is being collected for the purpose of determining an applicant's eligibility to request changes to National Flood Insurance Program (NFIP) Flood Insurance Rate Maps (FIRM).
ROUTINE USE(S): The information on this form may be disclosed as generally permitted under 5 U.S.C § 552a(b) of the Privacy Act of 1974, as amended. This includes using this information as necessary and authorized by the routine uses published in DHS/FEMA/NFIP/LOMA-1 National Flood Insurance Program (NFIP); Letter of Map Amendment (LOMA) February 15, 2006, 71 FR 7990.
DISCLOSURE: The disclosure of information on this form is voluntary; however, failure to provide the information requested may delay or prevent FEMA from processing a determination regarding a requested change to a (NFIP) Flood Insurance Rate Maps (FIRM).

A. REQUESTED RESPONSE FROM DHS-FEMA

This request is for a (check one):

☒ CLOMR: A letter from DHS-FEMA commenting on whether a proposed project, if built as proposed, would justify a map revision, or proposed hydrology changes (See 44 CFR Ch. 1, Parts 60, 65 & 72). All CLOMRs require documentation of compliance with the Endangered Species Act. Refer to the Instructions for details.

☐ LOMR: A letter from DHS-FEMA officially revising the current NFIP map to show the changes to floodplains, regulatory floodway or flood elevations. (See 44 CFR Ch. 1, Parts 60, 65 & 72).

B. OVERVIEW

1. The NFIP map panel(s) affected for all impacted communities is (are):

Community No.	Community Name	State	Map No.	Panel No.	Effective Date
480385	Jefferson County (Unincorporated Areas)	TX	480385	0440D	04/02/92

2. a. Flooding Source: Gulf of America

b. Types of Flooding: ☒ Riverine ☒ Coastal ☐ Shallow Flooding (e.g., Zones AO and AH)
☐ Alluvial Fan ☐ Lakes ☐ Other (Attach Description)

3. Project Name/Identifier: PORT ARTHUR LIQUEFACTION PROJECT

4. FEMA zone designations (choices: A, AH, AO, A1-A30, A99, AE, AR, V, V1-V30, VE, B, C, D, X)

a. Effective: A15

b. Revised: AE and/or VE

5. Basis for Request and Type of Revision:

a. The basis for this revision request is (check all that apply)

☒ Physical Change	☒ Improved Methodology/Data	☐ Regulatory Floodway Revision	☐ Base Map Changes
☒ Coastal Analysis	☒ Hydraulic Analysis	☐ Hydrologic Analysis	☐ Corrections
☐ Weir-Dam Changes	☒ Levee Certification	☐ Alluvial Fan Analysis	☐ Natural Changes
☒ New Topographic Data	☐ Other (Attach Description)		

Note: A photograph and narrative description of the area of concern is not required, but is very helpful during review.

b. The area of revision encompasses the following structures (check all that apply)

Structures:	☐ Channelization	☒ Levee/Floodwall	☐ Bridge/Culvert
	☐ Dam	☒ Fill	☐ Other (Attach Description)

6. ☒ Documentation of ESA compliance is submitted (required to initiate CLOMR review). Please refer to the instructions for more information.

C. REVIEW FEE

Has the review fee for the appropriate request category been included? ☒ Yes Fee amount: $ 7,000

☐ No, Attach Explanation

- **Please see the DHS-FEMA Web site at http://www.fema.gov/forms-documents-and-software/flood-map-related-fees for Fee Amounts and Exemptions.**

D. SIGNATURES

1. REQUESTOR'S SIGNATURE

All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Name: Jim Thompson	Company: PALNG Common Facilities Company, LLC	
Mailing Address: 1500 Post Oak Blvd., Suite 1000 Houston, TX 77056	Daytime Telephone: 832.284.5685	Fax No.:
	E-mail Address: jdthompson@sempraglobal.com	
	Date:	

Signature of Requestor (required):

2. COMMUNITY CONCURRENCE

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this Letter of Map Revision (LOMR) or conditional LOMR request. Based upon the community's review, we find the completed or proposed project meets or is designed to meet all of the community floodplain management requirements, including the requirements for when fill is placed in the regulatory floodway, and that all necessary Federal, State, and local permits have been, or in the case of a conditional LOMR, will be obtained. For Conditional LOMR requests, the applicant has documented Endangered Species Act (ESA) compliance to FEMA prior to FEMA's review of the Conditional LOMR application. For LOMR requests, I acknowledge that compliance with Sections 9 and 10 of the ESA has been achieved independently of FEMA's process. For actions authorized, funded, or being carried out by Federal or State agencies, documentation from the agency showing its compliance with Section 7(a)(2) of the ESA will be submitted. In addition, we have determined that the land and any existing or proposed structures to be removed from the SFHA are or will be reasonably safe from flooding as defined in 44CFR 65.2(c), and that we have available upon request by FEMA, all analyses and documentation used to make this determination.

Community Official's Name and Title: Jeff Branick, County Judge

Mailing Address: Jefferson County Courthouse 1149 Pearl St. Beaumont, Texas 77701	Community Name: Jefferson County	
	Daytime Telephone: (409)835-8466	Fax No.: (409)839-2311
	E-mail Address: Jeff.Branick@jeffersoncountytx.gov	
Community Official's Signature (required):	Date:	

3. CERTIFICATION BY REGISTERED PROFESSIONAL ENGINEER AND/OR LAND SURVEYOR

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information data, hydrologic and hydraulic analysis, and any other supporting information as per NFIP regulations paragraph 65.2(b) and as described in the MT-2 Forms Instructions. All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name: Tyler Young		License No.: 159589	Expiration Date: 12/29/2026
Company Name: C.H. Fenstermaker & Associates, L.L.C.		Mailing Address: 135 Regency Square Lafayette, LA 70508	
Telephone No.: 337-351-7609	Fax No.:		
E-mail Address: tylery@fenstermaker.com			
Signature:			Date:

Ensure the forms that are appropriate to your revision request are included in your submittal.

Form Name and (Number)	Required if …
☒ Riverine Hydrology and Hydraulics Form (Form 2)	New or revised discharges or water-surface elevations
☒ Riverine Structures Form (Form 3)	Channel is modified, addition/revision of bridge/culverts, addition/revision of levee/floodwall, addition/revision of dam
☒ Coastal Analysis Form (Form 4)	New or revised coastal elevations
☒ Coastal Structures Form (Form 5)	Addition/revision of coastal structure
☐ Alluvial Fan Flooding Form (Form 6)	Flood control measures on alluvial fans

Seal (Optional)

DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency

990

RIVERINE HYDROLOGY & HYDRAULICS FORM (FORM 2)

OMB Control Number: 1660-0016
Expiration: 1/31/2024

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 3.5 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless it displays a valid OMB control number. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 500 C Street, SW, Washington, DC 20472 , Paperwork Reduction Project (1660-0016). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

PRIVACY ACT STATEMENT

AUTHORITY: The National Flood Insurance Act of 1968, Public Law 90-448, as amended by the Flood Disaster Protection Act of 1973, Public Law 93-234.
PRINCIPAL PURPOSE(S): This information is being collected for the purpose of determining an applicant's eligibility to request changes to National Flood Insurance Program (NFIP) Flood Insurance Rate Maps (FIRM).
ROUTINE USE(S): The information on this form may be disclosed as generally permitted under 5 U.S.C § 552a(b) of the Privacy Act of 1974, as amended. This includes using this information as necessary and authorized by the routine uses published in DHS/FEMA/NFIP/LOMA-1 National Flood Insurance Program (NFIP); Letter of Map Amendment (LOMA) February 15, 2006, 71 FR 7990.
DISCLOSURE: The disclosure of information on this form is voluntary; however, failure to provide the information requested may delay or prevent FEMA from processing a determination regarding a requested change to a (NFIP) Flood Insurance Rate Maps (FIRM).

Flooding Source: Gulf of America

Note: Fill out one form for each flooding source studied

A. HYDROLOGY

1. Reason for New Hydrologic Analysis (check all that apply):

☐ Not revised (skip to section B) ☐ No existing analysis ☒ Improved data
☐ Alternative methodology ☐ Proposed Conditions (CLOMR) ☐ Changed physical condition of watershed

2. Comparison of Representative 1%-Annual-Chance Discharges

Location	Drainage Area (Sq. Mi.)	Effective/FIS (cfs)	Revised (cfs)
		N/A	
		N/A	
		N/A	

3. Methodology for New Hydrologic Analysis (check all that apply)

☒ Precipitation/Runoff Model → Specify Model: HEC-HMSv4.6.1 Duration: 24-hour Rainfall Amount: 18.2in

☐ Statistical Analysis of Gage Records

☐ Regional Regression Equations ☐ Other (please attach description)

Please enclose all relevant models in digital format, maps, computations (including computation of parameters), and documentation to support the new analysis.

4. Review/Approval of Analysis

If your community requires a regional, state, or federal agency to review the hydrologic analysis, please attach evidence of approval/review. 4. HEC-RAS File Description**:

5. Impacts of Sediment Transport on Hydrology

Is the hydrology for the revised flooding source(s) affected by sediment transport? ☐ Yes ☒ No

If yes, then fill out Section F (Sediment Transport) of Form 3. If No, then attach your explanation.

B. HYDRAULICS

1. Reach to be Revised

	Description	Cross Section	Water-Surface Elevation (ft.)	
			Effective	Proposed/Revised
Downstream Limit*	PA Canal Downstream XS	2D Reference Line	N/A	11.63
Upstream Limit*	PA Canal Upstream XS	2D Reference Line	N/A	11.41

*Proposed/Revised elevations must tie-into the Effective elevations within 0.5 foot at the downstream and upstream limits of revision.

2. Hydraulic Method/Model Used: HEC-RASv6.6

☐ Steady State ☒ Unsteady State ☐ One-Dimensional ☒ Two-Dimentional

3. Pre-Submittal Review of Hydraulic Models*

DHS-FEMA has developed two review programs, CHECK-2 and CHECK-RAS, to aid in the review of HEC-2 and HEC-RAS hydraulic models, respectively. We recommend that you review your HEC-2 and HEC-RAS models with CHECK-2 and CHECK-RAS.

4. HEC-RAS File Description**:

Models Submitted	Natural Run		Floodway Run		Datum
Duplicate Effective Model*	File Name:	Plan Name:	File Name:	Plan Name:	
	N/A	N/A	N/A	N/A	N/A
Corrected Effective Model*	File Name:	Plan Name:	File Name:	Plan Name:	
	N/A	N/A	N/A	N/A	N/A
Existing or Pre-Project Conditions Model	File Name:	Plan Name:	File Name:	Plan Name:	
	SabineLake.prj	Existing Conditions	N/A	N/A	NAVD88 (U.S. Feet)
Revised or Post-Project Conditions Model	File Name:	Plan Name:	File Name:	Plan Name:	
	SabineLake.prj	Proposed Conditions	N/A	N/A	NAVD88 (U.S. Feet)
Other - (attach description)	File Name:	Plan Name:	File Name:	Plan Name:	
	Sabine Lake BLE 10	BLE 100YR	N/A	N/A	NAVD88 (U.S. Feet)

* For details, refer to the corresponding section of the instructions.
**See instructions for information about modeling other then HEC-RAS. ☒ Digital Models Submitted? (Required)

C. MAPPING REQUIREMENTS

A **certified topographic work map** must be submitted showing the following information (where applicable): the boundaries of the effective, existing, and proposed conditions 1%-annual-chance floodplain (for approximate Zone A revisions) or the boundaries of the 1%- and 0.2%-annual-chance floodplains and regulatory floodway (for detailed Zone AE, AO, and AH revisions); location and alignment of all cross sections with stationing control indicated; stream, road, and other alignments (e.g., dams, levees, etc.); current community easements and boundaries; boundaries of the requester's property; certification of a registered professional engineer registered in the subject State; location and description of reference marks; and the referenced vertical datum (NGVD, NAVD, etc.).

Topographic Information: ☒ Digital Mapping (GIS/CADD) Data Submitted (preferred)

Source: Figures and Maps\Effective_PALNG_TopographicMap.pdf Date: 01/12/2026

Vertical Datum: NAVD88 Spatial Projection: NAD 1983 StatePlane Texas FIPS 4204 (US Feet)

Accuracy: 0.1ft

Note that the boundaries of the existing or proposed conditions floodplains and regulatory floodway to be shown on the revised FIRM and/or FBFM must tie-in with the effective floodplain and regulatory floodway boundaries. Please attach **a copy of the effective FIRM and/or FBFM**, at the same scale as the original, annotated to show the boundaries of the revised 1%-and 0.2%-annual-chance floodplains and regulatory floodway that tie-in with the boundaries of the effective 1%-and 0.2%-annual-chance floodplain and regulatory floodway at the upstream and downstream limits of the area on revision.

☒ Annotated FIRM and/or FBFM (Required)

D. COMMON REGULATORY REQUIREMENTS*

1. For LOMR/CLOMR requests, do Base Flood Elevations (BFEs) or Special Flood Hazard Areas (SFHAs) increase compared to the effective BFEs? ☐ Yes ☒ No

   If Yes, please attach **proof of property owner notification**. Examples of property owner notifications can be found in the MT-2 Form 2 Instructions.

2. For CLOMR requests, if either of the following is true, please submit **evidence of compliance with Section 65.12 of the NFIP regulations**:

   - The proposed project encroaches upon a regulatory floodway and would result in increases above 0.00 foot compared to pre-project conditions.
   - The proposed project encroaches upon a SFHA with or without BFEs established and would result in increases above 1.00 foot compared to pre-project conditions.

3. Does the request involve the placement or proposed placement of fill? ☒ Yes ☐ No

   If Yes, the community must be able to certify that the area to be removed from the special flood hazard area, to include any structures or proposed structures, meets all of the standards of the local floodplain ordinances, and is reasonably safe from flooding in accordance with the NFIP regulations set forth at 44 CFR 60.3(A)(3), 65.5(a)(4), and 65.6(a)(14). Please see the MT-2 instructions for more information.

4. Does the request involve the placement or proposed placement of fill? ☒ Yes ☐ No

   If Yes, attach **evidence of regulatory floodway revision notification**. As per Paragraph 65.7(b)(1) of the NFIP Regulations, notification is required for requests involving revisions to the regulatory floodway Elements and examples of regulatory floodway revision notification can be found in the MT-2 Form 2 Instructions.

5. For CLOMR requests, please submit documentation to FEMA and the community to show that you have complied with Sections 9 and 10 of the Endangered Species Act (ESA). For actions authorized, funded, or being carried out by Federal or State agencies, please submit documentation from the agency showing its compliance with Section 7(a)(2) of the ESA. Please see the MT-2 instructions for more detail.

DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency

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RIVERINE STRUCTURES FORM (FORM 3)

OMB Control Number: 1660-0016
Expiration: 1/31/2024

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 3.5 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless it displays a valid OMB control number. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 500 C Street, SW, Washington, DC 20472 , Paperwork Reduction Project (1660-0016). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

PRIVACY ACT STATEMENT

AUTHORITY: The National Flood Insurance Act of 1968, Public Law 90-448, as amended by the Flood Disaster Protection Act of 1973, Public Law 93-234.
PRINCIPAL PURPOSE(S): This information is being collected for the purpose of determining an applicant's eligibility to request changes to National Flood Insurance Program (NFIP) Flood Insurance Rate Maps (FIRM).
ROUTINE USE(S): The information on this form may be disclosed as generally permitted under 5 U.S.C § 552a(b) of the Privacy Act of 1974, as amended. This includes using this information as necessary and authorized by the routine uses published in DHS/FEMA/NFIP/LOMA-1 National Flood Insurance Program (NFIP); Letter of Map Amendment (LOMA) February 15, 2006, 71 FR 7990.
DISCLOSURE: The disclosure of information on this form is voluntary; however, failure to provide the information requested may delay or prevent FEMA from processing a determination regarding a requested change to a (NFIP) Flood Insurance Rate Maps (FIRM).

Flooding Source: Gulf of America

Note: Fill out one form for each flooding source studied

A. GENERAL

Complete the appropriate section(s) for each Structure listed below:

Channelization:	complete Section B
Bridge/Culvert:	complete Section C
Dam:	complete Section D
Levee/Floodwall:	complete Section E
Sediment Transport:	complete Section F (if required)

Description Of Modeled Structure

1. Name of Structure: PORT ARTHUR LIQUEFACTION PROJECT

   Type (check one): ☐ Channelization ☐ Bridge/Culvert ☒ Levee/Floodwall ☐ Dam

   Location of Structure: 3570 South Gulfway Drive - Port Arthur, TX 77640

   Downstream Limit/Cross Section: Port Arthur Shipping Canal / 2D model

   Upstream Limit/Cross Section: Texas State Hwy87 / 2D model

2. Name of Structure: _____

   Type (check one): ☐ Channelization ☐ Bridge/Culvert ☐ Levee/Floodwall ☐ Dam

   Location of Structure: _____

   Downstream Limit/Cross Section: _____

   Upstream Limit/Cross Section: _____

3. Name of Structure: _____

   Type (check one): ☐ Channelization ☐ Bridge/Culvert ☐ Levee/Floodwall ☐ Dam

   Location of Structure: _____

   Downstream Limit/Cross Section: _____

   Upstream Limit/Cross Section: _____

NOTE: FOR MORE STRUCTURES, ATTACH ADDITIONAL PAGES AS NEEDED.

B. CHANNELIZATION

Flooding Source: _____

Name of Structure: _____

1. Hydraulic Considerations

The channel was designated to carry _____ (cfs) and/or the _____ - year flood

The design elevation in the channel is based on (check one):

☐ Subcritical flow ☐ Critical flow ☐ Supercritical flow ☐ Energy grade line

If there is the potential for a hydraulic jump at the following locations, check all that apply and attach an explanation of how the hydraulic jump is controlled without affecting the stability of the channel.

☐ Inlet to channel ☐ Outlet to channel ☐ At Drop Structures ☐ At Transitions

☐ Other locations (specify): _____

2. Channel Design Plans

Attach the plans of the channelization certified by a registered professional engineer, as described in the instructions.

3. Accessory Structures

The channelization includes (check one):

☐ Levees [Attach Section E (Levee/Floodwall)] ☐ Drop structures ☐ Superelevated sections ☐ Energy dissipater

☐ Transitions in cross sectional geometry ☐ Debris basin/detention basin [Attach Section D (Dam/Basin)] ☐ Weir

☐ Other (Describe): _____

4. Sediment Transport Considerations

Are the hydraulics of the channel affected by sediment transport? ☐ Yes ☐ No

If yes, then fill out Section F (Sediment Transport) of Form 3. If No, then attach your explanation for why sediment transport was not considered.

C. BRIDGE/CULVERT

Flooding Source: _____

Name of Structure: _____

1. This revision reflects (check one):

☐ Bridge/Culvert not modeled in the FIS

☐ Modified Bridge/Culvert previously modeled in the FIS

☐ Revised analysis of Bridge/Culvert previously modeled in the FIS

2. Hydraulic model used to analyze the structure (e.g., HEC-2 with special bridge routine, WSPRO, HY8): _____

If different than hydraulic analysis for the flooding source, justify why the hydraulic analysis used for the flooding source could not analyze the structures. Attach justification.

3. Attach plans of the structures certified by a registered professional engineer. The plan detail and information should include the following (check the information that has been provided):

☐ Dimensions (height, width, span, radius, length)
☐ Shape (culverts only)
☐ Material
☐ Beveling and Rounding
☐ Wink Wall Angle
☐ Skew Angle
☐ Distance between Cross Sections
☐ Erosion Protection
☐ Low Chord Elevations - Upstream and Downstream
☐ Top of Road Elevations - Upstream and Downstream
☐ Structure Invert Elevations - Upstream and Downstream
☐ Stream Invert Elevations - Upstream and Downstream
☐ Cross-Section Locations

4. Sediment Transport Considerations

Are the hydraulics of the channel affected by sediment transport? ☐ Yes ☐ No

If yes, then fill out Section F (Sediment Transport) of Form 3. If No, then attach your explanation for why sediment transport was not considered.

D. DAM/BASIN

Flooding Source: _____

Name of Structure: _____

1. This request is for (check one): ☐ Existing Dam/Basin ☐ New Dam/Basin ☐ Modification of existing Dam/Basin

2. The Dam/Basin was designed by (check one): ☐ Federal Agency ☐ State Agency ☐ Private Organization

☐ Local Government Agency Name of the Agency or Organization: _____

3. The Dam was permitted as (check one): ☐ Federal Dam ☐ State Dam

Provide the permit or identification number (ID) for the dam and the appropriate permitting agency or organization

Permit or ID number _____ Permitting Agency or Organization _____

a. ☐ Local Government Dam ☐ Private Dam

Provided related drawings, specification and supporting design information.

4. Does the project involve revised hydrology? ☐ Yes ☐ No

If Yes, complete the Riverine Hydrology & Hydraulics Form (Form 2).

Was the dam/basin designed using critical duration storm? (must account for the maximum volume of runoff)

☐ Yes, provide supporting documentation with your completed Form 2.

☐ No, provide a written explanation and justification for not using the critical duration storm.

5. Does the submittal include debris/sediment yield analysis? ☐ Yes ☐ No

If Yes, then fill out Section F (Sediment Transport). If No, then attach your explanation for why debris/sediment analysis was not considered?

6. Does the Base Flood Elevation behind the dam/basin or downstream of the dam/basin change? ☐ Yes ☐ No

If Yes, complete the Riverine Hydrology & Hydraulics Form (Form 2) and complete the table below.

	Stillwater Elevation Behind the Dam/Basin	
FREQUENCY (% annual chance)	FIS	REVISED
10-year (10%)		
50-year (2%)		
100-year (1%)		
500-year (0.2%)		
Normal Pool Elevation		

7. Please attach a copy of the formal Operation and Maintenance Plan

E. LEVEE/FLOODWALL

1. System Elements

a. This Levee/Floodwall analysis is based on (check one): ☐ Upgrading of an existing levee/floodwall system ☒ A newly constructed levee/floodwall system ☐ Reanalysis of an existing levee/floodwall system

b. Levee elements and locations are (check one):

☒	Earthen embankment, dike, berm, etc	Stationed 1+00.00	to	162+52.00
☐	Structured floodwall	Stationed _____	to	_____
☐	Other (describe): _____	Stationed _____	to	_____

E. LEVEE/FLOODWALL (CONTINUED)

c. Structural Type (check one): ☐ Monolithic cast-in place reinforced concrete ☐ Reinforced concrete masonry block ☐ Sheet piling ☒ Other (describe): Earthen Embankment

d. Has this levee/floodwall system been certified by a Federal agency to provide protection from the base flood?

☐ Yes ☒ No

If Yes, by which agency? N/A

e. Attach certified drawings containing the following information (indicate drawing sheet numbers):

1. Plan of the levee embankment and floodwall structures. Sheet Numbers: _____
2. A profile of the levee/floodwall system showing the Base Flood Elevation (BFE), levee and/or wall crest and foundation, and closure locations for the total levee system. Sheet Numbers: _____
3. A profile of the levee/floodwall system showing the Base Flood Elevation (BFE), levee and/or wall crest and foundation, and closure locations for the total levee system. Sheet Numbers: _____
4. A layout detail for the embankment protection measures. Sheet Numbers: _____
5. Location, layout, and size and shape of the levee embankment features, foundation treatment, Floodwall structure, closure structures, and pump stations. Sheet Numbers: _____

2. Freeboard

a. The minimum freeboard provided above the BFE is:

2.06

Riverine

3.0 feet or more at the downstream end and throughout	☒ Yes	☐ No
3.5 feet or more at the upstream end	☒ Yes	☐ No
4.0 feet within 100 feet upstream of all structures and/or constrictions	☒ Yes	☐ No

Coastal

1.0 foot above the height of the one percent wave associated with the 1%-annual-chance stillwater surge elevation or maximum wave runup (whichever is greater).	☒ Yes	☐ No
2.0 feet above the 1%-annual-chance stillwater surge elevation	☒ Yes	☐ No

Please note, occasionally exceptions are made to the minimum freeboard requirement. If an exception is requested, attach documentation addressing Paragraph 65.10(b)(1)(ii) of the NFIP Regulations.

If No is answered to any of the above, please attach an explanation.

b. Is there an indication from historical records that ice-jamming can affect the BFE? ☐ Yes ☒ No

3. Closures

a. Openings through the levee system (check one): ☐ Exists ☒ Does not exist

If opening exists, list all closures:

Channel Station	Left or Right Bank	Opening Type	Highest Elevation for Opening Invert	Type of Closure Device

(Extend table on an added sheet as needed and reference)

Note: Geotechnical and geologic data

In addition to the required detailed analysis reports, data obtained during field and laboratory investigations and used in the design analysis for the following system features should be submitted in a tabulated summary form. (Reference U.S. Army Corps of Engineers [USACE] EM-1110-2-1906 Form 2086.)

E. LEVEE/FLOODWALL (CONTINUED)

4. Embankment Protection

a. The maximum levee slope land side is: 3:1

b. The maximum levee slope flood side is: 3:1

c. The range of velocities along the levee during the base flood is: 0.15 ft/s (min) to 2 ft/s (max)

d. Embankment material is protected by (describe what kind): Riprap/TRM

e. Riprap Design Parameters (check one): [x] Velocity [ ] Tractive Stress

Attach referrences

Reach	Sideslope	Flow Depth	Velocity	Curve or Straight	Stone Riprap			Depth of Toedown
					D_{100}	D_{50}	Thickness	
Sta ____ to ____								
Sta ____ to ____								
Sta ____ to ____								
Sta ____ to ____								
Sta ____ to ____								
Sta ____ to ____								

(Extend table on an added sheet as needed and reference each entry)

f. Is a bedding/filter analysis and design attached? [x] Yes [ ] No

g. Describe the analysis used for other kinds of protection used (include copies of the design analysis):

Metocean data are collected and analyzed to be as the input to perform the shore protection, and overtopping and flow on earthen levees due to Irregular waves design by using with USACE CEM-1110-2-1100, (2003), Rock Manual and CEDAS .

Attach engineering analysis to support construction plans.

5. Embankment and Foundation Stability

a. Identify locations and describe the basis for selection of critical location for analysis:

Per levee design report PAL-PGT-CSA-RPT-00-GEN-0004, governing cross-sections A-A', C-C', G-G' and F-F' are selected for analysis based on ground conditions (subgrade), levee geometry, and presence of neighboring features that may inform stability (e.g. adjacent slopes, sheet pile wall).

[x] Overall height: STA:____ , height ____ ft.

[x] Limiting foundation soil strength:

Strength ϕ = ____ degrees, c = ____ psf

Slope: SS = ____ (h) to ____ (v)

(Repeat as needed on an added sheet for additional locations)

Section - Sta - Height* - φ - c** - Slope (H:V).**
A-A' - 31+10 -19.4' - 0 - 250 psf - 3:1
C-C' - 52+20 - 23.9' - 0 - 250 psf- 3:1
G-G' - 120+80 - 23.9' - 0 - 200 psf - 3:1
F-F' - 129+20 - 19.4' - 0 - 200 psf - 3:1

* Height variations are due to native topography variations outside the levee. Levee min. top elevation remains constant, and as-reported in previous sections.

** Reported soil strength parameters refer to the governing (Upper) Soft Clay layer, at its native state i.e. before it has been improved with cement & lime stabilization of part of its thickness and before consolidation. Strength reported herein refers to the generally governing cases of "End of Construction" and "Rapid drawdown" where Short term (undrained) strength parameters are used, i.e. φ=0 and c=Su. For further details on load cases and derived FoS refer to Table 5 of levee design report PAL-PGT-CSA-RPT-00-GEN-0004.

b. Specify the embankment stability analysis methodology used (e.g., circular arc, sliding block, infinite slope, etc.):

Both circular arc and sliding block were examined in all cross sections analyzed.

c. Summary of stability analysis results: see below

E. LEVEE/FLOODWALL (CONTINUED)

5. Embarkment and Foundation Stability (continued)

Case	Loading Conditions	Critical Safety Factor	Criteria (Min.)
I	End of construction	1.31	1.3
II	Sudden drawdown	1.29	1.0
III	Critical flood stage	1.45	1.4
IV	Steady seepage at flood stage	1.45	1.4
VI	Earthquake (Case I)	0.79 *	1.0

(Reference: USACE EM-1110-2-1913 Table 6-1)

* refer to Section 6.5 (d) of above USACE levee design reference. Please also note that seismic case was ran after discounting by 20% the strength of the clay materials. Stability was justified using the accepted Newmark-type seismic deformation analyses to demonstrate very low levels of seismic induced slope movement.

d. Was a seepage analysis for the embankment performed? [x] Yes [ ] No

If Yes, describe methodology used:

Per Section 6.3 of the levee design report PAL-PGT-CSA-RPT-00-GEN-0004, both the levee construction material (low permeability compacted lean clay), the cement & lime stabilized subgrade (7 to 10' stabilization below levee base) and the nature of the materials comprising the native foundation soils within the zone of interest (fat clay) do not give rise to a condition of uplift or piping, therefore seepage analysis is not required and materials can be considered impermeable (see also above referenced USACE manual, e.g. Table 3-1). A steady-state seepage analysis was performed solely for the purpose of reporting an upper bound seepage rate under item 8g below.

e. Was a seepage analysis for the embankment performed? [x] Yes [ ] No

f. Were uplift pressures at the embankment landside toe checked? [ ] Yes [x] No

g. Were seepage exit gradients checked for piping potential? [ ] Yes [x] No

h. The duration of the base flood hydrograph against the embankment is 24 hours.

Attach engineering analysis to support construction plans.

6. Floodwall and Foundation Stability Not applicable. There is no floodwall in this project.

a. Describe analysis submittal based on Code (check one): [ ] UBC (1988) [ ] Other (specify): _____

b. Stability analysis submitted provides for: [ ] Overturning [ ] Sliding [x] If not, explain: _____

c. Loading included in the analyses were: [ ] Lateral earth @ P_A = _____ psf; P_p = _____ psf

[x] Surcharge-Slope @ 250 psf, [ ] surface _____ psf

[ ] Wind @ P_w = _____ psf

[ ] Seepage (Uplift); _____ [x] Earthquake @ P_{eq} = _____ %g

[x] 1%-annual-chance significant wave height: _____ ft.

[x] 1%-annual-chance significant wave period: _____ sec.

d. Summary of Stability Analysis Results: Factors of Safety.
Itemize for each range in site layout dimension and loading condition limitation for each respective reach.

Loading Condition	Criteria (Min)		Sta	To	Sta	To
	Overturn	Sliding	Overturn	Sliding	Overturn	Sliding
Dead & Wind	1.5	1.5				
Dead & Soil	1.5	1.5				
Dead, Soil, Flood, & Impact	1.5	1.5				
Dead, Soil, & Seismic	1.3	1.3				

(Ref: FEMA 114 Sept 1986; USACE EM 1110-2-2502)
Note: (Extend table on an added sheet as needed and reference)

E. LEVEE/FLOODWALL (CONTINUED)

e. Foundation bearing strength for each soil type:

Bearing Pressure	Sustained Load (psf)	Short Term Load (psf)
Computed design maximum		
Maximum allowable		

f. Foundation scour protection ☐ is, ☐ is not provided. If provided, attach explanation and supporting documentation:

Attach engineering analysis to support construction plans.

7. Settlement

a. Has anticipated potential settlement been determined and incorporated into the specified construction elevations to maintain the established freeboard margin?

Yes. Values include the primary consolidation settlement, which is expected to conclude and be addressed via compensation filling during the construction phase and prior to handover to operations. Post-handover, the expected settlement is due to secondary compression and creep and is between 4 and 8".

b. The computed settlement range is 2.3 ft. to 3.5 ft.

c. Settlement of the levee crest is determined to be primarily from : ☒ Foundation consolidation

☐ Embankment compression ☐ Other (Describe): _____

d. Differential settlement of floodwalls ☐ has ☐ has not been accommodated in the structural design and construction

Attach engineering analysis to support construction plans. Not applicable-no floodwalls.

8. Interior Drainage

a. Specify size of each interior watershed:

Drainage to pressure conduit: 96, 89, 100 acres

Drainage to ponding area: 88.5, 80.2, 90.3 acres

b. Relationship Established:

Ponding elevation vs. storage	☒ Yes	☐ No
Ponding elevation vs. gravity flow	☐ Yes	☒ No
Differential head vs. gravity flow	☐ Yes	☒ No

c. The river flow duration curve is enclosed: ☐ Yes ☒ No

d. Specify the discharge capacity of the head pressure conduit: 399 cfs

e. Which flooding conditions were analyzed?

Gravity flow (Interior Watershed)	☒ Yes	☐ No
Common storm (River Watershed)	☐ Yes	☒ No
Historical ponding probability	☐ Yes	☒ No
Coastal wave overtopping	☒ Yes	☐ No

If No for any of the above, attach explanation. protected by levee

f. Interior drainage has been analyzed based on joint probability of interior and exterior flooding and the capacities of pumping and outlet facilities to provide the established level of flood protection.

☐ Yes ☒ No If No, attach explanation. protected by levee

g. The rate of seepage through the levee system for the base flood is : 0.14 cfs

h. The length of levee system used to drive this seepage rate in item g: 16,252 ft.

E. LEVEE/FLOODWALL (CONTINUED)

8. Interior Drainage (continued)

i. Will pumping plants be used for interior drainage? [x] Yes [ ] No

If Yes, include the number of pumping plants: 3 For each pumping plant, list:

	Plant #1	Plant #2
The number of pumps	System 1, 2, and 3 have 3 pumps each	
The ponding storage capacity	13.908+, 15.029+, 18.073+ million gallons	
The maximum pumping rate	60,000 gpm at each System 1, 2, and 3	
The maximum pumping head	52.11 ft, 52.11 ft, 61.70 ft	
The pumping starting elevation	-5' 2" for 10k gpm, -2' 8" & -2' 2" for 25k gpm	
The pumping stopping elevation	-5'11" for 10k gpm, -3' 5" & -3' 2" for 25k gpm	
Is the discharge facility protected?	yes, with energy dissipating headwalls	
Is there a flood warning plan?	No	
How much time is available between warning and flooding?	N/A	

Will the operation be automatic? [x] Yes [ ] No

If the pumps are electric; are there backup power sources? [x] Yes [ ] No

(Reference: USACE EM-1110-2-3101, 3102, 3103, 3104, and 3105)
Include a copy of supporting documentation of data and analysis. Provide a map showing the flooded area and maximum ponding elevations for all interior watersheds that result in flooding.

9. Other Design Criteria

a. The following items have been addressed as stated:

Liquefaction [ ] is [x] is not a problem

Hydrocompaction [ ] is [x] is not a problem

Heave differential movement due to soils of high shrink/swell [ ] is [x] is not a problem

b. For each of these problems, state the basic facts and corrective action taken:

Liquefaction = not a seismic area and no granular soils present.
Hydrocompaction = no soils prone (e.g weakly cemented soils, aeolian deposits) present
Heave differential = zone has been treated via cement and lime stabilization.

Attach supporting documentation

c. If the levee/floodwall is new or enlarged, will the structure adversely impact flood levels and/or flow velocities floodside of the structure? [ ] Yes [x] No

d. Sediment Transport Considerations:

Was sediment transport considered? [ ] Yes [x] No

If Yes, then fill out Section F (Sediment Transport). If No, then attach your explanation for why sediment transport was not considered.

Levee as deigned by 500-yr event, no flow/ no sediment transport inside the plant is anticipated. However, the sedimentation pattern change in the Port Arthur Channel due to the Project has been documented in PAL0-10-MAR-RPT-0007 and the LNG Export Terminal exhibits a higher sedimentation rate (2.15 ft/yr) than other project areas which are in the Port Arthur Canal (1.16–1.41 ft/yr).

10. Operational Plan and Criteria

a. Are the planned/installed works in full compliance with Part 65.10 of the NFIP Regulations? [x] Yes [ ] No

b. Does the operation plan incorporate all the provisions for closure devices as required in Paragraph 65.10(c)(1) of the NFIP regulations? [x] Yes [ ] No

c. Does the operation plan incorporate all the provisions for interior drainage as required in Paragraph 65.10(c)(2) of the NFIP regulations? [x] Yes [ ] No

If the answer is No to any of the above, please attach supporting documentation.

E. LEVEE/FLOODWALL (CONTINUED)

11. Maintenance Plan

Please attach a copy of the fomal maintenance plan for the levee/floodwall

12. Operational and Maintenance Plan

Please attach a copy of the formal Operations and Maintenance Plan for the levee/floodwall.

CERTIFICATION OF THE LEVEE DOCUMENTATION

This certification is to be signed and sealed by a licensed registered professional engineer authorized by law to certify elevation information data, hydrologic and hydraulic analysis, and any other supporting information as per NFIP regulations paragraph 65.10(e) and as described in the MT-2 Forms Instructions. All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name: _____ License No.: _____ Expiration Date: _____

Company Name: Telephone No.: _____ Fax No.: _____

Signature: _____ Date: _____ E-mail Address: _____

CERTIFICATION OF THE LEVEE DOCUMENTATION

Flooding Source: Coastal, Gulf of America

Name of Structure: PALNG Levee

If there is any indication from historical records that sediment transport (including scour and deposition) can affect the Base Flood Elevation (BFE); and/or based on the stream morphology, vegetative cover, development of the watershed and bank conditions, there is a potential for debris and sediment transport (including scour and deposition) to affect the BFEs, then provide the following information along with the supporting documentation:

Sediment load associated with the base flood discharge: Volume _____ acres-feet

Debris load associated with the base flood discharge: Volume _____ acres-feet

Sediment transport rate _____ (percent concentration by volume)

Method used to estimate sediment transport: _____

Most sediment transport formulas are intended for a range of hydraulic conditions and sediment sizes; attach a detailed explanation for using the selected method.

Method used to estimate scour and/or deposition: _____

Method used to revise hydraulic or hydrologic analysis (model) to account for sediment transport: _____

Please note that bulked flows are used to evaluate the performance of a structure during the base flood; however, FEMA does not map BFEs based on bulked flows.

If a sediment analysis has not been performed, an explanation as to why sediment transport (including scour and deposition) will not affect the BFEs or structures must be provided.

DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency

1002

COASTAL ANALYSIS FORM (FORM 4)

OMB Control Number: 1660-0016
Expiration: 1/31/2024

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 1 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless it displays a valid OMB control number. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 500 C Street, SW, Washington, DC 20472 , Paperwork Reduction Project (1660-0016). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

PRIVACY ACT STATEMENT

AUTHORITY: The National Flood Insurance Act of 1968, Public Law 90-448, as amended by the Flood Disaster Protection Act of 1973, Public Law 93-234.
PRINCIPAL PURPOSE(S): This information is being collected for the purpose of determining an applicant's eligibility to request changes to National Flood Insurance Program (NFIP) Flood Insurance Rate Maps (FIRM).
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DISCLOSURE: The disclosure of information on this form is voluntary; however, failure to provide the information requested may delay or prevent FEMA from processing a determination regarding a requested change to a (NFIP) Flood Insurance Rate Maps (FIRM).

Flooding Source: Gulf of America

Note: Fill out one form for each flooding source studied

A. COASTLINE TO BE REVISED

Describe limits of study area: Port Arthur LNG Project, Jefferson County, Texas

B. EFFECTIVE FIS

The area being revised in the effective FIS was studied by detailed methods using (check all that apply):

- ☐ Storm surge modeling
- ☒ Wave height computations
- ☐ Wave overtopping computations
- ☐ Primary Frontal Dune Assessment
- ☐ Wave setup computations
- ☒ Wave runup computations
- ☐ Dune erosion computations
- ☐ N/A (area not studied by detailed methods

C. REVISED ANALYSIS

1. Number of transects in revised analysis: 2

2. Information used to prepare the revision (check all that apply):

- ☒ Wave setup analysis (complete Items 3, 4, and 5 below)
- ☐ Stillwater elevation determinations (complete Items 3)
- ☐ Erosion considerations (complete Items 4)
- ☐ Non-accredited shore protection structure (complete Items 4)
- ☒ Wave runup analysis (complete Items 4 and 5)
- ☒ Wave height analysis (complete Items 4 and 5)
- ☐ Wave overtopping assessment (complete Items 4 and 5)
- ☐ More detailed topographic information (complete Section E)
- ☐ Accredited shore protection structure (attach completed Coastal Structures Form - Form 5)
- ☐ Primary Frontal Dune Assessment (complete Items 5)
- ☐ Other, attach basis of request with explanation

3. Stillwater Elevation Determination

a. How were stillwater elevations determined?

- ☐ Effective FIS Report Date of FIS Report _____ Transect Number _____
- ☐ Gage analysis (If revised gage analysis was used, provide copies of gage data and revised analysis.)
- ☐ Storm surge analysis
- ☒ Other (Describe): Preliminary FIS Report (48245CV000A)

b. Specify what datum was used in the calculations: NAVD88

If not the FIS datum, have the calculations been adjusted to the FIS datum? ☐ Yes ☐ No Conversion Factor _____

C. REVISED ANALYSIS (continued)

c. Was wave setup included in wave height analysis and removed for wave runup analyses?: ☒ Yes ☐ No

d. Was an overtopping analysis performed for any coastal shore protection structures or natural land forms that may be overtopped?: ☐ Yes ☒ No

Attach an explanation of the methodology utilized and describe in detail the results of the analysis.

e. Is wave setup included? ☒ Yes ☐ No

Source: ☒ Effective FIS Report ☐ New Analysis

If wave setup was computed, attach a description of methodology used.

4. Revised Analysis (i.e., erosion, wave height, wave runup, primary frontal dune, and wave overtopping)

If DHS-FEMA procedures were utilized to perform the revision, attach a detailed description of differences between the current and the revised analyses, and why the revised analysis should replace the current analysis.

If DHS-FEMA procedures were not utilized to perform the revision, provide full documentation on methodology and/or models used; including operational program, detailed differences between methodology and/or models utilized and DHS-FEMA's methodology and/or models. Also, attach an explanation of why new methodology and/or models should replace current methodology and/or models.

If revision reflects more detailed topographic information and fill has been/will be placed in a V Zone, and is not protected from erosion by an accredited shore protection structure, provide a detailed description of how the fill has been treated in the revised analysis.

5. Wave Runup, Wave Height, And Wave Overtopping Analysis

Wave height analyses along a transect are greatly affected by starting wave conditions that propagate inland. Wave runup and overtopping analyses are typically considered when the stillwater elevation including wave setup is less thanthe crest of shore protection structures or natural land forms.

a. Was an analysis performed to determine starting wave height and period for input into WHAFIS?

If Yes, attach an explanation of the method utilized. If No, explain why these analyses were not performed. ☐ Yes ☒ No

b. Was wave setup included in the reference water level used to calculate the dune reservoir volume? ☒ Yes ☐ No

c. Was wave setup included in wave height analysis and removed for wave runup analyses? ☒ Yes ☐ No

d. Was an overtopping analysis performed for any coastal shore protection structures or natural land forms that may be overtopped?

☐ Yes ☒ No

Attach an explanation of the methodology utilized and describe in detail the results of the analysis.

D. RESULTS

1. Stillwater storm surge elevation: 13.5 feet NAVD Datum
2. Wave setup: _____ feet
3. Starting deep-water significant wave condition: height: 1.76
   period: 11.05
4. Maximum wave height elevation: 10.25 feet
5. Wave runup elevation: 5.04 feet
6. Estimated amount of overtopping: 0.0 cfs/feet
7. Has this revision changed the Limit Moderate Wave Action (LiMWA)? ☐ Yes ☒ No ☐ N/A
8. The areas designated as costal high hazard areas (Vzones) have: ☐ Yes ☐ No ☐ N/A

Attach a description where they have increased and/or decreased.

9. As a result of the revised analyses, the V zone location has shifted a maximum of 0.0 feet seaward and 0.0 feet landward of its existing position.
10. Does the revision reflect the location of the primary frontal dune?

☐ Yes ☒ No

11. The Base Flood Elevations have:

☐ Increased ☒ Decreased

a. What was the greatest increase? _____ feet

b. What was the greatest decrease? _____ feet

12. The special flood hazard area has:

☐ Increased ☒ Decreased ☐ Both

Attach a description where it has increased or decreased.

E. MAPPING REQUIREMENTS

A certified topographic map must be submitted showing the following information (where applicable): effective, existing conditions, and proposed conditions 1%-annual-chance floodplain boundaries, revised shoreline due to either erosion or accretion, location and alignment of all transects, correct location and alignment of any structures, current community easements and boundaries, boundary of the requester's property, certification of a professional engineer registered in the subject State, location and description of reference marks, and the referenced vertical datum (NGVD, NAVD, etc.).

Note that the existing or proposed conditions floodplain boundaries to be shown on the revised FIRM must tie-in with the effective floodplain boundaries. Please attach a copy of the current FIRM annotated to show the revised 1%-annual-chance floodplain boundaries that tie-in with effective 1%-annual-chance floodplain boundaries along the entire extent of the area of revision.

DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency

1005

COASTAL STRUCTURES FORM (FORM 5)

OMB Control Number: 1660-0016
Expiration: 1/31/2024

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 3.5 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless it displays a valid OMB control number. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 500 C Street, SW, Washington, DC 20472 , Paperwork Reduction Project (1660-0016). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

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DISCLOSURE: The disclosure of information on this form is voluntary; however, failure to provide the information requested may delay or prevent FEMA from processing a determination regarding a requested change to a (NFIP) Flood Insurance Rate Maps (FIRM).

Flooding Source: Gulf of America

Note: Fill out one form for each flooding source studied

A. BACKGROUND

1. Name of Structure: PALNG Perimeter Flood Protection Levee
2. Location of Structure: Port Arthur LNG Facility, Jefferson County, Texas
3. Type of structure (check one):

☒ Levee/Floodwall* ☐ Anchored Bulkhead ☐ Revetment ☐ Gravity Seawall
☐ Breakwater ☐ Pile supported seawall ☐ Other _____

*Note: If the coastal structure is a levee/floodwall, complete Section E of Form 3 (Riverine Structures Form). The remainder of this form does not need to be completed.

4. Material structure is composed of (check all the apply):

☐ Stone ☐ Earthern fill ☐ Concrete ☐ Steel ☐ Sand ☐ Other _____

5. The structure is (check one):

☐ New or Proposed ☐ Existing ☐ Modification of existing structure
☐ Replacement structure of the same size and design as what was previously at the site

Describe in detail the existing structure and/or modifications being made to the structure and the purpose of the modifications:

If existing, please include date of construction: _____

6. Copies of certified "as-built" plans ☐ are ☐ are not attached. Attach all design analyses that apply.

If "as-built" plans are not available for submittal, please explain why and attach a sketch with general structure dimensions including: face slope, height, length, depth, and toe elevation referenced to the appropriate datum (e.g. NGVD 1929, NAVD 1988, etc.).

A. BACKGROUND (continued)

7. Has a Federal agency with responsibility for the design of coastal flood protection structures designed or certified that the structures have been adequately designed and constructed to provide protection against the 1%-annual-chance event?
☐ Yes ☐ No
If Yes, specify the name of the agency and dates of project completion and certification.

_____

If Yes, then no other sections of this form need to be completed.

8. An Operation & Maintenance Plan has been provided.(required for all coastal structures) ☐ Yes ☐ No

B. DESIGN CRITERIA

1. Design Parameters

a. Were physical parameters representing the 1%-annual-chance event or greater used to design the coastal flood protection structure?
☐ Yes ☐ No

b. The number of design water levels that were evaluated _____ (number) range from the mean low water elevation of _____ feet to the 1%-annual-chance stillwater surge elevation of _____ feet. The critical water level is _____ feet.

The datum that these elevations are referenced to is _____ e.g., (NGVD)

Attach an explanation specifying which water levels and associated wave heights and periods were analyzed.

c. Were breaking wave forces used to design the structure?

☐ Yes ☐ No If No, attach an explanation why they were not used for design.

2. Settlement

a. What is the expected settlement rate at the site of the structure? _____

Please attach a settlement analysis.

3. Freeboard

a. Does the structure have 1 foot of freeboard above the height of the 1%-annual-chance wave-height elevation or maximum wave runup (whichever is greater)?
☐ Yes ☐ No

b. Does the structure have freeboard of at least 2 feet above the 1% annual chance stillwater surge elevation?
☐ Yes ☐ No

4. Toe Protection

Specify the type of toe protection: _____

If no toe protection is provided, provide analysis of scour potential and attach an evaluation of structural stability performed with potential scour at the toe.

5. Backfill Protection

Will the structure be overtopped during the 1%-annual-chance event? ☐ Yes ☐ No

If the structure will be overtopped, attach an explanation of what measures are used to prevent the loss of backfill from rundown over the structure, drainage landward, under or laterally around the ends of the structure, or through seams and drainage openings in the structure.

6. Structural Stability - Minimum Water Level

a. For coastal revetments, was a geotechnical analysis of potential failure in the landward direction by rotational gravity slip performed for maximum loads associated with minimum seaward water level, no wave action, saturated soil conditions behind the structure, and maximum toe scour? ☐ Yes ☐ No

b. For gravity and pile-supported seawalls, were engineering analyses of landward sliding, landward overturning, and of foundation adequacy using maximum pressures developed in the sliding and overturning calculations performed? ☐ Yes ☐ No

c. For anchored bulkheads, were engineering analyses performed for shear failure, moment failure, and adequacy of tiebacks and deadmen to resist loading under low-water conditions? ☐ Yes ☐ No

B. DESIGN CRITERIA (continued)

7. Structural Stability - Critical Water Level (Note: All structures must be designed to resist the maximum loads associated with the critical water level to be credited as providing protection from the 1% annual chance event.)

   a. For coastal revetments, was a geotechnical analysis of potential failure in the seaward direction by rotational gravity slip or foundation failure due to inadequate bearing strength?
   ☐ Yes ☐ No

   b. For revetments, were engineering analyses of rock, riprap, or armor blocks' stability under wave action or uplift forces on the rock, riprap, or armor blocks performed?
   ☐ Yes ☐ No

   c. Are the rocks graded?
   ☐ Yes ☐ No

   d. Are soil or geotextile filters being used in the design?
   ☐ Yes ☐ No

   e. For gravity and pile supported seawalls, were engineering analyses of landward sliding, landward overturning, and foundation adequacy performed?
   ☐ Yes ☐ No

   f. For anchored bulkheads, were engineering analyses of shear and moment failure performed using "shock" pressures?
   ☐ Yes ☐ No

   For all analyses marked “No” above for the appropriate type of structure, please attach an explanation why the analyses were not performed.

8. Material Adequacy

   The design life of the structure given the existing conditions at the structure site is _____ years.

9. Ice and Impact Alignment

   a. Will the structure be subjected to ice forces? ☐ Yes ☐ No If Yes, attach impact analysis and design details for such forces.

   b. Will the structure be subjected to impact forces from boats, ships, or large debris? ☐ Yes ☐ No If Yes, attach impact analysis.

10. Structure Plan Alignment

    The structure is (check one): ☐ Isolated ☐ Part of a continuous structure with redundant return walls at frequent intervals.

    Please provide a map showing the location of the structure and any natural land features that shelter the structure from wave actions.

C. ADVERSE IMPACT EVALUATION

If the structure is new, proposed, or modified, will the structure impact flooding and erosion for areas adjacent to the structure?

☐ Yes ☐ No

If Yes, attach an explanation.

D. COMMUNITY AND/OR STATE REVIEW

Has the design, maintenance, and impact of the structure been reviewed and approved by the community, and any Federal, State, or local agencies having jurisdiction over flood control and coastal construction activities in the area the structure impacts?

☐ Yes ☐ No If Yes, attach a list of agencies who have reviewed and approved the project.

If No, attach an explanation why review and approval by the appropriate community or agency has not been obtained.

E. CERTIFICATION

As a Professional Engineer, I certify that the above structures will withstand all hydraulic and wave forces associated with the 1% annual chance flood without significant structural degradation. All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name: License No.: Exp. Date:

Company Name: Telephone No.: Fax No.:

Signature: _____ Date:

Seal (optional)

Sabine Lake Watershed, Texas and Louisiana

2D Base Level Engineering and Mapping

Contract #HSFE60-15-D0003, Task Order # 70FBR620F00000047
November 2021

Prepared for:

DHS/FEMA (Federal Emergency Management Agency)
Attn: Sable Bell, Compass Contracting Officer Representative (COR)
FEMA Region VI
400 C Street Southwest
Washington, DC

Submitted by:

Compass PTS JV
3101 Wilson Boulevard
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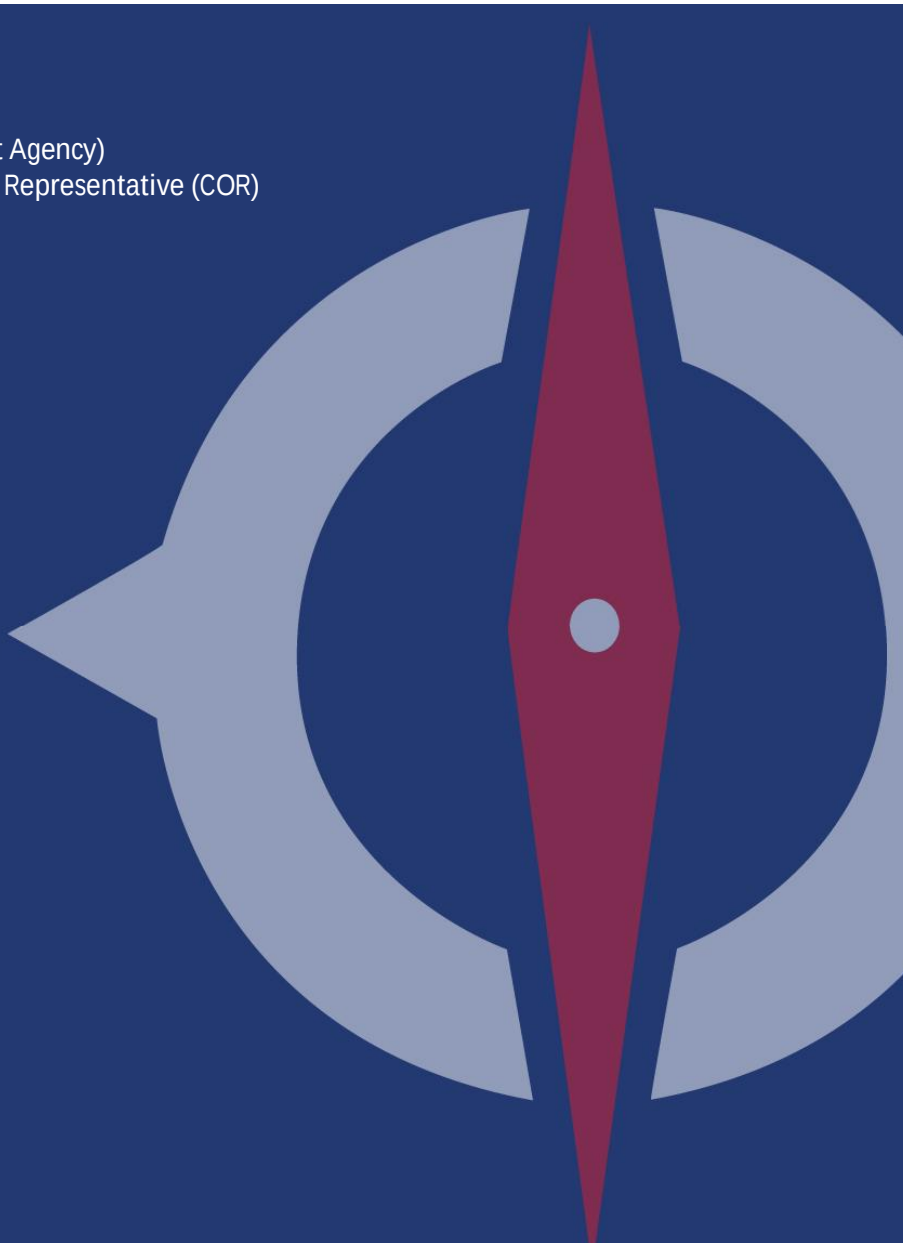

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DOCUMENT HISTORY

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REVISION HISTORY

Version Number	Version Date	Summary Changes	Team/Author
2	November 2021	Final Submittal (addressed R6 comments to the initial submittal)	Compass

APPROVALS

This document requires the approval of the following persons:

Role	Name	Review Date	Approved Date
Project Manager	Sean Sutton	November 1, 2021	November 30, 2021

CLIENT DISTRIBUTION

Name	Title/Organization	Location
FEMA's MIP	Region VI	See path above
Diane Howe	FEMA Region VI	Denton, Texas
Larry Voice	FEMA Region VI	Denton, Texas

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1. Introduction

BLE is a riverine hydrologic and hydraulic modeling approach that builds on lessons learned to produce a baseline understanding of flood risk to communities, produced to support the assessment and maintenance of the national flood hazard inventory. Engineering models are created during a Base Level Engineering assessment, producing information that meets the mapping Standards for Flood Risk Projects (FEMA Policy Memo FP 204-078-1) to produce Zone A (1-percent-annual-chance flood) information. BLE data is intended to represent the base level of investment needed for all flood study efforts FEMA will undertake.

Base Level Engineering (BLE) provides technically credible flood data for various geographies - community, county, watershed and/or state level. BLE data can be shared with Federal, State, local and tribal governments, this data sharing provides stakeholders at all levels the necessary data to make informed decisions to reduce future flood losses. Without the mapping of flood prone areas, there can be a lack of information to effectively communicate flood risk to community officials, citizens, and businesses.

BLE practices leverage high-resolution topography that meets or exceeds the United States Geological Survey (USGS) 3-D Elevation Program standards and often applies flood engineering at a large scale as opposed to targeting stream reaches within a watershed. BLE can be conducted at any scale, commonly for larger areas (HUC-8 watershed) but may be produced at the county or local level too. It is encouraged to do BLE for wider areas in order to build on efficiencies in modeling and ensure cost efficiency. Using current technologies, multiple watersheds or watersheds with large land areas can be analyzed at a more efficient rate to produce water-surface elevations and site-specific hazard data replacing outdated flood studies shown in existing Flood Insurance Rate Maps (FIRMs). All flood prone areas within a watershed will have an engineering model calculating multiple flood recurrence intervals and defining floodplains with elevation grids using high-resolution topography.

For floodplain management purposes, BLE data shall be used as best available information in areas that are designated as Zone A floodplain. It may also be used to regulate development in areas where no Special Flood Hazard Area (SFHA) has been mapped before. Communities should be encouraged to adopt BLE data to support local regulations. Adoption of BLE data facilitates use of the data in local floodplain management activities, including in the post disaster environment where a need for updated and/or enhanced flood hazard information may be necessary.

Per standards #84 and #133, BLE will include all recurrence intervals (0.2-percent, 1-percent, 1-percent plus, 1-percent minus, 2-percent, 4-percent, and 10-percent-annual-chance floods). As such, hydrologic and hydraulic analysis should be performed to determine the expected water surface elevations for each of the seven recurrence intervals previously identified.

The intent of BLE is to provide communities technically credible flood hazard information in a cost efficient and timely manner. Additionally, BLE provides communities a chance to review draft modeling information, reflecting the potential changes in risk within their community. Providing additional flood risk datasets, like water surface elevation grids and flood depth grids, delivers alternative information that reinforces the variability of flood risk within a designated floodplain and supports historic community requests for a source to determine a Base Flood Elevation in Zone A areas.

BLE provides information to communities who are currently unmapped and provides a digital entry to communities that are currently un-modernized. BLE acts as a measuring tool to allow FEMA to assess the current Zone A inventory identified as unknown or unverified in FEMA's Coordinated Needs

Management Strategy (CNMS). BLE modeling is intended to be scalable, meaning that the model produced during the BLE assessment may be refined to produce a more enhanced model with additional manual correction and on the ground survey. If BLE modeling exists, FEMA will recommend that it be used as the base model for any detailed studies performed in those areas.

Base Level Engineering benefits Federal, State, local and tribal governments by providing an expansive stream network of available modeling and providing a range of flood risk data that can broaden and expand risk awareness conversations with local communities.

This report details the 2D BLE modeling approach and products derived for the Sabine Lake Watershed BLE Project contracted by FEMA Region VI to the Compass JV.

In an effort to increase and enhance the flood risk products in Texas and Louisiana, FEMA Region VI contracted the Compass JV to perform a BLE analysis for the Sabine Lake Watershed. This report documents the BLE process, products, and results for this watershed. Figure 1 depicts the Watershed footprint.



Figure 1: Sabine Lake Watershed

2. 2D BLE Modeling Inputs and Controls

Section 2 presents fundamental components required to execute a 2-dimensional (2D) hydraulic engineering analysis for the Sabine Lake Watershed. Inputs such as elevation data, hydrology from rain-on-grid and inflow hydrographs, and hydraulic analyses and variables are defined herein. HEC-RAS 5.0.7 rain-on-grid utility was applied in the production of the 2D BLE products produced for this watershed.

2.1 Topographic Data

A high resolution Digital Elevation Model (DEM) is a fundamental component for two-dimensional engineering analyses by providing a detailed representation of the surface for hydraulic routing through the model area. As such, DEMs were developed for the Sabine Lake BLE project by leveraging available high resolution gridded elevation data derived from Light Detection and Ranging (LiDAR) collections throughout the States of Texas and Louisiana. The 10-foot DEM developed to support the 2D BLE modeling and analysis, within the Sabine Lake Watershed, was executed using the following steps:

1. Available elevation data for the project area were inventoried and collected.
2. Leveraged elevation data were evaluated and prioritized based on source vertical accuracy, year of collection, and resolution.
3. Seamless DEMs were processed using GIS.
4. Quality was assured using quantitative and qualitative assessment.

Documentation regarding leveraged data including coverage, accuracy, acquisition dates, and source contact/agency are presented in the figures, tables and text within Section 2.1.2. All vertical accuracy specifications were obtained from the metadata or survey reports provided with the leverage datasets. All available metadata, survey reports, and other leverage documentation are included in the FEMA Data Capture Technical Reference compliant submittal content for the Sabine Lake Watershed.

2.1.1 Inventory

An inventory of existing topographic data was conducted for the Sabine Lake BLE watershed footprint. Figure 2 depicts the datasets identified and leveraged across the project area. FEMA, National Oceanic and Atmospheric Administration (NOAA), United States Geological Survey (USGS), and other State and Federal agencies were queried to build the inventory with the most current and available data sources.

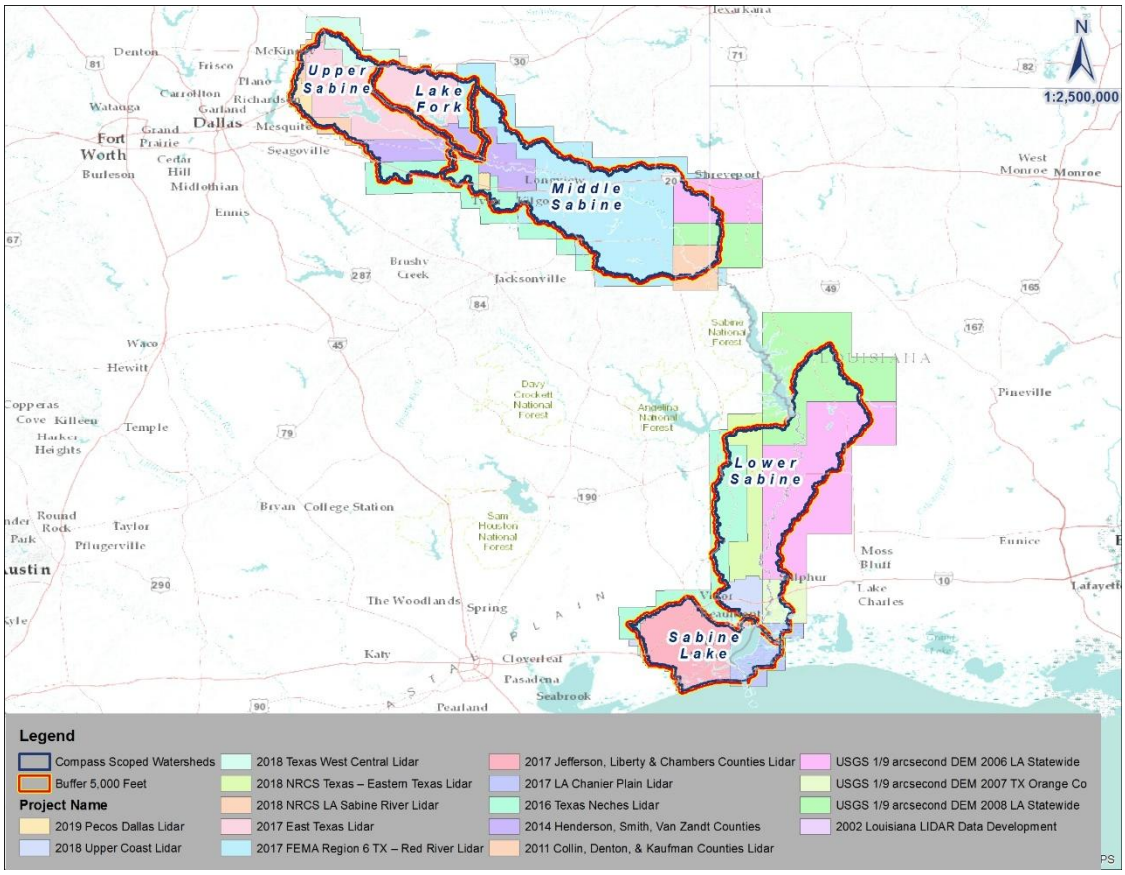


Figure 2: Sabine Lake HUC8 Topographic Input Data Sources

2.1.2 Evaluation

A data coverage assessment was conducted to check for data gaps, extent, accuracy, and completeness. A review of related documentation, reports, indexes, and metadata associated with the leveraged datasets ensured each dataset meets FEMA accuracy requirements for topographic data. Decisions to leverage or exclude a dataset (or portion of it), were based generally on the following criteria coupled with engineering judgment:

- Data meet FEMA vertical accuracy standards (Table 1)
- Date of origination
- Data density and coverage

Table 1 depicts the Risk MAP SID #43 vertical accuracy requirements based on flood risk and terrain slope within the floodplain being mapped.

Table 1: FEMA Vertical Accuracy Requirements for Leveraged Data

Level of Flood Risk	Typical Slopes	Specification Level	Vertical Accuracy*	LiDAR Nominal Pulse Spacing (NPS)
High (Deciles 1,2,3)	Flattest	Highest	24.5 cm / 36.3 cm	≤ 2 meters
High (Deciles 1,2,3)	Rolling or Hilly	High	49.0 cm / 72.6 cm	≤ 2 meters
High (Deciles 2,3,4,5)	Hilly	Medium	98.0 cm / 145 cm	≤ 3.5 meters
Medium (Deciles 3,4,5,6,7)	Flattest	High	49.0 cm / 72.6 cm	≤ 2 meters
Medium (Deciles 3,4,5,6,7)	Rolling	Medium	98.0 cm / 145 cm	≤ 3.5 meters
Medium (Deciles 3,4,5,6,7)	Hilly	Low	147 cm / 218 cm	≤ 5 meters
Low (Deciles 7,8,9,10)	All	Low	147 cm / 218 cm	≤ 5 meters

*Vertical Accuracy at 95% Confidence Level (FVA or NVA)/(CVA or VVA)

Table 2 depicts the complete list of source elevation data and attributes leveraged for the Sabine Lake Watershed. All datasets used for hydraulic analyses and mapping meet the highest specification level defined in Table 1. The following datasets were evaluated and prioritized as best available:

Table 2: LiDAR Topographic Data Available for the Sabine Lake Watershed

Year	Description	Source/Owner	Accuracy[1]	Approximate Footprint (Sq. Mi.)[2]
2018	Upper Coast LiDAR 1 Meter DEM	TNRIS/TWDB	0.098 m	42.4
2017	Jefferson, Liberty, & Chambers Counties 1 Meter DEM	TNRIS/TWDB	0.116 m	847.8
2017	LA Chenier Plain LiDAR 1 Meter DEM	USGS	0.122 m	280.5
2016	Texas Neches LiDAR 1 Meter DEM	USGS	0.129 m	92.3

1. [1]RMSEz reported at the 95% confidence level
2. [2]Size of LiDAR DEM footprint utilized for BLE study

2.1.2.1 Processing Leverage Data

2.1.2.1.1 2018 Upper Coast LiDAR **1** Meter DEM

Fugro was tasked to collect and process a LiDAR-derived elevation dataset for the Texas counties of Austin, Brazoria, Calcasieu, Cameron, Chambers, Colorado, Fort Bend, Galveston, Grimes, Harris, Houston, Jasper, Jefferson, Liberty, Madison, Matagorda, Montgomery, Newton, Orange, Polk, San Jacinto, Trinity, Walker, Waller, Washington, and Wharton with QL 2 Specification.

The 2018 Upper Coast LiDAR was available as 1 meter rasters from TNRIS (https://data.tnris.org/collection/b5bd2b96-8ba5-4dc6-ba88-d88133eb6643). The data was downloaded on September 9, 2020. The data was in NAD83 UTM Zone 15 projection with elevations in NAVD88 with units in meters. The data was collected from January 13, 2018 to March 22, 2018.

Data Specification:

Modern era LiDAR data collection is typically expected to meet specifications of the NGP - LBS. The national LBS have been modified through a series of revisions throughout time and can be accessed at 'LiDAR Base Specification Online' for reference (https://www.usgs.gov/core-science-systems/ngp/ss/LiDAR-base-specification-online). This LiDAR survey and derivative products produced in compliance with the task order are based on:

- USGS LiDAR Base Specifications v1.2
- ASPRS Positional Accuracy Standards for Digital Geospatial Data

The measured accuracy was 0.098 meters for NVA at 95% confidence level and the VVA measured as 0.116 meters.



Figure 3: 2018 Upper Coast LiDAR 1 Meter DEM

2.1.2.1.2 2017 Jefferson, Liberty and Chambers Counties 1 Meter DEM

Sanborn was tasked to collect and process a LiDAR-derived elevation dataset for the Texas counties of Jefferson, Liberty, and Chambers with QL 2 Specification for the Jefferson County Area of Interest (AOI) and QL0 Specification for the Liberty and Chambers Counties AOI.

The Jefferson, Liberty, and Chambers Counties LiDAR data was available as 1 meter rasters from TNRIS (https://data.tnris.org/collection/12342f12-2d74-44c4-9f00-a5c12ac2659c). The data was downloaded on September 9, 2020. The data was in NAD83 UTM Zone 15 projection with elevations in NAVD88 with units in meters. The data was collected from February 22, 2017 to March 23, 2017.

Data Specification:

Modern era LiDAR data collection is typically expected to meet specifications of the NGP - LBS. The national LBS have been modified through a series of revisions throughout time and can be accessed at 'LiDAR Base Specification Online' for reference (https://www.usgs.gov/core-science-systems/ngp/ss/LiDAR-base-specification-online). This LiDAR survey and derivative products produced in compliance with the task order are based on:

- USGS LiDAR Base Specifications v1.2
- ASPRS Positional Accuracy Standards for Digital Geospatial Data

The measured accuracy was 0.196 meters for NVA at 95% confidence level and the VVA measured as 0.286 meters.

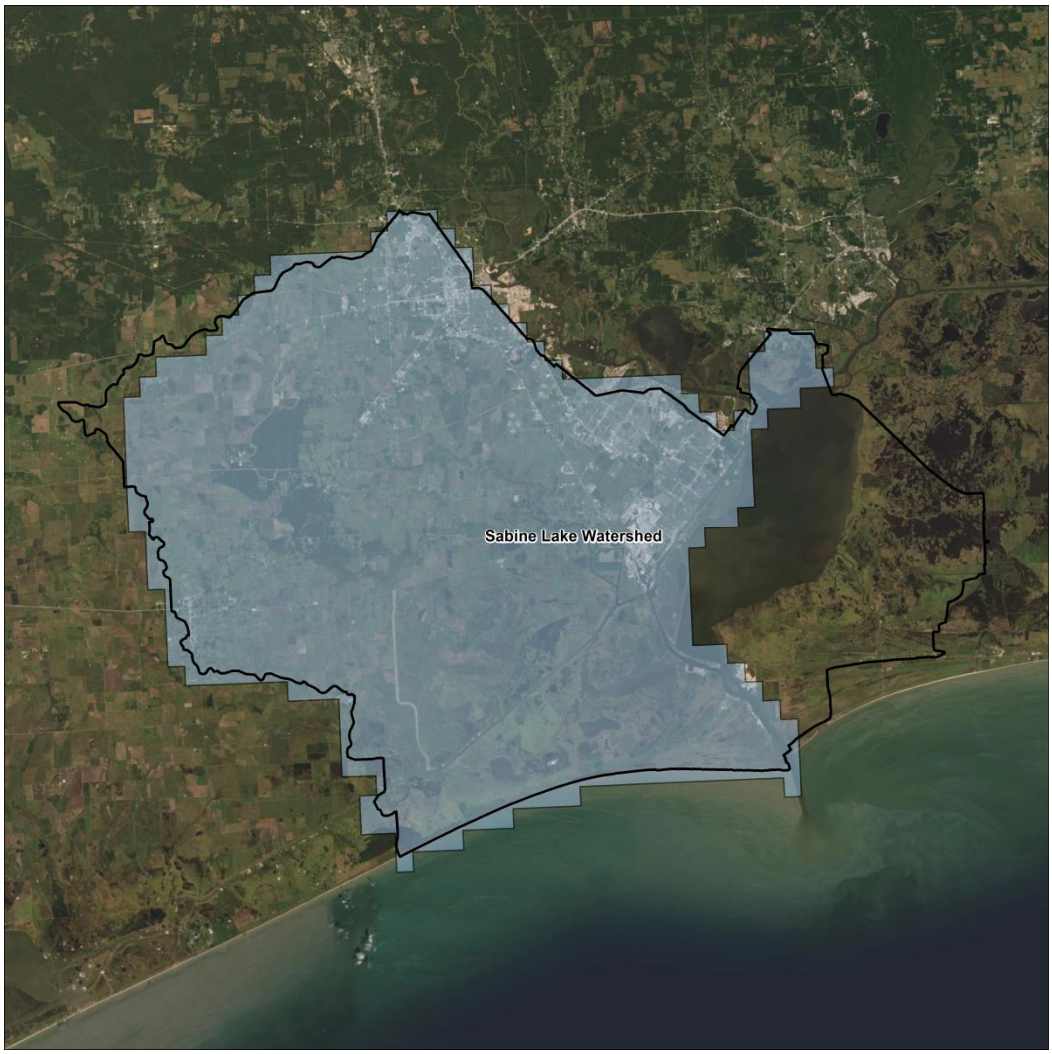


Figure 4: 2017 Jefferson, Liberty and Chambers Counties 1 Meter DEM

2.1.2.1.3 2017 LA Chenier Plain LiDAR 1 Meter DEM

Woolpert and Aerial Services, Inc. were tasked to collect and process a LiDAR-derived elevation dataset for the Louisiana parishes of Calcasieu, Cameron, Vermillion, Iberia, and St. Mary with QL 2 Specification.

The 2017 LA Chenier Plain data was available as 1 meter rasters from the USGS National Map (ftp://rockyftp.cr.usgs.gov/vdelivery/Datasets/Staged/Elevation/1m/Projects/LA_Chenier_Plain_2017/). The data was downloaded on September 9, 2020. The data was in NAD83 UTM Zone 15 projection with elevations in NAVD88 with units in meters. The data was collected from January 8, 2017 to March 3, 2017.

Data Specification:

Modern era LiDAR data collection is typically expected to meet specifications of the NGP - LBS. The national LBS have been modified through a series of revisions throughout time and can be accessed at 'LiDAR Base Specification Online' for reference (https://www.usgs.gov/core-science-systems/ngp/ss/LiDAR-base-specification-online). This LiDAR survey and derivative products produced in compliance with the task order are based on:

- USGS LiDAR Base Specifications v1.2
- ASPRS Positional Accuracy Standards for Digital Geospatial Data

The measured accuracy was 0.122 meters for NVA at 95% confidence level and the VVA measured as 0.121 meters.

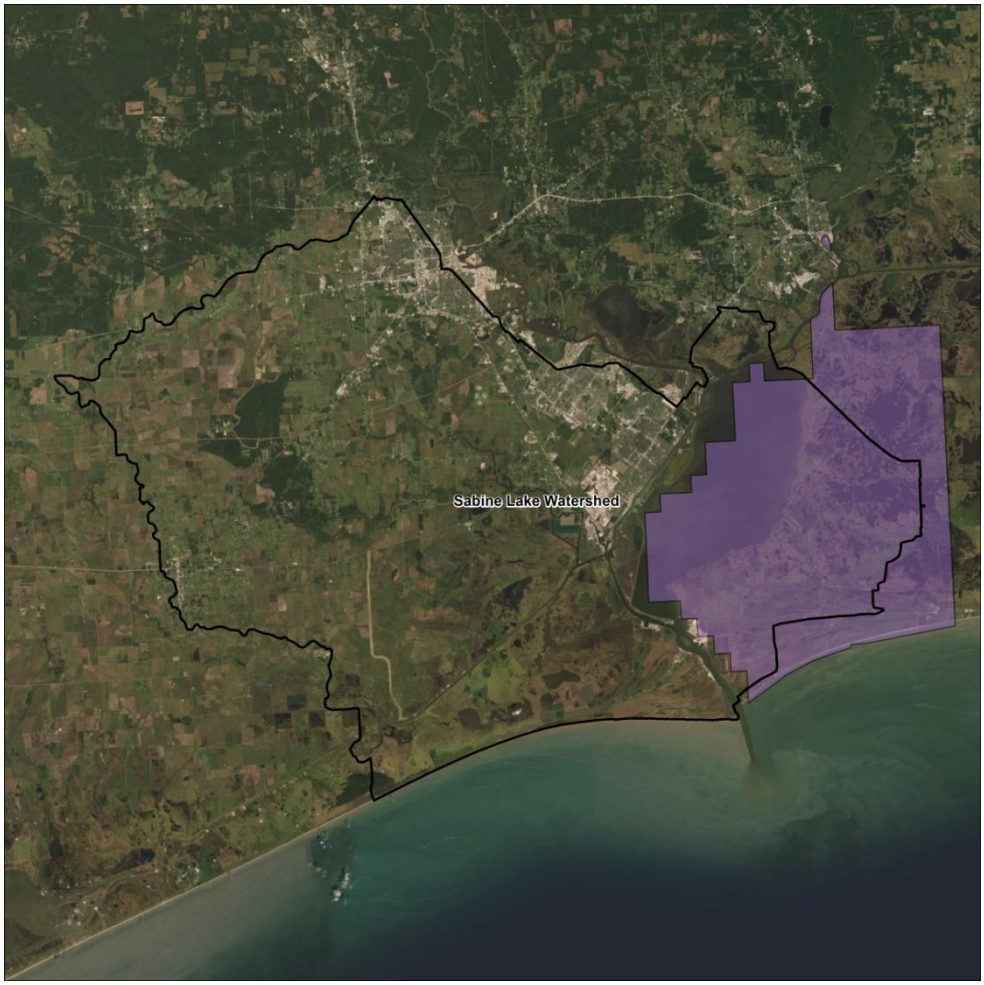


Figure 5: 2017 LA Chenier Plain LiDAR 1 Meter DEM

2.1.2.1.4 2016 Texas Neches LiDAR 1 Meter DEM

Dewberry was tasked to collect and process a LiDAR-derived elevation dataset for the USGS Texas Neches Project Area with QL 2 Specification. Quantum Spatial and Precision Aerial Reconnaissance completed LiDAR data acquisition and data calibration for the project area which includes the Texas counties of Kaufman, Navarro, Freestone, Leon, Madison, Van Zandt, Henderson, Smith, Anderson, Cherokee, Rusk, Shelby, Nacogdoches, Houston, Trinity, Angelina, San Augustine, Sabine, Newton, Jasper, Tyler, Hardin, Polk, Liberty, Jefferson, and Orange.

The 2016 Texas Neches LiDAR data was available as 1 meter rasters from the USGS National Map (ftp://rockyftp.cr.usgs.gov/vdelivery/Datasets/Staged/Elevation/1m/Projects/TX_Neches_B5_2016/ and ftp://rockyftp.cr.usgs.gov/vdelivery/Datasets/Staged/Elevation/1m/Projects/TX_Neches_B1_2016/ and ftp://rockyftp.cr.usgs.gov/vdelivery/Datasets/Staged/Elevation/1m/Projects/TX_Neches_B2_2016/) The data was downloaded on September 9, 2020. The data was in NAD83 UTM Zone 15 projection with elevations in NAVD88 with units in meters. The data was collected from March 3, 2016 to February 25, 2017.

Data Specification:

Modern era LiDAR data collection is typically expected to meet specifications of the NGP - LBS. The national LBS have been modified through a series of revisions throughout time and can be accessed at 'LiDAR Base Specification Online' for reference (https://www.usgs.gov/core-science-systems/ngp/ss/LiDAR-base-specification-online). This LiDAR survey and derivative products produced in compliance with the task order are based on:

- USGS LiDAR Base Specifications v1.2
- ASPRS Positional Accuracy Standards for Digital Geospatial Data

The measured accuracy was 0.129 meters for NVA at 95% confidence level and the VVA measured as 0.167 meters.



Figure 6: 2016 Texas Neches LiDAR 1 Meter DEM

2.1.3 Data Processing

ArcGIS software was utilized in order to create a digital surface model for the Sabine Lake HUC 8 Watershed project area. The LiDAR datasets were added to a mosaic dataset and prioritized by date with the most recent dataset taking the first priority. If two datasets are from the same year or flown at similar dates, the accuracy was reviewed to determine the priority. The mosaic dataset was exported to make a seamless bare earth DEM.

The exported DEM was reviewed through automated QC to check for anomalies and outlier locations based on slope and cells that exceed z value differences from surrounding cells. Visual review was also performed to check for ground differences at the extents of the datasets for differences in ground values. Where necessary, minor adjustments were made to represent a more accurate bare earth surface using aerial imagery. A shapefile with specific notes has been included for reference for modified locations.

2.1.4 DEM QA/QC

DEMs developed for use in the Sabine Lake Watershed BLE analysis were developed and independently assured to meet quality standards of the project. The data were developed using a controlled process, were evaluated and assured by a topographic data development team, and were evaluated and assured by the engineering team. Quality assurance during the data development process includes, but is not limited to the following QC checks:

- Horizontal Projection Check
- Vertical Datum Check
- Resolution Check
- Format Check
- Seamless Data Check to ensure the DEM files are consistent and seamless along source data edges

The quality control after the development process by the DEM development team included visual observations using hillshade, contouring, color rendering, and/or other visual aids to review and identify potential impactful anomalies within the DEM surface. This QC step included, but were not limited to the following QC checks:

- Seamless Data Check to ensure no voids along the edges and between the prioritized datasets
- NoData Value Check to ensure no null values
- Manual Elevation Check using hillshade rasters to find erroneous elevation issues
- Unit Consistency Check
- Legacy Cell Value Anomalies

Quality assurance conducted after the seamless DEM development conducted by the engineering team included visual or automated assessments to identify potentially impactful anomalies or slope changes that may adversely impact hydraulic.

The final DEM data developed for the Sabine Lake Watershed is assured to meet FEMA standards and present a representative surface developed from leveraged elevation data for the purposes of this BLE project.

2.2 2D BLE Methods

HEC-RAS 5.0.7 (RAS5) rain-on-grid utility was applied in the Texas 2D Base Level Engineering (BLE) products workflow. The following sections describe the engineering methods and model inputs used.

2.2.1 2D Computational Mesh and Settings

The RAS5 2D computational mesh was created for the Sabine Lake model area were created using ArcGIS toolsets, which reduce the need for manual edits to mesh cells within RAS5 that result in error generation. The model's 2D mesh contains 1,573,451 cells with a default cell size of 200 feet and with 50 foot cells within community boundaries and 500 foot cells in the lakes using refinement regions. Profile lines were used for all flow extractions. There are no 2D connections in the model. An adaptive 30-second time step was used to allow the model to lower the time step, as necessary, to keep the maximum courant number under 3 for the duration of the simulation. The time step was allowed to

reach 60 seconds for a maximum and 7.5 seconds for the minimum. A theta value of 0.6 was used due to the models alignment with the coast. The RAS5 model was ran with Diffusion Wave (simplified Full Momentum) equations.

2.2.2 Model and Boundary Condition Setup

Using RAS5 rain-on-grid modeling requires a 2D computational mesh boundary and often requires defining inflow boundary conditions and application of excess precipitation. Excess precipitation was applied to the 2D mesh as a precipitation boundary condition. The process to determine the excess precipitation to be applied is outlined in the hydrology section. Figure 7 below depicts the Sabine Lake model boundaries, tidal gages and inflow locations.

Outflow boundary conditions (from the computational 2D mesh) were used along model boundaries without an inflow boundary condition. Unique outflow boundaries were established for obvious riverine outflows, while the remaining boundaries were defined as continuous boundaries to allow drainage to adjacent basins leave the model area freely. Normal depth was used for all non-unique outflow boundary conditions using approximate energy grade-line slopes estimated from the LiDAR terrain data.

A stage hydrograph was used for boundary conditions along the coast. The water elevation was determined by the Mean Higher High Water (MHHW) of the nearby tide station. The tide stations referenced for these boundary conditions are Sabine Pass TX (8770822). On April 15th 2021 the MHWW value of 0.81 ft was obtained from NOAA.

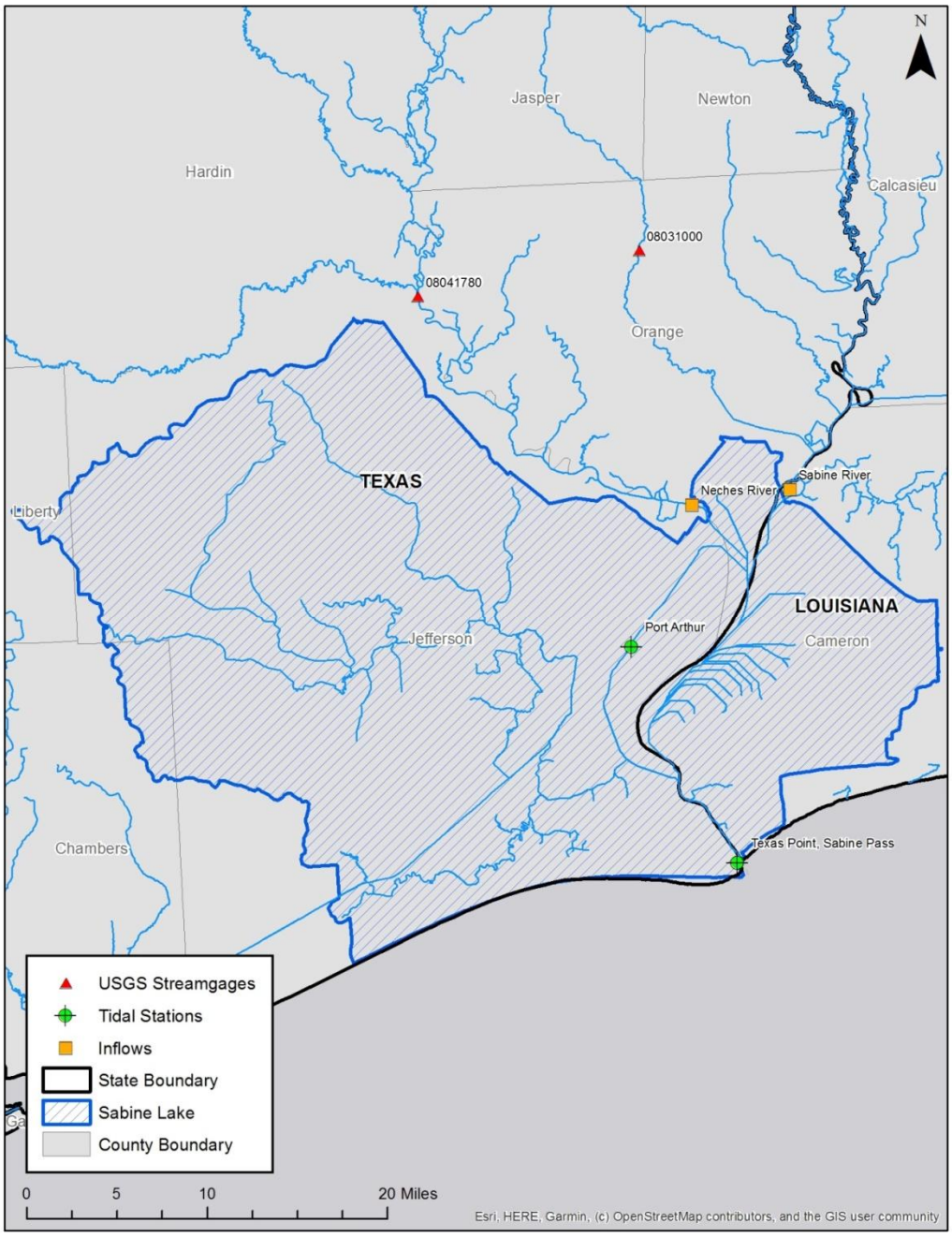


Figure 7: RAS5 2D Computational Mesh and Boundary Conditions

2.2.3 Hydrology

Precipitation frequency data (NOAA, 2018) was used for this study. These data were obtained from NOAA's Precipitation Frequency Data Server (PFDS) (http://hdsc.nws.noaa.gov/hdsc/pfds/index.html), and appropriate values for all sub-basin elements were determined considering spatial variation and a representative total for Sabine Lake. Excess precipitation for the 2D mesh was developed as described in Section 2.2.3.1. USGS streamflow gage data were leveraged to estimate peak flows for downstream

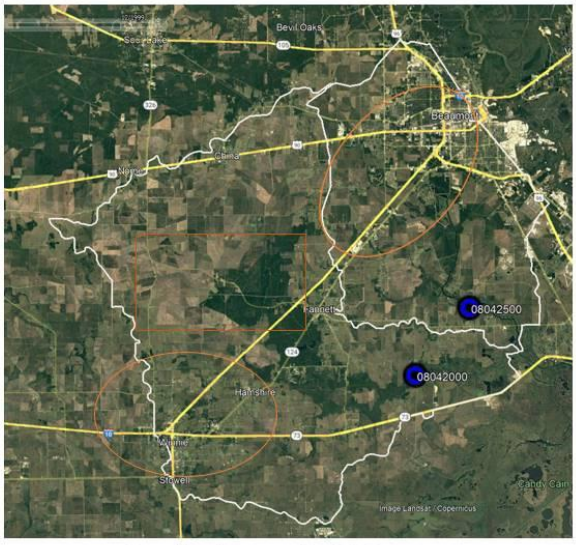
gages within each work area for calibration purposes, as discussed in Section 3. The 10-, 4-, 2-, 1-, and 0.2-percent annual chance 24-hour precipitation depths for all sub-basin elements were determined by area-weighted intersection of gridded PFDS data with sub-basins.

USGS streamflow gage data are leveraged to estimate peak flows for downstream gages within each model for calibration purposes. USGS stream gages with less than 10 years of continuous record, and gages without any recent data were not considered for this study. No gages fit these criteria for this watershed. USGS stream gages listed in Table 3 are within the scoped area, but were not considered for this analysis.

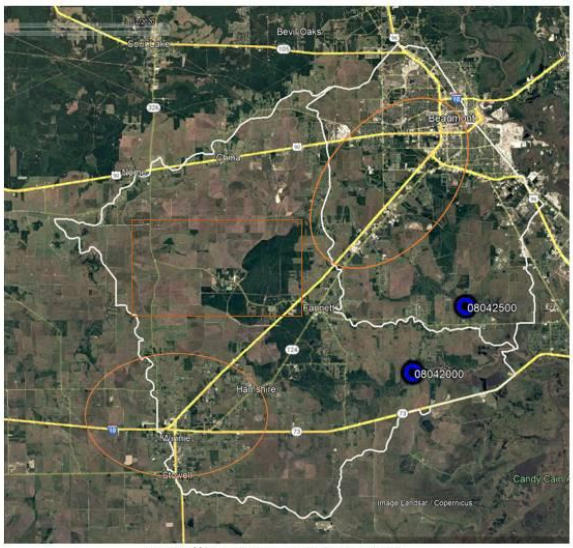
Table 3: USGS Peak Streamflow Gages

Gage ID	Flooding Source and Location	Published Drainage Area (mi^2)	Period of Record
08042500	Hillebrandt Bayou near Lovell Lake, TX	128	1954-2000
08042000	Taylor Bayou near LaBelle, TX	262	1952-2000

Figure 8 shows the Drainage area (white outlines) for gages 08042500 and 08042000. From Google Earth historical satellite imagery, the urban development changes between 1999 and 2019 are visible in those circled areas. The Multi-Resolution Land Characteristics (MRLC) National Land Cover Database (NLCD) Enhanced Visualization and Analysis (EVA) tool shows the land cover change from 2001 to 2019, and the report for Jefferson County shows that overall 6.58%, or 73 square miles, of the County land use changed. Per FEMA guidance (General Hydrologic Considerations Guidance Feb 2019), "*Note that gage record analyses are valid only for homogeneous periods of record in which the hydrologic response of the watershed is unchanged*". Therefore, the two gages with period of records ending before 2000 are not representing current watershed condition, and therefore the gage data was not used.



Satellite Imagery in 1999



Satellite Imagery in 2019

Figure 8: Comparison of Satellite Imageries from 1999 to 2019

2.2.3.1 Excess Precipitation for 2D Computational Mesh

HEC-HMS version 4.6 was used to apply the Soil Conservation Service (SCS) Curve Number method to calculate losses and define excess precipitation for this watershed. Temporal distributions of point rainfall totals were defined using 24-hour, frequency-based storm distributions. The plus and minus standard error for the 1% annual chance precipitation depths were determined as the upper and lower 84% confidence limits on the nominal 1% depth, assuming a normal distribution of the logarithms for the precipitation depths. An areal reduction as per Technical Paper 40 (TP-40) was used in HEC-HMS on all recurrence interval total precipitation depths in order to determine the effective precipitation for the sub-basin representing 2D mesh.

In addition to recurrence interval precipitation estimates, NOAA Atlas 14 provides 90% confidence intervals of reported precipitation values. On a normal distribution curve, 90% confidence intervals (i.e. the upper and lower 95% confidence limits) correspond to +/- 1.645 standard deviations. The 1% plus and minus events are defined to be one standard deviation above and below the 1% event. It should be noted that the standard errors for the 1% rainfall depth were based on the depth used post-areal reduction.

Curve numbers were computed by intersecting the NLCD 2016 coverage and NRCS soils data based on the matrix presented in Table 4.

Table 4: Land Use-Soils-CN Matrix for Defining Initial Curve Number

LU_GridCode	NLCD LU Description	Hydrologic Soil Group			
		A	B	C	D
11	Open Water	99	99	99	99
21	Developed Open Space	49	69	79	84
22	Developed Low Intensity	61	75	83	87
23	Developed Medium Intensity	81	88	91	93
24	Developed High Intensity	89	92	94	95
31	Barren Land	39	61	74	80
41	Deciduous Forest	30	55	70	77
42	Evergreen Forest	30	55	70	77
43	Mixed Forest	30	55	70	77
52	Shrub Scrub	30	48	65	73
71	Herbaceous	49	62	74	85
81	Hay Pasture	39	61	74	84
82	Cultivated Crops	51	67	76	80
90	Woody Wetlands	72	80	87	93
95	Emergent Herbaceous Wetlands	72	80	87	93

A Curve Number (CN) can be considered a parameter, exhibiting variability that follows some frequency distribution. While Antecedent Runoff Condition (ARC) II CNs were used for a 1% event, the range between ARC I and ARC III for the ARC II CN was assumed to correspond to an 80% confidence interval of

the ARC II CN. The CN loss method assumes a maximum potential retention parameter, S, is inversely related to a CN by S = 1000 / CN – 10; this relationship is based on a median value of S determined from plotting a large number of observations.

Chapter 5 of the NRCS National Engineering Handbook (NEH) Part 630 provides an example of computing a CN for a watershed based on annual peak gage observations. The example involves computing a CN and corresponding S value for each event, then taking the logarithms of the S values. Further, the logarithm of S is assumed to vary normally, and the mean of the logarithms corresponds to the arithmetic median. Therefore, 10% (S10) and 90% (S90) extremes of lognormally distributed S values can be assumed to correspond to ARC III and ARC I condition CN values, respectively. This range represents an 80% confidence interval, corresponding to +/- 1.282 standard deviations from the mean. The following procedure was used to estimate one standard deviation of a given CN (in fact, one standard deviation of the logarithm of S) for the purposes of modeling 1% plus and minus events. First, ARC III (corresponding to S10) and ARC I (corresponding to S90) CN values can be estimated from a 1% CN (ARC II) by:

$$CNI = 4.2 * CNII / (10 - 0.058 * CNII)$$

$$CNIII = 23 * CNII / (10 + 0.13 * CNII)$$

Next, S90 and S10 can be computed by:

$$S10 = 1000 / CNIII - 10$$

$$S90 = 1000 / CNI - 10$$

The following relationship can then be used to compute one standard deviation of the logarithm of S:

$$\log(S10) = \text{mean}(\log(S)) + 1.282\ \text{std. dev.}(\log(S))$$

$$\log(S90) = \text{mean}(\log(S)) - 1.282\ \text{std. dev.}(\log(S))$$

$$1\ \text{std. dev.}(\log S) = (\log S10 - \log S90) / 1.282$$

Therefore, 1% plus and minus S values can be estimated by:

$$\log SPlus = \log S + [1\ \text{std. dev.}(\log S)]$$

$$\log SMinus = \log S - [1\ \text{std. dev.}(\log S)]$$

Finally, 1% plus and minus CNs can be computed by:

$$CNPlus = 1000 / (SPlus + 10)$$

$$CNMinus = 1000 / (SMinus + 10)$$

Since the 1% plus and minus events represent plus and minus one standard deviation of a 1% event, CNs used in a rainfall-runoff simulation for modeling 1% plus and minus events were developed, as described above.

The table below shows the curve numbers both initially computed and revised values based on reasonability check revisions.

Table 5: Rainfall-Runoff Curve Numbers

Sub-basin Description	CN (initial)	CN (verified)	CN 1% Minus	CN 1% Plus
Sabine Lake	89.5	89.5	82.1	94.14

NRCS rainfall-runoff methods were used to define excess precipitation applied to the 2D mesh, including curve numbers for defining rainfall losses. No routing was considered in the rainfall-runoff modeling. Frequency-based storms, with 50% storm centering, were used for defining temporal distributions of point rainfall totals. An Areal Reduction Factor (ARF) of 0.91 was used on all recurrence interval total precipitation depths in order to determine the effective precipitation for the sub-basin representing the 2D mesh. Table 6 provides the precipitation totals used for determining excess precipitation.

Table 6: Precipitation Totals Estimated in HEC-HMS (post ARF)

Percent Annual Chance Precipitation Depths (in.)							
Sub-Basin Description	1%	0.2%	2%	4%	10%	1% Plus	1% Minus
Sabine Lake	18.2	27.7	15.1	12.4	9.4	22.18	14.22

Table 7 shows the excess precipitation totals determined from the HMS model. These values are a factor of the average curve number and precipitation depths for each model area. Note that CNs were modified during the calibration process and the excess precipitation depths were recalculated to match actual conditions and install confidence in the final model results.

Table 7: Total Excess Precipitation Applied to 2D Mesh

Percent Annual Chance Precipitation Depths (in.)							
Sub-Basin Description	1%	0.2%	2%	4%	10%	1% Plus	1% Minus
Sabine Lake	15.23	23.85	12.43	9.99	7.26	19.46	10.65

Figure 9 shows the excess precipitation hyetograph used for Sabine Lake. Curve Number and precipitation depth are the two factors used by the HMS model to determine the magnitude of the excess precipitation event. The excess precipitation hyetograph is calculated in 6-minute increments. All models in this study have excess hyetograph shapes that closely resemble this one, but with varying maximum excess precipitation values.

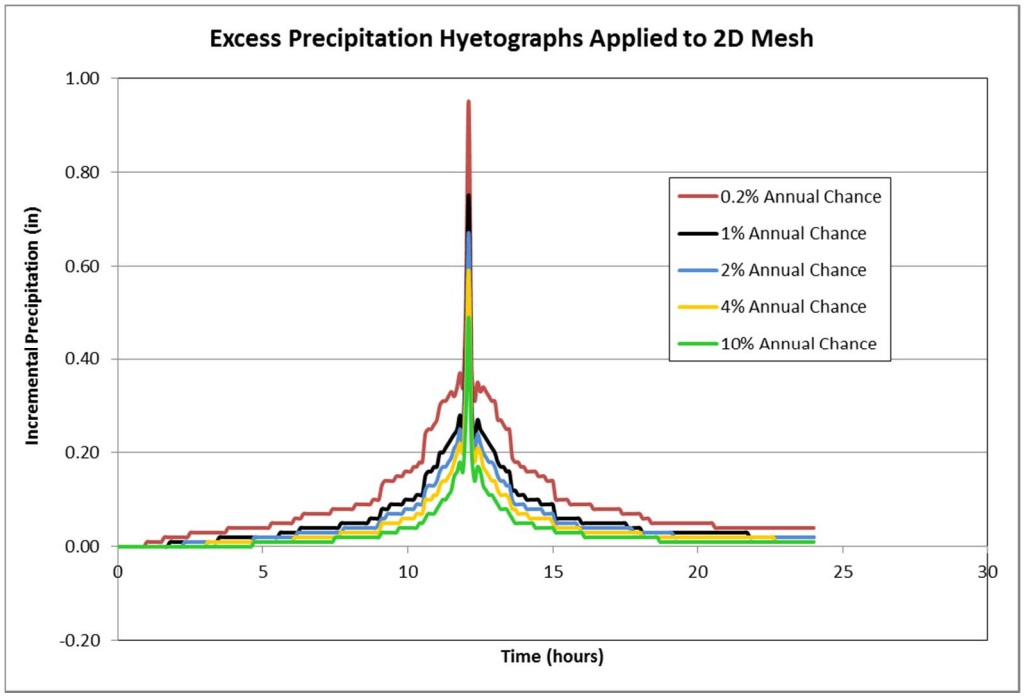


Figure 9: Excess Precipitation Hyetograph

2.2.3.2 Inflow Hydrograph Boundary Conditions

There are two major inflows for Sabine Lake watershed, Sabine River and Neches River. See Figure 7 for the inflow locations. For both of the inflow hydrographs development, the approach of Unit Hydrograph (UH) were applied.

- Neches River developed the UH from gage records at site 08031000, and the peak values are from 2019 BLE study.
- Sabine River developed the UH from gage records at site 08041780, and the peak values are from the on-going FEMA Region 6 FY20 Lower Sabine River 1D BLE study.

The resultant hydrographs are shown in the figures below.

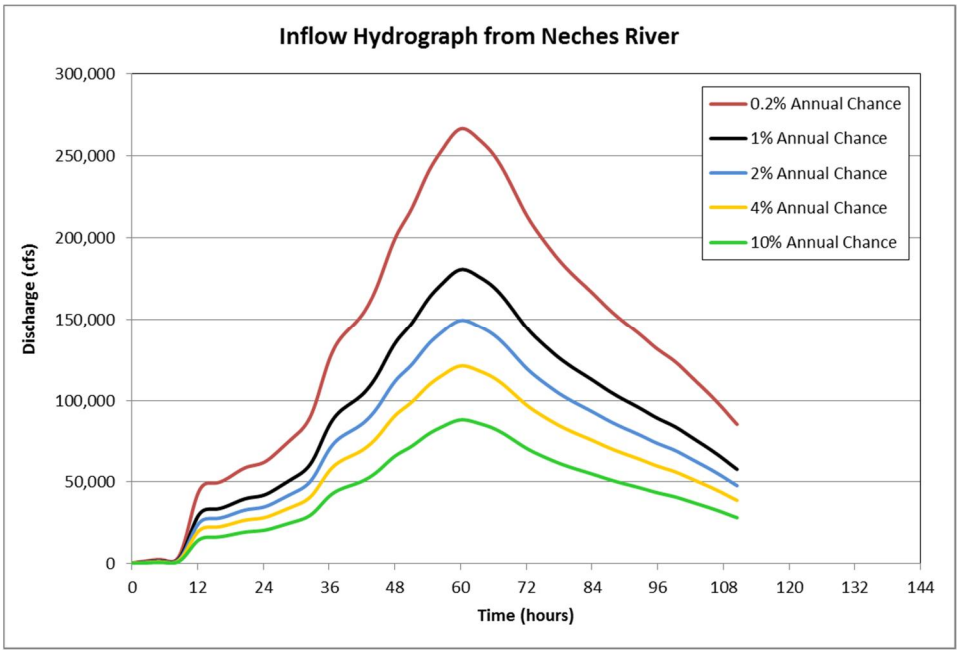


Figure 10: Inflow Hydrograph from Neches River

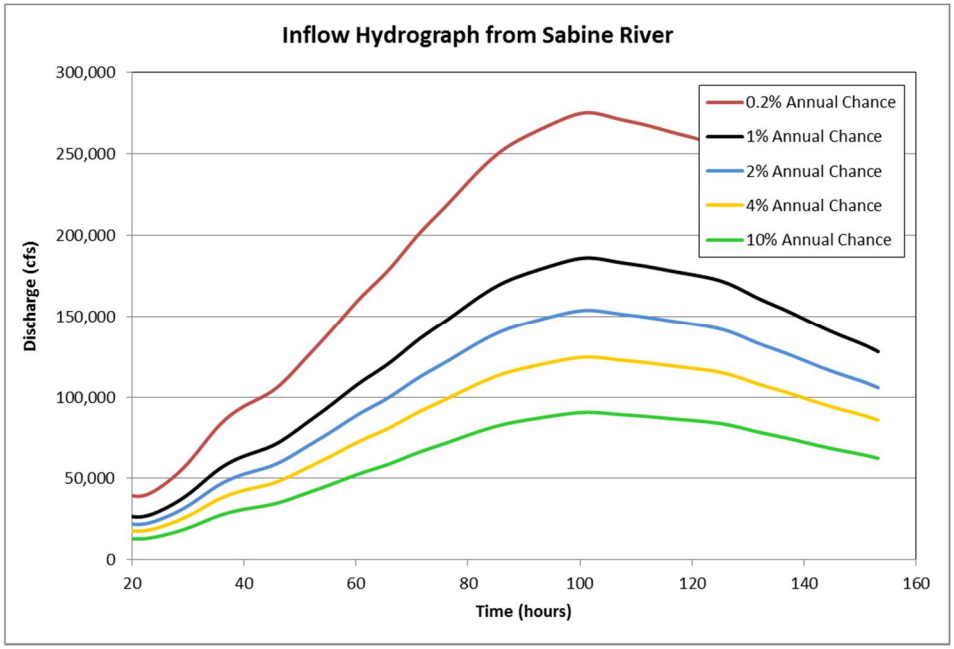


Figure 11: Inflow Hydrograph from Sabine River

2.2.4 Hydraulics

This section describes the remaining hydraulic modeling considerations, including implementation of Manning's roughness, breaklines, refinement regions, and hydraulic structures within the 2D computational mesh.

2.2.4.1 Roughness Coefficients

Manning's (n) roughness coverage was developed for the 2D computational mesh using typical roughness values for given NLCD land classifications. Two different sets of Manning's N values were used for areas within the channel and all other areas outside of the channels of the stream network. The channel layers were created using a 100-ft buffer. This allows for the model to accurately represent deep, swift flow within the channel and shallow overland flow outside of the channel areas. The table below shows a typical landuse-roughness matrix used in defining the roughness coverage for the study area for areas both inside and outside of the channel.

Table 8: NLCD 2016 Manning's N Roughness Matrix

NLCD Classification	Channel		Overbank	
	N Value	Source	N Value	Source
Open Water	0.03	Chow, 1959	0.03	Chow 1959
Developed, Open Space	0.035	Chow, 1959	0.04	NRCS KS Dam Breach, 2016
Developed, Low Intensity	0.035	Chow, 1959	0.08	NRCS KS Dam Breach, 2016
Developed, Medium Intensity	0.035	Chow, 1959	0.1	NRCS KS Dam Breach, 2016
Developed, High Intensity	0.035	Chow, 1959	0.15	NRCS KS Dam Breach, 2016
Barren Land	0.03	Chow, 1959	0.03	NRCS KS Dam Breach, 2016
Deciduous Forest	0.05	Chow, 1959	0.16	NRCS KS Dam Breach, 2016
Evergreen Forest	0.05	Chow, 1959	0.16	NRCS KS Dam Breach, 2016
Mixed Forest	0.05	Chow, 1959	0.15	NRCS KS Dam Breach, 2016
Scrub/Shrub	0.04	Chow, 1959	0.1	NRCS KS Dam Breach, 2016
Grassland/Herbaceous	0.04	Chow, 1959	0.15	HCFCD modeling Guidelines
Pasture/Hay	0.04	Chow, 1959	0.15	HCFCD modeling Guidelines, 2018
Cultivated Crops	0.04	Chow, 1959	0.1	HCFCD modeling Guidelines, 2018
Woody Wetlands	0.04	Chow, 1959	0.12	NRCS KS Dam Breach, 2016
Emergent Herbaceous Wetland	0.04	Chow, 1959	0.07	NRCS KS Dam Breach, 2016

2.2.4.2 Breaklines

Breaklines align grid cell faces and were used within the 2D mesh area to define prominent features including road embankments and hydraulic structures. Road embankment features were delineated in GIS and imported into RAS5 as breaklines to contain water where appropriate. Similarly, significant bridge/culvert crossings that were not processed out of the terrain data were modeled by v-notch breaklines adjacent to the road embankment to align grid cells around the embankment and allow water to be routed through the embankment without creating artificial backwater. An example of the v-notch breakline approach is shown in Figure 12.

County, interstate, common name, state recognized, and U.S. roads were incorporated for road breaklines from the U.S. Census Bureau TIGER/Line road layer.

Any publicly owned dams, according to the 2018 National Inventory of Dams, were modeled with breaklines to provide protection. This method allows water to flow out of the spillway, if it reaches that elevation. Private dams were not modeled as showing protection. This is to lessen the burden on private dam owners to maintain their dams in order to sustain the regulatory products created as a result of this study.

Breaklines were also used along all the stream centerlines of streams draining greater than one square mile of drainage area. Each stream centerline was enforced with 100 foot cell spacing in order to align cells along the stream line and capture more detail along the one square mile stream network.

The study area included multiple levee systems. The accredited levee system, Port Arthur Hurricane Flood Protection, was represented by breaklines running along the top. The non-accredited levee systems used breaklines running along the low point at the bottom so as to allow water to pass.

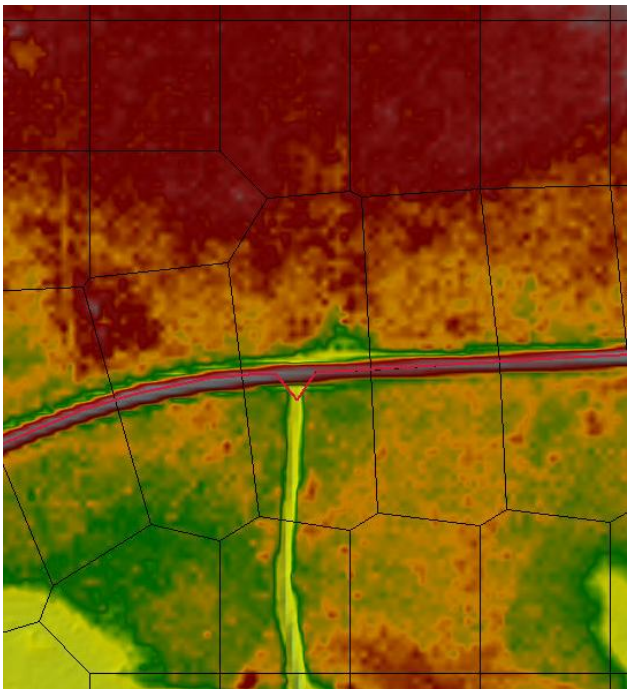


Figure 12: V-notch Breakline Approach at Bridge Crossing

2.2.4.3 Refinement Regions

Refinement regions were created for each community within the model. The political boundary was used to determine the shape of the refinement region. The regions were assigned a cell spacing of 50 feet by 50 feet. This finer cell spacing allows for more hydraulic calculations and mapping detail near areas where there are likely to be more structures. The table below shows the communities contained within Sabine Lake watershed that were modeled with refinement regions as well as the square mileage of the refinement region.

Table 9: Communities with 2D Mesh Refinement

Community Name	Area (mi^2)
Beaumont City	54.9
Bridge City	1.8
Central Gardens CDP	2.5
China City	1.0
Fannett CDP	6.2
Groves City	5.2
Nederland City	5.4
Nome City	5.4
Port Arthur City	30.4
Port Neches City	5.2
Stowell CDP	3.2
Taylor Landing City	0.1
Winnie CDP	3.3

Refinement regions were also used in a few of the largest lakes, including Sabine Lake, where the terrain does not have a slope. A cell size of 500ft was used for the body of the lake. Due to the flat surface in these lakes, no detail was lost by having larger cell sizes. This was done to lower to total model cell count, ensuring shorter runtimes and decreasing chance of error.

2.2.5 Quality Control

The results of 2D BLE results were independently assured to meet quality standards of the project. Standard checklists complying with FEMA standards were used to review hydrology and hydraulics results, the resulting flood hazard area delineations and CNMS dataset. Quality assurance during the data development process includes, but is not limited to the following QC checks:

- Hydrological QC – included checks for curve number calculation, input precipitation, flood events, areal reduction factor and human error.
- Hydraulic QC – included checks for RAS geometry, breakline placement, v-notch placement to ensure water conveyance at crossings, refinement regions, roughness coefficients, boundary/initial conditions, timestep and mapping outputs
- Mapping – included checks for spot checking flood inundation accuracies based on floodplain mapping criteria described in Section 4, ensuring flood extents from higher frequency events did not exceed lower frequency extents due to GIS smoothing algorithms, and topological overlap and cluster tolerance errors were resolved

- CNMS - Included review of the A1-A5 analysis for all effective approximate reaches in the HUC, geometry updates to newly studied reaches added as Zone X, and removal of scoped areas which lie outside of the final BLE footprint.

3. Results

The 2D BLE results for the study produced flood hazard area that compared reasonably well with effective special flood hazard area (SFHA) in most cases, and provides additional estimated flood hazard risk area where not previously mapped. The HEC-RAS peak (max) results were exported for mapping and the HEC-RAS model was run with a hydrograph output interval of 30 minutes, mapping output interval of 1 hour and the detailed output interval of 1 hour. The Sabine Lake Watershed is sufficient to facilitate FEMA regulatory processes while also providing the best available information for planning purposes. The 2D BLE results should be verified through community work map meetings as part of the regulatory workflow.

Table 10: Effective and Model BFE Comparison

Location	Effective BFE (feet)	Model BFE (feet)	Difference (feet)
Willow Marsh Bayou Effective XS Letter A	9.7	10	0.3
Green Pond Gully Effective XS Letter C	30.7	30	0.7
South Fork Taylor Bayou Effective XS Letter E	17.8	18	0.2
Channel to Janes Gully Effective XS Letter F	25.6	26	0.4

3.1 Calibration

For calibration purposes, none of the USGS gages fit the criteria due to insufficient length of record or outdated record dates. There also existed only a limited amount of reliable effective data within the study area; therefore, regression estimates were utilized in different locations throughout the model to ensure accurate results. The specific locations for calculating regression were chosen based on their proximity to communities, defined streamflow, and to achieve a variety of drainage area sizes between the points. With this criteria in mind, the points chosen all fall in the Texas portion of the study area.

The regression analysis was performed as per regional regression equations using the drainage area, dimensionless main channel slope (S), OmegaEM parameter and mean annual precipitation (P) (USGS-SIR 2009-5087). Regression comparisons were made in four locations with varying contributing drainage area to ensure a reasonable amount of excess precipitation was being applied to the 2D mesh.

Adjustments to curve number and hydraulic features within the model were made until the flows in the model matched closely with the peak flows determined from gage and effective data. Final results following model calibration at the calibration locations are presented in Table 11.

Table 11: Calibration Results

Calibration Location	Source	Method Used in Original Study	Drainage Area (Square Miles)	Reference			HEC-RAS 5.0.7 (2D)
				Lower Limit	1%	Upper Limit	
Basin 1	Regression	USGS Report 77-110 methodologies	13	1,608	3,209	6,403	4,714
Basin 2	Regression	USGS Report 77-110 methodologies	280	6,369	12,707	25,355	13,535
Basin 4	Regression	USGS Report 77-110 methodologies	160	4,511	9,001	17,958	8,777
Basin 6	Regression	USGS Report 77-110 methodologies	16	1,074	2,144	4,278	3,797

Figure 13 shows the final results of the calibration locations compared to modeled flows throughout the Sabine Lake watershed. Four comparisons were made with varying drainage areas to ensure the calibration of excess precipitation for different points over the entire watershed area. This large collection of calibration points provides confidence in results throughout the entire Watershed.

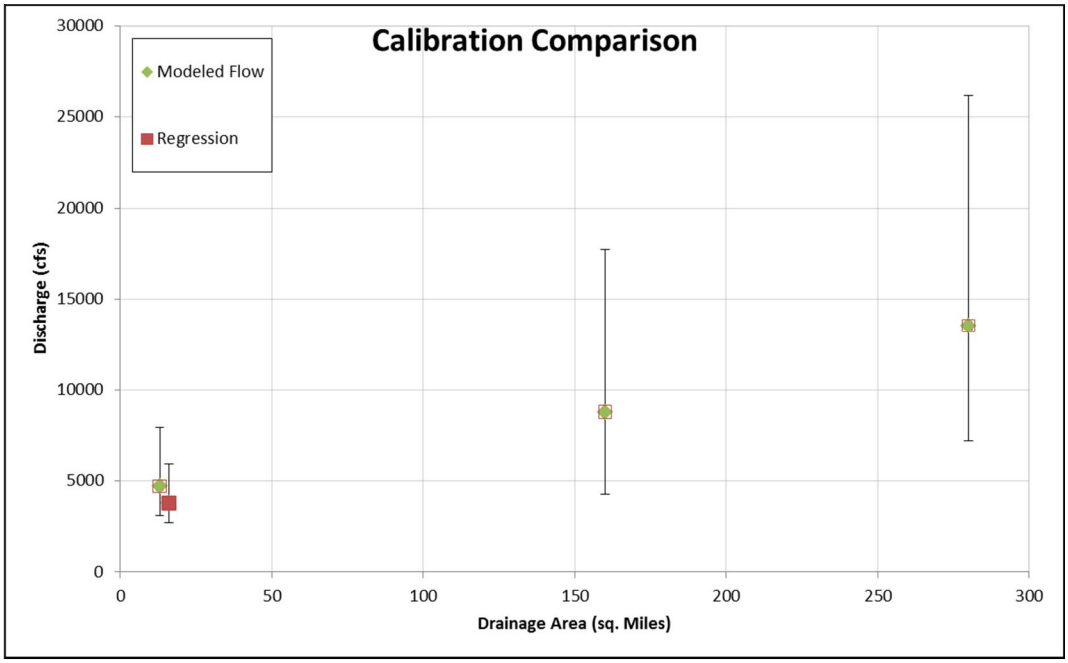


Figure 13: Calibration Comparison

3.2 Challenges

In order to mimic the normal pool condition for Sabine Lake, the team conducted tests to see how much impact the empty lake may have in terms of the discharge and WSEL. Below are the three simulation scenarios that were tested:

- Restart: unrevised terrain (-1.3ft), using a restart file starts which ran for 12 hours prior to the real simulation. This allows the model starts with wet conditions.
- Original: unrevised terrain (-1.3ft), no restart file.
- Mod terrain: revised terrain (0.67ft), no restart file. 0.67ft is the MHHW value at gage 08770475.

Table 12: Simulation Comparison

Items	Restart Plan	Original Plan	Modified Terrain
WSE(Max)	4.58	4.28	4.5
Depth(Max)	5.89	5.57	5.05
percent error	0.000171	0.000235	0.000236
Starting Volume	875,742	235,603	109,645

The comparison profile lines were pulled from the mid-point through the lake. Table 12 lists the comparisons between the three plans, and below are some findings:

- The flow/volume/WSEL/Depth comparisons look reasonable.
- Start volume for restart plan is higher because more volume had been added into the model before the real simulation and that plan yields to the lowest percent error among those three.
- The discharge from the modified terrain is significantly lower than the other two.

Due to the lack of a riverine gage, it could not be determined which flow is closest to reality. However, this area will be fully under coastal impact, so this is not a concern at the moment. In conclusion, the original terrain is used for the model without a restart file because there is not enough available data to support otherwise.

3.3 Recommendations

This study provides significant information useful for flood identification and communication among those affected. The study is highly scalable, and stakeholder input and further analysis would enhance the product and inform implementation of regulatory flood hazard areas. In addition, the validity of the 2D BLE results should be verified through community work map meetings before being applied as a regulatory product.

Due to the size of the HEC-RAS model, point source Atlas 14 rainfall data was used. For detailed modeling and further improvements smaller sized model is recommended which will have less rainfall

and curve number variability. The hydraulic model can further be improved by using a smaller cell size than 200 ft along with adding structural and survey data for each crossing.

4. Floodplain Mapping and Effective Zone A Validation

The following sections provide a synopsis of how raw modeled depths were translated into Special Flood Hazard Areas (SFHA). In addition to developing a new SFHA, the BLE model data was leveraged to validate the effective Zone A studies within the project footprint.

4.1 Special Flood Hazard Areas

4.1.1 Model Outputs

The HEC acknowledged that RAS Mapper may not render water surface elevation values and/or delineate inundation extent appropriately for direct use in FEMA regulatory mapping products. As a result, Compass created a workflow to export model water surface elevation values for each 2D mesh cell to develop regulatory-ready water surface elevation grids and subsequent flood hazard area mapping features.

4.1.2 Methodology

Maximum water surface elevation values were exported for each model's two-dimensional computational mesh cell centroid. Densified points along the floodplain fringe of the sloping raster extents and areas of zero slope (ponds) from the DEM were added to the cell centroid points to help meet FEMA regulatory mapping product requirements. A triangular irregular network (TIN) was created from the points, and water surface elevation and depth grids were created from the TIN to match the resolution of the input terrain DEM.

Discussion with Compass partners, FEMA Region 6, and the Texas Water Development Board determined that floodplain outputs in coastal areas should reduce the overall inundation using statistical analysis of flood hazard depths and areas. For the Sabine Lake watershed, the following parameters were applied to remove or reduce floodplain inundation:

- Removal of all depths below 1/3rd of a foot across the watershed
- Removal of all polygons smaller than 10,890 square feet, regardless of depth
- Removal of polygons between 10,890 and 21,780 square feet, with an average depth between 1/3rd and ½ foot.

The final polygons were smoothed and simplified in order to meet FEMA regulatory mapping specifications. Small islands less than 13,068 square feet in the polygons were filled in.

Minor adjustments were made to the floodplain boundaries along open water rivers, ponds and other waterways to ensure floodplain connectivity in situations that were removed based on the parameters mentioned above. Minor tributaries or roadside ditches that aren't fully inundated have not been adjusted. The watershed does contain open water detention ponds that are elevated compared to surrounding areas. These ponds have not been included in the floodplain boundaries in situations that the sloping model raster did not show inundation.

Mapping for the 0.2% annual chance was mapped in a similar manner as mentioned above in regard to removal of depths and areas. Due to methodologies and tolerances applied in the ArcGIS smoothing tool, minor differences between 1% and 0.2% boundaries where the extent of the 1% boundary would

exceed the 0.2% have been resolved by copying the 1% boundaries into the 0.2% boundaries and merging the boundaries together.

Mapping for the 10% annual chance was mapped as well in a similar manner in regard to removal of depths and areas. No adjustments were made beyond the removal of very minor differences that could result from the smoothing methodologies and tolerances as mentioned previously. In locations that the 10% boundary exceeded the 1% boundary, those areas have been removed.

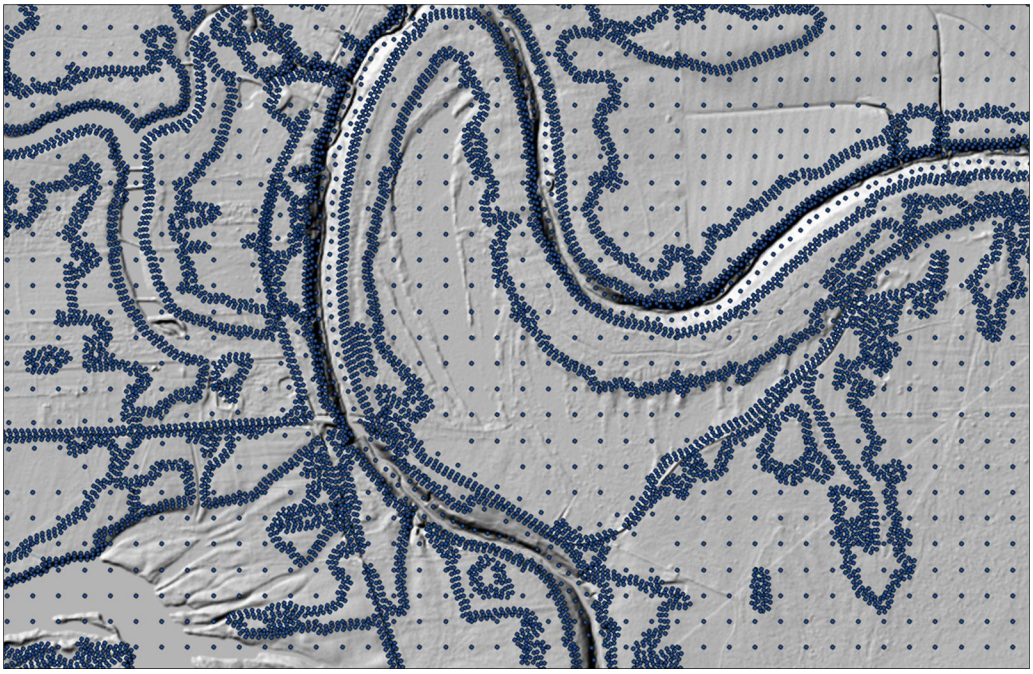


Figure 14: 2D BLE Model Points for Mapping Workflow

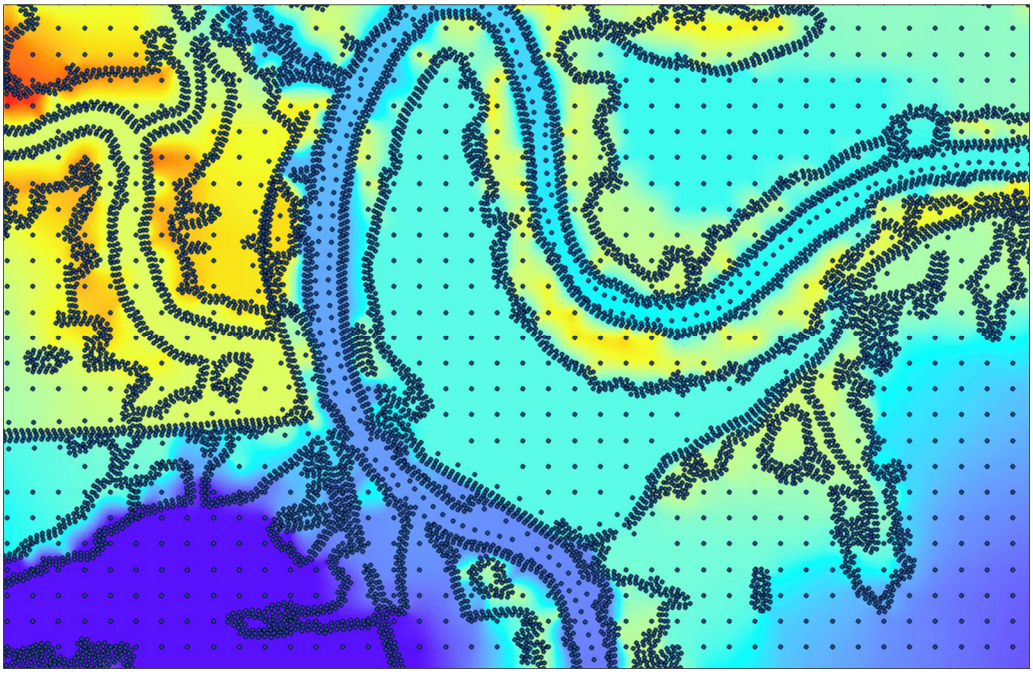


Figure 15: 2D BLE Model Points to Water Surface Elevation TIN

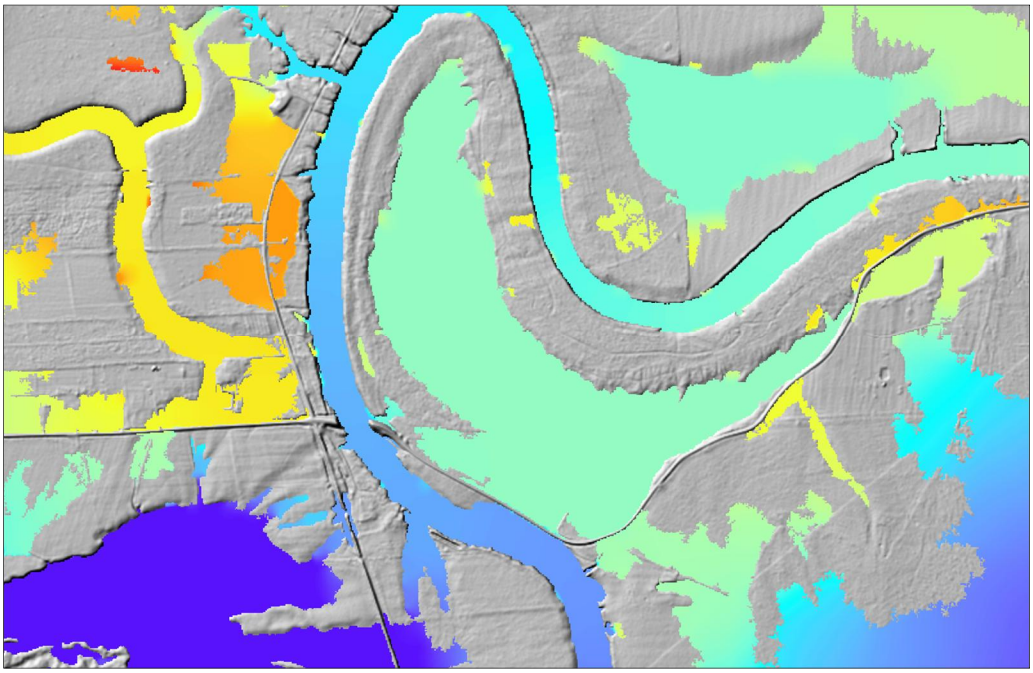


Figure 16: Water Surface Elevation TIN to Grid

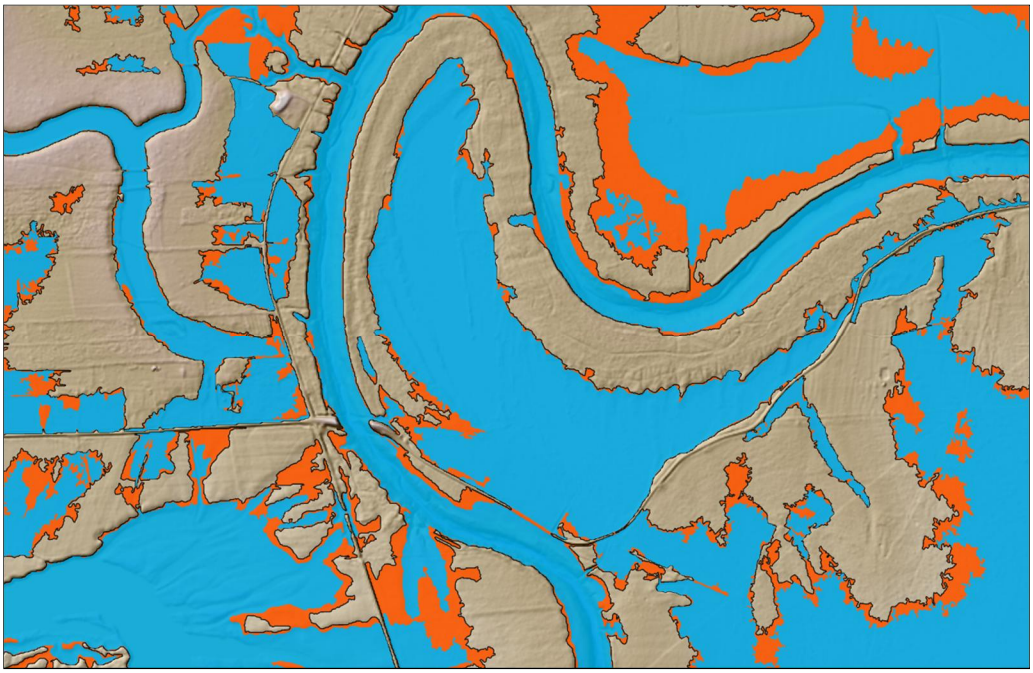


Figure 17: Water Surface Elevation Grid to Mapping Products

4.1.3 BLE Flood Hazard Layer

BLE database format FLD_HAZ_AR feature classes were developed and attributed with Zone A and Shaded Zone X features. The BLE FLD_HAZ_AR feature class was tested for topological errors described in the FIRM Database Technical Reference and all errors were fixed for data integrity and schema agreement. The 10% boundaries have been included in the BLE TENPCT_FP feature class.

4.1.4 Additional 1-Percent Features

The BLE results for this study produced a SFHA that compares favorably with the effective SFHA. These boundaries provide an estimated SFHA in areas that have not been previously studied and therefore do not currently have an SFHA mapped. These results provide context for flood risk communication as part of the Discovery process, and should be verified through community work map meetings before being applied to a regulatory product.

A map showing the BLE results is included as Appendix A .

4.2 Validation of Effective Zone A SFHA

The inventory of Zone A studies (102.7 miles) in the Sabine Lake Watershed were classified in CNMS with validation status of “UNVERIFIED” (97.8 miles) or “VALID” (4.9 miles), and with status type of “BEING STUDIED.” The following is a summary of the results of the CNMS validation assessment for the effective Zone A studies in the study area. Initial Assessment checks A1-A3 were evaluated for the CNMS inventory of Zone A studies. Note, there is no CNMS linework in the Louisiana portion of the Sabine Lake HUC watershed (or in the lower portion of Jefferson County, Texas as well) as those are coastally influenced areas that are Zone V, Zone AE, or Zone AE with static BFEs (coastal). Coastally influenced areas are not included or tracked in CNMS.

4.2.1 Initial Assessment A1 – Significant Topography Update Check

This check involves determining whether a topographic data source is available that is significantly better than what was used for the effective Zone A modeling and mapping. For the study area in the Sabine Lake Watershed, the effective Zone A topographic data consisted of USGS 7.5 Minute Series Topo Maps. The LiDAR sources used in this BLE study are considered significant improvements from the effective zone A topographic sources; therefore, all reaches FAIL this check.

4.2.2 Initial Assessment A2 – Check for Significant Hydrology Changes

The significant hydrology changes check determines whether new regression equations have become available from the USGS since the date of the effective Zone A study. If newer regression equations exist for the area of interest, then an engineer must determine whether these regression equations would significantly affect the 1% annual chance flow. New equations have not been issued since that time. For this reason, all reaches in the study area PASS this check.

4.2.3 Initial Assessment A3 – Check for Significant Development

The significant development check, using the National Urban Change Indicator (NUCI) dataset, assesses increased urbanization in the watershed. If the percentage of urban area within the HUC-12 watershed containing the effective Zone A study is 15 percent or more, and has increased by 50 percent or more since the effective analysis, the study would fail this check. The check for significant development in the Sabine Lake Watershed was completed by evaluating percentage of urban change at the HUC-12 level. None of the HUC-12 polygons within the study area met the threshold of 15% or more urban cover, therefore, all reaches were set to PASS this element.

Table 13 presents the summarized results of checks A1 through A3.

Table 13: Zone A Initial Assessment Results

Assessment Check	Pass / Fail	Notes
A1 – Topography	Fail	LiDAR sources available are considered significant improvements from the effective zone A topographic sources.
A2 – Hydrology	Pass	Regression equations are not known used in effective study
A3 – Development	Pass	Watershed does not meet urban threshold

4.2.4 Validation Check A4 – Check of Studies Backed by Technical Data

Zone A studies that pass all initial assessment checks described above may be categorized as “Valid” in the CNMS Inventory only if the effective Zone A study is supported by modeling or sound engineering judgment and all regulatory products are in agreement. If the effective Zone A study passes all initial assessment checks, but is not supported by modeling, or if the original engineering method used is unsupported or undocumented, a comparison of the BLE results and effective Zone A’s is performed.

All zone A streams within this watershed are not supported by technical data and fail this assessment check.

4.2.5 Validation Check A5 – Comparison of BLE and Effective Zone A

The BLE /effective Zone A comparison method leverages the existing Floodplain Boundary Standard (FBS) certification procedures described in FEMA SID 113, but with a slight modification. This modified FBS comparison approach uses the 1-percent plus and 1-percent minus flood profiles and horizontal and vertical tolerances described in FEMA's Automated Engineering guidance document dated May 2016. Within the Louisiana portion of the study area, there are no effective Zone A areas or CNMS lines, and therefore no A5 validation check. For the comparison of BLE and effective Zone A in the Texas portion of the study area, the following vertical and horizontal tolerances were used to conduct the modified FBS procedure. One point was placed every 200 feet along the floodplain boundaries for comparison.

- Vertical Tolerance: +/- 2.5 - 5 feet (one-half contour interval of effective topographic source).
- Horizontal Tolerance: +/- 75 feet (standard horizontal tolerance for BLE comparison testing).

Comparison results, in Texas, for these streams were grouped at the HUC-12 level and are summarized in Table 14 to better understand the general health of the HUC-12 watershed, but the validation check was performed at the stream level. Streams where the percentage of passing FBS sample points is greater than or equal to 85% are marked as "Pass", otherwise marked as "Fail".

Table 14: BLE Comparison Results

HUC-12 Watershed		Total FBS points	Fail	Pass	%Pass	BLE Comparison Pass? (>85%)	Priority Score
Watershed Name	Watershed Number						
Sabine Lake	All Streams	6182	3525	2657	43%	Fail	
Hillebrandt Bayou	120402010200	5232	3079	2153	41%	Fail	48.2
Lower Neches Valley Authority Canal-Taylor Bayou	120402010100	2944	1308	1636	55.6%	Fail	46.3
Salt Bayou	120402010300	78	5	73	94%	Pass	6.1

4.2.6 Validation Results

All 102.7 total miles of available CNMS features representing the effective Zone A studies were categorized as VALID – BEING STUDIED and UNVERIFIED – BEING STUDIED. Total miles in each of these categories are summarized in Table 15 and illustrated in Figure 18 below. Please note again, these do not include the coastally influenced areas in the Louisiana portion of the HUC-8 watershed since these are not tracked in CNMS.

Table 15: Zone A Validation Results

Validation Status	Status Type	Total Miles
VALID	BEING STUDIED	4.9
UNVERIFIED	BEING STUDIED	97.8

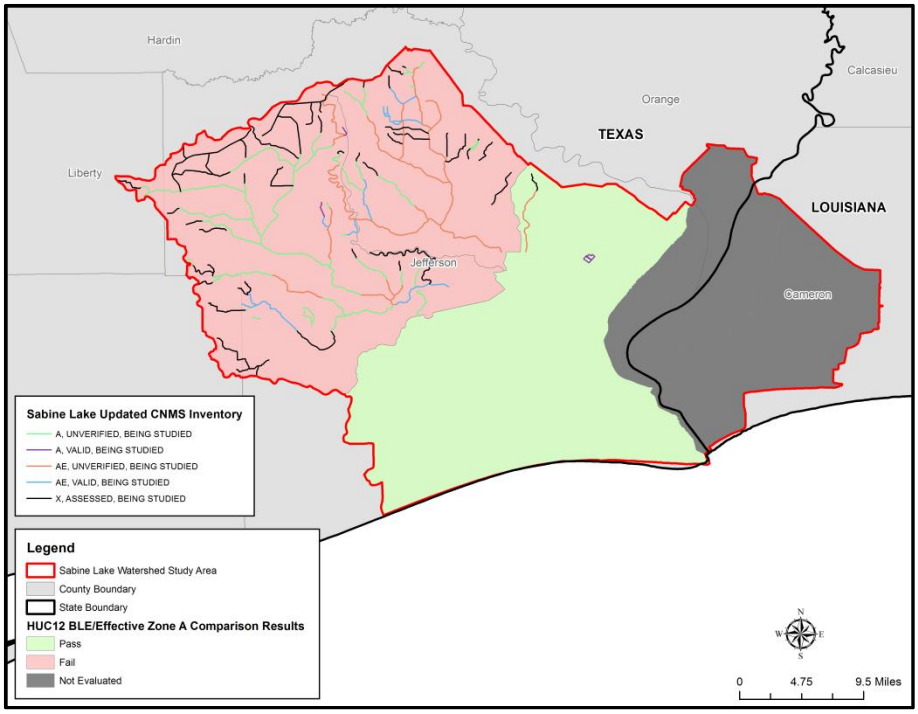


Figure 18: Sabine Lake Watershed CNMS Validation Results

An overall risk for each HUC-12 watershed was calculated using the National Flood Risk Percentages Dataset and its proportional area. The weighted risk was multiplied by the percentage of points in the watershed that failed the CNMS comparison to effective to determine the priority score. Figure 19 below shows the range of the HUC-12 priority scores which can be used to initiate discussions during the Discovery phase. Priority scores not determined for the coastally influenced areas in the Louisiana portion of the HUC-8 watershed since these areas not tracked in CNMS.

Hillebrandt Bayou HUC-12 was determined to have the highest priority score and the most need while Salt Bayou HUC-12 had the lowest scores.

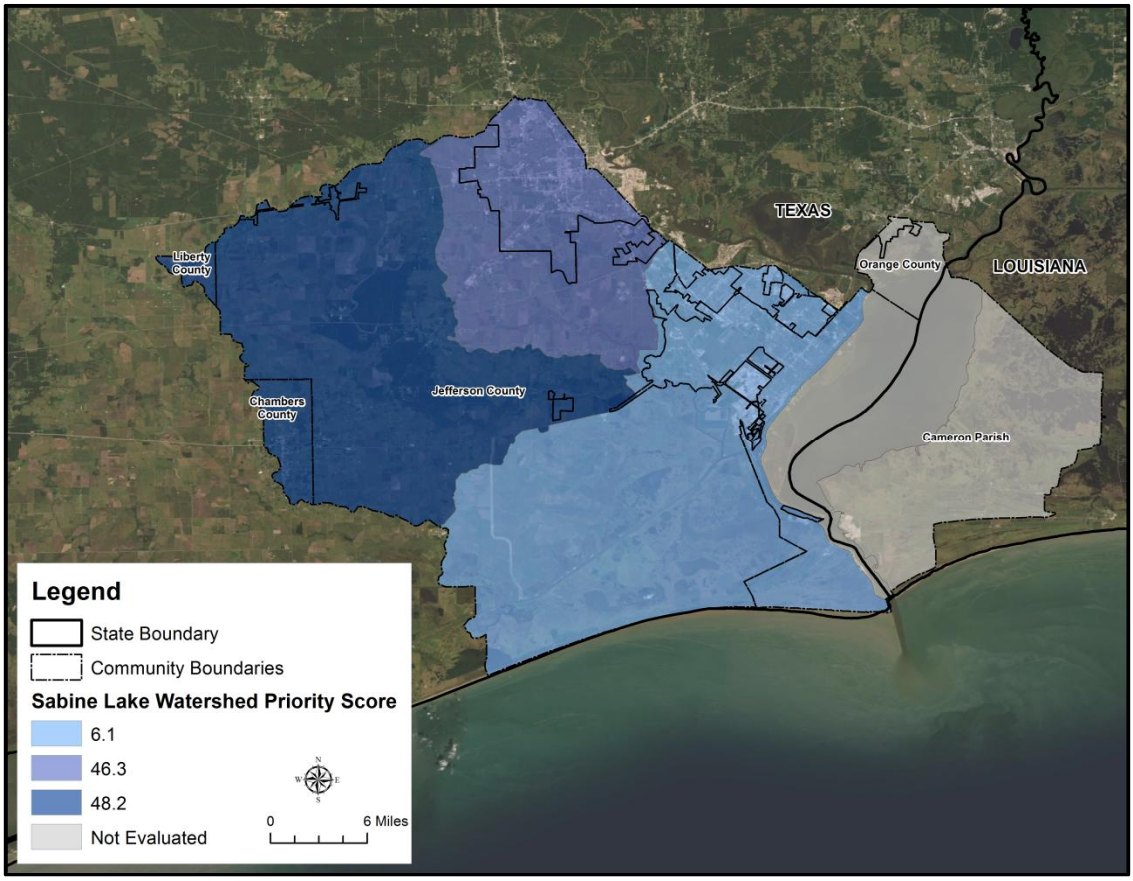


Figure 19: Ranking of Sabine Lake Watershed HUC-12s

4.3 Flood Risk Analysis

A flood risk analysis was performed for this project. The updated 1% annual chance and 0.2% annual chance depth grids were used to calculate the potential flood losses. The loss results are stored in the S_FRAC_AR spatial file within the FRD geodatabase. All results are reported in whole dollar values.

Hazus version 4.2 (SP03) was used for the basic and refined loss analysis.

The losses are reported via census blocks. It is important to note that Hazus version 4.2 (SP03) uses dasymetric census blocks. Dasymetric mapping removes undeveloped areas (such as areas covered by other bodies of water, wetlands, or forests) from the census blocks, changing their shape and reducing their size in these areas. For more information on dasymetric data visit FEMA's Media Library for the Hazus-MH Data Inventories: Dasymetric vs. Homogenous, or Hazus 3.0 Dasymetric Data Overview.

Hazus analysis was performed by county within the project watershed extents for each return period to ensure proper model processing. A summary of results for the 1-percent a.c.e. scenarios are shown in Table 16.

Table 16: Hazus 4.2 (SP03) Results for 1-percent-annual-chance (100 year) scenario for Sabine Lake Watershed, Texas and Louisiana

County/Parish	Full Replacement - Total Loss	Dollar Exposure (Replacement Value) - Buildings	Dollar Exposure (Replacement Value) - Contents
Cameron	50,413,000	5,128,000	5,082,000
Chambers	58,762,000	409,718,000	249,953,000
Jefferson	18,806,877,000	22,981,242,000	146,496,328,000
Liberty	81,000	1,314,000	658,000
Orange	42,293,000	375,515,000	221,607,000
Total	18,908,013,000	23,767,789,000	146,968,546,000

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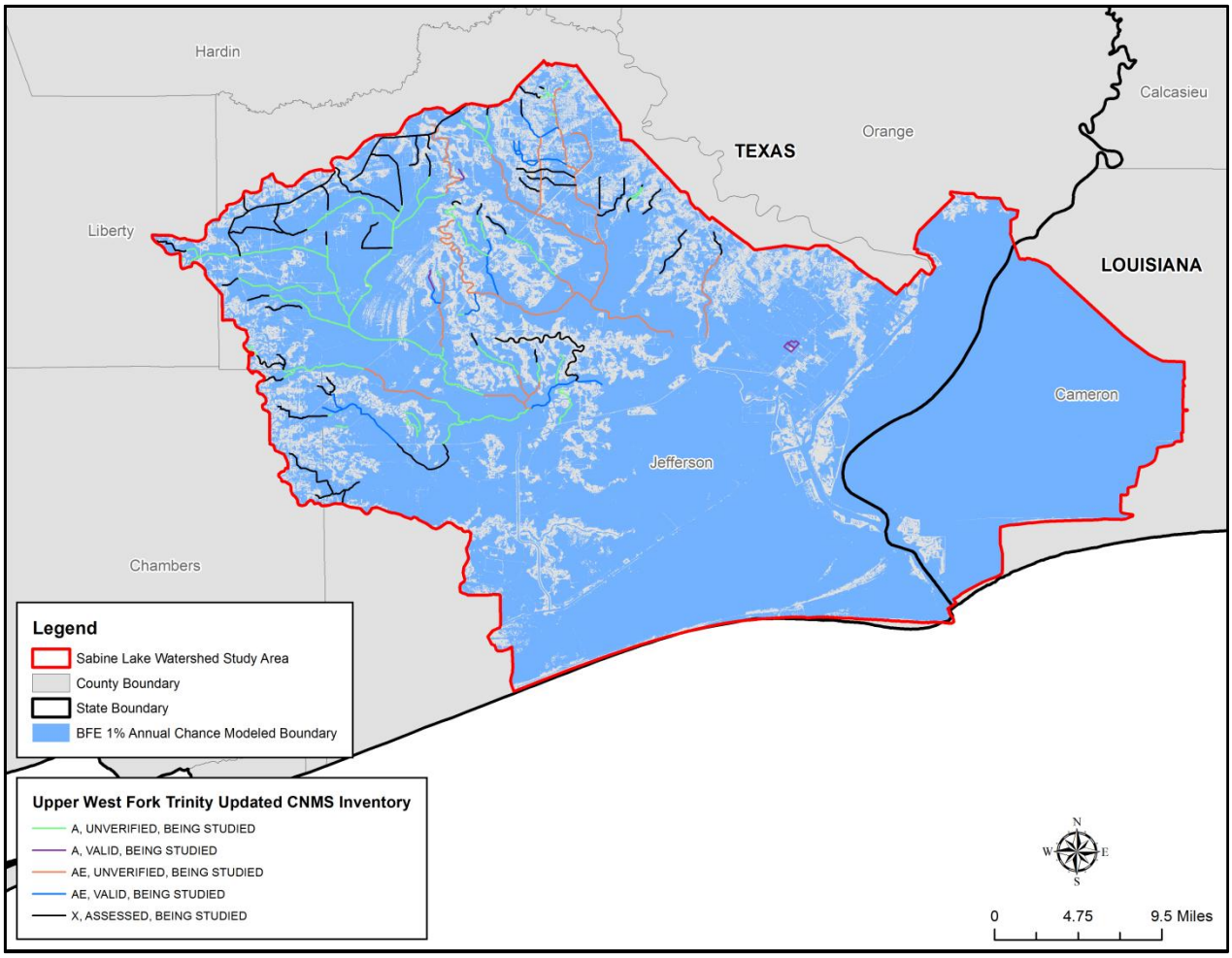
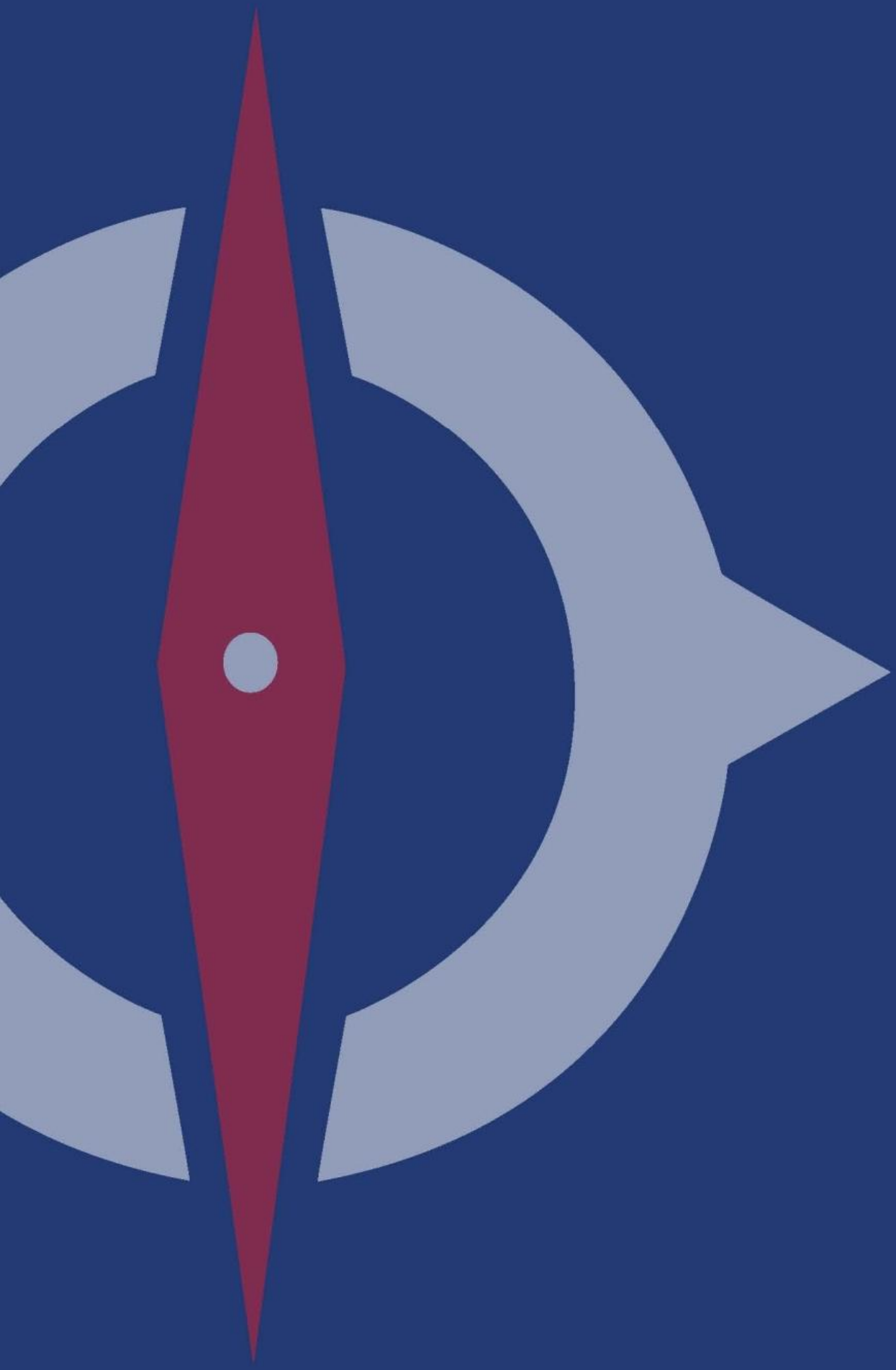
Appendix A BLE Map





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CODE OF FEDERAL REGULATIONS

Title 44

Emergency Management and Assistance

Revised as of October 1, 2024

Containing a codification of documents
of general applicability and future effect

As of October 1, 2024

Published by the Office of the Federal Register
National Archives and Records Administration
as a Special Edition of the Federal Register

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OLIVER A. POTTS,
Director,
Office of the Federal Register
October 1, 2024

THIS TITLE

Title 44—EMERGENCY MANAGEMENT AND ASSISTANCE is composed of one volume. The contents of this volume represent all current regulations codified under this title of the CFR as of October 1, 2024.

For this volume, Christine Colaninno was Chief Editor. The Code of Federal Regulations publication program is under the direction of John Hyrum Martinez, assisted by Stephen J. Frattini.

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Part

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CHAPTER IV—Department of Commerce and Department of Transportation 401

CHAPTER I—FEDERAL EMERGENCY MANAGEMENT AGENCY, DEPARTMENT OF HOMELAND SECURITY

EDITORIAL NOTE: Nomenclature changes to chapter I appear at 74 FR 15331, Apr. 3, 2009.

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SUBCHAPTER A—GENERAL

PART 0—GENERAL STATEMENTS OF POLICY [RESERVED]

PART 1—RULEMAKING, POLICY, AND PROCEDURES

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1.2 Definitions.
1.3 Regulatory policy.
1.4 Public rulemaking docket.
1.5 Public comments.
1.6 Ex parte communications.
1.7 Hearings.
1.8 Petitions for rulemaking.
1.9 Petitions for reconsideration.

AUTHORITY: 5 U.S.C. 551, 553; 6 U.S.C. 101 *et seq.*; Department of Homeland Security Delegation 9001.1.

SOURCE: 87 FR 11977, Mar. 3, 2022, unless otherwise noted.

§ 1.1 Purpose and scope.

(a) This part contains FEMA's procedures for informal rulemaking under the Administrative Procedure Act (5 U.S.C. 553) that affect the public.

(b) This part does not apply to rules issued in accordance with the formal rulemaking provisions of the Administrative Procedure Act (5 U.S.C. 556, 557).

§ 1.2 Definitions.

(a) *Rule* or *regulation* have the same meaning as those terms are defined in the Administrative Procedure Act (5 U.S.C. 551(4)).

(b) *Rulemaking* means the FEMA process for considering and formulating the issuance, amendment, or repeal of a rule.

(c) *Administrator* means the Administrator, FEMA, or an official to whom the Administrator has expressly delegated authority to issue rules.

(d) *FEMA* means Federal Emergency Management Agency.

§ 1.3 Regulatory policy.

(a) It is the general policy of FEMA to provide for public participation in rulemaking regarding its programs and functions, including matters that relate to public property, loans, grants, or benefits, or contracts, even though these matters are not subject to a requirement for notice and public comment rulemaking by law.

(b) It is the general policy of FEMA that its notices of proposed rulemaking are to afford the public at least 60 days for submission of comments unless the Administrator makes an exception and sets forth the reasons for the exception in the preamble to the notice of proposed rulemaking.

(c) The general policies contained in this section are not intended to and do not create a right or benefit, substantive or procedural, enforceable against the United States or its agencies or officers. FEMA may depart from such policies in its absolute discretion, including for its annual grant programs and in other cases as circumstances warrant.

§ 1.4 Public rulemaking docket.

(a) FEMA maintains a public docket for each rulemaking after it is published in the FEDERAL REGISTER and until the rulemaking is closed and archived at the National Archives and Records Administration. The public docket includes every document published in the FEDERAL REGISTER in conjunction with a rulemaking. It also includes regulatory assessments and analyses, written comments from the public addressed to the merits of a proposed rule, comments from the public received in response to notices, or to withdrawals or terminations of a proposed rulemaking, requests for a public meeting, requests for extension of time, petitions for rulemaking, grants or denials of petitions or requests, and transcripts or minutes of informal hearings. The public rulemaking docket is maintained by the Regulatory Affairs Division, Office of Chief Counsel.

(b) After FEMA establishes a public rulemaking docket, any person may examine docketed material during established business hours by prearrangement with the Regulatory Affairs Division, Office of Chief Counsel, FEMA, 500 C St. SW, Washington, DC 20472, and may obtain a copy of any docketed material (except for copyrighted material). FEMA also maintains a copy of

each public docket electronically, with the exception of copyrighted material, on *www.regulations.gov*. To access the docket on *www.regulations.gov*, search for the docket ID associated with the rulemaking.

(c) The docket for flood hazard elevation rules issued by the National Flood Insurance Program are partially maintained at the locality that is the subject of the rule. FEMA includes in the preamble of each flood hazard elevation rule the repository address for supporting material.

§ 1.5 Public comments.

A member of the public may submit comments via mail or courier to the Regulatory Affairs Division, Office of Chief Counsel, Federal Emergency Management Agency, 500 C St. SW, Washington, DC 20472, or may submit comments electronically to the rulemaking docket at *www.regulations.gov* under the applicable docket ID.

§ 1.6 Ex parte communications.

(a) All oral or written communications from outside the Federal Executive branch of significant information and argument respecting the merits of a rulemaking document, received after publication of a notice of proposed rulemaking, by FEMA or its offices and divisions or their personnel participating in the decision, must be summarized in writing and placed promptly in the public docket. This applies until the agency publishes a final regulatory action such as a withdrawal of the notice of proposed rulemaking or a final rule.

(b) FEMA may conclude that restrictions on ex parte communications are necessitated at other times by considerations of fairness or for other reasons.

(c) This section does not apply to Tribal consultations.

§ 1.7 Hearings.

(a) When FEMA affords an opportunity for oral presentation, the hearing is an informal, non-adversarial, fact-finding proceeding. Any rulemaking issued in a proceeding under this part in which a hearing is held need not be based exclusively on the record of such hearing.

(b) When such a hearing is provided, the Administrator will designate a representative to conduct the hearing.

(c) The transcript or minutes of the hearing will be kept and filed in the public rulemaking docket.

§ 1.8 Petitions for rulemaking.

(a) Any interested person may petition the Administrator for the issuance, amendment, or repeal of a rule. For purposes of this section, the term *person* includes any member of the public and any entity outside the Federal Executive branch of Government. Each petitioner must:

(1) Submit the petition to the Regulatory Affairs Division, Office of Chief Counsel, FEMA, 8NE, 500 C Street SW, Washington, DC 20472;

(2) Label the petition with the following: ''Petition for Rulemaking'' or ''Rulemaking Petition'';

(3) Set forth the substance of the rule or amendment proposed or specify the rule sought to be repealed or amended;

(4) Explain the interest of the petitioner in support of the action sought; and

(5) Set forth all data and arguments available to the petitioner in support of the action sought.

(b) FEMA will specify additional methods of submitting rulemaking petitions on its website at *www.fema.gov/about/offices/chief-counsel/rulemaking* and petitioners seeking to confirm whether FEMA has received or responded to a specific rulemaking petition may inquire at *fema-regulations@fema.dhs.gov*. The website may also contain other information about the petition for rulemaking process.

(c)(1) FEMA may solicit public comment on the petition in its discretion. If the Administrator finds that the petition contains adequate justification, a rulemaking proceeding will be initiated, or a final rule will be issued as appropriate. If the Administrator finds that the petition does not contain adequate justification, the petition will be denied by letter or other notice, with a brief statement of the ground for denial. The disposition will be posted on *www.regulations.gov* under docket ID FEMA–2022–0011.

(2) The Administrator may consider new evidence at any time; however, FEMA will not consider repetitious petitions for rulemaking.

§ 1.9 Petitions for reconsideration.

Petitions for reconsideration of a final rule will not be considered. Such petitions, if filed, will be treated as petitions for rulemaking in accordance with § 1.8.

PART 2—OMB CONTROL NUMBERS

Sec.
2.1 Purpose.
2.2 OMB control numbers assigned to information collections.

AUTHORITY: 5 U.S.C. 552; 42 U.S.C. 3507; Reorganization Plan No. 3 of 1978, 5 U.S.C. App. 1; E.O. 12127, 3 CFR, 1979 Comp., p. 376; E.O. 12148, as amended, 3 CFR, 1979 Comp., p. 412.

SOURCE: 74 FR 15332, Apr. 3, 2009, unless otherwise noted.

§ 2.1 Purpose.

This part collects and displays the control numbers assigned to information collection requirements of FEMA by the Office of Management and Budget (OMB) pursuant to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*). FEMA intends that this part comply with the requirements of section 3507(f) of the Paperwork Reduction Act, which requires that agencies display a current control number assigned by the Director of OMB for each agency information collection requirement.

§ 2.2 OMB control numbers assigned to information collections.

44 CFR part or section where identified or described	Current OMB Control No.
59	1660–0023
59.22	1660–0003, 1660–0004
59 subpart C	1660–0045
60.6, 60.3	1660–0033
61.13	1660–0006
62 subpart B	1660–0005,1660–0095
62.23(l)	1660–0086
62.24	1660–0020, 1660–0038
65, 70 generally	1660–0037
71.4	1660–0010
72	1660–0015, 1660–0016
75.11	1660–0013
78	1660–0062, 1660–0072,1660–0075
79.7(d)	1660–0104
80	1660–0103
151.11	1660–0014
152.4, 152.7	1660–0069
201	1660–0062, 1660–0072, 1660–0103
204	1660–0058
206 subpart B: 206.34, 206.35, 206.36, 206.46, 206.47	1660–0009
206 subpart D: 206.101(e), 202.110, 206.117, 206.119	1660–0002
206.112, 206.114, 206.115	1660–0061
206.171	1660–0085
206.202(f)(2), 206.203(c), 206.203(d)(i), 206.204(f)	1660–0017
206 subpart K	1660–0082, 1660–0083
206 subpart N	1660–0076
206.437	1660–0026
206.440	1660–0076
208	1660–0073
352	1660–0024

PART 3 [RESERVED]

PART 4—INTERGOVERNMENTAL REVIEW OF FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) PROGRAMS AND ACTIVITIES

Sec.
4.1 What is the purpose of these regulations?

4.2 What definitions apply to these regulations?
4.3 What programs and activities of FEMA are subject to these regulations?
4.4 [Reserved]
4.5 What is the Administrator's obligation with respect to Federal interagency coordination?
4.6 What procedures apply to the selection of programs and activities under these regulations?
4.7 How does the Administrator communicate with State and local officials concerning FEMA's programs and activities?
4.8 How does the Administrator provide an opportunity to comment on proposed Federal financial assistance and direct Federal development?
4.9 How does the Administrator receive and respond to comments?
4.10 How does the Administrator make efforts to accommodate intergovernmental concerns?
4.11 What are the Administrator's obligations in interstate situations?
4.12 How may a State simplify, consolidate, or substitute federally required State plans?
4.13 May the Administrator waive any provision of these regulations?

AUTHORITY: E.O. 12372, July 14, 1982 (47 FR 30959), as amended April 8, 1983 (48 FR 15887); sec. 401, Intergovernmental Cooperation Act of 1968, as amended (31 U.S.C. 6506); sec. 204, Demonstration Cities and Metropolitan Development Act of 1966, as amended (42 U.S.C. 3334).

SOURCE: 48 FR 29316, June 24, 1983, unless otherwise noted.

EDITORIAL NOTE: For additional information, see related documents published at 47 FR 57369, Dec. 23, 1982; 48 FR 17101, Apr. 21, 1983; and 48 FR 29096, June 24, 1983.

§ 4.1 What is the purpose of these regulations?

(a) The regulations in this part implement Executive Order 12372, ''Intergovernmental Review of Federal Programs,'' issued July 14, 1982 and amended on April 8, 1983. These regulations also implement applicable provisions of section 401 of the Intergovernmental Cooperation Act of 1968 and section 204 of the Demonstration Cities and Metropolitan Development Act of 1966.

(b) These regulations are intended to foster an intergovernmental partnership and a strengthened Federalism by relying on state processes and on State, areawide, regional and local coordination for review of proposed Federal financial assistance and direct Federal development.

(c) These regulations are intended to aid the internal management of FEMA, and are not intended to create any right or benefit enforceable at law by a party against FEMA or its officers.

§ 4.2 What definitions apply to these regulations?

Administrator means the Administrator of FEMA or an official or employee of FEMA acting for the Administrator of FEMA under a delegation of authority.

FEMA means the Federal Emergency Management Agency.

Order means Executive Order 12372, issued July 14, 1982, and amended April 8, 1983 and titled ''Intergovernmental Review of Federal Programs.''

State means any of the 50 states, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of Northern Mariana Islands, Guam, American Samoa, the U.S. Virgin Islands, or the Trust Territory of the Pacific Islands.

[48 FR 29316, June 24, 1983, as amended at 74 FR 15332, Apr. 3, 2009]

§ 4.3 What programs and activities of FEMA are subject to these regulations?

The Administrator publishes in the FEDERAL REGISTER a list of FEMA's programs and activities that are subject to these regulations and identifies which of these are subject to the requirements of section 204 of the Demonstration Cities and Metropolitan Development Act.

§ 4.4 [Reserved]

§ 4.5 What is the Administrator's obligation with respect to Federal interagency coordination?

The Administrator, to the extent practicable, consults with and seeks advice from all other substantially affected Federal departments and agencies in an effort to assure full coordination between such agencies and FEMA regarding programs and activities covered under these regulations.

§ 4.6 What procedures apply to the selection of programs and activities under these regulations?

(a) A State may select any program or activity published in the FEDERAL REGISTER in accordance with §4.3 of this part for intergovernmental review under these regulations. Each State, before selecting programs and activities, shall consult with local elected officials.

(b) Each State that adopts a process shall notify the Administrator of FEMA's programs and activities selected for that process.

(c) A State may notify the Administrator of changes in its selections at any time. For each change, the State shall submit to the Administrator an assurance that the State has consulted with local elected officials regarding the change. FEMA may establish deadlines by which States are required to inform the Administrator of changes in their program selections.

(d) The Administrator uses a State's process as soon as feasible, depending on individual programs and activities, after the Administrator is notified of its selections.

§ 4.7 How does the Administrator communicate with State and local officials concerning FEMA's programs and activities?

(a) For those programs and activities covered by a state process under §4.6, the Administrator, to the extent permitted by law:

(1) Uses the state process to determine views of State and local elected officials; and,

(2) Communicates with State and local elected officials, through the state process, as early in a program planning cycle as is reasonably feasible to explain specific plans and actions.

(b) The Administrator provides notice to directly affected State, areawide, regional, and local entities in a State of proposed Federal financial assistance or direct Federal development if:

(1) The State has not adopted a process under the Order; or

(2) The assistance or development involves a program or activity not selected for the State process.

This notice may be made by publication in the FEDERAL REGISTER or other appropriate means, which FEMA in its discretion deems appropriate.

§ 4.8 How does the Administrator provide an opportunity to comment on proposed Federal financial assistance and direct Federal development?

(a) Except in unusual circumstances, the Administrator gives state processes or directly affected State, areawide, regional and local officials and entities at least 60 days from the date established by the Administrator to comment on proposed direct Federal development or Federal financial assistance.

(b) This section also applies to comments in cases in which the review, coordination, and communication with FEMA have been delegated.

(c) Applicants for programs and activities subject to section 204 of the Demonstration Cities and Metropolitan Act shall allow areawide agencies a 60-day opportunity for review and comment.

§ 4.9 How does the Administrator receive and respond to comments?

(a) The Administrator follows the procedures in §4.10 if:

(1) A State office or official is designated to act as a single point of contact between a state process and all Federal agencies, and

(2) That office or official transmits a state process recommendation for a program selected under §4.6.

(b)(1) The single point of contact is not obligated to transmit comments from State, areawide, regional or local officials and entities where there is no state process recommendation.

(2) If a state process recommendation is transmitted by a single point of contact, all comments from state, areawide, regional, and local officials and entities that differ from it must also be transmitted.

(c) If a State has not established a process, or is unable to submit a state process recommendation, State, areawide, regional and local officials and entities may submit comments to FEMA.

(d) If a program or activity is not selected for a state process, State, areawide, regional and local officials

and entities may submit comments to FEMA. In addition, if a state process recommendation for a nonselected program or activity is transmitted to FEMA by the single point of contact, the Administrator follows the procedures of § 4.10 of this part.

(e) The Administrator considers comments which do not constitute a state process recommendation submitted under these regulations and for which the Administrator is not required to apply the procedures of § 4.10 of this part, when such comments are provided by a single point of contact, by the applicant or directly to FEMA by a commenting party.

§ 4.10 How does the Administrator make efforts to accommodate intergovernmental concerns?

(a) If a state process provides a state process recommendation to FEMA through its single point of contact, the Administrator either:

(1) Accepts the recommendation;

(2) Reaches a mutually agreeable solution with the state process; or

(3) Provides the single point of contact with such written explanation of the decision, as the Administrator in his or her discretion deems appropriate. The Administrator may also supplement the written explanation by providing the explanation to the single point of contact by telephone, other telecommunication, or other means.

(b) In any explanation under paragraph (a)(3) of this section, the Administrator informs the single point of contact that:

(1) FEMA will not implement its decision for at least ten days after the single point of contact receives the explanation; or

(2) The Administrator has reviewed the decision and determined that, because of unusual circumstances, the waiting period of at least ten days is not feasible.

(c) For purposes of computing the waiting period under paragraph (b)(1) of this section, a single point of contact is presumed to have received written notification 5 days after the date of mailing of such notification.

§ 4.11 What are the Administrator's obligations in interstate situations?

(a) The Administrator is responsible for:

(1) Identifying proposed Federal financial assistance and direct Federal development that have an impact on interstate areas;

(2) Notifying appropriate officials and entities in states which have adopted a process and which select FEMA's program or activity;

(3) Making efforts to identify and notify the affected State, areawide, regional, and local officials and entities in those States that have not adopted a process under the Order or do not select FEMA's program or activity;

(4) Responding pursuant to § 4.10 of this part if the Administrator receives a recommendation from a designated areawide agency transmitted by a single point of contact, in cases in which the review, coordination, and communication with FEMA have been delegated.

(b) The Administrator uses the procedures in § 4.10 if a state process provides a state process recommendation to FEMA through a single point of contact.

§ 4.12 How may a State simplify, consolidate, or substitute federally required State plans?

(a) As used in this section:

(1) *Simplify* means that a State may develop its own format, choose its own submission date, and select the planning period for a State plan.

(2) *Consolidate* means that a State may meet statutory and regulatory requirements by combining two or more plans into one document and that the State can select the format, submission date, and planning period for the consolidated plan.

(3) *Substitute* means that a State may use a plan or other document that it has developed for its own purposes to meet Federal requirements.

(b) If not inconsistent with law, a State may decide to try to simplify, consolidate, or substitute federally required state plans without prior approval by the Administrator.

(c) The Administrator reviews each state plan that a State has simplified,

consolidated, or substituted and accepts the plan only if its contents meet Federal requirements.

§ 4.13 May the Administrator waive any provision of these regulations?

In an emergency, the Administrator may waive any provision of these regulations.

PART 5—PRODUCTION OR DISCLOSURE OF INFORMATION

Subparts A–E [Reserved]

Subpart F—Subpoenas or Other Legal Demands for Testimony or the Production or Disclosure of Records or Other Information

Sec.
5.80 Scope and applicability.
5.81 Statement of policy.
5.82 Definitions.
5.83 Authority to accept service of subpoenas.
5.84 Production of documents in private litigation.
5.85 Authentication and attestation of copies.
5.86 Records involved in litigation or other judicial process.
5.87 Testimony of FEMA employees in private litigation.
5.88 Testimony in litigation in which the United States is a party.
5.89 Waiver.

AUTHORITY: Pub. L. 107–296, 116 Stat. 2135; 5 U.S.C. 301.

SOURCE: 44 FR 50287, Aug. 27, 1979, unless otherwise noted.

Subparts A–E [Reserved]

Subpart F—Subpoenas or Other Legal Demands for Testimony or the Production or Disclosure of Records or Other Information

SOURCE: 54 FR 11715, Mar. 22, 1989, unless otherwise noted.

§ 5.80 Scope and applicability.

(a) This subpart sets forth policies and procedures with respect to the disclosure or production by FEMA employees, in response to a subpoena, order or other demand of a court or other authority, of any material contained in the files of the Agency or any information relating to material contained in the files of the Agency or any information acquired by an employee as part of the performance of that person's official duties or because of that person's official status.

(b) This subpart applies to State and local judicial, administrative and legislative proceedings, and Federal judicial and administrative proceedings.

(c) This subpart does not apply to Congressional requests or subpoenas for testimony or documents, or to an employee making an appearance solely in his or her private capacity in judicial or administrative proceedings that do not relate to the Agency (such as cases arising out of traffic accidents, domestic relations, etc.).

(d) The Department of Homeland Security's regulations, 6 CFR 5.41 through 5.49, apply to any subject matter not already covered by this subpart, including but not limited to demands or requests directed to current or former FEMA contractors.

[54 FR 11715, Mar. 22, 1989, as amended at 72 FR 43546, Aug. 6, 2007]

§ 5.81 Statement of policy.

(a) It is the policy of FEMA to make its records available to private litigants to the same extent and in the same manner as such records are made available to members of the general public, except where protected from disclosure by litigation procedural authority (e.g., Federal Rules of Civil Procedure) or other applicable law.

(b) It is FEMA's policy and responsibility to preserve its human resources for performance of the official functions of the Agency and to maintain strict impartiality with respect to private litigants. Participation by FEMA employees in private litigation in their official capacities is generally contrary to this policy.

§ 5.82 Definitions.

For purposes of this subpart, the following terms have the meanings ascribed to them in this section:

(a) *Demand* refers to a subpoena, order, or other demand of a court of competent jurisdiction, or other specific authority (e.g., an administrative or State legislative body), signed by

the presiding officer, for the production, disclosure, or release of FEMA records or information or for the appearance and testimony of FEMA personnel as witnesses in their official capacities.

(b) *Employee of the Agency* includes all officers and employees of the United States appointed by or subject to the supervision, jurisdiction or control of the Administrator of FEMA.

(c) *Private litigation* refers to any legal proceeding which does not involve as a named party the United States Government, or the Federal Emergency Management Agency, or any official thereof in his or her official capacity.

§ 5.83 Authority to accept service of subpoenas.

In all legal proceedings between private litigants, a subpoena duces tecum or subpoena ad testificandum or other demand by a court or other authority for the production of records held by FEMA Regional offices or for the oral or written testimony of FEMA Regional employees should be addressed to the appropriate Regional Administrator listed in § 5.26. For all other records or testimony, the subpoena should be addressed to the Chief Counsel, FEMA, 500 C Street SW., Washington, DC 20472 Washington, DC 20472. No other official or employee of FEMA is authorized to accept service of subpoenas on behalf of the Agency.

§ 5.84 Production of documents in private litigation.

(a) The production of records held by FEMA in response to a subpoena duces tecum or other demand issued pursuant to private litigation, whether or not served in accordance with the provisions of § 5.83 of this subpart, is prohibited absent authorization by the Chief Counsel.

(b) Whenever an official or employee of FEMA, including any Regional Administrator, receives a subpoena or other demand for the production of Agency documents or material, he or she shall immediately notify and provide a copy of the demand to the Chief Counsel.

(c) The Chief Counsel, after consultation with other appropriate officials as deemed necessary, shall promptly determine whether to disclose the material or documents identified in the subpoena or other demand. Generally, authorization to furnish the requested material or documents shall not be withheld unless their disclosure is prohibited by relevant law or for other compelling reasons.

(d) Whenever a subpoena or demand commanding the production of any record is served upon any Agency employee other than as provided in § 5.83 of this subpart, or the response to a demand is required before the receipt of instructions from the Chief Counsel, such employee shall appear in response thereto, respectfully decline to produce the record(s) on the ground that it is prohibited by this section and state that the demand has been referred for the prompt consideration of the Chief Counsel.

(e) Where the release of documents in response to a subpoena duces tecum is authorized by the Chief Counsel, the official having custody of the requested records will furnish, upon the request of the party seeking disclosure, authenticated copies of the documents. No official or employee of FEMA shall respond in strict compliance with the terms of a subpoena duces tecum unless specifically authorized by the Chief Counsel.

§ 5.85 Authentication and attestation of copies.

The Administrator, Deputy Administrators, Regional Administrators, Assistant Administrators, United States Fire Administrator, Federal Insurance Administrator, Chief Counsel, and their designees, and other heads of offices having possession of records are authorized in the name of the Administrator to authenticate and attest for copies or reproductions of records. Appropriate fees will be charged for such copies or reproductions based on the fee schedule set forth in section 5.46 of this part.

[74 FR 15334, Apr. 3, 2009]

§ 5.86 Records involved in litigation or other judicial process.

Subpoenas duces tecum issued pursuant to litigation or any other adjudicatory proceeding in which the United

States is a party shall be referred to the Chief Counsel.

[81 FR 83643, Nov. 22, 2016]

§ 5.87 Testimony of FEMA employees in private litigation.

(a) No FEMA employee shall testify in response to a subpoena or other demand in private litigation as to any information relating to material contained in the files of the Agency, or any information acquired as part of the performance of that person's official duties or because of that person's official status, including the meaning of Agency documents.

(b) Whenever a demand is made upon a FEMA employee, for the disclosure of information described in paragraph (a) of this section, that employee shall immediately notify the Office of Chief Counsel. The Chief Counsel, upon receipt of such notice and absent waiver of the general prohibition against employee testimony at his or her discretion, shall arrange with the appropriate United States Attorney the taking of such steps as are necessary to quash the subpoena or seek a protective order.

(c) In the event that an immediate demand for testimony or disclosure is made in circumstances which would preclude prior notice to and consultation with the Chief Counsel, the employee shall respectfully request from the demanding authority a stay in the proceedings to allow sufficient time to obtain advice of counsel.

(d) If the court or other authority declines to stay the effect of the demand in response to a request made in accordance with paragraph (c) of this section pending consultation with counsel, or if the court or other authority rules that the demand must be complied with irrespective of instructions not to testify or disclose the information sought, the employee upon whom the demand has been made shall respectfully decline to comply with the demand, citing these regulations and *United States ex rel. Touhy* v. *Ragen*, 340 U.S. 462 (1951).

§ 5.88 Testimony in litigation in which the United States is a party.

(a) Whenever, in any legal proceeding in which the United States is a party, the attorney in charge of presenting the case for the United States requests it, the Chief Counsel shall arrange for an employee of the Agency to testify as a witness for the United States.

(b) The attendance and testimony of named employees of the Agency may not be required in any legal proceeding by the judge or other presiding officer, by subpoena or otherwise. However, the judge or other presiding officer may, upon a showing of exceptional circumstances (such as a case in which a particular named FEMA employee has direct personal knowledge of a material fact not known to the witness made available by the Agency) require the attendance and testimony of named FEMA personnel.

§ 5.89 Waiver.

The Chief Counsel may grant, in writing, a waiver of any policy or procedure prescribed by this subpart, where waiver is considered necessary to promote a significant interest of the Agency or for other good cause. In granting such waiver, the Chief Counsel shall attach to the waiver such reasonable conditions and limitations as are deemed appropriate in order that a response in strict compliance with the terms of a subpoena duces tecum or the providing of testimony will not interfere with the duties of the employee and will otherwise conform to the policies of this part. The Administrator may, in his or her discretion, review any decision to authorize a waiver of any policy or procedure prescribed by this subpart.

PART 6—IMPLEMENTATION OF THE PRIVACY ACT OF 1974

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AUTHORITY: 5 U.S.C. 552a; Reorganization Plan No. 3 of 1978; and E.O. 12127.

SOURCE: 44 FR 50293, Aug. 27, 1979, unless otherwise noted.

Subpart A—General

§ 6.1 Purpose and scope of part.

This part sets forth policies and procedures concerning the collection, use and dissemination of records maintained by the Federal Emergency Management Agency (FEMA) which are subject to the provision of 5 U.S.C. 552a, popularly known as the ''Privacy Act of 1974'' (hereinafter referred to as the Act). These policies and procedures govern only those records as defined in § 6.2. Policies and procedures governing the disclosure and availability of records in general are in part 5 of this chapter. This part also covers: (a) Procedures for notification to individuals of a FEMA system of records pertaining to them; (b) guidance to individuals in obtaining information, including inspections of, and disagreement with, the content of records; (c) accounting of disclosure; (d) special requirements for medical records; and (e) fees.

§ 6.2 Definitions.

For the purpose of this part:

(a) *Agency* includes any executive department, military department, Government corporation, Government controlled corporation, or other establishment in the executive branch of the Government (including the Executive Office of the President), or any independent regulatory agency (see 5 U.S.C. 552(e)).

(b) *Individual* means a citizen of the United States or an alien lawfully admitted for permanent residence.

(c) *Maintain* includes maintain, collect, use, and disseminate.

(d) *Record* means any item, collection, or grouping of information about an individual that is maintained by an agency, including, but not limited to those concerning education, financial transactions, medical history, and criminal or employment history, and that contains the name or other identifying particular assigned to the individual, such as a fingerprint, voiceprint, or photograph.

(e) *System of records* means a group of any records under the control of an agency from which information is retrieved by the name of the individual or by some identifying number, symbol, or other identification assigned to that individual.

(f) *Statistical record* means a record in a system of records maintained for statistical research or reporting purposes only and not used in whole or in part in making any determination about an

identifiable individual, except as provided by 13 U.S.C. 8.

(g) *Routine use* means, with respect to the disclosure of a record, the use of that record for a purpose which is compatible with the purpose for which it was collected.

(h) *System manager* means the employee of FEMA who is responsible for the maintenance of a system of records and for the collection, use, and dissemination of information therein.

(i) *Subject individual* means the individual named or discussed in a record of the individual to whom a record otherwise pertains.

(j) *Disclosure* means a transfer of a record, a copy of a record, or any or all of the information contained in a record to a recipient other than the subject individual, or the review of a record by someone other than the subject individual.

(k) *Access* means a transfer of a record, a copy of a record, or the information in a record to the subject individual, or the review of a record by the subject individual.

(l) *Solicitation* means a request by an officer or employee of FEMA that an individual provide information about himself or herself.

(m) *Administrator* means the Administrator, FEMA.

(n) *Deputy Administrator* means the Deputy Administrator, FEMA, or, in the case of the absence of the Deputy Administrator, or a vacancy in that office, a person designated by the Administrator to perform the functions under this regulation of the Deputy Administrator.

(o) *Privacy Appeals Officer* means the FOIA/Privacy Act Specialist or his/her designee.

[44 FR 50293, Aug. 27, 1979, as amended at 45 FR 17152, Mar. 18, 1980; 51 FR 34604, Sept. 30, 1986]

§ 6.3 Collection and use of information (Privacy Act statements).

(a) *General.* Any information used in whole or in part in making a determination about an individual's rights, benefits, or privileges under FEMA programs will be collected directly from the subject individual to the extent practicable. The system manager also shall ensure that information collected is used only in conformance with the provisions of the Act and these regulations.

(b) *Solicitation of information.* System managers shall ensure that at the time information is solicited the solicited individual is informed of the authority for collecting that information, whether providing the information is mandatory or voluntary, the purpose for which the information will be used, the routine uses to be made of the information, and the effects on the individual, if any, of not providing the information. The Director, Records Management Division, Office of Management and Regional Administrators shall ensure that forms used to solicit information are in compliance with the Act and these regulations.

(c) *Solicitation of Social Security numbers.* Before an employee of FEMA can deny to any individual a right, benefit, or privilege provided by law because such individual refuses to disclose his/her social security account number, the employee of FEMA shall ensure that either:

(1) The disclosure is required by Federal statute; or

(2) The disclosure of a social security number was required under a statute or regulation adopted before January 1, 1975, to verify the identity of an individual, and the social security number will become a part of a system of records in existence and operating before January 1, 1975.

If solicitation of the social security number is authorized under paragraph (c) (1) or (2) of this section, the FEMA employee who requests an individual to disclose the social security account number shall first inform that individual whether that disclosure is mandatory or voluntary, by what statutory or other authority the number is solicited, and the use that will be made of it.

(d) *Soliciting information from third parties.* An employee of FEMA shall inform third parties who are requested to provide information about another individual of the purposes for which the information will be used.

[44 FR 50293, Aug. 27, 1979, as amended at 47 FR 13149, Mar. 29, 1982; 48 FR 12091, Mar. 23, 1983; 50 FR 40006, Oct. 1, 1985]

§ 6.4 Standards of accuracy.

The system manager shall ensure that all records which are used by FEMA to make determinations about any individual are maintained with such accuracy, relevance, timeliness, and completeness as is reasonably necessary to ensure fairness to the individual.

§ 6.5 Rules of conduct.

Employees of FEMA involved in the design, development, operation, or maintenance of any system of records or in maintaining any record, shall conduct themselves in accordance with the rules of conduct concerning the protection of personal information in § 3.25 of this chapter.

§ 6.6 Safeguarding systems of records.

(a) Systems managers shall ensure that appropriate administrative, technical, and physical safeguards are established to ensure the security and confidentiality of records and to protect against any anticipated threats or hazards to their security or integrity which could result in substantial harm, embarrassment, inconvenience, or unfairness to any individual on whom information is maintained.

(b) Personnel information contained in both manual and automated systems of records shall be protected by implementing the following safeguards:

(1) Official personnel folders, authorized personnel operating or work folders and other records of personnel actions effected during an employee's Federal service or affecting the employee's status and service, including information on experience, education, training, special qualification, and skills, performance appraisals, and conduct, shall be stored in a lockable metal filing cabinet when not in use by an authorized person. A system manager may employ an alternative storage system providing that it furnished an equivalent degree of physical security as storage in a lockable metal filing cabinet.

(2) System managers, at their discretion, may designate additional records of unusual sensitivity which require safeguards similar to those described in paragraph (a) of this section.

(3) A system manager shall permit access to and use of automated or manual personnel records only to persons whose official duties require such access, or to a subject individual or his or her representative as provided by this part.

§ 6.7 Records of other agencies.

If FEMA receives a request for access to records which are the primary responsibility of another agency, but which are maintained by or in the temporary possession of FEMA on behalf of that agency, FEMA will advise the requestor that the request has been forwarded to the responsible agency. Records in the custody of FEMA which are the primary responsibility of the Office of Personnel Management are governed by the rules promulgated by it pursuant to the Privacy Act.

§ 6.8 Subpoena and other legal demands.

Access to records in systems of records by subpoena or other legal process shall be in accordance with the provisions of part 5 of this chapter.

§ 6.9 Inconsistent issuances of FEMA and/or its predecessor agencies superseded.

Any policies and procedures in any issuances of FEMA or any of its predecessor agencies which are inconsistent with the policies and procedures in this part are superseded to the extent of that inconsistency.

§ 6.10 Assistance and referrals.

Requests for assistance and referral to the responsible system manager or other FEMA employee charged with implementing these regulations should be made to the Privacy Appeals Officer, Federal Emergency Management Agency, Washington, DC 20472.

[45 FR 17152, Mar. 18, 1980]

Subpart B—Disclosure of Records

§ 6.20 Conditions of disclosure.

No employee of FEMA shall disclose any record to any person or to another agency without the express written consent of the subject individual unless the disclosure is:

(a) To officers or employees of FEMA who have a need for the information in the official performance of their duties;

(b) Required by the provisions of the Freedom of Information Act, 5 U.S.C. 552.

(c) For a routine use as published in the notices in the FEDERAL REGISTER;

(d) To the Bureau of the Census for use pursuant to title 13, United States Code;

(e) To a recipient who has provided FEMA with advance adequate written assurance that the record will be used solely as a statistical research or reporting record subject to the following: The record shall be transferred in a form that is not individually identifiable. The written statement should include as a minimum (1) a statement of the purpose for requesting the records; and (2) certification that the records will be used only for statistical purposes. These written statements should be maintained as accounting records. In addition to deleting personal identifying information from records released for statistical purposes, the system manager shall ensure that the identity of the individual cannot reasonably be deduced by combining various statistical records;

(f) To the National Archives of the United States as a record which has sufficient historical or other value to warrant its continued preservation by the United States Government, or for evaluation by the Administrator of The National Archives and Records Administration or his designee to determine whether the record has such value;

(g) To another agency or instrumentality of any governmental jurisdiction within or under the control of the United States for civil or criminal law enforcement activity, if the activity is authorized by law, and if the head of the agency or instrumentality or his designated representative has made a written request to the Administrator specifying the particular portion desired and the law enforcement activity for which the record is sought;

(h) To a person showing compelling circumstances affecting the health and safety of an individual to whom the record pertains. (Upon such disclosure, a notification must be sent to the last known address of the subject individual.)

(i) To either House of Congress or to a subcommittee or committee (joint or of either House, to the extent that the subject matter falls within their jurisdiction;

(j) To the Comptroller General or any duly authorized representatives of the Comptroller General in the course of the performance of the duties of the Government Accountability Office; or

(k) Pursuant to the order of a court of competent jurisdiction.

(l) To consumer reporting agencies as defined in the Fair Credit Reporting Act (35 U.S.C. 1681a(f) or the Debt Collection Act of 1982 (31 U.S.C. 3711(d)(4)).

[44 FR 50293, Aug. 27, 1979, as amended at 48 FR 44543, Sept. 29, 1983; 50 FR 40006, Oct. 1, 1985]

§ 6.21 Procedures for disclosure.

(a) Upon receipt of a request for disclosure, the system manager shall verify the right of the requestor to obtain disclosure pursuant to § 6.20. Upon that verification and subject to other requirements of this part, the system manager shall make the requested records available.

(b) If the system manager determines that the disclosure is not permitted under the provisions of § 6.20 or other provisions of this part, the system manager shall deny the request in writing and shall inform the requestor of the right to submit a request for review and final determination to the Administrator or designee.

§ 6.22 Accounting of disclosures.

(a) Except for disclosures made pursuant to § 6.20 (a) and (b), an accurate accounting of each disclosure shall be made and retained for 5 years after the disclosure or for the life of the record, whichever is longer. The accounting shall include the date, nature, and purpose of each disclosure, and the name and address of the person or agency to whom the disclosure is made;

(b) The system manager also shall maintain in conjunction with the accounting of disclosures;

(1) A full statement of the justification for the disclosure.

(2) All documentation surrounding disclosure of a record for statistical or law enforcement purposes; and

(3) Evidence of written consent to a disclosure given by the subject individual.

(c) Except for the accounting of disclosures made to agencies or instrumentalities in law enforcement activities in accordance with §6.20 (g) or of disclosures made from exempt systems the accounting of disclosures shall be made available to the individual upon request. Procedures for requesting access to the accounting are in subpart C of this part.

Subpart C—Individual Access to Records

§ 6.30 Form of requests.

(a) An individual who seeks access to his or her record or to any information pertaining to the individual which is contained in a system of records should notify the system manager at the address indicated in the FEDERAL REGISTER notice describing the pertinent system. The notice should bear the legend ''Privacy Act Request'' both on the request letter and on the envelope. It will help in the processing of a request if the request letter contains the complete name and identifying number of the system as published in the FEDERAL REGISTER; the full name and address of the subject individual; a brief description of the nature, time, place, and circumstances of the individual's association with FEMA; and any other information which the individual believes would help the system manager to determine whether the information about the individual is included in the system of records. The system manager shall answer or acknowledge the request within 10 workdays of its receipt by FEMA.

(b) The system manager, at his discretion, may accept oral requests for access subject to verification of identity.

§ 6.31 Special requirements for medical records.

(a) A system manager who receives a request from an individual for access to those official medical records which belong to the U.S. Office of Personnel Management and are described in Chapter 339, Federal Personnel Manual (medical records about entrance qualifications or fitness for duty, or medical records which are otherwise filed in the Official Personnel Folder), shall refer the pertinent system of records to a Federal Medical Officer for review and determination in accordance with this section. If no Federal Medical Officer is available to make the determination required by this section, the system manager shall refer the request and the medical reports concerned to the Office of Personnel Management for determination.

(b) If, in the opinion of a Federal Medical Officer, medical records requested by the subject individual indicate a condition about which a prudent physician would hesitate to inform a person suffering from such a condition of its exact nature and probable outcome, the system manager shall not release the medical information to the subject individual nor to any person other than a physician designated in writing by the subject individual, or the guardian or conservator of the individual.

(c) If, in the opinion of a Federal Medical Officer, the medical information does not indicate the presence of any condition which would cause a prudent physician to hesitate to inform a person suffering from such a condition of its exact nature and probable outcome, the system manager shall release it to the subject individual or to any person, firm, or organization which the individual authorizes in writing to receive it.

§ 6.32 Granting access.

(a) Upon receipt of a request for access to non-exempt records, the system manager shall make these records available to the subject individual or shall acknowledge the request within 10 workdays of its receipt by FEMA. The acknowledgment shall indicate when the system manager will make the records available.

(b) If the system manager anticipates more than a 10 day delay in making a record available, he or she also shall include in the acknowledgment specific reasons for the delay.

(c) If a subject individual's request for access does not contain sufficient information to permit the system manager to locate the records, the system manager shall request additional information from the individual and shall have 10 workdays following receipt of the additional information in which to make the records available or to acknowledge receipt of the request and indicate when the records will be available.

(d) Records will be available for authorized access during normal business hours at the offices where the records are located. A requestor should be prepared to identify himself or herself by signature; i.e., to note by signature the date of access and/or produce other identification verifying the signature.

(e) Upon request, a system manager shall permit an individual to examine the original of a non-exempt record, shall provide the individual with a copy of the record, or both. Fees shall be charged in accordance with subpart F.

(f) An individual may request to pick up a record in person or to receive it by mail, directed to the name and address provided by the individual in the request. A system manager shall not make a record available to a third party for delivery to the subject individual except for medical records as outlined in § 6.31.

(g) An individual who selects another person to review, or to accompany the individual in reviewing or obtaining a copy of the record must, prior to the disclosure, sign a statement authorizing the disclosure of the record. The system manager shall maintain this statement with the record.

(h) The procedure for access to an accounting of disclosure is identical to the procedure for access to a record as set forth in this section.

§ 6.33 Denials of access.

(a) A system manager may deny an individual access to that individual's record only upon the grounds that FEMA has published the rules in the FEDERAL REGISTER exempting the pertinent system of records from the access requirement. These exempt systems of records are described in subpart G of this part.

(b) Upon receipt of a request for access to a record which the system manager believes is contained within an exempt system of records he or she shall forward the request to the appropriate official listed below or to his or her delegate through normal supervisory channels.

(1) Deputy Administrators.

(2) [Reserved]

(3) Federal Insurance Administrator.

(4) Assistant Administrators.

(5) United States Fire Administrator.

(6) Chief of Staff.

(7) Office Directors.

(8) Chief Counsel.

(9) [Reserved]

(10) Chief Financial Officer.

(11) Regional Administrators.

(c) In the event that the system manager serves in one of the positions listed in paragraph (b) of this section, he or she shall retain the responsibility for denying or granting the request.

(d) The appropriate official listed in paragraph (b) of this section shall, in consultation with the Office of Chief Counsel and such other officials as deemed appropriate, determine if the request record is contained within an exempt system of records and:

(1) If the record is not contained within an exempt system of records, the above official shall notify the system manager to grant the request in accordance with § 6.32, or

(2) If the record is contained within an exempt system said official shall;

(i) Notify the requestor that the request is denied, including a statement justifying the denial and advising the requestor of a right to judicial review of that decision as provided in § 6.57, or

(ii) Notify the system manager to make record available to the requestor in accordance with § 6.31, notwithstanding the record's inclusion within an exempt system.

(e) The appropriate official listed in paragraph (b) of this section shall provide the Privacy Appeals Office with a copy of any denial of a requested access.

[44 FR 50293, Aug. 27, 1979, as amended at 48 FR 44543, Sept. 29, 1983; 50 FR 40006, Oct. 1, 1985; 51 FR 34604, Sept. 30, 1986; 74 FR 15334, Apr. 3, 2009]

§ 6.34 Appeal of denial of access within FEMA.

A requestor denied access in whole or in part, to records pertaining to that individual, exclusive of those records for which the system manager is the Administrator, may file an administrative appeal of that denial. Appeals of denied access will be processed in the same manner as processing for appeals from a denial of a request to amend a record set out in §6.55, regardless whether the denial being appealed is made at headquarters or by a regional official.

Subpart D—Requests To Amend Records

§ 6.50 Submission of requests to amend records.

An individual who desires to amend any record containing personal information about the individual should direct a written request to the system manager specified in the pertinent FEDERAL REGISTER notice concerning FEMA's systems of records. A current FEMA employee who desires to amend personnel records should submit a written request to the Director, Human Capital Division, Washington, DC 20472. Each request should include evidence of and justification for the need to amend the pertinent record. Each request should bear the legend ''Privacy Act—Request to Amend Record'' prominently marked on both the face of the request letter and the envelope.

§ 6.51 Review of requests to amend records.

(a) The system manager shall acknowledge the receipt of a request to amend a record within 10 workdays. If possible, the acknowledgment shall include the system manager's determination either to amend the record or to deny the request to amend as provided in §6.53.

(b) When reviewing a record in response to a request to amend, the system manager shall assess the accuracy, relevance, timeliness, and completeness of the existing record in light of the proposed amendment and shall determine whether the request for the amendment is justified. With respect to a request to delete information, the system manager also shall review the request and the existing record to determine whether the information is relevant and necessary to accomplish an agency purpose required to be accomplished by statute or Executive Order.

§ 6.52 Approval of requests to amend records.

If the system manager determines that amendment of a record is proper in accordance with the request to amend, he or she promptly shall make the necessary corrections to the record and shall send a copy of the corrected record to the individual. Where an accounting of disclosure has been maintained, the system manager shall advise all previous recipients of the record of the fact that a correction has been made and the substance of the correction. Where practicable, the system manager shall advise the Privacy Appeals Officer that a request to amend has been approved.

§ 6.53 Denial of requests to amend records.

(a) If the system manager determines that an amendment of a record is improper or that the record should be amended in a manner other than that requested by an individual, he shall refer the request to amend and his determinations and recommendations to the appropriate official listed in §6.33(b) through normal supervisory channels.

(b) If the official listed in §6.33, after reviewing the request to amend a record, determines to amend the record in accordance with the request, said official promptly shall return the request to the system manager with instructions to make the requested amendments in accordance with §6.52.

(c) If the appropriate official listed in §6.33, after reviewing the request to amend a record, determines not to amend the record in accordance with the request, the requestor shall be promptly advised in writing of the determination. The refusal letter (1) shall state the reasons for the denial of the request to amend; (2) shall include proposed alternative amendments, if appropriate; (3) shall state the requestor's right to appeal the denial of the request to amend; and (4) shall state

the procedures for appealing and the name and title of the official to whom the appeal is to be addressed.

(d) The appropriate official listed in § 6.33 shall furnish the Privacy Appeals Officer a copy of each initial denial of a request to amend a record.

[44 FR 50293, Aug. 27, 1979, as amended at 45 FR 17152, Mar. 18, 1980]

§ 6.54 Agreement to alternative amendments.

If the denial of a request to amend a record includes proposed alternative amendments, and if the requestor agrees to accept them, he or she must notify the official who signed the denial. That official immediately shall instruct the system manager to make the necessary amendments in accordance with § 6.52.

§ 6.55 Appeal of denial of request to amend a record.

(a) A requestor who disagrees with a denial of a request to amend a record may file an administrative appeal of that denial. The requestor should address the appeal to the FEMA Privacy Appeals Officer, Washington, DC 20472. If the requestor is an employee of FEMA and the denial to amend involves a record maintained in the employee's Official Personnel Folder covered by an Office of Personnel Management Government-wide system notice, the appeal should be addressed to the Assistant Director, Information Systems, Agency Compliance and Evaluation Group, Office of Personnel Management, Washington, DC 20415.

(b) Each appeal to the Privacy Act Appeals Officer shall be in writing and must be received by FEMA no later than 30 calendar days from the requestor's receipt of a denial of a request to amend a record. The appeal should bear the legend ''Privacy Act—Appeal,'' both on the face of the letter and the envelope.

(c) Upon receipt of an appeal, the Privacy Act Appeals Officer shall consult with the system manager, the official who made the denial, the Chief Counsel or a member of that office, and such other officials as may be appropriate. If the Privacy Act Appeals Officer in consultation with these officials, determines that the record should be amended, as requested, the system manager shall be instructed immediately to amend the record in accordance with § 6.52 and shall notify the requestor of that action.

(d) If the Privacy Act Appeals Officer, in consultation with the officials specified in paragraph (c) of this section, determines that the appeal should be rejected, the Privacy Act Appeals Officer shall submit the file on the request and appeal, including findings and recommendations, to the Deputy Administrator for a final administrative determination.

(e) If the Deputy Administrator determines that the record should be amended as requested, he or she immediately shall instruct the system manager in writing to amend the record in accordance with § 6.52. The Deputy Administrator shall send a copy of those instructions to the Privacy Act Appeals Officer, who shall notify the requester of that action.

(f) If the Deputy Administrator determines to reject the appeal, the requestor shall immediately be notified in writing of that determination. This action shall constitute the final administrative determination on the request to amend the record and shall include:

(1) The reasons for the rejection of the appeal.

(2) Proposed alternative amendments, if appropriate, which the requestor subsequently may accept in accordance with § 6.54.

(3) Notice of the requestor's right to file a Statement of Disagreement for distribution in accordance with § 6.56.

(4) Notice of the requestor's right to seek judicial review of the final administrative determination, as provided in § 6.57.

(g) The final agency determination must be made no later than 30 workdays from the date on which the appeal is received by the Privacy Act Appeals Officer.

(h) In extraordinary circumstances, the Administrator may extend this time limit by notifying the requestor in writing before the expiration of the 30 workdays. The Administrator's notification will include a justification for the extension.

[44 FR 50293, Aug. 27, 1979, as amended at 45 FR 17152, Mar. 18, 1980]

§ 6.56 Statement of disagreement.

Upon receipt of a final administrative determination denying a request to amend a record, the requestor may file a Statement of Disagreement with the appropriate system manager. The Statement of Disagreement should include an explanation of why the requestor believes the record to be inaccurate, irrelevant, untimely, or incomplete. The system manager shall maintain the Statement of Disagreement in conjunction with the pertinent record, and shall include a copy of the Statement of Disagreement in any disclosure of the pertinent record. The system manager shall provide a copy of the Statement of Disagreement to any person or agency to whom the record has been disclosed only if the disclosure was subject to the accounting requirements of § 6.22.

§ 6.57 Judicial review.

Within 2 years of receipt of a final administrative determination as provided in § 6.34 or § 6.55, a requestor may seek judicial review of that determination. A civil action must be filed in the Federal District Court in which the requestor resides or has his or her principal place of business or in which the agency records are situated, or in the District of Columbia.

Subpart E—Report on New Systems and Alterations of Existing Systems

§ 6.70 Reporting requirement.

(a) No later than 90 calendar days prior to the establishment of a new system of records, the prospective system manager shall notify the Privacy Appeals Officer of the proposed new system. The prospective system manager shall include with the notification a completed FEMA Form 11–2, System of Records Covered by the Privacy Act of 1974, and a justification for each system of records proposed to be established. If the Privacy Appeals Officer determines that the establishment of the proposed system is in the best interest of the Government, then no later than 60 calendar days prior to the establishment of that system of records, a report of the proposal shall be submitted by the Administrator or a designee thereof, to the President of the Senate, the Speaker of the House of Representatives, and the Administrator, Office of Information and Regulatory Affairs, Office of Management and Budget for their evaluation of the probable or potential effect of that proposal on the privacy and other personal or property rights of individuals.

(b) No later than 90 calendar days prior to the alteration of a system of records, the system manager responsible for the maintenance of that system of records shall notify the Privacy Appeals Officer of the proposed alteration. The system manager shall include with the notification a completed FEMA Form 11–2. System of Records Covered by the Privacy Act of 1974, and a justification for each system of records he proposes to alter. If it is determined that the proposed alteration is in the best interest of the Government, then, the Administrator, or a designee thereof, shall submit, no later than 60 calendar days prior to the establishment of that alteration, a report of the proposal to the President of the Senate, the Speaker of the House of Representatives, and the Administrator, Office of Information and Regulatory Affairs, Office of Management and Budget for their evaluation of the probable or potential effect of that proposal on the privacy and other personal or property rights of individuals.

(c) The reports required by this regulation are exempt from reports control.

(d) The Administrator, Office of Information and Regulatory Affairs, Office of Management and Budget may waive the time requirements set out in this section upon a finding that a delay in the establishing or amending the system would not be in the public interest and showing how the public interest would be adversely affected if the waiver were not granted and otherwise complying with OMB Circular A–130.

[44 FR 50293, Aug. 27, 1979, as amended at 45 FR 17152, Mar. 18, 1980; 51 FR 34604, Sept. 30, 1986]

§ 6.71 Federal Register notice of establishment of new system or alteration of existing system.

Notice of the proposed establishment or alteration of a system of records shall be published in the FEDERAL REGISTER, in accordance with FEMA procedures when:

(a) Notice is received that the Senate, the House of Representatives, and the Office of Management and Budget do not object to the establishment of a new system or records or to the alteration of an existing system of records, or

(b) No fewer than 30 calendar days elapse from the date of submission of the proposal to the Senate, the House of Representatives, and the Office of Management and Budget without receipt of an objection to the proposal. The notice shall include all of the information required to be provided in FEMA Form 11–2, System of Records Covered by the Privacy Act of 1974, and such other information as the Administrator deems necessary.

§ 6.72 Effective date of new system of records or alteration of an existing system of records.

Systems of records proposed to be established or altered in accordance with the provisions of this subpart shall be effective no sooner than 30 calendar days from the publication of the notice required by § 6.71.

Subpart F—Fees

§ 6.80 Records available at fee.

The system manager shall provide a copy of a record to a requestor at a fee prescribed in § 6.85 unless the fee is waived under § 6.82.

[44 FR 50293, Aug. 27, 1979, as amended at 45 FR 17152, Mar. 18, 1980]

§ 6.81 Additional copies.

A reasonable number of additional copies shall be provided for the applicable fee to a requestor who indicates that he has no access to commercial reproduction services.

§ 6.82 Waiver of fee.

The system manager shall make one copy of a record, up to 300 pages, available without charge to a requestor who is an employee of FEMA. The system manager may waive the fee requirement for any other requestor if the cost of collecting the fee is an unduly large part of, or greater than, the fee, or when furnishing the record without charge conforms to generally established business custom or is in the public interest.

[44 FR 50287, Aug. 27, 1979, as amended at 52 FR 13679, Apr. 24, 1987]

§ 6.83 Prepayment of fees.

(a) When FEMA estimates or determines that allowable charges that a requester may be required to pay are likely to exceed $250.00, FEMA may require a requester to make an advance payment of the entire fee before continuing to process the request.

(b) When a requester has previously failed to pay a fee charged in a timely fashion (i.e., within 30 days of the date of the billing), FEMA may require the requester to pay the full amount owed plus any applicable interest as provided in § 6.85(d), and to make an advance payment of the full amount of the estimated fee before the agency begins to process a new request or a pending request from that requester.

(c) When FEMA acts under § 5.44 (a) or (b), the administrative time limits prescribed in subsection (a)(6) of the FOIA (i.e., 10 working days from the receipt of initial requests and 20 working days from receipt of appeals from initial denial, plus permissible extensions of these time limits) will begin only after FEMA has received fee payments described under § 5.44 (a) or (b).

[52 FR 13679, Apr. 24, 1987]

§ 6.84 Form of payment.

Payment shall be by check or money order payable to The Federal Emergency Management Agency and shall be addressed to the system manager.

§ 6.85 Reproduction fees.

(a) *Duplication costs.* (1) For copies of documents reproduced on a standard office copying machine in sizes up to 8½ × 14 inches, the charge will be $.15 per page.

(2) The fee for reproducing copies of records over 8½ × 14 inches or whose

physical characteristics do not permit reproduction by routine electrostatic copying shall be the direct cost of reproducing the records through Government or commercial sources. If FEMA estimates that the allowable duplication charges are likely to exceed $25, it shall notify the requester of the estimated amount of fees, unless the requester has indicated in advance his/her willingness to pay fees as high as those anticipated. Such a notice shall offer a requester the opportunity to confer with agency personnel with the objective of reformulating the request to meet his/her needs at a lower cost.

(3) For other methods of reproduction or duplication, FEMA shall charge the actual direct costs of producing the document(s). If FEMA estimates that the allowable duplication charges are likely to exceed $25, it shall notify the requester of the estimated amount of fees, unless the requester has indicated in advance his/her willingness to pay fees as high as those anticipated. Such a notice shall offer a requester the opportunity to confer with agency personnel with the objective of reformulating the request to meet his/her needs at a lower cost.

(b) Interest may be charge to those requesters who fail to pay fees charged. FEMA may begin assessing interest charges on the amount billed starting on the 31st day following the day on which the billing was sent. Interest will be at the rate prescribed in section 3717 of title 31 U.S.C.

[52 FR 13679, Apr. 24, 1987]

Subpart G—Exempt Systems of Records

§ 6.86 General exemptions.

(a) Whenever the Administrator, Federal Emergency Management Agency, determines it to be necessary and proper, with respect to any system of records maintained by the Federal Emergency Management Agency, to exercise the right to promulgate rules to exempt such systems in accordance with the provisions of 5 U.S.C. 552a (j) and (k), each specific exemption, including the parts of each system to be exempted, the provisions of the Act from which they are exempted, and the justification for each exemption shall be published in the FEDERAL REGISTER as part of FEMA's Notice of Systems of Records.

(b) Exempt under 5 U.S.C. 552a(j)(2) from the requirements of 5 U.S.C. 552a(c) (3) and (4), (d), (e) (1), (2), (3), (e)(4) (G), (H), and (I), (e) (5) and (8) (f) and (g) of the Privacy Act.

(1) *Exempt systems.* The following systems of records, which contain information of the type described in 5 U.S.C. 552(j)(2), shall be exempt from the provisions of 5 U.S.C. 552a listed in paragraph (b) of this section.

General Investigative Files (FEMA/IG–2)—Limited Access

(2) *Reasons for exemptions.* (i) 5 U.S.C. 552a (e)(4)(G) and (f)(1) enable individuals to be notified whether a system of records contains records pertaining to them. The Federal Emergency Management Agency believes that application of these provisions to the above-listed system of records would give individuals an opportunity to learn whether they are of record either as suspects or as subjects of a criminal investigation; this would compromise the ability of the Federal Emergency Management Agency to complete investigations and identify or detect violators of laws administered by the Federal Emergency Management Agency or other Federal agencies. Individuals would be able (A) to take steps to avoid detection, (B) to inform co-conspirators of the fact that an investigation is being conducted, (C) to learn the nature of the investigation to which they are being subjected, (D) to learn the type of surveillance being utilized, (E) to learn whether they are only suspects or identified law violators, (F) to continue to resume their illegal conduct without fear of detection upon learning that they are not in a particular system of records, and (G) to destroy evidence needed to prove the violation.

(ii) 5 U.S.C. 552a (d)(1), (e)(4)(H) and (f)(2), (3) and (5) enable individuals to gain access to records pertaining to them. The Federal Emergency Management Agency believes that application of these provisions to the above-listed system of records would compromise its ability to complete or continue criminal investigations and to detect

or identify violators of laws administered by the Federal Emergency Management Agency or other Federal agencies. Permitting access to records contained in the above-listed system of records would provide individuals with significant information concerning the nature of the investigation, and this could enable them to avoid detection or apprehension in the following ways:

(A) By discovering the collection of facts which would form the basis for their arrest, (B) by enabling them to destroy evidence of criminal conduct which would form the basis for their arrest, and (C) by learning that the criminal investigators had reason to believe that a crime was about to be committed, they could delay the commission of the crime or change the scene of the crime to a location which might not be under surveillance. Granting access to ongoing or closed investigative files would also reveal investigative techniques and procedures, the knowledge of which could enable individuals planning criminal activity to structure their future operations in such a way as to avoid detection or apprehension, thereby neutralizing law enforcement officers' established investigative tools and procedures. Further, granting access to investigative files and records could disclose the identity of confidential sources and other informers and the nature of the information which they supplied, thereby endangering the life or physical safety of those sources of information by exposing them to possible reprisals for having provided information relating to the criminal activities of those individuals who are the subjects of the investigative files and records; confidential sources and other informers might refuse to provide criminal investigators with valuable information if they could not be secure in the knowledge that their identities would not be revealed through disclosure of either their names or the nature of the information they supplied, and this would seriously impair the ability of the Federal Emergency Management Agency to carry out its mandate to enforce criminal and related laws. Additionally, providing access to records contained in the above-listed system of records could reveal the identities of undercover law enforcement personnel who compiled information regarding individual's criminal activities, thereby endangering the life or physical safety of those undercover personnel or their families by exposing them to possible reprisals.

(iii) 5 U.S.C. 552a(d) (2), (3) and (4), (e)(4)(H) and (f)(4), which are dependent upon access having been granted to records pursuant to the provisions cited in paragraph (b)(2)(ii) of this section, enable individuals to contest (seek amendment to) the content of records contained in a system of records and require an agency to note an amended record and to provide a copy of an individual's statement (of disagreement with the agency's refusal to amend a record) to persons or other agencies to whom the record has been disclosed. The Federal Emergency Management Agency believes that the reasons set forth in paragraph (b)(2)(ii) of this section are equally applicable to this paragraph and, accordingly, those reasons are hereby incorporated herein by reference.

(iv) 5 U.S.C. 552a(c)(3) requires that an agency make accountings of disclosures of records available to individuals named in the records at their request; such accountings must state the date, nature and purpose of each disclosure of a record and the name and address of the recipient. The Federal Emergency Management Agency believes that application of this provision to the above-listed system of records would impair the ability of other law enforcement agencies to make effective use of information provided by the Federal Emergency Management Agency in connection with the investigation, detection and apprehension of violators of the criminal laws enforced by those other law enforcement agencies. Making accountings of disclosure available to violators or possible violators would alert those individuals to the fact that another agency is conducting an investigation into their criminal activities, and this could reveal the geographic location of the other agency's investigation, the nature and purpose of that investigation, and the dates on which that investigation was active. Violators possessing such knowledge would thereby be able to take appropriate

measures to avoid detection or apprehension by altering their operations, by transferring their criminal activities to other geographic areas or by destroying or concealing evidence which would form the basis for their arrest. In addition, providing violators with accountings of disclosure would alert those individuals to the fact that the Federal Emergency Management Agency has information regarding their criminal activities and could inform those individuals of the general nature of that information; this, in turn, would afford those individuals a better opportunity to take appropriate steps to avoid detection or apprehension for violations of criminal and related laws.

(v) 5 U.S.C. 552a(c)(4) requires that an agency inform any person or other agency about any correction or notation of dispute made by the agency in accordance with 5 U.S.C. 552a(d) of any record that has been disclosed to the person or agency if an accounting of the disclosure was made. Since this provision is dependent on an individual's having been provided an opportunity to contest (seek amendment to) records pertaining to him/her, and since the above-listed system of records is proposed to be exempt from those provisions of 5 U.S.C. 552a relating to amendments of records as indicated in paragraph (b)(2)(iii) of this section, the Federal Emergency Management Agency believes that this provision should not be applicable to the above system of records.

(vi) 5 U.S.C. 552a(e)(4)(I) requires that an agency publish a public notice listing the categories of sources for information contained in a system of records. The categories of sources of this system of records have been published in the FEDERAL REGISTER in broad generic terms in the belief that this is all that subsection (e)(4)(I) of the Act requires. In the event, however, that this subsection should be interpreted to require more detail as to the identity of sources of the records in this system, exemption from this provision is necessary in order to protect the confidentiality of the sources of criminal and other law enforcement information. Such exemption is further necessary to protect the privacy and physical safety of witnesses and informants.

(vii) 5 U.S.C. 552a(e)(1) requires that an agency maintain in its records only such information about an individual as is relevant and necessary to accomplish a purpose of the agency required to be accomplished by statute or executive order. The term *maintain* as defined in 5 U.S.C. 552a(a)(3) includes ''collect'' and ''disseminate.'' At the time that information is collected by the Federal Emergency Management Agency, there is often insufficient time to determine whether the information is relevant and necessary to accomplish a purpose of the Federal Emergency Management Agency; in many cases information collected may not be immediately susceptible to a determination of whether the information is relevant and necessary, particularly in the early stages of an investigation, and in many cases, information which initially appears to be irrelevant or unnecessary may, upon further evaluation or upon continuation of the investigation, prove to have particular relevance to an enforcement program of the Federal Emergency Management Agency. Further, not all violations of law discovered during a criminal investigation fall within the investigative jurisdiction of the Federal Emergency Management Agency; in order to promote effective law enforcement, it often becomes necessary and desirable to disseminate information pertaining to such violations to other law enforcement agencies which have jurisdiction over the offense to which the information relates. The Federal Emergency Management Agency should not be placed in a position of having to ignore information relating to violations of law not within its jurisdiction when that information comes to the attention of the Federal Emergency Management Agency through the conduct of a lawful FEMA investigation. The Federal Emergency Management Agency, therefore, believes that it is appropriate to exempt the above-listed system of records from the provisions of 5 U.S.C. 552a(e)(1).

(viii) 5 U.S.C. 552a(e)(2) requires that an agency collect information to the greatest extent practicable directly from the subject individual when the

information may result in adverse determinations about an individual's rights, benefits, and privileges under Federal programs. The Federal Emergency Management Agency believes that application of this provision to the above-listed system of records would impair the ability of the Federal Emergency Management Agency to conduct investigations and to identify or detect violators of criminal or related laws for the following reasons:

(A) Most information collected about an individual under criminal investigations is obtained from third parties such as witnesses and informers, and it is usually not feasible to rely upon the subject of the investigation as a source for information regarding his/her criminal activities, (B) an attempt to obtain information from the subject of a criminal investigation will often alert that individual to the existence of an investigation, thereby affording the individual an opportunity to attempt to conceal his/her criminal activities so as to avoid apprehension, (C) in certain instances, the subject of a criminal investigation is not required to supply information to criminal investigators as a matter of legal duty, and (D) during criminal investigations it is often a matter of sound investigative procedures to obtain information from a variety of sources in order to verify information already obtained.

(ix) 5 U.S.C. 552a(e)(3) requires that an agency inform each individual whom it asks to supply information, either on the form which the agency uses to collect the information or on a separate form which can be retained by the individual, with the following information: The authority which authorizes the solicitation of the information and whether disclosure of such information is mandatory or voluntary; the principal purposes for which the information is intended to be used; the routine uses which may be made of the information; and the effects on the individual of not providing all or part of the requested information. The Federal Emergency Management Agency believes that the above-listed system of records should be exempted from this provision in order to avoid adverse effects on its ability to identify or detect violators of criminal or related laws. In many cases, information is obtained by confidential sources, other informers or undercover law enforcement officers under circumstances where it is necessary that the true purpose of their actions be kept secret so as to avoid alerting the subject of the investigation or his/her associates that a criminal investigation is in process. Further, if it became known that the undercover officer was assisting in a criminal investigation, that officer's life or physical safety could be endangered through reprisal, and, under such circumstances it may not be possible to continue to utilize that officer in the investigation. In many cases, individuals, for personal reasons, would feel inhibited in talking to a person representing a criminal law enforcement agency but would be willing to talk to a confidential source or undercover officer who they believe is not involved in law enforcement activities. In addition, providing a source of information with written evidence that he was a source, as required by this provision, could increase the likelihood that the source of information would be the subject of retaliatory action by the subject of the investigation. Further, application of this provision could result in an unwarranted invasion of the personal privacy of the subject of the criminal investigation, particularly where further investigation would result in a finding that the subject was not involved in any criminal activity.

(x) 5 U.S.C. 552a(e)(5) requires that an agency maintain all records used by the agency in making any determination about any individual with such accuracy, relevance, timeliness and completeness as is reasonably necessary to assure fairness to the individual in the determination. Since 5 U.S.C. 552a(a)(3) defines ''maintain'' to include ''collect'' and ''disseminate,'' application of this provision to the above-listed system of records would hinder the initial collection of any information which could not, at the moment of collection, be determined to be accurate, relevant, timely and complete. Similarly, application of this provision would seriously

restrict the necessary flow of information from the Federal Emergency Management Agency to other law enforcement agencies when a FEMA investigation revealed information pertaining to a violation of law which was under investigative jurisdiction of another agency. In collecting information during the course of a criminal investigation, it is not possible or feasible to determine accuracy, relevance, timeliness or completeness prior to collection of the information; in disseminating information to other law enforcement agencies it is often not possible to determine accuracy, relevance, timeliness or completeness prior to dissemination because the disseminating agency may not have the expertise with which to make such determinations. Further, information which may initially appear to be inaccurate, irrelevant, untimely or incomplete may, when gathered, grouped, and evaluated with other available information, become more pertinent as an investigation progresses. In addition, application of this provision could seriously impede criminal investigators and intelligence analysts in the exercise of their judgment in reporting on results obtained during criminal investigations. The Federal Emergency Management Agency believes that it is appropriate to exempt the above-listed system of records from the provisions of 5 U.S.C. 552a(e)(5).

(xi) 5 U.S.C. 552a(e)(8) requires that an agency make reasonable effort to serve notice on an individual when any record on the individual is made available to any person under compulsory legal process when such process becomes a matter of public record. The Federal Emergency Management Agency believes that the above-listed system of records should be exempt from this provision in order to avoid revealing investigative techniques and procedures outlined in those records and in order to prevent revelation of the existence on an on-going investigation where there is a need to keep the existence of the investigation secret.

(xii) 5 U.S.C. 552a(g) provides civil remedies to an individual for an agency's refusal to amend a record or to make a review of a request for amendment; for an agency's refusal to grant access to a record; for an agency's failure to maintain accurate, relevant, timely and complete records which are used to make a determination which is adverse to the individual; and for an agency's failure to comply with any other provision of 5 U.S.C. 552a in such a way as to have an adverse effect on an individual. The Federal Emergency Management Agency believes that the above-listed system of records should be exempted from this provision to the extent that the civil remedies provided therein may relate to provisions of 5 U.S.C. 552a from which the above-listed system of records is proposed to be exempt. Since the provisions of 5 U.S.C. 552a enumerated in paragraphs (b)(2)(i) through (xi) of this section are proposed to be inapplicable to the above-listed systems of records for the reasons stated therein, there should be no corresponding civil remedies for failure to comply with the requirements of those provisions to which the exemption is proposed to apply. Further, the Federal Emergency Management Agency believes that application of this provision to the above-listed system of records would adversely affect its ability to conduct criminal investigations by exposing to civil court action every stage of the criminal investigative process in which information is compiled or used in order to identify, detect, or otherwise investigate persons suspected or known to be engaged in criminal conduct.

(xiii) Individuals may not have access to another agency's records, which are contained in files maintained by the Federal Emergency Management Agency, when that other agency's regulations provide that such records are subject to general exemption under 5 U.S.C. 552a(j). If such exempt records are within a request for access, FEMA will advise the individual of their existence and of the name and address of the source agency. For any further information concerning the record and the exemption, the individual must contact that source agency.

[45 FR 64580, Sept. 30, 1980]

§ 6.87 Specific exemptions.

(a) *Exempt under 5 U.S.C. 552a(k)(1).* The Administrator, Federal Emergency Management Agency has determined

that certain systems of records may be exempt from the requirements of (c)(3) and (d) pursuant to 5 U.S.C. 552a(k)(1) to the extent that the system contains any information properly classified under Executive Order 12356 or any subsequent Executive order and which are required to be kept secret in the interest of national defense or foreign policy. To the extent that this occurs, such records in the following systems would be exempt:

Claims (litigation) (FEMA/GC–1)—Limited Access
FEMA Enforcement (Compliance) (FEMA/GC–2)—Limited Access
General Investigative Files (FEMA/IG–1)—Limited Access
Security Management Information System (FEMA/SEC–1)—Limited Access

(b) *Exempt under 5 U.S.C. 552a(k)(2) from the requirements of 5 U.S.C. 552a (c)(3), (d), (e)(1), (e)(4) (G), (H), and (I), and (f).* The Federal Emergency Management Agency will not deny individuals access to information which has been used to deny them a right, privilege, or benefit to which they would otherwise be entitled.

(1) *Exempt systems.* The following systems of records, which contain information of the type described in 5 U.S.C. 552a(k)(2), shall be exempt from the provisions of 5 U.S.C. 552a(k)(2) listed in paragraph (b) of this section.

Claims (litigation) (FEMA/GC–1)—Limited Access
FEMA Enforcement (Compliance) (FEMA/GC–2)—Limited Access
General Investigative Files (FEMA/IG–1)—Limited Access
Equal Employment Opportunity Complaints of Discrimination Files (FEMA/PER–2)—Limited Access

(2) *Reasons for exemptions.* (i) 5 U.S.C. 552a (e)(4)(G) and (f)(1) enable individuals to be notified whether a system of records contains records pertaining to them. The Federal Emergency Management Agency believes that application of these provisions to the above-listed systems of records would impair the ability of FEMA to successfully complete investigations and inquiries of suspected violators of civil and criminal laws and regulations under its jurisdiction. In many cases investigations and inquiries into violations of civil and criminal laws and regulations involve complex and continuing patterns of behavior. Individuals, if informed, that they have been identified as suspected violators of civil or criminal laws and regulations, would have an opportunity to take measures to prevent detection of illegal action so as to avoid prosecution or the imposition of civil sanctions. They would also be able to learn the nature and location of the investigation or inquiry, the type of surveillance being utilized, and they would be able to transmit this knowledge to co-conspirators. Finally, violators might be given the opportunity to destroy evidence needed to prove the violation under investigation or inquiry.

(ii) 5 U.S.C. 552a (d)(1), (e)(4)(H) and (f)(2), (3) and (5) enable individuals to gain access to records pertaining to them. The Federal Emergency Management Agency believes that application of these provisions to the above-listed systems of records would impair its ability to complete or continue civil or criminal investigations and inquiries and to detect violators of civil or criminal laws. Permitting access to records contained in the above-listed systems of records would provide violators with significant information concerning the nature of the civil or criminal investigation or inquiry. Knowledge of the facts developed during an investigation or inquiry would enable violators of criminal and civil laws and regulations to learn the extent to which the investigation or inquiry has progressed, and this could provide them with an opportunity to destroy evidence that would form the basis for prosecution or the imposition of civil sanctions. In addition, knowledge gained through access to investigatory material could alert a violator to the need to temporarily postpone commission of the violation or to change the intended point where the violation is to be committed so as to avoid detection or apprehension. Further, access to investigatory material would disclose investigative techniques and procedures which, if known, could enable violators to structure their future operations in such a way as to avoid detection or apprehension, thereby neutralizing investigators' established and

effective investigative tools and procedures. In addition, investigatory material may contain the identity of a confidential source of information or other informer who would not want his/her identity to be disclosed for reasons of personal privacy or for fear of reprisal at the hands of the individual about whom he/she supplied information. In some cases mere disclosure of the information provided by an informer would reveal the identity of the informer either through the process of elimination or by virtue of the nature of the information supplied. If informers cannot be assured that their identities (as sources for information) will remain confidential, they would be very reluctant in the future to provide information pertaining to violations of criminal and civil laws and regulations, and this would seriously compromise the ability of the Federal Emergency Management Agency to carry out its mission. Further, application of 5 U.S.C. 552a (d)(1), (e)(4)(H) and (f)(2), (3) and (5) to the above-listed systems of records would make available attorney's work product and other documents which contain evaluations, recommendations, and discussions of ongoing civil and criminal legal proceedings; the availability of such documents could have a chilling effect on the free flow of information and ideas within the Federal Emergency Management Agency which is vital to the agency's predecisional deliberative process, could seriously prejudice the agency's or the Government's position in a civil or criminal litigation, and could result in the disclosure of investigatory material which should not be disclosed for the reasons stated above. It is the belief of the Federal Emergency Management Agency that, in both civil actions and criminal prosecutions, due process will assure that individuals have a reasonable opportunity to learn of the existence of, and to challenge, investigatory records and related materials which are to be used in legal proceedings.

(iii) 5 U.S.C. 552a (d)(2), (3) and (4), (e)(4)(H) and (f)(4) which are dependent upon access having been granted to records pursuant to the provisions cited in paragraph (b)(2)(ii) of this section, enable individuals to contest (seek amendment to) the content of records contained in a system of records and require an agency to note an amended record and to provide a copy of an individual's statement (of disagreement with the agency's refusal to amend a record) to persons or other agencies to whom the record has been disclosed. The Federal Emergency Management Agency believes that the reasons set forth in paragraphs (b)(2)(i) of this section are equally applicable to this paragraph, and, accordingly, those reasons are hereby incorporated herein by reference.

(iv) 5 U.S.C. 552a(c)(3) requires that an agency make accountings of disclosures of records available to individuals named in the records at their request; such accountings must state the date, nature, and purpose of each disclosure of a record and the name and address of the recipient. The Federal Emergency Management Agency believes that application of this provision to the above-listed systems of records would impair the ability of the Federal Emergency Management Agency and other law enforcement agencies to conduct investigations and inquiries into civil and criminal violations under their respective jurisdictions. Making accountings available to violators would alert those individuals to the fact that the Federal Emergency Management Agency or another law enforcement authority is conducting an investigation or inquiry into their activities, and such accountings could reveal the geographic location of the investigation or inquiry, the nature and purpose of the investigation or inquiry and the nature of the information disclosed, and the date on which that investigation or inquiry was active. Violators possessing such knowledge would thereby be able to take appropriate measures to avoid detection or apprehension by altering their operations, transferring their activities to other locations or destroying or concealing evidence which would form the basis for prosecution or the imposition of civil sanctions.

(v) 5 U.S.C. 552a(e)(1) requires that an agency maintain in its records only such information about an individual as is relevant and necessary to accomplish a purpose of the agency required

to be accomplished by statute or executive order. The term *maintain* as defined in 5 U.S.C. 552a(a)(3) includes ''collect'' and ''disseminate.'' At the time that information is collected by the Federal Emergency Management Agency there is often insufficient time to determine whether the information is relevant and necessary to accomplish a purpose of the Federal Emergency Management Agency; in many cases information collected may not be immediately susceptible to a determination of whether the information is relevant and necessary, particularly in the early stages of investigation or inquiry, and in many cases information which initially appears to be irrelevant or unnecessary may, upon further evaluation or upon continuation of the investigation or inquiry, prove to have particular relevance to an enforcement program of the Federal Emergency Management Agency. Further, not all violations of law uncovered during a Federal Emergency Management Agency inquiry fall within the civil or criminal jurisdiction of the Federal Emergency Management Agency; in order to promote effective law enforcement, it often becomes necessary and desirable to disseminate information pertaining to such violations to other law enforcement agencies which have jurisdiction over the offense to which the information relates. The Federal Emergency Management Agency should not be placed in a position of having to ignore information relating to violations of law not within its jurisdiction when that information comes to the attention of the Federal Emergency Management Agency through the conduct of a lawful FEMAs civil or criminal investigation or inquiry. The Federal Emergency Management Agency therefore believes that it is appropriate to exempt the above-listed systems of records from the provisions of 5 U.S.C. 552a(e)(1).

(c) *Exempt under 5 U.S.C. 552a(k)(5).* The Administrator, Federal Emergency Management Agency has determined that certain systems of records are exempt from the requirements of (c)(3) and (d) of 5 U.S.C. 552a.

(1) *Exempt systems.* The following systems of records, which contain information of the type described in 5 U.S.C. 552a(k)(5), shall be exempted from the provisions of 5 U.S.C. 552a listed in paragraph (c) of this section.

Claims (litigation) (FEMA/GC–1)—Limited Access

FEMA Enforcement (Compliance) (FEMA/GC–2)—Limited Access

General Investigative Files (FEMA/IG–2)—Limited Access

Security Management Information Systems (FEMA/SEC–1)—Limited Access

(2) *Reasons for exemptions.* All information about individuals in these records that meet the criteria stated in 5 U.S.C. 552a(k)(5) is exempt from the requirements of 5 U.S.C. 552a (c)(3) and (d). These provisions of the Privacy Act relate to making accountings of disclosure available to the subject and access to and amendment of records. These exemptions are claimed because the system of records entitled, FEMA/SEC–1, Security Management Information System, contains investigatory material compiled solely for the purpose of determining suitability, eligibility, or qualifications for access to classified information or classified Federal contracts, but only to the extent that the disclosure would reveal the identity of a source who furnished information to the Government under an express promise or, prior to September 27, 1975, under an implied promise that the identity of the source would be held in confidence. During the litigation process and investigations, it is possible that certain records from the system of records entitled, FEMA/SEC–1, Security Management System may be necessary and relevant to the litigation or investigation and included in these systems of records. To the extent that this occurs, the Administrator, FEMA, has determined that the records would also be exempted from subsections (c)(3) and (d) pursuant to 5 U.S.C. 552a(k)(5) to protect such records. A determination will be made at the time of the request for a record concerning whether specific information would reveal the identity of a source. This exemption is

required in order to protect the confidentiality of the sources of information compiled for the purpose of determining access to classified information. This confidentiality helps maintain the Government's continued access to information from persons who would otherwise refuse to give it.

[45 FR 64580, Sept. 30, 1980, as amended at 47 FR 54816, Dec. 6, 1982; 52 FR 5114, Feb. 19, 1987]

PART 7—NONDISCRIMINATION IN FEDERALLY-ASSISTED PROGRAMS (FEMA REG. 5)

Subpart A—Nondiscrimination in FEMA-Assisted Programs—General

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SOURCE: 30 FR 321, Jan. 9, 1965, unless otherwise noted. Redesignated at 45 FR 44575, July 1, 1980.

Subpart A—Nondiscrimination in FEMA-Assisted Programs—General

AUTHORITY: FEMA Reg. 5 issued under sec. 602, 78 Stat. 252; 42 U.S.C. 2000 d–1; 42 U.S.C. 1855–1885g; 50 U.S.C. 404.

SOURCE: 30 FR 321, Jan. 9, 1965, unless otherwise noted. Redesignated at 45 FR 44575, July 1, 1980, and further redesignated at 55 FR 23078, June 6, 1990.

§ 7.1 Purpose.

The purpose of this regulation is to effectuate the provisions of title VI of the Civil Rights Act of 1964 (hereafter referred to as the ''Act'') to the end that no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving Federal financial assistance from the Federal Emergency Management Agency.

§ 7.2 Definitions.

As used in this regulation:

(a) The term *responsible agency official* with respect to any program receiving Federal financial assistance means the Administrator of the Federal Emergency Management Agency or other official of the agency who by law or by delegation has the principal responsibility within the agency for the administration of the law extending such assistance.

(b) The term *United States* means the States of the United States, the District of Columbia, Puerto Rico, the Virgin Islands, American Samoa, Guam, Wake Island, the Canal Zone, and the territories and possessions of the United States, and the term *State* means any one of the foregoing.

(c) The term *Federal financial assistance* includes (1) grants and loans of Federal funds, (2) the grant or donation of Federal property and interests in property, (3) the detail of Federal personnel, (4) the sale and lease of, and the permission to use (on other than a casual or transient basis), Federal property or any interest in such property without consideration or at a nominal consideration, or at a consideration which is reduced for the purpose of assisting the recipient, or in recognition of the public interest to be served by such sale or lease to the recipient, and (5) any Federal agreement, arrangement, or other contract which has as one of its purposes the provision of assistance.

(d) The terms *program or activity* and *program* mean all of the operations of any entity described in paragraphs (d)(1) through (4) of this section, any part of which is extended Federal financial assistance:

(1)(i) A department, agency, special purpose district, or other instrumentality of a State or of a local government; or

(ii) The entity of such State or local government that distributes such assistance and each such department or agency (and each other State or local government entity) to which the assistance is extended, in the case of assistance to a State or local government;

(2)(i) A college, university, or other postsecondary institution, or a public system of higher education; or

(ii) A local educational agency (as defined in 20 U.S.C. 7801), system of vocational education, or other school system;

(3)(i) An entire corporation, partnership, or other private organization, or an entire sole proprietorship—

(A) If assistance is extended to such corporation, partnership, private organization, or sole proprietorship as a whole; or

(B) Which is principally engaged in the business of providing education, health care, housing, social services, or parks and recreation; or

(ii) The entire plant or other comparable, geographically separate facility to which Federal financial assistance is extended, in the case of any other corporation, partnership, private organization, or sole proprietorship; or

(4) Any other entity which is established by two or more of the entities described in paragraph (d)(1), (2), or (3) of this section.

(e) The term *facility* includes all or any portion of structure, equipment, or other real or personal property or interests therein, and the provision of facilities includes the construction, expansion, renovation, remodeling, alteration or acquisition of facilities.

(f) The term *recipient* means any State, political subdivision of any State, or instrumentality of any State or political subdivision, any public or private agency, institution, or organization, or other entity, or any individual, in any State, to whom Federal financial assistance is extended, directly or through another recipient, including any successor, assign, or transferee thereof, but such term does not include any ultimate beneficiary.

(g) The term *primary recipient* means any recipient which is authorized or required to extend Federal financial assistance to another recipient.

(h) The term *applicant* means one who submits an application, request, or plan required to be approved by a responsible agency official, or by a primary recipient, as a condition to eligibility for Federal financial assistance,

and the term *application* means such an application, request, or plan.

[30 FR 321, Jan. 9, 1965. Redesignated at 45 FR 44575, July 1, 1980, and further redesignated at 55 FR 23078, June 6, 1990. 68 FR 51379, Aug. 26, 2003]

§ 7.3 Application of this regulation.

No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program to which this regulation applies.

[68 FR 51379, Aug. 26, 2003]

§ 7.4 Further application of this regulation.

This regulation applies to any program for which Federal financial assistance is authorized under a law administered by the Federal Emergency Management Agency. It applies to money paid, property transferred, or other Federal financial assistance extended after the effective date of the regulation pursuant to an application approved prior to such effective date. This regulation does not apply to (a) any Federal financial assistance by way of insurance or guaranty contracts, (b) money paid, property transferred, or other assistance extended before the effective date of this regulation, (c) any assistance to any individual who is the ultimate beneficiary, or (d) any employment practice, under such program, of any employer, employment agency, or labor organization.

(Reorganization Plan No. 3 of 1978, E.O. 12127 and E.O. 12148)

[30 FR 321, Jan. 9, 1965. Redesignated at 45 FR 44575, July 1, 1980, as amended at 48 FR 44543, Sept. 29, 1983; 68 FR 51379, Aug. 26, 2003]

§ 7.5 Specific discriminatory actions prohibited.

(a) A recipient to which this regulation applies may not, directly or through contractual or other arrangements, on ground of race, color, or national origin:

(1) Deny any individual any service, financial aid, or other benefit provided under the program;

(2) Provide any service, financial aid, or other benefit to an individual which is different, or is provided in a different manner, from that provided to others under the program;

(3) Subject an individual to segregation or separate treatment in any matter related to his receipt of any service, financial aid, or other benefit under the program;

(4) Restrict an individual in any way in the enjoyment of any advantage or privilege enjoyed by others receiving any service, financial aid, or other benefit under the program;

(5) Treat an individual differently from others in determining whether he satisfies any admission, enrollment, quota, eligibility, membership or other requirement or condition which individuals must meet in order to be provided any service, financial aid, or other benefit provided under the program;

(6) Deny an individual an opportunity to participate in the program through the provision of services or otherwise or afford him an opportunity to do so which is different from that afforded others under the program.

(b) A recipient, in determining the types of services, financial aid, or other benefits, or facilities which will be provided under any such program, or the class of individuals to whom, or the situations in which, such services, financial aid, other benefits, or facilities will be provided under any such program, or the class of individuals to be afforded an opportunity to participate in any such program, may not, directly or through contractual or other arrangements, utilize criteria or methods of administration which have the effect of subjecting individuals to discrimination because of their race, color, or national origin, or have the effect of defeating or substantially impairing accomplishment of the objectives of the program as respect individuals of a particular race, color, or national origin.

(c) As used in this section the services, financial aid, or other benefits provided under a program receiving Federal financial assistance shall be deemed to include any service, financial aid, or other benefit provided in or through a facility provided with the aid of Federal financial assistance.

(d) The enumeration of specific forms of prohibited discrimination in this section does not limit the generality of the prohibition in section 4.

[30 FR 321, Jan. 9, 1965. Redesignated at 45 FR 44575, July 1, 1980, and further redesignated at 55 FR 23078, June 6, 1990. 68 FR 51379, Aug. 26, 2003]

§ 7.6 Life, health, and safety.

Notwithstanding the provisions of section 5, a recipient of Federal financial assistance shall not be deemed to have failed to comply with section 3, if immediate provision of a service or other benefit to an individual is necessary to prevent his death or serious impairment of his health or safety.

§ 7.7 Assurances required.

Every application for Federal financial assistance to which this regulation applies, and every application for Federal financial assistance to provide a facility shall, as a condition to its approval and the extension of any Federal financial assistance pursuant to the application, contain or be accompanied by an assurance that the program will be conducted or the facility operated in compliance with all requirements imposed by or pursuant to this regulation. In the case of an application for Federal financial assistance to provide real property or structures thereon, the assurance shall obligate the recipient, or, in the case of a subsequent transfer, the transferee, for the period during which the real property or structures are used for a purpose for which the Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits. In the case of personal property the assurance shall obligate the recipient for the period during which he retains ownership or possession of the property. In all other cases the assurance shall obligate the recipient for the period during which Federal financial assistance is extended pursuant to the application. The responsible agency official shall specify the form of the foregoing assurances and the extent to which like assurances will be required of subgrantee, contractors and subcontractors, transferees, successors in interest, and other participants. Any such assurance shall include provisions which give the United States a right to seek its judicial enforcement.

[30 FR 321, Jan. 9, 1965. Redesignated at 45 FR 44575, July 1, 1980, and further redesignated at 55 FR 23078, June 6, 1990. 68 FR 51379, Aug. 26, 2003]

§ 7.8 Elementary and secondary schools.

The requirements of section 7 with respect to any elementary or secondary school or school system shall be deemed to be satisfied if such school or school system (a) is subject to a final order of a court of the United States for the desegregation of such school or school system, and provides an assurance that it will comply with such order, including any future modification of such order, or (b) submits a plan for the desegregation of such school or school system which the United States Commissioner of Education determines is adequate to accomplish the purpose of the Act and this regulation, and provides reasonable assurance that it will carry out such plans; in any case of continuing Federal financial assistance the responsible agency official may reserve the right to redetermine, after such period as may be specified by him, the adequacy of the plan to accomplish the purposes of the Act and this regulation. In any case to which a final order of a court of the United States for the desegregation of such school or school system is entered after submission of such a plan, such plan shall be revised to conform to such final order, including any future modification of such order.

§ 7.9 Assurances from institutions.

(a) In the case of any application for Federal financial assistance to an institution of higher education, the assurance required by section 7 shall extend to admission practices and to all other practices relating to the treatment of students.

(b) The assurances required with respect to an institution of higher education, hospital, or any other institution, insofar as the assurance relates to the institution's practices with respect to admission or other treatment of individuals as students, patients, or clients of the institutions or to the opportunity to participate in the provision

of services or other benefits to such individuals, shall be applicable to the entire institution.

[30 FR 321, Jan. 9, 1965. Redesignated at 45 FR 44575, July 1, 1980, and further redesignated at 55 FR 23078, June 6, 1990. 68 FR 51379, Aug. 26, 2003]

§ 7.10 Compliance information.

(a) *Cooperation and assistance.* The responsible official in the Federal Emergency Management Agency shall to the fullest extent practicable seek the cooperation of recipients in obtaining compliance with this regulation and shall provide assistance and guidance to recipients to help them comply voluntarily with this regulation.

(b) *Compliance reports.* Each recipient shall keep such records and submit to the responsible agency official or his designee timely, complete, and accurate compliance reports at such times, and in such form and containing such information, as the responsible agency official or his designee may determine to be necessary to enable him to ascertain whether the recipient has complied or is complying with this regulation. In the case in which a primary recipient extends Federal financial assistance to any other recipient, such other recipient shall also submit such compliance reports to the primary recipient as may be necessary to enable the primary recipient to carry out its obligations under this regulation.

(c) *Access to sources of information.* Each recipient shall permit access by the responsible agency official or his designee during normal business hours to such of its books, records, accounts, and other sources of information, and its facilities as may be pertinent to ascertain compliance with this regulation. Where any information required of a recipient is in the exclusive possession of any other agency, institution or person and this agency, institution or person shall fail or refuse to furnish this information, the recipient shall so certify in its report and shall set forth what efforts it has made to obtain the information.

(d) *Information to beneficiaries and participants.* Each recipient shall make available to participants, beneficiaries, and other interested persons such information regarding the provisions of this regulation and its applicability to the program for which the recipient receives Federal financial assistance, and make such information available to them in such manner, as the responsible agency official finds necessary to apprise such persons of the protection against discrimination assured them by the Act and this regulation.

[30 FR 321, Jan. 9, 1965. Redesignated at 45 FR 44575, July 1, 1980, and further redesignated at 55 FR 23078, June 6, 1990. 68 FR 51379, Aug. 26, 2003]

§ 7.11 Conduct of investigations.

(a) *Periodic compliance reviews.* The responsible agency official or his designee shall from time to time review the practices of recipients to determine whether they are complying with this regulation.

(b) *Complaints.* Any person who believes himself or any specific class of individuals to be subjected to discrimination prohibited by this regulation may by himself or by a representative file a written complaint with the National Headquarters or any Regional Office of the Federal Emergency Management Agency. A complaint must be filed not later than 180 days from the date of the alleged discrimination, unless the time for filing is extended by the responsible agency official or his designee.

(c) *Investigations.* The responsible agency official or his designee will make a prompt investigation whenever a compliance review, report, complaint, or any other information indicates a possible failure to comply with this regulation. The investigation should include, where appropriate, a review of the pertinent practices and policies of the recipient, the circumstances under which the possible noncompliance with this regulation occurred, and other factors relevant to a determination as to whether the recipient has failed to comply with this regulation.

(d) *Resolution of matters.* (1) If an investigation pursuant to paragraph (c) of this section indicates a failure to comply with this regulation, the responsible agency official or his designee will so inform the recipient and the matter will be resolved by informal means whenever possible. If it has been

determined that the matter cannot be resolved by informal means, action will be taken as provided for in section 12.

(2) If an investigation does not warrant action pursuant to paragraph (d)(1) of this section the responsible agency official or his designee will so inform the recipient and the complainant, if any, in writing.

(e) *Intimidatory or retaliatory acts prohibited.* No recipient or other person shall intimidate, threaten, coerce, or discriminate against any individual for the purpose of interfering with any right or privilege secured by section 601 of the Act or this regulation, or because he has made a complaint, testified, assisted, or participated in any manner in an investigation, proceeding, or hearing under this regulation. The identity of complainants shall be kept confidential except to the extent necessary to carry out the purposes of this regulation, including the conduct of any investigation, hearing, or judicial proceeding arising thereunder.

[30 FR 321, Jan. 9, 1965. Redesignated at 45 FR 44575, July 1, 1980, and further redesignated at 55 FR 23078, June 6, 1990, as amended at 64 FR 38309, July 16, 1999]

§7.12 Procedure for effecting compliance.

(a) *General.* If there appears to be a failure or threatened failure to comply with this regulation, and if the noncompliance or threatened noncompliance cannot be corrected by informal means, compliance with this regulation may be effected by the suspension or termination of or refusal to grant or to continue Federal financial assistance or by any other means authorized by law. Such other means may include, but are not limited to, (1) a reference to the Department of Justice with a recommendation that appropriate proceedings be brought to enforce any rights of the United States under any law of the United States (including other titles of the Act), or any assurance or other contractual undertaking, and (2) any applicable proceeding under state or local law.

(b) *Noncompliance with section 7.* If an applicant fails or refuses to furnish an assurance required under section 7 or otherwise fails or refuses to comply with a requirement imposed by or pursuant to that section Federal financial assistance may be refused in accordance with the procedures of paragraph (c) of this section. The agency shall not be required to provide assistance in such a case during the pendency of the administrative proceedings under such paragraph except that the agency shall continue assistance during the pendency of such proceedings where such assistance is due and payable pursuant to an application thereof approved prior to the effective date of this regulation.

(c) *Termination of or refusal to grant or to continue Federal financial assistance.* No order suspending, terminating or refusing to grant or continue Federal financial assistance shall become effective until (1) the responsible agency official has advised the applicant or recipient of his failure to comply and has determined that compliance cannot be secured by voluntary means, (2) there has been an express finding on the record, after opportunity for hearing, of a failure by the applicant or recipient to comply with a requirement imposed by or pursuant to this regulation, (3) the action has been approved by the Administrator of the Federal Emergency Management Agency pursuant to section 14, and (4) the expiration of 30 days after the Administrator has filed with the committee of the House and the committee of the Senate having legislative jurisdiction over the program involved, a full written report of the circumstances and the grounds for such action. Any action to suspend or terminate or to refuse to grant or to continue Federal financial assistance shall be limited to the particular political entity, or part thereof, or other applicant or recipient as to whom such a finding has been made and shall be limited in its effect to the particular program, or part thereof, in which such noncompliance has been so found.

(d) *Other means authorized by law.* No action to effect compliance by any other means authorized by law shall be taken until (1) the responsible agency official has determined that compliance cannot be secured by voluntary means, (2) the action has been approved by the Administrator of the Federal Emergency Management Agency, (3)

the recipient or other person has been notified of its failure to comply and of the action to be taken to effect compliance, and (4) the expiration of at least 10 days from the mailing of such notice to the recipient or other person. During this period of at least 10 days additional efforts shall be made to persuade the recipient or other person to comply with the regulation and to take such corrective action as may be appropriate.

§ 7.13 Hearings.

(a) *Opportunity for hearing.* Whenever an opportunity for a hearing is required by section 12(c), reasonable notice shall be given by registered or certified mail, return receipt requested, to the affected applicant or recipient. This notice shall advise the applicant or recipient of the action proposed to be taken, the specific provision under which the proposed action against it is to be taken, and the matters of fact or law asserted as the basis for this action, and either (1) fix a date not less than 20 days after the date of such notice within which the applicant or recipient may request of the responsible agency official that the matter be scheduled for hearing or (2) advise the applicant or recipient that the matter in question has been set down for hearing at a stated place and time. The time and place so fixed shall be reasonable and shall be subject to change for cause. The complainant, if any, shall be advised of the time and place of the hearing. An applicant or recipient may waive a hearing and submit written information and argument for the record. The failure of an applicant or recipient to request a hearing under this subsection or to appear at a hearing for which a date has been set shall be deemed to be a waiver of the right to a hearing under section 602 of the Act and section 12(c) of this regulation and consent to the making of a decision on the basis of such information as is available.

(b) *Time and place of hearing.* Hearings shall be held at the National Headquarters of the Federal Emergency Management Agency in Washington, DC, at a time fixed by the responsible agency official unless he determines that the convenience of the applicant or recipient or of the agency requires that another place be selected. Hearings shall be held before the responsible agency official or, at his discretion, before a hearing examiner designated in accordance with section 11 of the Administrative Procedure Act.

(c) *Right to counsel.* In all proceedings under this section, the applicant or recipient and the agency shall have the right to be represented by counsel.

(d) *Procedures, evidence, and record.* (1) The hearing, decision, and any administrative review thereof shall be conducted in conformity with sections 5–8 of the Administrative Procedure Act, and in accordance with such rules of procedure as are proper (and not inconsistent with this section) relating to the conduct of the hearing, giving of notices subsequent to those provided for in paragraph (a) of this section, taking of testimony, exhibits, arguments and briefs, requests for findings, and other related matters. Both the agency and the applicant or recipient shall be entitled to introduce all relevant evidence on the issues as stated in the notice for hearing or as determined by the officer conducting the hearing at the outset of or during the hearing.

(2) Technical rules of evidence shall not apply to hearings conducted pursuant to this regulation, but rules or principles designed to assure production of the most credible evidence available and to subject testimony to test by cross-examination shall be applied where reasonably necessary by the officer conducting the hearing. The hearing officer may exclude irrelevant, immaterial, or unduly repetitious evidence. All documents and other evidence offered or taken for the record shall be open to examination by the parties and opportunity shall be given to refute facts and arguments advanced on either side of the issues. A transcript shall be made of the oral evidence except to the extent the substance thereof is stipulated for the record. All decisions shall be based upon the hearing record and written findings shall be made.

(e) *Consolidated or joint hearings.* In cases in which the same or related facts are asserted to constitute noncompliance with this regulation with

respect to two or more Federal statutes, authorities, or other means by which Federal financial assistance is extended and to which this regulation applies, or noncompliance with this regulation and the regulations of one or more other Federal departments or agencies issued under title VI of the Act, the Administrator of the Federal Emergency Management Agency may, by agreement with such other departments or agencies where applicable, provide for the conduct of consolidated or joint hearings, and for the application to such hearings of rules of procedures not inconsistent with this regulation. Final decisions in such cases, insofar as this regulation is concerned, shall be made in accordance with section 14.

[30 FR 321, Jan. 9, 1965. Redesignated at 45 FR 44575, July 1, 1980, and further redesignated at 55 FR 23078, June 6, 1990. 68 FR 51379, Aug. 26, 2003]

§ 7.14 Decisions and notices.

(a) *Decision by person other than the responsible agency official.* If the hearing is held by a hearing examiner such hearing examiner shall either make an initial decision, if so authorized, or certify the entire record including his recommended findings and proposed decision to the responsible agency official for a final decision, and a copy of such initial decision or certification shall be mailed to the applicant or recipient. Where the initial decision is made by the hearing examiner the applicant or recipient may within 30 days of the mailing of such notice of initial decision file with the responsible agency official his exceptions to the initial decision, with his reasons therefor. In the absence of exceptions, the responsible agency official may on his own motion within 45 days after the initial decision serve on the applicant or recipient a notice that he will review the decision. Upon the filing of such exceptions or of such notice of review the responsible agency official shall review the initial decision and issue his own decision thereon including the reasons therefor. In the absence of either exceptions or a notice of review the initial decision shall constitute the final decision of the responsible agency official.

(b) *Decisions on record or review by the responsible agency official.* Whenever a record is certified to the responsible agency official for decision or he reviews the decision of a hearing examiner pursuant to paragraph (a) of this section, or whenever he conducts the hearing, the applicant or recipient shall be given reasonable opportunity to file with him briefs or other written statements of its contentions, and a copy of his final decision shall be given in writing to the applicant or recipient and to the complainant, if any.

(c) *Decisions on record where a hearing is waived.* Whenever a hearing is waived pursuant to section 13(a) a decision shall be made by the responsible agency official on the record and a copy of such decision shall be given in writing to the applicant or recipient, and to the complainant, if any.

(d) *Rulings required.* Each decision of a hearing officer or responsible agency official shall set forth his ruling on each finding, conclusion, or exception presented, and shall identify the requirement or requirements imposed by or pursuant to this regulation with which it is found that the applicant or recipient has failed to comply.

(e) *Approval by Administrator.* Any final decision of a responsible agency official (other than the Administrator of the agency) which provides for the suspension or termination of, or the refusal to grant or continue Federal financial assistance, or the imposition of any other sanction available under this regulation or the Act, shall promptly be transmitted to the Administrator of the Federal Emergency Management Agency who may approve such decision, may vacate it, or remit or mitigate any sanction imposed.

(f) *Content of orders.* The final decision may provide for suspension or termination of, or refusal to grant or continue Federal financial assistance, in whole or in part, to which this regulation applies, and may contain such terms, conditions, and other provisions as are consistent with and will effectuate the purposes of the Act and this regulation, including provisions designed to assure that no Federal financial assistance to which this regulation applies will thereafter be extended to the applicant or recipient determined

by such decision to be in default in its performance of an assurance given by it pursuant to this regulation, or to have otherwise failed to comply with this regulation, unless and until it corrects its noncompliance and satisfies the Administrator of the Federal Emergency Management Agency that it will fully comply with this regulation.

[30 FR 321, Jan. 9, 1965. Redesignated at 45 FR 44575, July 1, 1980, and further redesignated at 55 FR 23078, June 6, 1990. 68 FR 51379, Aug. 26, 2003]

§ 7.15 Judicial review.

Action taken pursuant to section 602 of the Act is subject to judicial review as provided in section 603 of the Act.

§ 7.16 Effect on other regulations; forms and instructions.

(a) *Effect on other regulations.* All regulations, orders, or like directions heretofore issued by any officer of the Federal Emergency Management Agency which impose requirements designed to prohibit any discrimination against individuals on the ground of race, color, or national origin under any program to which this regulation applies, and which authorize the suspension or termination of or refusal to grant or to continue Federal financial assistance to any applicant for or recipient of such assistance for failure to comply with such requirements, are hereby superseded to the extent that such discrimination is prohibited by this regulation, except that nothing in this regulation shall be deemed to relieve any person of any obligation assumed or imposed under any such superseded regulation, order, instruction, or like direction prior to the effective date of this regulation. Nothing in this regulation, however, shall be deemed to supersede Executive Orders 10925 and 11114 (including future amendments thereof) and regulations issued thereunder, or any other regulations or instructions, insofar as such regulations or instructions prohibit discrimination on the ground of race, color, or national origin in any program or situation to which this regulation is inapplicable, or prohibit discrimination on any other ground.

(b) *Forms and instructions.* Each responsible agency official shall issue and promptly make available to interested persons forms and detailed instructions and procedures for effectuating this regulation as applied to programs to which this regulation applies and for which he is responsible.

(c) *Supervision and coordination.* The Administrator of the Federal Emergency Management Agency may from time to time assign to officials of other departments or agencies of the Government with the consent of such departments or agencies, responsibilities in connection with the effectuation of the purposes of title VI of the Act and this regulation (other than responsibility for final decision as provided in section 14), including the achievement of effective coordination and maximum uniformity within the agency and within the Executive Branch of the Government in the application of title VI and this regulation to similar programs and in similar situations.

[30 FR 321, Jan. 9, 1965. Redesignated at 45 FR 44575, July 1, 1980, and further redesignated at 55 FR 23078, June 6, 1990. 68 FR 51379, Aug. 26, 2003]

Subparts B–D [Reserved]

Subpart E—Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance From FEMA

AUTHORITY: Age Discrimination Act of 1975, as amended (42 U.S.C. 6101 *et seq.*); 45 CFR part 90.

SOURCE: 55 FR 23078, June 6, 1990, unless otherwise noted.

GENERAL

§ 7.910 What is the purpose of the Age Discrimination Act of 1975?

The Age Discrimination Act of 1975 (the ''Act''), as amended, is designed to prohibit discrimination on the basis of age in programs or activities receiving Federal financial assistance. The Act also permits federally-assisted programs or activities, and recipients of Federal funds, to continue to use certain age distinctions and factors other

than age which meet the requirements of the Act and this regulation.

[55 FR 23078, June 6, 1990, as amended at 68 FR 51380, Aug. 26, 2003]

§ 7.911 What is the purpose of FEMA's age discrimination regulation?

The purpose of this regulation is to set out FEMA's policies and procedures under the Age Discrimination Act of 1975 and the general governmentwide regulations, 45 CFR part 90. The Act and the general regulations prohibit discrimination on the basis of age in programs or activities receiving Federal financial assistance. The Act and the general regulations permit federally-assisted programs or activities, and recipients of Federal funds, to continue to use age distinctions and factors other than age which meet the requirements of the Act and its implementing regulations.

[55 FR 23078, June 6, 1990, as amended at 68 FR 51380, Aug. 26, 2003]

§ 7.912 To what programs or activities does this regulation apply?

(a) The Act and this regulation apply to each FEMA recipient and to each program or activity operated by the recipient which receives Federal financial assistance provided by FEMA.

(b) The Act and this regulation do not apply to:

(1) An age distinction contained in that part of a Federal, State or local statute or ordinance adopted by an elected, general purpose legislative body which:

(i) Provides any benefits or assistance to persons based on age; or

(ii) Establishes criteria for participation in age-related terms; or

(iii) Describes intended beneficiaries or target groups in age-related terms.

(2) Any employment practice of any employer, employment agency, labor organization, or any labor-management joint apprenticeship training program, except for any program or activity receiving Federal financial assistance for public service employment under the Job Training Partnership Act (29 U.S.C. 150, *et seq.*)

[55 FR 23078, June 6, 1990, as amended at 68 FR 51380, Aug. 26, 2003]

§ 7.913 Definition of terms used in this regulation.

As used in this regulation, the term *Act* means the Age Discrimination Act of 1975 as amended (title III of Pub. L. 94–135).

Action means any act, activity, policy, rule, standard, or method of administration; or the use of any policy, rule, standard or method of administration.

Administrator means the Administrator of the Federal Emergency Management Agency.

Age means how old a person is, or the number of years from the date of a person's birth.

Age distinction means any action using age or an age-related term.

Age-related term means a word or words which necessarily imply a particular age or range of ages (for example, *children*, *older persons*, but not *student*).

Agency means the Federal Emergency Management Agency.

Federal financial assistance means any grant, entitlement, loan, cooperative agreement, contract (other than a procurement contract or a contract of insurance or guaranty), or any other arrangement by which the agency provides or otherwise makes available assistance in the form of:

(a) Funds; or

(b) Services or Federal personnel; or

(c) Real and personal property or any interest in or use of property, including:

(1) Transfers or leases of property for less than fair market value or for reduced consideration; and

(2) Proceeds from a subsequent transfer or lease of property if the Federal share of its fair market value is not returned to the Federal Government.

Normal operation means the operation of a program or activity without significant changes that would impair its ability to meet its objective.

Program or activity means all of the operations of any entity described in paragraphs (1) through (4) of this definition, any part of which is extended Federal financial assistance:

(1)(i) A department, agency, special purpose district, or other instrumentality of a State or of a local government; or

(ii) The entity of such State or local government that distributes such assistance and each such department or agency (and each other State or local government entity) to which the assistance is extended, in the case of assistance to a State or local government;

(2)(i) A college, university, or other postsecondary institution, or a public system of higher education; or

(ii) A local educational agency (as defined in 20 U.S.C. 7801), system of vocational education, or other school system;

(3)(i) An entire corporation, partnership, or other private organization, or an entire sole proprietorship—

(A) If assistance is extended to such corporation, partnership, private organization, or sole proprietorship as a whole; or

(B) Which is principally engaged in the business of providing education, health care, housing, social services, or parks and recreation; or

(ii) The entire plant or other comparable, geographically separate facility to which Federal financial assistance is extended, in the case of any other corporation, partnership, private organization, or sole proprietorship; or

(4) Any other entity which is established by two or more of the entities described in paragraph (1), (2), or (3) of this definition.

Recipient means any State or its political subdivision, any instrumentality of a State or its political subdivision, institution, organization, or other entity, or any person to which Federal financial assistance is extended, directly or through another recipient. Recipient includes any successor, assignee, or transferee, but excludes the ultimate beneficiary of the assistance.

Statutory objective means any purpose of a program or activity expressly stated in any Federal statute, State statute or local statute or ordinance adopted by an elected, general purpose legislative body.

Subrecipient means any of the entities in the definition of ''recipient'' to which a recipient extends or passes on Federal financial assistance. A subrecipient is generally regarded as a recipient of Federal financial assistance and has all the duties of a recipient in these regulations.

United States includes the States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, Wake Island, the Canal Zone, the Trust Territory of the Pacific Islands and all other territories and possessions of the United States. The term ''State'' also includes any one of the foregoing.

[55 FR 23078, June 6, 1990, as amended at 68 FR 51380, Aug. 26, 2003; 74 FR 15335, Apr. 3, 2009]

STANDARDS FOR DETERMINING AGE DISCRIMINATION

§ 7.920 Rules against discrimination.

The rules stated in this section are limited by the exceptions contained in §§ 7.921 and 7.922 of these regulations.

(a) *General rule:* No person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under, any program or activity receiving Federal financial assistance.

(b) *Specific rules:* A recipient may not, in any program or activity receiving Federal financial assistance, directly or through contractual licensing, or other arrangements, use age distinctions or take any other actions which have the effect, on the basis of age, of:

(1) Excluding individuals from, denying them the benefits of, subjecting them to discrimination under, a program or activity receiving Federal financial assistance; or

(2) Denying or limiting individuals in their opportunity to participate in any program or activity receiving Federal financial assistance. The specific forms of age discrimination listed in paragraph (b) of this section do not necessarily constitute a complete list.

§ 7.921 Exceptions to the rules against age discrimination: Normal operation or statutory objective of any program or activity.

A recipient is permitted to take an action, otherwise prohibited by § 7.920, if the action reasonably takes into account age as a factor necessary to the

normal operation of the achievement of any statutory objective of a program or activity. An action reasonably takes into account age as a factor necessary to the normal operation or the achievement of any statutory objective of a program or activity, if:

(a) Age is used as a measure or approximation of one or more other characteristics; and

(b) The other characteristic(s) must be measured or approximated in order for the normal operation of the program or activity to continue, or to achieve any statutory objective of the program or activity; and

(c) The other characteristic(s) can be reasonably measured or approximated by the use of age; and

(d) The other characteristic(s) are impractical to measure directly on an individual basis.

§ 7.922 Exceptions to the rules against age discrimination: Reasonable factors other than age.

A recipient is permitted to take an action otherwise prohibited by § 7.920 which is based on a factor other than age, even though that action may have a disproportionate effect on persons of different ages only if the factor bears a direct and substantial relationship to the normal operation of the program or activity or to the achievement of a statutory objective.

§ 7.923 Burden of proof for exceptions.

The burden of proving that an age distinction or other action falls within the exceptions outlined in §§ 7.921 and 7.922 is on the recipient of Federal financial assistance.

§ 7.924 Affirmative action by recipient.

Even in the absence of a finding of discrimination, a recipient may take affirmative action to overcome the effects of conditions that resulted in the limited participation in the recipient's program or activity on the basis of age.

§ 7.925 Special benefits for children and the elderly.

If a recipient operating a program or activity provides special benefits to the elderly or to children, such use of age distinctions shall be presumed to be necessary to the normal operation of the program or activity, notwithstanding the provisions of § 7.921.

[55 FR 23078, June 6, 1990, as amended at 68 FR 51380, Aug. 26, 2003]

§ 7.926 Age distinctions contained in FEMA regulations.

Any age distinctions contained in a rule or regulation issued by FEMA shall be presumed to be necessary to the achievement of a statutory objective of the program or activity to which the rule or regulation applies, notwithstanding the provisions of § 7.921.

[55 FR 23078, June 6, 1990, as amended at 68 FR 51380, Aug. 26, 2003]

DUTIES OF FEMA RECIPIENTS

§ 7.930 General responsibilities.

Each FEMA recipient has primary responsibility to ensure that its programs or activities are in compliance with the Act and this regulation, and shall take steps to eliminate violations of the Act. A recipient also has responsibility to maintain records, provide information, and to afford FEMA access to its records to the extent FEMA finds necessary to determine whether the recipient is in compliance with the Act and this regulation.

[55 FR 23078, June 6, 1990, as amended at 68 FR 51380, Aug. 26, 2003]

§ 7.931 Notice to subrecipients and beneficiaries.

(a) Where a recipient passes on Federal financial assistance from FEMA to subrecipients, the recipient shall provide the subrecipients written notice of their obligations under the Act and this regulation.

(b) Each recipient shall make necessary information about the Act and this regulation available to its beneficiaries in order to inform them about the protection against discrimination provided by the Act and this regulation.

[55 FR 23078, June 6, 1990, as amended at 68 FR 51380, Aug. 26, 2003]

§ 7.932 Assurance of compliance and recipient assessment of age distinctions.

(a) Each recipient of Federal financial assistance from FEMA shall sign a written assurance as specified by FEMA that it will comply with Act and this regulation.

(b) Recipient assessment of age distinctions. (1) As part of the compliance review under §7.940 or complaint investigation under §7.943, FEMA may require a recipient employing the equivalent of fifteen or more employees to complete written evaluation, in a manner specified by the responsible Agency official, of any age distinction imposed in its program or activity receiving Federal financial assistance from FEMA to assess the recipient's compliance with the Act.

(2) Whenever an assessment indicates a violation of the Act and the FEMA regulations, the recipient shall take corrective action.

§ 7.933 Information requirement.

Each recipient shall:

(a) Keep records in a form acceptable to FEMA and containing information which FEMA determines are necessary to ascertain whether the recipient is complying with the Act and this regulation.

(b) Provide to FEMA, upon request, information and reports which FEMA determines are necessary to ascertain whether the recipient is complying with the Act and this regulation.

(c) Permit FEMA reasonable access to the books, records, accounts, and other recipient facilities and sources of information to the extent FEMA determines is necessary to ascertain whether the recipient is complying with the Act and this regulation.

INVESTIGATION, CONCILIATION, AND ENFORCEMENT PROCEDURES

§ 7.940 Compliance reviews.

(a) FEMA may conduct compliance reviews and preaward reviews or use other similar procedures that will permit it to investigate and correct violations of the Act and this regulation. FEMA may conduct these reviews even in the absence of a complaint against a recipient. The reviews may be as comprehensive as necessary to determine whether a violation of the Act and this regulation has occurred.

(b) If a compliance review or preaward review indicates a violation of the Act or this regulation, FEMA will attempt to achieve voluntary compliance with the Act. If voluntary compliance cannot be achieved, FEMA will arrange for enforcement as described in §7.945.

§ 7.941 Complaints.

(a) Any person, individually or as a member of a class or on behalf of others, may file a complaint with FEMA, alleging discrimination prohibited by the Act or these regulations occurring after the date of final adoption of this rule. A complainant shall file a complaint within 180 days from the date the complainant first had knowledge of the alleged act of discrimination. However, for good cause showing, FEMA may extend this time limit.

(b) FEMA will consider the date a complaint is filed to be the date upon which the complaint is sufficient to be processed. A complaint is deemed ''sufficient'' when it contains particulars (e.g., names, addresses, and telephone numbers of parties involved; date(s) of alleged discrimination; kind(s) of alleged discrimination) upon which to begin an investigation.

(c) FEMA will attempt to facilitate the filing of complaints wherever possible, including taking the following measures:

(1) Accepting as a sufficient complaint any written statement which identifies the parties involved and the date the complainant first had knowledge of the alleged violation, describes generally the action or practice complained of, and is signed by the complainant.

(2) Freely permitting a complainant to add information to the complaint to meet the requirements of a sufficient complaint.

(3) Notifying the complainant and the recipient of their rights and obligations under the complaint procedure, including the right to have a representative at all stages of the complaint procedure.

(4) Notifying the complainant and the recipient (or their representatives)

of their right to contact FEMA for information and assistance regarding the complaint resolution process.

(d) FEMA will return to the complainant any complaint outside the jurisdiction of this regulation, and will state the reason(s) why it is outside the jurisdiction of this regulation.

§ 7.942 Mediation.

(a) FEMA will promptly refer to a mediation agency designated by the Administrator all sufficient complaints that:

(1) Fall within the jurisdiction of the Act and this regulation, unless the age distinction complained of is clearly within an exception; and,

(2) Contain all information necessary for further processing.

(b) Both the complainant and the recipient shall participate in the mediation process to the extent necessary to reach an agreement or for the mediator to make an informed judgment that an agreement is not possible.

(c) If the complainant and the recipient reach an agreement, the mediator shall prepare a written statement of the agreement and have the complainant and the recipient sign it. The mediator shall send a copy of the agreement to FEMA. FEMA will take no further action on the complaint unless the complainant or the recipient fails to comply with the agreement.

(d) The mediator shall protect the confidentiality of all information obtained in the course of the mediation process. No mediator shall testify in any adjudicative proceeding, produce any document, or otherwise disclose any information obtained in the course of the mediation process without prior approval of the head of the mediation agency.

(e) The mediation will proceed for a maximum of 60 days after a complaint is filed with FEMA. Mediation ends if:

(1) Sixty days elapse from the time the complaint is filed; or

(2) Prior to the end of that 60 day period, an agreement is reached; or

(3) Prior to the end of that 60 day period, the mediator determines that an agreement cannot be reached. This 60 day period may be extended by the mediator, with the concurrence of FEMA, for not more than 30 days if the mediator determines agreement will likely be reached during such extended period.

(f) The mediator shall return unresolved complaints to FEMA.

§ 7.943 Investigation.

(a) *Informal investigation.* (1) FEMA will investigate complaints that are unresolved after mediation or are reopened because of a violation of a mediation agreement.

(2) As part of the initial investigation, FEMA will use informal fact finding methods, including joint or separate discussion with the complainant and recipient, to establish the facts and, if possible, settle the complaint on terms that are mutually agreeable to the parties. FEMA may seek the assistance of any involved state agency.

(3) FEMA will put any agreement in writing and have it signed by the parties and an authorized official at FEMA.

(4) The settlement shall not affect the operation of any other enforcement effort of FEMA, including compliance reviews and investigation of other complaints which may involve the recipient.

(5) The settlement is not a finding of discrimination against a recipient.

(b) *Formal investigation.* If FEMA cannot resolve the complaint through informal investigation, it will begin to develop formal findings through further investigation of the complaint. If the investigation indicates a violation of this regulation, FEMA will attempt to obtain voluntary compliance, it will begin enforcement as described in § 7.945.

[55 FR 23078, June 6, 1990, as amended at 68 FR 51380, Aug. 26, 2003]

§ 7.944 Prohibition against intimidation or retaliation.

A recipient may not engage in acts of intimidation or retaliation against any person who:

(a) Attempts to assert a right protected by the Act or this regulation; or

(b) Cooperates in any mediation, investigation, hearing, or other part of FEMA's investigation, conciliation and enforcement process.

§ 7.945 Compliance procedure.

(a) FEMA may enforce the Act and this regulation through:

(1) Termination of a recipient's Federal financial assistance from FEMA under the program or activity involved where the recipient has violated the Act or this regulation. The determination of the recipient's violation may be made only after a recipient has had an opportunity for a hearing on the record before an administrative law judge.

(2) Any other means authorized by law including but not limited to:

(i) Referral to the Department of Justice for proceedings to enforce any rights of the United States or obligations of the recipient created by the Act or this regulation.

(ii) Use of any requirement of or referral to any Federal, State or local government agency that will have the effect of correcting a violation of the Act or this regulation.

(b) FEMA will limit any termination under §7.945(a)(1) to the particular recipient and particular program or activity or part of such program or activity FEMA finds in violation of this regulation. FEMA will not base any part of a termination on a finding with respect to any program or activity of the recipient which does not receive Federal financial assistance from FEMA.

(c) FEMA will take no action under paragraph (a) until:

(1) The Administrator has advised the recipient of its failure to comply with the Act and this regulation and has determined that voluntary compliance cannot be obtained.

(2) Thirty days have elapsed after the Administrator has sent a written report of the circumstances and grounds of the action to the committees of the Congress having legislative jurisdiction over the program or activity involved. The Administrator will file a report whenever any action is taken under paragraph (a).

(d) FEMA also may defer granting new Federal financial assistance from FEMA to a recipient when a hearing under §7.945(a)(1) is initiated.

(1) New Federal financial assistance from FEMA includes all assistance for which FEMA requires an application or approval, including renewal or continuation of existing activities, or authorization of new activities, during the deferral period. New Federal financial assistance from FEMA does not include increases in funding as a result of changed computation of formula awards or assistance approved prior to the beginning of a hearing under §7.945(a)(1).

(2) FEMA will not begin a deferral until the recipient has received a notice of an opportunity for a hearing under §7.945(a)(1). FEMA will not continue a deferral for more than 60 days unless a hearing has begun within that time or the time for beginning the hearing has been extended by mutual consent of the recipient for more than 30 days after the close of the hearing, unless the hearing results in a finding against the recipient.

(3) FEMA will limit any deferral to the particular recipient and particular program or activity or part of such program or activity FEMA finds in violation of this regulation. FEMA will not base any part of a deferral on a finding with respect to any program or activity of the recipient which does not and would not, in connection with new funds, receive Federal financial assistance from FEMA.

[55 FR 23078, June 6, 1990, as amended at 68 FR 51380, Aug. 26, 2003]

§ 7.946 Hearings, decisions, post-termination proceedings.

Certain FEMA procedural provisions applicable to title VI of the Civil Rights Act of 1964 apply to FEMA enforcement of this regulation. They are found at 44 CFR 7.10 through 7.16.

§ 7.947 Remedial action by recipient.

Where FEMA finds a recipient has discriminated on the basis of age, the recipient shall take any remedial action that FEMA may require to overcome the effects of the discrimination. If another recipient exercises control over the recipient that had discriminated, FEMA may require both recipients to take remedial action.

§ 7.948 Alternate funds disbursal procedure.

(a) When FEMA withholds funds from recipient under this regulation, the Administrator may, if allowable under the statute governing the assistance,

disburse the withheld funds directly to an alternate recipient: Any public or nonprofit private organization or agency, or State or political subdivision of the State.

(b) The Administrator will require any alternate recipient to demonstrate:

(1) The ability to comply with this regulation; and

(2) The ability to achieve the goals of the Federal statute authorizing the Federal financial assistance.

[55 FR 23078, June 6, 1990, as amended at 68 FR 51380, Aug. 26, 2003]

§ 7.949 Exhaustion of administrative remedies.

(a) A complainant may file a civil action following the exhaustion of administrative remedies under the Act. Administrative remedies are exhausted if:

(1) 180 days have elapsed since the complainant filed the complaint and FEMA had made no finding with regard to the complaint; or

(2) FEMA issues any finding in favor of the recipient.

(b) If FEMA fails to make a finding within 180 days or issues a finding in favor of the recipient, FEMA shall:

(1) Promptly advise the complainant in writing of this fact; and

(2) Advise the complainant of his or her right to bring a civil action for injunctive relief; and

(3) Inform the complainant:

(i) That the complainant may bring a civil action only in a United States District Court for the district in which the recipient is located or transacts business;

(ii) That a complainant prevailing in a civil action has the right to be awarded the costs of the action, including reasonable attorney's fees, but that the complainant must demand these costs in the complaint at the time it is filed.

(iii) That before commencing the action, the complainant shall give 30 days notice by registered mail to the Administrator, the Attorney General of the United States, and the recipient;

(iv) That the notice must state: The alleged violation of the Act; the relief requested; the court in which the complainant is bringing the action; and whether or not attorney's fees are demanded in the event the complainant prevails; and

(v) That the complainant may not bring an action if the same alleged violation of the Act by the same recipient is the subject of a pending action in any court (Federal or State) of the United States.

PART 8 [RESERVED]

PART 9—FLOODPLAIN MANAGEMENT AND PROTECTION OF WETLANDS

Sec.

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AUTHORITY: 6 U.S.C. 101 *et seq.;* 42 U.S.C. 4001 *et seq.;* 42 U.S.C. 4321 *et seq.;* E.O. 11988 of May 24, 1977, 42 FR 26951, 3 CFR, 1977 Comp., p. 117; E.O. 11990 of May 24, 1977, 42 FR 26961, 3 CFR, 1977 Comp. p. 121; E.O. 13690, 80 FR 6425; E.O. 14030, 86 FR 27967.

SOURCE: 45 FR 59526, Sept. 9, 1980, unless otherwise noted.

§ 9.1 Purpose.

This part sets forth the policy, procedure, and responsibilities to implement and enforce relevant sections of the National Flood Insurance Act of 1968, as amended, and the Flood Disaster Protection Act of 1973, as amended, 42 U.S.C. 4001 *et seq.*, the National Environmental Policy Act of 1969, 42 U.S.C. 4321 *et seq.*, as amended, and other relevant statutory authorities in conjunction with Executive Order 11988, Floodplain Management, as amended, and

Executive Order 11990, Protection of Wetlands.

[89 FR 57037, July 11, 2024]

§ 9.2 Policy.

(a) FEMA shall take no action unless and until the requirements of this regulation are complied with.

(b) The Agency will provide leadership in floodplain management and the protection of wetlands, informed by the best available and actionable science, to bolster the resilience of communities and Federal assets against the impacts of flooding, which are anticipated to increase over time due to the effects of changing conditions which adversely affect the environment, economic prosperity, public health and safety, and national security.

(c) The Agency shall integrate the goals of the Orders to the greatest possible degree into its procedures for implementing the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*).

(d) The Agency shall:

(1) Minimize the impact of floods on human health, safety, and welfare;

(2) Avoid long- and short-term adverse impacts associated with the occupancy and modification of floodplains and the destruction and modification of wetlands;

(3) Avoid direct and indirect support of floodplain development and new construction in wetlands wherever there is a practicable alternative;

(4) Reduce the risk of flood loss;

(5) Promote the use of nonstructural flood protection methods to reduce the risk of flood loss;

(6) Minimize the destruction, loss, or degradation of wetlands;

(7) Restore and preserve the natural and beneficial values served by floodplains;

(8) Preserve and enhance the natural values of wetlands;

(9) Involve the public throughout the floodplain management and wetlands protection decision-making process;

(10) Adhere to the objectives of the Unified National Program for Floodplain Management; and

(11) Improve and coordinate the Agency's plans, programs, functions, and resources so that the Nation may attain the widest range of beneficial uses of the environment without degradation or risk to health and safety.

[45 FR 59526, Sept. 9, 1980, as amended at 89 FR 57038, July 11, 2024]

§ 9.3 Severability.

Any provision of this part held to be invalid or unenforceable as applied to any action should be construed so as to continue to give the maximum effect to the provision permitted by law, unless such holding is that the provision of this part is invalid and unenforceable in all circumstances, in which event the provision should be severable from the remainder of this subpart and shall not affect the remainder thereof.

[89 FR 57038, July 11, 2024]

§ 9.4 Definitions.

The following definitions shall apply throughout this regulation.

0.2 percent annual chance flood elevation means the elevation to which floodwater is anticipated to rise during the 0.2 percent annual chance flood (also known as the 500-year flood).

0.2 Percent annual chance floodplain means the area subject to flooding by the 0.2 percent annual chance flood (also known as the 500-year floodplain).

1 percent annual chance flood elevation—see the definition of *base flood elevation* in this section.

1 percent annual chance floodplain means the area subject to flooding by the 1 percent annual chance flood (also known as the 100-year floodplain or base floodplain).

Action means

(1) Acquiring, managing, and disposing of Federal lands and facilities;

(2) Providing federally undertaken, financed, or assisted construction and improvements; and

(3) Conducting Federal activities and programs affecting land use, including, but not limited to, water and related land resources, planning, regulating, and licensing activities.

Action subject to the Federal Flood Risk Management Standard (FFRMS) means any action where FEMA funds are used for new construction, substantial improvement, or to address substantial damage to a structure or facility.

Actions affecting or affected by floodplains or wetlands means actions

which have the potential to result in the long- or short-term impacts associated with:

(1) The occupancy or modification of floodplains, and the direct or indirect support of floodplain development, or

(2) The destruction and modification of wetlands and the direct or indirect support of new construction in wetlands.

Administrator means the Administrator of the Federal Emergency Management Agency.

Agency means the Federal Emergency Management Agency (FEMA).

Agency Assistance means grants for projects or planning activities, loans, and all other forms of financial or technical assistance provided by the Agency.

Base flood elevation means the elevation to which floodwater is anticipated to rise during the 1 percent annual chance flood (also known as the base flood or 100-year flood). The terms ''base flood elevation,'' ''1 percent annual change flood elevation,'' and ''100-year flood elevation'' are synonymous and are used interchangeably.

Coastal high hazard area means an area of flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources.

Critical action means any action for which even a slight chance of flooding is too great. Critical actions include, but are not limited to, those which create or extend the useful life of structures or facilities:

(1) Such as those which produce, use or store highly volatile, flammable, explosive, toxic or water-reactive materials;

(2) Such as hospitals and nursing homes, and housing for the elderly, which are likely to contain occupants who may not be sufficiently mobile to avoid the loss of life or injury during flood and storm events;

(3) Such as emergency operation centers, or data storage centers which contain records or services that may become lost or inoperative during flood and storm events; and

(4) Such as generating plants, and other principal points of utility lines.

Direct Impacts means changes in floodplain or wetland values and functions and changes in the risk to lives and property caused or induced by an action or related activity. Impacts are caused whenever these natural values and functions are affected as a direct result of an action. An action which would result in the discharge of polluted storm waters into a floodplain or wetland, for example, would directly affect their natural values and functions. Construction-related activities, such as dredging and filling operations within the floodplain or a wetland would be another example of impacts caused by an action.

Emergency actions means emergency work essential to save lives and protect property and public health and safety performed under sections 403 and 502 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (42 U.S.C. 5170b and 5192).

Enhance means to increase, heighten, or improve the natural and beneficial values associated with wetlands.

Facility means any man-made or man-placed item other than a structure.

Federal Flood Risk Management Standard (FFRMS) means the Federal flood risk management standard to be incorporated into existing processes used to implement Executive Order 11988, as amended.

Federal Flood Risk Management Standard (FFRMS) floodplain means the floodplain established using one of the approaches described in §9.7(c) of this part.

Federally funded project—see the definition of *Action subject to the Federal Flood Risk Management Standard* in this section.

FEMA means the Federal Emergency Management Agency.

FEMA Resilience means the organization within FEMA that includes the Federal Insurance and Mitigation Administration, the Grants Program Directorate, and the National Preparedness Directorate.

Flood or *flooding* means the general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland and/or tidal waters, and/or the unusual and rapid accumulation of runoff of

surface waters from any source. *0.2 percent annual chance flood* means the flood which has a 0.2 percent chance of being equaled or exceeded in any given year (also known as the 500-year flood). *1 percent annual chance flood* means the flood which has a 1 percent chance of being equaled or exceeded in any given year (also known as the 100-year flood or base flood). The terms ''base flood,'' ''1 percent annual chance flood,'' and ''100-year flood'' are synonymous and are used interchangeably.

Floodplain means any land area that is subject to flooding. The term ''floodplain,'' by itself, refers to geographic features with undefined boundaries. For the purposes of this part, the FFRMS floodplain shall be established using one of the approaches described in §9.7(c). *See* the definitions of *0.2 percent annual chance floodplain*, *1 percent annual chance floodplain*, and *Federal Flood Risk Management Standard floodplain* in this section.

Floodproofing means the modification of individual structures and facilities, their sites, and their contents to protect against structural failure, to keep water out, or to reduce effects of water entry.

Floodway means that portion of the floodplain which is effective in carrying flow, within which this carrying capacity must be preserved and where the flood hazard is generally highest, i.e., where water depths and velocities are the greatest. It is that area which provides for the discharge of the base flood so the cumulative increase in water surface elevation is no more than one foot.

Functionally dependent use means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water.

Indirect Impacts means an indirect result of an action whenever the action induces or makes possible related activities which effect the natural values and functions of floodplains or wetlands or the risk to lives and property. Such impacts occur whenever these values and functions are potentially affected, either in the short- or long-term, as a result of undertaking an action.

Minimize means to reduce to the smallest amount or degree possible.

Mitigation means steps necessary to minimize the potentially adverse effects of the proposed action, and to restore and preserve the natural and beneficial floodplain values and to preserve and enhance natural values of wetlands.

National security means:

(1) A condition that is provided by either:

(i) A military or defense advantage over any foreign nation or group of nations;

(ii) A favorable foreign relations position; or

(iii) A defense posture capable of successfully resisting hostile or destructive action from within or without, overt or covert.

(2) National security encompasses both national defense and foreign relations of the United States.

Natural and beneficial values of floodplains and wetlands means features or resources that provide environmental and societal benefits. Water and biological resources are often referred to as ''natural functions of floodplains and wetlands.'' These values include, but are not limited to:

(1) Water resource values (storing and conveying floodwaters, maintaining water quality, and groundwater recharge);

(2) Living resource values (providing habitats and enhancing biodiversity for fish, wildlife, and plant resources);

(3) Cultural resource values (providing open space, natural beauty, recreation, scientific study, historic and archaeological resources, and education; and

(4) Cultivated resource values (creating rich soils for agriculture, aquaculture, and forestry).

Natural features means characteristics of a particular environment (*e.g.*, barrier islands, sand dunes, wetlands) that are created by physical, geological, biological, and chemical processes and exist in dynamic equilibrium. Natural features are self-sustaining parts of the landscape that require little or no maintenance to continue providing their ecosystem services (functions).

Nature-based approaches means the features (sometimes referred to as ''green infrastructure'') designed to mimic natural processes and provide

specific services such as reducing flood risk and/or improving water quality. Nature-based approaches are created by human design (in concert with and to accommodate natural processes) and generally, but not always, must be maintained in order to reliably provide the intended level of service.

New construction means the construction of a new structure or facility or the replacement of a structure or facility which has been totally destroyed. New construction includes permanent installation of temporary housing units. New construction in wetlands includes draining, dredging, channelizing, filling, diking, impounding, and related activities.

Orders means Executive Order 11988, Floodplain Management, as amended, and Executive Order 11990, Protection of Wetlands.

Practicable means capable of being done within existing constraints. The test of what is practicable depends on the situation and includes consideration of all pertinent factors, such as natural environment, social concerns, economic aspects, legal constraints, and agency authorities.

Preserve means to prevent alterations to natural conditions and to maintain the values and functions which operate the floodplains or wetlands in their natural states.

Regional Administrator means the Regional Administrator of the Federal Emergency Management Agency for the Region in which FEMA is acting, or the Disaster Recovery Manager when one is designated.

Regulatory floodway means the area regulated by Federal, State, or local requirements to provide for the discharge of the base flood so the cumulative rise in the water surface is no more than a designated amount above the base flood elevation.

Restore means to reestablish a setting or environment in which the natural functions of the floodplain can operate.

Structure means a walled and roofed building, including a temporary housing unit (manufactured housing) or a gas or liquid storage tank.

Substantial improvement means any repair, reconstruction or other improvement of a structure or facility, which has been damaged in excess of, or the cost of which equals or exceeds, 50 percent of the pre-disaster market value of the structure or replacement cost of the facility (including all ''public facilities'' as defined in the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988) before the repair or improvement is started, or if the structure or facility has been damaged and is proposed to be restored. Substantial improvement includes work to address substantial damage to a structure or facility. If a facility is an essential link in a larger system, the percentage of damage will be based on the cost of repairing the damaged facility relative to the replacement cost of the portion of the system which is operationally dependent on the facility. The term ''substantial improvement'' does not include any alteration of a structure or facility listed on the National Register of Historic Places or a State Inventory of Historic Places.

Support of floodplain and wetland development means to, directly or indirectly, encourage, allow, serve, or otherwise facilitate development in floodplains or wetlands. Development means any man-made change to improved or unimproved real estate, including but not limited to new construction, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials. Direct support results from actions within floodplains or wetlands, and indirect support results from actions outside of floodplains or wetlands.

Wetlands means those areas which are inundated or saturated by surface or ground water with a frequency sufficient to support, or that under normal hydrologic conditions does or would support, a prevalence of vegetation or aquatic life typically adapted for life in saturated or seasonally saturated soil conditions, including wetlands areas separated from their natural supply of water as a result of construction activities such as structural flood protection methods or solid-fill road beds, and activities such as mineral extraction and navigation improvements. Examples of wetlands include, but are not limited to, swamps, fresh and salt water marshes, estuaries, bogs, beaches, wet meadows, sloughs, potholes,

mud flats, river overflows, and other similar areas. This definition is intended to be consistent with the definition utilized by the U.S. Fish and Wildlife Service.

[45 FR 59526, Sept. 9, 1980, as amended at 47 FR 13149, Mar. 29, 1982; 50 FR 40006, Oct. 1, 1985; 74 FR 15335, Apr. 3, 2009; 89 FR 57038, July 11, 2024]

§ 9.5 Scope.

(a) *Applicability.* (1) These regulations apply to all Agency actions which have the potential to affect floodplains or wetlands or their occupants, or which are subject to potential harm by location in floodplains or wetlands.

(2) The basic test of the potential of an action to affect floodplains or wetlands is the action's potential (both by itself and when viewed cumulatively with other proposed actions) to result in the long- or short-term adverse impacts associated with:

(i) The occupancy or modification of floodplains, and the direct and indirect support of floodplain development; or

(ii) The destruction or modification of wetlands and the direct or indirect support of new construction in wetlands.

(3) The amendments to this part made on September 9, 2024 apply to new actions for which assistance is made available pursuant to declarations under the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 on or after September 9, 2024 and new actions for which assistance is made available pursuant to notices of funding opportunities published on or after September 9, 2024. For ongoing actions for which assistance was made available prior to that date, legacy program regulations (available at *http://www.fema.gov*) shall apply.

(b) *Limited exemption of ongoing actions involving wetlands located outside the floodplains.* (1) Executive Order 11990, Protection of Wetlands, contains a limited exemption not found in Executive Order 11988, Floodplain Management, as amended. Therefore, this exemption applies only to actions affecting wetlands which are located outside the floodplains, and which have no potential to result in harm to or within floodplains or to support floodplain development.

(2) The following proposed actions that impact wetlands located outside of floodplains are exempt from this regulation:

(i) Agency-assisted or permitted projects which were under construction before May 24, 1977; and

(ii) Projects for which the Agency has proposed a draft of a final environmental impact statement (EIS) which adequately analyzes the action and which was filed before October 1, 1977. Proposed actions that impact wetlands outside of floodplains are not exempt if the EIS:

(A) Only generally covers the proposed action;

(B) Is devoted largely to related activities; or

(C) Treats the project area or program without an adequate and specific analysis of the floodplain and wetland implications of the proposed action.

(c) *Decision-making involving certain categories of actions.* The provisions set forth in this part are not applicable to the actions enumerated in paragraphs (c)(1) through (10) of this section except that the Regional Administrators shall comply with the spirit of Executive Order 11988, as amended, and Executive Order 11990 to the extent practicable. For any action which is excluded from the actions enumerated below, the full 8-step process applies (see § 9.6) (except as indicated at paragraphs (d), (e), and (g) of this section regarding other categories of partial or total exclusion). The provisions of this part do not apply to the following (all references are to the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, Public Law 93–288, as amended, except as noted):

(1) Assistance provided for emergency work essential to save lives and protect property and public health and safety performed pursuant to sections 403 and 502;

(2) Emergency Support Teams (section 303);

(3) Emergency Communications (section 418);

(4) Emergency Public Transportation (section 419);

(5) Fire Management Assistance (section 420), except for hazard mitigation assistance under sections 404 and 420(d);

(6) Community Disaster Loans (section 417), except to the extent that the proceeds of the loan will be used for repair of facilities or structures or for construction of additional facilities or structures;

(7) The following Federal Assistance to Individuals and Households Program (section 408) categories of assistance:

(i) Financial assistance for temporary housing (section 408(c)(1)(A));

(ii) Lease and repair of rental units for temporary housing (section 408(c)(1)(B)(ii)), except that Step 1 (§9.7) shall be carried out;

(iii) Repairs (section 408(c)(2));

(iv) Replacement (section 408(c)(3)); and

(v) Financial assistance to address other needs (section 408(e)).

(8) Debris clearance and removal (sections 403 and 502), except those grants involving non-emergency disposal of debris within a floodplain or wetland (section 407);

(9) Actions under sections 406 and 407 of less than $18,000. Such $18,000 amount will be adjusted annually to reflect changes in the Consumer Price Index for All Urban Consumers published by the Department of Labor;

(10) Placement of families in existing resources and Temporary Relocation Assistance provided to those families so placed under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Public Law 96–510.

(d) *Abbreviated decision-making process applying steps 1, 4, 5, and 8.* The Regional Administrator shall apply steps 1, 4, 5, and 8 of the decision-making process (§§9.7, 9.10, and 9.11) to repairs under section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, Public Law 93–288, as amended, between $18,000 and $91,000. Such $18,000 and $91,000 amounts will be adjusted annually to reflect changes in the Consumer Price Index for All Urban Consumers published by the Department of Labor. For any action which is excepted from the actions listed below (except as otherwise provided in this section regarding other categories of partial or total exclusion), the full 8-step process applies (See §9.6). The Regional Administrator may also require certain other portions of the decision-making process to be carried out for individual actions as is deemed necessary. Steps 1, 4, 5, and 8 of the decision-making process apply to actions under section 406 of the Stafford Act referenced above except for:

(1) Actions in a floodway or coastal high hazard area; or

(2) New construction, substantial improvement, or repairs to address substantial damage of structures or facilities; or

(3) Facilities or structures which have previously sustained damage from flooding due to a major disaster or emergency or on which a flood insurance claim has been paid; or

(4) Critical actions.

(e) *Abbreviated decision-making process applying steps 1, 2, 4, 5, and 8.* The Regional Administrator shall apply steps 1, 2, 4, 5, and 8 of the decision-making process (§§9.7, 9.8, 9.10, and 9.11, see §9.6) to certain actions under Section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, Public Law 93–288, as amended, provided in paragraphs (e)(1) and (2) of this section. Steps 3 and 6 (§9.9) shall be carried out except that alternative sites outside the floodplain or wetland need not be considered. After assessing impacts of the proposed action on the floodplain or wetlands and of the site on the proposed action, alternative actions to the proposed action, if any, and the ''no action'' alternative shall be considered. The Regional Administrator may also require certain other portions of the decision-making process to be carried out for individual actions as is deemed necessary. For any action which is excluded from the actions listed below (except as otherwise provided in this section regarding other categories of partial or total exclusion), the full 8-step process applies (see §9.6). The Regional Administrator shall apply steps 1, 2, 4, 5, and 8 of the decision-making process (§§9.7, 9.8, 9.10, and 9.11, *see* §9.6) to:

(1) Replacement of building contents, materials, and equipment (section 406).

(2) Repairs under section 406 to damaged facilities or structures, except any such action for which one or more of the following is applicable:

(i) FEMA estimated cost of repairs is more than 50 percent of the estimated

reconstruction cost of the entire facility or structure or is more than $364,000. Such $364,000 amount will be adjusted annually to reflect changes in the Consumer Price Index for All Urban Consumers published by the Department of Labor; or

(ii) The action is located in a floodway or coastal high hazard area; or

(iii) Facilities or structures which have previously sustained structural damage from flooding due to a major disaster or emergency or on which a flood insurance claim has been paid; or

(iv) The action is a critical action.

(f) *Other categories of actions.* Based upon the completion of the 8-step decision-making process (§9.6), the Regional Administrator may find that a specific category of actions either offers no potential for carrying out the purposes of the Orders and shall be treated as those actions listed in paragraph (c) of this section, or has no practicable alternative sites and shall be treated as those actions listed in paragraph (e) of this section, or has no practicable alternative actions or sites and shall be treated as those actions listed in paragraph (d) of this section. This finding will be made in consultation with FEMA Resilience and the Council on Environmental Quality as provided in section 2(d) of Executive Order 11988, as amended. Public notice of each of these determinations shall include publication in the FEDERAL REGISTER and a 30-day comment period.

(g) *The National Flood Insurance Program (NFIP).* (1) FEMA Resilience shall apply the 8-step decision-making process to program-wide actions under the NFIP, including all regulations, procedures, and other issuances making or amending program policy, and the establishment of programmatic standards or criteria. FEMA Resilience shall not apply the 8-step decision-making process to the application of programmatic standards or criteria to specific situations. Thus, for example, FEMA Resilience would apply the 8-step process to a programmatic determination of categories of structures to be insured, but not to whether to insure each individual structure.

(2) The provisions set forth in this part are not applicable to the actions enumerated below except that FEMA Resilience shall comply with the spirit of the Orders to the extent practicable:

(i) The issuance of individual flood insurance policies and policy interpretations;

(ii) The adjustment of claims made under the Standard Flood Insurance Policy;

(iii) The hiring of independent contractors to assist in the implementation of the NFIP;

(iv) The issuance of individual flood insurance maps, Map Information Facility map determinations, and map amendments; and

(v) The conferring of eligibility for emergency or regular program (NFIP) benefits upon communities.

[45 FR 59526, Sept. 9, 1980, as amended at 47 FR 13149, Mar. 29, 1982; 49 FR 35583, Sept. 10, 1984; 50 FR 40006, Oct. 1, 1985; 51 FR 39531, Oct. 29, 1986; 66 FR 57347, Nov. 14, 2001; 89 FR 57040, July 11, 2024]

§ 9.6 Decision-making process.

(a) *Purpose.* This section sets out the floodplain management and wetlands protection decision-making process to be followed by the Agency in applying the Orders to its actions. The numbering of Steps 1 through 8 does not require that the steps be followed sequentially. As information is gathered through the decision-making process, and as additional information is needed, reevaluation of lower numbered steps may be necessary.

(b) *Decision-making process.* Except as otherwise provided in §9.5 regarding categories of partial or total exclusion when proposing an action, the Agency shall apply the 8-step decision-making process. FEMA shall:

(1) *Step 1.* Determine whether the proposed action is located in a floodplain and/or a wetland as established by §9.7; and whether it has the potential to affect or be affected by a floodplain or wetland (see §9.7);

(2) *Step 2.* Notify the public at the earliest possible time of the intent to carry out an action in a floodplain or wetland, and involve the affected and interested public in the decision-making process (see §9.8);

(3) *Step 3.* Identify and evaluate practicable alternatives to locating the

proposed action in a floodplain or wetland (including alternative sites, actions, natural features, nature-based approaches, and the ''no action'' option) (see § 9.9). If a practicable alternative exists outside the floodplain or wetland FEMA must locate the action at the alternative site.

(4) *Step 4.* Identify the potential direct and indirect impacts associated with the occupancy or modification of floodplains and wetlands and the potential direct and indirect support of floodplain and wetland development that could result from the proposed action (see § 9.10);

(5) *Step 5.* Minimize the potential adverse impacts to or within floodplains and wetlands and minimize support of floodplain and wetland development identified under Step 4. Restore and preserve the natural and beneficial values served by floodplains, and preserve and enhance the natural and beneficial values served by wetlands. Integrate nature-based approaches where appropriate (see § 9.11);

(6) *Step 6.* Reevaluate the proposed action to determine first, if it is still practicable in light of its exposure to flood hazards, the extent to which it will aggravate hazards to others, and its potential to disrupt floodplain and wetland values; and second, if alternatives preliminarily rejected at Step 3 are practicable in light of the information gained in Steps 4 and 5. FEMA shall not act in a floodplain or wetland unless it is the only practicable location (*see* § 9.9);

(7) *Step 7.* Prepare and provide the public with a finding and public explanation of any final decision that the floodplain or wetland is the only practicable alternative (see § 9.12); and

(8) *Step 8.* Review the implementation and post-implementation phases of the proposed action to ensure that the requirements stated in § 9.11 are fully implemented. Oversight responsibility shall be integrated into existing processes.

[89 FR 57041, July 11, 2024]

§ 9.7 Determination of proposed action's location.

(a) *Purpose.* This section establishes Agency procedures for determining whether any action as proposed is located in or affects a floodplain established in paragraph (c) of this section or a wetland.

(b) *Information needed.* (1) The Agency shall obtain enough information so that it can fulfill the requirements in this part to:

(i) Avoid Federal action in floodplain and wetland locations unless they are the only practicable alternatives; and

(ii) Minimize harm to and within floodplains and wetlands.

(2) In all cases, FEMA shall determine whether the proposed action is located in a floodplain or wetland. Information about the floodplain as established by paragraph (c) of this section and the location of floodways and coastal high hazard areas may also be needed to comply with this part, especially § 9.11.

(3) The following additional current and future flooding characteristics may be identified by the Regional Administrator as applicable:

(i) Velocity of floodwater;

(ii) Rate of rise of floodwater;

(iii) Duration of flooding;

(iv) Available warning and evacuation time and routes;

(v) Special problems:

(A) Levees;

(B) Erosion;

(C) Subsidence;

(D) Sink holes;

(E) Ice jams;

(F) Debris load;

(G) Pollutants;

(H) Wave heights;

(I) Groundwater flooding;

(J) Mudflow.

(vi) Any other applicable flooding characteristics.

(c) *Floodplain determination.* In the absence of a finding to the contrary, FEMA will determine that a proposed action involving a facility or structure that has been flooded previously is in the floodplain. In determining if a proposed action is in the floodplain:

(1) FEMA shall determine whether the action is an action subject to the FFRMS as defined in § 9.4.

(i) If the action is an action subject to the FFRMS, FEMA shall establish the FFRMS floodplain area and associated flood elevation by using the process specified in (c)(3) of this section and one of the following approaches:

(A) Climate-Informed Science Approach (CISA): Using a climate-informed science approach that uses the best-available, actionable hydrologic and hydraulic data and methods that integrate current and future changes in flooding based on climate science. This approach will also include an emphasis on whether the action is a critical action as one of the factors to be considered when conducting the analysis;

(B) Freeboard Value Approach (FVA): Using the freeboard value, reached by adding an additional 2 feet to the base flood elevation for non-critical actions and by adding an additional 3 feet to the base flood elevation for critical actions;

(C) 0.2-Percent-Annual-Chance Flood Approach (0.2PFA): The 0.2 percent annual chance flood; or

(D) Any other method identified in an update to the FFRMS.

(ii) FEMA may select among and prioritize the approaches in this paragraph (c)(1) by policy.

(iii) FEMA may provide an exception to using the FFRMS floodplain and corresponding flood elevation for an action subject to the FFRMS and instead use the 1 percent annual chance (base) floodplain for non-critical actions or the 0.2 percent annual chance floodplain for critical actions where the action is in the interest of national security, where the action is an emergency action, or where the action is a mission-critical requirement related to a national security interest or an emergency action.

(2) If the action is not an action subject to the FFRMS as defined in §9.4, FEMA shall use, at a minimum:

(i) The 1 percent annual chance (base) floodplain and flood elevation for non-critical actions; and

(ii) The 0.2 percent annual chance floodplain and flood elevation for critical actions.

(3) FEMA shall establish the floodplain and corresponding elevation using the best available information. The floodplain and corresponding elevation determined using the best available information must be at least as restrictive as FEMA's regulatory determinations under the NFIP where such determinations are available. In obtaining the best available information, FEMA may consider other FEMA information as well as other available information, such as information from:

(i) Department of Agriculture: Natural Resources Conservation Service, U.S. Forest Service;

(ii) Department of Defense: U.S. Army Corps of Engineers;

(iii) Department of Commerce: National Oceanic and Atmospheric Administration;

(iv) Department of the Interior: Bureau of Land Management, Bureau of Reclamation, National Park Service, U.S. Fish and Wildlife Service, United States Geological Survey;

(v) Tennessee Valley Authority;

(vi) Department of Transportation;

(vii) Environmental Protection Agency;

(viii) General Services Administration;

(ix) Agencies of State, Regional, and Indian Tribal governments; or

(x) Local sources such as Floodplain Administrators, Regional Flood Control Districts, or Transportation Departments.

(4) If the sources listed in paragraph (c)(3) of this section do not have or know of the information necessary to comply with the requirements in this part, the Regional Administrator may seek the services of a professional registered engineer.

(5) If a decision involves an area or location within extensive Federal or state holdings or a headwater area and FEMA's regulatory determinations under the National Flood Insurance Program are not available, the Regional Administrator shall seek information from the land administering agency before information and/or assistance is sought from the sources listed in paragraph (c)(3) of this section.

(d) *Wetland determination.* The following sequence shall be followed by the Agency in making the wetland determination.

(1) The Agency shall consult with the U.S. Fish and Wildlife Service (FWS) for information concerning the location, scale and type of wetlands within the area which could be affected by the proposed action.

(2) If the FWS does not have adequate information upon which to base the determination, the Agency shall consult wetland inventories maintained by the Army Corps of Engineers, the Environmental Protection Agency, various states, communities and others.

(3) If the identified sources do not have adequate information upon which to base the determination, the Agency shall carry out an on-site analysis performed by a representative of the FWS or other qualified individual for wetlands characteristics based on the definition of a wetland in § 9.4.

(4) If an action constitutes new construction and is in a wetland but not in a floodplain, the provisions of this part shall apply. If the action is not in a wetland, the Regional Administrator shall determine if the action has the potential to result in indirect impacts on wetlands. If so, all potential adverse impacts shall be minimized. For actions which are in a wetland and the floodplain, completion of the decision-making process is required. (*See* § 9.6). In such a case, the wetland will be considered as one of the natural and beneficial values of the floodplain.

[45 FR 59526, Sept. 9, 1980, as amended at 47 FR 13149, Mar. 29, 1982; 49 FR 33879, Aug. 27, 1984; 50 FR 40006, Oct. 1, 1985; 51 FR 34605, Sept. 30, 1986; 89 FR 57042, July 11, 2024]

§ 9.8 Public notice requirements.

(a) *Purpose.* This section establishes the initial notice procedures to be followed when the Agency proposes any action in or affecting floodplains or wetlands.

(b) *General.* The Agency shall provide adequate information to enable the public to have impact on the decision outcome for all actions having potential to affect, adversely, or be affected by floodplains or wetlands that it proposes. To achieve this objective, the Agency shall:

(1) Provide the public with adequate information and opportunity for review and comment at the earliest possible time and throughout the decision-making process; and upon completion of this process, provide the public with an accounting of its final decisions (see § 9.12); and

(2) Rely on its environmental assessment processes, to the extent possible, as vehicles for public notice, involvement and explanation.

(c) *Early public notice.* The Agency shall provide opportunity for public involvement in the decision-making process through the provision of public notice upon determining that the proposed action can be expected to affect or be affected by floodplains or wetlands. Whenever possible, notice shall precede major project site identification and analysis in order to preclude the foreclosure of options consistent with the Orders.

(1) For an action for which an environmental impact statement is being prepared, the Notice of Intent to File an EIS constitutes the early public notice if it includes the information required under paragraph (c)(5) of this section.

(2) For each action having national significance for which notice is being provided, the Agency at a minimum shall provide notice by publication in the FEDERAL REGISTER and shall provide notice by mail to national organizations reasonably expected to be interested in the action. The additional notices listed in paragraph (c)(4) of this section shall be used in accordance with the determination made under paragraph (c)(3) of this section.

(3) The Agency shall determine whether it has provided appropriate notices, adequate comment periods, and whether to issue cumulative notices (paragraphs (c)(4), (6), and (7) of this section) based on factors which include, but are not limited to:

(i) Scale of the action;

(ii) Potential for controversy;

(iii) Degree of public need;

(iv) Number of affected agencies and individuals; and

(v) Anticipated potential impact of the action.

(4) For each action having primarily local importance for which notice is being provided, notice shall be made in accordance with the criteria under paragraph (c)(3) of this section, and shall include, as appropriate:

(i) Notice through the internet or another comparable method.

(ii) Notice to Indian tribes when effects may occur on reservations.

(iii) Information required in the affected State's public notice procedures for comparable actions.

(iv) Publication in local newspapers.

(v) Notice through other local media including newsletters.

(vi) Notice to potential interested community organizations.

(vii) Direct mailing to owners and occupants of nearby or affected property.

(viii) Posting of notice on and off site in the area where the action is to be located.

(ix) Public hearing.

(5) The notice shall:

(i) Describe the action, its purposes, and a statement of the intent to carry out an action affecting or affected by a floodplain or wetland;

(ii) Based on the factors in paragraph (c)(3) of this section, include a map of the area and other identification of the floodplain and/or wetland areas which is of adequate scale and detail; alternatively, FEMA may state that such map is available for public inspection, including the location at which such map may be inspected and a telephone number to call for information or may provide a link to access the map online;

(iii) Based on the factors in paragraph (c)(3) of this section, describe the type, extent, and degree of hazard involved and the floodplain or wetland values present; and

(iv) Identify the responsible official or organization for implementing the proposed action, and from whom further information can be obtained.

(6) The Agency shall provide for an adequate comment period.

(7) In a post-disaster situation in particular, the requirement for early public notice may be met in a cumulative manner based on the factors set out in paragraph (c)(3) of this section. Several actions may be addressed in one notice or series of notices. For some actions involving limited public interest a single notice in a local newspaper or letter to interested parties may suffice.

(d) *Continuing public notice.* The Agency shall keep the public informed of the progress of the decision-making process through additional public notices at key points in the process. The preliminary information provided under paragraph (c)(5) of this section shall be augmented by the findings of the adverse effects of the proposed actions and steps necessary to mitigate them. This responsibility shall be performed for actions requiring the preparation of an EIS, and all other actions having the potential for major adverse impacts, or the potential for harm to the health and safety of the general public.

[45 FR 59526, Sept. 9, 1980, as amended at 48 FR 29318, June 24, 1983; 89 FR 57042, July 11, 2024]

§ 9.9 Analysis and reevaluation of practicable alternatives.

(a) *Purpose.* (1) This section expands upon the directives set out in §9.6 of this part in order to clarify and emphasize the requirements to avoid floodplains and wetlands unless there is no practicable alternative.

(2) Step 3 is a preliminary determination as to whether the floodplain is the only practicable location for the action. It is a preliminary determination because it comes early in the decision-making process when the Agency has a limited amount of information. If it is clear that there is a practicable alternative, or the floodplain or wetland is itself not a practicable location, FEMA shall then act on that basis. Provided that the location outside the floodplain or wetland does not indirectly impact floodplains or wetlands or support development therein (see §9.10), the remaining analysis set out by this regulation is not required. If such location does indirectly impact floodplains or wetlands or support development therein, the remaining analysis set out by this regulation is required. If the preliminary determination is to act in the floodplain, FEMA shall gather the additional information required under Steps 4 and 5 and then reevaluate all the data to determine if the floodplain or wetland is the only practicable alternative.

(b) *Analysis of practicable alternatives.* The Agency shall identify and evaluate practicable alternatives to carrying out a proposed action in floodplains or wetlands, including:

(1) Alternative sites outside the floodplain or wetland;

(2) Alternative actions which serve essentially the same purpose as the

proposed action, but which have less potential to affect or be affected by the floodplain or wetlands. In developing the alternative actions, the Agency shall use, where possible, natural systems, ecosystem processes, and nature-based approaches; and

(3) *No action.* The floodplain and wetland site itself must be a practicable location in light of the factors set out in this section.

(c) The Agency shall analyze the following factors in determining the practicability of the alternatives set out in paragraph (b) of this section:

(1) Natural environment (including, but not limited to topography, habitat, hazards, when applicable);

(2) Social concerns (including, but not limited to aesthetics, historical and cultural values, land patterns, when applicable);

(3) Economic aspects (including, but not limited to costs of space, technology, construction, services, relocation, when applicable);

(4) Legal constraints (including, but not limited to deeds and leases, when applicable); and

(5) Agency authorities.

(1) The Agency shall not locate the proposed action in the floodplain as established by §9.7(c) or in a wetland if a practicable alternative exists outside the floodplain or wetland.

(2) If no practicable alternative exists outside the floodplain or wetland, in order to carry out the action the floodplain or wetland must itself be a practicable location in light of the review required in this section.

(e) *Reevaluation of alternatives.* Upon determination of the impact of the proposed action to or within the floodplain or wetland and of what measures are necessary to comply with the requirement to minimize harm to and within floodplains and wetlands (§9.11), FEMA shall:

(1) Determine whether:

(i) The action is still practicable at a floodplain or wetland site, considering the flood risk and the ensuing disruption of natural values;

(ii) The floodplain or wetland site is the only practicable alternative;

(iii) The scope of the action can be limited to increase the practicability of previously rejected non-floodplain or wetland sites and alternative actions; and

(iv) Harm to or within the floodplain can be minimized using all practicable means.

(2) Take no action in a floodplain unless the importance of the floodplain site clearly outweighs the requirements to:

(i) Avoid direct or indirect support of floodplain development;

(ii) Reduce the risk of flood loss;

(iii) Minimize the impact of floods on human safety, health and welfare; and

(iv) Restore and preserve floodplain values.

(3) Take no action in a wetland unless the importance of the wetland site clearly outweighs the requirements to:

(i) Avoid the destruction or modification of the wetlands;

(ii) Avoid direct or indirect support of new construction in wetlands;

(iii) Minimize the destruction, loss or degradation of wetlands; and

(iv) Preserve and enhance the natural and beneficial values of wetlands.

(4) In carrying out this balancing process, give the factors in paragraphs (e)(2) and (3) of this section great weight.

(5) Choose the ''no action'' alternative where there are no practicable alternative actions or sites and where the floodplain or wetland is not itself a practicable alternative. In making the assessment of whether a floodplain or wetland location is itself a practicable alternative, the practicability of the floodplain or wetland location shall be balanced against the practicability of not carrying out the action at all. That is, even if there is no practicable alternative outside of the floodplain or wetland, the floodplain or wetland itself must be a practicable location in order for the action to be carried out there. To be a practicable location, the importance of carrying out the action must clearly outweigh the requirements of the Orders listed in paragraphs (e)(2) and (e)(3) of this section. Unless the importance of carrying out the action clearly outweighs those requirements, the ''no action'' alternative shall be selected.

[45 FR 59526, Sept. 9, 1980, as amended at 89 FR 57043, July 11, 2024]

§ 9.10 Identify impacts of proposed actions.

(a) This section ensures that the effects of proposed Agency actions are identified.

(b) The Agency shall identify the potential direct and indirect adverse impacts associated with the occupancy and modification of floodplains and wetlands and the potential direct and indirect support of floodplain and wetland development that could result from the proposed action. Such identification of impacts shall be to the extent necessary to comply with the requirements of this part to avoid floodplain and wetland locations unless they are the only practicable alternatives to minimize harm to and within floodplains and wetlands.

(c) This identification shall consider whether the proposed action will result in an increase in the useful life of any structure or facility in question, maintain the investment at risk and exposure of lives to the flood hazard or forego an opportunity to restore the natural and beneficial values served by floodplains or wetlands.

(d) In the review of a proposed or alternative action, the Regional Administrator shall consider and evaluate: impacts associated with modification of wetlands and floodplains regardless of its location; additional impacts which may occur when certain types of actions may support subsequent action which have additional impacts of their own; adverse impacts of the proposed actions on lives and property and on natural and beneficial floodplain and wetland values; and the three categories of factors listed below:

(1) *Flood hazard-related factors*. These include, but are not limited to, the factors listed in § 9.7(b)(3);

(2) *Natural values-related factors*. These include, but are not limited to: water resource values, as in storing and conveying floodwaters, maintaining water quality, and groundwater recharge; living resource values, as in providing habitats and enhancing biodiversity for fish and wildlife and plant resources; cultural resource values, as in providing open space, natural beauty, recreation, scientific study, historical and archaeological resources, and education; and cultivated resource values, as in creating rich soils for agriculture, aquaculture, and forestry.

(3) *Factors relevant to a proposed action's effects on the survival and quality of wetlands*. These include, but are not limited to: Public health, safety, and welfare, including water supply, quality, recharge and discharge; pollution; flood and storm hazards; and sediment and erosion; maintenance of natural systems, including conservation and long term productivity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, wildlife, timber, and food and fiber resources; and other uses of wetlands in the public interest, including recreational, scientific, and cultural uses.

[45 FR 59526, Sept. 9, 1980, as amended at 89 FR 57043, July 11, 2024]

§ 9.11 Mitigation.

(a) *Purpose*. This section expands upon the directives set out in § 9.6 of this part and sets out the mitigative actions required if the preliminary determination is made to carry out an action that affects or is in a floodplain or wetland.

(b) *General provisions*. (1) The Agency shall design or modify its actions so as to minimize harm to or within the floodplain;

(2) The Agency shall minimize the destruction, loss or degradation of wetlands;

(3) The Agency shall restore and preserve natural and beneficial floodplain values; and

(4) The Agency shall preserve and enhance natural and beneficial wetland values.

(c) *Minimization provisions*. The Agency shall minimize:

(1) Potential harm to lives and the investment from flooding based on flood elevations as established by § 9.7(c);

(2) Potential adverse impacts the action may have on others; and

(3) Potential adverse impact the action may have on floodplain and wetland values.

(d) *Minimization Standards.* The Agency shall apply, at a minimum, the following standards to its actions to comply with the requirements of paragraphs (b) and (c) of this section (except as provided in §9.5(c), (d), and (g) regarding categories of partial or total exclusion). Any Agency action to which the following specific requirements do not apply, shall nevertheless be subject to the full 8-step process (§9.6) including the general requirement to minimize harm to and within floodplains:

(1) There shall be no new construction or substantial improvement in a floodway and no new construction in a coastal high hazard area, except for:

(i) A functionally dependent use; or

(ii) A structure or facility which facilitates an open space use.

(2) For a structure which is a functionally dependent use or which facilitates an open space use, the following applies: Any construction of a new or substantially improved structure in a coastal high hazard area must be elevated on adequately anchored pilings or columns, and securely anchored to such piles or columns so that the lowest portion of the structural members of the lowest floor (excluding the pilings or columns) is elevated to or above the floodplain as established by §9.7(c). The structure shall be anchored so as to withstand velocity waters and hurricane wave wash.

(3) The following applies to elevation of structures:

(i) There shall be no new construction or substantial improvement of structures unless the lowest floor of the structures (including basement) is at or above the elevation of the floodplain as established by §9.7(c).

(ii) If the subject structure is nonresidential, instead of elevating the structure, FEMA may approve the design of the structure and its attendant utility and sanitary facilities so that the structure is watertight below the flood elevation with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

(iii) The provisions of paragraphs (d)(3)(i) and (ii) of this section do not apply to the extent that FEMA Resilience has granted an exception under §60.6(b) of this chapter, or the community has granted a variance which the Regional Administrator determines is consistent with §60.6(a) of this chapter. In a community which does not have a FEMA regulatory product in effect, FEMA may approve a variance from the standards of paragraphs (d)(3)(i) and (ii) of this section, after compliance with the standards of §60.6(a).

(4) There shall be no encroachments, including but not limited to fill, new construction, substantial improvements of structures or facilities, or other development within a designated regulatory floodway that would result in any increase in flood elevation within the community during the occurrence of the 1 percent annual chance (base) flood discharge. Until a regulatory floodway is designated, no fill, new construction, substantial improvements, or other development shall be permitted within the 1 percent annual chance (base) floodplain unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the 1 percent annual chance (base) flood more than the amount designated by the NFIP or the community, whichever is most restrictive.

(5) Even if an action is a functionally dependent use or facilitates open space uses (under paragraph (d)(1) or (2) of this section) and does not increase flood heights (under paragraph (d)(4) of this section), such action may only be taken in a floodway or coastal high hazard area if:

(i) Such site is the only practicable alternative; and

(ii) Harm to and within the floodplain is minimized.

(6) In addition to standards (d)(1) through (d)(5) of this section, no action may be taken if it is inconsistent with the criteria of the National Flood Insurance Program (44 CFR part 59 *et seq.*) or any more restrictive Federal, State or local floodplain management standards.

(7) New construction and substantial improvement of structures shall be elevated on open works (walls, columns,

piers, piles, etc.) rather than on fill, in all cases in coastal high hazard areas and elsewhere, where practicable.

(8) To minimize the effect of floods on human health, safety and welfare, the Agency shall:

(i) Where appropriate, integrate all of its proposed actions in floodplains into existing flood warning and preparedness plans and ensure that available flood warning time is reflected;

(ii) Facilitate adequate access and egress to and from the site of the proposed action; and

(iii) Give special consideration to the unique hazard potential in flash flood, rapid-rise or tsunami areas.

(9) In the replacement of building contents, materials and equipment, the Regional Administrator shall require as appropriate, flood proofing and/or elevation of the building and/or elimination of such future losses by relocation of those building contents, materials, and equipment outside or above the floodplain as established by §9.7(c).

(e) *Restore and preserve.* (1) For any action taken by the Agency which affects the floodplain or wetland and which has resulted in, or will result in, harm to the floodplain or wetland, the Agency shall act to restore and preserve the natural and beneficial values served by floodplains and wetlands.

(2) Where floodplain or wetland values have been degraded by the proposed action, the Agency shall identify, evaluate, and implement measures to restore the values.

(3) If an action will result in harm to or within the floodplain or wetland, the Agency shall design or modify the action to preserve as much of the natural and beneficial floodplain and wetland values as is possible.

[45 FR 59526, Sept. 9, 1980, as amended at 46 FR 51752, Oct. 22, 1981; 48 FR 44543, Sept. 29, 1983; 49 FR 33879, Aug. 27, 1984; 49 FR 35584, Sept. 10, 1984; 50 FR 40006, Oct. 1, 1985; 89 FR 57044, July 11, 2024]

§9.12 Final public notice.

If the Agency decides to take an action in or affecting a floodplain or wetland, it shall provide the public with a statement of its final decision and shall explain the relevant factors considered by the Agency in making this determination.

(a) In addition, those sent notices under §9.8 shall also be provided the final notice.

(b) For actions for which an environmental impact statement is being prepared, the FEIS is adequate to constitute final notice in all cases except where:

(1) Significant modifications are made in the FEIS after its initial publication;

(2) Significant modifications are made in the development plan for the proposed action; or

(3) Significant new information becomes available in the interim between issuance of the FEIS and implementation of the proposed action.

If any of these situations develop, the Agency shall prepare a separate final notice that contains the contents of paragraph (e) of this section and shall make it available to those who received the FEIS. A minimum of 15 days shall, without good cause shown, be allowed for comment on the final notice.

(c) For actions for which an environmental assessment was prepared, the Notice of No Significant Impact is adequate to constitute final public notice, if it includes the information required under paragraph (e) of this section.

(d)(1) For all other actions, the finding shall be made in a document separate from those described in paragraphs (a), (b), and (c) of this section. Based on an assessment of the following factors, the requirement for final notice may be met in a cumulative manner:

(i) Scale of the action;

(ii) Potential for controversy;

(iii) Degree of public need;

(iv) Number of affected agencies and individuals;

(v) Its anticipated potential impact; and

(vi) Similarity of the actions, i.e., to the extent that they are susceptible of common descriptions and assessments.

(2) When a damaged structure or facility is already being repaired by the State or local government at the time of the project application, the requirements of Steps 2 and 7 (§9.8 and this section) may be met by a single notice. Such notice shall contain all the information required by both sections.

(e) The final notice shall include the following:

(1) A statement of why the proposed action must be located in an area affecting or affected by a floodplain or a wetland;

(2) A description of all significant facts considered in making this determination;

(3) A list of the alternatives considered;

(4) A statement indicating whether the action conforms to applicable state and local floodplain protection standards;

(5) A statement indicating how the action affects or is affected by the floodplain and/or wetland, and how mitigation is to be achieved;

(6) Identification of the responsible official or organization for implementation and monitoring of the proposed action, and from whom further information can be obtained; and

(7) A map of the area or a statement that such map is available for public inspection, including the location at which such map may be inspected and a telephone number to call for information.

(f) After providing the final notice, the Agency shall, without good cause shown, wait at least 15 days before carrying out the action.

[45 FR 59526, Sept. 9, 1980, as amended at 48 FR 29318, June 24, 1983; 89 FR 57045, July 11, 2024]

§9.13 Particular types of temporary housing.

(a) This section sets forth the procedures whereby the Agency will provide certain specified types of temporary housing at a private, commercial, or group site.

(b) Prior to providing the temporary housing described in paragraph (a) of this section, the Agency shall comply with the provisions of this section. For temporary housing not enumerated above, the full 8-step process (*see* §9.6) applies.

(c) The actions described in paragraph (a) of this section are subject to the following decision-making process:

(1) The temporary housing action shall be evaluated in accordance with the provisions of §9.7 to determine if it is in or affects the 1 percent annual chance (base) floodplain or wetland.

(2) No temporary housing unit may be placed on a site in a floodway or coastal high hazard area.

(3) An individual or family shall not be housed in the 1 percent annual chance (base) floodplain or wetland unless the Regional Administrator has complied with the provisions of §9.9 to determine that such site is the only practicable alternative. The following factors shall be substituted for the factors in §9.9(c) and (e)(2) through (4):

(i) Speedy provision of temporary housing;

(ii) Potential flood risk to the temporary housing occupant;

(iii) Cost effectiveness;

(iv) Social and neighborhood patterns;

(v) Timely availability of other housing resources; and

(vi) Potential harm to the floodplain or wetland.

(4) For temporary housing units at group sites, Step 4 of the 8-step process shall be applied in accordance with §9.10.

(5) An individual or family shall not be housed in a floodplain or wetland (except in existing resources) unless the Regional Administrator has complied with the provisions of §9.11 to minimize harm to and within floodplains and wetlands. The following provisions shall be substituted for the provisions of §9.11(d) for temporary housing units:

(i) No temporary housing unit may be placed unless it is elevated to the fullest extent practicable up to the base flood elevation and adequately anchored.

(ii) No temporary housing unit may be placed if such placement is inconsistent with the criteria of the NFIP (44 CFR parts 59 and 60) or any more restrictive Federal, State, or local floodplain management standard. Such standards may require elevation to the base flood elevation in the absence of a variance.

(iii) Temporary housing units shall be elevated on open works (walls, columns, piers, piles, etc.) rather than on fill where practicable.

(iv) To minimize the effect of floods on human health, safety and welfare, the Agency shall:

(A) Where appropriate, integrate all of its proposed actions in placing temporary housing units for temporary housing in floodplains into existing flood warning or preparedness plans and ensure that available flood warning time is reflected;

(B) Provide adequate access and egress to and from the proposed site of the temporary housing unit; and

(C) Give special consideration to the unique hazard potential in flash flood and rapid-rise areas.

(6) FEMA shall comply with Step 2 Early Public Notice (§9.8(c)) and Step 7 Final Public Notice (§9.12). In providing these notices, the emergency nature of temporary housing shall be taken into account.

(7) FEMA shall carry out the actions in accordance with Step 8, ensuring the requirements of this section and the decision-making process are fully integrated into the provision of temporary housing.

(d) The following applies to the permanent installation of a temporary housing unit as part of a sale or disposal of temporary housing:

(1) FEMA shall not permanently install temporary housing units in floodways or coastal high hazard areas. FEMA shall not permanently install a temporary housing unit in floodplains as established by 9.7(c) or wetlands unless there is full compliance with the 8-step process. Given the vulnerability of temporary housing units to flooding, a rejection of a non-floodplain location alternative and of the no-action alternative shall be based on:

(i) A compelling need of the family or individual to buy a temporary housing unit for permanent housing; and

(ii) A compelling requirement to permanently install the unit in a floodplain.

(2) FEMA shall not permanently install temporary housing units in the floodplain as established by §9.7(c) unless they are or will be elevated at least to the elevation of the floodplain as established by §9.7(c).

(3) The Regional Administrator shall notify FEMA Resilience of each instance where a floodplain location has been found to be the only practicable alternative for permanent installation of a temporary housing unit.

[45 FR 59526, Sept. 9, 1980, as amended at 47 FR 13149, Mar. 29, 1982; 49 FR 35584, Sept. 10, 1984; 50 FR 40006, Oct. 1, 1985; 89 FR 57045, July 11, 2024]

§ 9.14 Disposal of Agency property.

(a) This section sets forth the procedures whereby the Agency shall dispose of property.

(b) Prior to its disposal by sale, lease or other means of disposal, property proposed to be disposed of by the Agency shall be reviewed according to the decision-making process set out in §9.6 of this part, as follows:

(1) The property shall be evaluated in accordance with the provisions of §9.7 to determine if it affects or is affected by a floodplain or wetland;

(2) The public shall be notified of the proposal and involved in the decision-making process in accordance with the provisions of §9.8;

(3) Practicable alternatives to disposal shall be evaluated in accordance with the provisions of §9.9. For disposals, this evaluation shall focus on alternative actions (conveyance for an alternative use that is more consistent with the floodplain management and wetland protection policies set out in §9.2 than the one proposed, e.g., open space use for park or recreational purposes rather than high intensity uses), and on the ''no action'' option (retain the property);

(4) Identify the potential impacts and support of floodplain and wetland development associated with the disposal of the property in accordance with §9.10;

(5) Identify the steps necessary to minimize, restore, preserve and enhance in accordance with §9.11. For disposals, this analysis shall address all four of these components of mitigation where unimproved property is involved, but shall focus on minimization through elevation or floodproofing and restoration of natural values where improved property is involved;

(6) Reevaluate the proposal to dispose of the property in light of its exposure to the flood hazard and its natural values-related impacts, in accordance with §9.9. This analysis shall focus on

whether it is practicable in light of the findings from §§9.10 and 9.11 to dispose of the property, or whether it must be retained. If it is determined that it is practicable to dispose of the property, this analysis shall identify the practicable alternative that best achieves the Agency's mitigation responsibility.

(7) To the extent that it would decrease the flood hazard to lives and property, the Agency shall, wherever practicable, dispose of the properties according to the following priorities:

(i) Properties located outside the floodplain;

(ii) Properties located inside the floodplain but outside of the floodway and the coastal high hazard area; and

(iii) Properties located in a floodway, regulatory floodway, or coastal high hazard area.

(8) The Agency shall prepare and provide the public with a finding and public explanation in accordance with §9.12.

(9) The Agency shall ensure that the applicable mitigation requirements are fully implemented in accordance with §9.11(c).

(c) At the time of disposal, for all disposed property, the Agency shall reference in the conveyance uses that are restricted under existing Federal, State and local floodplain management and wetland protection standards relating to flood hazards and floodplain and wetland values.

[45 FR 59526, Sept. 9, 1980, as amended at 89 FR 57045, July 11, 2024]

§9.15 Planning programs affecting land use.

The Agency shall take floodplain management into account when formulating or evaluating any water and land use plans. No plan may be approved unless it:

(a) Reflects consideration of flood hazards and floodplain management and wetlands protection; and

(b) Prescribes planning procedures to implement the policies and requirements of the Orders and this regulation.

§9.16 Guidance for applicants.

(a) The Agency shall encourage and provide adequate guidance to applicants for agency assistance to evaluate the effects of their plans and proposals in or affecting floodplains and wetlands.

(b) This shall be accomplished primarily through amendment of all Agency instructions to applicants, and also through contact made by agency staff during the normal course of their activities, to fully inform prospective applicants of:

(1) The Agency's policy on floodplain management and wetlands protection as set out in §9.2;

(2) The decision-making process to be used by the Agency in making the determination of whether to take an action in or affecting floodplains or wetlands as set out in §9.6;

(3) The practicability analysis as set out in §9.9;

(4) The mitigation responsibilities as set out in §9.11;

(5) The public notice and involvement process as set out in §§9.8 and 9.12; and

(6) The supplemental requirements applicable to applications for the lease or other disposal of Agency owned properties set out in §9.14.

(c) Guidance to applicants shall be provided, where possible, prior to the time of application in order to minimize potential delays in the Agency's processing of the application due to failure of applicants to follow the provisions in this part.

[45 FR 59526, Sept. 9, 1980, as amended at 89 FR 57046, July 11, 2024]

§9.17 Instructions to applicants.

(a) *Purpose.* In accordance with Executive Orders 11988, as amended, and 11990, the Federal executive agencies must respond to a number of floodplain management and wetland protection responsibilities before carrying out any of their activities, including the provision of Federal financial and technical assistance. This section provides notice to applicants for Agency assistance of both the criteria that FEMA is required to follow, and the applicants' responsibilities under this part.

(b) *Responsibilities of applicants.* Based upon the guidance provided by the Agency under §9.16, the guidance included in the U.S. Water Resources Council's Guidelines for Implementing

Executive Order 11988, Floodplain Management, and Executive Order 13690, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input, and based upon the provisions of the Orders and this part, applicants for Agency assistance shall recognize and reflect in their application:

(1) The Agency's policy on floodplain management and wetlands protection as set out in § 9.2;

(2) The decision-making process to be used by the Agency in making the determination of whether to provide the requested assistance as set out in § 9.6;

(3) The practicability analysis as set out in § 9.9;

(4) The mitigation responsibilities as set out in § 9.11;

(5) The public notice and involvement process as set out in §§ 9.8 and 9.12; and

(6) The supplemental requirements for application for the lease or other disposal of Agency-owned properties, as set out in § 9.13.

(c) *Provision of supporting information.* Applicants for Agency assistance may be required to provide supporting information relative to the various responsibilities set out in paragraph (b) of this section as a prerequisite to the approval of their applications.

(d) *Approval of applicants.* Applications for Agency assistance shall be reviewed for compliance with the provisions in this part in addition to the Agency's other approval criteria.

[45 FR 59526, Sept. 9, 1980, as amended at 89 FR 57046, July 11, 2024]

§ 9.18 Responsibilities.

(a) *Regional Administrators' responsibilities.* Regional Administrators shall, for all actions falling within their respective jurisdictions:

(1) Implement the requirements of the Orders and this part. Under §§ 9.2 and 9.6 through 9.13 and 9.15 where a direction is given to the Agency, it is the responsibility of the Regional Administrator.

(2) Consult with the Chief Counsel regarding any question of interpretation concerning this regulation or the Orders.

(b) The Heads of the Offices, Directorates and Administrations of FEMA shall:

(1) Implement the requirements of the Orders and this regulation. When a decision of a Regional Administrator relating to disaster assistance is appealed, FEMA Resilience may make determinations under this part on behalf of the Agency.

(2) Prepare and submit to the Office of Chief Counsel reports to the Office of Management and Budget in accordance with section 2(b) of Executive Order 11988, as amended, and section 3 of Executive Order 11990. If a proposed action is to be located in a floodplain or wetland, any requests to the Office of Management and Budget for new authorizations or appropriations shall be accompanied by a report indicating whether the proposed action is in accord with the Orders and these regulations.

[45 FR 59526, Sept. 9, 1980, as amended at 49 FR 33879, Aug. 27, 1984; 74 FR 15336, Apr. 3, 2009; 89 FR 57046, July 11, 2024]

PART 10 [RESERVED]

PART 11—CLAIMS

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AUTHORITY: 31 U.S.C. 3701 *et seq.*

SOURCE: 45 FR 15930, Mar. 12, 1980, unless otherwise noted.

Subpart A—General

§ 11.1 General collection standards.

The general standards and procedures governing the collection, compromise, termination and referral to the Department of Justice of claims for money and property that are prescribed in the regulations issued jointly by the Government Accountability Office and the Department of Justice pursuant to the Federal Claims Collection Act of 1966 (4 CFR part 101 *et seq.*), apply to the administrative claim collection activities of the Federal Emergency Management Agency (FEMA).

§ 11.2 Delegations of authority.

Any and all claims that arise under subchapter III of chapter 83, chapter 87 and chapter 88 of title 5, the United States Code, the Retired Federal Employees Health Benefits Act (74 Stat. 849), the Panama Canal Construction Annuity Act (58 Stat. 257), and the Lighthouse Service Widow's Annuity Act (64 Stat. 465) shall be referred to the Director of the Bureau of Retirement and Insurance, Office of Personnel Management, for handling. The Chief Counsel, FEMA shall act on all other claims against FEMA for money and property.

Subpart B—Administrative Claims Under Federal Tort Claims Act

§ 11.10 Scope of regulation.

This regulation applies to claims asserted under the Federal Tort Claims Act against the Federal Emergency Management Agency (FEMA). It does not include any contractor with FEMA.

§ 11.11 Administrative claim; when presented; appropriate FEMA office.

(a) For the purpose of this part, and the provisions of the Federal Tort Claims Act a claim is deemed to have been presented when FEMA receives, at a place designated in paragraph (b) or (c) of this section, an executed ''Claim for Damage or Injury,'' Standard Form 95, or other written notification of an incident, accompanied by a claim for money damages in a sum certain for injury to or loss of property, for personal injury, or for death alleged to have occurred by reason of the incident. A claim which should have been presented to FEMA, but which was mistakenly addressed to or filed with another Federal agency, is deemed to be presented to FEMA as of the date that the claim is received by FEMA. If a claim is mistakenly addressed to or filed with FEMA, the claim shall forthwith be transferred to the appropriate Federal Agency, if ascertainable, or returned to the claimant.

(b) Except as provided in paragraph (c) of this section, a claimant shall mail or deliver his or her claim to the Office of Chief Counsel, Federal Emergency Management Agency, Washington, DC, 20472.

(c) When a claim is for $200 or less, does not involve a personal injury, and involves a FEMA regional employee, the claimant shall mail or deliver the claim to the Administrator of the FEMA Regional Office in which is employed the FEMA employee whose negligence or wrongful act or omission is alleged to have caused the loss or injury complained of. The addresses of the Regional Offices of FEMA are set out in part 2 of this chapter.

(d) A claim presented in compliance with paragraph (a) of this section may be amended by the claimant at any time prior to final FEMA action or prior to the exercise of the claimant's option under 28 U.S.C. 2675(a). Amendments shall be submitted in writing and signed by the claimant or his or her duly authorized agent or legal representative. Upon the timely filing of an amendment to a pending claim, FEMA shall have six months in which to make a final disposition of the claim as amended and the claimant's option

under 28 U.S.C. 2675(a) shall not accrue until six months after the filing of an amendment.

[45 FR 15930, Mar. 12, 1980, as amended at 48 FR 6711, Feb. 15, 1983; 49 FR 33879, Aug. 27, 1984]

§ 11.12 Administrative claim; who may file.

(a) A claim for injury to or loss of property may be presented by the owner of the property interest which is the subject of the claim, his or her authorized agent, or legal representative.

(b) A claim for personal injury may be presented by the injured person or, his or her authorized agent or legal representative.

(c) A claim based on death may be presented by the executor or administrator of the decedent's estate or by any other person legally entitled to assert such a claim under applicable State law.

(d) A claim for loss wholly compensated by an insurer with the rights of a subrogee may be presented by the insurer or the insured individually, as their respective interests appear, or jointly. When an insurer presents a claim asserting the rights of a subrogee, he or she shall present with the claim appropriate evidence that he or she has the rights of a subrogee.

(e) A claim presented by an agent or legal representative shall be presented in the name of the claimant, be signed by the agent or legal representative, show the title of legal capacity of the person signing, and be accompanied by evidence of his or her authority to present a claim on behalf of the claimant as agent, executor, administrator, parent, guardian, or other representative.

§ 11.13 Investigations.

FEMA may investigate, or may request any other Federal agency to investigate, a claim filed under this part.

§ 11.14 Administrative claim; evidence and information to be submitted.

(a) *Death.* In support of a claim based on death the claimant may be required to submit the following evidence or information:

(1) An authenticated death certificate or other competent evidence showing cause of death, date of death, and age of the decedent.

(2) Decedent's employment or occupation at time of death, including his or her monthly or yearly salary or earnings (if any), and the duration of his or her last employment or occupation.

(3) Full names, addresses, birth dates, kinship, and marital status of the decedent's survivors, including identification of those survivors who were dependent for support on the decedent at the time of his or her death.

(4) Degree of support afforded by the decedent to each survivor dependent on him or her for support at the time of death.

(5) Decedent's general physical and mental condition before death.

(6) Itemized bills or medical and burial expenses incurred by reason of the incident causing death, or itemized receipts of payment for such expenses.

(7) If damages for pain and suffering before death are claimed, a physician's detailed statement specifying the injuries suffered, duration of pain and suffering, any drugs administered for pain, and the decedent's physical condition in the interval between injury and death.

(8) Any other evidence or information which may have a bearing on either the responsibility of the United States for the death or the amount of damages claimed.

(b) *Personal injury.* In support of a claim for personal injury, including pain and suffering, the claimant may be required to submit the following evidence or information:

(1) A written report by his or her attending physician or dentist setting forth the nature and extent of the injury, nature and extent of treatment, any degree of temporary or permanent disability, the prognosis, period of hospitalization, and any diminished earning capacity. In addition, the claimant may be required to submit to a physical or mental examination by a physician employed by FEMA or another Federal agency. FEMA shall make available to the claimant a copy of the report of the examining physician on written request by the claimant, if he or she has, on request, furnished the report referred to in the first sentence of

this subparagraph and has made or agrees to make available to FEMA any other physician's reports previously or thereafter made of the physical or mental condition which is the subject matter of the claim.

(2) Itemized bills for medical, dental, and hospital expenses incurred, or itemized receipts of payment of such expenses.

(3) If the prognosis reveals the necessity for future treatment, a statement of expected expenses for such treatment.

(4) If a claim is made for loss of time from employment, a written statement from the employer showing actual time lost from employment, whether he or she is a full- or part-time employee, and wages or salary actually lost.

(5) If a claim is made for loss of income and the claimant is self-employed, documentary evidence showing the amount of earnings actually lost.

(6) Any other evidence or information which may have a bearing on either the responsibility of the United States for the personal injury or the damages claimed.

(c) *Property damage.* In support of a claim for injury to or loss of property, real or personal, the claimant may be required to submit the following evidence or information:

(1) Proof of ownership of the property interest which is the subject of the claim.

(2) A detailed statement of the amount claimed with respect to each item of property.

(3) An itemized receipt of payment for necessary repairs or itemized written estimates of the cost of such repairs.

(4) A statement listing date of purchase, purchase price, and salvage value, where repair is not economical.

(5) Any other evidence or information which may have a bearing on either the responsibility of the United States for the injury to or loss of property or the damages claimed.

§ 11.15 Authority to adjust, determine, compromise and settle.

(a) The Chief Counsel of FEMA, or a designee of the Chief Counsel, is delegated authority to consider, ascertain, adjust, determine, compromise, and settle claims under the provisions of section 2672 of title 28, United States Code, and this part.

(b) Notwithstanding the delegation of authority in paragraph (a) of this section, a Regional Administrator is delegated authority to be exercised in his or her discretion, to consider, ascertain, adjust, determine, compromise, and settle under the provisions of section 2672 of title 28, United States Code, and this part, any claim for $200 or less which is based on alleged negligence or wrongful act or omission of an employee of the appropriate Region, except when:

(1) There are personal injuries to either Government personnel or individuals not employed by the Government; or

(2) All damage to Government property or to property being used by FEMA, or both, is more than $200, or all damage to non-Government property being used by individuals not employed by the Government is more than $200.

[45 FR 15930, Mar. 12, 1980, as amended at 48 FR 6711, Feb. 15, 1983]

§ 11.16 Limitations on authority.

(a) An award, compromise, or settlement of a claim under this part in excess of $25,000 may be effected only with the advance written approval of the Attorney General or his or her designee. For the purpose of this paragraph, a principal claim and any derivative or subrogated claim shall be treated as a single claim.

(b) An administrative claim may be adjusted, determined, compromised, or settled under this part only after consultation with the Department of Justice, when, in the opinion of the Chief Counsel of FEMA or his or her designee:

(1) A new precedent or a new point of law is involved; or

(2) A question of policy is or may be involved; or

(3) The United States is or may be entitled to indemnity or contribution from a third party and FEMA is unable to adjust the third party claim; or

(4) The compromise of a particular claim, as a practical matter, will or

may control the disposition of a related claim in which the amount to be paid may exceed $25,000.

(c) An administrative claim may be adjusted, determined, compromised or settled under this part only after consultation with the Department of Justice when FEMA is informed or is otherwise aware that the United States or an employee, agent or cost-type contractor of the United States is involved in litigation based on a claim arising out of the same incident or transaction.

§ 11.17 Referral to Department of Justice.

When Department of Justice approval or consultation is required under § 11.16, the referral or request shall be transmitted to the Department of Justice by the Chief Counsel or his or her designee.

§ 11.18 Final denial of claim.

(a) Final denial of an administrative claim under this part shall be in writing and sent to the claimant, his or her attorney, or legal representative by certified or registered mail. The notification of final denial may include a statement of the reasons for the denial and shall include a statement that, if the claimant is dissatisfied with the FEMA action, he or she may file suit in an appropriate U.S. District Court not later than 6 months after the date of mailing of the notification.

(b) Prior to the commencement of suit and prior to the expiration of the 6-month period provided in 28 U.S.C. 2401(b), a claimant, his or her duly authorized agent, or legal representative, may file a written request with FEMA for reconsideration of a final denial of a claim under paragraph (a) of this section. Upon the timely filing of a request for reconsideration the FEMA shall have 6 months from the date of filing in which to make a final FEMA disposition of the claim and the claimant's option under 28 U.S.C. 2675(a) shall not accrue until 6 months after the filing of a request for reconsideration. Final FEMA action on a request for reconsideration shall be effected in accordance with the provisions of paragraph (a) of this section.

§ 11.19 Action on approved claim.

(a) Payment of a claim approved under this part is contingent on claimant's execution of (1) a ''Claim for Damage or Injury,'' Standard Form 95, or a claims settlement agreement, and (2) a ''Voucher for Payment,'' Standard Form 1145, as appropriate. When a claimant is represented by an attorney, the voucher for payment shall designate both the claimant and his or her attorney as payees, and the check shall be delivered to the attorney, whose address shall appear on the voucher.

(b) Acceptance by the claimant, his or her agent, or legal representative, of an award, compromise, or settlement made under section 2672 or 2677 of title 28, United States Code, is final and conclusive on the claimant, his or her agent or legal representative, and any other person on whose behalf or for whose benefit the claim has been presented, and constitutes a complete release of any claim against the United States and against any employee of the Government whose act or omission gave rise to the claim, by reason of the same subject matter.

Subpart C [Reserved]

Subpart D—Personnel Claims Regulations

AUTHORITY: 31 U.S.C. 3721.

SOURCE: 50 FR 8112, Feb. 28, 1985, unless otherwise noted.

§ 11.70 Scope and purpose.

(a) The Administrator, Federal Emergency Management Agency (FEMA), is authorized by 31 U.S.C. 3721 to settle and pay (including replacement in kind) claims of officers and employees of FEMA, amounting to not more than $25,000 for damage to or loss of personal property incident to their service. Property may be replaced in-kind at the option of the Government. Claims are payable only for such types, quantities, or amounts of tangible personal property (including money) as the approving authority shall determine to be reasonable, useful, or proper under the circumstances existing at the time and place of the loss. In determining what is reasonable, useful, or proper,

the approving authority will consider the type and quantity of property involved, circumstances attending acquisition and use of the property, and whether possession or use by the claimant at the time of damage or loss was incident to service.

(b) The Government does not underwrite all personal property losses that a claimant may sustain and it does not underwrite individual tastes. While the Government does not attempt to limit possession of property by an individual, payment for damage or loss is made only to the extent that the possession of the property is determined to be reasonable, useful, or proper. If individuals possess excessive quantities of items, or expensive items, they should have such property privately insured. Failure of the claimant to comply with these procedures may reduce or preclude payment of the claim under this subpart.

§ 11.71 Claimants.

(a) A claim pursuant to this subpart may only be made by: (1) An employee of FEMA; (2) a former employee of FEMA whose claim arises out of an incident occurring before his/her separation from FEMA; (3) survivors of a person named in paragraph (a) (1) or (2) of this section, in the following order of precedence: (i) Spouse; (ii) children; (iii) father or mother, or both or (iv) brothers or sisters, or both; (4) the authorized agent or legal representative of a person named in paragraphs (a) (1), (2), and (3) of this section.

(b) A claim may not be presented by or for the benefit of a subrogee, assignee, conditional vendor, or other third party.

§ 11.72 Time limitations.

(a) A claim under this part may be allowed only if it is in writing, specifies a sum certain and is received in the Office of Chief Counsel, Federal Emergency Management Agency, Washington, DC 20472: (1) Within 2 years after it accrues; (2) or if it cannot be filed within the time limits of paragraph (a)(1) of this section because it accrues in time of war or in time of armed conflict in which any armed force of the United States is engaged or if such a war or armed conflict intervenes within 2 years after the claim accrues, when the claimant shows good cause, the claim may be filed within 2 years after the cause ceases to exist but not more than 2 years after termination of the war or armed conflict.

(b) For purposes of this subpart, a claim accrues at the time of the accident or incident causing the loss or damage, or at such time as the loss or damage should have been discovered by the claimant by the exercise of due diligence.

§ 11.73 Allowable claims.

(a) A claim may be allowed only if: (1) The damage or loss was not caused wholly or partly by the negligent or wrongful act of the claimant, his/her agent, the members of his/her family, or his/her private employee (the standard to be applied is that of reasonable care under the circumstances); and (2) the possession of the property lost or damaged and the quantity possessed is determined to have been reasonable, useful, or proper under the circumstances; and (3) the claim is substantiated by proper and convincing evidence.

(b) Claims which are otherwise allowable under this subpart shall not be disallowed solely because the property was not in the possession of the claimant at the time of the damage or loss, or solely because the claimant was not the legal owner of the property for which the claim is made. For example, borrowed property may be the subject of a claim.

(c) Subject to the conditions in paragraph (a) of this section, and the other provisions of this subpart, any claim for damage to, or loss of, personal property incident to service with FEMA may be considered and allowed. The following are examples of the principal types of claims which may be allowed, unless excluded by § 11.74.

(1) *Property loss or damage in quarters or other authorized places.* Claims may be allowed for damage to, or loss of, property arising from fire, flood, hurricane, other natural disaster, theft, or other unusual occurrence, while such property is located at:

(i) Quarters within the 50 states or the District of Columbia that were assigned to the claimant or otherwise

provided in-kind by the United States; or

(ii) Any warehouse, office, working area, or other place (except quarters) authorized for the reception or storage of property.

(2) *Transportation or travel losses.* Claims may be allowed for damage to, or loss of, property incident to transportation or storage pursuant to orders, or in connection with travel under orders, including property in the custody of a carrier, an agent or agency of the Government, or the claimant.

(3) *Motor vehicles.* Claims may be allowed for automobiles and other motor vehicles damaged or lost by overseas shipments provided by the Government. ''Shipments provided by the Government'' means via Government vessels, charter of commercial vessels, or by Government bills of lading on commercial vessels, and includes storage, unloading, and offloading incident thereto. Other claims for damage to or loss of automobiles and other major vehicles may be allowed when use of the vehicles on a nonreimbursable basis was required by the claimant's supervisor, but these claims shall be limited to a maximum of $1,000.00.

(4) *Mobile homes.* Claims may be allowed for damage to or loss of mobile homes and their content under the provisions of paragraph (c)(2) of this section. Claims for structural damage to mobile homes resulting from such structural damage must contain conclusive evidence that the damage was not caused by structural deficiency of the mobile home and that it was not overloaded. Claims for damage to or loss of tires mounted on mobile homes may be allowed only in cases of collision, theft, or vandalism.

(5) *Money.* Claims for money in an amount that is determined to be reasonable for the claimant to possess at the time of the loss are payable:

(i) Where personal funds were accepted by responsible Government personnel with apparent authority to receive them for safekeeping, deposit, transmittal, or other authorized disposition, but were neither applied as directed by the owner nor returned;

(ii) When lost incident to a marine or aircraft disaster;

(iii) When lost by fire, flood, hurricane, or other natural disaster;

(iv) When stolen from the quarters of the claimant where it is conclusively shown that the money was in a locked container and that the quarters themselves were locked. Exceptions to the foregoing ''double lock'' rule are permitted when the adjudicating authority determines that the theft loss was not caused wholly or partly by the negligent or wrongful act of the claimant, their agent, or their employee. The adjudicating authority should use the test of whether the claimant did their best under the circumstances to protect the property; or

(v) When taken by force from the claimant's person.

(6) *Clothing.* Claims may be allowed for clothing and accessories customarily worn on the person which are damaged or lost:

(i) During the performance of official duties in an unusual or extraordinary-risk situation;

(ii) In cases involving emergency action required by natural disaster such as fire, flood, hurricane, or by enemy or other belligerent action;

(iii) In cases involving faulty equipment or defective furniture maintained by the Government and used by the claimant required by the job situation; or

(iv) When using a motor vehicle.

(7) *Property used for benefit of the Government.* Claims may be allowed for damage to or loss of property (except motor vehicles, see §§11.73(c)(3) and 11.74(b)(13)) used for the benefit of the Government at the request of, or with the knowledge and consent of, superior authority or by reason of necessity.

(8) *Enemy action or public service.* Claims may be allowed for damage to or loss of property as a direct consequence of:

(i) Enemy action or threat thereof, or combat, guerrilla, brigandage, or other belligerent activity, or unjust confiscation by a foreign power or its nation:

(ii) Action by the claimant to quiet a civil disturbance or to alleviate a public disaster; or

(iii) Efforts by the claimant to save human life or Government property.

(9) *Marine or aircraft disaster.* Claims may be allowed for personal property

damaged or lost as a result of marine or aircraft disaster or accident.

(10) *Government property*. Claims may be allowed for property owned by the United States only when the claimant is financially responsible to an agency of the Government other than FEMA.

(11) *Borrowed property*. Claims may be allowed for borrowed property that has been damaged or lost.

(12)(i) A claim against the Government may be made for not more than $40,000 by an officer or employee of the agency for damage to, or loss of, personal property in a foreign country that was incurred incident to service, and—

(A) The officer, or employee was evacuated from the country on a recommendation or order of the Secretary of State or other competent authority that was made in responding to an incident of political unrest or hostile act by people in that country; and the damage or loss resulted from the evacuation, incident, or hostile act; or

(B) The damage or loss resulted from a hostile act directed against the Government or its officers, or employees.

(ii) On paying the claim under this section, the Government is subrogated for the amount of the payment to a right or claim that the claimant may have against the foreign country for the damage or loss for which the Government made the payment.

(iii) Amounts may be obligated or expended for claims under this section only to the extent provided in advance in appropriation laws.

§ 11.74 Claims not allowed.

(a) A claim is not allowable if:

(1) The damage or loss was caused wholly or partly by the negligent or wrongful act of the claimant, claimant's agent, claimant's employee, or a member of claimant's family;

(2) The damage or loss occurred in quarters occupied by the claimant within the 50 states and the District of Columbia that were not assigned to the claimant or otherwise provided in-kind by the United States;

(3) Possession of the property lost or damaged was not incident to service or not reasonable or proper under the circumstances.

(b) In addition to claims falling within the categories of paragraph (a) of this section, the following are examples of claims which are not payable:

(1) *Claims not incident to service*. Claims which arose during the conduct of personal business are not payable.

(2) *Subrogation claims*. Claims based upon payment or other consideration to a proper claimant are not payable.

(3) *Assigned claims*. Claims based upon assignment of a claim by a proper claimant are not payable.

(4) *Conditional vendor claims*. Claims asserted by or on behalf of a conditional vendor are not payable.

(5) *Claims by improper claimants*. Claims by persons not designated in § 11.71 are not payable.

(6) *Articles of extraordinary value*. Claims are not payable for valuable or expensive articles, such as cameras, watches, jewelry, furs, or other articles of extraordinary value, when shipped with household goods or as unaccompanied baggage (shipment includes storage). This prohibition does not apply to articles in the personal custody of the claimant or articles properly checked, provided that reasonable protection or security measures have been taken, by the claimant.

(7) *Articles acquired for other persons*. Claims are not payable for articles intended directly or indirectly for persons other than the claimant or members of the claimants' immediate household. This prohibition includes articles acquired at the request of others and articles for sale.

(8) *Property used for business*. Claims are not payable for property normally used for business or profit.

(9) *Unserviceable property*. Claims are not payable for wornout or unserviceable property.

(10) *Violation of law or directive*. Claims are not payable for property acquired, possessed, or transported in violation of law, regulation, or other directive. This does not apply to limitation imposed on the weight of shipments of household goods.

(11) *Intangible property*. Claims are not payable for intangible property such as bank books, checks, promissory notes, stock certificates, bonds,

bills of lading, warehouse receipts, baggage checks, insurance policies, money orders, and traveler's checks.

(12) *Government property.* Claims are not payable for property owned by the United States unless the claimant is financially responsible for the property to an agency of the Government other than FEMA.

(13) *Motor vehicles.* Claims for motor vehicles, except as provided for by §11.73(c)(3), will ordinarily not be paid. However, in exceptional cases, meritorious claims for damage to or loss of motor vehicles, limited to a maximum of $1,000.00, may be recommended to the Office of Chief Counsel for consideration and approval for payment.

(14) *Enemy property.* Claims are not payable for enemy property, including war trophies.

(15) *Losses recoverable from carrier, insurer or contractor.* Claims are not payable for losses, or any portion thereof, which have been recovered or are recoverable from a carrier, insurer or under contract except as permitted under §11.75.

(16) *Fees for estimates.* Claims are not normally payable for fees paid to obtain estimates of repair in conjunction with submitting a claim under this subpart. However, where, in the opinion of the adjudicating authority, the claimant could not obtain an estimate without paying a fee, such a claim may be considered in an amount reasonable in relation to the value for the cost of repairs of the articles involved, provided that the evidence furnished clearly indicates that the amount of the fee paid will not be deducted from the cost of repairs if the work is accomplished by the estimator.

(17) *Items fraudulently claimed.* Claims are not payable for items fraudulently claimed. When investigation discloses that a claimant, claimant's agent, claimant's employee, or member of claimant's family has intentionally misrepresented an item claimed as to cost, condition, costs to repair, etc., the item will be disallowed in its entirety even though some actual damage has been sustained. However, if the remainder of the claim is proper, it may be paid. This does not preclude appropriate disciplinary action if warranted.

(18) *Minimum amount.* Loss or damage amounting to less than $10.

§11.75 Claims involving carriers and insurers.

In the event the property which is the subject of a claim was lost or damaged while in the possession of a carrier or was insured, the following procedures will apply:

(a) Whenever property is damaged, lost, or destroyed while being shipped pursuant to authorized travel orders, the owner must file a written claim for reimbursement with the last commercial carrier known or believed to have handled the goods, or the carrier known to be in possession of the property when the damage or loss occurred, according to the terms of its bill of lading or contract, before submitting a claim against the Government under this subpart.

(1) If more than one bill of lading or contract was issued, a separate demand should be made against the last carrier on each such document.

(2) The demand should be made within the time limit provided in the policy and prior to the filing of a claim against the Government.

(3) If it is apparent that the damage or loss is attributable to packing, storage, or unpacking while in the custody of the Government, no demand need be made against the carrier.

(b) Whenever property which is damaged, lost, or destroyed incident to the claimant's service is insured in whole or in part, the claimant must make demand in writing against the insurer for reimbursement under terms and conditions of the insurance coverage, prior to the filing of the concurrent claim against the Government.

(c) Failure to make a demand on a carrier or insurer or to make all reasonable efforts to protect and prosecute rights available against a carrier or insurer and to collect the amount recoverable from the carrier or insurer may result in reducing the amount recoverable from the Government by the maximum amount which would have been recoverable from the carrier or insurer, had the claim been timely or diligently prosecuted. However, no deduction will be made where the circumstances of the claimant's service

preclude reasonable filing of such a claim or diligent prosecution, or the evidence indicates a demand was impracticable or would have been unavailing.

(d) Following the submission of the claim against the carrier or insurer, the claimant may immediately submit a claim against the Government in accordance with the provisions of this subpart, without waiting until either final approval or denial of the claim is made by the carrier or insurer.

(1) Upon submission of a claim to the Government, the claimant must certify in the claim that no recovery (or the amount of recovery) has been gained from a carrier or insurer, and enclose all correspondence pertinent thereto.

(2) If the carrier or insurer has not taken final action on the claim against them, by the time the claimant submits a claim to the Government, the claimant will immediately notify them to address all correspondence in regard to the claim to him/her, in care of the Chief Counsel of FEMA.

(3) The claimant shall timely advise the Chief Counsel in writing, of any action which is taken by the carrier or insurer on the claim. On request, the claimant also will furnish such evidence as may be required to enable the United States to enforce the claim.

(e) When a claim is paid by FEMA, the claimant will assign to the United States, to the extent of any payment on the claim accepted by claimant, all rights, title, and interest in any claim against the carrier, insurer, or other party arising out of the incident on which the claim against the Government is based. After payment of the claim by the Government, the claimant will, upon receipt of any payment from a carrier or insurer, pay the proceeds to the United States to the extent of the payment received by the claimant from the United States.

(f) When a claimant recovers for the loss from the carrier or insurer before the claim against the Government under this subpart is settled, the amount or recovery shall be applied to the claim as follows:

(1) When the amount recovered from a carrier, insurer, or other third party is greater than or equal to the claimant's total loss as determined under this subpart, no compensation is allowable under this subpart.

(2) When the amount recovered is less than such total loss, the allowable amount is determined by deducting the recovery from the amount of such total loss;

(3) For the purpose of this paragraph (f) the claimant's total loss is to be determined without regard to the $25,000 maximum set forth above. However, if the resulting amount, after making this deduction, exceeds $25,000, the claimant will be allowed only $25,000.

§ 11.76 Claims procedures.

(a) *Filing a claim.* Applicants shall file claims in writing with the Chief Counsel, Federal Emergency Management Agency, Washington, DC 20472. Each written claim shall contain, as a minimum:

(1) Name, address, and place of employment of the claimant;

(2) Place and date of the damage or loss:

(3) A brief statement of the facts and circumstances surrounding the damage or loss;

(4) Cost, date, and place of acquisition of each price of property damaged or lost;

(5) Two itemized repair estimates, or value estimates, whichever is applicable;

(6) Copies of police reports, if applicable;

(7) A statement from the claimant's supervisor that the loss was incident to service;

(8) A statement that the property was or was not insured;

(9) With respect to claims involving thefts or losses in quarters or other places where the property was reasonably kept, a statement as to what security precautions were taken to protect the property involved;

(10) With respect to claims involving property being used for the benefit of the Government, a statement by the claimant's supervisor that the claimant was required to provide such property or that the claimant's providing it was in the interest of the Government; and

(11) Other evidence as may be required.

(b) *Single claim.* A single claim shall be presented for all lost or damaged property resulting from the same incident. If this procedure causes a hardship, the claimant may present an initial claim with notice that it is a partial claim, an explanation of the circumstances causing the hardship, and an estimate of the balance of the claim and the date it will be submitted. Payment may be made on a partial claim if the adjudicating authority determines that a genuine hardship exists.

(c) *Loss in quarters.* Claims for property loss in quarters or other authorized places should be accompanied by a statement indicating:

(1) Geographical location;

(2) Whether the quarters were assigned or provided in-kind by the Government;

(3) Whether the quarters are regularly occupied by the claimant;

(4) Names of the authority, if any, who designated the place of storage of the property if other than quarters;

(5) Measures taken to protect the property; and

(6) Whether the claimant is a local inhabitant.

(d) *Loss by theft or robbery.* Claims for property loss by theft or robbery should be accompanied by a statement indicating:

(1) Geographical location;

(2) Facts and circumstances surrounding the loss, including evidence of the crime such as breaking and entering, capture of the thief or robber, or recovery of part of the stolen goods; and

(3) Evidence that the claimant exercised due care in protecting the property prior to the loss, including information as to the degree of care normally exercised in the locale of the loss due to any unusual risks involved.

(e) *Transportation losses.* Claims for transportation losses should be accompanied by the following:

(1) Copies of orders authorizing the travel, transportation, or shipment or a certificate explaining the absence of orders and stating their substance;

(2) Statement in cases where property was turned over to a shipping officer, supply officer, or contract packer indicating:

(i) Name (or designation) and address of the shipping officer, supply officer, or contract packer indicating;

(ii) Date the property was turned over;

(iii) Inventoried condition when the property was turned over;

(iv) When and where the property was packed and by whom;

(v) Date of shipment;

(vi) Copies of all bills of lading, inventories, and other applicable shipping documents;

(vii) Date and place of delivery to the claimant;

(viii) Date the property was unpacked by the carrier, claimant, or Government;

(ix) Statement of disinterested witnesses as to the condition of the property when received and delivered, or as to handling or storage;

(x) Whether the negligence of any Government employee acting within the scope of his/her employment caused the damage or loss;

(xi) Whether the last common carrier or local carrier was given a clear receipt, except for concealed damages;

(xii) Total gross, tare, and new weight of shipment;

(xiii) Insurance certificate or policy if losses are privately insured;

(xiv) Copy of the demand on carrier or insured, or both, when required, and the reply, if any;

(xv) Action taken by the claimant to locate missing baggage or household effects, including related correspondence.

(f) *Marine or aircraft disaster.* Claims for property losses due to marine or aircraft disaster should be accompanied by a copy of orders or other evidence to establish the claimant's right to be, or to have property on board.

(g) *Enemy action, public disaster, or public service.* Claims for property losses due to enemy action, public disaster, or public service should be accompanied by:

(1) Copies of orders or other evidence establishing the claimant's required presence in the area involved; and

(2) A detailed statement of facts and circumstances showing an applicable case enumerated in §11.73(c)(8).

(h) *Money.* Claims for loss of money deposited for safekeeping, transmittal,

or other authorized disposition should be accompanied by:

(1) Name, grade, and address of the person or persons who received money and any others involved;

(2) Name and designation of the authority who authorized such person or persons to accept personal funds and the disposition required; and

(3) Receipts and written sworn statements explaining the failure to account for funds or return them to the claimant.

(i) *Motor vehicles or mobile homes in transit.* Claims for damage to motor vehicles or mobile homes in transit should be accompanied by a copy of orders or other available evidence to establish the claimant's lawful right to have the property shipped and evidence to establish damage in transit.

§ 11.77 Settlement of claims.

(a) The Chief Counsel, FEMA, is authorized to settle (consider, ascertain, adjust, determine, and dispose of, whether by full or partial allowance or disallowance) any claim under this subpart.

(b) The Chief Counsel may formulate such procedures and make such redelegations as may be required to fulfill the objectives of this subpart.

(c) The Chief Counsel shall conduct or request the Office of Inspector General to conduct such investigation as may be appropriate in order to determine the validity of a claim.

(d) The Chief Counsel shall notify a claimant in writing of action taken on their claim, and if partial or full disallowance is made, the reasons therefor.

(e) In the event a claim submitted against a carrier under §11.75 has not been settled, before settlement of the claim against the Government pursuant to this subpart, the Chief Counsel shall notify such carrier or insurer to pay the proceeds of the claim to FEMA to the extent FEMA has paid such to claimant in settlement.

(f) The settlement of a claim under this subpart, whether by full or partial allowance or disallowance, is final and conclusive.

§ 11.78 Computation of amount of award.

(a) The amount allowed for damage to or loss of any items of property may not exceed the cost of the item (either the price paid in cash or property, or the value at the time of acquisition if not acquired by purchase or exchange), and there will be no allowance for replacement cost or for appreciation in the value of the property. Subject to these limitations, the amount allowable is either:

(1) The depreciated value, immediately prior to the loss or damage, of property lost or damaged beyond economical repair, less any salvage value; or

(2) The reasonable cost or repairs, when property is economically repairable, provided that the cost of repairs does not exceed the amount allowable under paragraph (a)(1) of this section.

(b) Depreciation in value is determined by considering the type of article involved, its costs, its conditions when damaged or lost, and the time elapsed between the date of acquisition and the date of damage or loss.

(c) Replacement of lost or damaged property may be made in-kind whenever appropriate.

§ 11.79 Attorney's fees.

No more than 10 per centum of the amount paid in settlement of each individual claim submitted and settled under this subpart shall be paid or delivered to or received by any agent or attorney on account of services rendered in connection with that claim. A person violating this section shall be fined not more than $1,000.

[45 FR 15930, Mar. 12, 1980, as amended at 74 FR 15337, Apr. 3, 2009]

PARTS 12–14 [RESERVED]

PART 15—CONDUCT AT THE MT. WEATHER EMERGENCY ASSISTANCE CENTER AND AT THE NATIONAL EMERGENCY TRAINING CENTER

Sec.

15.1 Applicability.
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15.4 Inspection.
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15.17 Other laws.

AUTHORITY: Reorganization Plan No. 3 of 1978, 43 FR 41943, 3 CFR, 1978 Comp., p. 329; E.O. 12127 of Mar. 31, 1979, 44 FR 19367, 3 CFR, 1979 Comp., p. 376; E.O. 12148, 44 FR 13239, 3 CFR, 1979 Comp., p. 412; Federal Fire Prevention and Control Act of 1974, 15 U.S.C. 2201 *et seq.;* delegation of authority from the Administrator of General Services, dated July 18, 1979; Pub. L. 80–566, approved June 1, 1948, 40 U.S.C. 318–318d; and the Federal Property and Administrative Services Act of 1949, 40 U.S.C. 271 *et seq*.

SOURCE: 64 FR 31137, June 10, 1999, unless otherwise noted.

§ 15.1 Applicability.

The rules and regulations in this part apply to all persons entering, while on, or leaving all the property known as the Mt. Weather Emergency Operations Center (Mt. Weather) located at 19844 Blue Ridge Mountain Road, Bluemont, Virginia 20135, and all the property known as the National Emergency Training Center (NETC), located on 16825 South Seton Avenue in Emmitsburg, Maryland, which the Federal Emergency Management Agency (FEMA) owns, operates and controls.

§ 15.2 Definitions.

Terms used in part 15 have these meanings:

Administrator means the Administrator of the Federal Emergency Management Agency.

Assistant Administrator means the Assistant Administrator, United States Fire Administration, FEMA.

FEMA means the Federal Emergency Management Agency.

Mt. Weather means the Mt. Weather Emergency Operations Center, Bluemont, Virginia.

Mt. Weather Executive Director means the Executive Director of the Mt. Weather Emergency Operations Center.

NETC means the National Emergency Training Center, Emmitsburg, MD.

We means the Federal Emergency Management Agency or FEMA.

[64 FR 31137, June 10, 1999, as amended at 74 FR 15338, Apr. 3, 2009]

§ 15.3 Access to Mt. Weather.

Mt. Weather contains classified material and areas that we must protect in the interest of national security. The facility is a restricted area. We deny access to Mt. Weather to the general public and limit access to those persons having official business related to the missions and operations of Mt. Weather. The Administrator or the Mt. Weather Executive Director must approve all persons and vehicles entering Mt. Weather. All persons must register with the Mt. Weather Police/Security Force and must receive a Mt. Weather identification badge and vehicle parking decal or permit to enter or remain on the premises. No person will enter or remain on Mt. Weather premises unless he or she has received permission from the Administrator or the Mt. Weather Executive Director and has complied with these procedures.

§ 15.4 Inspection.

(a) *In general.* All vehicles, packages, handbags, briefcases, and other containers being brought into, while on or being removed from Mt. Weather or the NETC are subject to inspection by the Police/Security Force and other authorized officials. A full search of a vehicle or person may accompany an arrest.

(b) *Inspection at Mt. Weather.* We authorize inspection at Mt. Weather to prevent the possession and use of items prohibited by these rules and regulations or by other applicable laws, to prevent theft of property and to prevent the wrongful obtaining of defense information under 18 U.S.C. 793. If individuals object to such inspections they must tell the officer on duty at the entrance gate before entering Mt. Weather. The Police/Security Force and other authorized officials must not authorize or allow individuals who refuse to permit an inspection of their vehicle or possessions to enter the premises of Mt. Weather.

§ 15.5 Preservation of property.

At both Mt. Weather and NETC we prohibit:

(a) The improper disposal of rubbish;

(b) Willful destruction of or damage to property;

(c) Theft of property;

(d) Creation of any hazard on the property to persons or things;

(e) Throwing articles of any kind from or at a building;

(f) Climbing upon a fence; or

(g) Climbing upon the roof or any part of a building.

§ 15.6 Compliance with signs and directions.

Persons at Mt. Weather and the NETC must comply at all times with official signs that prohibit, regulate, or direct, and with the directions of the Police/Security Force and other authorized officials.

§ 15.7 Disturbances.

At both Mt. Weather and NETC we prohibit any unwarranted loitering, disorderly conduct, or other conduct at Mt. Weather and NETC that:

(a) Creates loud or unusual noise or a nuisance;

(b) Unreasonably obstructs the usual use of classrooms, dormitory rooms, entrances, foyers, lobbies, corridors, offices, elevators, stairways, roadways or parking lots;

(c) Otherwise impedes or disrupts the performance of official duties by government employees or government contractors;

(d) Interferes with the delivery of educational or other programs; or

(e) Prevents persons from obtaining in a timely manner the administrative services provided at both facilities.

§ 15.8 Gambling.

We prohibit participating in games for money or other personal property, including the operation of gambling devices, the conduct of a lottery or pool, or the sale or purchase of numbers tickets at both facilities.

§ 15.9 Alcoholic beverages and narcotics.

At both Mt. Weather and the NETC we prohibit:

(a) Operating a motor vehicle by any person under the influence of alcoholic beverages, narcotic drugs, hallucinogens, marijuana, barbiturates or amphetamines as defined in Title 21 of the Annotated Code of Maryland, Transportation, sec. 21–902 or in Title 18.2, ch. 7, Art. 2 of the Code of Virginia, secs. 18.2–266 and 18.2–266.1, as applicable;

(b) Entering upon or while on either property being under the influence of or using or possessing any narcotic drug, marijuana, hallucinogen, barbiturate or amphetamine. This prohibition does not apply in cases where a licensed physician has prescribed the drug for the person;

(c) Entering upon either property or being on either property under the influence of alcoholic beverages;

(d) Bringing alcoholic beverages, narcotic drugs, hallucinogens, marijuana, barbiturates or amphetamines onto the premises unless the Assistant Administrator, the Mt. Weather Executive Director, or the Administrator or designee for the NETC authorizes it in writing; and

(e) Use of alcoholic beverages on the property except:

(1) In the Balloon Shed Lounge at Mt. Weather and in other locations that the Administrator or the Mt. Weather Executive Director authorizes in writing; and

(2) In the NETC Recreation Association and other locations that the Assistant Administrator for the United States Fire Administration or the Administrator, or designee, authorizes in writing.

§ 15.10 Soliciting, vending, and debt collection.

(a) We prohibit soliciting alms and contributions, commercial or political soliciting and vending of all kinds, displaying or distributing commercial advertising, or collecting private debts unless the Assistant Administrator for the United States Fire Administration or the Mt. Weather Executive Director approve the activities in writing and in advance.

(b) The prohibitions of this section do not apply to:

(1) National or local drives for funds for welfare, health, or other purposes

as authorized by 5 CFR part 950, Solicitation of Federal Civilian and Uniformed Service Personnel for Contributions to Private Voluntary Organizations. The Administrator, or the Senior Resident Manager, or the Assistant Administrator for the United States Fire Administration or designee, must approve all such national or local drives before they are conducted on either premises;

(2) Authorized concessions;

(3) Personal notices posted by employees on authorized bulletin boards; and

(4) Solicitation of labor organization membership or dues authorized by occupant agencies under the Civil Service Reform Act of 1978, 5 U.S.C. 7101 *et seq.*

§ 15.11 Distribution of handbills.

We prohibit the distribution of materials such as pamphlets, handbills or flyers, and the displaying of placards or posting of materials on bulletin boards or elsewhere at Mt. Weather and the NETC unless the Administrator, the Mt. Weather Executive Director, or the Deputy Assistant Administrator for the United States Fire Administration or designee, approves such distribution or display, or when such distribution or display is conducted as part of authorized government activities.

§ 15.12 Photographs and other depictions.

(a) *Photographs and other depictions at Mt. Weather.* We prohibit taking photographs and making notes, sketches, or diagrams of buildings, grounds or other features of Mt. Weather, or the possession of a camera while at Mt. Weather except when the Administrator or Mt. Weather Executive Director approves in advance.

(b) *Photographs and other depictions at the NETC.* (1) Photographs may be taken inside classroom or office areas of the NETC only with the consent of the occupants. Except where security regulations apply or a Federal court order or rule prohibits it, photographs may be taken in entrances, lobbies, foyers, corridors, or auditoriums when used for public meetings.

(2) Subject to the foregoing prohibitions, photographs for advertising and commercial purposes may be taken only with written permission of the Director of Management Operations and Systems Support, United States Fire Administration, Federal Emergency Management Agency, Emmitsburg, MD 21727, (telephone) (301) 447–1223, (facsimile) (301) 447–1052, or other authorized official where photographs are to be taken.

§ 15.13 Dogs and other animals.

Dogs and other animals, except seeing-eye dogs, must not be brought onto Mt. Weather grounds or into the buildings at NETC for other than official purposes.

§ 15.14 Vehicular and pedestrian traffic.

(a) Drivers of all vehicles entering or while at Mt. Weather or the NETC must drive carefully and safely at all times and must obey the signals and directions of the Police/Security Force or other authorized officials and all posted traffic signs;

(b) Drivers must comply with NETC parking requirements and vehicle registration requirements;

(c) At both Mt. Weather and the NETC we prohibit:

(1) Blocking entrances, driveways, walks, loading platforms, or fire hydrants on the property; and

(2) Parking without authority, parking in unauthorized locations or in locations reserved for other persons, or parking contrary to the direction of posted signs.

(3) Where warning signs are posted vehicles parked in violation may be removed at the owners' risk and expense.

(d) The Administrator, Mt. Weather Executive Director, or the Assistant Administrator for the United States Fire Administration or designee may issue and post specific supplemental traffic directives if needed. When issued and posted supplemental traffic directives will have the same force and effect as if they were in these rules. Proof that a parked motor vehicle violated these rules or directives may be taken as prima facie evidence that the registered owner was responsible for the violation.

§ 15.15 Weapons and explosives.

No person entering or while at Mt. Weather or the NETC will carry or possess firearms, other dangerous or deadly weapons, explosives or items intended to be used or that could reasonably be used to fabricate an explosive or incendiary device, either openly or concealed, except:

(a) For official purposes if the Administrator, Mt. Weather Executive Director, or the Assistant Administrator for the United States Fire Administration or designee approves; and

(b) In accordance with FEMA policy governing the possession of firearms.

§ 15.16 Penalties.

(a) *Misconduct.* (1) Whoever is found guilty of violating any of these rules and regulations is subject to a fine of not more than $50 or imprisonment for not more than 30 days, or both. (See 40 U.S.C. 318c.)

(2) We will process any misconduct at NETC according to FEMA/NETC policy or instructions.

(b) *Parking violations.* We may tow at the owner's expense any vehicles parked in violation of State law, FEMA, Mt. Weather, or NETC instructions.

§ 15.17 Other laws.

Nothing in the rules and regulations in this part will be construed to abolish any other Federal laws or any State and local laws and regulations applicable to Mt. Weather or NETC premises. The rules and regulations in this part supplement penal provisions of Title 18, United States Code, relating to Crimes and Criminal Procedure, which apply without regard to the place of the offense and to those penal provisions that apply in areas under the special maritime and territorial jurisdiction of the United States, as defined in 18 U.S.C. 7. They supersede provisions of State law, however, that Federal law makes criminal offenses under the Assimilated Crimes Act (18 U.S.C. 13) to the extent that State laws conflict with these regulations. State and local criminal laws apply as such only to the extent that the State reserved such authority to itself by the State consent or cession statute or that a Federal statute vests such authority in the State.

PART 16—ENFORCEMENT OF NONDISCRIMINATION ON THE BASIS OF HANDICAP IN PROGRAMS OR ACTIVITIES CONDUCTED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY

Sec.

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AUTHORITY: 29 U.S.C. 794.

SOURCE: 53 FR 25885, July 8, 1988, unless otherwise noted.

§ 16.101 Purpose.

The purpose of this regulation is to effectuate section 119 of the Rehabilitation, Comprehensive Services, and Developmental Disabilities Amendments of 1978, which amended section 504 of the Rehabilitation Act of 1973 to prohibit discrimination on the basis of handicap in programs or activities conducted by Executive agencies or the United States Postal Service.

§ 16.102 Application.

This regulation (§§ 16.101 through 16.170) applies to all programs or activities conducted by the agency, except for programs or activities conducted outside the United States that do not involve individuals with handicaps in the United States.

§ 16.103 Definitions.

For purposes of this regulation, the term—

Assistant Attorney General means the Assistant Attorney General, Civil Rights Division, United States Department of Justice.

Auxiliary aids means services or devices that enable persons with impaired sensory, manual, or speaking skills to have an equal opportunity to participate in, and enjoy the benefits of, programs or activities conducted by the agency. For example, auxiliary aids useful for persons with impaired vision include readers, Brailled materials, audio recordings, and other similar services and devices. Auxiliary aids useful for persons with impaired hearing include telephone handset amplifiers, telephones compatible with hearing aids, telecommunication devices for deaf persons (TDD's), interpreters, notetakers, written materials, and other similar services and devices.

Complete complaint means a written statement that contains the complainant's name and address and describes the agency's alleged discriminatory action in sufficient detail to inform the agency of the nature and date of the alleged violation of section 504. It shall be signed by the complainant or by someone authorized to do so on his or her behalf. Complaints filed on behalf of classes or third parties shall describe or identify (by name, if possible) the alleged victims of discrimination.

Facility means all or any portion of buildings, structures, equipment, roads, walks, parking lots, rolling stock or other conveyances, or other real or personal property.

Historic preservation programs means programs conducted by the agency that have preservation of historic properties as a primary purpose.

Historic properties means those properties that are listed or eligible for listing in the National Register of Historic Places or properties designated as historic under a statute of the appropriate State or local government body.

Individual with handicaps means any person who has a physical or mental impairment that substantially limits one or more major life activities, has a record of such an impairment, or is regarded as having such an impairment.

As used in this definition, the phrase:

(1) *Physical or mental impairment* includes—

(i) Any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: Neurological; musculoskeletal; special sense organs; respiratory, including speech organs; cardiovascular; reproductive; digestive; genitourinary; hemic and lymphatic; skin; and endocrine; or

(ii) Any mental or psychological disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities. The term *physical or mental impairment* includes, but is not limited to, such diseases and conditions as orthopedic, visual, speech, and hearing impairments, cerebral palsy, epilepsy, muscular dystrophy, multiple sclerosis, cancer, heart disease, diabetes, mental retardation, emotional illness, and drug addiction and alcoholism.

(2) *Major life activities* includes functions such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working.

(3) *Has a record of such an impairment* means has a history of, or has been misclassified as having, a mental or physical impairment that substantially limits one or more major life activities.

(4) *Is regarded as having an impairment* means—

(i) Has a physical or mental impairment that does not substantially limit major life activities but is treated by the agency as constituting such a limitation;

(ii) Has a physical or mental impairment that substantially limits major life activities only as a result of the attitudes of others toward such impairment; or

(iii) Has none of the impairments defined in paragraph (1) of this definition but is treated by the agency as having such an impairment.

Qualified individual with handicaps means—

(1) With respect to preschool, elementary, or secondary education services provided by the agency, an individual with handicaps who is a member of a class of persons otherwise entitled by

statute, regulation, or agency policy to receive education services from the agency;

(2) With respect to any other agency program or activity under which a person is required to perform services or to achieve a level of accomplishment, an individual with handicaps who meets the essential eligibility requirements and who can achieve the purpose of the program or activity without modifications in the program or activity that the agency can demonstrate would result in a fundamental alteration in its nature;

(3) With respect to any other program or activity, an individual with handicaps who meets the essential eligibility requirements for participation in, or receipt of benefits from, that program or activity; and

(4) *Qualified handicapped person* as that term is defined for purposes of employment in 29 CFR 1613.702(f), which is made applicable to this regulation by § 16.140.

Section 504 means section 504 of the Rehabilitation Act of 1973 (Pub. L. 93–112, 87 Stat. 394 (29 U.S.C. 794)), as amended by the Rehabilitation Act Amendments of 1974 (Pub. L. 93–516, 88 Stat. 1617); the Rehabilitation, Comprehensive Services, and Developmental Disabilities Amendments of 1978 (Pub. L. 95–602, 92 Stat. 2955); and the Rehabilitation Act Amendments of 1986 (Pub. L. 99–506, 100 Stat. 1810). As used in this regulation, section 504 applies only to programs or activities conducted by Executive agencies and not to federally assisted programs.

Substantial impairment means a significant loss of the integrity of finished materials, design quality, or special character resulting from a permanent alteration.

§§ 16.104–16.109 [Reserved]

§ 16.110 Self-evaluation.

(a) The agency shall, by September 6, 1989, evaluate its current policies and practices, and the effects thereof, that do not or may not meet the requirements of this regulation and, to the extent modification of any such policies and practices is required, the agency shall proceed to make the necessary modifications.

(b) The agency shall provide an opportunity to interested persons, including individuals with handicaps or organizations representing individuals with handicaps, to participate in the self-evaluation process by submitting comments (both oral and written).

(c) The agency shall, for at least three years following completion of the self-evaluation, maintain on file and make available for public inspection:

(1) A description of areas examined and any problems identified; and

(2) A description of any modifications made.

§ 16.111 Notice.

The agency shall make available to employees, applicants, participants, beneficiaries, and other interested persons such information regarding the provisions of this regulation and its applicability to the programs or activities conducted by the agency, and make such information available to them in such manner as the head of the agency finds necessary to apprise such persons of the protections against discrimination assured them by section 504 and this regulation.

§§ 16.112–16.129 [Reserved]

§ 16.130 General prohibitions against discrimination.

(a) No qualified individual with handicaps shall, on the basis of handicap, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity conducted by the agency.

(b)(1) The agency, in providing any aid, benefit, or service, may not, directly or through contractual, licensing, or other arrangements, on the basis of handicap—

(i) Deny a qualified individual with handicaps the opportunity to participate in or benefit from the aid, benefit, or service;

(ii) Afford a qualified individual with handicaps an opportunity to participate in or benefit from the aid, benefit, or service that is not equal to that afforded others;

(iii) Provide a qualified individual with handicaps with an aid, benefit, or

service that is not as effective in affording equal opportunity to obtain the same result, to gain the same benefit, or to reach the same level of achievement as that provided to others;

(iv) Provide different or separate aid, benefits, or services to individuals with handicaps or to any class of individuals with handicaps than is provided to others unless such action is necessary to provide qualified individuals with handicaps with aid, benefits, or services that are as effective as those provided to others;

(v) Deny a qualified individual with handicaps the opportunity to participate as a member of planning or advisory boards;

(vi) Otherwise limit a qualified individual with handicaps in the enjoyment of any right, privilege, advantage, or opportunity enjoyed by others receiving the aid, benefit, or service.

(2) The agency may not deny a qualified individual with handicaps the opportunity to participate in programs or activities that are not separate or different, despite the existence of permissibly separate or different programs or activities.

(3) The agency may not, directly or through contractual or other arrangements, utilize criteria or methods of administration the purpose or effect of which would—

(i) Subject qualified individuals with handicaps to discrimination on the basis of handicap; or

(ii) Defeat or substantially impair accomplishment of the objectives of a program or activity with respect to individuals with handicaps.

(4) The agency may not, in determining the site or location of a facility, make selections the purpose or effect of which would—

(i) Exclude individuals with handicaps from, deny them the benefits of, or otherwise subject them to discrimination under any program or activity conducted by the agency; or

(ii) Defeat or substantially impair the accomplishment of the objectives of a program or activity with respect to individuals with handicaps.

(5) The agency, in the selection of procurement contractors, may not use criteria that subject qualified individuals with handicaps to discrimination on the basis of handicap.

(6) The agency may not administer a licensing or certification program in a manner that subjects qualified individuals with handicaps to discrimination on the basis of handicap, nor may the agency establish requirements for the programs or activities of licensees or certified entities that subject qualified individuals with handicaps to discrimination on the basis of handicap. However, the programs or activities of entities that are licensed or certified by the agency are not, themselves, covered by this regulation.

(c) The exclusion of nonhandicapped persons from the benefits of a program limited by Federal statute or Executive order to individuals with handicaps or the exclusion of a specific class of individuals with handicaps from a program limited by Federal statute or Executive order to a different class of individuals with handicaps is not prohibited by this regulation.

(d) The agency shall administer programs and activities in the most integrated setting appropriate to the needs of qualified individuals with handicaps.

§§ 16.131–16.139 [Reserved]

§ 16.140 Employment.

No qualified individual with handicaps shall, on the basis of handicap, be subject to discrimination in employment under any program or activity conducted by the agency. The definitions, requirements, and procedures of section 501 of the Rehabilitation Act of 1973 (29 U.S.C. 791), as established by the Equal Employment Opportunity Commission in 29 CFR part 1613, shall apply to employment in federally conducted programs or activities.

§§ 16.141–16.148 [Reserved]

§ 16.149 Program accessibility: Discrimination prohibited.

Except as otherwise provided in §16.150, no qualified individual with handicaps shall, because the agency's facilities are inaccessible to or unusable by individuals with handicaps, be denied the benefits of, be excluded from

participation in, or otherwise be subjected to discrimination under any program or activity conducted by the agency.

§ 16.150 Program accessibility: Existing facilities.

(a) *General.* The agency shall operate each program or activity so that the program or activity, when viewed in its entirety, is readily accessible to and usable by individuals with handicaps. This paragraph does not—

(1) Necessarily require the agency to make each of its existing facilities accessible to and usable by individuals with handicaps;

(2) In the case of historic preservation programs, require the agency to take any action that would result in a substantial impairment of significant historic features of an historic property; or

(3) Require the agency to take any action that it can demonstrate would result in a fundamental alteration in the nature of a program or activity or in undue financial and administrative burdens. In those circumstances where agency personnel believe that the proposed action would fundamentally alter the program or activity or would result in undue financial and administrative burdens, the agency has the burden of proving that compliance with § 16.150(a) would result in such alteration or burdens. The decision that compliance would result in such alteration or burdens must be made by the agency head or his or her designee after considering all agency resources available for use in the funding and operation of the conducted program or activity, and must be accompanied by a written statement of the reasons for reaching that conclusion. If an action would result in such an alteration or such burdens, the agency shall take any other action that would not result in such an alteration or such burdens but would nevertheless ensure that individuals with handicaps receive the benefits and services of the program or activity.

(b) *Methods*—(1) *General.* The agency may comply with the requirements of this section through such means as redesign of equipment, reassignment of services to accessible buildings, assignment of aides to beneficiaries, home visits, delivery of services at alternate accessible sites, alteration of existing facilities and construction of new facilities, use of accessible rolling stock, or any other methods that result in making its programs or activities readily accessible to and usable by individuals with handicaps. The agency is not required to make structural changes in existing facilities where other methods are effective in achieving compliance with this section. The agency, in making alterations to existing buildings, shall meet accessibility requirements to the extent compelled by the Architectural Barriers Act of 1968, as amended (42 U.S.C. 4151 through 4157), and any regulations implementing it. In choosing among available methods for meeting the requirements of this section, the agency shall give priority to those methods that offer programs and activities to qualified individuals with handicaps in the most integrated setting appropriate.

(2) *Historic preservation programs.* In meeting the requirements of § 16.150(a) in historic preservation programs, the agency shall give priority to methods that provide physical access to individuals with handicaps. In cases where a physical alteration to an historic property is not required because of § 16.150(a) (2) or (3), alternative methods of achieving program accessibility include—

(i) Using audio-visual materials and devices to depict those portions of an historic property that cannot otherwise be made accessible;

(ii) Assigning persons to guide individuals with handicaps into or through portions of historic properties that cannot otherwise be made accessible; or

(iii) Adopting other innovative methods.

(c) *Time period for compliance.* The agency shall comply with the obligations established under this section by November 7, 1988, except that where structural changes in facilities are undertaken, such changes shall be made by September 6, 1991, but in any event as expeditiously as possible.

(d) *Transition plan.* In the event that structural changes to facilities will be

undertaken to achieve program accessibility, the agency shall develop, by March 6, 1989, a transition plan setting forth the steps necessary to complete such changes. The agency shall provide an opportunity to interested persons, including individuals with handicaps or organizations representing individuals with handicaps, to participate in the development of the transition plan by submitting comments (both oral and written). A copy of the transition plan shall be made available for public inspection. The plan shall, at a minimum—

(1) Identify physical obstacles in the agency's facilities that limit the accessibility of its programs or activities to individuals with handicaps;

(2) Describe in detail the methods that will be used to make the facilities accessible;

(3) Specify the schedule for taking the steps necessary to achieve compliance with this section and, if the time period of the transition plan is longer than one year, identify steps that will be taken during each year of the transition period; and

(4) Indicate the official responsible for implementation of the plan.

§ 16.151 Program accessibility: New construction and alterations.

Each building or part of a building that is constructed or altered by, on behalf of, or for the use of the agency shall be designed, constructed, or altered so as to be readily accessible to and usable by individuals with handicaps. The definitions, requirements, and standards of the Architectural Barriers Act (42 U.S.C. 4151–4157), as established in 41 CFR 101–19.600 to 101–19.607, apply to buildings covered by this section.

§§ 16.152–16.159 [Reserved]

§ 16.160 Communications.

(a) The agency shall take appropriate steps to ensure effective communication with applicants, participants, personnel of other Federal entities, and members of the public.

(1) The agency shall furnish appropriate auxiliary aids where necessary to afford an individual with handicaps an equal opportunity to participate in, and enjoy the benefits of, a program or activity conducted by the agency.

(i) In determining what type of auxiliary aid is necessary, the agency shall give primary consideration to the requests of the individual with handicaps.

(ii) The agency need not provide individually prescribed devices, readers for personal use or study, or other devices of a personal nature.

(2) Where the agency communicates with applicants and beneficiaries by telephone, telecommunication devices for deaf persons (TDD's) or equally effective telecommunication systems shall be used to communicate with persons with impaired hearing.

(b) The agency shall ensure that interested persons, including persons with impaired vision or hearing, can obtain information as to the existence and location of accessible services, activities, and facilities.

(c) The agency shall provide signage at a primary entrance to each of its inaccessible facilities, directing users to a location at which they can obtain information about accessible facilities. The international symbol for accessibility shall be used at each primary entrance of an accessible facility.

(d) This section does not require the agency to take any action that it can demonstrate would result in a fundamental alteration in the nature of a program or activity or in undue financial and administrative burdens. In those circumstances where agency personnel believe that the proposed action would fundamentally alter the program or activity or would result in undue financial and administrative burdens, the agency has the burden of proving that compliance with § 16.160 would result in such alteration or burdens. The decision that compliance would result in such alteration or burdens must be made by the agency head or his or her designee after considering all agency resources available for use in the funding and operation of the conducted program or activity and must be accompanied by a written statement of the reasons for reaching that conclusion. If an action required to comply with this section would result in such an alteration or such burdens, the agency shall take any other action that would not

result in such an alteration or such burdens but would nevertheless ensure that, to the maximum extent possible, individuals with handicaps receive the benefits and services of the program or activity.

§§ 16.161–16.169 [Reserved]

§ 16.170 Compliance procedures.

(a) Except as provided in paragraph (b) of this section, this section applies to all allegations of discrimination on the basis of handicap in programs and activities conducted by the agency.

(b) The agency shall process complaints alleging violations of section 504 with respect to employment according to the procedures established by the Equal Employment Opportunity Commission in 29 CFR part 1613 pursuant to section 501 of the Rehabilitation Act of 1973 (29 U.S.C. 791).

(c) The Director of the Office of Equal Rights shall be responsible for coordinating implementation of this section. Complaints may be sent to Director of the Office of Equal Rights, Room 810, Federal Emergency Management Agency, 500 C Street, SW., Washington, DC 20472.

(d) The agency shall accept and investigate all complete complaints for which it has jurisdiction. All complete complaints must be filed within 180 days of the alleged act of discrimination. The agency may extend this time period for good cause.

(e) If the agency receives a complaint over which it does not have jurisdiction, it shall promptly notify the complainant and shall make reasonable efforts to refer the complaint to the appropriate Government entity.

(f) The agency shall notify the Architectural and Transportation Barriers Compliance Board upon receipt of any complaint alleging that a building or facility that is subject to the Architectural Barriers Act of 1968, as amended (42 U.S.C. 4151–4157), is not readily accessible to and usable by individuals with handicaps.

(g) Within 180 days of the receipt of a complete complaint for which it has jurisdiction, the agency shall notify the complainant of the results of the investigation in a letter containing—

(1) Findings of fact and conclusions of law;

(2) A description of a remedy for each violation found; and

(3) A notice of the right to appeal.

(h) Appeals of the findings of fact and conclusions of law or remedies must be filed by the complainant within 90 days of receipt from the agency of the letter required by paragraph (g) of this section. The agency may extend this time for good cause.

(i) Timely appeals shall be accepted and processed by the head of the agency.

(j) The head of the agency shall notify the complainant of the results of the appeal within 60 days of the receipt of the request. If the head of the agency determines that additional information is needed from the complainant, he or she shall have 60 days from the date of receipt of the additional information to make his or her determination on the appeal.

(k) The time limits cited in paragraphs (g) and (j) of this section may be extended with the permission of the Assistant Attorney General.

(l) The agency may delegate its authority for conducting complaint investigations to other Federal agencies, except that the authority for making the final determination may not be delegated to another agency.

§§ 16.171–16.999 [Reserved]

PART 17 [RESERVED]

PART 18—NEW RESTRICTIONS ON LOBBYING

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APPENDIX A TO PART 18—CERTIFICATION REGARDING LOBBYING
APPENDIX B TO PART 18—DISCLOSURE FORM TO REPORT LOBBYING

AUTHORITY: Section 319, Public Law 101–121 (31 U.S.C. 1352); 5 U.S.C. 551, 552, 553; 5 U.S.C. 601, *et seq.;* E.O. 12291. Reorganization Plan No. 3 of 1978, E.O. 12127, E.O. 12148, E.O. 12657, E.O. 12699.

SOURCE: 55 FR 6737, 6754, Feb. 26, 1990, unless otherwise noted.

CROSS REFERENCE: See also Office of Management and Budget notice published at 54 FR 52306, December 20, 1989.

Subpart A—General

§ 18.100 Conditions on use of funds.

(a) No appropriated funds may be expended by the recipient of a Federal contract, grant, loan, or cooperative agreement to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(b) Each person who requests or receives from an agency a Federal contract, grant, loan, or cooperative agreement shall file with that agency a certification, set forth in appendix A, that the person has not made, and will not make, any payment prohibited by paragraph (a) of this section.

(c) Each person who requests or receives from an agency a Federal contract, grant, loan, or a cooperative agreement shall file with that agency a disclosure form, set forth in appendix B, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under paragraph (a) of this section if paid for with appropriated funds.

(d) Each person who requests or receives from an agency a commitment providing for the United States to insure or guarantee a loan shall file with that agency a statement, set forth in appendix A, whether that person has made or has agreed to make any payment to influence or attempt to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with that loan insurance or guarantee.

(e) Each person who requests or receives from an agency a commitment providing for the United States to insure or guarantee a loan shall file with that agency a disclosure form, set forth in appendix B, if that person has made or has agreed to make any payment to influence or attempt to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with that loan insurance or guarantee.

§ 18.105 Definitions.

For purposes of this part:

(a) *Agency*, as defined in 5 U.S.C. 552(f), includes Federal executive departments and agencies as well as independent regulatory commissions and Government corporations, as defined in 31 U.S.C. 9101(1).

(b) *Covered Federal action* means any of the following Federal actions:

(1) The awarding of any Federal contract;

(2) The making of any Federal grant;

(3) The making of any Federal loan;

(4) The entering into of any cooperative agreement; and,

(5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

Covered Federal action does not include receiving from an agency a commitment providing for the United States to insure or guarantee a loan. Loan guarantees and loan insurance are addressed independently within this part.

(c) *Federal contract* means an acquisition contract awarded by an agency, including those subject to the Federal Acquisition Regulation (FAR), and any other acquisition contract for real or personal property or services not subject to the FAR.

(d) *Federal cooperative agreement* means a cooperative agreement entered into by an agency.

(e) *Federal grant* means an award of financial assistance in the form of money, or property in lieu of money, by the Federal Government or a direct appropriation made by law to any person. The term does not include technical assistance which provides services instead of money, or other assistance in the form of revenue sharing, loans, loan guarantees, loan insurance, interest subsidies, insurance, or direct United States cash assistance to an individual.

(f) *Federal loan* means a loan made by an agency. The term does not include loan guarantee or loan insurance.

(g) *Indian tribe* and *tribal organization* have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B). Alaskan Natives are included under the definitions of Indian tribes in that Act.

(h) *Influencing or attempting to influence* means making, with the intent to influence, any communication to or appearance before an officer or employee or any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

(i) *Loan guarantee* and *loan insurance* means an agency's guarantee or insurance of a loan made by a person.

(j) *Local government* means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

(k) *Officer or employee of an agency* includes the following individuals who are employed by an agency:

(1) An individual who is appointed to a position in the Government under title 5, U.S. Code, including a position under a temporary appointment;

(2) A member of the uniformed services as defined in section 101(3), title 37, U.S. Code;

(3) A special Government employee as defined in section 202, title 18, U.S. Code; and,

(4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, title 5, U.S. Code appendix 2.

(l) *Person* means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

(m) *Reasonable compensation* means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

(n) *Reasonable payment* means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

(o) *Recipient* includes all contractors, subcontractors at any tier, and subgrantees at any tier of the recipient of funds received in connection with a Federal contract, grant, loan, or cooperative agreement. The term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

(p) *Regularly employed* means, with respect to an officer or employee of a

person requesting or receiving a Federal contract, grant, loan, or cooperative agreement or a commitment providing for the United States to insure or guarantee a loan, an officer or employee who is employed by such person for at least 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract, grant, loan, cooperative agreement, loan insurance commitment, or loan guarantee commitment. An officer or employee who is employed by such person for less than 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

(q) *State* means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and a multi-State, regional, or interstate entity having governmental duties and powers.

§ 18.110 Certification and disclosure.

(a) Each person shall file a certification, and a disclosure form, if required, with each submission that initiates agency consideration of such person for:

(1) Award of a Federal contract, grant, or cooperative agreement exceeding $100,000; or

(2) An award of a Federal loan or a commitment providing for the United States to insure or guarantee a loan exceeding $150,000.

(b) Each person shall file a certification, and a disclosure form, if required, upon receipt by such person of:

(1) A Federal contract, grant, or cooperative agreement exceeding $100,000; or

(2) A Federal loan or a commitment providing for the United States to insure or guarantee a loan exceeding $150,000, unless such person previously filed a certification, and a disclosure form, if required, under paragraph (a) of this section.

(c) Each person shall file a disclosure form at the end of each calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under paragraphs (a) or (b) of this section. An event that materially affects the accuracy of the information reported includes:

(1) A cumulative increase of $25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(2) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or,

(3) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(d) Any person who requests or receives from a person referred to in paragraphs (a) or (b) of this section:

(1) A subcontract exceeding $100,000 at any tier under a Federal contract;

(2) A subgrant, contract, or subcontract exceeding $100,000 at any tier under a Federal grant;

(3) A contract or subcontract exceeding $100,000 at any tier under a Federal loan exceeding $150,000; or,

(4) A contract or subcontract exceeding $100,000 at any tier under a Federal cooperative agreement,

shall file a certification, and a disclosure form, if required, to the next tier above.

(e) All disclosure forms, but not certifications, shall be forwarded from tier to tier until received by the person referred to in paragraphs (a) or (b) of this section. That person shall forward all disclosure forms to the agency.

(f) Any certification or disclosure form filed under paragraph (e) of this section shall be treated as a material representation of fact upon which all receiving tiers shall rely. All liability arising from an erroneous representation shall be borne solely by the tier filing that representation and shall not be shared by any tier to which the erroneous representation is forwarded. Submitting an erroneous certification or disclosure constitutes a failure to file the required certification or disclosure, respectively. If a person fails to

file a required certification or disclosure, the United States may pursue all available remedies, including those authorized by section 1352, title 31, U.S. Code.

(g) For awards and commitments in process prior to December 23, 1989, but not made before that date, certifications shall be required at award or commitment, covering activities occurring between December 23, 1989, and the date of award or commitment. However, for awards and commitments in process prior to the December 23, 1989 effective date of these provisions, but not made before December 23, 1989, disclosure forms shall not be required at time of award or commitment but shall be filed within 30 days.

(h) No reporting is required for an activity paid for with appropriated funds if that activity is allowable under either subpart B or C.

Subpart B—Activities by Own Employees

§ 18.200 Agency and legislative liaison.

(a) The prohibition on the use of appropriated funds, in §18.100 (a), does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a Federal contract, grant, loan, or cooperative agreement if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(b) For purposes of paragraph (a) of this section, providing any information specifically requested by an agency or Congress is allowable at any time.

(c) For purposes of paragraph (a) of this section, the following agency and legislative liaison activities are allowable at any time only where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency (including individual demonstrations) the qualities and characteristics of the person's products or services, conditions or terms of sale, and service capabilities; and,

(2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(d) For purposes of paragraph (a) of this section, the following agencies and legislative liaison activities are allowable only where they are prior to formal solicitation of any covered Federal action:

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and,

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Public Law 95–507 and other subsequent amendments.

(e) Only those activities expressly authorized by this section are allowable under this section.

§ 18.205 Professional and technical services.

(a) The prohibition on the use of appropriated funds, in §18.100 (a), does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a Federal contract, grant, loan, or cooperative agreement or an extension, continuation, renewal, amendment, or modification of a Federal contract, grant, loan, or cooperative agreement if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal contract, grant, loan, or cooperative agreement or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal contract, grant, loan, or cooperative agreement.

(b) For purposes of paragraph (a) of this section, ''professional and technical services'' shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational

capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(c) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation, or reasonably expected to be required by law or regulation, and any other requirements in the actual award documents.

(d) Only those services expressly authorized by this section are allowable under this section.

§ 18.210 Reporting.

No reporting is required with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

Subpart C—Activities by Other Than Own Employees

§ 18.300 Professional and technical services.

(a) The prohibition on the use of appropriated funds, in § 18.100 (a), does not apply in the case of any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action, if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal contract, grant, loan, or cooperative agreement or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal contract, grant, loan, or cooperative agreement.

(b) The reporting requirements in § 18.110 (a) and (b) regarding filing a disclosure form by each person, if required, shall not apply with respect to professional or technical services rendered directly in the preparation, submission, or negotiation of any commitment providing for the United States to insure or guarantee a loan.

(c) For purposes of paragraph (a) of this section, ''professional and technical services'' shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting or a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the

intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(d) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation, or reasonably expected to be required by law or regulation, and any other requirements in the actual award documents.

(e) Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(f) Only those services expressly authorized by this section are allowable under this section.

Subpart D—Penalties and Enforcement

§ 18.400 Penalties.

(a) Any person who makes an expenditure prohibited herein shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such expenditure.

(b) Any person who fails to file or amend the disclosure form (see appendix B) to be filed or amended if required herein, shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

(c) A filing or amended filing on or after the date on which an administrative action for the imposition of a civil penalty is commenced does not prevent the imposition of such civil penalty for a failure occurring before that date. An administrative action is commenced with respect to a failure when an investigating official determines in writing to commence an investigation of an allegation of such failure.

(d) In determining whether to impose a civil penalty, and the amount of any such penalty, by reason of a violation by any person, the agency shall consider the nature, circumstances, extent, and gravity of the violation, the effect on the ability of such person to continue in business, any prior violations by such person, the degree of culpability of such person, the ability of the person to pay the penalty, and such other matters as may be appropriate.

(e) First offenders under paragraphs (a) or (b) of this section shall be subject to a civil penalty of $10,000, absent aggravating circumstances. Second and subsequent offenses by persons shall be subject to an appropriate civil penalty between $10,000 and $100,000, as determined by the agency head or his or her designee.

(f) An imposition of a civil penalty under this section does not prevent the United States from seeking any other remedy that may apply to the same conduct that is the basis for the imposition of such civil penalty.

§ 18.405 Penalty procedures.

Agencies shall impose and collect civil penalties pursuant to the provisions of the Program Fraud and Civil Remedies Act, 31 U.S.C. 3803 (except subsection (c)), 3804, 3805, 3806, 3807, 3808, and 3812, insofar as these provisions are not inconsistent with the requirements herein.

§ 18.410 Enforcement.

The head of each agency shall take such actions as are necessary to ensure that the provisions herein are vigorously implemented and enforced in that agency.

Subpart E—Exemptions

§ 18.500 Secretary of Defense.

(a) The Secretary of Defense may exempt, on a case-by-case basis, a covered Federal action from the prohibition whenever the Secretary determines, in writing, that such an exemption is in the national interest. The Secretary shall transmit a copy of each such written exemption to Congress immediately after making such a determination.

(b) The Department of Defense may issue supplemental regulations to implement paragraph (a) of this section.

Subpart F—Agency Reports

§ 18.600 Semi-annual compilation.

(a) The head of each agency shall collect and compile the disclosure reports (see appendix B) and, on May 31 and November 30 of each year, submit to the Secretary of the Senate and the Clerk of the House of Representatives a report containing a compilation of the information contained in the disclosure reports received during the six-month period ending on March 31 or September 30, respectively, of that year.

(b) The report, including the compilation, shall be available for public inspection 30 days after receipt of the report by the Secretary and the Clerk.

(c) Information that involves intelligence matters shall be reported only to the Select Committee on Intelligence of the Senate, the Permanent Select Committee on Intelligence of the House of Representatives, and the Committees on Appropriations of the Senate and the House of Representatives in accordance with procedures agreed to by such committees. Such information shall not be available for public inspection.

(d) Information that is classified under Executive Order 12356 or any successor order shall be reported only to the Committee on Foreign Relations of the Senate and the Committee on Foreign Affairs of the House of Representatives or the Committees on Armed Services of the Senate and the House of Representatives (whichever such committees have jurisdiction of matters involving such information) and to the Committees on Appropriations of the Senate and the House of Representatives in accordance with procedures agreed to by such committees. Such information shall not be available for public inspection.

(e) The first semi-annual compilation shall be submitted on May 31, 1990, and shall contain a compilation of the disclosure reports received from December 23, 1989 to March 31, 1990.

(f) Major agencies, designated by the Office of Management and Budget (OMB), are required to provide machine-readable compilations to the Secretary of the Senate and the Clerk of the House of Representatives no later than with the compilations due on May 31, 1991. OMB shall provide detailed specifications in a memorandum to these agencies.

(g) Non-major agencies are requested to provide machine-readable compilations to the Secretary of the Senate and the Clerk of the House of Representatives.

(h) Agencies shall keep the originals of all disclosure reports in the official files of the agency.

§ 18.605 Inspector General report.

(a) The Inspector General, or other official as specified in paragraph (b) of this section, of each agency shall prepare and submit to Congress each year, commencing with submission of the President's Budget in 1991, an evaluation of the compliance of that agency with, and the effectiveness of, the requirements herein. The evaluation may include any recommended changes that may be necessary to strengthen or improve the requirements.

(b) In the case of an agency that does not have an Inspector General, the agency official comparable to an Inspector General shall prepare and submit the annual report, or, if there is no such comparable official, the head of the agency shall prepare and submit the annual report.

(c) The annual report shall be submitted at the same time the agency submits its annual budget justifications to Congress.

(d) The annual report shall include the following: All alleged violations relating to the agency's covered Federal actions during the year covered by the report, the actions taken by the head of the agency in the year covered by the report with respect to those alleged violations and alleged violations in previous years, and the amounts of civil penalties imposed by the agency in the year covered by the report.

Appendix A to Part 18—Certification Regarding Lobbying

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, ''Disclosure Form to Report Lobbying,'' in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

STATEMENT FOR LOAN GUARANTEES AND LOAN INSURANCE

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, ''Disclosure Form to Report Lobbying,'' in accordance with its instructions.

Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

APPENDIX B TO PART 18—DISCLOSURE FORM TO REPORT LOBBYING

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB
0348-0046

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. **Type of Federal Action:** ☐ a. contract ☐ b. grant ☐ c. cooperative agreement ☐ d. loan ☐ e. loan guarantee ☐ f. loan insurance	2. **Status of Federal Action:** ☐ a. bid/offer/application ☐ b. initial award ☐ c. post-award	3. **Report Type:** ☐ a. initial filing ☐ b. material change **For Material Change Only:** year _____ quarter _____ date of last report _____

4. **Name and Address of Reporting Entity:** ☐ Prime ☐ Subawardee Tier _____, *if known:* **Congressional District,** *if known:*	5. **If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:** **Congressional District,** *if known:*
6. **Federal Department/Agency:**	7. **Federal Program Name/Description:** CFDA Number, *if applicable:* _____
8. **Federal Action Number,** *if known:*	9. **Award Amount,** *if known:* $
10. **a. Name and Address of Lobbying Entity** *(if individual, last name, first name, MI):*	**b. Individuals Performing Services** *(including address if different from No. 10a) (last name, first name, MI):*

(attach Continuation Sheet(s) SF-LLL-A, if necessary)

11. **Amount of Payment** *(check all that apply):* $ _____ ☐ actual ☐ planned	13. **Type of Payment** *(check all that apply):* ☐ a. retainer ☐ b. one-time fee ☐ c. commission ☐ d. contingent fee ☐ e. deferred ☐ f. other; specify: _____
12. **Form of Payment** *(check all that apply):* ☐ a. cash ☐ b. in-kind; specify: nature _____ value _____	

14. **Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment Indicated in Item 11:**

(attach Continuation Sheet(s) SF-LLL-A, if necessary)

15. **Continuation Sheet(s) SF-LLL-A attached:** ☐ Yes ☐ No

16. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.	**Signature:** _____ **Print Name:** _____ **Title:** _____ **Telephone No.:** _____ **Date:** _____

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INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Use the SF-LLL-A Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee", then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.

    (b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.
14. Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in actual contact with Federal officials. Identify the Federal official(s) or employee(s) contacted or the officer(s), employee(s), or Member(s) of Congress that were contacted.
15. Check whether or not a SF-LLL-A Continuation Sheet(s) is attached.
16. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

Public reporting burden for this collection of information is estimated to average 30 mintues per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, D.C. 20503.

DISCLOSURE OF LOBBYING ACTIVITIES
CONTINUATION SHEET

Approved by OMB
0348-0046

Reporting Entity: _____ **Page** _____ **of** _____

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PART 19—NONDISCRIMINATION ON THE BASIS OF SEX IN EDUCATION PROGRAMS OR ACTIVITIES RECEIVING FEDERAL FINANCIAL ASSISTANCE

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AUTHORITY: 20 U.S.C. 1681, 1682, 1683, 1685, 1686, 1687, 1688.

SOURCE: 65 FR 52865, 52892, Aug. 30, 2000, unless otherwise noted.

Subpart A—Introduction

§ 19.100 Purpose and effective date.

The purpose of these Title IX regulations is to effectuate Title IX of the Education Amendments of 1972, as amended (except sections 904 and 906 of those Amendments) (20 U.S.C. 1681, 1682, 1683, 1685, 1686, 1687, 1688), which is designed to eliminate (with certain exceptions) discrimination on the basis of sex in any education program or activity receiving Federal financial assistance, whether or not such program or activity is offered or sponsored by an educational institution as defined in these Title IX regulations. The effective date of these Title IX regulations shall be September 29, 2000.

§ 19.105 Definitions.

As used in these Title IX regulations, the term:

Administratively separate unit means a school, department, or college of an educational institution (other than a local educational agency) admission to which is independent of admission to any other component of such institution.

Admission means selection for part-time, full-time, special, associate,

transfer, exchange, or any other enrollment, membership, or matriculation in or at an education program or activity operated by a recipient.

Applicant means one who submits an application, request, or plan required to be approved by an official of the Federal agency that awards Federal financial assistance, or by a recipient, as a condition to becoming a recipient.

Designated agency official means Director, Office of Equal Rights.

Educational institution means a local educational agency (LEA) as defined by 20 U.S.C. 8801(18), a preschool, a private elementary or secondary school, or an applicant or recipient that is an institution of graduate higher education, an institution of undergraduate higher education, an institution of professional education, or an institution of vocational education, as defined in this section.

Federal financial assistance means any of the following, when authorized or extended under a law administered by the Federal agency that awards such assistance:

(1) A grant or loan of Federal financial assistance, including funds made available for:

(i) The acquisition, construction, renovation, restoration, or repair of a building or facility or any portion thereof; and

(ii) Scholarships, loans, grants, wages, or other funds extended to any entity for payment to or on behalf of students admitted to that entity, or extended directly to such students for payment to that entity.

(2) A grant of Federal real or personal property or any interest therein, including surplus property, and the proceeds of the sale or transfer of such property, if the Federal share of the fair market value of the property is not, upon such sale or transfer, properly accounted for to the Federal Government.

(3) Provision of the services of Federal personnel.

(4) Sale or lease of Federal property or any interest therein at nominal consideration, or at consideration reduced for the purpose of assisting the recipient or in recognition of public interest to be served thereby, or permission to use Federal property or any interest therein without consideration.

(5) Any other contract, agreement, or arrangement that has as one of its purposes the provision of assistance to any education program or activity, except a contract of insurance or guaranty.

Institution of graduate higher education means an institution that:

(1) Offers academic study beyond the bachelor of arts or bachelor of science degree, whether or not leading to a certificate of any higher degree in the liberal arts and sciences;

(2) Awards any degree in a professional field beyond the first professional degree (regardless of whether the first professional degree in such field is awarded by an institution of undergraduate higher education or professional education); or

(3) Awards no degree and offers no further academic study, but operates ordinarily for the purpose of facilitating research by persons who have received the highest graduate degree in any field of study.

Institution of professional education means an institution (except any institution of undergraduate higher education) that offers a program of academic study that leads to a first professional degree in a field for which there is a national specialized accrediting agency recognized by the Secretary of Education.

Institution of undergraduate higher education means:

(1) An institution offering at least two but less than four years of college-level study beyond the high school level, leading to a diploma or an associate degree, or wholly or principally creditable toward a baccalaureate degree; or

(2) An institution offering academic study leading to a baccalaureate degree; or

(3) An agency or body that certifies credentials or offers degrees, but that may or may not offer academic study.

Institution of vocational education means a school or institution (except an institution of professional or graduate or undergraduate higher education) that has as its primary purpose preparation of students to pursue a technical, skilled, or semiskilled occupation or trade, or to pursue study in a

technical field, whether or not the school or institution offers certificates, diplomas, or degrees and whether or not it offers full-time study.

Recipient means any State or political subdivision thereof, or any instrumentality of a State or political subdivision thereof, any public or private agency, institution, or organization, or other entity, or any person, to whom Federal financial assistance is extended directly or through another recipient and that operates an education program or activity that receives such assistance, including any subunit, successor, assignee, or transferee thereof.

Student means a person who has gained admission.

Title IX means Title IX of the Education Amendments of 1972, Public Law 92–318, 86 Stat. 235, 373 (codified as amended at 20 U.S.C. 1681–1688) (except sections 904 and 906 thereof), as amended by section 3 of Public Law 93–568, 88 Stat. 1855, by section 412 of the Education Amendments of 1976, Public Law 94–482, 90 Stat. 2234, and by Section 3 of Public Law 100–259, 102 Stat. 28, 28–29 (20 U.S.C. 1681, 1682, 1683, 1685, 1686, 1687, 1688).

Title IX regulations means the provisions set forth at §§ 19.100 through 19.605.

Transition plan means a plan subject to the approval of the Secretary of Education pursuant to section 901(a)(2) of the Education Amendments of 1972, 20 U.S.C. 1681(a)(2), under which an educational institution operates in making the transition from being an educational institution that admits only students of one sex to being one that admits students of both sexes without discrimination.

§ 19.110 Remedial and affirmative action and self-evaluation.

(a) *Remedial action.* If the designated agency official finds that a recipient has discriminated against persons on the basis of sex in an education program or activity, such recipient shall take such remedial action as the designated agency official deems necessary to overcome the effects of such discrimination.

(b) *Affirmative action.* In the absence of a finding of discrimination on the basis of sex in an education program or activity, a recipient may take affirmative action consistent with law to overcome the effects of conditions that resulted in limited participation therein by persons of a particular sex. Nothing in these Title IX regulations shall be interpreted to alter any affirmative action obligations that a recipient may have under Executive Order 11246, 3 CFR, 1964–1965 Comp., p. 339; as amended by Executive Order 11375, 3 CFR, 1966–1970 Comp., p. 684; as amended by Executive Order 11478, 3 CFR, 1966–1970 Comp., p. 803; as amended by Executive Order 12086, 3 CFR, 1978 Comp., p. 230; as amended by Executive Order 12107, 3 CFR, 1978 Comp., p. 264.

(c) *Self-evaluation.* Each recipient education institution shall, within one year of September 29, 2000:

(1) Evaluate, in terms of the requirements of these Title IX regulations, its current policies and practices and the effects thereof concerning admission of students, treatment of students, and employment of both academic and nonacademic personnel working in connection with the recipient's education program or activity;

(2) Modify any of these policies and practices that do not or may not meet the requirements of these Title IX regulations; and

(3) Take appropriate remedial steps to eliminate the effects of any discrimination that resulted or may have resulted from adherence to these policies and practices.

(d) *Availability of self-evaluation and related materials.* Recipients shall maintain on file for at least three years following completion of the evaluation required under paragraph (c) of this section, and shall provide to the designated agency official upon request, a description of any modifications made pursuant to paragraph (c)(2) of this section and of any remedial steps taken pursuant to paragraph (c)(3) of this section.

§ 19.115 Assurance required.

(a) *General.* Either at the application stage or the award stage, Federal agencies must ensure that applications for Federal financial assistance or awards of Federal financial assistance contain, be accompanied by, or be covered by a specifically identified assurance from

the applicant or recipient, satisfactory to the designated agency official, that each education program or activity operated by the applicant or recipient and to which these Title IX regulations apply will be operated in compliance with these Title IX regulations. An assurance of compliance with these Title IX regulations shall not be satisfactory to the designated agency official if the applicant or recipient to whom such assurance applies fails to commit itself to take whatever remedial action is necessary in accordance with §19.110(a) to eliminate existing discrimination on the basis of sex or to eliminate the effects of past discrimination whether occurring prior to or subsequent to the submission to the designated agency official of such assurance.

(b) *Duration of obligation.* (1) In the case of Federal financial assistance extended to provide real property or structures thereon, such assurance shall obligate the recipient or, in the case of a subsequent transfer, the transferee, for the period during which the real property or structures are used to provide an education program or activity.

(2) In the case of Federal financial assistance extended to provide personal property, such assurance shall obligate the recipient for the period during which it retains ownership or possession of the property.

(3) In all other cases such assurance shall obligate the recipient for the period during which Federal financial assistance is extended.

(c) *Form.* (1) The assurances required by paragraph (a) of this section, which may be included as part of a document that addresses other assurances or obligations, shall include that the applicant or recipient will comply with all applicable Federal statutes relating to nondiscrimination. These include but are not limited to: Title IX of the Education Amendments of 1972, as amended (20 U.S.C. 1681–1683, 1685–1688).

(2) The designated agency official will specify the extent to which such assurances will be required of the applicant's or recipient's subgrantees, contractors, subcontractors, transferees, or successors in interest.

§ 19.120 Transfers of property.

If a recipient sells or otherwise transfers property financed in whole or in part with Federal financial assistance to a transferee that operates any education program or activity, and the Federal share of the fair market value of the property is not upon such sale or transfer properly accounted for to the Federal Government, both the transferor and the transferee shall be deemed to be recipients, subject to the provisions of §§19.205 through 19.235(a).

§ 19.125 Effect of other requirements.

(a) *Effect of other Federal provisions.* The obligations imposed by these Title IX regulations are independent of, and do not alter, obligations not to discriminate on the basis of sex imposed by Executive Order 11246, 3 CFR, 1964–1965 Comp., p. 339; as amended by Executive Order 11375, 3 CFR, 1966–1970 Comp., p. 684; as amended by Executive Order 11478, 3 CFR, 1966–1970 Comp., p. 803; as amended by Executive Order 12087, 3 CFR, 1978 Comp., p. 230; as amended by Executive Order 12107, 3 CFR, 1978 Comp., p. 264; sections 704 and 855 of the Public Health Service Act (42 U.S.C. 295m, 298b-2); Title VII of the Civil Rights Act of 1964 (42 U.S.C. 2000e *et seq.*); the Equal Pay Act of 1963 (29 U.S.C. 206); and any other Act of Congress or Federal regulation.

(b) *Effect of State or local law or other requirements.* The obligation to comply with these Title IX regulations is not obviated or alleviated by any State or local law or other requirement that would render any applicant or student ineligible, or limit the eligibility of any applicant or student, on the basis of sex, to practice any occupation or profession.

(c) *Effect of rules or regulations of private organizations.* The obligation to comply with these Title IX regulations is not obviated or alleviated by any rule or regulation of any organization, club, athletic or other league, or association that would render any applicant or student ineligible to participate or limit the eligibility or participation of any applicant or student, on the basis of sex, in any education program or activity operated by a recipient and that receives Federal financial assistance.

§ 19.130 Effect of employment opportunities.

The obligation to comply with these Title IX regulations is not obviated or alleviated because employment opportunities in any occupation or profession are or may be more limited for members of one sex than for members of the other sex.

§ 19.135 Designation of responsible employee and adoption of grievance procedures.

(a) *Designation of responsible employee.* Each recipient shall designate at least one employee to coordinate its efforts to comply with and carry out its responsibilities under these Title IX regulations, including any investigation of any complaint communicated to such recipient alleging its noncompliance with these Title IX regulations or alleging any actions that would be prohibited by these Title IX regulations. The recipient shall notify all its students and employees of the name, office address, and telephone number of the employee or employees appointed pursuant to this paragraph.

(b) *Complaint procedure of recipient.* A recipient shall adopt and publish grievance procedures providing for prompt and equitable resolution of student and employee complaints alleging any action that would be prohibited by these Title IX regulations.

§ 19.140 Dissemination of policy.

(a) *Notification of policy.* (1) Each recipient shall implement specific and continuing steps to notify applicants for admission and employment, students and parents of elementary and secondary school students, employees, sources of referral of applicants for admission and employment, and all unions or professional organizations holding collective bargaining or professional agreements with the recipient, that it does not discriminate on the basis of sex in the educational programs or activities that it operates, and that it is required by Title IX and these Title IX regulations not to discriminate in such a manner. Such notification shall contain such information, and be made in such manner, as the designated agency official finds necessary to apprise such persons of the protections against discrimination assured them by Title IX and these Title IX regulations, but shall state at least that the requirement not to discriminate in education programs or activities extends to employment therein, and to admission thereto unless §§ 19.300 through 19.310 do not apply to the recipient, and that inquiries concerning the application of Title IX and these Title IX regulations to such recipient may be referred to the employee designated pursuant to § 19.135, or to the designated agency official.

(2) Each recipient shall make the initial notification required by paragraph (a)(1) of this section within 90 days of September 29, 2000 or of the date these Title IX regulations first apply to such recipient, whichever comes later, which notification shall include publication in:

(i) Newspapers and magazines operated by such recipient or by student, alumnae, or alumni groups for or in connection with such recipient; and

(ii) Memoranda or other written communications distributed to every student and employee of such recipient.

(b) *Publications.* (1) Each recipient shall prominently include a statement of the policy described in paragraph (a) of this section in each announcement, bulletin, catalog, or application form that it makes available to any person of a type, described in paragraph (a) of this section, or which is otherwise used in connection with the recruitment of students or employees.

(2) A recipient shall not use or distribute a publication of the type described in paragraph (b)(1) of this section that suggests, by text or illustration, that such recipient treats applicants, students, or employees differently on the basis of sex except as such treatment is permitted by these Title IX regulations.

(c) *Distribution.* Each recipient shall distribute without discrimination on the basis of sex each publication described in paragraph (b)(1) of this section, and shall apprise each of its admission and employment recruitment representatives of the policy of nondiscrimination described in paragraph (a) of this section, and shall require such representatives to adhere to such policy.

Subpart B—Coverage

§ 19.200 Application.

Except as provided in §§ 19.205 through 19.235(a), these Title IX regulations apply to every recipient and to each education program or activity operated by such recipient that receives Federal financial assistance.

§ 19.205 Educational institutions and other entities controlled by religious organizations.

(a) *Exemption.* These Title IX regulations do not apply to any operation of an educational institution or other entity that is controlled by a religious organization to the extent that application of these Title IX regulations would not be consistent with the religious tenets of such organization.

(b) *Exemption claims.* An educational institution or other entity that wishes to claim the exemption set forth in paragraph (a) of this section shall do so by submitting in writing to the designated agency official a statement by the highest-ranking official of the institution, identifying the provisions of these Title IX regulations that conflict with a specific tenet of the religious organization.

§ 19.210 Military and merchant marine educational institutions.

These Title IX regulations do not apply to an educational institution whose primary purpose is the training of individuals for a military service of the United States or for the merchant marine.

§ 19.215 Membership practices of certain organizations.

(a) *Social fraternities and sororities.* These Title IX regulations do not apply to the membership practices of social fraternities and sororities that are exempt from taxation under section 501(a) of the Internal Revenue Code of 1954, 26 U.S.C. 501(a), the active membership of which consists primarily of students in attendance at institutions of higher education.

(b) *YMCA, YWCA, Girl Scouts, Boy Scouts, and Camp Fire Girls.* These Title IX regulations do not apply to the membership practices of the Young Men's Christian Association (YMCA), the Young Women's Christian Association (YWCA), the Girl Scouts, the Boy Scouts, and Camp Fire Girls.

(c) *Voluntary youth service organizations.* These Title IX regulations do not apply to the membership practices of a voluntary youth service organization that is exempt from taxation under section 501(a) of the Internal Revenue Code of 1954, 26 U.S.C. 501(a), and the membership of which has been traditionally limited to members of one sex and principally to persons of less than nineteen years of age.

§ 19.220 Admissions.

(a) Admissions to educational institutions prior to June 24, 1973, are not covered by these Title IX regulations.

(b) *Administratively separate units.* For the purposes only of this section, §§ 19.225 and 19.230, and §§ 19.300 through 19.310, each administratively separate unit shall be deemed to be an educational institution.

(c) *Application of §§ 19.300 through .310.* Except as provided in paragraphs (d) and (e) of this section, §§ 19.300 through 19.310 apply to each recipient. A recipient to which §§ 19.300 through 19.310 apply shall not discriminate on the basis of sex in admission or recruitment in violation of §§ 19.300 through 19.310.

(d) *Educational institutions.* Except as provided in paragraph (e) of this section as to recipients that are educational institutions, §§ 19.300 through 19.310 apply only to institutions of vocational education, professional education, graduate higher education, and public institutions of undergraduate higher education.

(e) *Public institutions of undergraduate higher education.* §§ 19.300 through 19.310 do not apply to any public institution of undergraduate higher education that traditionally and continually from its establishment has had a policy of admitting students of only one sex.

§ 19.225 Educational institutions eligible to submit transition plans.

(a) *Application.* This section applies to each educational institution to which §§ 19.300 through 19.310 apply that:

(1) Admitted students of only one sex as regular students as of June 23, 1972; or

(2) Admitted students of only one sex as regular students as of June 23, 1965, but thereafter admitted, as regular students, students of the sex not admitted prior to June 23, 1965.

(b) *Provision for transition plans.* An educational institution to which this section applies shall not discriminate on the basis of sex in admission or recruitment in violation of §§ 19.300 through 19.310.

§ 19.230 Transition plans.

(a) *Submission of plans.* An institution to which § 19.225 applies and that is composed of more than one administratively separate unit may submit either a single transition plan applicable to all such units, or a separate transition plan applicable to each such unit.

(b) *Content of plans.* In order to be approved by the Secretary of Education, a transition plan shall:

(1) State the name, address, and Federal Interagency Committee on Education Code of the educational institution submitting such plan, the administratively separate units to which the plan is applicable, and the name, address, and telephone number of the person to whom questions concerning the plan may be addressed. The person who submits the plan shall be the chief administrator or president of the institution, or another individual legally authorized to bind the institution to all actions set forth in the plan.

(2) State whether the educational institution or administratively separate unit admits students of both sexes as regular students and, if so, when it began to do so.

(3) Identify and describe with respect to the educational institution or administratively separate unit any obstacles to admitting students without discrimination on the basis of sex.

(4) Describe in detail the steps necessary to eliminate as soon as practicable each obstacle so identified and indicate the schedule for taking these steps and the individual directly responsible for their implementation.

(5) Include estimates of the number of students, by sex, expected to apply for, be admitted to, and enter each class during the period covered by the plan.

(c) *Nondiscrimination.* No policy or practice of a recipient to which § 19.225 applies shall result in treatment of applicants to or students of such recipient in violation of §§ 19.300 through 19.310 unless such treatment is necessitated by an obstacle identified in paragraph (b)(3) of this section and a schedule for eliminating that obstacle has been provided as required by paragraph (b)(4) of this section.

(d) *Effects of past exclusion.* To overcome the effects of past exclusion of students on the basis of sex, each educational institution to which § 19.225 applies shall include in its transition plan, and shall implement, specific steps designed to encourage individuals of the previously excluded sex to apply for admission to such institution. Such steps shall include instituting recruitment programs that emphasize the institution's commitment to enrolling students of the sex previously excluded.

§ 19.235 Statutory amendments.

(a) This section, which applies to all provisions of these Title IX regulations, addresses statutory amendments to Title IX.

(b) These Title IX regulations shall not apply to or preclude:

(1) Any program or activity of the American Legion undertaken in connection with the organization or operation of any Boys State conference, Boys Nation conference, Girls State conference, or Girls Nation conference;

(2) Any program or activity of a secondary school or educational institution specifically for:

(i) The promotion of any Boys State conference, Boys Nation conference, Girls State conference, or Girls Nation conference; or

(ii) The selection of students to attend any such conference;

(3) Father-son or mother-daughter activities at an educational institution or in an education program or activity, but if such activities are provided for students of one sex, opportunities for reasonably comparable activities shall be provided to students of the other sex;

(4) Any scholarship or other financial assistance awarded by an institution of higher education to an individual because such individual has received such award in a single-sex pageant based upon a combination of factors related to the individual's personal appearance, poise, and talent. The pageant, however, must comply with other nondiscrimination provisions of Federal law.

(c) *Program or activity* or *program* means:

(1) All of the operations of any entity described in paragraphs (c)(1)(i) through (iv) of this section, any part of which is extended Federal financial assistance:

(i)(A) A department, agency, special purpose district, or other instrumentality of a State or of a local government; or

(B) The entity of such State or local government that distributes such assistance and each such department or agency (and each other State or local government entity) to which the assistance is extended, in the case of assistance to a State or local government;

(ii)(A) A college, university, or other postsecondary institution, or a public system of higher education; or

(B) A local educational agency (as defined in section 8801 of title 20), system of vocational education, or other school system;

(iii)(A) An entire corporation, partnership, or other private organization, or an entire sole proprietorship—

(*1*) If assistance is extended to such corporation, partnership, private organization, or sole proprietorship as a whole; or

(*2*) Which is principally engaged in the business of providing education, health care, housing, social services, or parks and recreation; or

(B) The entire plant or other comparable, geographically separate facility to which Federal financial assistance is extended, in the case of any other corporation, partnership, private organization, or sole proprietorship; or

(iv) Any other entity that is established by two or more of the entities described in paragraphs (c)(1)(i), (ii), or (iii) of this section.

(2)(i) *Program or activity* does not include any operation of an entity that is controlled by a religious organization if the application of 20 U.S.C. 1681 to such operation would not be consistent with the religious tenets of such organization.

(ii) For example, all of the operations of a college, university, or other postsecondary institution, including but not limited to traditional educational operations, faculty and student housing, campus shuttle bus service, campus restaurants, the bookstore, and other commercial activities are part of a ''program or activity'' subject to these Title IX regulations if the college, university, or other institution receives Federal financial assistance.

(d)(1) Nothing in these Title IX regulations shall be construed to require or prohibit any person, or public or private entity, to provide or pay for any benefit or service, including the use of facilities, related to an abortion. Medical procedures, benefits, services, and the use of facilities, necessary to save the life of a pregnant woman or to address complications related to an abortion are not subject to this section.

(2) Nothing in this section shall be construed to permit a penalty to be imposed on any person or individual because such person or individual is seeking or has received any benefit or service related to a legal abortion. Accordingly, subject to paragraph (d)(1) of this section, no person shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any academic, extracurricular, research, occupational training, employment, or other educational program or activity operated by a recipient that receives Federal financial assistance because such individual has sought or received, or is seeking, a legal abortion, or any benefit or service related to a legal abortion.

Subpart C—Discrimination on the Basis of Sex in Admission and Recruitment Prohibited

§ 19.300 Admission.

(a) *General.* No person shall, on the basis of sex, be denied admission, or be

subjected to discrimination in admission, by any recipient to which §§ 19.300 through §§ 19.310 apply, except as provided in §§ 19.225 and 19.230.

(b) *Specific prohibitions.* (1) In determining whether a person satisfies any policy or criterion for admission, or in making any offer of admission, a recipient to which §§ 19.300 through 19.310 apply shall not:

(i) Give preference to one person over another on the basis of sex, by ranking applicants separately on such basis, or otherwise;

(ii) Apply numerical limitations upon the number or proportion of persons of either sex who may be admitted; or

(iii) Otherwise treat one individual differently from another on the basis of sex.

(2) A recipient shall not administer or operate any test or other criterion for admission that has a disproportionately adverse effect on persons on the basis of sex unless the use of such test or criterion is shown to predict validly success in the education program or activity in question and alternative tests or criteria that do not have such a disproportionately adverse effect are shown to be unavailable.

(c) *Prohibitions relating to marital or parental status.* In determining whether a person satisfies any policy or criterion for admission, or in making any offer of admission, a recipient to which §§ 19.300 through 19.310 apply:

(1) Shall not apply any rule concerning the actual or potential parental, family, or marital status of a student or applicant that treats persons differently on the basis of sex;

(2) Shall not discriminate against or exclude any person on the basis of pregnancy, childbirth, termination of pregnancy, or recovery therefrom, or establish or follow any rule or practice that so discriminates or excludes;

(3) Subject to § 19.235(d), shall treat disabilities related to pregnancy, childbirth, termination of pregnancy, or recovery therefrom in the same manner and under the same policies as any other temporary disability or physical condition; and

(4) Shall not make pre-admission inquiry as to the marital status of an applicant for admission, including whether such applicant is ''Miss'' or ''Mrs.'' A recipient may make pre-admission inquiry as to the sex of an applicant for admission, but only if such inquiry is made equally of such applicants of both sexes and if the results of such inquiry are not used in connection with discrimination prohibited by these Title IX regulations.

§ 19.305 Preference in admission.

A recipient to which §§ 19.300 through 19.310 apply shall not give preference to applicants for admission, on the basis of attendance at any educational institution or other school or entity that admits as students only or predominantly members of one sex, if the giving of such preference has the effect of discriminating on the basis of sex in violation of §§ 19.300 through 19.310.

§ 19.310 Recruitment.

(a) *Nondiscriminatory recruitment.* A recipient to which §§ 19.300 through 19.310 apply shall not discriminate on the basis of sex in the recruitment and admission of students. A recipient may be required to undertake additional recruitment efforts for one sex as remedial action pursuant to § 19.110(a), and may choose to undertake such efforts as affirmative action pursuant to § 19.110(b).

(b) *Recruitment at certain institutions.* A recipient to which §§ 19.300 through 19.310 apply shall not recruit primarily or exclusively at educational institutions, schools, or entities that admit as students only or predominantly members of one sex, if such actions have the effect of discriminating on the basis of sex in violation of §§ 19.300 through 19.310.

Subpart D—Discrimination on the Basis of Sex in Education Programs or Activities Prohibited

§ 19.400 Education programs or activities.

(a) *General.* Except as provided elsewhere in these Title IX regulations, no person shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any academic, extracurricular, research, occupational training, or other education program or activity operated by a recipient that

receives Federal financial assistance. Sections 19.400 through 19.455 do not apply to actions of a recipient in connection with admission of its students to an education program or activity of a recipient to which §§ 19.300 through 19.310 do not apply, or an entity, not a recipient, to which §§ 19.300 through 19.310 would not apply if the entity were a recipient.

(b) *Specific prohibitions.* Except as provided in §§ 19.400 through 19.455, in providing any aid, benefit, or service to a student, a recipient shall not, on the basis of sex:

(1) Treat one person differently from another in determining whether such person satisfies any requirement or condition for the provision of such aid, benefit, or service;

(2) Provide different aid, benefits, or services or provide aid, benefits, or services in a different manner;

(3) Deny any person any such aid, benefit, or service;

(4) Subject any person to separate or different rules of behavior, sanctions, or other treatment;

(5) Apply any rule concerning the domicile or residence of a student or applicant, including eligibility for in-state fees and tuition;

(6) Aid or perpetuate discrimination against any person by providing significant assistance to any agency, organization, or person that discriminates on the basis of sex in providing any aid, benefit, or service to students or employees;

(7) Otherwise limit any person in the enjoyment of any right, privilege, advantage, or opportunity.

(c) *Assistance administered by a recipient educational institution to study at a foreign institution.* A recipient educational institution may administer or assist in the administration of scholarships, fellowships, or other awards established by foreign or domestic wills, trusts, or similar legal instruments, or by acts of foreign governments and restricted to members of one sex, that are designed to provide opportunities to study abroad, and that are awarded to students who are already matriculating at or who are graduates of the recipient institution; *Provided,* that a recipient educational institution that administers or assists in the administration of such scholarships, fellowships, or other awards that are restricted to members of one sex provides, or otherwise makes available, reasonable opportunities for similar studies for members of the other sex. Such opportunities may be derived from either domestic or foreign sources.

(d) *Aids, benefits or services not provided by recipient.* (1) This paragraph (d) applies to any recipient that requires participation by any applicant, student, or employee in any education program or activity not operated wholly by such recipient, or that facilitates, permits, or considers such participation as part of or equivalent to an education program or activity operated by such recipient, including participation in educational consortia and cooperative employment and student-teaching assignments.

(2) Such recipient:

(i) Shall develop and implement a procedure designed to assure itself that the operator or sponsor of such other education program or activity takes no action affecting any applicant, student, or employee of such recipient that these Title IX regulations would prohibit such recipient from taking; and

(ii) Shall not facilitate, require, permit, or consider such participation if such action occurs.

§ 19.405 Housing.

(a) *Generally.* A recipient shall not, on the basis of sex, apply different rules or regulations, impose different fees or requirements, or offer different services or benefits related to housing, except as provided in this section (including housing provided only to married students).

(b) *Housing provided by recipient.* (1) A recipient may provide separate housing on the basis of sex.

(2) Housing provided by a recipient to students of one sex, when compared to that provided to students of the other sex, shall be as a whole:

(i) Proportionate in quantity to the number of students of that sex applying for such housing; and

(ii) Comparable in quality and cost to the student.

(c) *Other housing.* (1) A recipient shall not, on the basis of sex, administer different policies or practices concerning occupancy by its students of housing other than that provided by such recipient.

(2)(i) A recipient which, through solicitation, listing, approval of housing, or otherwise, assists any agency, organization, or person in making housing available to any of its students, shall take such reasonable action as may be necessary to assure itself that such housing as is provided to students of one sex, when compared to that provided to students of the other sex, is as a whole:

(A) Proportionate in quantity; and

(B) Comparable in quality and cost to the student.

(ii) A recipient may render such assistance to any agency, organization, or person that provides all or part of such housing to students of only one sex.

§ 19.410 Comparable facilities.

A recipient may provide separate toilet, locker room, and shower facilities on the basis of sex, but such facilities provided for students of one sex shall be comparable to such facilities provided for students of the other sex.

§ 19.415 Access to course offerings.

(a) A recipient shall not provide any course or otherwise carry out any of its education program or activity separately on the basis of sex, or require or refuse participation therein by any of its students on such basis, including health, physical education, industrial, business, vocational, technical, home economics, music, and adult education courses.

(b)(1) With respect to classes and activities in physical education at the elementary school level, the recipient shall comply fully with this section as expeditiously as possible but in no event later than one year from September 29, 2000. With respect to physical education classes and activities at the secondary and post-secondary levels, the recipient shall comply fully with this section as expeditiously as possible but in no event later than three years from September 29, 2000.

(2) This section does not prohibit grouping of students in physical education classes and activities by ability as assessed by objective standards of individual performance developed and applied without regard to sex.

(3) This section does not prohibit separation of students by sex within physical education classes or activities during participation in wrestling, boxing, rugby, ice hockey, football, basketball, and other sports the purpose or major activity of which involves bodily contact.

(4) Where use of a single standard of measuring skill or progress in a physical education class has an adverse effect on members of one sex, the recipient shall use appropriate standards that do not have such effect.

(5) Portions of classes in elementary and secondary schools, or portions of education programs or activities, that deal exclusively with human sexuality may be conducted in separate sessions for boys and girls.

(6) Recipients may make requirements based on vocal range or quality that may result in a chorus or choruses of one or predominantly one sex.

§ 19.420 Access to schools operated by LEAs.

A recipient that is a local educational agency shall not, on the basis of sex, exclude any person from admission to:

(a) Any institution of vocational education operated by such recipient; or

(b) Any other school or educational unit operated by such recipient, unless such recipient otherwise makes available to such person, pursuant to the same policies and criteria of admission, courses, services, and facilities comparable to each course, service, and facility offered in or through such schools.

§ 19.425 Counseling and use of appraisal and counseling materials.

(a) *Counseling.* A recipient shall not discriminate against any person on the basis of sex in the counseling or guidance of students or applicants for admission.

(b) *Use of appraisal and counseling materials.* A recipient that uses testing or

other materials for appraising or counseling students shall not use different materials for students on the basis of their sex or use materials that permit or require different treatment of students on such basis unless such different materials cover the same occupations and interest areas and the use of such different materials is shown to be essential to eliminate sex bias. Recipients shall develop and use internal procedures for ensuring that such materials do not discriminate on the basis of sex. Where the use of a counseling test or other instrument results in a substantially disproportionate number of members of one sex in any particular course of study or classification, the recipient shall take such action as is necessary to assure itself that such disproportion is not the result of discrimination in the instrument or its application.

(c) *Disproportion in classes.* Where a recipient finds that a particular class contains a substantially disproportionate number of individuals of one sex, the recipient shall take such action as is necessary to assure itself that such disproportion is not the result of discrimination on the basis of sex in counseling or appraisal materials or by counselors.

§ 19.430 Financial assistance.

(a) *General.* Except as provided in paragraphs (b) and (c) of this section, in providing financial assistance to any of its students, a recipient shall not:

(1) On the basis of sex, provide different amounts or types of such assistance, limit eligibility for such assistance that is of any particular type or source, apply different criteria, or otherwise discriminate;

(2) Through solicitation, listing, approval, provision of facilities, or other services, assist any foundation, trust, agency, organization, or person that provides assistance to any of such recipient's students in a manner that discriminates on the basis of sex; or

(3) Apply any rule or assist in application of any rule concerning eligibility for such assistance that treats persons of one sex differently from persons of the other sex with regard to marital or parental status.

(b) *Financial aid established by certain legal instruments.* (1) A recipient may administer or assist in the administration of scholarships, fellowships, or other forms of financial assistance established pursuant to domestic or foreign wills, trusts, bequests, or similar legal instruments or by acts of a foreign government that require that awards be made to members of a particular sex specified therein; *Provided,* that the overall effect of the award of such sex-restricted scholarships, fellowships, and other forms of financial assistance does not discriminate on the basis of sex.

(2) To ensure nondiscriminatory awards of assistance as required in paragraph (b)(1) of this section, recipients shall develop and use procedures under which:

(i) Students are selected for award of financial assistance on the basis of nondiscriminatory criteria and not on the basis of availability of funds restricted to members of a particular sex;

(ii) An appropriate sex-restricted scholarship, fellowship, or other form of financial assistance is allocated to each student selected under paragraph (b)(2)(i) of this section; and

(iii) No student is denied the award for which he or she was selected under paragraph (b)(2)(i) of this section because of the absence of a scholarship, fellowship, or other form of financial assistance designated for a member of that student's sex.

(c) *Athletic scholarships.* (1) To the extent that a recipient awards athletic scholarships or grants-in-aid, it must provide reasonable opportunities for such awards for members of each sex in proportion to the number of students of each sex participating in interscholastic or intercollegiate athletics.

(2) A recipient may provide separate athletic scholarships or grants-in-aid for members of each sex as part of separate athletic teams for members of each sex to the extent consistent with this paragraph (c) and § 19.450.

§ 19.435 Employment assistance to students.

(a) *Assistance by recipient in making available outside employment.* A recipient that assists any agency, organization, or person in making employment available to any of its students:

(1) Shall assure itself that such employment is made available without discrimination on the basis of sex; and

(2) Shall not render such services to any agency, organization, or person that discriminates on the basis of sex in its employment practices.

(b) *Employment of students by recipients.* A recipient that employs any of its students shall not do so in a manner that violates §§ 19.500 through 19.550.

§ 19.440 Health and insurance benefits and services.

Subject to § 19.235(d), in providing a medical, hospital, accident, or life insurance benefit, service, policy, or plan to any of its students, a recipient shall not discriminate on the basis of sex, or provide such benefit, service, policy, or plan in a manner that would violate §§ 19.500 through 19.550 if it were provided to employees of the recipient. This section shall not prohibit a recipient from providing any benefit or service that may be used by a different proportion of students of one sex than of the other, including family planning services. However, any recipient that provides full coverage health service shall provide gynecological care.

§ 19.445 Marital or parental status.

(a) *Status generally.* A recipient shall not apply any rule concerning a student's actual or potential parental, family, or marital status that treats students differently on the basis of sex.

(b) *Pregnancy and related conditions.* (1) A recipient shall not discriminate against any student, or exclude any student from its education program or activity, including any class or extracurricular activity, on the basis of such student's pregnancy, childbirth, false pregnancy, termination of pregnancy, or recovery therefrom, unless the student requests voluntarily to participate in a separate portion of the program or activity of the recipient.

(2) A recipient may require such a student to obtain the certification of a physician that the student is physically and emotionally able to continue participation as long as such a certification is required of all students for other physical or emotional conditions requiring the attention of a physician.

(3) A recipient that operates a portion of its education program or activity separately for pregnant students, admittance to which is completely voluntary on the part of the student as provided in paragraph (b)(1) of this section, shall ensure that the separate portion is comparable to that offered to non-pregnant students.

(4) Subject to § 19.235(d), a recipient shall treat pregnancy, childbirth, false pregnancy, termination of pregnancy and recovery therefrom in the same manner and under the same policies as any other temporary disability with respect to any medical or hospital benefit, service, plan, or policy that such recipient administers, operates, offers, or participates in with respect to students admitted to the recipient's educational program or activity.

(5) In the case of a recipient that does not maintain a leave policy for its students, or in the case of a student who does not otherwise qualify for leave under such a policy, a recipient shall treat pregnancy, childbirth, false pregnancy, termination of pregnancy, and recovery therefrom as a justification for a leave of absence for as long a period of time as is deemed medically necessary by the student's physician, at the conclusion of which the student shall be reinstated to the status that she held when the leave began.

§ 19.450 Athletics.

(a) *General.* No person shall, on the basis of sex, be excluded from participation in, be denied the benefits of, be treated differently from another person, or otherwise be discriminated against in any interscholastic, intercollegiate, club, or intramural athletics offered by a recipient, and no recipient shall provide any such athletics separately on such basis.

(b) *Separate teams.* Notwithstanding the requirements of paragraph (a) of this section, a recipient may operate or sponsor separate teams for members of each sex where selection for such teams is based upon competitive skill

or the activity involved is a contact sport. However, where a recipient operates or sponsors a team in a particular sport for members of one sex but operates or sponsors no such team for members of the other sex, and athletic opportunities for members of that sex have previously been limited, members of the excluded sex must be allowed to try out for the team offered unless the sport involved is a contact sport. For the purposes of these Title IX regulations, contact sports include boxing, wrestling, rugby, ice hockey, football, basketball, and other sports the purpose or major activity of which involves bodily contact.

(c) *Equal opportunity.* (1) A recipient that operates or sponsors interscholastic, intercollegiate, club, or intramural athletics shall provide equal athletic opportunity for members of both sexes. In determining whether equal opportunities are available, the designated agency official will consider, among other factors:

(i) Whether the selection of sports and levels of competition effectively accommodate the interests and abilities of members of both sexes;

(ii) The provision of equipment and supplies;

(iii) Scheduling of games and practice time;

(iv) Travel and per diem allowance;

(v) Opportunity to receive coaching and academic tutoring;

(vi) Assignment and compensation of coaches and tutors;

(vii) Provision of locker rooms, practice, and competitive facilities;

(viii) Provision of medical and training facilities and services;

(ix) Provision of housing and dining facilities and services;

(x) Publicity.

(2) For purposes of paragraph (c)(1) of this section, unequal aggregate expenditures for members of each sex or unequal expenditures for male and female teams if a recipient operates or sponsors separate teams will not constitute noncompliance with this section, but the designated agency official may consider the failure to provide necessary funds for teams for one sex in assessing equality of opportunity for members of each sex.

(d) *Adjustment period.* A recipient that operates or sponsors interscholastic, intercollegiate, club, or intramural athletics at the elementary school level shall comply fully with this section as expeditiously as possible but in no event later than one year from September 29, 2000. A recipient that operates or sponsors interscholastic, intercollegiate, club, or intramural athletics at the secondary or postsecondary school level shall comply fully with this section as expeditiously as possible but in no event later than three years from September 29, 2000.

§ 19.455 Textbooks and curricular material.

Nothing in these Title IX regulations shall be interpreted as requiring or prohibiting or abridging in any way the use of particular textbooks or curricular materials.

Subpart E—Discrimination on the Basis of Sex in Employment in Education Programs or Activities Prohibited

§ 19.500 Employment.

(a) *General.* (1) No person shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination in employment, or recruitment, consideration, or selection therefor, whether full-time or part-time, under any education program or activity operated by a recipient that receives Federal financial assistance.

(2) A recipient shall make all employment decisions in any education program or activity operated by such recipient in a nondiscriminatory manner and shall not limit, segregate, or classify applicants or employees in any way that could adversely affect any applicant's or employee's employment opportunities or status because of sex.

(3) A recipient shall not enter into any contractual or other relationship which directly or indirectly has the effect of subjecting employees or students to discrimination prohibited by §§ 19.500 through 19.550, including relationships with employment and referral agencies, with labor unions, and

with organizations providing or administering fringe benefits to employees of the recipient.

(4) A recipient shall not grant preferences to applicants for employment on the basis of attendance at any educational institution or entity that admits as students only or predominantly members of one sex, if the giving of such preferences has the effect of discriminating on the basis of sex in violation of these Title IX regulations.

(b) *Application.* The provisions of §§ 19.500 through 19.550 apply to:

(1) Recruitment, advertising, and the process of application for employment;

(2) Hiring, upgrading, promotion, consideration for and award of tenure, demotion, transfer, layoff, termination, application of nepotism policies, right of return from layoff, and rehiring;

(3) Rates of pay or any other form of compensation, and changes in compensation;

(4) Job assignments, classifications, and structure, including position descriptions, lines of progression, and seniority lists;

(5) The terms of any collective bargaining agreement;

(6) Granting and return from leaves of absence, leave for pregnancy, childbirth, false pregnancy, termination of pregnancy, leave for persons of either sex to care for children or dependents, or any other leave;

(7) Fringe benefits available by virtue of employment, whether or not administered by the recipient;

(8) Selection and financial support for training, including apprenticeship, professional meetings, conferences, and other related activities, selection for tuition assistance, selection for sabbaticals and leaves of absence to pursue training;

(9) Employer-sponsored activities, including social or recreational programs; and

(10) Any other term, condition, or privilege of employment.

§ 19.505 Employment criteria.

A recipient shall not administer or operate any test or other criterion for any employment opportunity that has a disproportionately adverse effect on persons on the basis of sex unless:

(a) Use of such test or other criterion is shown to predict validly successful performance in the position in question; and

(b) Alternative tests or criteria for such purpose, which do not have such disproportionately adverse effect, are shown to be unavailable.

§ 19.510 Recruitment.

(a) *Nondiscriminatory recruitment and hiring.* A recipient shall not discriminate on the basis of sex in the recruitment and hiring of employees. Where a recipient has been found to be presently discriminating on the basis of sex in the recruitment or hiring of employees, or has been found to have so discriminated in the past, the recipient shall recruit members of the sex so discriminated against so as to overcome the effects of such past or present discrimination.

(b) *Recruitment patterns.* A recipient shall not recruit primarily or exclusively at entities that furnish as applicants only or predominantly members of one sex if such actions have the effect of discriminating on the basis of sex in violation of §§ 19.500 through 19.550.

§ 19.515 Compensation.

A recipient shall not make or enforce any policy or practice that, on the basis of sex:

(a) Makes distinctions in rates of pay or other compensation;

(b) Results in the payment of wages to employees of one sex at a rate less than that paid to employees of the opposite sex for equal work on jobs the performance of which requires equal skill, effort, and responsibility, and that are performed under similar working conditions.

§ 19.520 Job classification and structure.

A recipient shall not:

(a) Classify a job as being for males or for females;

(b) Maintain or establish separate lines of progression, seniority lists, career ladders, or tenure systems based on sex; or

(c) Maintain or establish separate lines of progression, seniority systems, career ladders, or tenure systems for

similar jobs, position descriptions, or job requirements that classify persons on the basis of sex, unless sex is a bona fide occupational qualification for the positions in question as set forth in § 19.550.

§ 19.525 Fringe benefits.

(a) *''Fringe benefits'' defined.* For purposes of these Title IX regulations, *fringe benefits* means: Any medical, hospital, accident, life insurance, or retirement benefit, service, policy or plan, any profit-sharing or bonus plan, leave, and any other benefit or service of employment not subject to the provision of § 19.515.

(b) *Prohibitions.* A recipient shall not:

(1) Discriminate on the basis of sex with regard to making fringe benefits available to employees or make fringe benefits available to spouses, families, or dependents of employees differently upon the basis of the employee's sex;

(2) Administer, operate, offer, or participate in a fringe benefit plan that does not provide for equal periodic benefits for members of each sex and for equal contributions to the plan by such recipient for members of each sex; or

(3) Administer, operate, offer, or participate in a pension or retirement plan that establishes different optional or compulsory retirement ages based on sex or that otherwise discriminates in benefits on the basis of sex.

§ 19.530 Marital or parental status.

(a) *General.* A recipient shall not apply any policy or take any employment action:

(1) Concerning the potential marital, parental, or family status of an employee or applicant for employment that treats persons differently on the basis of sex; or

(2) Which is based upon whether an employee or applicant for employment is the head of household or principal wage earner in such employee's or applicant's family unit.

(b) *Pregnancy.* A recipient shall not discriminate against or exclude from employment any employee or applicant for employment on the basis of pregnancy, childbirth, false pregnancy, termination of pregnancy, or recovery therefrom.

(c) *Pregnancy as a temporary disability.* Subject to § 19235(d), a recipient shall treat pregnancy, childbirth, false pregnancy, termination of pregnancy, recovery therefrom, and any temporary disability resulting therefrom as any other temporary disability for all job-related purposes, including commencement, duration, and extensions of leave, payment of disability income, accrual of seniority and any other benefit or service, and reinstatement, and under any fringe benefit offered to employees by virtue of employment.

(d) *Pregnancy leave.* In the case of a recipient that does not maintain a leave policy for its employees, or in the case of an employee with insufficient leave or accrued employment time to qualify for leave under such a policy, a recipient shall treat pregnancy, childbirth, false pregnancy, termination of pregnancy, and recovery therefrom as a justification for a leave of absence without pay for a reasonable period of time, at the conclusion of which the employee shall be reinstated to the status that she held when the leave began or to a comparable position, without decrease in rate of compensation or loss of promotional opportunities, or any other right or privilege of employment.

§ 19.535 Effect of state or local law or other requirements.

(a) *Prohibitory requirements.* The obligation to comply with §§ 19.500 through 19.550 is not obviated or alleviated by the existence of any State or local law or other requirement that imposes prohibitions or limits upon employment of members of one sex that are not imposed upon members of the other sex.

(b) *Benefits.* A recipient that provides any compensation, service, or benefit to members of one sex pursuant to a State or local law or other requirement shall provide the same compensation, service, or benefit to members of the other sex.

§ 19.540 Advertising.

A recipient shall not in any advertising related to employment indicate preference, limitation, specification, or discrimination based on sex unless sex is a bona fide occupational qualification for the particular job in question.

§ 19.545 Pre-employment inquiries.

(a) *Marital status.* A recipient shall not make pre-employment inquiry as to the marital status of an applicant for employment, including whether such applicant is ''Miss'' or ''Mrs.''

(b) *Sex.* A recipient may make pre-employment inquiry as to the sex of an applicant for employment, but only if such inquiry is made equally of such applicants of both sexes and if the results of such inquiry are not used in connection with discrimination prohibited by these Title IX regulations.

§ 19.550 Sex as a bona fide occupational qualification.

A recipient may take action otherwise prohibited by §§ 19.500 through 19.550 provided it is shown that sex is a bona fide occupational qualification for that action, such that consideration of sex with regard to such action is essential to successful operation of the employment function concerned. A recipient shall not take action pursuant to this section that is based upon alleged comparative employment characteristics or stereotyped characterizations of one or the other sex, or upon preference based on sex of the recipient, employees, students, or other persons, but nothing contained in this section shall prevent a recipient from considering an employee's sex in relation to employment in a locker room or toilet facility used only by members of one sex.

Subpart F—Procedures

§ 19.600 Notice of covered programs.

Within 60 days of September 29, 2000, each Federal agency that awards Federal financial assistance shall publish in the FEDERAL REGISTER a notice of the programs covered by these Title IX regulations. Each such Federal agency shall periodically republish the notice of covered programs to reflect changes in covered programs. Copies of this notice also shall be made available upon request to the Federal agency's office that enforces Title IX.

§ 19.605 Enforcement procedures.

The investigative, compliance, and enforcement procedural provisions of Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d) (''Title VI'') are hereby adopted and applied to these Title IX regulations. These procedures may be found at 32 CFR 195.7 through 195.12.

PARTS 20–24 [RESERVED]

PART 25—UNIFORM RELOCATION ASSISTANCE AND REAL PROPERTY ACQUISITION FOR FEDERAL AND FEDERALLY ASSISTED PROGRAMS

AUTHORITY: Sec. 213, Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Pub. L. 91–646, 84 Stat. 1894 (42 U.S.C. 4601) as amended by the Surface Transportation and Uniform Relocation Assistance Act of 1987, title IV of Pub. L. 100–17, 101 Stat. 246–256 (42 U.S.C. 4601 note).

§ 25.1 Uniform relocation assistance and real property acquisition.

Regulations and procedures for complying with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Pub. L. 91–646, 84 Stat. 1894, 42 U.S.C. 4601), as amended by the Surface Transportation and Uniform Relocation Assistance Act of 1987 (title IV of Pub. L. 100–17, 101 Stat. 246–256, 42 U.S.C. 4601 note) are set forth in 49 CFR part 24.

[52 FR 48026, Dec. 17, 1987 and 54 FR 8912, Mar. 2, 1989]

PARTS 26–49 [RESERVED]

SUBCHAPTER B—INSURANCE AND HAZARD MITIGATION

PARTS 50–54 [RESERVED]

National Insurance Development Program

PARTS 55–58 [RESERVED]

National Flood Insurance Program

PART 59—GENERAL PROVISIONS

Subpart A—General

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AUTHORITY: 42 U.S.C. 4001 *et seq.;* 6 U.S.C. 101 *et seq.*

Subpart A—General

§ 59.1 Definitions.

As used in this subchapter—

Act means the statutes authorizing the National Flood Insurance Program that are incorporated in 42 U.S.C. 4001-*et seq.*

Actuarial rates—see *risk premium rates.*

Administrator means the Administrator of the Federal Emergency Management Agency.

Agency means the Federal Emergency Management Agency, Washington DC.

Alluvial fan flooding means flooding occurring on the surface of an alluvial fan or similar landform which originates at the apex and is characterized by high-velocity flows; active processes of erosion, sediment transport, and deposition; and, unpredictable flow paths.

Apex means a point on an alluvial fan or similar landform below which the flow path of the major stream that formed the fan becomes unpredictable and alluvial fan flooding can occur.

Applicant means a community which indicates a desire to participate in the Program.

Appurtenant structure means a structure which is on the same parcel of property as the principal structure to be insured and the use of which is incidental to the use of the principal structure.

Area of future-conditions flood hazard means the land area that would be inundated by the 1-percent-annual-chance (100-year) flood based on future-conditions hydrology.

Area of shallow flooding means a designated AO, AH, AR/AO, AR/AH, or VO zone on a community's Flood Insurance Rate Map (FIRM) with a 1 percent or greater annual chance of flooding to an average depth of 1 to 3 feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Area of special flood-related erosion hazard is the land within a community which is most likely to be subject to severe flood-related erosion losses. The area may be designated as Zone E on the Flood Hazard Boundary Map (FHBM). After the detailed evaluation of the special flood-related erosion hazard area in preparation for publication of the FIRM, Zone E may be further refined.

Area of special flood hazard is the land in the flood plain within a community subject to a 1 percent or greater chance of flooding in any given year. The area may be designated as Zone A on the FHBM. After detailed ratemaking has been completed in preparation for publication of the flood insurance rate map, Zone A usually is refined into Zones A, AO, AH, A1–30, AE, A99, AR, AR/A1–30, AR/AE, AR/AO, AR/AH, AR/A, VO, or V1–30, VE, or V. For purposes of these regulations, the term ''special flood hazard area'' is synonymous in meaning with the phrase ''area of special flood hazard''.

Area of special mudslide (*i.e., mudflow*) *hazard* is the land within a community

most likely to be subject to severe mudslides (i.e., mudflows). The area may be designated as Zone M on the FHBM. After the detailed evaluation of the special mudslide (i.e., mudflow) hazard area in preparation for publication of the FIRM, Zone M may be further refined.

Base flood means the flood having a one percent chance of being equalled or exceeded in any given year.

Basement'' means any area of the building having its floor subgrade (below ground level) on all sides.

Breakaway wall means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

Building—see *structure*.

Chargeable rates mean the rates established by the Federal Insurance Administrator pursuant to section 1308 of the Act for first layer limits of flood insurance on existing structures.

Chief Executive Officer of the community (*CEO*) means the official of the community who is charged with the authority to implement and administer laws, ordinances and regulations for that community.

Coastal high hazard area means an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources.

Community means any State or area or political subdivision thereof, or any Indian tribe or authorized tribal organization, or Alaska Native village or authorized native organization, which has authority to adopt and enforce flood plain management regulations for the areas within its jurisdiction.

Condominium building means a type of building in the form of ownership in which each unit owner has an undivided interest in common elements of the building.

Contents coverage is the insurance on personal property within an enclosed structure, including the cost of debris removal, and the reasonable cost of removal of contents to minimize damage. Personal property may be household goods usual or incidental to residential occupancy, or merchandise, furniture, fixtures, machinery, equipment and supplies usual to other than residential occupancies.

Criteria means the comprehensive criteria for land management and use for flood-prone areas developed under 42 U.S.C. 4102 for the purposes set forth in part 60 of this subchapter.

Critical feature means an integral and readily identifiable part of a flood protection system, without which the flood protection provided by the entire system would be compromised.

Curvilinear Line means the border on either a FHBM or FIRM that delineates the special flood, mudslide (i.e., mudflow) and/or flood-related erosion hazard areas and consists of a curved or contour line that follows the topography.

Deductible means the amount of an insured loss that is the responsibility of the insured and that is incurred before any amounts are paid for the insured loss under the insurance policy.

Developed area means an area of a community that is:

(a) A primarily urbanized, built-up area that is a minimum of 20 contiguous acres, has basic urban infrastructure, including roads, utilities, communications, and public facilities, to sustain industrial, residential, and commercial activities, and

(1) Within which 75 percent or more of the parcels, tracts, or lots contain commercial, industrial, or residential structures or uses; or

(2) Is a single parcel, tract, or lot in which 75 percent of the area contains existing commercial or industrial structures or uses; or

(3) Is a subdivision developed at a density of at least two residential structures per acre within which 75 percent or more of the lots contain existing residential structures at the time the designation is adopted.

(b) Undeveloped parcels, tracts, or lots, the combination of which is less than 20 acres and contiguous on at least 3 sides to areas meeting the criteria of paragraph (a) at the time the designation is adopted.

(c) A subdivision that is a minimum of 20 contiguous acres that has obtained all necessary government approvals, provided that the actual ''start of construction'' of structures has occurred on at least 10 percent of the lots or remaining lots of a subdivision or 10 percent of the maximum building coverage or remaining building coverage allowed for a single lot subdivision at the time the designation is adopted and construction of structures is underway. Residential subdivisions must meet the density criteria in paragraph (a)(3).

Development means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

Eligible community or *participating community* means a community for which the Federal Insurance Administrator has authorized the sale of flood insurance under the National Flood Insurance Program..

Elevated building means, for insurance purposes, a nonbasement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

Emergency program means the initial phase of a community's participation in the National Flood Insurance Program, as prescribed by Section 1306 of the Act.

Erosion means the process of the gradual wearing away of land masses. This peril is not per se covered under the Program.

Exception means a waiver from the provisions of part 60 of this subchapter directed to a community which relieves it from the requirements of a rule, regulation, order or other determination made or issued pursuant to the Act.

Existing construction, means for the purposes of determining rates, structures for which the ''start of construction'' commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before that date. ''Existing construction'' may also be referred to as ''existing structures.''

Existing manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

Existing structures see *existing construction.*

Expansion to an existing manufactured home park or subdivision means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufacturing homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

Federal agency means any department, agency, corporation, or other entity or instrumentality of the executive branch of the Federal Government, and includes the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation.

Federal instrumentality responsible for the supervision, approval, regulation, or insuring of banks, savings and loan associations, or similar institutions means the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the Comptroller of the Currency, the Federal Home Loan Bank Board, the Federal Savings and Loan Insurance Corporation, and the National Credit Union Administration.

Financial assistance means any form of loan, grant, guaranty, insurance, payment, rebate, subsidy, disaster assistance loan or grant, or any other form of direct or indirect Federal assistance, other than general or special revenue sharing or formula grants made to States.

Financial assistance for acquisition or construction purposes means any form of financial assistance which is intended in whole or in part for the acquisition, construction, reconstruction, repair, or improvement of any publicly or privately owned building or mobile home,

and for any machinery, equipment, fixtures, and furnishings contained or to be contained therein, and shall include the purchase or subsidization of mortgages or mortgage loans but shall exclude assistance pursuant to the Disaster Relief Act of 1974 other than assistance under such Act in connection with a flood. It includes only financial assistance insurable under the Standard Flood Insurance Policy.

First-layer coverage is the maximum amount of structural and contents insurance coverage available under the Emergency Program.

Flood or *Flooding* means:

(a) A general and temporary condition of partial or complete inundation of normally dry land areas from:

(1) The overflow of inland or tidal waters.

(2) The unusual and rapid accumulation or runoff of surface waters from any source.

(3) Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (a)(2) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

(b) The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (a)(1) of this definition.

Flood elevation determination means a determination by the Federal Insurance Administrator of the water surface elevations of the base flood, that is, the flood level that has a one percent or greater chance of occurrence in any given year.

Flood elevation study means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards.

Flood Hazard Boundary Map means an official map of a community, issued by the Federal Insurance Administrator, where the boundaries of the flood, mudslide (i.e., mudflow) related erosion areas having special hazards have been designated as Zones A, M, and/or E.

Flood insurance means the insurance coverage provided under the Program.

Flood Insurance Rate Map (FIRM) means an official map of a community, on which the Federal Insurance Administrator has delineated both the special hazard areas and the risk premium zones applicable to the community. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM).

Flood Insurance Study see *flood elevation study*.

Flood plain or *flood-prone area* means any land area susceptible to being inundated by water from any source (see definition of ''flooding'').

Flood plain management means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and flood plain management regulations.

Flood plain management regulations means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a flood plain ordinance, grading ordinance and erosion control ordinance) and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

Flood protection system means those physical structural works for which funds have been authorized, appropriated, and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the area within a community subject to a ''special flood hazard'' and the extent of the depths of associated flooding. Such a system typically includes hurricane tidal barriers, dams, reservoirs, levees or dikes. These specialized flood modifying works are those

constructed in conformance with sound engineering standards.

Flood proofing means any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

Flood-related erosion means the collapse or subsidence of land along the shore of a lake or other body of water as a result of undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding.

Flood-related erosion area or *flood-related erosion prone area* means a land area adjoining the shore of a lake or other body of water, which due to the composition of the shoreline or bank and high water levels or wind-driven currents, is likely to suffer flood-related erosion damage.

Flood-related erosion area management means the operation of an overall program of corrective and preventive measures for reducing flood-related erosion damage, including but not limited to emergency preparedness plans, flood-related erosion control works, and flood plain management regulations.

Floodway—see *regulatory floodway*.

Floodway encroachment lines mean the lines marking the limits of floodways on Federal, State and local flood plain maps.

Freeboard means a factor of safety usually expressed in feet above a flood level for purposes of flood plain management. ''Freeboard'' tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.

Functionally dependent use means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

Future-conditions flood hazard area, or *future-conditions floodplain*—see *Area of future-conditions flood hazard*.

Future-conditions hydrology means the flood discharges associated with projected land-use conditions based on a community's zoning maps and/or comprehensive land-use plans and without consideration of projected future construction of flood detention structures or projected future hydraulic modifications within a stream or other waterway, such as bridge and culvert construction, fill, and excavation.

Highest adjacent grade means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

Historic Structure means any structure that is:

(a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

(b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

(c) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or

(d) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:

(1) By an approved state program as determined by the Secretary of the Interior or

(2) Directly by the Secretary of the Interior in states without approved programs.

Independent scientific body means a non-Federal technical or scientific organization involved in the study of land use planning, flood plain management, hydrology, geology, geography, or any other related field of study concerned with flooding.

Insurance adjustment organization means any organization or person engaged in the business of adjusting loss claims arising under the Standard Flood Insurance Policy.

Insurance company or *insurer* means any person or organization authorized to engage in the insurance business under the laws of any State.

Levee means a man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.

Levee System means a flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

Lowest Floor means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; *Provided,* that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of §60.3.

Mangrove stand means an assemblage of mangrove trees which are mostly low trees noted for a copious development of interlacing adventitious roots above the ground and which contain one or more of the following species: Black mangrove (Avicennia Nitida); red mangrove (Rhizophora Mangle); white mangrove (Languncularia Racemosa); and buttonwood (Conocarpus Erecta).

Manufactured home means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term ''manufactured home'' does not include a ''recreational vehicle''.

Manufactured home park or subdivision'' means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

Map means the Flood Hazard Boundary Map (FHBM) or the Flood Insurance Rate Map (FIRM) for a community issued by the Agency.

Mean sea level means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

Mixed use building means a building that has both residential and non-residential uses.

Mudslide (i.e., mudflow) describes a condition where there is a river, flow or inundation of liquid mud down a hillside usually as a result of a dual condition of loss of brush cover, and the subsequent accumulation of water on the ground preceded by a period of unusually heavy or sustained rain. A mudslide (i.e., mudflow) may occur as a distinct phenomenon while a landslide is in progress, and will be recognized as such by the Administrator only if the mudflow, and not the landslide, is the proximate cause of damage that occurs.

Mudslide (*i.e., mudflow*) *area management* means the operation of an overall program of corrective and preventive measures for reducing mudslide (i.e., mudflow) damage, including but not limited to emergency preparedness plans, mudslide control works, and flood plain management regulations.

Mudslide (*i.e., mudflow*) *prone area* means an area with land surfaces and slopes of unconsolidated material where the history, geology and climate indicate a potential for mudflow.

Multifamily building means an other residential building that is not a condominium building.

New construction means, for the purposes of determining insurance rates, structures for which the ''start of construction'' commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is

later, and includes any subsequent improvements to such structures. For floodplain management purposes, *new construction* means structures for which the *start of construction* commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

New manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by a community.

Non-residential building means a commercial or mixed-use building where the primary use is commercial or nonhabitational.

Non-residential property means either a non-residential building, the contents within a non-residential building, or both.

100-year flood see *base flood*.

Other residential building means a residential building that is designed for use as a residential space for 5 or more families or a mixed use building in which the total floor area devoted to non-residential uses is less than 25 percent of the total floor area within the building.

Other residential property means either an other residential building, the contents within an other residential building, or both.

Participating community, also known as an *eligible community*, means a community in which the Administrator has authorized the sale of flood insurance.

Person includes any individual or group of individuals, corporation, partnership, association, or any other entity, including State and local governments and agencies.

Policy means the Standard Flood Insurance Policy.

Premium means the total premium payable by the insured for the coverage or coverages provided under the policy. The calculation of the premium may be based upon either chargeable rates or risk premium rates, or a combination of both.

Primary frontal dune means a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes immediately landward and adjacent to the beach and subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.

Principally above ground means that at least 51 percent of the actual cash value of the structure, less land value, is above ground.

Program means the National Flood Insurance Program authorized by 42 U.S.C. 4001 through 4128.

Program deficiency means a defect in a community's flood plain management regulations or administrative procedures that impairs effective implementation of those flood plain management regulations or of the standards in § 60.3, § 60.4, § 60.5, or § 60.6.

Project cost means the total financial cost of a flood protection system (including design, land acquisition, construction, fees, overhead, and profits), unless the Federal Insurance Administrator determines a given ''cost'' not to be a part of such project cost.

Recreational vehicle means a vehicle which is:

(a) Built on a single chassis;

(b) 400 square feet or less when measured at the largest horizontal projection;

(c) Designed to be self-propelled or permanently towable by a light duty truck; and

(d) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Reference feature is the receding edge of a bluff or eroding frontal dune, or if such a feature is not present, the normal high-water line or the seaward line of permanent vegetation if a high-water line cannot be identified.

Regular Program means the Program authorized by the Act under which risk premium rates are required for the first half of available coverage (also known as ''first layer'' coverage) for all

new construction and substantial improvements started on or after the effective date of the FIRM, or after December 31, 1974, for FIRM's effective on or before that date. All buildings, the construction of which started before the effective date of the FIRM, or before January 1, 1975, for FIRMs effective before that date, are eligible for first layer coverage at either subsidized rates or risk premium rates, whichever are lower. Regardless of date of construction, risk premium rates are always required for the second layer coverage and such coverage is offered only after the Administrator has completed a risk study for the community.

Regulatory floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

Remedy a violation means to bring the structure or other development into compliance with State or local flood plain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the ordinance or otherwise deterring future similar violations, or reducing Federal financial exposure with regard to the structure or other development.

Residential building means a non-commercial building designed for habitation by one or more families or a mixed use building that qualifies as a single-family, two-to-four family, or other residential building.

Residential property means either a residential building or the contents within a residential building, or both.

Risk premium rates means those rates established by the Federal Insurance Administrator pursuant to individual community studies and investigations which are undertaken to provide flood insurance in accordance with section 1307 of the Act and the accepted actuarial principles. ''Risk premium rates'' include provisions for operating costs and allowances.

Riverine means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

Sand dunes mean naturally occurring accumulations of sand in ridges or mounds landward of the beach.

Scientifically incorrect. The methodology(ies) and/or assumptions which have been utilized are inappropriate for the physical processes being evaluated or are otherwise erroneous.

Second layer coverage means an additional limit of coverage equal to the amounts made available under the Emergency Program, and made available under the Regular Program.

Servicing company means a corporation, partnership, association, or any other organized entity which contracts with the Federal Insurance Administration to service insurance policies under the National Flood Insurance Program for a particular area.

Sheet flow area—see *area of shallow flooding*.

Single-family dwelling means either (a) a residential single-family building in which the total floor area devoted to non-residential uses is less than 50 percent of the building's total floor area, or (b) a single-family residential unit within a two-to-four family building, other-residential building, business, or non-residential building, in which commercial uses within the unit are limited to less than 50 percent of the unit's total floor area.

60-year setback means a distance equal to 60 times the average annual long term recession rate at a site, measured from the reference feature.

Special flood hazard area—see ''area of special flood hazard''.

Special hazard area means an area having special flood, mudslide (i.e., mudflow), or flood-related erosion hazards, and shown on an FHBM or FIRM as Zone A, AO, A1–30, AE, AR, AR/A1–30, AR/AE, AR/AO, AR/AH, AR/A, A99, AH, VO, V1–30, VE, V, M, or E.

Standard Flood Insurance Policy means the flood insurance policy issued by the Federal Insurance Administrator or an insurer pursuant to an arrangement with the Federal Insurance Administrator pursuant to Federal statutes and regulations.

Start of Construction (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (Pub. L. 97–348)), includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

State means any State of the United States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

State Coordinating Agency means the agency of the state government (or other office designated by the Governor of the state or by state statute) that, at the request of the Federal Insurance Administrator, assists in the implementation of the National Flood Insurance Program in that state.

Storm cellar means a space below grade used to accommodate occupants of the structure and emergency supplies as a means of temporary shelter against severe tornado or similar wind storm activity.

Structure means, for floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home. *Structure*, for insurance purposes, means:

(1) A building with two or more outside rigid walls and a fully secured roof, that is affixed to a permanent site;

(2) A manufactured home (''a manufactured home,'' also known as a mobile home, is a structure: built on a permanent chassis, transported to its site in one or more sections, and affixed to a permanent foundation); or

(3) A travel trailer without wheels, built on a chassis and affixed to a permanent foundation, that is regulated under the community's floodplain management and building ordinances or laws.

For the latter purpose, ''structure'' does not mean a recreational vehicle or a park trailer or other similar vehicle, except as described in paragraph (3) of this definition, or a gas or liquid storage tank.

Subsidized rates mean the rates established by the Federal Insurance Administrator involving in the aggregate a subsidization by the Federal Government.

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial improvement means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the ''start of construction'' of the improvement. This term includes structures which have incurred ''substantial damage'', regardless of the actual repair work performed. The term does not, however, include either:

(1) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions or

(2) Any alteration of a ''historic structure'', provided that the alteration will not preclude the structure's continued designation as a ''historic structure''.

30-year setback means a distance equal to 30 times the average annual long term recession rate at a site, measured from the reference feature.

Technically incorrect. The methodology(ies) utilized has been erroneously applied due to mathematical or measurement error, changed physical conditions, or insufficient quantity or quality of input data.

Two-to-four family building means a residential building, including an apartment building, containing two-to-four residential spaces and in which commercial uses are limited to less than 25 percent of the building's total floor area.

V Zone—see ''coastal high hazard area.''

Variance means a grant of relief by a community from the terms of a flood plain management regulation.

Violation means the failure of a structure or other development to be fully compliant with the community's flood plain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in §60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is provided.

Water surface elevation means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, (or other datum, where specified) of floods of various magnitudes and frequencies in the flood plains of coastal or riverine areas.

Zone of imminent collapse means an area subject to erosion adjacent to the shoreline of an ocean, bay, or lake and within a distance equal to 10 feet plus 5 times the average annual long-term erosion rate for the site, measured from the reference feature.

[41 FR 46968, Oct. 26, 1976]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §59.1, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.govinfo.gov*.

§ 59.2 Description of program.

(a) The National Flood Insurance Act of 1968 was enacted by title XIII of the Housing and Urban Development Act of 1968 (Pub. L. 90–448, August 1, 1968) to provide previously unavailable flood insurance protection to property owners in flood-prone areas. Mudslide (as defined in §59.1) protection was added to the Program by the Housing and Urban Development Act of 1969 (Pub. L. 91–152, December 24, 1969). Flood-related erosion (as defined in §59.1) protection was added to the Program by the Flood Disaster Protection Act of 1973 (Pub. L. 93–234, December 31, 1973). The Flood Disaster Protection Act of 1973 requires the purchase of flood insurance on and after March 2, 1974, as a condition of receiving any form of Federal or federally-related financial assistance for acquisition or construction purposes with respect to insurable buildings and mobile homes within an identified special flood, mudslide (i.e., mudflow), or flood-related erosion hazard area that is located within any community participating in the Program. The Act also requires that on and after July 1, 1975, or one year after a community has been formally notified by the Federal Insurance Administrator. of its identification as community containing one or more special flood, mudslide (i.e., mudflow), or flood-related erosion hazard areas, no such Federal financial assistance, shall be provided within such an area unless the community in which the area is located is then participating in the Program, subject to certain exceptions. See FIA published Guidelines at §59.4(c).

(b) To qualify for the sale of federally-subsidized flood insurance a community must adopt and submit to the Federal Insurance Administrator as part of its application, flood plain management regulations, satisfying at a minimum the criteria set forth at part 60 of this subchapter, designed to reduce or avoid future flood, mudslide (i.e., mudflow) or flood-related erosion damages. These regulations must include effective enforcement provisions.

(c) Minimum requirements for adequate flood plain management regulations are set forth in §60.3 for flood-prone areas, in §60.4 for mudslide (i.e.,

mudflow) areas and in § 60.5 for flood-related erosion areas. Those applicable requirements and standards are based on the amount of technical information available to the community.

[41 FR 46968, Oct. 26, 1976, as amended at 43 FR 7140, Feb. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44552, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

§ 59.3 Emergency program.

The 1968 Act required a risk study to be undertaken for each community before it could become eligible for the sale of flood insurance. Since this requirement resulted in a delay in providing insurance, the Congress, in section 408 of the Housing and Urban Development Act of 1969 (Pub. L. 91–152, December 24, 1969), established an Emergency Flood Insurance Program as a new section 1336 of the National Flood Insurance Act (42 U.S.C. 4056) to permit the early sale of insurance in flood-prone communities. The emergency program does not affect the requirement that a community must adopt adequate flood plain management regulations pursuant to part 60 of this subchapter but permits insurance to be sold before a study is conducted to determine risk premium rates for the community. The program still requires upon the effective date of a FIRM the charging of risk premium rates for all new construction and substantial improvements and for higher limits of coverage for existing structures.

[43 FR 7140, Feb. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44543, Sept. 29, 1983]

§ 59.4 References.

(a) The following are statutory references for the National Flood Insurance Program, under which these regulations are issued:

(1) National Flood Insurance Act of 1968 (title XIII of the Housing and Urban Development Act of 1968), Pub. L. 90–448, approved August 1, 1968, 42 U.S.C. 4001 *et seq.*

(2) Housing and Urban Development Act of 1969 (Pub. L. 91–152, approved December 24, 1969).

(3) Flood Disaster Protection Act of 1973 (87 Stat. 980), Public Law 93–234, approved December 31, 1973.

(4) Section 816 of the Housing and Community Development Act of 1974 (87 Stat. 975), Public Law 93–383, approved August 22, 1974.

(5) Public Law 5–128 (effective October 12, 1977).

(6) The above statutes are included in 42 U.S.C. 4001 *et seq.*

(b) The following are references relevant to the National Flood Insurance Program:

(1) Executive Order 11988 (Floodplain Management, dated May 24, 1977 (42 FR 26951, May 25, 1977)).

(2) The Flood Control Act of 1960 (Pub. L. 86–645).

(3) Title II, section 314 of title III and section 406 of title IV of the Disaster Relief Act of 1974 (Pub. L. 93–288).

(4) Coastal Zone Management Act (Pub. L. 92–583), as amended Public Law 94–370.

(5) Water Resources Planning Act (Pub. L. 89–90), as amended Public Law 94–112 (October 16, 1975).

(6) Title I, National Environmental Policy Act (Pub. L. 91–190).

(7) Land and Water Conservation Fund Act (Pub. L. 89–578), and subsequent amendments thereto.

(8) Water Resources Council, Principals and Standards for Planning, Water and Related Land Resources (38 FR 24778–24869, September 10, 1973).

(9) Executive Order 11593 (Protection and Enchancement of the Cultural Environment), dated May 13, 1971 (36 FR 8921, May 15, 1971).

(10) 89th Cong., 2nd Session, H.D. 465.

(11) Required land use element for comprehensive planning assistance under section 701 of the Housing Act of 1954, as amended by the Housing and Community Development Act of 1974 (24 CFR 600.72).

(12) Executive Order 11990 (Protection of Wetlands, dated May 24, 1977 (42 FR 26951, May 25, 1977)).

(13) Water Resources Council (Guidance for Floodplain Management) (42 FR 52590, September 30, 1977).

(14) Unified National Program for Floodplain Management of the United States Water Resources Council, July 1976.

(c) The following reference guidelines represent the views of the Federal Insurance Administration with respect to

the mandatory purchase of flood insurance under section 102 of the Flood Disaster Protection Act of 1973: Mandatory Purchase of Flood Insurance Guidelines (54 FR 29666–29695, July 13, 1989).

[41 FR 46968, Oct. 26, 1976, as amended at 43 FR 7140, Feb. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, and amended at 57 FR 19540, May 7, 1992]

Subpart B—Eligibility Requirements

§ 59.21 Purpose of subpart.

This subpart lists actions that must be taken by a community to become eligible and to remain eligible for the Program.

[41 FR 46968, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979]

§ 59.22 Prerequisites for the sale of flood insurance.

(a) To qualify for flood insurance availability a community shall apply for the entire area within its jurisdiction, and shall submit:

(1) Copies of legislative and executive actions indicating a local need for flood insurance and an explicit desire to participate in the National Flood Insurance Program;

(2) Citations to State and local statutes and ordinances authorizing actions regulating land use and copies of the local laws and regulations cited;

(3) A copy of the flood plain management regulations the community has adopted to meet the requirements of §§ 60.3, 60.4 and/or § 60.5 of this subchapter. This submission shall include copies of any zoning, building, and subdivision regulations, health codes, special purpose ordinances (such as a flood plain ordinance, grading ordinance, or flood-related erosion control ordinance), and any other corrective and preventive measures enacted to reduce or prevent flood, mudslide (i.e., mudflow) or flood-related erosion damage;

(4) A list of the incorporated communities within the applicant's boundaries;

(5) Estimates relating to the community as a whole and to the flood, mudslide (i.e., mudflow) and flood-related erosion prone areas concerning:

(i) Population;

(ii) Number of one to four family residences;

(iii) Number of small businesses; and

(iv) Number of all other structures.

(6) Address of a local repository, such as a municipal building, where the Flood Hazard Boundary Maps (FHBM's) and Flood Insurance Rate Maps (FIRM's) will be made available for public inspection;

(7) A summary of any State or Federal activities with respect to flood plain, mudslide (i.e., mudflow) or flood-related erosion area management within the community, such as federally-funded flood control projects and State-administered flood plain management regulations;

(8) A commitment to recognize and duly evaluate flood, mudslide (i.e., mudflow) and/or flood-related erosion hazards in all official actions in the areas having special flood, mudslide (i.e., mudflow) and/or flood-related erosion hazards and to take such other official action reasonably necessary to carry out the objectives of the program; and

(9) A commitment to:

(i) Assist the Federal Insurance Administrator at his/her request, in his/her delineation of the limits of the areas having special flood, mudslide (i.e., mudflow) or flood-related erosion hazards;

(ii) Provide such information concerning present uses and occupancy of the flood plain, mudslide (i.e., mudflow) or flood-related erosion areas as the Federal Insurance Administrator may request;

(iii) Maintain for public inspection and furnish upon request, for the determination of applicable flood insurance risk premium rates within all areas having special flood hazards identified on a FHBM or FIRM, any certificates of floodproofing, and information on the elevation (in relation to mean sea level) of the level of the lowest floor (including basement) of all new or substantially improved structures, and include whether or not such structures contain a basement, and if the structure has been floodproofed, the elevation (in relation to mean sea level) to which the structure was floodproofed;

(iv) Cooperate with Federal, State, and local agencies and private firms which undertake to study, survey, map, and identify flood plain, mudslide (i.e., mudflow) or flood-related erosion areas, and cooperate with neighboring communities with respect to the management of adjoining flood plain, mudslide (i.e., mudflow) and/or flood-related erosion areas in order to prevent aggravation of existing hazards;

(v) Upon occurrence, notify the Federal Insurance Administrator in writing whenever the boundaries of the community have been modified by annexation or the community has otherwise assumed or no longer has authority to adopt and enforce flood plain management regulations for a particular area. In order that all FHBM's and FIRM's accurately represent the community's boundaries, include within such notification a copy of a map of the community suitable for reproduction, clearly delineating the new corporate limits or new area for which the community has assumed or relinquished flood plain management regulatory authority.

(b) An applicant shall legislatively:

(1) Appoint or designate the agency or official with the responsibility, authority, and means to implement the commitments made in paragraph (a) of this section, and

(2) Designate the official responsible to submit a report to the Federal Insurance Administrator concerning the community participation in the Program, including, but not limited to the development and implementation of flood plain management regulations. This report shall be submitted annually or biennially as determined by the Federal Insurance Administrator.

(c) The documents required by paragraph (a) of this section and evidence of the actions required by paragraph (b) of this section shall be submitted to the Federal Emergency Management Agency, Washington DC 20472.

[41 FR 46968, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979 and amended at 48 FR 29318, June 24, 1983; 48 FR 44543 and 44552, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984; 49 FR 33656, Aug. 24, 1984; 50 FR 36023, Sept. 4, 1985]

§ 59.23 Priorities for the sale of flood insurance under the regular program.

Flood-prone, mudslide (i.e., mudflow) and flood-related erosion prone communities are placed on a register of areas eligible for ratemaking studies and then selected from this register for ratemaking studies on the basis of the following considerations—

(a) Recommendations of State officials;

(b) Location of community and urgency of need for flood insurance;

(c) Population of community and intensity of existing or proposed development of the flood plain, the mudslide (i.e., mudflow) and the flood-related erosion area;

(d) Availability of information on the community with respect to its flood, mudslide (i.e., mudflow) and flood-related erosion characteristics and previous losses;

(e) Extent of State and local progress in flood plain, mudslide (i.e., mudflow) area and flood-related erosion area management, including adoption of flood plain management regulations consistent with related ongoing programs in the area.

[41 FR 46968, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979]

§ 59.24 Suspension of community eligibility.

(a) A community eligible for the sale of flood insurance shall be subject to suspension from the Program for failing to submit copies of adequate flood plain management regulations meeting the minimum requirements of paragraphs (b), (c), (d), (e) or (f) of § 60.3 or paragraph (b) of § 60.4 or § 60.5, within six months from the date the Federal Insurance Administrator provides the data upon which the flood plain regulations for the applicable paragraph shall be based. Where there has not been any submission by the community, the Federal Insurance Administrator shall notify the community that 90 days remain in the six month period in order to submit adequate flood plain management regulations. Where there has been an inadequate submission, the Federal Insurance Administrator shall notify the community of the specific deficiencies in its submitted flood plain

management regulations and inform the community of the amount of time remaining within the six month period. If, subsequently, copies of adequate flood plain management regulations are not received by the Administrator, no later than 30 days before the expiration of the original six month period the Federal Insurance Administrator shall provide written notice to the community and to the state and assure publication of the community's loss of eligibility for the sale of flood insurance on the internet or by another comparable method, such suspension to become effective upon the expiration of the six month period. Should the community remedy the defect and the Federal Insurance Administrator receive copies of adequate flood plain management regulations within the notice period, the suspension notice shall be rescinded by the Federal Insurance Administrator. If the Federal Insurance Administrator receives notice from the State that it has enacted adequate flood plain management regulations for the community within the notice period, the suspension notice shall be rescinded by the Federal Insurance Administrator. The community's eligibility shall remain terminated after suspension until copies of adequate flood plain management regulations have been received and approved by the Federal Insurance Administrator.

(b) A community eligible for the sale of flood insurance which fails to adequately enforce flood plain management regulations meeting the minimum requirements set forth in §§ 60.3, 60.4 and/or 60.5 shall be subject to probation. Probation shall represent formal notification to the community that the Federal Insurance Administrator regards the community's flood plain management program as not compliant with NFIP criteria. Prior to imposing probation, the Federal Insurance Administrator (1) shall inform the community upon 90 days prior written notice of the impending probation and of the specific program deficiencies and violations relative to the failure to enforce, (2) shall, at least 60 days before probation is to begin, issue a press release to local media explaining the reasons for and the effects of probation, and (3) shall, at least 90 days before probation is to begin, advise all policyholders in the community of the impending probation and the additional premium that will be charged, as provided in this paragraph, on policies sold or renewed during the period of probation. During this 90-day period the community shall have the opportunity to avoid probation by demonstrating compliance with Program requirements, or by correcting Program deficiencies and remedying all violations to the maximum extent possible. If, at the end of the 90-day period, the Federal Insurance Administrator determines that the community has failed to do so, the probation shall go into effect. Probation may be continued for up to one year after the community corrects all Program deficiencies and remedies all violations to the maximum extent possible. Flood insurance may be sold or renewed in the community while it is on probation. Where a policy covers property located in a community placed on probation on or after October 1, 1986, but prior to October 1, 1992, an additional premium of $25.00 shall be charged on each such policy newly issued or renewed during the one-year period beginning on the date the community is placed on probation and during any successive one-year periods that begin prior to October 1, 1992. Where a community's probation begins on or after October 1, 1992, the additional premium described in the preceding sentence shall be $50.00, which shall also be charged during any successive one-year periods during which the community remains on probation for any part thereof. This $50.00 additional premium shall further be charged during any successive one-year periods that begin on or after October 1, 1992, where the preceding one-year probation period began prior to October 1, 1992.

(c) A community eligible for the sale of flood insurance which fails to adequately enforce its flood plain management regulations meeting the minimum requirements set forth in §§ 60.3, 60.4 and/or 60.5 and does not correct its Program deficiencies and remedy all violations to the maximum extent possible in accordance with compliance deadlines established during a period of

probation shall be subject to suspension of its Program eligibility. Under such circumstances, the Federal Insurance Administrator shall grant the community 30 days in which to show cause why it should not be suspended. The Federal Insurance Administrator may conduct a hearing, written or oral, before commencing suspensive action. If a community is to be suspended, the Federal Insurance Administrator shall inform it upon 30 days prior written notice and upon publication of its loss of eligibility for the sale of flood insurance on the internet or by another comparable method. In the event of impending suspension, the Federal Insurance Administrator shall issue a press release to the local media explaining the reasons and effects of the suspension. The community's eligibility shall only be reinstated by the Federal Insurance Administrator upon his receipt of a local legislative or executive measure reaffirming the community's formal intent to adequately enforce the flood plain management requirements of this subpart, together with evidence of action taken by the community to correct Program deficiencies and remedy to the maximum extent possible those violations which caused the suspension. In certain cases, the Federal Insurance Administrator, in order to evaluate the community's performance under the terms of its submission, may withhold reinstatement for a period not to exceed one year from the date of his receipt of the satisfactory submission or place the community on probation as provided for in paragraph (b) of this section.

(d) A community eligible for the sale of flood insurance which repeals its flood plain management regulations, allows its regulations to lapse, or amends its regulations so that they no longer meet the minimum requirements set forth in §§ 60.3, 60.4 and/or 60.5 shall be suspended from the Program. If a community is to be suspended, the Federal Insurance Administrator shall inform it upon 30 days prior written notice and upon publication of its loss of eligibly for the sale of flood insurance on the internet or by another comparable method. The community eligibility shall remain terminated after suspension until copies of adequate flood plain management regulations have been received and approved by the Federal Insurance Administrator.

(e) A community eligible for the sale of flood insurance may withdraw from the Program by submitting to the Federal Insurance Administrator a copy of a legislative action that explicitly states its desire to withdraw from the National Flood Insurance Program. Upon receipt of a certified copy of a final legislative action, the Federal Insurance Administrator shall withdraw the community from the Program and publish its loss of eligibility for the sale of flood insurance on the internet or by another comparable method. A community that has withdrawn from the Program may be reinstated if its submits the application materials specified in § 59.22(a).

(f) If during a period of ineligibility under paragraphs (a), (d), or (e) of this section, a community has permitted actions to take place that have aggravated existing flood plain, mudslide (i.e., mudflow) and/or flood related erosion hazards, the Federal Insurance Administrator may withhold reinstatement until the community submits evidence that it has taken action to remedy to the maximum extent possible the increased hazards. The Federal Insurance Administrator may also place the reinstated community on probation as provided for in paragraph (b) of this section.

(g) The Federal Insurance Administrator shall promptly notify the servicing company and any insurers issuing flood insurance pursuant to an arrangement with the Federal Insurance Administrator of those communities whose eligibility has been suspended or which have withdrawn from the program. Flood insurance shall not be sold or renewed in those communities. Policies sold or renewed within a community during a period of ineligibility are deemed to be voidable by the Federal Insurance Administrator whether or

not the parties to sale or renewal had actual notice of the ineligibility.

[41 FR 46968, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, and amended at 48 FR 44543 and 44552, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984; 50 FR 36023, Sept. 4, 1985; 57 FR 19540, May 7, 1992; 59 FR 53598, Oct. 25, 1994; 62 FR 55715, Oct. 27, 1997; 85 FR 68789, Oct. 30, 2020]

PART 60—CRITERIA FOR LAND MANAGEMENT AND USE

Subpart A—Requirements for Flood Plain Management Regulations

Sec.

60.1 Purpose of subpart.
60.2 Minimum compliance with flood plain management criteria.
60.3 Flood plain management criteria for flood-prone areas.
60.4 Flood plain management criteria for mudslide (i.e., mudflow)-prone areas.
60.5 Flood plain management criteria for flood-related erosion-prone areas.
60.6 Variances and exceptions.
60.7 Revisions of criteria for flood plain management regulations.
60.8 Definitions.

Subpart B—Requirements for State Flood Plain Management Regulations

60.11 Purpose of this subpart.
60.12 Flood plain management criteria for State-owned properties in special hazard areas.
60.13 Noncompliance.

Subpart C—Additional Considerations in Managing Flood-Prone, Mudslide (i.e., Mudflow)-Prone, and Flood-Related Erosion-Prone Areas

60.21 Purpose of this subpart.
60.22 Planning considerations for flood-prone areas.
60.23 Planning considerations for mudslide (i.e., mudflow)-prone areas.
60.24 Planning considerations for flood-related erosion-prone areas.
60.25 Designation, duties, and responsibilities of State Coordinating Agencies.
60.26 Local coordination.

AUTHORITY: 42 U.S.C. 4001 *et seq.;* Reorganization Plan No. 3 of 1978, 43 FR 41943, 3 CFR, 1978 Comp., p. 329; E.O. 12127 of Mar. 31, 1979, 44 FR 19367, 3 CFR, 1979 Comp., p. 376.

SOURCE: 41 FR 46975, Oct. 26, 1976, unless otherwise noted. Redesignated at 44 FR 31177, May 31, 1979.

Subpart A—Requirements for Flood Plain Management Regulations

§ 60.1 Purpose of subpart.

(a) The Act provides that flood insurance shall not be sold or renewed under the program within a community, unless the community has adopted adequate flood plain management regulations consistent with Federal criteria. Responsibility for establishing such criteria is delegated to the Federal Insurance Administrator.

(b) This subpart sets forth the criteria developed in accordance with the Act by which the Federal Insurance Administrator will determine the adequacy of a community's flood plain management regulations. These regulations must be legally-enforceable, applied uniformly throughout the community to all privately and publicly owned land within flood-prone, mudslide (i.e., mudflow) or flood-related erosion areas, and the community must provide that the regulations take precedence over any less restrictive conflicting local laws, ordinances or codes. Except as otherwise provided in § 60.6, the adequacy of such regulations shall be determined on the basis of the standards set forth in § 60.3 for flood-prone areas, § 60.4 for mudslide areas and § 60.5 for flood-related erosion areas.

(c) Nothing in this subpart shall be construed as modifying or replacing the general requirement that all eligible communities must take into account flood, mudslide (i.e., mudflow) and flood-related erosion hazards, to the extent that they are known, in all official actions relating to land management and use.

(d) The criteria set forth in this subpart are minimum standards for the adoption of flood plain management regulations by flood-prone, mudslide (i.e., mudflow)-prone and flood-related erosion-prone communities. Any community may exceed the minimum criteria under this part by adopting more comprehensive flood plain management regulations utilizing the standards such as contained in subpart C of this part. In some instances, community officials may have access to information

or knowledge of conditions that require, particularly for human safety, higher standards than the minimum criteria set forth in subpart A of this part. Therefore, any flood plain management regulations adopted by a State or a community which are more restrictive than the criteria set forth in this part are encouraged and shall take precedence.

[41 FR 46975, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44552, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

§ 60.2 Minimum compliance with flood plain management criteria.

(a) A flood-prone community applying for flood insurance eligibility shall meet the standards of § 60.3(a) in order to become eligible if a FHBM has not been issued for the community at the time of application. Thereafter, the community will be given a period of six months from the date the Federal Insurance Administrator provides the data set forth in § 60.3 (b), (c), (d), (e) or (f), in which to meet the requirements of the applicable paragraph. If a community has received a FHBM, but has not yet applied for Program eligibility, the community shall apply for eligibility directly under the standards set forth in § 60.3(b). Thereafter, the community will be given a period of six months from the date the Federal Insurance Administrator provides the data set forth in § 60.3 (c), (d), (e) or (f) in which to meet the requirements of the applicable paragraph.

(b) A mudslide (i.e., mudflow)-prone community applying for flood insurance eligibility shall meet the standards of § 60.4(a) to become eligible. Thereafter, the community will be given a period of six months from the date the mudslide (i.e., mudflow) areas having special mudslide hazards are delineated in which to meet the requirements of § 60.4(b).

(c) A flood-related erosion-prone community applying for flood insurance eligibility shall meet the standards of § 60.5(a) to become eligible. Thereafter, the community will be given a period of six months from the date the flood-related erosion areas having special erosion hazards are delineated in which to meet the requirements of § 60.5(b).

(d) Communities identified in part 65 of this subchapter as containing more than one type of hazard (e.g., any combination of special flood, mudslide (i.e., mudflow), and flood-related erosion hazard areas) shall adopt flood plain management regulations for each type of hazard consistent with the requirements of §§ 60.3, 60.4 and 60.5.

(e) Local flood plain management regulations may be submitted to the State Coordinating Agency designated pursuant to § 60.25 for its advice and concurrence. The submission to the State shall clearly describe proposed enforcement procedures.

(f) The community official responsible for submitting annual or biennial reports to the Federal Insurance Administrator pursuant to § 59.22(b)(2) of this subchapter shall also submit copies of each annual or biennial report to any State Coordinating Agency.

(g) A community shall assure that its comprehensive plan is consistent with the flood plain management objectives of this part.

(h) The community shall adopt and enforce flood plain management regulations based on data provided by the Federal Insurance Administrator. Without prior approval of the Federal Insurance Administrator, the community shall not adopt and enforce flood plain management regulations based upon modified data reflecting natural or man-made physical changes.

[41 FR 46975, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 29318, June 24, 1983; 48 FR 44552, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984; 50 FR 36024, Sept. 4, 1985; 59 FR 53598, Oct. 25, 1994; 62 FR 55716, Oct. 27, 1997]

§ 60.3 Flood plain management criteria for flood-prone areas.

The Federal Insurance Administrator will provide the data upon which flood plain management regulations shall be based. If the Federal Insurance Administrator has not provided sufficient data to furnish a basis for these regulations in a particular community, the community shall obtain, review and reasonably utilize data available from other Federal, State or other sources pending receipt of data from the Federal Insurance Administrator. However, when special flood hazard area

designations and water surface elevations have been furnished by the Federal Insurance Administrator, they shall apply. The symbols defining such special flood hazard designations are set forth in §64.3 of this subchapter. In all cases the minimum requirements governing the adequacy of the flood plain management regulations for flood-prone areas adopted by a particular community depend on the amount of technical data formally provided to the community by the Federal Insurance Administrator. Minimum standards for communities are as follows:

(a) When the Federal Insurance Administrator has not defined the special flood hazard areas within a community, has not provided water surface elevation data, and has not provided sufficient data to identify the floodway or coastal high hazard area, but the community has indicated the presence of such hazards by submitting an application to participate in the Program, the community shall:

(1) Require permits for all proposed construction or other development in the community, including the placement of manufactured homes, so that it may determine whether such construction or other development is proposed within flood-prone areas;

(2) Review proposed development to assure that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, including section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334;

(3) Review all permit applications to determine whether proposed building sites will be reasonably safe from flooding. If a proposed building site is in a flood-prone area, all new construction and substantial improvements shall (i) be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, (ii) be constructed with materials resistant to flood damage, (iii) be constructed by methods and practices that minimize flood damages, and (iv) be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(4) Review subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, to determine whether such proposals will be reasonably safe from flooding. If a subdivision proposal or other proposed new development is in a flood-prone area, any such proposals shall be reviewed to assure that (i) all such proposals are consistent with the need to minimize flood damage within the flood-prone area, (ii) all public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage, and (iii) adequate drainage is provided to reduce exposure to flood hazards;

(5) Require within flood-prone areas new and replacement water supply systems to be designed to minimize or eliminate infiltration of flood waters into the systems; and

(6) Require within flood-prone areas (i) new and replacement sanitary sewage systems to be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters and (ii) onsite waste disposal systems to be located to avoid impairment to them or contamination from them during flooding.

(b) When the Federal Insurance Administrator has designated areas of special flood hazards (A zones) by the publication of a community's FHBM or FIRM, but has neither produced water surface elevation data nor identified a floodway or coastal high hazard area, the community shall:

(1) Require permits for all proposed construction and other developments including the placement of manufactured homes, within Zone A on the community's FHBM or FIRM;

(2) Require the application of the standards in paragraphs (a) (2), (3), (4), (5) and (6) of this section to development within Zone A on the community's FHBM or FIRM;

(3) Require that all new subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, include within such proposals base flood elevation data;

(4) Obtain, review and reasonably utilize any base flood elevation and floodway data available from a Federal, State, or other source, including data developed pursuant to paragraph (b)(3) of this section, as criteria for requiring that new construction, substantial improvements, or other development in Zone A on the community's FHBM or FIRM meet the standards in paragraphs (c)(2), (c)(3), (c)(5), (c)(6), (c)(12), (c)(14), (d)(2) and (d)(3) of this section;

(5) Where base flood elevation data are utilized, within Zone A on the community's FHBM or FIRM:

(i) Obtain the elevation (in relation to mean sea level) of the lowest floor (including basement) of all new and substantially improved structures, and

(ii) Obtain, if the structure has been floodproofed in accordance with paragraph (c)(3)(ii) of this section, the elevation (in relation to mean sea level) to which the structure was floodproofed, and

(iii) Maintain a record of all such information with the official designated by the community under §59.22 (a)(9)(iii);

(6) Notify, in riverine situations, adjacent communities and the State Coordinating Office prior to any alteration or relocation of a watercourse, and submit copies of such notifications to the Federal Insurance Administrator;

(7) Assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained;

(8) Require that all manufactured homes to be placed within Zone A on a community's FHBM or FIRM shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not to be limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.

(c) When the Federal Insurance Administrator has provided a notice of final flood elevations for one or more special flood hazard areas on the community's FIRM and, if appropriate, has designated other special flood hazard areas without base flood elevations on the community's FIRM, but has not identified a regulatory floodway or coastal high hazard area, the community shall:

(1) Require the standards of paragraph (b) of this section within all A1–30 zones, AE zones, A zones, AH zones, and AO zones, on the community's FIRM;

(2) Require that all new construction and substantial improvements of residential structures within Zones A1–30, AE and AH zones on the community's FIRM have the lowest floor (including basement) elevated to or above the base flood level, unless the community is granted an exception by the Federal Insurance Administrator for the allowance of basements in accordance with §60.6 (b) or (c);

(3) Require that all new construction and substantial improvements of nonresidential structures within Zones A1–30, AE and AH zones on the community's firm (i) have the lowest floor (including basement) elevated to or above the base flood level or, (ii) together with attendant utility and sanitary facilities, be designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

(4) Provide that where a non-residential structure is intended to be made watertight below the base flood level, (i) a registered professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of

construction are in accordance with accepted standards of practice for meeting the applicable provisions of paragraph (c)(3)(ii) or (c)(8)(ii) of this section, and (ii) a record of such certificates which includes the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be maintained with the official designated by the community under § 59.22(a)(9)(iii);

(5) Require, for all new construction and substantial improvements, that fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria: A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(6) Require that manufactured homes that are placed or substantially improved within Zones A1–30, AH, and AE on the community's FIRM on sites

(i) Outside of a manufactured home park or subdivision,

(ii) In a new manufactured home park or subdivision,

(iii) In an expansion to an existing manufactured home park or subdivision, or

(iv) In an existing manufactured home park or subdivision on which a manufactured home has incurred ''substantial damage'' as the result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist floatation collapse and lateral movement.

(7) Require within any AO zone on the community's FIRM that all new construction and substantial improvements of residential structures have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified);

(8) Require within any AO zone on the community's FIRM that all new construction and substantial improvements of nonresidential structures (i) have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified), or (ii) together with attendant utility and sanitary facilities be completely floodproofed to that level to meet the floodproofing standard specified in § 60.3(c)(3)(ii);

(9) Require within any A99 zones on a community's FIRM the standards of paragraphs (a)(1) through (a)(4)(i) and (b)(5) through (b)(9) of this section;

(10) Require until a regulatory floodway is designated, that no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1–30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

(11) Require within Zones AH and AO, adequate drainage paths around structures on slopes, to guide floodwaters around and away from proposed structures.

(12) Require that manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A–1–30, AH, and AE on the community's FIRM that are not subject to the provisions of paragraph (c)(6) of this section be elevated so that either

(i) The lowest floor of the manufactured home is at or above the base flood elevation, or

(ii) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist floatation, collapse, and lateral movement.

(13) Notwithstanding any other provisions of §60.3, a community may approve certain development in Zones A1–30, AE, and AH, on the community's FIRM which increase the water surface elevation of the base flood by more than one foot, provided that the community first applies for a conditional FIRM revision, fulfills the requirements for such a revision as established under the provisions of §65.12, and receives the approval of the Federal Insurance Administrator.

(14) Require that recreational vehicles placed on sites within Zones A1–30, AH, and AE on the community's FIRM either

(i) Be on the site for fewer than 180 consecutive days,

(ii) Be fully licensed and ready for highway use, or

(iii) Meet the permit requirements of paragraph (b)(1) of this section and the elevation and anchoring requirements for ''manufactured homes'' in paragraph (c)(6) of this section.

A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

(d) When the Federal Insurance Administrator has provided a notice of final base flood elevations within Zones A1–30 and/or AE on the community's FIRM and, if appropriate, has designated AO zones, AH zones, A99 zones, and A zones on the community's FIRM, and has provided data from which the community shall designate its regulatory floodway, the community shall:

(1) Meet the requirements of paragraphs (c) (1) through (14) of this section;

(2) Select and adopt a regulatory floodway based on the principle that the area chosen for the regulatory floodway must be designed to carry the waters of the base flood, without increasing the water surface elevation of that flood more than one foot at any point;

(3) Prohibit encroachments, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge;

(4) Notwithstanding any other provisions of §60.3, a community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that the community first applies for a conditional FIRM and floodway revision, fulfills the requirements for such revisions as established under the provisions of §65.12, and receives the approval of the Federal Insurance Administrator.

(e) When the Federal Insurance Administrator has provided a notice of final base flood elevations within Zones A1–30 and/or AE on the community's FIRM and, if appropriate, has designated AH zones, AO zones, A99 zones, and A zones on the community's FIRM, and has identified on the community's FIRM coastal high hazard areas by designating Zones V1–30, VE, and/or V, the community shall:

(1) Meet the requirements of paragraphs (c)(1) through (14) of this section;

(2) Within Zones V1–30, VE, and V on a community's FIRM, (i) obtain the elevation (in relation to mean sea level) of the bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures, and whether or not such structures contain a basement, and (ii) maintain a record of all such information with the official designated by the community under §59.22(a)(9)(iii);

(3) Provide that all new construction within Zones V1–30, VE, and V on the community's FIRM is located landward of the reach of mean high tide;

(4) Provide that all new construction and substantial improvements in Zones V1–30 and VE, and also Zone V if base flood elevation data is available, on the community's FIRM, are elevated on pilings and columns so that (i) the bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to or above the base flood level; and (ii) the pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable State or local building standards. A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of paragraphs (e)(4) (i) and (ii) of this section.

(5) Provide that all new construction and substantial improvements within Zones V1–30, VE, and V on the community's FIRM have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood latticework, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purposes of this section, a breakway wall shall have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot. Use of breakway walls which exceed a design safe loading resistance of 20 pounds per square foot (either by design or when so required by local or State codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:

(i) Breakaway wall collapse shall result from a water load less than that which would occur during the base flood; and,

(ii) The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and non-structural). Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable State or local building standards.

Such enclosed space shall be useable solely for parking of vehicles, building access, or storage.

(6) Prohibit the use of fill for structural support of buildings within Zones V1–30, VE, and V on the community's FIRM;

(7) Prohibit man-made alteration of sand dunes and mangrove stands within Zones V1–30, VE, and V on the community's FIRM which would increase potential flood damage.

(8) Require that manufactured homes placed or substantially improved within Zones V1–30, V, and VE on the community's FIRM on sites

(i) Outside of a manufactured home park or subdivision,

(ii) In a new manufactured home park or subdivision,

(iii) In an expansion to an existing manufactured home park or subdivision, or

(iv) In an existing manufactured home park or subdivision on which a manufactured home has incurred ''substantial damage'' as the result of a flood, meet the standards of paragraphs (e)(2) through (7) of this section and that manufactured homes placed or substantially improved on other sites in an existing manufactured home park or subdivision within Zones VI–30, V, and VE on the community's FIRM meet the requirements of paragraph (c)(12) of this section.

(9) Require that recreational vehicles placed on sites within Zones V1–30, V, and VE on the community's FIRM either

(i) Be on the site for fewer than 180 consecutive days,

(ii) Be fully licensed and ready for highway use, or

(iii) Meet the requirements in paragraphs (b)(1) and (e) (2) through (7) of this section.

A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

(f) When the Federal Insurance Administrator has provided a notice of final base flood elevations within Zones A1–30 or AE on the community's FIRM, and, if appropriate, has designated AH zones, AO zones, A99 zones, and A zones on the community's FIRM, and has identified flood protection restoration areas by designating Zones AR, AR/A1–30, AR/AE, AR/AH, AR/AO, or AR/A, the community shall:

(1) Meet the requirements of paragraphs (c)(1) through (14) and (d)(1) through (4) of this section.

(2) Adopt the official map or legal description of those areas within Zones AR, AR/A1–30, AR/AE, AR/AH, AR/A, or AR/AO that are designated developed areas as defined in § 59.1 in accordance with the eligibility procedures under § 65.14.

(3) For all new construction of structures in areas within Zone AR that are designated as developed areas and in other areas within Zone AR where the AR flood depth is 5 feet or less:

(i) Determine the lower of either the AR base flood elevation or the elevation that is 3 feet above highest adjacent grade; and

(ii) Using this elevation, require the standards of paragraphs (c)(1) through (14) of this section.

(4) For all new construction of structures in those areas within Zone AR that are not designated as developed areas where the AR flood depth is greater than 5 feet:

(i) Determine the AR base flood elevation; and

(ii) Using that elevation require the standards of paragraphs (c)(1) through (14) of this section.

(5) For all new construction of structures in areas within Zone AR/A1–30, AR/AE, AR/AH, AR/AO, and AR/A:

(i) Determine the applicable elevation for Zone AR from paragraphs (a)(3) and (4) of this section;

(ii) Determine the base flood elevation or flood depth for the underlying A1–30, AE, AH, AO and A Zone; and

(iii) Using the higher elevation from paragraphs (a)(5)(i) and (ii) of this section require the standards of paragraphs (c)(1) through (14) of this section.

(6) For all substantial improvements to existing construction within Zones AR/A1–30, AR/AE, AR/AH, AR/AO, and AR/A:

(i) Determine the A1–30 or AE, AH, AO, or A Zone base flood elevation; and

(ii) Using this elevation apply the requirements of paragraphs (c)(1) through (14) of this section.

(7) Notify the permit applicant that the area has been designated as an AR, AR/A1–30, AR/AE, AR/AH, AR/AO, or AR/A Zone and whether the structure will be elevated or protected to or above the AR base flood elevation.

[41 FR 46975, Oct. 26, 1976]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 60.3, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.govinfo.gov*.

§ 60.4 Flood plain management criteria for mudslide (i.e., mudflow)-prone areas.

The Federal Insurance Administrator will provide the data upon which flood plain management regulations shall be based. If the Federal Insurance Administrator has not provided sufficient data to furnish a basis for these regulations in a particular community, the community shall obtain, review, and reasonably utilize data available from other Federal, State or other sources pending receipt of data from the Federal Insurance Administrator. However, when special mudslide (i.e., mudflow) hazard area designations have been furnished by the Federal Insurance Administrator, they shall apply. The symbols defining such special mudslide (i.e., mudflow) hazard designations are set forth in § 64.3 of this subchapter. In all cases, the minimum requirements for mudslide (i.e., mudflow)-prone areas adopted by a particular community depend on the amount of technical data provided to the community by the Federal Insurance Administrator. Minimum standards for communities are as follows:

(a) When the Federal Insurance Administrator has not yet identified any

area within the community as an area having special mudslide (i.e., mudflow) hazards, but the community has indicated the presence of such hazards by submitting an application to participate in the Program, the community shall

(1) Require permits for all proposed construction or other development in the community so that it may determine whether development is proposed within mudslide (i.e., mudflow)-prone areas;

(2) Require review of each permit application to determine whether the proposed site and improvements will be reasonably safe from mudslides (i.e., mudflows). Factors to be considered in making such a determination should include but not be limited to (i) the type and quality of soils, (ii) any evidence of ground water or surface water problems, (iii) the depth and quality of any fill, (iv) the overall slope of the site, and (v) the weight that any proposed structure will impose on the slope;

(3) Require, if a proposed site and improvements are in a location that may have mudslide (i.e., mudflow) hazards, that (i) a site investigation and further review be made by persons qualified in geology and soils engineering, (ii) the proposed grading, excavations, new construction, and substantial improvements are adequately designed and protected against mudslide (i.e., mudflow) damages, (iii) the proposed grading, excavations, new construction and substantial improvements do not aggravate the existing hazard by creating either on-site or off-site disturbances, and (iv) drainage, planting, watering, and maintenance be such as not to endanger slope stability.

(b) When the Federal Insurance Administrator has delineated Zone M on the community's FIRM, the community shall:

(1) Meet the requirements of paragraph (a) of this section; and

(2) Adopt and enforce a grading ordinance or regulation in accordance with data supplied by the Federal Insurance Administrator which (i) regulates the location of foundation systems and utility systems of new construction and substantial improvements, (ii) regulates the location, drainage and maintenance of all excavations, cuts and fills and planted slopes, (iii) provides special requirements for protective measures including but not necessarily limited to retaining walls, buttress fills, sub-drains, diverter terraces, benchings, etc., and (iv) requires engineering drawings and specifications to be submitted for all corrective measures, accompanied by supporting soils engineering and geology reports. Guidance may be obtained from the provisions of the 1973 edition and any subsequent edition of the Uniform Building Code, sections 7001 through 7006, and 7008 through 7015. The Uniform Building Code is published by the International Conference of Building Officials, 50 South Los Robles, Pasadena, California 91101.

[41 FR 46975, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44552, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

§ 60.5 Flood plain management criteria for flood-related erosion-prone areas.

The Federal Insurance Administrator will provide the data upon which flood plain management regulations for flood-related erosion-prone areas shall be based. If the Federal Insurance Administrator has not provided sufficient data to furnish a basis for these regulations in a particular community, the community shall obtain, review, and reasonably utilize data available from other Federal, State or other sources, pending receipt of data from the Federal Insurance Administrator. However, when special flood-related erosion hazard area designations have been furnished by the Federal Insurance Administrator they shall apply. The symbols defining such special flood-related erosion hazard designations are set forth in § 64.3 of this subchapter. In all cases the minimum requirements governing the adequacy of the flood plain management regulations for flood-related erosion-prone areas adopted by a particular community depend on the amount of technical data provided to the community by the Federal Insurance Administrator. Minimum standards for communities are as follows:

(a) When the Federal Insurance Administrator has not yet identified any area within the community as having

special flood-related erosion hazards, but the community has indicated the presence of such hazards by submitting an application to participate in the Program, the community shall

(1) Require the issuance of a permit for all proposed construction, or other development in the area of flood-related erosion hazard, as it is known to the community;

(2) Require review of each permit application to determine whether the proposed site alterations and improvements will be reasonably safe from flood-related erosion and will not cause flood-related erosion hazards or otherwise aggravate the existing flood-related erosion hazard; and

(3) If a proposed improvement is found to be in the path of flood-related erosion or to increase the erosion hazard, require the improvement to be relocated or adequate protective measures to be taken which will not aggravate the existing erosion hazard.

(b) When the Federal Insurance Administrator has delineated Zone E on the community's FIRM, the community shall

(1) Meet the requirements of paragraph (a) of this section; and

(2) Require a setback for all new development from the ocean, lake, bay, riverfront or other body of water, to create a safety buffer consisting of a natural vegetative or contour strip. This buffer will be designated by the Federal Insurance Administrator according to the flood-related erosion hazard and erosion rate, in conjunction with the anticipated ''useful life'' of structures, and depending upon the geologic, hydrologic, topographic and climatic characteristics of the community's land. The buffer may be used for suitable open space purposes, such as for agricultural, forestry, outdoor recreation and wildlife habitat areas, and for other activities using temporary and portable structures only.

[41 FR 46975, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44552, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

§ 60.6 Variances and exceptions.

(a) The Federal Insurance Administrator does not set forth absolute criteria for granting variances from the criteria set forth in §§ 60.3, 60.4, and 60.5. The issuance of a variance is for flood plain management purposes only. Insurance premium rates are determined by statute according to actuarial risk and will not be modified by the granting of a variance. The community, after examining the applicant's hardships, shall approve or disapprove a request. While the granting of variances generally is limited to a lot size less than one-half acre (as set forth in paragraph (a)(2) of this section), deviations from that limitation may occur. However, as the lot size increases beyond one-half acre, the technical justification required for issuing a variance increases. The Federal Insurance Administrator may review a community's findings justifying the granting of variances, and if that review indicates a pattern inconsistent with the objectives of sound flood plain management, the Federal Insurance Administrator may take appropriate action under § 59.24(b) of this subchapter. Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure. Procedures for the granting of variances by a community are as follows:

(1) Variances shall not be issued by a community within any designated regulatory floodway if any increase in flood levels during the base flood discharge would result;

(2) Variances may be issued by a community for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, in conformance with the procedures of paragraphs (a) (3), (4), (5) and (6) of this section;

(3) Variances shall only be issued by a community upon (i) a showing of good and sufficient cause, (ii) a determination that failure to grant the variance would result in exceptional hardship to the applicant, and (iii) a determination that the granting of a variance will not result in increased flood heights, additional threats to public

safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances;

(4) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief;

(5) A community shall notify the applicant in writing over the signature of a community official that (i) the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as $25 for $100 of insurance coverage and (ii) such construction below the base flood level increases risks to life and property. Such notification shall be maintained with a record of all variance actions as required in paragraph (a)(6) of this section; and

(6) A community shall (i) maintain a record of all variance actions, including justification for their issuance, and (ii) report such variances issued in its annual or biennial report submitted to the Federal Insurance Administrator.

(7) Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that (i) the criteria of paragraphs (a)(1) through (a)(4) of this section are met, and (ii) the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

(b)(1) The requirement that each flood-prone, mudslide (i.e., mudflow)-prone, and flood-related erosion prone community must adopt and submit adequate flood plain management regulations as a condition of initial and continued flood insurance eligibility is statutory and cannot be waived, and such regulations shall be adopted by a community within the time periods specified in §60.3, §60.4 or §60.5. However, certain exceptions from the standards contained in this subpart may be permitted where the Federal Insurance Administrator recognizes that, because of extraordinary circumstances, local conditions may render the application of certain standards the cause for severe hardship and gross inequity for a particular community. Consequently, a community proposing the adoption of flood plain management regulations which vary from the standards set forth in §60.3, §60.4, or §60.5, shall explain in writing to the Federal Insurance Administrator the nature and extent of and the reasons for the exception request and shall include sufficient supporting economic, environmental, topographic, hydrologic, and other scientific and technical data, and data with respect to the impact on public safety and the environment.

(2) The Federal Insurance Administrator shall prepare a Special Environmental Clearance to determine whether the proposal for an exception under paragraph (b)(1) of this section will have significant impact on the human environment. The decision whether an Environmental Impact Statement or other environmental document will be prepared, will be made in accordance with applicable environmental and historic preservation laws, regulations, Executive Orders, and agency policy. Ninety or more days may be required for an environmental quality clearance if the proposed exception will have significant impact on the human environment thereby requiring an EIS.

(c) A community may propose flood plain management measures which adopt standards for floodproofed residential basements below the base flood level in zones A1–30, AH, AO, and AE which are not subject to tidal flooding. Notwithstanding the requirements of paragraph (b) of this section the Federal Insurance Administrator may approve the proposal provided that:

(1) The community has demonstrated that areas of special flood hazard in which basements will be permitted are subject to shallow and low velocity flooding and that there is adequate flood warning time to ensure that all residents are notified of impending floods. For the purposes of this paragraph flood characteristics must include:

(i) Flood depths that are five feet or less for developable lots that are contiguous to land above the base flood level and three feet or less for other lots;

(ii) Flood velocities that are five feet per second or less; and

(iii) Flood warning times that are 12 hours or greater. Flood warning times of two hours or greater may be approved if the community demonstrates that it has a flood warning system and emergency plan in operation that is adequate to ensure safe evacuation of flood plain residents.

(2) The community has adopted flood plain management measures that require that new construction and substantial improvements of residential structures with basements in zones A1–30, AH, AO, and AE shall:

(i) Be designed and built so that any basement area, together with attendant utilities and sanitary facilities below the floodproofed design level, is watertight with walls that are impermeable to the passage of water without human intervention. Basement walls shall be built with the capacity to resist hydrostatic and hydrodynamic loads and the effects of buoyancy resulting from flooding to the floodproofed design level, and shall be designed so that minimal damage will occur from floods that exceed that level. The floodproofed design level shall be an elevation one foot above the level of the base flood where the difference between the base flood and the 500-year flood is three feet or less and two feet above the level of the base flood where the difference is greater than three feet.

(ii) Have the top of the floor of any basement area no lower than five feet below the elevation of the base flood;

(iii) Have the area surrounding the structure on all sides filled to or above the elevation of the base flood. Fill must be compacted with slopes protected by vegetative cover;

(iv) Have a registered professional engineer or architect develop or review the building's structural design, specifications, and plans, including consideration of the depth, velocity, and duration of flooding and type and permeability of soils at the building site, and certify that the basement design and methods of construction proposed are in accordance with accepted standards of practice for meeting the provisions of this paragraph;

(v) Be inspected by the building inspector or other authorized representative of the community to verify that the structure is built according to its design and those provisions of this section which are verifiable.

[41 FR 46975, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44543 and 44552, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984; 50 FR 36025, Sept. 4, 1985; 51 FR 30308, Aug. 25, 1986; 54 FR 33550, Aug. 15, 1989; 81 FR 56533, Aug. 22, 2016]

§ 60.7 Revisions of criteria for flood plain management regulations.

From time to time part 60 may be revised as experience is acquired under the Program and new information becomes available. Communities will be given six months from the effective date of any new regulation to revise their flood plain management regulations to comply with any such changes.

§ 60.8 Definitions.

The definitions set forth in part 59 of this subchapter are applicable to this part.

Subpart B—Requirements for State Flood Plain Management Regulations

§ 60.11 Purpose of this subpart.

(a) A State is considered a ''community'' pursuant to § 59.1 of this subchapter; and, accordingly, the Act provides that flood insurance shall not be sold or renewed under the Program unless a community has adopted adequate flood plain management regulations consistent with criteria established by the Federal Insurance Administrator.

(b) This subpart sets forth the flood plain management criteria required for State-owned properties located within special hazard areas identified by the Federal Insurance Administrator. A State shall satisfy such criteria as a condition to the purchase of a Standard Flood Insurance Policy for a State-owned structure or its contents, or as a condition to the approval by the Federal Insurance Administrator, pursuant

to part 75 of this subchapter, of its plan of self-insurance.

[41 FR 46975, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44552, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

§ 60.12 Flood plain management criteria for State-owned properties in special hazard areas.

(a) The State shall comply with the minimum flood plain management criteria set forth in §§ 60.3, 60.4, and 60.5. A State either shall:

(1) Comply with the flood plain management requirements of all local communities participating in the program in which State-owned properties are located; or

(2) Establish and enforce flood plain management regulations which, at a minimum, satisfy the criteria set forth in §§ 60.3, 60.4, and 60.5.

(b) The procedures by which a state government adopts and administers flood plain management regulations satisfying the criteria set forth in §§ 60.3, 60.4 and 60.5 may vary from the procedures by which local governments satisfy the criteria.

(c) If any State-owned property is located in a non-participating local community, then the State shall comply with the requirements of paragraph (a)(2) of this section for the property.

§ 60.13 Noncompliance.

If a State fails to submit adequate flood plain management regulations applicable to State-owned properties pursuant to § 60.12 within six months of the effective date of this regulation, or fails to adequately enforce such regulations, the State shall be subject to suspensive action pursuant to § 59.24. Where the State fails to adequately enforce its flood plain management regulations, the Federal Insurance Administrator shall conduct a hearing before initiating such suspensive action.

[41 FR 46975, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44552, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

Subpart C—Additional Considerations in Managing Flood-Prone, Mudslide (i.e., Mudflow)-Prone and Flood-Related Erosion-Prone Areas

§ 60.21 Purpose of this subpart.

The purpose of this subpart is to encourage the formation and adoption of overall comprehensive management plans for flood-prone, mudslide (i.e., mudflow)-prone and flood-related erosion-prone areas. While adoption by a community of the standards in this subpart is not mandatory, the community shall completely evaluate these standards.

§ 60.22 Planning considerations for flood-prone areas.

(a) The flood plain management regulations adopted by a community for flood-prone areas should:

(1) Permit only that development of flood-prone areas which (i) is appropriate in light of the probability of flood damage and the need to reduce flood losses, (ii) is an acceptable social and economic use of the land in relation to the hazards involved, and (iii) does not increase the danger to human life;

(2) Prohibit nonessential or improper installation of public utilities and public facilities in flood-prone areas.

(b) In formulating community development goals after the occurrence of a flood disaster, each community shall consider—

(1) Preservation of the flood-prone areas for open space purposes;

(2) Relocation of occupants away from flood-prone areas;

(3) Acquisition of land or land development rights for public purposes consistent with a policy of minimization of future property losses;

(4) Acquisition of frequently flood-damaged structures;

(c) In formulating community development goals and in adopting flood plain management regulations, each community shall consider at least the following factors—

(1) Human safety;

(2) Diversion of development to areas safe from flooding in light of the need to reduce flood damages and in light of

the need to prevent environmentally incompatible flood plain use;

(3) Full disclosure to all prospective and interested parties (including but not limited to purchasers and renters) that (i) certain structures are located within flood-prone areas, (ii) variances have been granted for certain structures located within flood-prone areas, and (iii) premium rates applied to new structures built at elevations below the base flood substantially increase as the elevation decreases;

(4) Adverse effects of flood plain development on existing development;

(5) Encouragement of floodproofing to reduce flood damage;

(6) Flood warning and emergency preparedness plans;

(7) Provision for alternative vehicular access and escape routes when normal routes are blocked or destroyed by flooding;

(8) Establishment of minimum floodproofing and access requirements for schools, hospitals, nursing homes, orphanages, penal institutions, fire stations, police stations, communications centers, water and sewage pumping stations, and other public or quasi-public facilities already located in the flood-prone area, to enable them to withstand flood damage, and to facilitate emergency operations;

(9) Improvement of local drainage to control increased runoff that might increase the danger of flooding to other properties;

(10) Coordination of plans with neighboring community's flood plain management programs;

(11) The requirement that all new construction and substantial improvements in areas subject to subsidence be elevated above the base flood level equal to expected subsidence for at least a ten year period;

(12) For riverine areas, requiring subdividers to furnish delineations for floodways before approving a subdivision;

(13) Prohibition of any alteration or relocation of a watercourse, except as part of an overall drainage basin plan. In the event of an overall drainage basin plan, provide that the flood carrying capacity within the altered or relocated portion of the watercourse is maintained;

(14) Requirement of setbacks for new construction within Zones V1–30, VE, and V on a community's FIRM;

(15) Requirement of additional elevation above the base flood level for all new construction and substantial improvements within Zones A1–30, AE, V1–30, and VE on the community's FIRM to protect against such occurrences as wave wash and floating debris, to provide an added margin of safety against floods having a magnitude greater than the base flood, or to compensate for future urban development;

(16) Requirement of consistency between state, regional and local comprehensive plans and flood plain management programs;

(17) Requirement of pilings or columns rather than fill, for the elevation of structures within flood-prone areas, in order to maintain the storage capacity of the flood plain and to minimize the potential for negative impacts to sensitive ecological areas;

(18) Prohibition, within any floodway or coastal high hazard area, of plants or facilities in which hazardous substances are manufactured.

(19) Requirement that a plan for evacuating residents of all manufactured home parks or subdivisions located within flood prone areas be developed and filed with and approved by appropriate community emergency management authorities.

[41 FR 46975, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 50 FR 36025, Sept. 4, 1985; 54 FR 40284, Sept. 29, 1989]

§ 60.23 Planning considerations for mudslide (i.e., mudflow)-prone areas.

The planning process for communities identified under part 65 of this subchapter as containing Zone M, or which indicate in their applications for flood insurance pursuant to § 59.22 of this subchapter that they have mudslide (i.e., mudflow) areas, should include—

(a) The existence and extent of the hazard;

(b) The potential effects of inappropriate hillside development, including

(1) Loss of life and personal injuries, and

(2) Public and private property losses, costs, liabilities, and exposures resulting from potential mudslide (i.e., mudflow) hazards;

(c) The means of avoiding the hazard including the (1) availability of land which is not mudslide (i.e., mudflow)-prone and the feasibility of developing such land instead of further encroaching upon mudslide (i.e., mudflow) areas, (2) possibility of public acquisition of land, easements, and development rights to assure the proper development of hillsides, and (3) advisability of preserving mudslide (i.e., mudflow) areas as open space;

(d) The means of adjusting to the hazard, including the (1) establishment by ordinance of site exploration, investigation, design, grading, construction, filing, compacting, foundation, sewerage, drainage, subdrainage, planting, inspection and maintenance standards and requirements that promote proper land use, and (2) provision for proper drainage and subdrainage on public property and the location of public utilities and service facilities, such as sewer, water, gas and electrical systems and streets in a manner designed to minimize exposure to mudslide (i.e., mudflow) hazards and prevent their aggravation;

(e) Coordination of land use, sewer, and drainage regulations and ordinances with fire prevention, flood plain, mudslide (i.e., mudflow), soil, land, and water regulation in neighboring communities;

(f) Planning subdivisions and other developments in such a manner as to avoid exposure to mudslide (i.e., mudflow) hazards and the control of public facility and utility extension to discourage inappropriate development;

(g) Public facility location and design requirements with higher site stability and access standards for schools, hospitals, nursing homes, orphanages, correctional and other residential institutions, fire and police stations, communication centers, electric power transformers and substations, water and sewer pumping stations and any other public or quasi-public institutions located in the mudslide (i.e., mudflow) area to enable them to withstand mudslide (i.e., mudflow) damage and to facilitate emergency operations; and

(h) Provision for emergencies, including:

(1) Warning, evacuation, abatement, and access procedures in the event of mudslide (i.e., mudflow),

(2) Enactment of public measures and initiation of private procedures to limit danger and damage from continued or future mudslides (i.e., mudflow),

(3) Fire prevention procedures in the event of the rupture of gas or electrical distribution systems by mudslides,

(4) Provisions to avoid contamination of water conduits or deterioration of slope stability by the rupture of such systems,

(5) Similar provisions for sewers which in the event of rupture pose both health and site stability hazards and

(6) Provisions for alternative vehicular access and escape routes when normal routes are blocked or destroyed by mudslides (i.e., mudflow);

(i) The means for assuring consistency between state, areawide, and local comprehensive plans with the plans developed for mudslide (i.e., mudflow)-prone areas;

(j) Deterring the nonessential installation of public utilities and public facilities in mudslide (i.e., mudflow)-prone areas.

§ 60.24 Planning considerations for flood-related erosion-prone areas.

The planning process for communities identified under part 65 of this subchapter as containing Zone E or which indicate in their applications for flood insurance coverage pursuant to § 59.22 of this subchapter that they have flood-related erosion areas should include—

(a) The importance of directing future developments to areas not exposed to flood-related erosion;

(b) The possibility of reserving flood-related erosion-prone areas for open space purposes;

(c) The coordination of all planning for the flood-related erosion-prone areas with planning at the State and Regional levels, and with planning at the level of neighboring communities;

(d) Preventive action in E zones, including setbacks, shore protection works, relocating structures in the

path of flood-related erosion, and community acquisition of flood-related erosion-prone properties for public purposes;

(e) Consistency of plans for flood-related erosion-prone areas with comprehensive plans at the state, regional and local levels.

§ 60.25 Designation, duties, and responsibilities of State Coordinating Agencies.

(a) States are encouraged to demonstrate a commitment to the minimum flood plain management criteria set forth in §§ 60.3, 60.4, and 60.5 as evidenced by the designation of an agency of State government to be responsible for coordinating the Program aspects of flood plain management in the State.

(b) State participation in furthering the objectives of this part shall include maintaining capability to perform the appropriate duties and responsibilities as follows:

(1) Enact, whenever necessary, legislation enabling counties and municipalities to regulate development within flood-prone areas;

(2) Encourage and assist communities in qualifying for participation in the Program;

(3) Guide and assist county and municipal public bodies and agencies in developing, implementing, and maintaining local flood plain management regulations;

(4) Provide local governments and the general public with Program information on the coordination of local activities with Federal and State requirements for managing flood-prone areas;

(5) Assist communities in disseminating information on minimum elevation requirements for development within flood-prone areas;

(6) Assist in the delineation of riverine and coastal flood-prone areas, whenever possible, and provide all relevant technical information to the Federal Insurance Administrator;

(7) Recommend priorities for Federal flood plain management activities in relation to the needs of county and municipal localities within the State;

(8) Provide notification to the Federal Insurance Administrator in the event of apparent irreconcilable differences between a community's local flood plain management program and the minimum requirements of the Program;

(9) Establish minimum State flood plain management regulatory standards consistent with those established in this part and in conformance with other Federal and State environmental and water pollution standards for the prevention of pollution during periods of flooding;

(10) Assure coordination and consistency of flood plain management activities with other State, areawide, and local planning and enforcement agencies;

(11) Assist in the identification and implementation of flood hazard mitigation recommendations which are consistent with the minimum flood plain management criteria for the Program;

(12) Participate in flood plain management training opportunities and other flood hazard preparedness programs whenever practicable.

(c) Other duties and responsibilities, which may be deemed appropriate by the State and which are to be officially designated as being conducted in the capacity of the State Coordinating Agency for the Program, may be carried out with prior notification of the Federal Insurance Administrator.

(d) For States which have demonstrated a commitment to and experience in application of the minimum flood plain management criteria set forth in §§ 60.3, 60.4, and 60.5 as evidenced by the establishment and implementation of programs which substantially encompass the activities described in paragraphs (a), (b), and (c) of this section, the Federal Insurance Administrator shall take the foregoing into account when:

(1) Considering State recommendations prior to implementing Program activities affecting State communities;

(2) Considering State approval or certifications of local flood plain management regulations as meeting the requirements of this part.

[51 FR 30309, Aug. 25, 1986]

§ 60.26 Local coordination.

(a) Local flood plain, mudslide (i.e., mudflow) and flood-related erosion

area management, forecasting, emergency preparedness, and damage abatement programs should be coordinated with relevant Federal, State, and regional programs;

(b) A community adopting flood plain management regulations pursuant to these criteria should coordinate with the appropriate State agency to promote public acceptance and use of effective flood plain, mudslide, (i.e., mudflow) and flood-related erosion regulations;

(c) A community should notify adjacent communities prior to substantial commercial developments and large subdivisions to be undertaken in areas having special flood, mudslide (i.e., mudflow) and/or flood-related erosion hazards.

PART 61—INSURANCE COVERAGE AND RATES

Sec.

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APPENDIX A(1) TO PART 61—FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE AND MITIGATION ADMINISTRATION, STANDARD FLOOD INSURANCE POLICY, DWELLING FORM

APPENDIX A(2) TO PART 61—FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE AND MITIGATION ADMINISTRATION, STANDARD FLOOD INSURANCE POLICY, GENERAL PROPERTY FORM

APPENDIX A(3) TO PART 61—FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE AND MITIGATION ADMINISTRATION, STANDARD FLOOD INSURANCE POLICY, RESIDENTIAL CONDOMINIUM BUILDING ASSOCIATION POLICY

AUTHORITY: 42 U.S.C. 4001 *et seq.;* 6 U.S.C. 101 *et seq.*

SOURCE: 43 FR 2570, Jan. 17, 1978, unless otherwise noted. Redesignated at 44 FR 31177, May 31, 1979.

§ 61.1 Purpose of part.

This part describes the types of properties eligible for flood insurance coverage under the Program, the limits of such coverage, and the premium rates actually to be paid by insureds.

[85 FR 43957, July 20, 2020]

§ 61.2 Definitions.

The definitions set forth in part 59 of this subchapter are applicable to this part.

§ 61.3 Coverage and benefits provided under the Standard Flood Insurance Policy.

(a) Insurance coverage under the Program is available for buildings and their contents. Coverage for each may be purchased separately.

(b) In addition to building and contents coverage, the Dwelling Form of the Standard Flood Insurance Policy (SFIP) covers debris removal, loss avoidance measures, and condominium loss assessments. The General Property Form of the SFIP covers debris removal, loss avoidance measures, and pollution damage. The Residential Condominium Building Association Policy Form of the SFIP covers debris removal and loss avoidance measures.

(c) With the purchase of building coverage, the Standard Flood Insurance Policy covers the costs associated with bringing the building into compliance with local floodplain ordinances.

[85 FR 43957, July 20, 2020]

§ 61.4 Special terms and conditions.

(a) No new flood insurance or renewal of flood insurance policies will be written for properties declared by a duly constituted State or local zoning or other authority to be in violation of any floodplain, mudslide (*i.e.*, mudflow), or flood-related erosion area management or control law, regulation, or ordinance.

(b) In order to reduce the administrative costs of the Program, of which the Federal Government pays a major share, applicants must pay the full policy premium at the time of application.

[85 FR 43957, July 20, 2020]

§ 61.5 Deductibles.

FEMA must provide policyholders with deductible options in various amounts, up to and including $10,000, subject to the following minimum deductible amounts:

(a) The minimum deductible for policies covering pre-FIRM buildings charged less than full-risk rates with building coverage amounts less than or equal to $100,000 is $1,500.

(b) The minimum deductible for policies covering pre-FIRM buildings charged less than full-risk rates with building coverage amounts greater than $100,000 is $2,000.

(c) The minimum deductible for policies covering post-FIRM buildings and pre-FIRM buildings charged full risk rates, with building coverage amounts equal to or less than $100,000 is $1,000.

(d) The minimum deductible for policies covering post-FIRM buildings and pre-FIRM buildings charged full risk rates, with building coverage amounts greater than $100,000 is $1,250.

[85 FR 43958, July 20, 2020]

§ 61.6 Maximum amounts of coverage available.

(a) Pursuant to section 1306 of the Act, the following are the limits of coverage available under the emergency program and under the regular program.

TABLE 1 TO PARAGRAPH (a)—MAXIMUM AMOUNTS OF COVERAGE AVAILABLE [1]

Occupancy	Emergency Program	Regular Program
	Amount	Amount
Building Coverage		
Single-Family Dwelling	*$35,000	$250,000.
Two-to-Four Family Building	*35,000	$250,000.
Other Residential Building (including Multifamily Building).	**100,000	$500,000.
Residential Condominium Building	N/A	$250,000 times the number of units in the building.
Non-Residential Building	100,000	$500,000.
Contents Coverage [2]		
Residential Property [3]	10,000	$100,000.
Non-Residential Property	100,000	$500,000.

[1] This Table provides the maximum coverage amounts available under the Emergency Program and the Regular Program, and the columns cannot be aggregated to exceed the limits in the Regular Program, which are established by statute. The aggregate limits for building coverage are the maximum coverage amounts allowed by statute for each building included in the relevant Occupancy Category.

[2] The policy limits for contents coverage are not per building. Although a single insured may not have more than one policy covering contents in a building, several insureds may have separate policies of up to the policy limits.

[3] The Residential Property occupancy category includes the Single-Family Dwelling, Two-to-Four Family Building, Other Residential Building, and Condominium Building occupancies categories.

* In Alaska, Guam, Hawaii, and U.S. Virgin Islands, the amount available is $50,000.

** In Alaska, Guam, Hawaii, and U.S. Virgin Islands, the amount available is $150,000.

(b) Coverage and benefits payable under the SFIP pursuant to § 61.3(b) and (c) are included in, not in addition to, the coverage limits provided by the Act or stated in paragraph (a) of this section.

[85 FR 43958, July 20, 2020; 86 FR 10029, Feb. 18, 2021, as amended at 86 FR 62104, Nov. 9, 2021]

§ 61.7 Risk premium rate determinations.

(a) Pursuant to section 1307 of the Act, the Federal Insurance Administrator is authorized to undertake studies and investigations to enable him/her to estimate the risk premium rates necessary to provide flood insurance in accordance with accepted actuarial principles, including applicable operating costs and allowances. Such rates

are also referred to in this subchapter as ''actuarial rates.''

(b) The Federal Insurance Administrator is also authorized to prescribe by regulation the rates which can reasonably be charged to insureds in order to encourage them to purchase the flood insurance made available under the Program. Such rates are referred to in this subchapter as ''chargeable rates.'' For areas having special flood, mudslide (i.e., mudflow), and flood-related erosion hazards, chargeable rates are usually lower than actuarial rates.

§61.8 Applicability of risk premium rates.

Risk premium rates are applicable to all flood insurance made available for:

(a) Any structure, the construction or substantial improvement of which was started after December 31, 1974 or on or after the effective date of the initial FIRM, whichever is later.

(b) Coverage which exceeds the following limits:

(1) For dwelling properties in States other than Alaska, Hawaii, the Virgin Islands, and Guam (i) $35,000 aggregate liability for any property containing only one unit, (ii) $100,000 for any property containing more than one unit, and (iii) $10,000 liability per unit for any contents related to such unit.

(2) For dwelling properties in Alaska, Hawaii, the Virgin Islands, and Guam (i) $50,000 aggregate liability for any property containing only one unit, (ii) $150,000 for property containing more than one unit, and (iii) $10,000 aggregate liability per unit for any contents related to such unit.

(3) For churches and other properties (i) $100,000 for the structure and (ii) $100,000 for contents of any such unit.

(c) Any structure or the contents thereof for which the chargeable rates prescribed by this part would exceed the risk premium rates.

§61.9 Establishment of chargeable rates.

(a) Under section 1308 of the Act, we are establishing annual chargeable rates for each $100 of flood insurance coverage as follows for Pre-FIRM, A zone properties, Pre-FIRM, V-zone properties, and emergency program properties.

Type of structure	A zone[1] rates per year per $100 coverage on:				V zone[2] rates per year per $100 coverage on:			
	structure			Contents	Structure			Contents
	RCBAP[3]		All other		RCBAP[3]		All other	
	High rise	Low rise			High rise	Low rise		
1. Residential:								
No Basement or Enclosure	.85	.70	.76	.96	1.08	.93	.99	1.23
With Basement or Enclosure	.90	.75	.81	.96	1.15	1.00	1.06	1.23
2. All other including hotels and motels with normal occupancy of less than 6 months duration:								
No Basement or Enclosure	N/A	N/A	.83	1.62	N/A	N/A	1.10	2.14
With Basement or Enclosure	N/A	N/A	.88	1.62	N/A	N/A	1.16	2.14

[1] 1 A zones are zones A1–A30, AE, AO, AH, and unnumbered A zones.
[2] V zones are zones V1–V30, VE, and unnumbered V zones.
[3] Residential Condominium Building Association Policies (RCBAP) are distinguished between High Rise (those structures that have 3 or more floors and 5 or more units) and Low Rise (those structures that have either less than 3 floors or less than 5 units).

(b) We will charge rates for contents in pre-FIRM buildings according to the use of the building.

(c) A-zone rates for buildings without basements or enclosures apply uniformly to all buildings throughout emergency program communities.

(d) Properties that meet the definition of Severe Repetitive Loss properties as defined in §79.2(g) of this subchapter, and who refuse an offer of mitigation pursuant to §79.7 of this subchapter are not eligible for the rates identified in paragraphs (a) through (c) of this section.

(e) Properties leased from the Federal Government and located either on the river-facing side of a dike, levee, or other riverine flood control structure, or seaward of any seawall or other

coastal flood control structure are not eligible for the rates identified in paragraphs (a) through (c) of this section.

[64 FR 13116, Mar. 17, 1999, as amended at 67 FR 8905, Feb. 27, 2002; 68 FR 15668, Apr. 1, 2003; 72 FR 61737, Oct. 31, 2007]

§ 61.10 Requirements for issuance or renewal of flood insurance coverage.

FEMA will not issue or renew flood insurance unless FEMA receives:

(a) The full amount due (including applicable premiums, surcharges, and fees); and

(b) A complete application, including the information necessary to establish a premium rate for the policy, or submission of corrected or additional information necessary to calculate the premium for the renewal of the policy.

[85 FR 43958, July 20, 2020]

§ 61.11 Effective date and time of coverage under the Standard Flood Insurance Policy—New Business Applications and Endorsements.

(a) During the 13-month period beginning on the effective date of a revised Flood Hazard Boundary Map or Flood Insurance Rate Map for a community, the effective date and time of any initial flood insurance coverage shall be 12:01 a.m. (local time) on the first calendar day after the application date and the presentment of payment of premium; for example, a flood insurance policy applied for with the payment of the premium on May 1 will become effective at 12:01 a.m. on May 2.

(b) Where the initial purchase of flood insurance is in connection with the making, increasing, extension, or renewal of a loan, the coverage with respect to the property which is the subject of the loan shall be effective as of the time of the loan closing, provided the written request for the coverage is received by the NFIP and the flood insurance policy is applied for and the presentment of payment of premium is made at or prior to the loan closing.

(c) Where the following conditions are met, the effective date and time of any initial purchase of flood insurance coverage for any privately-owned property will be 12:01 a.m. (local time) on the first calendar day after the application date and the presentment of payment of premium:

(1) The Administrator has determined that the property is affected by flooding on Federal land that is a result of, or is exacerbated by, post-wildfire conditions, after consultation with an authorized employee of the Federal agency that has jurisdiction of the land on which the wildfire that caused the post-wildfire conditions occurred; and

(2) The flood insurance coverage was purchased not later than 60 calendar days after the fire containment date, as determined by the appropriate Federal employee, relating to the wildfire that caused the post-wildfire conditions described in clause (1).

(d) Except as provided by paragraphs (a), (b), and (c) of this section, the effective date and time of any new policy, added coverage, or increase in the amount of coverage will be 12:01 a.m. (local time) on the 30th calendar day after the application date and the presentment of payment of premium; for example, a flood insurance policy applied for with the payment of the premium on May 1 will become effective at 12:01 a.m. on May 31.

(e) Adding new coverage or increasing the amount of coverage in force is permitted during the term of any policy, subject to any applicable waiting periods. The additional premium for any new coverage or increase in the amount of coverage will be calculated pro rata in accordance with the rates currently in force.

(f) With respect to any submission of an application in connection with new business, the payment by an insured to an agent or the issuance of premium payment by the agent does not constitute payment to the NFIP. Therefore, it is important that an application for flood insurance, as well as the full amount due, be mailed to the NFIP promptly in order to have the effective date of the coverage based on the application date plus the waiting period. If the application and the full amount due are received at the office of the NFIP within ten (10) calendar days from the date of application, the waiting period will be calculated from the date of application. Also, as an alternative, in those cases where the application and premium payment are

mailed by certified mail within four (4) calendar days from the date of application, the waiting period will be calculated from the date of application even though the application and full amount due are received at the office of the NFIP after ten (10) calendar days following the date of application. Thus, if the application and premium payment are received after ten (10) calendar days from the date of the application or are not mailed by certified mail within four (4) calendar days from the date of application, the waiting period will be calculated from the date of receipt at the office of the NFIP. To determine the effective date of any coverage added by endorsement to a flood insurance policy already in effect, substitute the term *endorsement* for the term *application* in this paragraph (f).

(g) The rules set forth in paragraphs (a) through (f) of this section apply to Write Your Own (WYO) companies, except that agents must mail the premium payments and accompanying applications and endorsements to the WYO company and the WYO company must receive the applications and endorsements, rather than the NFIP.

[43 FR 50427, Oct. 30, 1978. Redesignated at 44 FR 31177, May 31, 1979, as amended at 46 FR 13514, Feb. 23, 1981; 48 FR 39069, Aug. 29, 1983; 48 FR 44544, Sept. 29, 1983; 49 FR 33656, Aug. 24, 1984; 50 FR 16242, Apr. 25, 1985; 50 FR 36026, Sept. 4, 1985; 51 FR 30309, Aug. 25, 1986; 53 FR 15211, Apr. 28, 1988; 60 FR 5585, 5586, Jan. 30, 1995; 85 FR 43958, July 20, 2020]

§61.12 Rates based on a flood protection system involving Federal funds.

(a) Where the Federal Insurance Administrator determines that a community has made adequate progress on the construction of a flood protection system involving Federal funds which will significantly limit the area of special flood hazards, the applicable risk premium rates for any property, located within a special flood hazard area intended to be protected directly by such system will be those risk premium rates which would be applicable when the system is complete.

(b) Adequate progress in paragraph (a) of this section means that the community has provided information to the Federal Insurance Administrator sufficient to determine that substantial completion of the flood protection system has been effected because:

(1) 100 percent of the total financial project cost of the completed flood protection system has been authorized;

(2) At least 60 percent of the total financial project cost of the completed flood protection system has been appropriated;

(3) At least 50 percent of the total financial project cost of the completed flood protection system has been expended;

(4) All critical features of the flood protection system, as identified by the Federal Insurance Administrator, are under construction, and each critical feature is 50 percent completed as measured by the actual expenditure of the estimated construction budget funds; and

(5) The community has not been responsible for any delay in the completion of the system.

(c) Each request by a community for a determination must be submitted in writing to the Risk Analysis Division, Mitigation Directorate, Federal Emergency Management Agency, Washington DC, and contain a complete statement of all relevant facts relating to the flood protection system, including, but not limited to, supporting technical data (e.g., U.S. Army Corps of Engineers flood protection project data), cost schedules, budget appropriation data and the extent of Federal funding of the system's construction. Such facts shall include information sufficient to identify all persons affected by such flood protection system or by such request: A full and precise statement of intended purposes of the flood protection system; and a carefully detailed description of such project, including construction completion target dates. In addition, true copies of all contracts, agreements, leases, instruments, and other documents involved must be submitted with the request. Relevant facts reflected in documents, however, must be included in the statement and not merely incorporated by reference, and must be accompanied by an analysis of their bearing on the requirements of paragraph (b) of this section, specifying the pertinent provisions. The request must contain a statement whether, to the best

of the knowledge of the person responsible for preparing the application for the community, the flood protection system is currently the subject matter of litigation before any Federal, State or local court or administrative agency, and the purpose of that litigation. The request must also contain a statement as to whether the community has previously requested a determination with respect to the same subject matter from the Federal Insurance Administrator, detailing the disposition of such previous request. As documents become part of the file and cannot be returned, the original documents should not be submitted.

(d) The effective date for any risk premium rates established under this section shall be the date of final determination by the Federal Insurance Administrator that adequate progress toward completion of a flood protection system has been made in a community.

(e) A responsible official of a community which received a determination that adequate progress has been made towards completion of a flood protection system shall certify to the Federal Insurance Administrator annually on the anniversary date of receipt of such determination that no present delay in completion of the system is attributable to local sponsors of the system, and that a good faith effort is being made to complete the project.

(f) A community for which risk premium rates have been made available under section 1307(e) of the National Flood Insurance Act of 1968, as amended, shall notify the Federal Insurance Administrator if, at any time, all progress on the completion of the flood protection system has been halted or if the project for the completion of the flood protection system has been canceled.

[43 FR 2570, Jan. 17, 1978, Redesignated at 44 FR 31177, May 31, 1979, as amended at 47 FR 43061 Sept. 30, 1982; 48 FR 39069, Aug. 29, 1983; 48 FR 44552, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984; 51 FR 30310, Aug. 25, 1986]

§ 61.13 Standard Flood Insurance Policy.

(a) *Incorporation of forms.* Each of the Standard Flood Insurance Policy forms included in appendix ''A'' hereto (General Property, Dwelling, and Residential Condominium Building Association) and by reference incorporated herein shall be incorporated into the Standard Flood Insurance Policy.

(b) *Endorsements.* All endorsements to the Standard Flood Insurance Policy shall be final upon publication in the FEDERAL REGISTER for inclusion in appendix A.

(c) *Applications.* The application and renewal application forms utilized by the National Flood Insurance Program shall be the only application forms used in connection with the Standard Flood Insurance Policy.

(d) *Waivers.* The Standard Flood Insurance Policy and required endorsements must be used in the Flood Insurance Program, and no provision of the said documents shall be altered, varied, or waived other than by the express written consent of the Federal Insurance Administrator through the issuance of an appropriate amendatory endorsement, approved by the Federal Insurance Administrator as to form and substance for uniform use.

(e) *Authorized only under terms and conditions established by the Act and Regulation.* The Standard Flood Insurance Policy is authorized only under terms and conditions established by Federal statute, the program's regulations, the Federal Insurance Administrator's interpretations, and the express terms of the policy itself. Accordingly, representations regarding the extent and scope of coverage that are not consistent with Federal statute, the program's regulations, the Federal Insurance Administrator's interpretations, and the express terms of the policy itself, are void.

(f) *Agent acts only for policyholder.* The duly licensed property or casualty agent acts for the policyholder and does not act as agent for the Federal Government, the Federal Emergency Management Agency, the Write Your Own (WYO) program participating insurance company authorized by part 62 of this chapter, or the NFIP servicing agent.

(g) *Oral and written binders.* No oral binder or contract will be effective. No written binder will be effective unless issued with express authorization of the Federal Insurance Administrator.

(h) The Standard Flood Insurance Policy and endorsements may be issued by private sector Write Your Own (WYO) property insurance companies, based upon flood insurance applications and renewal forms, all of which instruments of flood insurance may bear the name, as Insurer, of the issuing WYO company. In the case of any Standard Flood Insurance Policy, and its related forms, issued by a WYO company, wherever the names ''Federal Emergency Management Agency'' and ''Federal Insurance and Mitigation Administration'' appear, a WYO company must substitute its own name therefore. Standard Flood Insurance Policies issued by WYO companies may be executed by the issuing WYO company as Insurer, in the place and stead of the Federal Insurance Administrator, but the risk of loss is borne by the National Flood Insurance Fund, not the WYO company.

[43 FR 2570, Jan. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, as amended at 44 FR 62517, Oct. 31, 1979; 48 FR 46791, Oct. 14, 1983; 58 FR 62424, Nov. 26, 1993; 85 FR 43959, July 20, 2020]

§61.14 Standard Flood Insurance Policy Interpretations.

(a) *Definition.* A Standard Flood Insurance Policy Interpretation is a written determination by the Federal Insurance Administrator construing the scope of the flood insurance coverage that has been and is provided under the policy.

(b) *Publication and requests for interpretation.* The Federal Insurance Administrator shall, pursuant to these regulations from time to time, issue interpretative rulings regarding the provisions of the Standard Flood Insurance Policy. Such Interpretations shall be published in the FEDERAL REGISTER, made a part of appendix C to these regulations, and incorporated by reference as part of these regulations. Any policyholder or person in privity with a policyholder may file a request for an interpretation in writing with the Federal Insurance Administration, Federal Emergency Management Agency, Washington, DC 20472.

[43 FR 2570, Jan. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 39072, Aug. 29, 1983]

§61.16 Probation additional premium.

The additional premium charged pursuant to §59.24(b) on each policy sold or renewed within a community placed on probation prior to October 1, 1992, is $25.00. Where the community was placed on probation on or after October 1, 1992, the additional premium charge is $50.00.''

[50 FR 36026, Sept. 4, 1985, as amended at 57 FR 19541, May 7, 1992; 74 FR 15340, Apr. 3, 2009]

§61.17 Group Flood Insurance Policy.

(a) A Group Flood Insurance Policy (GFIP) is a policy covering all individuals named by a State as recipients under section 408 of the Stafford Act (42 U.S.C. 5174) of an Individuals and Households Program (IHP) award for flood damage as a result of major disaster declaration by the President.

(b) The premium for the GFIP is a flat fee of $600 per insured. We may adjust the premium to reflect NFIP loss experience and any adjustment of benefits under the IHP program.

(c) The amount of coverage is equivalent to the maximum grant amount established under section 408 of the Stafford Act (42 U.S.C. 5174).

(d) The term of the GFIP is for 36 months and begins 60 days after the date of the disaster declaration.

(e) Coverage for individual grantees begins on the thirtieth day after the NFIP receives the required data for individual grantees and their premium payments.

(f) We will send a Certificate of Flood Insurance to each individual insured under the GFIP.

(g) The GFIP is the Standard Flood Insurance Policy Dwelling Form (a copy of which is included in appendix A(1) of this part), except that:

(1) VI. DEDUCTIBLES does not apply to the GFIP. A special deductible of $200 (applicable separately to any building loss and any contents loss) applies to insured flood-damage losses sustained by the insured property in the course of any subsequent flooding event during the term of the GFIP. The deductible does not apply to:

(i) III.C.2. Loss Avoidance Measures; or

(ii) III. C.3. Condominium Loss Assessments coverage.

(2) VIII. POLICY NULLIFICATION, CANCELLATION, AND NON-RENEWAL, C. Cancellation of the Policy by You, does not apply to the GFIP.

(3) VII. GENERAL CONDITIONS, E. Policy Renewal, does not apply to the GFIP.

(h) We will send a notice to the GFIP certificate holders approximately 60 days before the end of the thirty-six month term of the GFIP. The notice will encourage them to contact a local insurance agent or producer or a private insurance company selling NFIP policies under the Write Your Own program of the NFIP Standard Flood Insurance Policy, and advise them as to the amount of coverage they must maintain in order not to jeopardize their eligibility for future disaster assistance. The IHP program will provide the NFIP the amount of flood insurance coverage to be maintained by certificate holders.

[65 FR 60769, Oct. 12, 2000, as amended at 67 FR 61462, Sept. 30, 2002; 85 FR 43959, July 20, 2020]

APPENDIX A(1) TO PART 61

FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE AND MITIGATION ADMINISTRATION

Standard Flood Insurance Policy

Dwelling Form

Please read the policy carefully. The flood insurance provided is subject to limitations, restrictions, and exclusions.

I. AGREEMENT

A. This policy insures the following types of property only:

1. A one to four family residential building, not under a condominium form of ownership;

2. A single-family dwelling unit in a condominium building; and

3. Personal property in a building.

B. The Federal Emergency Management Agency (FEMA) provides flood insurance under the terms of the National Flood Insurance Act of 1968 and its amendments, and Title 44 of the Code of Federal Regulations.

C. We will pay you for direct physical loss by or from flood to your insured property if you:

1. Have paid the full amount due (including applicable premiums, surcharges, and fees);

2. Comply with all terms and conditions of this policy; and

3. Have furnished accurate information and statements.

D. We have the right to review the information you give us at any time and revise your policy based on our review.

E. This policy insures only one building. If you own more than one building, coverage will apply to the single building specifically described in the Flood Insurance Application.

F. Subject to the exception in I.G below, multiple policies with building coverage cannot be issued to insure a single building to one insured or to different insureds, even if separate policies were issued through different NFIP insurers. Payment for damages may only be made under a single policy for building damages under Coverage A—Building Property.

G. A Dwelling Form policy with building coverage may be issued to a unit owner in a condominium building that is also insured under a Residential Condominium Building Association Policy (RCBAP). However, no more than $250,000 may be paid in combined benefits for a single unit under the Dwelling Form policy and the RCBAP. We will only pay for damage once. Items of damage paid for under an RCBAP cannot also be claimed under the Dwelling Form policy.

II. DEFINITIONS

A. In this policy, ''you'' and ''your'' refer to the named insured(s) shown on the Declarations Page of this policy and the spouse of the named insured, if a resident of the same household. Insured(s) also includes: Any mortgagee and loss payee named in the Application and Declarations Page, as well as any other mortgagee or loss payee determined to exist at the time of loss, in the order of precedence. ''We,'' ''us,'' and ''our'' refer to the insurer.

Some definitions are complex because they are provided as they appear in the law or regulations, or result from court cases.

B. *Flood,* as used in this flood insurance policy, means:

1. A general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties (one of which is your property) from:

a. Overflow of inland or tidal waters;

b. Unusual and rapid accumulation or runoff of surface waters from any source;

c. Mudflow.

2. Collapse or subsidence of land along the shore of a lake or similar body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels that result in a flood as defined in B.1.a above.

C. The following are the other key definitions we use in this policy:

1. *Act.* The National Flood Insurance Act of 1968 and any amendments to it.

2. *Actual Cash Value*. The cost to replace an insured item of property at the time of loss, less the value of its physical depreciation.

3. *Application*. The statement made and signed by you or your agent in applying for this policy. The application gives information we use to determine the eligibility of the risk, the kind of policy to be issued, and the correct premium payment. The application is part of this flood insurance policy.

4. *Base Flood*. A flood having a one percent chance of being equaled or exceeded in any given year.

5. *Basement*. Any area of a building, including any sunken room or sunken portion of a room, having its floor below ground level on all sides.

6. *Building*

a. A structure with two or more outside rigid walls and a fully secured roof that is affixed to a permanent site;

b. A manufactured home, also known as a mobile home, is a structure: Built on a permanent chassis, transported to its site in one or more sections, and affixed to a permanent foundation; or

c. A travel trailer without wheels, built on a chassis and affixed to a permanent foundation, that is regulated under the community's floodplain management and building ordinances or laws.

Building does not mean a gas or liquid storage tank, shipping container, or a recreational vehicle, park trailer, or other similar vehicle, except as described in C.6.c above.

7. *Cancellation*. The ending of the insurance coverage provided by this policy before the expiration date.

8. *Condominium*. That form of ownership of one or more buildings in which each unit owner has an undivided interest in common elements.

9. *Condominium Association*. The entity made up of the unit owners responsible for the maintenance and operation of:

a. Common elements owned in undivided shares by unit owners; and

b. Other buildings in which the unit owners have use rights; where membership in the entity is a required condition of ownership.

10. *Condominium Building*. A type of building for which the form of ownership is one in which each unit owner has an undivided interest in common elements of the building.

11. *Declarations Page*. A computer-generated summary of information you provided in your application for insurance. The Declarations Page also describes the term of the policy, limits of coverage, and displays the premium and our name. The Declarations Page is a part of this flood insurance policy.

12. *Deductible*. The amount of an insured loss that is your responsibility and that is incurred by you before any amounts are paid for the insured loss under this policy.

13. *Described Location*. The location where the insured building(s) or personal property are found. The described location is shown on the Declarations Page.

14. *Direct Physical Loss By or From Flood*. Loss or damage to insured property, directly caused by a flood. There must be evidence of physical changes to the property.

15. *Dwelling*. A building designed for use as a residence for no more than four families or a single-family unit in a condominium building.

16. *Elevated Building*. A building that has no basement and that has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

17. *Emergency Program*. The initial phase of a community's participation in the National Flood Insurance Program. During this phase, only limited amounts of insurance are available under the Act and the regulations prescribed pursuant to the Act.

18. *Federal Policy Fee*. A flat rate charge you must pay on each new or renewal policy to defray certain administrative expenses incurred in carrying out the National Flood Insurance Program.

19. *Improvements*. Fixtures, alterations, installations, or additions comprising a part of the dwelling or apartment in which you reside.

20. *Mudflow*. A river of liquid and flowing mud on the surface of normally dry land areas, as when earth is carried by a current of water. Other earth movements, such as landslide, slope failure, or a saturated soil mass moving by liquidity down a slope, are not mudflows.

21. *National Flood Insurance Program (NFIP)*. The program of flood insurance coverage and floodplain management administered under the Act and applicable Federal regulations in Title 44 of the Code of Federal Regulations, Subchapter B.

22. *Policy*. The entire written contract between you and us. It includes:

a. This printed form;

b. The application and Declarations Page;

c. Any endorsement(s) that may be issued; and

d. Any renewal certificate indicating that coverage has been instituted for a new policy and new policy term. Only one dwelling, which you specifically described in the application, may be insured under this policy.

23. *Pollutants*. Substances that include, but are not limited to, any solid, liquid, gaseous, or thermal irritant or contaminant, including smoke, vapor, soot, fumes, acids, alkalis, chemicals, and waste. ''Waste'' includes, but is not limited to, materials to be recycled, reconditioned, or reclaimed.

24. *Post-FIRM Building*. A building for which construction or substantial improvement occurred after December 31, 1974, or on or after the effective date of an initial Flood

Insurance Rate Map (FIRM), whichever is later.

25. *Principal Residence.* The dwelling in which you or your spouse have lived for at least 80 percent of:

a. The 365 days immediately preceding the time of loss; or

b. The period of ownership of you or your spouse, if either you or your spouse owned the dwelling for less than 365 days immediately preceding the time of loss.

26. *Probation Surcharge.* A flat charge you must pay on each new or renewal policy issued covering property in a community the NFIP has placed on probation under the provisions of 44 CFR 59.24.

27. *Regular Program.* The final phase of a community's participation in the National Flood Insurance Program. In this phase, a Flood Insurance Rate Map is in effect and full limits of coverage are available under the Act and the regulations prescribed pursuant to the Act.

28. *Special Flood Hazard Area (SFHA).* An area having special flood or mudflow, and/or flood-related erosion hazards, and shown on a Flood Hazard Boundary Map or Flood Insurance Rate Map as Zone A, AO, A1–A30, AE, A99, AH, AR, AR/A, AR/AE, AR/AH, AR/AO, AR/A1–A30, V1–V30, VE, or V.

29. *Unit.* A single-family residential space you own in a condominium building.

30. *Valued Policy.* A policy in which the insured and the insurer agree on the value of the property insured, that value being payable in the event of a total loss. The Standard Flood Insurance Policy is not a valued policy.

III. Property Insured

A. Coverage A—Building Property

We insure against direct physical loss by or from flood to:

1. The dwelling at the described location, or for a period of 45 days at another location as set forth in III.C.2.b, Property Removed to Safety.

2. Additions and extensions attached to and in contact with the dwelling by means of a rigid exterior wall, a solid load-bearing interior wall, a stairway, an elevated walkway, or a roof. At your option, additions and extensions connected by any of these methods may be separately insured. Additions and extensions attached to and in contact with the building by means of a common interior wall that is not a solid load-bearing wall are always considered part of the dwelling and cannot be separately insured.

3. A detached garage at the described location. Coverage is limited to no more than 10 percent of the limit of liability on the dwelling. Use of this insurance is at your option but reduces the building limit of liability. We do not cover any detached garage used or held for use for residential (*i.e.,* dwelling), business, or farming purposes.

4. Materials and supplies to be used for construction, alteration, or repair of the dwelling or a detached garage while the materials and supplies are stored in a fully enclosed building at the described location or on an adjacent property.

5. A building under construction, alteration, or repair at the described location.

a. If the structure is not yet walled or roofed as described in the definition for building (*see* II.C.6.a) then coverage applies:

(1) Only while such work is in progress; or

(2) If such work is halted, only for a period of up to 90 continuous days thereafter.

b. However, coverage does not apply until the building is walled and roofed if the lowest floor, including the basement floor, of a non-elevated building or the lowest elevated floor of an elevated building is:

(1) Below the base flood elevation in Zones AH, AE, A1–A30, AR, AR/AE, AR/AH, AR/A1–A30, AR/A, AR/AO; or

(2) Below the base flood elevation adjusted to include the effect of wave action in Zones VE or V1–V30.

The lowest floor level is based on the bottom of the lowest horizontal structural member of the floor in Zones VE or V1–V30 or the top of the floor in Zones AH, AE, A1–A30, AR, AR/AE, AR/AH, AR/A1–A30, AR/A, and AR/AO.

6. A manufactured home or a travel trailer, as described in the II.C.6. If the manufactured home or travel trailer is in a special flood hazard area, it must be anchored in the following manner at the time of the loss:

a. By over-the-top or frame ties to ground anchors; or

b. In accordance with the manufacturer's specifications; or

c. In compliance with the community's floodplain management requirements unless it has been continuously insured by the NFIP at the same described location since September 30, 1982.

7. The following items of property which are insured under Coverage A only:

a. Awnings and canopies;

b. Blinds;

c. Built-in dishwashers;

d. Built-in microwave ovens;

e. Carpet permanently installed over unfinished flooring;

f. Central air conditioners;

g. Elevator equipment;

h. Fire sprinkler systems;

i. Walk-in freezers;

j. Furnaces and radiators;

k. Garbage disposal units;

l. Hot water heaters, including solar water heaters;

m. Light fixtures;

n. Outdoor antennas and aerials fastened to buildings;

o. Permanently installed cupboards, bookcases, cabinets, paneling, and wallpaper;

p. Plumbing fixtures;

q. Pumps and machinery for operating pumps;

r. Ranges, cooking stoves, and ovens;

s. Refrigerators; and

t. Wall mirrors, permanently installed.

8. Items of property below the lowest elevated floor of an elevated post-FIRM building located in Zones A1–A30, AE, AH, AR, AR/A, AR/AE, AR/AH, AR/A1–A30, V1–V30, or VE, or in a basement regardless of the zone. Coverage is limited to the following:

a. Any of the following items, if installed in their functioning locations and, if necessary for operation, connected to a power source:

(1) Central air conditioners;

(2) Cisterns and the water in them;

(3) Drywall for walls and ceilings in a basement and the cost of labor to nail it, unfinished and unfloated and not taped, to the framing;

(4) Electrical junction and circuit breaker boxes;

(5) Electrical outlets and switches;

(6) Elevators, dumbwaiters and related equipment, except for related equipment installed below the base flood elevation after September 30, 1987;

(7) Fuel tanks and the fuel in them;

(8) Furnaces and hot water heaters;

(9) Heat pumps;

(10) Nonflammable insulation in a basement;

(11) Pumps and tanks used in solar energy systems;

(12) Stairways and staircases attached to the building, not separated from it by elevated walkways;

(13) Sump pumps;

(14) Water softeners and the chemicals in them, water filters, and faucets installed as an integral part of the plumbing system;

(15) Well water tanks and pumps;

(16) Required utility connections for any item in this list; and

(17) Footings, foundations, posts, pilings, piers, or other foundation walls and anchorage systems required to support a building.

b. Clean-up.

B. Coverage B—Personal Property

1. If you have purchased personal property coverage, we insure against direct physical loss by or from flood to personal property inside a building at the described location, if:

a. The property is owned by you or your household family members; and

b. At your option, the property is owned by guests or servants.

2. Personal property is also insured for a period of 45 days at another location as set forth in III.C.2.b, Property Removed to Safety.

3. Personal property in a building that is not fully enclosed must be secured to prevent flotation out of the building. If the personal property does float out during a flood, it will be conclusively presumed that it was not reasonably secured. In that case, there is no coverage for such property.

4. Coverage for personal property includes the following property, subject to B.1 above, which is insured under Coverage B only:

a. Air conditioning units, portable or window type;

b. Carpets, not permanently installed, over unfinished flooring;

c. Carpets over finished flooring;

d. Clothes washers and dryers;

e. ''Cook-out'' grills;

f. Food freezers, other than walk-in, and food in any freezer; and

g. Portable microwave ovens and portable dishwashers.

5. Coverage for items of property below the lowest elevated floor of an elevated post-FIRM building located in Zones A1–A30, AE, AH, AR, AR/A, AR/AE, AR/AH, AR/A1–A30, V1–V30, or VE, or in a basement regardless of the zone, is limited to the following items, if installed in their functioning locations and, if necessary for operation, connected to a power source:

a. Air conditioning units, portable or window type;

b. Clothes washers and dryers; and

c. Food freezers, other than walk-in, and food in any freezer.

6. If you are a tenant and have insured personal property under Coverage B in this policy, we will cover such property, including your cooking stove or range and refrigerator. The policy will also cover improvements made or acquired solely at your expense in the dwelling or apartment in which you reside, but for not more than 10 percent of the limit of liability shown for personal property on the Declarations Page. Use of this insurance is at your option but reduces the personal property limit of liability.

7. If you are the owner of a unit and have insured personal property under Coverage B in this policy, we will also cover your interior walls, floor, and ceiling (not otherwise insured under a flood insurance policy purchased by your condominium association) for not more than 10 percent of the limit of liability shown for personal property on the Declarations Page. Use of this insurance is at your option but reduces the personal property limit of liability.

8. Special Limits. We will pay no more than $2,500 for any one loss to one or more of the following kinds of personal property:

a. Artwork, photographs, collectibles, or memorabilia, including but not limited to, porcelain or other figures, and sports cards;

b. Rare books or autographed items;

c. Jewelry, watches, precious and semi-precious stones, or articles of gold, silver, or platinum;

d. Furs or any article containing fur that represents its principal value; or

e. Personal property used in any business.

9. We will pay only for the functional value of antiques.

C. Coverage C—Other Coverages

1. Debris Removal

a. We will pay the expense to remove non-owned debris that is on or in insured property and debris of insured property anywhere.

b. If you or a member of your household perform the removal work, the value of your work will be based on the Federal minimum wage.

c. This coverage does not increase the Coverage A or Coverage B limit of liability.

2. Loss Avoidance Measures

a. Sandbags, Supplies, and Labor

(1) We will pay up to $1,000 for costs you incur to protect the insured building from a flood or imminent danger of flood, for the following:

(a) Your reasonable expenses to buy:

(i) Sandbags, including sand to fill them;

(ii) Fill for temporary levees;

(iii) Pumps; and

(iv) Plastic sheeting and lumber used in connection with these items.

(b) The value of work, at the Federal minimum wage, that you or a member of your household perform.

(2) This coverage for Sandbags, Supplies, and Labor only applies if damage to insured property by or from flood is imminent and the threat of flood damage is apparent enough to lead a person of common prudence to anticipate flood damage. One of the following must also occur:

(a) A general and temporary condition of flooding in the area near the described location must occur, even if the flood does not reach the building; or

(b) A legally authorized official must issue an evacuation order or other civil order for the community in which the building is located calling for measures to preserve life and property from the peril of flood.

This coverage does not increase the Coverage A or Coverage B limit of liability.

b. Property Removed to Safety

(1) We will pay up to $1,000 for the reasonable expenses you incur to move insured property to a place other than the described location that contains the property in order to protect it from flood or the imminent danger of flood. Reasonable expenses include the value of work, at the Federal minimum wage, you or a member of your household perform.

(2) If you move insured property to a location other than the described location that contains the property in order to protect it from flood or the imminent danger of flood, we will cover such property while at that location for a period of 45 consecutive days from the date you begin to move it there. The personal property that is moved must be placed in a fully enclosed building or otherwise reasonably protected from the elements.

(3) Any property removed, including a moveable home described in II.6.b and c, must be placed above ground level or outside of the special flood hazard area.

(4) This coverage does not increase the Coverage A or Coverage B limit of liability.

3. Condominium Loss Assessments

a. Subject to III.C.3.b below, if this policy insures a condominium unit, we will pay, up to the Coverage A limit of liability, your share of loss assessments charged against you by the condominium association in accordance with the condominium association's articles of association, declarations and your deed. The assessment must be made because of direct physical loss by or from flood during the policy term, to the unit or to the common elements of the NFIP insured condominium building in which this unit is located.

b. We will not pay any loss assessment:

(1) Charged against you and the condominium association by any governmental body;

(2) That results from a deductible under the insurance purchased by the condominium association insuring common elements;

(3) That results from a loss to personal property, including contents of a condominium building;

(4) In which the total payment combined under all policies exceeds the maximum amount of coverage available under the Act for a single unit in a condominium building where the unit is insured under both a Dwelling Policy and a RCBAP; or

(5) On any item of damage that has already been paid under a RCBAP where a single unit in a condominium building is insured by both a Dwelling Policy and a RCBAP.

c. Condominium Loss Assessment coverage does not increase the Coverage A Limit of Liability and is subject to the maximum coverage limits available for a single-family dwelling under the Act, payable between all policies issued and covering the unit, under the Act.

D. Coverage D—Increased Cost of Compliance

1. General

This policy pays you to comply with a State or local floodplain management law or ordinance affecting repair or reconstruction of a building suffering flood damage. Compliance activities eligible for payment are: elevation, floodproofing, relocation, or demolition (or any combination of these activities) of your building. Eligible floodproofing activities are limited to:

a. Non-residential buildings.

b. Residential buildings with basements that satisfy FEMA's standards published in the Code of Federal Regulations [44 CFR 60.6(b) or (c)].

2. Limit of Liability

We will pay you up to $30,000 under this Coverage D—Increased Cost of Compliance, which only applies to policies with building coverage (Coverage A). Our payment of claims under Coverage D is in addition to the amount of coverage which you selected on the application and which appears on the Declarations Page. But the maximum you can collect under this policy for both Coverage A—Building Property and Coverage D—Increased Cost of Compliance cannot exceed the maximum permitted under the Act. We do not charge a separate deductible for a claim under Coverage D.

3. Eligibility

a. A building insured under Coverage A—Building Property sustaining a loss caused by a flood as defined by this policy must:

(1) Be a ''repetitive loss building.'' A repetitive loss building is one that meets the following conditions:

(a) The building is insured by a contract of flood insurance issued under the NFIP.

(b) The building has suffered flood damage on two occasions during a 10-year period which ends on the date of the second loss.

(c) The cost to repair the flood damage, on average, equaled or exceeded 25 percent of the market value of the building at the time of each flood loss.

(d) In addition to the current claim, the NFIP must have paid the previous qualifying claim, and the State or community must have a cumulative, substantial damage provision or repetitive loss provision in its floodplain management law or ordinance being enforced against the building; or

(2) Be a building that has had flood damage in which the cost to repair equals or exceeds 50 percent of the market value of the building at the time of the flood. The State or community must have a substantial damage provision in its floodplain management law or ordinance being enforced against the building.

b. This Coverage D pays you to comply with State or local floodplain management laws or ordinances that meet the minimum standards of the National Flood Insurance Program found in the Code of Federal Regulations at 44 CFR 60.3. We pay for compliance activities that exceed those standards under these conditions:

(1) 3.a.1 above.

(2) Elevation or floodproofing in any risk zone to preliminary or advisory base flood elevations provided by FEMA which the State or local government has adopted and is enforcing for flood-damaged buildings in such areas. (This includes compliance activities in B, C, X, or D zones which are being changed to zones with base flood elevations. This also includes compliance activities in zones where base flood elevations are being increased, and a flood-damaged building must comply with the higher advisory base flood elevation.) Increased Cost of Compliance coverage does not apply to situations in B, C, X, or D zones where the community has derived its own elevations and is enforcing elevation or floodproofing requirements for flood-damaged buildings to elevations derived solely by the community.

(3) Elevation or floodproofing above the base flood elevation to meet State or local ''free-board'' requirements, *i.e.*, that a building must be elevated above the base flood elevation.

c. Under the minimum NFIP criteria at 44 CFR 60.3(b)(4), States and communities must require the elevation or floodproofing of buildings in unnumbered A zones to the base flood elevation where elevation data is obtained from a Federal, State, or other source. Such compliance activities are eligible for Coverage D.

d. Coverage D will pay for the incremental cost, after demolition or relocation, of elevating or floodproofing a building during its rebuilding at the same or another site to meet State or local floodplain management laws or ordinances, subject to Coverage D Exclusion 5.g below.

e. Coverage D will pay to bring a flood-damaged building into compliance with State or local floodplain management laws or ordinances even if the building had received a variance before the present loss from the applicable floodplain management requirements.

4. Conditions

a. When a building insured under Coverage A—Building Property sustains a loss caused by a flood, our payment for the loss under this Coverage D will be for the increased cost to elevate, floodproof, relocate, or demolish (or any combination of these activities) caused by the enforcement of current State or local floodplain management ordinances or laws. Our payment for eligible demolition activities will be for the cost to demolish

and clear the site of the building debris or a portion thereof caused by the enforcement of current State or local floodplain management ordinances or laws. Eligible activities for the cost of clearing the site will include those necessary to discontinue utility service to the site and ensure proper abandonment of on-site utilities.

b. When the building is repaired or rebuilt, it must be intended for the same occupancy as the present building unless otherwise required by current floodplain management ordinances or laws.

5. Exclusions

Under this Coverage D (Increased Cost of Compliance), we will not pay for:

a. The cost to comply with any floodplain management law or ordinance in communities participating in the Emergency Program.

b. The cost associated with enforcement of any ordinance or law that requires any insured or others to test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of pollutants.

c. The loss in value to any insured building due to the requirements of any ordinance or law.

d. The loss in residual value of the undamaged portion of a building demolished as a consequence of enforcement of any State or local floodplain management law or ordinance.

e. Any Increased Cost of Compliance under this Coverage D:

(1) Until the building is elevated, floodproofed, demolished, or relocated on the same or to another premises; and

(2) Unless the building is elevated, floodproofed, demolished, or relocated as soon as reasonably possible after the loss, not to exceed two years.

f. Any code upgrade requirements, *e.g.*, plumbing or electrical wiring, not specifically related to the State or local floodplain management law or ordinance.

g. Any compliance activities needed to bring additions or improvements made after the loss occurred into compliance with State or local floodplain management laws or ordinances.

h. Loss due to any ordinance or law that you were required to comply with before the current loss.

i. Any rebuilding activity to standards that do not meet the NFIP's minimum requirements. This includes any situation where the insured has received from the State or community a variance in connection with the current flood loss to rebuild the property to an elevation below the base flood elevation.

j. Increased Cost of Compliance for a garage or carport.

k. Any building insured under an NFIP Group Flood Insurance Policy.

l. Assessments made by a condominium association on individual condominium unit owners to pay increased costs of repairing commonly owned buildings after a flood in compliance with State or local floodplain management ordinances or laws.

6. Other Provisions

a. Increased Cost of Compliance coverage will not be included in the calculation to determine whether coverage meets the 80 percent insurance-to-value requirement for replacement cost coverage as set forth in Art. VII.R (''Loss Settlement'') of this policy.

b. All other conditions and provisions of this policy apply.

IV. PROPERTY NOT INSURED

We do not insure any of the following:

1. Personal property not inside a building.

2. A building, and personal property in it, located entirely in, on, or over water or seaward of mean high tide if it was constructed or substantially improved after September 30, 1982.

3. Open structures, including a building used as a boathouse or any structure or building into which boats are floated, and personal property located in, on, or over water.

4. Recreational vehicles other than travel trailers described in the Definitions section (*see* II.C.6.c) whether affixed to a permanent foundation or on wheels.

5. Self-propelled vehicles or machines, including their parts and equipment. However, we do cover self-propelled vehicles or machines not licensed for use on public roads that are:

a. Used mainly to service the described location; or

b. Designed and used to assist handicapped persons, while the vehicles or machines are inside a building at the described location.

6. Land, land values, lawns, trees, shrubs, plants, growing crops, or animals.

7. Accounts, bills, coins, currency, deeds, evidences of debt, medals, money, scrip, stored value cards, postage stamps, securities, bullion, manuscripts, or other valuable papers.

8. Underground structures and equipment, including wells, septic tanks, and septic systems.

9. Those portions of walks, walkways, decks, driveways, patios and other surfaces, all whether protected by a roof or not, located outside the perimeter, exterior walls of the insured building or the building in which the insured unit is located.

10. Containers, including related equipment, such as, but not limited to, tanks containing gases or liquids.

11. Buildings or units and all their contents if more than 49 percent of the actual cash value of the building is below ground, unless the lowest level is at or above the base flood elevation and is below ground by reason of earth having been used as insulation material in conjunction with energy efficient building techniques.

12. Fences, retaining walls, seawalls, bulkheads, wharves, piers, bridges, and docks.

13. Aircraft or watercraft, or their furnishings and equipment.

14. Hot tubs and spas that are not bathroom fixtures, and swimming pools, and their equipment, such as, but not limited to, heaters, filters, pumps, and pipes, wherever located.

15. Property not eligible for flood insurance pursuant to the provisions of the Coastal Barrier Resources Act and the Coastal Barrier Improvement Act and amendments to these acts.

16. Personal property you own in common with other unit owners comprising the membership of a condominium association.

V. EXCLUSIONS

A. We only pay for direct physical loss by or from flood, which means that we do not pay you for:

1. Loss of revenue or profits;

2. Loss of access to the insured property or described location;

3. Loss of use of the insured property or described location;

4. Loss from interruption of business or production;

5. Any additional living expenses incurred while the insured building is being repaired or is unable to be occupied for any reason;

6. The cost of complying with any ordinance or law requiring or regulating the construction, demolition, remodeling, renovation, or repair of property, including removal of any resulting debris. This exclusion does not apply to any eligible activities we describe in Coverage D—Increased Cost of Compliance; or

7. Any other economic loss you suffer.

B. *Flood in Progress.* If this policy became effective as of the time of a loan closing, as provided by 44 CFR 61.11(b), we will not pay for a loss caused by a flood that is a continuation of a flood that existed prior to coverage becoming effective. In all other circumstances, we will not pay for a loss caused by a flood that is a continuation of a flood that existed on or before the day you submitted the application for coverage under this policy and the full amount due. We will determine the date of application using 44 CFR 61.11(f).

C. We do not insure for loss to property caused directly by earth movement even if the earth movement is caused by flood. Some examples of earth movement that we do not cover are:

1. Earthquake;

2. Landslide;

3. Land subsidence;

4. Sinkholes;

5. Destabilization or movement of land that results from accumulation of water in subsurface land area; or

6. Gradual erosion.

We do, however, pay for losses from mudflow and land subsidence as a result of erosion that are specifically insured under our definition of flood (*see* II.B.1.c and II.B.2).

D. We do not insure for direct physical loss caused directly or indirectly by any of the following:

1. The pressure or weight of ice;

2. Freezing or thawing;

3. Rain, snow, sleet, hail, or water spray;

4. Water, moisture, mildew, or mold damage that results primarily from any condition:

a. Substantially confined to the dwelling; or

b. That is within your control, including but not limited to:

(1) Design, structural, or mechanical defects;

(2) Failure, stoppage, or breakage of water or sewer lines, drains, pumps, fixtures, or equipment; or

(3) Failure to inspect and maintain the property after a flood recedes;

5. Water or water-borne material that:

a. Backs up through sewers or drains;

b. Discharges or overflows from a sump, sump pump, or related equipment; or

c. Seeps or leaks on or through the insured property;

unless there is a flood in the area and the flood is the proximate cause of the sewer or drain backup, sump pump discharge or overflow, or the seepage of water;

6. The pressure or weight of water unless there is a flood in the area and the flood is the proximate cause of the damage from the pressure or weight of water;

7. Power, heating, or cooling failure unless the failure results from direct physical loss by or from flood to power, heating, or cooling equipment on the described location;

8. Theft, fire, explosion, wind, or windstorm;

9. Anything you or any member of your household do or conspire to do to deliberately cause loss by flood; or

10. Alteration of the insured property that significantly increases the risk of flooding.

E. We do not insure for loss to any building or personal property located on land leased from the Federal Government, arising from or incident to the flooding of the land by the Federal Government, where the lease expressly holds the Federal Government harmless under flood insurance issued under any Federal Government program.

F. We do not pay for the testing for or monitoring of pollutants unless required by law or ordinance.

VI. DEDUCTIBLES

A. When a loss is insured under this policy, we will pay only that part of the loss that exceeds your deductible amount, subject to the limit of liability that applies. The deductible amount is shown on the Declarations Page.

However, when a building under construction, alteration, or repair does not have at least two rigid exterior walls and a fully secured roof at the time of loss, your deductible amount will be two times the deductible that would otherwise apply to a completed building.

B. In each loss from flood, separate deductibles apply to the building and personal property insured by this policy.

C. The deductible does NOT apply to:

1. III.C.2. Loss Avoidance Measures;

2. III.C.3. Condominium Loss Assessments; or

3. III.D. Increased Cost of Compliance.

VII. GENERAL CONDITIONS

A. Pair and Set Clause

In case of loss to an article that is part of a pair or set, we will have the option of paying you:

1. An amount equal to the cost of replacing the lost, damaged, or destroyed article, minus its depreciation; or

2. The amount that represents the fair proportion of the total value of the pair or set that the lost, damaged, or destroyed article bears to the pair or set.

B. Other Insurance

1. If a loss insured by this policy is also insured by other insurance that includes flood coverage not issued under the Act, we will not pay more than the amount of insurance you are entitled to for lost, damaged, or destroyed property insured under this policy subject to the following:

a. We will pay only the proportion of the loss that the amount of insurance that applies under this policy bears to the total amount of insurance covering the loss, unless VII.B.1.b or c immediately below applies.

b. If the other policy has a provision stating that it is excess insurance, this policy will be primary.

c. This policy will be primary (but subject to its own deductible) up to the deductible in the other flood policy (except another policy as described in VII.B.1.b above). When the other deductible amount is reached, this policy will participate in the same proportion that the amount of insurance under this policy bears to the total amount of both policies, for the remainder of the loss.

2. If there is other insurance issued under the Act in the name of your condominium association covering the same property insured by this policy, then this policy will be in excess over the other insurance, except where a condominium loss assessment to the unit owner results from a loss sustained by the condominium association that was not reimbursed under a flood insurance policy written in the name of the association under the Act because the building was not, at the time of loss, insured for an amount equal to the lesser of:

a. 80 percent or more of its full replacement cost; or

b. The maximum amount of insurance permitted under the Act.

The combined coverage payment under the other NFIP insurance and this policy cannot exceed the maximum coverage available under the Act, of $250,000 per single unit.

C. Amendments, Waivers, Assignment

This policy cannot be changed, nor can any of its provisions be waived, without the express written consent of the Federal Insurance Administrator. No action we take under the terms of this policy constitutes a waiver of any of our rights. You may assign this policy in writing when you transfer title of your property to someone else except under these conditions:

a. When this policy insures only personal property; or

b. When this policy insures a building under construction.

D. Insufficient Premium or Rating Information

1. Applicability. The following provisions apply to all instances where the premium paid on this policy is insufficient or where the rating information is insufficient, such as where an Elevation Certificate is not provided.

2. Reforming the Policy with Reduced Coverage. Except as otherwise provided in VII.D.1, if the premium we received from you was not sufficient to buy the kinds and amounts of coverage you requested, we will provide only the kinds and amounts of coverage that can be purchased for the premium payment we received.

a. For the purpose of determining whether your premium payment is sufficient to buy the kinds and amounts of coverage you requested, we will first deduct the costs of all applicable fees and surcharges.

b. If the amount paid, after deducting the costs of all applicable fees and surcharges, is not sufficient to buy any amount of coverage, your payment will be refunded. Unless the policy is reformed to increase the coverage amount to the amount originally requested pursuant to VII.D.3, this policy will

be cancelled, and no claims will be paid under this policy.

c. Coverage limits on the reformed policy will be based upon the amount of premium submitted per type of coverage, but will not exceed the amount originally requested.

3. Discovery of Insufficient Premium or Rating Information. If we discover that your premium payment was not sufficient to buy the requested amount of coverage, the policy will be reformed as described in VII.D.2. You have the option of increasing the amount of coverage resulting from this reformation to the amount you requested as follows:

a. Insufficient Premium. If we discover that your premium payment was not sufficient to buy the requested amount of coverage, we will send you, and any mortgagee or trustee known to us, a bill for the required additional premium for the current policy term (or that portion of the current policy term following any endorsement changing the amount of coverage). If it is discovered that the initial amount charged to you for any fees or surcharges is incorrect, the difference will be added or deducted, as applicable, to the total amount in this bill.

(1) If you or the mortgagee or trustee pays the additional premium amount due within 30 days from the date of our bill, we will reform the policy to increase the amount of coverage to the originally requested amount, effective to the beginning of the current policy term (or subsequent date of any endorsement changing the amount of coverage).

(2) If you or the mortgagee or trustee do not pay the additional amount due within 30 days of the date of our bill, any flood insurance claim will be settled based on the reduced amount of coverage.

(3) As applicable, you have the option of paying all or part of the amount due out of a claim payment based on the originally requested amount of coverage.

b. Insufficient Rating Information. If we determine that the rating information we have is insufficient and prevents us from calculating the additional premium, we will ask you to send the required information. You must submit the information within 60 days of our request.

(1) If we receive the information within 60 days of our request, we will determine the amount of additional premium for the current policy term, and follow the procedure in VII.D.3.a above.

(2) If we do not receive the information within 60 days of our request, no claims will be paid until the requested information is provided. Coverage will be limited to the amount of coverage that can be purchased for the payments we received, as determined when the requested information is provided.

4. Coverage Increases. If we do not receive the amounts requested in VII.D.3.a or the additional information requested in VII.D.3.b by the date it is due, the amount of coverage under this policy can only be increased by endorsement subject to the appropriate waiting period. However, no coverage increases will be allowed until you have provided the information requested in VII.D.3.b.

5. Falsifying Information. However, if we find that you or your agent intentionally did not tell us, or falsified any important fact or circumstance or did anything fraudulent relating to this insurance, the provisions of VIII.A apply.

E. Policy Renewal

1. This policy will expire at 12:01 a.m. on the last day of the policy term.

2. We must receive the payment of the appropriate renewal premium within 30 days of the expiration date.

3. If we find, however, that we did not place your renewal notice into the U.S. Postal Service, or if we did mail it, we made a mistake, *e.g.*, we used an incorrect, incomplete, or illegible address, which delayed its delivery to you before the due date for the renewal premium, then we will follow these procedures:

a. If you or your agent notified us, not later than one year after the date on which the payment of the renewal premium was due, of non-receipt of a renewal notice before the due date for the renewal premium, and we determine that the circumstances in the preceding paragraph apply, we will mail a second bill providing a revised due date, which will be 30 days after the date on which the bill is mailed.

b. If we do not receive the premium requested in the second bill by the revised due date, then we will not renew the policy. In that case, the policy will remain an expired policy as of the expiration date shown on the Declarations Page.

4. In connection with the renewal of this policy, we may ask you during the policy term to recertify, on a Recertification Questionnaire we will provide to you, the rating information used to rate your most recent application for or renewal of insurance.

F. Conditions Suspending or Restricting Insurance

We are not liable for loss that occurs while there is a hazard that is increased by any means within your control or knowledge.

G. Requirements in Case of Loss

In case of a flood loss to insured property, you must:

1. Give prompt written notice to us.

2. As soon as reasonably possible, separate the damaged and undamaged property, putting it in the best possible order so that we may examine it.

3. Prepare an inventory of damaged property showing the quantity, description, actual cash value, and amount of loss. Attach all bills, receipts, and related documents.

4. Within 60 days after the loss, send us a proof of loss, which is your statement of the amount you are claiming under the policy signed and sworn to by you, and which furnishes us with the following information:

a. The date and time of loss;

b. A brief explanation of how the loss happened;

c. Your interest (for example, ''owner'') and the interest, if any, of others in the damaged property;

d. Details of any other insurance that may cover the loss;

e. Changes in title or occupancy of the insured property during the term of the policy;

f. Specifications of damaged buildings and detailed repair estimates;

g. Names of mortgagees or anyone else having a lien, charge, or claim against the insured property;

h. Details about who occupied any insured building at the time of loss and for what purpose; and

i. The inventory of damaged personal property described in G.3 above.

5. In completing the proof of loss, you must use your own judgment concerning the amount of loss and justify that amount.

6. You must cooperate with the adjuster or representative in the investigation of the claim.

7. The insurance adjuster whom we hire to investigate your claim may furnish you with a proof of loss form, and she or he may help you complete it. However, this is a matter of courtesy only, and you must still send us a proof of loss within 60 days after the loss even if the adjuster does not furnish the form or help you complete it.

8. We have not authorized the adjuster to approve or disapprove claims or to tell you whether we will approve your claim.

9. At our option, we may accept the adjuster's report of the loss instead of your proof of loss. The adjuster's report will include information about your loss and the damages you sustained. You must sign the adjuster's report. At our option, we may require you to swear to the report.

H. Our Options After a Loss

Options we may, in our sole discretion, exercise after loss include the following:

1. At such reasonable times and places that we may designate, you must:

a. Show us or our representative the damaged property;

b. Submit to examination under oath, while not in the presence of another insured, and sign the same; and

c. Permit us to examine and make extracts and copies of:

(1) Any policies of property insurance insuring you against loss and the deed establishing your ownership of the insured real property;

(2) Condominium association documents including the Declarations of the condominium, its Articles of Association or Incorporation, Bylaws, rules and regulations, and other relevant documents if you are a unit owner in a condominium building; and

(3) All books of accounts, bills, invoices and other vouchers, or certified copies pertaining to the damaged property if the originals are lost.

2. We may request, in writing, that you furnish us with a complete inventory of the lost, damaged or destroyed property, including:

a. Quantities and costs;

b. Actual cash values or replacement cost (whichever is appropriate);

c. Amounts of loss claimed;

d. Any written plans and specifications for repair of the damaged property that you can reasonably make available to us; and

e. Evidence that prior flood damage has been repaired.

3. If we give you written notice within 30 days after we receive your signed, sworn proof of loss, we may:

a. Repair, rebuild, or replace any part of the lost, damaged, or destroyed property with material or property of like kind and quality or its functional equivalent; and

b. Take all or any part of the damaged property at the value that we agree upon or its appraised value.

I. No Benefit to Bailee

No person or organization, other than you, having custody of insured property will benefit from this insurance.

J. Loss Payment

1. We will adjust all losses with you. We will pay you unless some other person or entity is named in the policy or is legally entitled to receive payment. Loss will be payable 60 days after we receive your proof of loss (or within 90 days after the insurance adjuster files the adjuster's report signed and sworn to by you in lieu of a proof of loss) and:

a. We reach an agreement with you;

b. There is an entry of a final judgment; or

c. There is a filing of an appraisal award with us, as provided in VII.M.

2. If we reject your proof of loss in whole or in part you may:

a. Accept our denial of your claim;

b. Exercise your rights under this policy; or

c. File an amended proof of loss as long as it is filed within 60 days of the date of the loss.

K. Abandonment

You may not abandon to us damaged or undamaged property insured under this policy.

L. Salvage

We may permit you to keep damaged property insured under this policy after a loss, and we will reduce the amount of the loss proceeds payable to you under the policy by the value of the salvage.

M. Appraisal

If you and we fail to agree on the actual cash value or, if applicable, replacement cost of your damaged property to settle upon the amount of loss, then either may demand an appraisal of the loss. In this event, you and we will each choose a competent and impartial appraiser within 20 days after receiving a written request from the other. The two appraisers will choose an umpire. If they cannot agree upon an umpire within 15 days, you or we may request that the choice be made by a judge of a court of record in the state where the insured property is located. The appraisers will separately state the actual cash value, the replacement cost, and the amount of loss to each item. If the appraisers submit a written report of an agreement to us, the amount agreed upon will be the amount of loss. If they fail to agree, they will submit their differences to the umpire. A decision agreed to by any two will set the amount of actual cash value and loss, or if it applies, the replacement cost and loss.

Each party will:

1. Pay its own appraiser; and

2. Bear the other expenses of the appraisal and umpire equally.

N. Mortgage Clause

1. The word ''mortgagee'' includes trustee.

2. Any loss payable under Coverage A—Building Property will be paid to any mortgagee of whom we have actual notice, as well as any other mortgagee or loss payee determined to exist at the time of loss, and you, as interests appear. If more than one mortgagee is named, the order of payment will be the same as the order of precedence of the mortgages.

3. If we deny your claim, that denial will not apply to a valid claim of the mortgagee, if the mortgagee:

a. Notifies us of any change in the ownership or occupancy, or substantial change in risk of which the mortgagee is aware;

b. Pays any premium due under this policy on demand if you have neglected to pay the premium; and

c. Submits a signed, sworn proof of loss within 60 days after receiving notice from us of your failure to do so.

4. All of the terms of this policy apply to the mortgagee.

5. The mortgagee has the right to receive loss payment even if the mortgagee has started foreclosure or similar action on the building.

6. If we decide to cancel or not renew this policy, it will continue in effect for the benefit of the mortgagee only for 30 days after we notify the mortgagee of the cancellation or non-renewal.

7. If we pay the mortgagee for any loss and deny payment to you, we are subrogated to all the rights of the mortgagee granted under the mortgage on the property. Subrogation will not impair the right of the mortgagee to recover the full amount of the mortgagee's claim.

O. Suit Against Us

You may not sue us to recover money under this policy unless you have complied with all the requirements of the policy. If you do sue, you must start the suit within one year after the date of the written denial of all or part of the claim, and you must file the suit in the United States District Court of the district in which the insured property was located at the time of loss. This requirement applies to any claim that you may have under this policy and to any dispute that you may have arising out of the handling of any claim under the policy.

P. Subrogation

Whenever we make a payment for a loss under this policy, we are subrogated to your right to recover for that loss from any other person. That means that your right to recover for a loss that was partly or totally caused by someone else is automatically transferred to us, to the extent that we have paid you for the loss. We may require you to acknowledge this transfer in writing. After the loss, you may not give up our right to recover this money or do anything that would prevent us from recovering it. If you make any claim against any person who caused your loss and recover any money, you must pay us back first before you may keep any of that money.

Q. Continuous Lake Flooding

1. If an insured building has been flooded by rising lake waters continuously for 90 days or more and it appears reasonably certain that a continuation of this flooding will result in an insured loss to the insured building equal to or greater than the building policy limits plus the deductible or the maximum payable under the policy for any one building loss, we will pay you the lesser of these two amounts without waiting for the further damage to occur if you sign a release agreeing:

a. To make no further claim under this policy;

b. Not to seek renewal of this policy;

c. Not to apply for any flood insurance under the Act for property at the described location;

d. Not to seek a premium refund for current or prior terms.

If the policy term ends before the insured building has been flooded continuously for 90 days, the provisions of this paragraph Q.1 will apply when the insured building suffers a covered loss before the policy term ends.

2. If your insured building is subject to continuous lake flooding from a closed basin lake, you may elect to file a claim under either paragraph Q.1 above or Q.2 (A ''closed basin lake'' is a natural lake from which water leaves primarily through evaporation and whose surface area now exceeds or has exceeded one square mile at any time in the recorded past. Most of the nation's closed basin lakes are in the western half of the United States where annual evaporation exceeds annual precipitation and where lake levels and surface areas are subject to considerable fluctuation due to wide variations in the climate. These lakes may overtop their basins on rare occasions.) Under this paragraph Q.2, we will pay your claim as if the building is a total loss even though it has not been continuously inundated for 90 days, subject to the following conditions:

a. Lake floodwaters must damage or imminently threaten to damage your building.

b. Before approval of your claim, you must:

(1) Agree to a claim payment that reflects your buying back the salvage on a negotiated basis; and

(2) Grant the conservation easement described in FEMA's ''Policy Guidance for Closed Basin Lakes'' to be recorded in the office of the local recorder of deeds. FEMA, in consultation with the community in which the property is located, will identify on a map an area or areas of special consideration (ASC) in which there is a potential for flood damage from continuous lake flooding. FEMA will give the community the agreed-upon map showing the ASC. This easement will only apply to that portion of the property in the ASC. It will allow certain agricultural and recreational uses of the land. The only structures it will allow on any portion of the property within the ASC are certain simple agricultural and recreational structures. If any of these allowable structures are insurable buildings under the NFIP and are insured under the NFIP, they will not be eligible for the benefits of this paragraph Q.2. If a U.S. Army Corps of Engineers certified flood control project or otherwise certified flood control project later protects the property, FEMA will, upon request, amend the ASC to remove areas protected by those projects. The restrictions of the easement will then no longer apply to any portion of the property removed from the ASC; and

(3) Comply with paragraphs Q.1.a through Q.1.d above.

c. Within 90 days of approval of your claim, you must move your building to a new location outside the ASC. FEMA will give you an additional 30 days to move if you show there is sufficient reason to extend the time.

d. Before the final payment of your claim, you must acquire an elevation certificate and a floodplain development permit from the local floodplain administrator for the new location of your building.

e. Before the approval of your claim, the community having jurisdiction over your building must:

(1) Adopt a permanent land use ordinance, or a temporary moratorium for a period not to exceed 6 months to be followed immediately by a permanent land use ordinance that is consistent with the provisions specified in the easement required in paragraph Q.2.b above;

(2) Agree to declare and report any violations of this ordinance to FEMA so that under Section 1316 of the National Flood Insurance Act of 1968, as amended, flood insurance to the building can be denied; and

(3) Agree to maintain as deed-restricted, for purposes compatible with open space or agricultural or recreational use only, any affected property the community acquires an interest in. These deed restrictions must be consistent with the provisions of paragraph Q.2.b above, except that, even if a certified project protects the property, the land use restrictions continue to apply if the property was acquired under the Hazard Mitigation Grant Program or the Flood Mitigation Assistance Program. If a non-profit land trust organization receives the property as a donation, that organization must maintain the property as deed-restricted, consistent with the provisions of paragraph Q2.b above.

f. Before the approval of your claim, the affected State must take all action set forth in FEMA's ''Policy Guidance for Closed Basin Lakes.''

g. You must have NFIP flood insurance coverage continuously in effect from a date established by FEMA until you file a claim under paragraph Q.2. If a subsequent owner buys NFIP insurance that goes into effect within 60 days of the date of transfer of title, any gap in coverage during that 60-day period will not be a violation of this continuous coverage requirement. For the purpose of honoring a claim under this paragraph Q.2, we will not consider to be in effect any increased coverage that became effective after the date established by FEMA. The exception to this is any in-creased coverage in the amount suggested by your insurer as an inflation adjustment.

h. This paragraph Q.2 will be in effect for a community when the FEMA Regional Administrator for the affected region provides to the community, in writing, the following:

(1) Confirmation that the community and the State are in compliance with the conditions in paragraphs Q.2.e and Q.2.f above; and

(2) The date by which you must have flood insurance in effect.

R. Loss Settlement

1. Introduction

This policy provides three methods of settling losses: Replacement Cost, Special Loss Settlement, and Actual Cash Value. Each method is used for a different type of property, as explained in paragraphs a–c below.

a. Replacement Cost Loss Settlement, described in R.2 below, applies to a single-family dwelling provided:

(1) It is your principal residence; and

(2) At the time of loss, the amount of insurance in this policy that applies to the dwelling is 80 percent or more of its full replacement cost immediately before the loss, or is the maximum amount of insurance available under the NFIP.

b. Special Loss Settlement, described in R.3 below, applies to a single-family dwelling that is a manufactured or mobile home or a travel trailer.

c. Actual Cash Value Loss Settlement applies to a single-family dwelling not subject to replacement cost or special loss settlement, and to the property listed in R.4 below.

2. Replacement Cost Loss Settlement

The following loss settlement conditions apply to a single-family dwelling described in R.1.a above:

a. We will pay to repair or replace the damaged dwelling after application of the deductible and without deduction for depreciation, but not more than the least of the following amounts:

(1) The building limit of liability shown on your Declarations Page;

(2) The replacement cost of that part of the dwelling damaged, with materials of like kind and quality and for like use; or

(3) The necessary amount actually spent to repair or replace the damaged part of the dwelling for like use.

b. If the dwelling is rebuilt at a new location, the cost described above is limited to the cost that would have been incurred if the dwelling had been rebuilt at its former location.

c. When the full cost of repair or replacement is more than $1,000, or more than 5 percent of the whole amount of insurance that applies to the dwelling, we will not be liable for any loss under R.2.a above or R.4.a.2 below unless and until actual repair or replacement is completed.

d. You may disregard the replacement cost conditions above and make claim under this policy for loss to dwellings on an actual cash value basis. You may then make claim for any additional liability according to R.2.a, b, and c above, provided you notify us of your intent to do so within 180 days after the date of loss.

e. If the community in which your dwelling is located has been converted from the Emergency Program to the Regular Program during the current policy term, then we will consider the maximum amount of available NFIP insurance to be the amount that was available at the beginning of the current policy term.

3. Special Loss Settlement

a. The following loss settlement conditions apply to a single-family dwelling that:

(1) is a manufactured or mobile home or a travel trailer, as defined in II.C.6.b and c;

(2) is at least 16 feet wide when fully assembled and has an area of at least 600 square feet within its perimeter walls when fully assembled; and

(3) is your principal residence as specified in R.1.a.1 above.

b. If such a dwelling is totally destroyed or damaged to such an extent that, in our judgment, it is not economically feasible to repair, at least to its pre-damage condition, we will, at our discretion pay the least of the following amounts:

(1) The lesser of the replacement cost of the dwelling or 1.5 times the actual cash value; or

(2) The building limit of liability shown on your Declarations Page.

c. If such a dwelling is partially damaged and, in our judgment, it is economically feasible to repair it to its pre-damage condition, we will settle the loss according to the Replacement Cost conditions in R.2 above.

4. Actual Cash Value Loss Settlement

The types of property noted below are subject to actual cash value (or in the case of R.4.a.2., below, proportional) loss settlement.

a. A dwelling, at the time of loss, when the amount of insurance on the dwelling is both less than 80 percent of its full replacement cost immediately before the loss and less than the maximum amount of insurance available under the NFIP. In that case, we will pay the greater of the following amounts, but not more than the amount of insurance that applies to that dwelling:

(1) The actual cash value, as defined in II.C.2, of the damaged part of the dwelling; or

(2) A proportion of the cost to repair or replace the damaged part of the dwelling, without deduction for physical depreciation and after application of the deductible.

This proportion is determined as follows: If 80 percent of the full replacement cost of the dwelling is less than the maximum amount of insurance available under the NFIP, then the proportion is determined by dividing the

actual amount of insurance on the dwelling by the amount of insurance that represents 80 percent of its full replacement cost. But if 80 percent of the full replacement cost of the dwelling is greater than the maximum amount of insurance available under the NFIP, then the proportion is determined by dividing the actual amount of insurance on the dwelling by the maximum amount of insurance available under the NFIP.

b. A two-, three-, or four-family dwelling.

c. A unit that is not used exclusively for single-family dwelling purposes.

d. Detached garages.

e. Personal property.

f. Appliances, carpets, and carpet pads.

g. Outdoor awnings, outdoor antennas or aerials of any type, and other outdoor equipment.

h. Any property insured under this policy that is abandoned after a loss and remains as debris anywhere on the described location.

i. A dwelling that is not your principal residence.

5. Amount of Insurance Required

To determine the amount of insurance required for a dwelling immediately before the loss, we do not include the value of:

a. Footings, foundations, piers, or any other structures or devices that are below the undersurface of the lowest basement floor and support all or part of the dwelling;

b. Those supports listed in R.5.a above, that are below the surface of the ground inside the foundation walls if there is no basement; and

c. Excavations and underground flues, pipes, wiring, and drains.

Note: The Coverage D—Increased Cost of Compliance limit of liability is not included in the determination of the amount of insurance required.

VIII. Policy Nullification, Cancellation, and Non-Renewal

A. Policy Nullification for Fraud, Misrepresentation, or Making False Statements

1. With respect to all insureds under this policy, this policy is void and has no legal force and effect if at any time, before or after a loss, you or any other insured or your agent have, with respect to this policy or any other NFIP insurance:

a. Concealed or misrepresented any material fact or circumstance;

b. Engaged in fraudulent conduct; or

c. Made false statements.

2. Policies voided under A.1 cannot be renewed or replaced by a new NFIP policy.

3. Policies are void as of the date the acts described in A.1 above were committed.

4. Fines, civil penalties, and imprisonment under applicable Federal laws may also apply to the acts of fraud or concealment described above.

B. Policy Nullification for Reasons Other Than Fraud

1. This policy is void from its inception, and has no legal force or effect, if:

a. The property listed on the application is located in a community that was not participating in the NFIP on this policy's inception date and did not join or reenter the program during the policy term and before the loss occurred;

b. The property listed on the application is otherwise not eligible for coverage under the NFIP at the time of the initial application;

c. You never had an insurable interest in the property listed on the application;

d. You provided an agent with an application and payment, but the payment did not clear; or

e. We receive notice from you, prior to the policy effective date, that you have determined not to take the policy and you are not subject to a requirement to obtain and maintain flood insurance pursuant to any statute, regulation, or contract.

2. In such cases, you will be entitled to a full refund of all premium, fees, and surcharges received. However, if a claim was paid for a policy that is void, the claim payment must be returned to FEMA or offset from the premiums to be refunded before the refund will be processed.

C. Cancellation of the Policy by You

1. You may cancel this policy in accordance with the terms and conditions of this policy and the applicable rules and regulations of the NFIP.

2. If you cancel this policy, you may be entitled to a full or partial refund of premium, surcharges, or fees under the terms and conditions of this policy and the applicable rules and regulations of the NFIP.

D. Cancellation of the Policy by Us

1. Cancellation for Underpayment of Amounts Owed on Policy. This policy will be cancelled, pursuant to VII.D.2, if it is determined that the premium amount you paid is not sufficient to buy any amount of coverage, and you do not pay the additional amount of premium owed to increase the coverage to the originally requested amount within the required time period.

2. Cancellation Due to Lack of an Insurable Interest.

a. If you no longer have an insurable interest in the insured property, we will cancel this policy. You will cease to have an insurable interest if:

(1) For building coverage, the building was sold, destroyed, or removed.

(2) For contents coverage, the contents were sold or transferred ownership, or the contents were completely removed from the described location.

b. If your policy is cancelled for this reason, you may be entitled to a partial refund of premium under the applicable rules and regulations of the NFIP.

3. Cancellation of Duplicate Policies

a. Except as allowed under Article I.G, your property may not be insured by more than one NFIP policy, and payment for damages to your property will only be made under one policy.

b. Except as allowed under Article I.G, if the property is insured by more than one NFIP policy, we will cancel all but one of the policies. The policy, or policies, will be selected for cancellation in accordance with 44 CFR 62.5 and the applicable rules and guidance of the NFIP.

c. If this policy is cancelled pursuant to VIII.D.3.b, you may be entitled to a full or partial refund of premium, surcharges, or fees under the terms and conditions of this policy and the applicable rules and regulations of the NFIP.

4. Cancellation Due to Physical Alteration of Property

a. If the insured building has been physically altered in such a manner that it is no longer eligible for flood insurance coverage, we will cancel this policy.

b. If your policy is cancelled for this reason, you may be entitled to a partial refund of premium under the terms and conditions of this policy and the applicable rules and regulations of the NFIP.

E. Non-Renewal of the Policy by Us

Your policy will not be renewed if:

1. The community where your insured property is located is suspended or stops participating in the NFIP;

2. Your building is otherwise ineligible for flood insurance under the Act;

3. You have failed to provide the information we requested for the purpose of rating the policy within the required deadline.

IX. Liberalization Clause

If we make a change that broadens your coverage under this edition of our policy, but does not require any additional premium, then that change will automatically apply to your insurance as of the date we implement the change, provided that this implementation date falls within 60 days before or during the policy term stated on the Declarations Page.

X. What Law Governs

This policy and all disputes arising from the insurer's policy issuance, policy administration, or the handling of any claim under the policy are governed exclusively by the flood insurance regulations issued by FEMA, the National Flood Insurance Act of 1968, as amended (42 U.S.C. 4001, *et seq.*), and Federal common law.

In Witness Whereof, we have signed this policy below and hereby enter into this Insurance Agreement.

Federal Insurance and Mitigation Administration

[85 FR 43959, July 20, 2020; 86 FR 10029, Feb. 18, 2021; 86 FR 31177, June 11, 2021; 86 FR 48511, Aug. 31, 2021]

Appendix A(2) to Part 61

Federal Emergency Management Agency, Federal Insurance and Mitigation Administration

Standard Flood Insurance Policy

General Property Form

Please read the policy carefully. The flood insurance provided is subject to limitations, restrictions, and exclusions.

I. Agreement

A. Coverage Under This Policy

1. Except as provided in I.A.2, this policy provides coverage for multifamily buildings (residential buildings designed for use by 5 or more families that are not condominium buildings), non-residential buildings, and their contents.

2. There is no coverage for a residential condominium building in a regular program community, except for personal property coverage for a unit in a condominium building.

B. The Federal Emergency Management Agency (FEMA) provides flood insurance under the terms of the National Flood Insurance Act of 1968 and its amendments, and Title 44 of the Code of Federal Regulations.

C. We will pay you for direct physical loss by or from flood to your insured property if you:

1. Have paid the full amount due (including applicable premiums, surcharges, and fees);

2. Comply with all terms and conditions of this policy; and

3. Have furnished accurate information and statements.

D. We have the right to review the information you give us at any time and revise your policy based on our review.

E. This policy insures only one building. If you own more than one building, coverage will apply to the single building specifically described in the Flood Insurance Application.

F. Multiple policies with building coverage cannot be issued to insure a single building to one insured or to different insureds, even if issued through different NFIP insurers. Payment for damages may only be made under a single policy for building damages under Coverage A—Building Property.

II. DEFINITIONS

A. In this policy, ''you'' and ''your'' refer to the named insured(s) shown on the Declarations Page of this policy. Insured(s) also includes: Any mortgagee and loss payee named in the Application and Declarations Page, as well as any other mortgagee or loss payee determined to exist at the time of loss, in the order of precedence. ''We,'' ''us,'' and ''our'' refer to the insurer.

Some definitions are complex because they are provided as they appear in the law or regulations, or result from court cases.

B. *Flood,* as used in this flood insurance policy, means:

1. A general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties (one of which is your property) from:

a. Overflow of inland or tidal waters;

b. Unusual and rapid accumulation or runoff of surface waters from any source;

c. Mudflow.

2. Collapse or subsidence of land along the shore of a lake or similar body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels that result in a flood as defined in B.1.a above.

C. The following are the other key definitions we use in this policy:

1. *Act.* The National Flood Insurance Act of 1968 and any amendments to it.

2. *Actual Cash Value.* The cost to replace an insured item of property at the time of loss, less the value of its physical depreciation.

3. *Application.* The statement made and signed by you or your agent in applying for this policy. The application gives information we use to determine the eligibility of the risk, the kind of policy to be issued, and the correct premium payment. The application is part of this flood insurance policy.

4. *Base Flood.* A flood having a one percent chance of being equaled or exceeded in any given year.

5. *Basement.* Any area of a building, including any sunken room or sunken portion of a room, having its floor below ground level on all sides.

6. *Building*

a. A structure with two or more outside rigid walls and a fully secured roof that is affixed to a permanent site;

b. A manufactured home, also known as a mobile home, is a structure built on a permanent chassis, transported to its site in one or more sections, and affixed to a permanent foundation; or

c. A travel trailer without wheels, built on a chassis and affixed to a permanent foundation, that is regulated under the community's floodplain management and building ordinances or laws.

Building does not mean a gas or liquid storage tank, shipping container, or a recreational vehicle, park trailer, or other similar vehicle, except as described in C.6.c above.

7. *Cancellation.* The ending of the insurance coverage provided by this policy before the expiration date.

8. *Condominium.* That form of ownership of one or more buildings in which each unit owner has an undivided interest in common elements.

9. *Condominium Association.* The entity made up of the unit owners responsible for the maintenance and operation of:

a. Common elements owned in undivided shares by unit owners; and

b. Other buildings in which the unit owners have use rights where membership in the entity is a required condition of unit ownership.

10. *Condominium Building.* A type of building for which the form of ownership is one in which each unit owner has an undivided interest in common elements of the building.

11. *Declarations Page.* A computer-generated summary of information you provided in your application for insurance. The Declarations Page also describes the term of the policy, limits of coverage, and displays the premium and our name. The Declarations Page is a part of this flood insurance policy.

12. *Deductible.* The fixed amount of an insured loss that is your responsibility and that is incurred by you before any amounts are paid for the insured loss under this policy.

13. *Described Location.* The location where the insured building(s) or personal property are found. The described location is shown on the Declarations Page.

14. *Direct Physical Loss By or From Flood.* Loss or damage to insured property, directly caused by a flood. There must be evidence of physical changes to the property.

15. *Elevated Building.* A building that has no basement and that has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

16. *Emergency Program.* The initial phase of a community's participation in the National Flood Insurance Program. During this phase, only limited amounts of insurance are available under the Act and the regulations prescribed pursuant to the Act.

17. *Federal Policy Fee.* A flat rate charge you must pay on each new or renewal policy to defray certain administrative expenses incurred in carrying out the National Flood Insurance Program.

18. *Improvements.* Fixtures, alterations, installations, or additions comprising a part of the building.

19. *Mudflow.* A river of liquid and flowing mud on the surface of normally dry land areas, as when earth is carried by a current

of water. Other earth movements, such as landslide, slope failure, or a saturated soil mass moving by liquidity down a slope, are not mudflows.

20. *National Flood Insurance Program (NFIP).* The program of flood insurance coverage and floodplain management administered under the Act and applicable Federal regulations in Title 44 of the Code of Federal Regulations, Subchapter B.

21. *Policy.* The entire written contract between you and us. It includes:

a. This printed form;

b. The application and Declarations Page;

c. Any endorsement(s) that may be issued; and

d. Any renewal certificate indicating that coverage has been instituted for a new policy and new policy term. Only one building, which you specifically described in the application, may be insured under this policy.

22. *Pollutants.* Substances that include, but are not limited to, any solid, liquid, gaseous, or thermal irritant or contaminant, including smoke, vapor, soot, fumes, acids, alkalis, chemicals, and waste. ''Waste'' includes, but is not limited to, materials to be recycled, reconditioned, or reclaimed.

23. *Post-FIRM Building.* A building for which construction or substantial improvement occurred after December 31, 1974, or on or after the effective date of an initial Flood Insurance Rate Map (FIRM), whichever is later.

24. *Probation Surcharge.* A flat charge you must pay on each new or renewal policy issued covering property in a community the NFIP has placed on probation under the provisions of 44 CFR 59.24.

25. *Regular Program.* The final phase of a community's participation in the National Flood Insurance Program. In this phase, a Flood Insurance Rate Map is in effect and full limits of coverage are available under the Act and the regulations prescribed pursuant to the Act.

26. *Residential Condominium Building.* A condominium building, containing one or more family units and in which at least 75 percent of the floor area is residential.

27. *Special Flood Hazard Area (SFHA).* An area having special flood or mudflow, and/or flood-related erosion hazards, and shown on a Flood Hazard Boundary Map or Flood Insurance Rate Map as Zone A, AO, A1–A30, AE, A99, AH, AR, AR/A, AR/AE, AR/AH, AR/AO, AR/A1–A30, V1–V30, VE, or V.

28. *Stock* means merchandise held in storage or for sale, raw materials, and in-process or finished goods, including supplies used in their packing or shipping. Stock does not include any property not insured under Section IV. Property Not Insured, except the following:

a. Parts and equipment for self-propelled vehicles;

b. Furnishings and equipment for watercraft;

c. Spas and hot-tubs, including their equipment; and

d. Swimming pool equipment.

29. *Unit.* A single-family residential or nonresidential space you own in a condominium building.

30. *Valued Policy.* A policy in which the insured and the insurer agree on the value of the property insured, that value being payable in the event of a total loss. The Standard Flood Insurance Policy is not a valued policy.

III. Property Insured

A. Coverage A—Building Property

We insure against direct physical loss by or from flood to:

1. The building described on the Declarations Page at the described location. If the building is a condominium building and the named insured is the condominium association, Coverage A includes all units within the building and the improvements within the units, provided the units are owned in common by all unit owners.

2. Building property located at another location for a period of 45 days at another location, as set forth in III.C.2.b, Property Removed to Safety.

3. Additions and extensions attached to and in contact with the building by means of a rigid exterior wall, a solid load-bearing interior wall, a stairway, an elevated walkway, or a roof. At your option, additions and extensions connected by any of these methods may be separately insured. Additions and extensions attached to and in contact with the building by means of a common interior wall that is not a solid load-bearing wall are always considered part of the building and cannot be separately insured.

4. The following fixtures, machinery, and equipment, which are insured under Coverage A only:

a. Awnings and canopies;

b. Blinds;

c. Carpet permanently installed over unfinished flooring;

d. Central air conditioners;

e. Elevator equipment;

f. Fire extinguishing apparatus;

g. Fire sprinkler systems;

h. Walk-in freezers;

i. Furnaces;

j. Light fixtures;

k. Outdoor antennas and aerials attached to buildings;

l. Permanently installed cupboards, bookcases, paneling, and wallpaper;

m. Pumps and machinery for operating pumps;

n. Ventilating equipment;

o. Wall mirrors, permanently installed; and

p. In the units within the building, installed:
(1) Built-in dishwashers;
(2) Built-in microwave ovens;
(3) Garbage disposal units;
(4) Hot water heaters, including solar water heaters;
(5) Kitchen cabinets;
(6) Plumbing fixtures;
(7) Radiators;
(8) Ranges;
(9) Refrigerators; and
(10) Stoves.

5. Materials and supplies to be used for construction, alteration, or repair of the insured building while the materials and supplies are stored in a fully enclosed building at the described location or on an adjacent property.

6. A building under construction, alteration, or repair at the described location.

a. If the structure is not yet walled or roofed as described in the definition for building (*see* II.C.6.a) then coverage applies:
(1) Only while such work is in progress; or
(2) If such work is halted, only for a period of up to 90 continuous days thereafter.

b. However, coverage does not apply until the building is walled and roofed if the lowest floor, including the basement floor, of a non-elevated building or the lowest elevated floor of an elevated building is:
(1) Below the base flood elevation in Zones AH, AE, A1–A30, AR, AR/AE, AR/AH, AR/A1–A30, AR/A, AR/AO; or
(2) Below the base flood elevation adjusted to include the effect of wave action in Zones VE or V1–V30.

The lowest floor level is based on the bottom of the lowest horizontal structural member of the floor in Zones VE or V1–V30 or the top of the floor in Zones AH, AE, A1–A30, AR, AR/AE, AR/AH, AR/A1–A30, AR/A, and AR/AO.

7. A manufactured home or a travel trailer, as described in the II.C.6. If the manufactured home or travel trailer is in a special flood hazard area, it must be anchored in the following manner at the time of the loss:
a. By over-the-top or frame ties to ground anchors; or
b. In accordance with the manufacturer's specifications; or
c. In compliance with the community's floodplain management requirements unless it has been continuously insured by the NFIP at the same described location since September 30, 1982.

8. Items of property below the lowest elevated floor of an elevated post-FIRM building located in zones A1–A30, AE, AH, AR, AR/A, AR/AE, AR/AH, AR/A1–A30, V1–V30, or VE, or in a basement regardless of the zone. Coverage is limited to the following:
a. Any of the following items, if installed in their functioning locations and, if necessary for operation, connected to a power source:
(1) Central air conditioners;
(2) Cisterns and the water in them;
(3) Drywall for walls and ceilings in a basement and the cost of labor to nail it, unfinished and unfloated and not taped, to the framing;
(4) Electrical junction and circuit breaker boxes;
(5) Electrical outlets and switches;
(6) Elevators, dumbwaiters, and related equipment, except for related equipment installed below the base flood elevation after September 30, 1987;
(7) Fuel tanks and the fuel in them;
(8) Furnaces and hot water heaters;
(9) Heat pumps;
(10) Nonflammable insulation in a basement;
(11) Pumps and tanks used in solar energy systems;
(12) Stairways and staircases attached to the building, not separated from it by elevated walkways;
(13) Sump pumps;
(14) Water softeners and the chemicals in them, water filters, and faucets installed as an integral part of the plumbing system;
(15) Well water tanks and pumps;
(16) Required utility connections for any item in this list; and
(17) Footings, foundations, posts, pilings, piers, or other foundation walls and anchorage systems required to support a building.
b. Clean-up.

B. Coverage B—Personal Property

1. If you have purchased personal property coverage, we insure, subject to B.2–4 below, against direct physical loss by or from flood to personal property inside the fully enclosed insured building:
a. Owned solely by you, or in the case of a condominium, owned solely by the condominium association and used exclusively in the conduct of the business affairs of the condominium association; or
b. Owned in common by the unit owners of the condominium association.

2. We also insure such personal property for 45 days while stored at a temporary location, as set forth in III.C.2.b, Property Removed to Safety.

3. When this policy insures personal property, coverage will be either for household personal property or other than household personal property, while within the insured building, but not both.
a. If this policy insures household personal property, it will insure household personal property usual to a living quarters, that:
(1) Belongs to you, or a member of your household, or at your option:
(a) Your domestic worker;
(b) Your guest; or
(2) You may be legally liable for.

b. If this policy insures other than household personal property, it will insure your:
(1) Furniture and fixtures;
(2) Machinery and equipment;
(3) Stock; and
(4) Other personal property owned by you and used in your business, subject to IV, Property Not Insured.

4. Coverage for personal property includes the following property, subject to B.1.a and B.1.b above, which is insured under Coverage B, only:
a. Air conditioning units, portable or window type;
b. Carpets, not permanently installed, over unfinished flooring;
c. Carpets over finished flooring;
d. Clothes washers and dryers;
e. ''Cook-out'' grills;
f. Food freezers, other than walk-in, and food in any freezer;
g. Outdoor equipment and furniture stored inside the insured building;
h. Ovens and the like; and
i. Portable microwave ovens and portable dishwashers.

5. Coverage for items of property below the lowest elevated floor of an elevated post-FIRM building located in Zones A1–A30, AE, AH, AR, AR/A, AR/AE, AR/AH, AR/A1–A30, V1–V30, or VE, or in a basement regardless of the zone, is limited to the following items, if installed in their functioning locations and, if necessary for operation, connected to a power source:
a. Air conditioning units, portable or window type;
b. Clothes washers and dryers; and
c. Food freezers, other than walk-in, and food in any freezer.

6. Special Limits. We will pay no more than $2,500 for any loss to one or more of the following kinds of personal property:
a. Artwork, photographs, collectibles, or memorabilia, including but not limited to, porcelain or other figures, and sports cards.
b. Rare books or autographed items.
c. Jewelry, watches, precious and semi-precious stones, or articles of gold, silver, or platinum.
d. Furs or any article containing fur that represents its principal value.

7. We will pay only for the functional value of antiques.

8. If you are a tenant, you may apply up to 10 percent of the Coverage B limit to improvements:
a. Made a part of the building you occupy; and
b. You acquired, or made at your expense, even though you cannot legally remove.
This coverage does not increase the amount of insurance that applies to insured personal property.

9. If you are a condominium unit owner, you may apply up to 10 percent of the Coverage B limit to cover loss to interior:
a. walls,
b. floors, and
c. ceilings,
that are not insured under a policy issued to the condominium association insuring the condominium building.
This coverage does not increase the amount of insurance that applies to insured personal property.

10. If you are a tenant, personal property must be inside the fully enclosed building.

C. Coverage C—Other Coverages

1. Debris Removal

a. We will pay the expense to remove non-owned debris that is on or in insured property and debris of insured property anywhere.
b. If you or a member of your household perform the removal work, the value of your work will be based on the Federal minimum wage.
c. This coverage does not increase the Coverage A or Coverage B limit of liability.

2. Loss Avoidance Measures

a. Sandbags, Supplies, and Labor
(1) We will pay up to $1,000 for costs you incur to protect the insured building from a flood or imminent danger of flood, for the following:
(a) Your reasonable expenses to buy:
(i) Sandbags, including sand to fill them;
(ii) Fill for temporary levees;
(iii) Pumps; and
(iv) Plastic sheeting and lumber used in connection with these items.
(b) The value of work, at the Federal minimum wage, that you perform.
(2) This coverage for Sandbags, Supplies, and Labor only applies if damage to insured property by or from flood is imminent and the threat of flood damage is apparent enough to lead a person of common prudence to anticipate flood damage. One of the following must also occur:
(a) A general and temporary condition of flooding in the area near the described location must occur, even if the flood does not reach the building; or
(b) A legally authorized official must issue an evacuation order or other civil order for the community in which the building is located calling for measures to preserve life and property from the peril of flood.
This coverage does not increase the Coverage A or Coverage B limit of liability.
b. Property Removed to Safety
(1) We will pay up to $1,000 for the reasonable expenses you incur to move insured property to a place other than the described location that contains the property in order to protect it from flood or the imminent danger of flood. Reasonable expenses include the value of work, at the Federal minimum

wage, you or a member of your household perform.

(2) If you move insured property to a location other than the described location that contains the property in order to protect it from flood or the imminent danger of flood, we will cover such property while at that location for a period of 45 consecutive days from the date you begin to move it there. The personal property that is moved must be placed in a fully enclosed building or otherwise reasonably protected from the elements.

(3) Any property removed, including a moveable home described in II.6, must be placed above ground level or outside of the special flood hazard area.

(4) This coverage does not increase the Coverage A or Coverage B limit of liability.

3. Pollution Damage

We will pay for damage caused by pollutants to insured property if the discharge, seepage, migration, release, or escape of the pollutants is caused by or results from flood. The most we will pay under this coverage is $10,000. This coverage does not increase the Coverage A or Coverage B limits of liability. Any payment under this provision when combined with all other payments for the same loss cannot exceed the replacement cost or actual cash value, as appropriate, of the insured property. This coverage does not include the testing for or monitoring of pollutants unless required by law or ordinance.

D. Coverage D—Increased Cost of Compliance

1. General

This policy pays you to comply with a State or local floodplain management law or ordinance affecting repair or reconstruction of a building suffering flood damage. Compliance activities eligible for payment are: elevation, floodproofing, relocation, or demolition (or any combination of these activities) of your building. Eligible floodproofing activities are limited to:

a. Non-residential buildings.

b. Residential buildings with basements that satisfy FEMA's standards published in the Code of Federal Regulations [44 CFR 60.6(b) or (c)].

2. Limits of Liability

We will pay you up to $30,000 under this Coverage D (Increased Cost of Compliance), which only applies to policies with building coverage (Coverage A). Our payment of claims under Coverage D is in addition to the amount of coverage which you selected on the application and which appears on the Declarations Page. However, the maximum you can collect under this policy for both Coverage A (Building Property) and Coverage D (Increased Cost of Compliance) cannot exceed the maximum permitted under the Act. We do NOT charge a separate deductible for a claim under Coverage D.

3. Eligibility

a. A building insured under Coverage A (Building Property) sustaining a loss caused by a flood as defined by this policy must:

(1) Be a ''repetitive loss building.'' A repetitive loss building is one that meets the following conditions:

(a) The building is insured by a contract of flood insurance issued under the NFIP.

(b) The building has suffered flood damage on two occasions during a 10-year period which ends on the date of the second loss.

(c) The cost to repair the flood damage, on average, equaled or exceeded 25 percent of the market value of the building at the time of each flood loss.

(d) In addition to the current claim, the NFIP must have paid the previous qualifying claim, and the State or community must have a cumulative, substantial damage provision or repetitive loss provision in its floodplain management law or ordinance being enforced against the building; or

(2) Be a building that has had flood damage in which the cost to repair equals or exceeds 50 percent of the market value of the building at the time of the flood. The State or community must have a substantial damage provision in its floodplain management law or ordinance being enforced against the building.

b. This Coverage D pays you to comply with State or local floodplain management laws or ordinances that meet the minimum standards of the National Flood Insurance Program found in the Code of Federal Regulations at 44 CFR 60.3. We pay for compliance activities that exceed those standards under these conditions:

(1) 3.a.1 above.

(2) Elevation or floodproofing in any risk zone to preliminary or advisory base flood elevations provided by FEMA which the State or local government has adopted and is enforcing for flood-damaged buildings in such areas. (This includes compliance activities in B, C, X, or D zones which are being changed to zones with base flood elevations. This also includes compliance activities in zones where base flood elevations are being increased, and a flood-damaged building must comply with the higher advisory base flood elevation.) Increased Cost of Compliance coverage does not apply to situations in B, C, X, or D zones where the community has derived its own elevations and is enforcing elevation or floodproofing requirements for flood-damaged buildings to elevations derived solely by the community.

(3) Elevation or floodproofing above the base flood elevation to meet State or local

''free-board'' requirements, *i.e.*, that a building must be elevated above the base flood elevation.

c. Under the minimum NFIP criteria at 44 CFR 60.3(b)(4), States and communities must require the elevation or floodproofing of buildings in unnumbered A zones to the base flood elevation where elevation data is obtained from a Federal, State, or other source. Such compliance activities are also eligible for Coverage D.

d. This coverage will pay for the incremental cost, after demolition or relocation, of elevating or floodproofing a building during its rebuilding at the same or another site to meet State or local floodplain management laws or ordinances, subject to the exclusion at III.D.5.g.

e. This coverage will pay to bring a flood-damaged building into compliance with State or local floodplain management laws or ordinances even if the building had received a variance before the present loss from the applicable floodplain management requirements.

4. Conditions

a. When a building insured under Coverage A—Building Property sustains a loss caused by a flood, our payment for the loss under this Coverage D will be for the increased cost to elevate, floodproof, relocate, or demolish (or any combination of these activities) caused by the enforcement of current State or local floodplain management ordinances or laws. Our payment for eligible demolition activities will be for the cost to demolish and clear the site of the building debris or a portion thereof caused by the enforcement of current State or local floodplain management ordinances or laws. Eligible activities for the cost of clearing the site will include those necessary to discontinue utility service to the site and ensure proper abandonment of on-site utilities.

b. When the building is repaired or rebuilt, it must be intended for the same occupancy as the present building unless otherwise required by current floodplain management ordinances or laws.

5. Exclusions

Under this Coverage D (Increased Cost of Compliance), we will not pay for:

a. The cost to comply with any floodplain management law or ordinance in communities participating in the Emergency Program.

b. The cost associated with enforcement of any ordinance or law that requires any insured or others to test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of pollutants.

c. The loss in value to any insured building due to the requirements of any ordinance or law.

d. The loss in residual value of the undamaged portion of a building demolished as a consequence of enforcement of any State or local floodplain management law or ordinance.

e. Any Increased Cost of Compliance under this Coverage D:

(1) Until the building is elevated, floodproofed, demolished, or relocated on the same or to another premises; and

(2) Unless the building is elevated, floodproofed, demolished, or relocated as soon as reasonably possible after the loss, not to exceed two years.

f. Any code upgrade requirements, *e.g.*, plumbing or electrical wiring, not specifically related to the State or local floodplain management law or ordinance.

g. Any compliance activities needed to bring additions or improvements made after the loss occurred into compliance with State or local floodplain management laws or ordinances.

h. Loss due to any ordinance or law that you were required to comply with before the current loss.

i. Any rebuilding activity to standards that do not meet the NFIP's minimum requirements. This includes any situation where the insured has received from the State or community a variance in connection with the current flood loss to rebuild the property to an elevation below the base flood elevation.

j. Increased Cost of Compliance for a garage or carport.

k. Any building insured under an NFIP Group Flood Insurance Policy.

l. Assessments made by a condominium association on individual condominium unit owners to pay increased costs of repairing commonly owned buildings after a flood in compliance with State or local floodplain management ordinances or laws.

6. Other Provisions

All other conditions and provisions of the policy apply.

IV. PROPERTY NOT INSURED

We do not insure any of the following property:

1. Personal property not inside the fully enclosed building.

2. A building, and personal property in it, located entirely in, on, or over water or seaward of mean high tide if it was constructed or substantially improved after September 30, 1982.

3. Open structures, including a building used as a boathouse or any structure or building into which boats are floated, and

personal property located in, on, or over water.

4. Recreational vehicles other than travel trailers described in the II.C.6.c, whether affixed to a permanent foundation or on wheels.

5. Self-propelled vehicles or machines, including their parts and equipment. However, we do cover self-propelled vehicles or machines not licensed for use on public roads and are:

a. Used mainly to service the described location; or

b. Designed and used to assist handicapped persons, while the vehicles or machines are inside a building at the described location.

6. Land, land values, lawns, trees, shrubs, plants, growing crops, or animals.

7. Accounts, bills, coins, currency, deeds, evidences of debt, medals, money, scrip, stored value cards, postage stamps, securities, bullion, manuscripts, or other valuable papers.

8. Underground structures and equipment, including wells, septic tanks, and septic systems.

9. Those portions of walks, walkways, decks, driveways, patios, and other surfaces, all whether protected by a roof or not, located outside the perimeter, exterior walls of the insured building.

10. Containers, including related equipment, such as, but not limited to, tanks containing gases or liquids.

11. Buildings or units and all their contents if more than 49 percent of the actual cash value of the building is below ground, unless the lowest level is at or above the base flood elevation and is below ground by reason of earth having been used as insulation material in conjunction with energy efficient building techniques.

12. Fences, retaining walls, seawalls, bulkheads, wharves, piers, bridges, and docks.

13. Aircraft or watercraft, or their furnishings and equipment.

14. Hot tubs and spas that are not bathroom fixtures, and swimming pools, and their equipment, such as, but not limited to, heaters, filters, pumps, and pipes, wherever located.

15. Property not eligible for flood insurance pursuant to the provisions of the Coastal Barrier Resources Act and the Coastal Barrier Improvement Act and amendments to these Acts.

16. Personal property owned by or in the care, custody or control of a unit owner, except for property of the type and under the circumstances set forth under III. Coverage B—Personal Property of this policy.

17. A residential condominium building located in a Regular Program community.

V. EXCLUSIONS

A. We only pay for ''direct physical loss by or from flood,'' which means that we do not pay you for:

1. Loss of revenue or profits;

2. Loss of access to the insured property or described location;

3. Loss of use of the insured property or described location;

4. Loss from interruption of business or production;

5. Any additional living expenses incurred while the insured building is being repaired or is unable to be occupied for any reason;

6. The cost of complying with any ordinance or law requiring or regulating the construction, demolition, remodeling, renovation, or repair of property, including removal of any resulting debris. This exclusion does not apply to any eligible activities we describe in Coverage D—Increased Cost of Compliance; or

7. Any other economic loss you suffer.

B. *Flood in Progress.* If this policy became effective as of the time of a loan closing, as provided by 44 CFR 61.11(b), we will not pay for a loss caused by a flood that is a continuation of a flood that existed prior to coverage becoming effective. In all other circumstances, we will not pay for a loss caused by a flood that is a continuation of a flood that existed on or before the day you submitted the application for coverage under this policy and the correct premium. We will determine the date of application using 44 CFR 611.11(f).

C. We do not insure for loss to property caused directly by earth movement even if the earth movement is caused by flood. Some examples of earth movement that we do not cover are:

1. Earthquake;

2. Landslide;

3. Land subsidence;

4. Sinkholes;

5. Destabilization or movement of land that results from accumulation of water in subsurface land areas; or

6. Gradual erosion.

We do, however, pay for losses from mudflow and land subsidence as a result of erosion that are specifically insured under our definition of flood (*see* II.B.1.c and II.B.2).

D. We do not insure for direct physical loss caused directly or indirectly by:

1. The pressure or weight of ice;

2. Freezing or thawing;

3. Rain, snow, sleet, hail, or water spray;

4. Water, moisture, mildew, or mold damage that results primarily from any condition:

a. Substantially confined to the insured building; or

b. That is within your control including, but not limited to:

(1) Design, structural, or mechanical defects;

(2) Failures, stoppages, or breakage of water or sewer lines, drains, pumps, fixtures, or equipment; or

(3) Failure to inspect and maintain the property after a flood recedes;

5. Water or water-borne material that:

a. Backs up through sewers or drains;

b. Discharges or overflows from a sump, sump pump, or related equipment; or

c. Seeps or leaks on or through the insured property;

unless there is a flood in the area and the flood is the proximate cause of the sewer or drain backup, sump pump discharge or overflow, or the seepage of water;

6. The pressure or weight of water unless there is a flood in the area and the flood is the proximate cause of the damage from the pressure or weight of water;

7. Power, heating, or cooling failure unless the failure results from direct physical loss by or from flood to power, heating, or cooling equipment on the described location;

8. Theft, fire, explosion, wind, or windstorm;

9. Anything you or any member of your household do or conspires to do to deliberately cause loss by flood; or

10. Alteration of the insured property that significantly increases the risk of flooding.

E. We do not insure for loss to any building or personal property located on land leased from the Federal Government, arising from or incident to the flooding of the land by the Federal Government, where the lease expressly holds the Federal Government harmless under flood insurance issued under any Federal Government program.

VI. Deductibles

A. When a loss is insured under this policy, we will pay only that part of the loss that exceeds your deductible amount, subject to the limit of liability that applies. The deductible amount is shown on the Declarations Page.

However, when a building under construction, alteration, or repair does not have at least two rigid exterior walls and a fully secured roof at the time of loss, your deductible amount will be two times the deductible that would otherwise apply to a completed building.

B. In each loss from flood, separate deductibles apply to the building and personal property insured by this policy.

C. The deductible does NOT apply to:

1. III.C.2. Loss Avoidance Measures; or

2. III.D. Increased Cost of Compliance.

VII. General Conditions

A. Pair and Set Clause

In case of loss to an article that is part of a pair or set, we will have the option of paying you:

1. An amount equal to the cost of replacing the lost, damaged, or destroyed article, minus its depreciation; or

2. The amount that represents the fair proportion of the total value of the pair or set that the lost, damaged, or destroyed article bears to the pair or set.

B. Other Insurance

1. If a loss insured by this policy is also insured by other insurance that includes flood coverage not issued under the Act, we will not pay more than the amount of insurance that you are entitled to for lost, damaged, or destroyed property insured under this policy subject to the following:

a. We will pay only the proportion of the loss that the amount of insurance that applies under this policy bears to the total amount of insurance covering the loss, unless VII.B.1.b or c below applies.

b. If the other policy has a provision stating that it is excess insurance, this policy will be primary.

c. This policy will be primary (but subject to its own deductible) up to the deductible in the other flood policy (except another policy as described in VII.B.1.b above). When the other deductible amount is reached, this policy will participate in the same proportion that the amount of insurance under this policy bears to the total amount of both policies, for the remainder of the loss.

2. Where this policy insures a condominium association and there is a National Flood Insurance Program flood insurance policy in the name of a unit owner that insures the same loss as this policy, then this policy will be primary.

C. Amendments, Waivers, Assignment

This policy cannot be changed, nor can any of its provisions be waived, without the express written consent of the Federal Insurance Administrator. No action that we take under the terms of this policy can constitute a waiver of any of our rights. You may assign this policy in writing when you transfer title of your property to someone else except under these conditions:

1. When this policy insures only personal property; or

2. When this policy insures a building under construction.

D. Insufficient Premium or Rating Information

1. Applicability. The following provisions apply to all instances where the premium paid on this policy is insufficient or where the rating information is insufficient, such as where an Elevation Certificate is not provided.

2. Reforming the Policy with Reduced Coverage. Except as otherwise provided in VII.D.1 and VII.D.4, if the premium we received from you was not sufficient to buy the

kinds and amounts of coverage you requested, we will provide only the kinds and amounts of coverage that can be purchased for the premium payment we received.

a. For the purpose of determining whether your premium payment is sufficient to buy the kinds and amounts of coverage you requested, we will first deduct the costs of all applicable fees and surcharges.

b. If the amount paid, after deducting the costs of all applicable fees and surcharges, is not sufficient to buy any amount of coverage, your payment will be refunded. Unless the policy is reformed to increase the coverage amount to the amount originally requested pursuant to VII.D.3, this policy will be cancelled, and no claims will be paid under this policy.

c. Coverage limits on the reformed policy will be based upon the amount of premium submitted per type of coverage, but will not exceed the amount originally requested.

3. Discovery of Insufficient Premium or Rating Information. If we discover that your premium payment was not sufficient to buy the requested amount of coverage, the policy will be reformed as described in VII.D.2. You have the option of increasing the amount of coverage resulting from this reformation to the amount you requested as follows:

a. Insufficient Premium. If we discover that your premium payment was not sufficient to buy the requested amount of coverage, we will send you, and any mortgagee or trustee known to us, a bill for the required additional premium for the current policy term (or that portion of the current policy term following any endorsement changing the amount of coverage). If it is discovered that the initial amount charged to you for any fees or surcharges is incorrect, the difference will be added or deducted, as applicable, to the total amount in this bill.

(1) If you or the mortgagee or trustee pay the additional amount due within 30 days from the date of our bill, we will reform the policy to increase the amount of coverage to the originally requested amount, effective to the beginning of the current policy term (or subsequent date of any endorsement changing the amount of coverage).

(2) If you or the mortgagee or trustee do not pay the additional amount due within 30 days of the date of our bill, any flood insurance claim will be settled based on the reduced amount of coverage.

(3) As applicable, you have the option of paying all or part of the amount due out of a claim payment based on the originally requested amount of coverage.

b. Insufficient Rating Information. If we determine that the rating information we have is insufficient and prevents us from calculating the additional premium, we will ask you to send the required information. You must submit the information within 60 days of our request.

(1) If we receive the information within 60 days of our request, we will determine the amount of additional premium for the current policy term and follow the procedure in VII.D.3.a above.

(2) If we do not receive the information within 60 days of our request, no claims will be paid until the requested information is provided. Coverage will be limited to the amount of coverage that can be purchased for the payments we received, as determined when the requested information is provided.

4. Coverage Increases. If we do not receive the amounts requested in VII.D.3.a or the additional information requested in VII.D.3.b by the date it is due, the amount of coverage under this policy can only be increased by endorsement subject to the appropriate waiting period. However, no coverage increases will be allowed until you have provided the information requested in VII.D.3.b is provided.

5. Falsifying Information. However, if we find that you or your agent intentionally did not tell us, or falsified, any important fact or circumstance or did anything fraudulent relating to this insurance, the provisions of VIII.A apply.

E. Policy Renewal

1. This policy will expire at 12:01 a.m. on the last day of the policy term.

2. We must receive the payment of the appropriate renewal premium within 30 days of the expiration date.

3. If we find, however, that we did not place your renewal notice into the U.S. Postal Service, or if we did mail it, we made a mistake, *e.g.*, we used an incorrect, incomplete, or illegible address, which delayed its delivery to you before the due date for the renewal premium, then we will follow these procedures:

a. If you or your agent notified us, not later than one year after the date on which the payment of the renewal premium was due, of non-receipt of a renewal notice before the due date for the renewal premium, and we determine that the circumstances in the preceding paragraph apply, we will mail a second bill providing a revised due date, which will be 30 days after the date on which the bill is mailed.

b. If we do not receive the premium requested in the second bill by the revised due date, then we will not renew the policy. In that case, the policy will remain as an expired policy as of the expiration date shown on the Declarations Page.

4. In connection with the renewal of this policy, we may ask you during the policy term to recertify, on a Recertification Questionnaire that we will provide to you, the rating information used to rate your most

recent application for or renewal of insurance.

F. Conditions Suspending or Restricting Insurance

We are not liable for loss that occurs while there is a hazard that is increased by any means within your control or knowledge.

G. Requirements in Case of Loss

In case of a flood loss to insured property, you must:

1. Give prompt written notice to us.
2. As soon as reasonably possible, separate the damaged and undamaged property, putting it in the best possible order so that we may examine it.
3. Prepare an inventory of damaged property showing the quantity, description, actual cash value, and amount of loss. Attach all bills, receipts, and related documents.
4. Within 60 days after the loss, send us a proof of loss, which is your statement of the amount you are claiming under the policy signed and sworn to by you, and which furnishes us with the following information:
a. The date and time of loss;
b. A brief explanation of how the loss happened;
c. Your interest (for example, ''owner'') and the interest, if any, of others in the damaged property;
d. Details of any other insurance that may cover the loss;
e. Changes in title or occupancy of the insured property during the term of the policy;
f. Specifications of damaged buildings and detailed repair estimates;
g. Names of mortgagees or anyone else having a lien, charge, or claim against the insured property;
h. Details about who occupied any insured building at the time of loss and for what purpose; and
i. The inventory of damaged personal property described in G.3 above.
5. In completing the proof of loss, you must use your own judgment concerning the amount of loss and justify that amount.
6. You must cooperate with the adjuster or representative in the investigation of the claim.
7. The insurance adjuster whom we hire to investigate your claim may furnish you with a proof of loss form, and she or he may help you complete it. However, this is a matter of courtesy only, and you must still send us a proof of loss within 60 days after the loss even if the adjuster does not furnish the form or help you complete it.
8. We have not authorized the adjuster to approve or disapprove claims or to tell you whether we will approve your claim.
9. At our option, we may accept the adjuster's report of the loss instead of your proof of loss. The adjuster's report will include information about your loss and the damages you sustained. You must sign the adjuster's report. At our option, we may require you to swear to the report.

H. Our Options After a Loss

Options we may, in our sole discretion, exercise after loss include the following:

1. At such reasonable times and places that we may designate, you must:
a. Show us or our representative the damaged property;
b. Submit to examination under oath, while not in the presence of another insured, and sign the same; and
c. Permit us to examine and make extracts and copies of:
(1) Any policies of property insurance insuring you against loss and the deed establishing your ownership of the insured real property;
(2) Condominium association documents including the Declarations of the condominium, its Articles of Association or Incorporation, Bylaws, rules and regulations, and other relevant documents if you are a unit owner in a condominium building; and
(3) All books of accounts, bills, invoices and other vouchers, or certified copies pertaining to the damaged property if the originals are lost.
2. We may request, in writing, that you furnish us with a complete inventory of the lost, damaged or destroyed property, including:
a. Quantities and costs;
b. Actual cash values or replacement cost (whichever is appropriate);
c. Amounts of loss claimed;
d. Any written plans and specifications for repair of the damaged property that you can reasonably make available to us; and
e. Evidence that prior flood damage has been repaired.
3. If we give you written notice within 30 days after we receive your signed, sworn proof of loss, we may:
a. Repair, rebuild, or replace any part of the lost, damaged, or destroyed property with material or property of like kind and quality or its functional equivalent; and
b. Take all or any part of the damaged property at the value that we agree upon or its appraised value.

I. No Benefit to Bailee

No person or organization, other than you, having custody of insured property will benefit from this insurance.

J. Loss Payment

1. We will adjust all losses with you. We will pay you unless some other person or entity is named in the policy or is legally entitled to receive payment. Loss will be payable 60 days after we receive your proof of loss (or

within 90 days after the insurance adjuster files the adjuster's report signed and sworn to by you in lieu of a proof of loss) and:

a. We reach an agreement with you;

b. There is an entry of a final judgment; or

c. There is a filing of an appraisal award with us, as provided in VII.M.

2. If we reject your proof of loss in whole or in part you may:

a. Accept our denial of your claim;

b. Exercise your rights under this policy; or

c. File an amended proof of loss as long as it is filed within 60 days of the date of the loss.

K. Abandonment

You may not abandon damaged or undamaged insured property to us.

L. Salvage

We may permit you to keep damaged insured property after a loss, and we will reduce the amount of the loss proceeds payable to you under the policy by the value of the salvage.

M. Appraisal

If you and we fail to agree on the actual cash value of the damaged property so as to determine the amount of loss, either may demand an appraisal of the loss. In this event, you and we will each choose a competent and impartial appraiser within 20 days after receiving a written request from the other. The two appraisers will choose an umpire. If they cannot agree upon an umpire within 15 days, you or we may request that the choice be made by a judge of a court of record in the state where the insured property is located. The appraisers will separately state the actual cash value and the amount of loss to each item. If the appraisers submit a written report of an agreement to us, the amount agreed upon will be the amount of loss. If they fail to agree, they will submit their differences to the umpire. A decision agreed to by any two will set the amount of actual cash value and loss.

Each party will:

1. Pay its own appraiser; and

2. Bear the other expenses of the appraisal and umpire equally.

N. Mortgage Clause

1. The word ''mortgagee'' includes trustee.

2. Any loss payable under Coverage A—Building Property will be paid to any mortgagee of whom we have actual notice, as well as any other mortgagee or loss payee determined to exist at the time of loss, and you, as interests appear. If more than one mortgagee is named, the order of payment will be the same as the order of precedence of the mortgages.

3. If we deny your claim, that denial will not apply to a valid claim of the mortgagee, if the mortgagee:

a. Notifies us of any change in the ownership or occupancy, or substantial change in risk of which the mortgagee is aware;

b. Pays any premium due under this policy on demand if you have neglected to pay the premium; and

c. Submits a signed, sworn proof of loss within 60 days after receiving notice from us of your failure to do so.

4. All terms of this policy apply to the mortgagee.

5. The mortgagee has the right to receive loss payment even if the mortgagee has started foreclosure or similar action on the building.

6. If we decide to cancel or not renew this policy, it will continue in effect for the benefit of the mortgagee only for 30 days after we notify the mortgagee of the cancellation or non-renewal.

7. If we pay the mortgagee for any loss and deny payment to you, we are subrogated to all the rights of the mortgagee granted under the mortgage on the property. Subrogation will not impair the right of the mortgagee to recover the full amount of the mortgagee's claim.

O. Suit Against Us

You may not sue us to recover money under this policy unless you have complied with all the requirements of the policy. If you do sue, you must start the suit within one year of the date of the written denial of all or part of the claim, and you must file the suit in the United States District Court of the district in which the insured property was located at the time of loss. This requirement applies to any claim that you may have under this policy and to any dispute that you may have arising out of the handling of any claim under the policy.

P. Subrogation

Whenever we make a payment for a loss under this policy, we are subrogated to your right to recover for that loss from any other person. That means that your right to recover for a loss that was partly or totally caused by someone else is automatically transferred to us, to the extent that we have paid you for the loss. We may require you to acknowledge this transfer in writing. After the loss, you may not give up our right to recover this money or do anything that would prevent us from recovering it. If you make any claim against any person who caused your loss and recover any money, you must pay us back first before you may keep any of that money.

Q. Continuous Lake Flood

1. If an insured building has been flooded by rising lake waters continuously for 90 days or more and it appears reasonably certain that a continuation of this flooding will result in an insured loss to the insured building equal to or greater than the building policy limits plus the deductible or the maximum payable under the policy for any one building loss, we will pay you the lesser of these two amounts without waiting for the further damage to occur if you sign a release agreeing:

a. To make no further claim under this policy;

b. Not to seek renewal of this policy;

c. Not to apply for any flood insurance under the Act for property at the described location;

d. Not to seek a premium refund for current or prior terms.

If the policy term ends before the insured building has been flooded continuously for 90 days, the provisions of this paragraph Q.1 will apply when the insured building suffers a covered loss before the policy term ends.

2. If your insured building is subject to continuous lake flooding from a closed basin lake, you may elect to file a claim under either paragraph Q.1 above or Q.2 (A ''closed basin lake'' is a natural lake from which water leaves primarily through evaporation and whose surface area now exceeds or has exceeded one square mile at any time in the recorded past. Most of the nation's closed basin lakes are in the western half of the United States where annual evaporation exceeds annual precipitation and where lake levels and surface areas are subject to considerable fluctuation due to wide variations in the climate. These lakes may overtop their basins on rare occasions.) Under this paragraph Q.2, we will pay your claim as if the building is a total loss even though it has not been continuously inundated for 90 days, subject to the following conditions:

a. Lake floodwaters must damage or imminently threaten to damage your building.

b. Before approval of your claim, you must:

(1) Agree to a claim payment that reflects your buying back the salvage on a negotiated basis; and

(2) Grant the conservation easement described in FEMA's ''Policy Guidance for Closed Basin Lakes'' to be recorded in the office of the local recorder of deeds. FEMA, in consultation with the community in which the property is located, will identify on a map an area or areas of special consideration (ASC) in which there is a potential for flood damage from continuous lake flooding. FEMA will give the community the agreed-upon map showing the ASC. This easement will only apply to that portion of the property in the ASC. It will allow certain agricultural and recreational uses of the land. The only structures it will allow on any portion of the property within the ASC are certain simple agricultural and recreational structures. If any of these allowable structures are insurable buildings under the NFIP and are insured under the NFIP, they will not be eligible for the benefits of this paragraph Q.2. If a U.S. Army Corps of Engineers certified flood control project or otherwise certified flood control project later protects the property, FEMA will, upon request, amend the ASC to remove areas protected by those projects. The restrictions of the easement will then no longer apply to any portion of the property removed from the ASC; and

(3) Comply with paragraphs Q.1.a through Q.1.d above.

c. Within 90 days of approval of your claim, you must move your building to a new location outside the ASC. FEMA will give you an additional 30 days to move if you show there is sufficient reason to extend the time.

d. Before the final payment of your claim, you must acquire an elevation certificate and a floodplain development permit from the local floodplain administrator for the new location of your building.

e. Before the approval of your claim, the community having jurisdiction over your building must:

(1) Adopt a permanent land use ordinance, or a temporary moratorium for a period not to exceed 6 months to be followed immediately by a permanent land use ordinance that is consistent with the provisions specified in the easement required in paragraph Q.2.b above;

(2) Agree to declare and report any violations of this ordinance to FEMA so that under Section 1316 of the National Flood Insurance Act of 1968, as amended, flood insurance to the building can be denied; and

(3) Agree to maintain as deed-restricted, for purposes compatible with open space or agricultural or recreational use only, any affected property the community acquires an interest in. These deed restrictions must be consistent with the provisions of paragraph Q.2.b above, except that, even if a certified project protects the property, the land use restrictions continue to apply if the property was acquired under the Hazard Mitigation Grant Program or the Flood Mitigation Assistance Program. If a non-profit land trust organization receives the property as a donation, that organization must maintain the property as deed-restricted, consistent with the provisions of paragraph Q2.b. above.

f. Before the approval of your claim, the affected State must take all action set forth in FEMA's ''Policy Guidance for Closed Basin Lakes.''

g. You must have NFIP flood insurance coverage continuously in effect from a date established by FEMA until you file a claim under paragraph Q.2. If a subsequent owner

buys NFIP insurance that goes into effect within 60 days of the date of transfer of title, any gap in coverage during that 60-day period will not be a violation of this continuous coverage requirement. For the purpose of honoring a claim under this paragraph Q.2, we will not consider to be in effect any increased coverage that became effective after the date established by FEMA. The exception to this is any increased coverage in the amount suggested by your insurer as an inflation adjustment.

h. This paragraph Q.2 will be in effect for a community when the FEMA Regional Administrator for the affected region provides to the community, in writing, the following:

(1) Confirmation that the community and the State are in compliance with the conditions in paragraphs Q.2.e and Q.2.f above; and

(2) The date by which you must have flood insurance in effect.

R. Loss Settlement

We will pay the least of the following amounts after application of the deductible:

1. The applicable amount of insurance under this policy;

2. The actual cash value; or

3. The amount it would cost to repair or replace the property with material of like kind and quality within a reasonable time after the loss.

VIII. POLICY NULLIFICATION, CANCELLATION, AND NON-RENEWAL

A. Policy Nullification for Fraud, Misrepresentation, or Making False Statements

1. With respect to all insureds under this policy, this policy is void and has no legal force and effect if at any time, before or after a loss, you or any other insured or your agent have, with respect to this policy or any other NFIP insurance:

a. Concealed or misrepresented any material fact or circumstance;

b. Engaged in fraudulent conduct; or

c. Made false statements.

2. Policies voided under A.1 cannot be renewed or replaced by a new NFIP policy.

3. Policies are void as of the date the acts described in A.1 above were committed.

4. Fines, civil penalties, and imprisonment under applicable Federal laws may also apply to the acts of fraud or concealment described above.

B. Policy Nullification for Reasons Other Than Fraud

1. This policy is void from its inception, and has no legal force or effect, if:

a. The property listed on the application is located in a community that was not participating in the NFIP on this policy's inception date and did not join or reenter the program during the policy term and before the loss occurred;

b. The property listed on the application is otherwise not eligible for coverage under the NFIP at the time of the initial application;

c. You never had an insurable interest in the property listed on the application;

d. You provided an agent with an application and payment, but the payment did not clear; or

e. We receive notice from you, prior to the policy effective date, that you have determined not to take the policy and you are not subject to a requirement to obtain and maintain flood insurance pursuant to any statute, regulation, or contract.

2. In such cases, you will be entitled to a full refund of all premium, fees, and surcharges received. However, if a claim was paid for a policy that is void, the claim payment must be returned to FEMA or offset from the premiums to be refunded before the refund will be processed.

C. Cancellation of the Policy by You

1. You may cancel this policy in accordance with the terms and conditions of this policy and the applicable rules and regulations of the NFIP.

2. If you cancel this policy, you may be entitled to a full or partial refund of premium, surcharges, or fees under the terms and conditions of this policy and the applicable rules and regulations of the NFIP.

D. Cancellation of the Policy by Us

1. Cancellation for Underpayment of Amounts Owed on Policy. This policy will be cancelled, pursuant to VII.D.2, if it is determined that the premium amount you paid is not sufficient to buy any amount of coverage, and you do not pay the additional amount of premium owed to increase the coverage to the originally requested amount within the required time period.

2. Cancellation Due to Lack of an Insurable Interest.

a. If you no longer have an insurable interest in the insured property, we will cancel this policy. You will cease to have an insurable interest if:

(1) For building coverage, the building was sold, destroyed, or removed.

(2) For contents coverage, the contents were sold or transferred ownership, or the contents were completely removed from the described location.

b. If your policy is cancelled for this reason, you may be entitled to a partial refund of premium under the applicable rules and regulations of the NFIP.

3. Cancellation of Duplicate Policies.

a. Your property may not be insured by more than one NFIP policy, and payment for damages to your property will only be made under one policy.

b. If the property is insured by more than one NFIP policy, we will cancel all but one of the policies. The policy, or policies, will be selected for cancellation in accordance with 44 CFR 62.5 and the applicable rules and guidance of the NFIP.

c. If this policy is cancelled pursuant to VIII.D.3.b, you may be entitled to a full or partial refund of premium, surcharges, or fees under the terms and conditions of this policy and the applicable rules and regulations of the NFIP.

4. Cancellation Due to Physical Alteration of Property

a. If the insured building has been physically altered in such a manner that it is no longer eligible for flood insurance coverage, we will cancel this policy.

b. If your policy is cancelled for this reason, you may be entitled to a partial refund of premium under the terms and conditions of this policy and the applicable rules and regulations of the NFIP.

E. Non-Renewal of the Policy by Us

Your policy will not be renewed if:

1. The community where your insured property is located is suspended or stops participating in the NFIP;

2. Your building is otherwise ineligible for flood insurance under the Act;

3. You have failed to provide the information we requested for the purpose of rating the policy within the required deadline.

IX. LIBERALIZATION CLAUSE

If we make a change that broadens your coverage under this edition of our policy, but does not require any additional premium, then that change will automatically apply to your insurance as of the date we implement the change, provided that this implementation date falls within 60 days before or during the policy term stated on the Declarations Page.

X. WHAT LAW GOVERNS

This policy and all disputes arising from the insurer's policy issuance, policy administration, or the handling of any claim under the policy are governed exclusively by the flood insurance regulations issued by FEMA, the National Flood Insurance Act of 1968, as amended (42 U.S.C. 4001, *et seq.*), and Federal common law.

In Witness Whereof, we have signed this policy below and hereby enter into this Insurance Agreement.

Federal Insurance and Mitigation Administration

[85 FR 43968, July 20, 2020; 86 FR 10029, Feb. 18, 2021; 86 FR 31178, June 11, 2021; 86 FR 47395, Aug. 25, 2021; 86 FR 48511, Aug. 31, 2021]

APPENDIX A(3) TO PART 61

FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE AND MITIGATION ADMINISTRATION

Standard Flood Insurance Policy

Residential Condominium Building Association Policy

Please read the policy carefully. The flood insurance provided is subject to limitations, restrictions, and exclusions.

I. AGREEMENT

A. This policy insures only a residential condominium building in a regular program community. If the community reverts to emergency program status during the policy term and remains as an emergency program community at time of renewal, this policy cannot be renewed.

B. The Federal Emergency Management Agency (FEMA) provides flood insurance under the terms of the National Flood Insurance Act of 1968 and its amendments, and Title 44 of the Code of Federal Regulations.

C. We will pay you for direct physical loss by or from flood to your insured property if you:

1. Have paid the full amount due (including applicable premiums, surcharges, and fees);

2. Comply with all terms and conditions of this policy; and

3. Have furnished accurate information and statements.

D. We have the right to review the information you give us at any time and revise your policy based on our review.

E. This policy insures only one building. If you own more than one building, coverage will apply to the single building specifically described in the Flood Insurance Application.

F. Subject to the exception in Section I.G below, multiple policies with building coverage cannot be issued to insure a single building to one insured or to different insureds, even if issued through different NFIP insurers. Payment for damages may only be made under a single policy for building damages under Coverage A—Building Property.

G. A Dwelling Form policy with building coverage may be issued to a unit owner in a condominium building that is also insured under a Residential Condominium Building Association Policy (RCBAP). However, no more than $250,000 may be paid in combined benefits for a single unit under the Dwelling Form and the RCBAP. We will only pay for damage once. Items of damage paid for under a RCBAP cannot also be claimed under the Dwelling Form policy.

II. DEFINITIONS

A. In this policy, ''you'' and ''your'' refer to the named insured(s) shown on the Declarations Page of this policy. The named insured must also include the building owner if building coverage is purchased. Insured(s) includes: Any mortgagee and loss payee named in the Application and Declarations Page, as well as any other mortgagee or loss payee determined to have an existing interest at the time of loss, in the order of precedence. ''We,'' ''us,'' and ''our'' refer to the insurer.

Some definitions are complex because they are provided as they appear in the law or regulations, or result from court cases.

B. *Flood,* as used in this flood insurance policy, means:

1. A general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties (one of which is your property) from:

a. Overflow of inland or tidal waters;

b. Unusual and rapid accumulation or runoff of surface waters from any source;

c. Mudflow.

2. Collapse or subsidence of land along the shore of a lake or similar body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels which result in a flood as defined in B.1.a above.

C. The following are the other key definitions we use in this policy:

1. *Act*. The National Flood Insurance Act of 1968 and any amendments to it.

2. *Actual Cash Value*. The cost to replace an insured item of property at the time of loss, less the value of its physical depreciation.

3. *Application*. The statement made and signed by you or your agent in applying for this policy. The application gives information we use to determine the eligibility of the risk, the kind of policy to be issued, and the correct premium payment. The application is part of this flood insurance policy.

4. *Base Flood*. A flood having a one percent chance of being equaled or exceeded in any given year.

5. *Basement*. Any area of a building, including any sunken room or sunken portion of a room, having its floor below ground level on all sides.

6. *Building*

a. A structure with two or more outside rigid walls and a fully secured roof that is affixed to a permanent site;

b. A manufactured home, also known as a mobile home, is a structure built on a permanent chassis, transported to its site in one or more sections, and affixed to a permanent foundation; or

c. A travel trailer without wheels, built on a chassis and affixed to a permanent foundation, that is regulated under the community's floodplain management and building ordinances or laws.

Building does not mean a gas or liquid storage tank, shipping container, or a recreational vehicle, park trailer, or other similar vehicle, except as described in C.6.c above.

7. *Cancellation*. The ending of the insurance coverage provided by this policy before the expiration date.

8. *Condominium*. That form of ownership of one or more buildings in which each unit owner has an undivided interest in common elements.

9. *Condominium Association*. The entity made up of the unit owners responsible for the maintenance and operation of:

a. Common elements owned in undivided shares by unit owners; and

b. Other buildings in which the unit owners have use rights; where membership in the entity is a required condition of ownership.

10. *Condominium Building*. A type of building for which the form of ownership is one in which each unit owner has an undivided interest in common elements of the building.

11. *Declarations Page*. A computer-generated summary of information you provided in your application for insurance. The Declarations Page also describes the term of the policy, limits of coverage, and displays the premium and our name. The Declarations Page is a part of this flood insurance policy.

12. *Deductible*. The fixed amount of an insured loss that is your responsibility and that is incurred by you before any amounts are paid for the insured loss under this policy.

13. *Described Location*. The location where the insured building or personal property are found. The described location is shown on the Declarations Page.

14. *Direct Physical Loss By or From Flood*. Loss or damage to insured property, directly caused by a flood. There must be evidence of physical changes to the property.

15. *Elevated Building*. A building that has no basement and that has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

16. *Emergency Program*. The initial phase of a community's participation in the National Flood Insurance Program. During this phase, only limited amounts of insurance are available under the Act and the regulations prescribed pursuant to the Act.

17. *Federal Policy Fee*. A flat rate charge you must pay on each new or renewal policy to defray certain administrative expenses incurred in carrying out the National Flood Insurance Program.

18. *Improvements*. Fixtures, alterations, installations, or additions comprising a part of the residential condominium building, including improvements in the units.

19. *Mudflow*. A river of liquid and flowing mud on the surface of normally dry land areas, as when earth is carried by a current of water. Other earth movements, such as landslide, slope failure, or a saturated soil mass moving by liquidity down a slope, are not mudflows.

20. *National Flood Insurance Program (NFIP)*. The program of flood insurance coverage and floodplain management administered under the Act and applicable Federal regulations in Title 44 of the Code of Federal Regulations, Subchapter B.

21. *Policy*. The entire written contract between you and us. It includes:

a. This printed form;

b. The application and Declarations Page;

c. Any endorsement(s) that may be issued; and

d. Any renewal certificate indicating that coverage has been instituted for a new policy and new policy term. Only one building, which you specifically described in the application, may be insured under this policy.

22. *Pollutants*. Substances that include, but are not limited to, any solid, liquid, gaseous, or thermal irritant or contaminant, including smoke, vapor, soot, fumes, acids, alkalis, chemicals, and waste. ''Waste'' includes, but is not limited to, materials to be recycled, reconditioned, or reclaimed.

23. *Post-FIRM Building*. A building for which construction or substantial improvement occurred after December 31, 1974, or on or after the effective date of an initial Flood Insurance Rate Map (FIRM), whichever is later.

24. *Probation Surcharge*. A flat charge you must pay on each new or renewal policy issued covering property in a community the NFIP has placed on probation under the provisions of 44 CFR 59.24.

25. *Regular Program*. The final phase of a community's participation in the National Flood Insurance Program. In this phase, a Flood Insurance Rate Map is in effect and full limits of coverage are available under the Act and the regulations prescribed pursuant to the Act.

26. *Residential Condominium Building*. A building, condominium, containing one or more family units and in which at least 75 percent of the floor area is residential.

27. *Special Flood Hazard Area (SFHA)*. An area having special flood or mudflow, and/or flood-related erosion hazards, and shown on a Flood Hazard Boundary Map or Flood Insurance Rate Map as Zone A, AO, A1–A30, AE, A99, AH, AR, AR/A, AR/AE, AR/AH, AR/AO, AR/A1–A30, V1–V30, VE, or V.

28. *Unit*. A single-family residential space in a residential condominium building.

29. *Valued Policy*. A policy in which the insured and the insurer agree on the value of the property insured, that value being payable in the event of a total loss. The Standard Flood Insurance Policy is not a valued policy.

III. Property Insured

A. Coverage A—Building Property

We insure against direct physical loss by or from flood to:

1. The residential condominium building described on the Declarations Page at the described location, including all units within the building and the improvements within the units.

2. We also insure such building property for a period of 45 days at another location, as set forth in III.C.2.b, Property Removed to Safety.

3. Additions and extensions attached to and in contact with the building by means of a rigid exterior wall, a solid load-bearing interior wall, a stairway, an elevated walkway, or a roof. At your option, additions and extensions connected by any of these methods may be separately insured. Additions and extensions attached to and in contact with the building by means of a common interior wall that is not a solid load-bearing wall are always considered part of the building and cannot be separately insured.

4. The following fixtures, machinery and equipment, including its units, which are insured under Coverage A only:

a. Awnings and canopies;

b. Blinds;

c. Carpet permanently installed over unfinished flooring;

d. Central air conditioners;

e. Elevator equipment;

f. Fire extinguishing apparatus;

g. Fire sprinkler systems;

h. Walk-in freezers;

i. Furnaces;

j. Light fixtures;

k. Outdoor antennas and aerials fastened to buildings;

l. Permanently installed cupboards, bookcases, paneling, and wallpaper;

m. Pumps and machinery for operating pumps;

n. Ventilating equipment;

o. Wall mirrors, permanently installed; and

p. In the units within the building, installed:

(1) Built-in dishwashers;

(2) Built-in microwave ovens;

(3) Garbage disposal units;

(4) Hot water heaters, including solar water heaters;

(5) Kitchen cabinets;

(6) Plumbing fixtures;

(7) Radiators;

(8) Ranges;

(9) Refrigerators; and

(10) Stoves.

5. Materials and supplies to be used for construction, alteration or repair of the insured building while the materials and supplies are stored in a fully enclosed building at the described location or on an adjacent property.

6. A building under construction, alteration, or repair at the described location.

a. If the structure is not yet walled or roofed as described in the definition for building (*see* II.C.6.a) then coverage applies:

(1) Only while such work is in progress; or

(2) If such work is halted, only for a period of up to 90 continuous days thereafter.

b. However, coverage does not apply until the building is walled and roofed if the lowest floor, including the basement floor, of a non-elevated building or the lowest elevated floor of an elevated building is:

(1) Below the base flood elevation in Zones AH, AE, A1–30, AR, AR/AE, AR/AH, AR/A1–30, AR/A, AR/AO; or

(2) Below the base flood elevation adjusted to include the effect of wave action in Zones VE or V1–30.

The lowest floor level is based on the bottom of the lowest horizontal structural member of the floor in Zones VE or V1–V30 or top of the floor in Zones AH, AE, A1–A30, AR, AR/AE, AR/AH, AR/A1–A30, AR/A, and AR/AO.

7. A manufactured home or a travel trailer, as described in the II.C.6. If the manufactured home is in a special flood hazard area, it must be anchored in the following manner at the time of the loss:

a. By over-the-top or frame ties to ground anchors; or

b. In accordance with the manufacturer's specifications; or

c. In compliance with the community's floodplain management requirements unless it has been continuously insured by the NFIP at the same described location since September 30, 1982.

8. Items of property below the lowest elevated floor of an elevated post-FIRM building located in zones A1–A30, AE, AH, AR, AR/A, AR/AE, AR/AH, AR/A1–A30, V1–V30, or VE, or in a basement regardless of the zone. Coverage is limited to the following:

a. Any of the following items, if installed in their functioning locations and, if necessary for operation, connected to a power source:

(1) Central air conditioners;

(2) Cisterns and the water in them;

(3) Drywall for walls and ceilings in a basement and the cost of labor to nail it, unfinished and unfloated and not taped, to the framing;

(4) Electrical junction and circuit breaker boxes;

(5) Electrical outlets and switches;

(6) Elevators, dumbwaiters, and related equipment, except for related equipment installed below the base flood elevation after September 30, 1987;

(7) Fuel tanks and the fuel in them;

(8) Furnaces and hot water heaters;

(9) Heat pumps;

(10) Nonflammable insulation in a basement;

(11) Pumps and tanks used in solar energy systems;

(12) Stairways and staircases attached to the building, not separated from it by elevated walkways;

(13) Sump pumps;

(14) Water softeners and the chemicals in them, water filters, and faucets installed as an integral part of the plumbing system;

(15) Well water tanks and pumps;

(16) Required utility connections for any item in this list; and

(17) Footings, foundations, posts, pilings, piers, or other foundation walls and anchorage systems required to support a building.

b. Clean-up.

B. Coverage B—Personal Property

1. If you have purchased personal property coverage, we insure, subject to B.2 and B.3 below, against direct physical loss by or from flood to personal property that is inside the fully enclosed insured building and is:

a. Owned by the unit owners of the condominium association in common, meaning property in which each unit owner has an undivided ownership interest; or

b. Owned solely by the condominium association and used exclusively in the conduct of the business affairs of the condominium association.

2. We also insure such personal property for 45 days while stored at a temporary location, as set forth in III.C.2.b, Property Removed to Safety.

3. Coverage for personal property includes the following property, subject to B.1. above, which is insured under Coverage B only:

a. Air conditioning units, portable or window type;

b. Carpets, not permanently installed, over unfinished flooring;

c. Carpets over finished flooring;

d. Clothes washers and dryers;

e. ''Cook-out'' grills;

f. Food freezers, other than walk-in, and food in any freezer;

g. Outdoor equipment and furniture stored inside the insured building;

h. Ovens and the like; and

i. Portable microwave ovens and portable dishwashers.

4. Coverage for items of property in a building enclosure below the lowest elevated floor of an elevated post-FIRM building located in zones A1–A30, AE, AH, AR, AR/A, AR/AE, AR/AH, AR/A1–A30, V1–V30, or VE, or in a basement regardless of the zone, is limited to the following items, if installed in

their functioning locations and, if necessary for operation, connected to a power source:

a. Air conditioning units, portable or window type;

b. Clothes washers and dryers; and

c. Food freezers, other than walk-in, and food in any freezer.

5. Special Limits. We will pay no more than $2,500 for any one loss to one or more of the following kinds of personal property:

a. Artwork, photographs, collectibles, or memorabilia, including but not limited to, porcelain or other figures, and sports cards.

b. Rare books or autographed items.

c. Jewelry, watches, precious and semi-precious stones, or articles of gold, silver, or platinum.

d. Furs or any article containing fur which represents its principal value.

6. We will pay only for the functional value of antiques.

C. Coverage C—Other Coverages

1. Debris Removal

a. We will pay the expense to remove non-owned debris that is on or in insured property and debris of insured property anywhere.

b. If you or a member of your household perform the removal work, the value of your work will be based on the Federal minimum wage.

c. This coverage does not increase the Coverage A or Coverage B limit of liability.

2. Loss Avoidance Measures

a. Sandbags, Supplies, and Labor

(1) We will pay up to $1,000 for costs you incur to protect the insured building from a flood or imminent danger of flood, for the following:

(a) Your reasonable expenses to buy:

(i) Sandbags, including sand to fill them;

(ii) Fill for temporary levees;

(iii) Pumps; and

(iv) Plastic sheeting and lumber used in connection with these items.

(b) The value of work, at the Federal minimum wage, that you perform.

(2) This coverage for Sandbags, Supplies, and Labor only applies if damage to insured property by or from flood is imminent and the threat of flood damage is apparent enough to lead a person of common prudence to anticipate flood damage. One of the following must also occur:

(a) A general and temporary condition of flooding in the area near the described location must occur, even if the flood does not reach the building; or

(b) A legally authorized official must issue an evacuation order or other civil order for the community in which the building is located calling for measures to preserve life and property from the peril of flood.

This coverage does not increase the Coverage A or Coverage B limit of liability.

b. Property Removed to Safety

(1) We will pay up to $1,000 for the reasonable expenses you incur to move insured property to a place other than the described location that contains the property in order to protect it from flood or the imminent danger of flood. Reasonable expenses include the value of work, at the Federal minimum wage, you or a member of your household perform.

(2) If you move insured property to a location other than the described location that contains the property in order to protect it from flood or the imminent danger of flood, we will cover such property while at that location for a period of 45 consecutive days from the date you begin to move it there.

(3) The personal property that is moved must be placed in a fully enclosed building or otherwise reasonably protected from the elements. Any property removed, including a moveable home described in II.6.b and c, must be placed above ground level or outside of the special flood hazard area.

(4) This coverage does not increase the Coverage A or Coverage B limit of liability.

D. Coverage D—Increased Cost of Compliance

1. General

This policy pays you to comply with a State or local floodplain management law or ordinance affecting repair or reconstruction of a building suffering flood damage. Compliance activities eligible for payment are: elevation, floodproofing, relocation, or demolition (or any combination of these activities) of your building. Eligible floodproofing activities are limited to:

a. Non-residential buildings.

b. Residential buildings with basements that satisfy FEMA's standards published in the Code of Federal Regulations [44 CFR 60.6 (b) or (c)].

2. Limit of Liability

We will pay you up to $30,000 under this Coverage D (Increased Cost of Compliance), which only applies to policies with building coverage (Coverage A). Our payment of claims under Coverage D is in addition to the amount of coverage which you selected on the application and which appears on the Declarations Page. But, the maximum you can collect under this policy for both Coverage A—Building Property and Coverage D—Increased Cost of Compliance cannot exceed the maximum permitted under the Act. We do not charge a separate deductible for a claim under Coverage D.

3. Eligibility

a. A building insured under Coverage A (Building Property) sustaining a loss caused by a flood as defined by this policy must:

(1) Be a ''repetitive loss building.'' A repetitive loss building is one that meets the following conditions:

(a) The building is insured by a contract of flood insurance issued under the NFIP.

(b) The building has suffered flood damage on two occasions during a 10-year period which ends on the date of the second loss.

(c) The cost to repair the flood damage, on average, equaled or exceeded 25 percent of the market value of the building at the time of each flood loss.

(d) In addition to the current claim, the NFIP must have paid the previous qualifying claim, and the State or community must have a cumulative, substantial damage provision or repetitive loss provision in its floodplain management law or ordinance being enforced against the building; or

(2) Be a building that has had flood damage in which the cost to repair equals or exceeds 50 percent of the market value of the building at the time of the flood. The State or community must have a substantial damage provision in its floodplain management law or ordinance being enforced against the building.

b. This Coverage D pays you to comply with State or local floodplain management laws or ordinances that meet the minimum standards of the National Flood Insurance Program found in the Code of Federal Regulations at 44 CFR 60.3. We pay for compliance activities that exceed those standards under these conditions:

(1) 3.a.1 above.

(2) Elevation or floodproofing in any risk zone to preliminary or advisory base flood elevations provided by FEMA which the State or local government has adopted and is enforcing for flood-damaged buildings in such areas. (This includes compliance activities in B, C, X, or D zones which are being changed to zones with base flood elevations. This also includes compliance activities in zones where base flood elevations are being increased, and a flood-damaged building must comply with the higher advisory base flood elevation.) Increased Cost of Compliance coverage does not apply to situations in B, C, X, or D zones where the community has derived its own elevations and is enforcing elevation or floodproofing requirements for flood-damaged buildings to elevations derived solely by the community.

(3) Elevation or floodproofing above the base flood elevation to meet State or local ''freeboard'' requirements, *i.e.,* that a building must be elevated above the base flood elevation.

c. Under the minimum NFIP criteria at 44 CFR 60.3(b)(4), States and communities must require the elevation or floodproofing of buildings in unnumbered A zones to the base flood elevation where elevation data is obtained from a Federal, State, or other source. Such compliance activities are also eligible for Coverage D.

d. Coverage D will pay for the incremental cost, after demolition or relocation, of elevating or floodproofing a building during its rebuilding at the same or another site to meet State or local floodplain management laws or ordinances, subject to Exclusion D.5.g below relating to improvements.

e. Coverage D will pay to bring a flood-damaged building into compliance with State or local floodplain management laws or ordinances even if the building had received a variance before the present loss from the applicable floodplain management requirements.

4. Conditions

a. When a building insured under Coverage A—Building Property sustains a loss caused by a flood, our payment for the loss under this Coverage D will be for the increased cost to elevate, floodproof, relocate, or demolish (or any combination of these activities) caused by the enforcement of current State or local floodplain management ordinances or laws. Our payment for eligible demolition activities will be for the cost to demolish and clear the site of the building debris or a portion thereof caused by the enforcement of current State or local floodplain management ordinances or laws. Eligible activities for the cost of clearing the site will include those necessary to discontinue utility service to the site and ensure proper abandonment of on-site utilities.

b. When the building is repaired or rebuilt, it must be intended for the same occupancy as the present building unless otherwise required by current floodplain management ordinances or laws.

5. Exclusions

Under this Coverage D (Increased Cost of Compliance) we will not pay for:

a. The cost to comply with any floodplain management law or ordinance in communities participating in the Emergency Program.

b. The cost associated with enforcement of any ordinance or law that requires any insured or others to test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of pollutants.

c. The loss in value to any insured building due to the requirements of any ordinance or law.

d. The loss in residual value of the undamaged portion of a building demolished as a consequence of enforcement of any

State or local floodplain management law or ordinance.

e. Any Increased Cost of Compliance under this Coverage D:

(1) Until the building is elevated, floodproofed, demolished, or relocated on the same or to another premises; and

(2) Unless the building is elevated, floodproofed, demolished, or relocated as soon as reasonably possible after the loss, not to exceed two years.

f. Any code upgrade requirements, *e.g.*, plumbing or electrical wiring, not specifically related to the State or local floodplain management law or ordinance.

g. Any compliance activities needed to bring additions or improvements made after the loss occurred into compliance with State or local floodplain management laws or ordinances.

h. Loss due to any ordinance or law that you were required to comply with before the current loss.

i. Any rebuilding activity to standards that do not meet the NFIP's minimum requirements. This includes any situation where the insured has received from the State or community a variance in connection with the current flood loss to rebuild the property to an elevation below the base flood elevation.

j. Increased Cost of Compliance for a garage or carport.

k. Any building insured under an NFIP Group Flood Insurance Policy.

l. Assessments made by a condominium association on individual condominium unit owners to pay increased costs of repairing commonly owned buildings after a flood in compliance with State or local floodplain management ordinances or laws.

6. Other Provisions

a. Increased Cost of Compliance coverage will not be included in the calculation to determine whether coverage meets the coinsurance requirement for replacement cost coverage under Art. VIII.R. (''Loss Settlement'').

b. All other conditions and provisions of this policy apply.

IV. Property Not Insured

We do not insure any of the following:

1. Personal property not inside a building.

2. A building, and personal property in it, located entirely in, on, or over water or seaward of mean high tide if it was constructed or substantially improved after September 30, 1982.

3. Open structures, including a building used as a boathouse or any structure or building into which boats are floated, and personal property located in, on, or over water.

4. Recreational vehicles other than travel trailers described in the Definitions section (see II.C.6.c) whether affixed to a permanent foundation or on wheels.

5. Self-propelled vehicles or machines, including their parts and equipment. However, we do cover self-propelled vehicles or machines not licensed for use on public roads that are:

a. Used mainly to service the described location; or

b. Designed and used to assist handicapped persons, while the vehicles or machines are inside a building at the described location.

6. Land, land values, lawns, trees, shrubs, plants, growing crops, or animals.

7. Accounts, bills, coins, currency, deeds, evidences of debt, medals, money, scrip, stored value cards, postage stamps, securities, bullion, manuscripts, or other valuable papers.

8. Underground structures and equipment, including wells, septic tanks, and septic systems.

9. Those portions of walks, walkways, decks, driveways, patios, and other surfaces, all whether protected by a roof or not, located outside the perimeter, exterior walls of the insured building.

10. Containers, including related equipment, such as, but not limited to, tanks containing gases or liquids.

11. Buildings and all their contents if more than 49 percent of the actual cash value of the building is below ground, unless the lowest level is at or above the base flood elevation and is below ground by reason of earth having been used as insulation material in conjunction with energy efficient building techniques.

12. Fences, retaining walls, seawalls, bulkheads, wharves, piers, bridges, and docks.

13. Aircraft or watercraft, or their furnishings and equipment.

14. Hot tubs and spas that are not bathroom fixtures, and swimming pools, and their equipment such as, but not limited to, heaters, filters, pumps, and pipes, wherever located.

15. Property not eligible for flood insurance pursuant to the provisions of the Coastal Barrier Resources Act and the Coastal Barrier Improvements Act of 1990 and amendments to these Acts.

16. Personal property used in connection with any incidental commercial occupancy or use of the building.

V. Exclusions

A. We only pay for ''direct physical loss by or from flood,'' which means that we do not pay you for:

1. Loss of revenue or profits;

2. Loss of access to the insured property or described location;

3. Loss of use of the insured property or described location;

4. Loss from interruption of business or production;

5. Any additional living expenses incurred while the insured building is being repaired or is unable to be occupied for any reason;

6. The cost of complying with any ordinance or law requiring or regulating the construction, demolition, remodeling, renovation, or repair of property, including removal of any resulting debris. This exclusion does not apply to any eligible activities we describe in Coverage D—Increased Cost of Compliance; or

7. Any other economic loss you suffer.

B. *Flood in Progress.* If this policy became effective as of the time of a loan closing, as provided by 44 CFR 61.11(b), we will not pay for a loss caused by a flood that is a continuation of a flood that existed prior to coverage becoming effective. In all other circumstances, we will not pay for a loss caused by a flood that is a continuation of a flood that existed on or before the day you submitted the application for coverage under this policy and the correct premium. We will determine the date of application using 44 CFR 611.11(f).

C. We do not insure for loss to property caused directly by earth movement even if the earth movement is caused by flood. Some examples of earth movement that we do not cover are:

1. Earthquake;

2. Landslide;

3. Land subsidence;

4. Sinkholes;

5. Destabilization or movement of land that results from accumulation of water in subsurface land areas; or

6. Gradual erosion.

We do, however, pay for losses from mudflow and land subsidence as a result of erosion that are specifically covered under our definition of flood (*see* II.B.1.c and II.B.2).

D. We do not insure for direct physical loss caused directly or indirectly by:

1. The pressure or weight of ice;

2. Freezing or thawing;

3. Rain, snow, sleet, hail, or water spray;

4. Water, moisture, mildew, or mold damage that results primarily from any condition:

a. Substantially confined to the insured building; or

b. That is within your control including, but not limited to:

(1) Design, structural, or mechanical defects;

(2) Failures, stoppages, or breakage of water or sewer lines, drains, pumps, fixtures, or equipment; or

(3) Failure to inspect and maintain the property after a flood recedes;

5. Water or water-borne material that:

a. Backs up through sewers or drains;

b. Discharges or overflows from a sump, sump pump, or related equipment; or

c. Seeps or leaks on or through the insured property; unless there is a flood in the area and the flood is the proximate cause of the sewer or drain backup, sump pump discharge or overflow, or the seepage of water;

6. The pressure or weight of water unless there is a flood in the area and the flood is the proximate cause of the damage from the pressure or weight of water;

7. Power, heating, or cooling failure unless the failure results from direct physical loss by or from flood to power, heating, or cooling equipment on the described location;

8. Theft, fire, explosion, wind, or windstorm;

9. Anything you or your agents do or conspire to do to cause loss by flood deliberately; or

10. Alteration of the insured property that significantly increases the risk of flooding.

E. We do not insure for loss to any building or personal property located on land leased from the Federal Government, arising from or incident to the flooding of the land by the Federal Government, where the lease expressly holds the Federal Government harmless under flood insurance issued under any Federal Government program.

F. We do not pay for the testing for or monitoring of pollutants unless required by law or ordinance.

VI. Deductibles

A. When a loss is insured under this policy, we will pay only that part of the loss that exceeds your deductible amount, subject to the limit of liability that applies. The deductible amount is shown on the Declarations Page.

However, when a building under construction, alteration, or repair does not have at least two rigid exterior walls and a fully secured roof at the time of loss, your deductible amount will be two times the deductible that would otherwise apply to a completed building.

B. In each loss from flood, separate deductibles apply to the building and personal property insured by this policy.

C. No deductible applies to:

1. III.C.2. Loss Avoidance Measures; or

2. III.D. Increased Cost of Compliance.

VII. Coinsurance

A. This Coinsurance Section applies only to coverage on the building.

B. We will impose a penalty on loss payment unless the amount of insurance applicable to the damaged building is:

1. At least 80 percent of its replacement cost; or

2. The maximum amount of insurance available for that building under the NFIP, whichever is less.

C. If the actual amount of insurance on the building is less than the required amount in

accordance with the terms of VII.B above, then loss payment is determined as follows (subject to all other relevant conditions in this policy, including those pertaining to valuation, adjustment, settlement, and payment of loss):

1. Divide the actual amount of insurance carried on the building by the required amount of insurance.

2. Multiply the amount of loss, before application of the deductible, by the figure determined in C.1 above.

3. Subtract the deductible from the figure determined in C.2 above.

We will pay the amount determined in C.3 above, or the amount of insurance carried, whichever is less. The amount of insurance carried, if in excess of the applicable maximum amount of insurance available under the NFIP, is reduced accordingly.

Examples

Example #1 (Inadequate Insurance)
Replacement value of the building—$250,000
Required amount of insurance—$200,000
(80 percent of replacement value of $250,000)
Actual amount of insurance carried—$180,000
Amount of the loss—$150,000
Deductible—$500
Step 1: 180,000/200,000 = .90
(90 percent of what should be carried.)
Step 2: 150,000 × .90 = 135,000
Step 3: 135,000 − 500 = 134,500

We will pay no more than $134,500. The remaining $15,500 is not covered due to the coinsurance penalty ($15,000) and application of the deductible ($500).

Example #2 (Adequate Insurance)
Replacement value of the building—$500,000
Required amount of insurance—$400,000
(80 percent of replacement value of $500,000)
Actual amount of insurance carried—$400,000
Amount of the loss—$200,000
Deductible—$500

In this example there is no coinsurance penalty, because the actual amount of insurance carried meets the required amount. We will pay no more than $199,500 ($200,000 amount of loss minus the $500 deductible).

D. In calculating the full replacement cost of a building:

1. The replacement cost value of any insured building property will be included;

2. The replacement cost value of any building property not insured under this policy will not be included; and

3. Only the replacement cost value of improvements installed by the condominium association will be included.

VIII. General Conditions

A. Pair and Set Clause

In case of loss to an article that is part of a pair or set, we will have the option of paying you:

1. An amount equal to the cost of replacing the lost, damaged, or destroyed article, minus its depreciation; or

2. The amount that represents the fair proportion of the total value of the pair or set that the lost, damaged, or destroyed article bears to the pair or set.

B. Other Insurance

1. If a loss insured by this policy is also insured by other insurance that includes flood coverage not issued under the Act, we will not pay more than the amount of insurance that you are entitled to for lost, damaged, or destroyed property insured under this policy subject to the following:

a. We will pay only the proportion of the loss that the amount of insurance that applies under this policy bears to the total amount of insurance covering the loss, unless VIII.B.1.b or c immediately below applies.

b. If the other policy has a provision stating that it is excess insurance, this policy will be primary.

c. This policy will be primary (but subject to its own deductible) up to the deductible in the other flood policy (except another policy as described in VIII.B.1.b. above). When the other deductible amount is reached, this policy will participate in the same proportion that the amount of insurance under this policy bears to the total amount of both policies, for the remainder of the loss.

2. If there is a National Flood Insurance Program flood insurance policy in the name of a unit owner that covers the same loss as this policy, then this policy will be primary.

C. Amendments, Waivers, Assignment

This policy cannot be changed, nor can any of its provisions be waived, without the express written consent of the Federal Insurance Administrator. No action we take under the terms of this policy constitutes a waiver of any of our rights. You may assign this policy in writing when you transfer title of your property to someone else except under these conditions:

1. When this policy insures only personal property; or

2. When this policy insures a building under construction.

D. Insufficient Premium or Rating Information

1. Applicability. The following provisions apply to all instances where the premium paid on this policy is insufficient or where the rating information is insufficient, such as where an Elevation Certificate is not provided.

2. Reforming the Policy with Reduced Coverage. Except as otherwise provided in VIII.D.1 and VIII.D.4, if the premium we received from you was not sufficient to buy the

kinds and amounts of coverage you requested, we will provide only the kinds and amounts of coverage that can be purchased for the premium payment we received.

a. For the purpose of determining whether your premium payment is sufficient to buy the kinds and amounts of coverage you requested, we will first deduct the costs of all applicable fees and surcharges.

b. If the amount paid, after deducting the costs of all applicable fees and surcharges, is not sufficient to buy any amount of coverage, your payment will be refunded. Unless the policy is reformed to increase the coverage amount to the amount originally requested pursuant to VIII.E.3, this policy will be cancelled, and no claims will be paid under this policy.

c. Coverage limits on the reformed policy will be based upon the amount of premium submitted per type of coverage, but will not exceed the amount originally requested.

3. Discovery of Insufficient Premium or Rating Information. If we discover that your premium payment was not sufficient to buy the requested amount of coverage, the policy will be reformed as described in VIII.D.2. You have the option of increasing the amount of coverage resulting from this reformation to the amount you requested as follows:

a. Insufficient Premium. If we discover that your premium payment was not sufficient to buy the requested amount of coverage, we will send you, and any mortgagee or trustee known to us, a bill for the required additional premium for the current policy term (or that portion of the current policy term following any endorsement changing the amount of coverage). If it is discovered that the initial amount charged to you for any fees or surcharges is incorrect, the difference will be added or deducted, as applicable, to the total amount in this bill.

(1) If you or the mortgagee or trustee pay the additional amount due within 30 days from the date of our bill, we will reform the policy to increase the amount of coverage to the originally requested amount, effective to the beginning of the current policy term (or subsequent date of any endorsement changing the amount of coverage).

(2) If you or the mortgagee or trustee do not pay the additional amount due within 30 days of the date of our bill, any flood insurance claim will be settled based on the reduced amount of coverage.

(3) As applicable, you have the option of paying all or part of the amount due out of a claim payment based on the originally requested amount of coverage.

b. Insufficient Rating Information. If we determine that the rating information we have is insufficient and prevents us from calculating the additional premium, we will ask you to send the required information. You must submit the information within 60 days of our request.

(1) If we receive the information within 60 days of our request, we will determine the amount of additional premium for the current policy term and follow the procedure in VIII.D.3.a above.

(2) If we do not receive the information within 60 days of our request, no claims will be paid until the requested information is provided. Coverage will be limited to the amount of coverage that can be purchased for the payments we received, as determined when the requested information is provided.

4. Coverage Increases. If we do not receive the amount requested in VIII.D.3.a or VIII.D.4.a, or the additional information requested in VIII.D.3.b or VIII.D.4.b by the date it is due, the amount of coverage under this policy can only be increased by endorsement subject to the appropriate waiting period. However, no coverage increases will be allowed until you have provided the information requested in VIII.D.3.b or VIII.D.4.b.

5. Falsifying Information. However, if we find that you or your agent intentionally did not tell us, or falsified, any important fact or circumstance or did anything fraudulent relating to this insurance, the provisions of IX.A apply.

E. Policy Renewal

1. This policy will expire at 12:01 a.m. on the last day of the policy term.

2. We must receive the payment of the appropriate renewal premium within 30 days of the expiration date.

3. If we find, however, that we did not place your renewal notice into the U.S. Postal Service, or if we did mail it, we made a mistake, *e.g.*, we used an incorrect, incomplete, or illegible address, which delayed its delivery to you before the due date for the renewal premium, then we will follow these procedures:

a. If you or your agent notified us, not later than one year after the date on which the payment of the renewal premium was due, of non-receipt of a renewal notice before the due date for the renewal premium, and we determine that the circumstances in the preceding paragraph apply, we will mail a second bill providing a revised due date, which will be 30 days after the date on which the bill is mailed.

b. If we do not receive the premium requested in the second bill by the revised due date, then we will not renew the policy. In that case, the policy will remain as an expired policy as of the expiration date shown on the Declarations Page.

c. In connection with the renewal of this policy, we may ask you during the policy term to recertify, on a Recertification Questionnaire that we will provide you, the rating information used to rate your most recent application for or renewal of insurance.

F. Conditions Suspending or Restricting Insurance

We are not liable for loss that occurs while there is a hazard that is increased by any means within your control or knowledge.

G. Requirements in Case of Loss

In case of a flood loss to insured property, you must:

1. Give prompt written notice to us.

2. As soon as reasonably possible, separate the damaged and undamaged property, putting it in the best possible order so that we may examine it.

3. Prepare an inventory of damaged property showing the quantity, description, actual cash value, and amount of loss. Attach all bills, receipts, and related documents.

4. Within 60 days after the loss, send us a proof of loss, which is your statement of the amount you are claiming under the policy signed and sworn to by you, and which furnishes us with the following information:

a. The date and time of loss;

b. A brief explanation of how the loss happened;

c. Your interest (for example, ''owner'') and the interest, if any, of others in the damaged property;

d. Details of any other insurance that may cover the loss;

e. Changes in title or occupancy of the insured property during the term of the policy;

f. Specifications of damaged buildings and detailed repair estimates;

g. Names of mortgagees or anyone else having a lien, charge, or claim against the insured property;

h. Details about who occupied any insured building at the time of loss and for what purpose; and

i. The inventory of damaged personal property described in G.3 above.

5. In completing the proof of loss, you must use your own judgment concerning the amount of loss and justify that amount.

6. You must cooperate with the adjuster or representative in the investigation of the claim.

7. The insurance adjuster whom we hire to investigate your claim may furnish you with a proof of loss form, and she or he may help you complete it. However, this is a matter of courtesy only, and you must still send us a proof of loss within 60 days after the loss even if the adjuster does not furnish the form or help you complete it.

8. We have not authorized the adjuster to approve or disapprove claims or to tell you whether we will approve your claim.

9. At our option, we may accept the adjuster's report of the loss instead of your proof of loss. The adjuster's report will include information about your loss and the damages you sustained. You must sign the adjuster's report. At our option, we may require you to swear to the report.

H. Our Options After a Loss

Options we may, in our sole discretion, exercise after loss include the following:

1. At such reasonable times and places that we may designate, you must:

a. Show us or our representative the damaged property;

b. Submit to examination under oath, while not in the presence of another insured, and sign the same; and

c. Permit us to examine and make extracts and copies of:

(1) Any policies of property insurance insuring you against loss and the deed establishing your ownership of the insured real property;

(2) Condominium association documents including the Declarations of the condominium, its Articles of Association or Incorporation, Bylaws, and rules and regulations; and

(3) All books of accounts, bills, invoices and other vouchers, or certified copies pertaining to the damaged property if the originals are lost.

2. We may request, in writing, that you furnish us with a complete inventory of the lost, damaged, or destroyed property, including:

a. Quantities and costs;

b. Actual cash values or replacement cost (whichever is appropriate);

c. Amounts of loss claimed;

d. Any written plans and specifications for repair of the damaged property that you can reasonably make available to us; and

e. Evidence that prior flood damage has been repaired.

3. If we give you written notice within 30 days after we receive your signed, sworn proof of loss, we may:

a. Repair, rebuild, or replace any part of the lost, damaged, or destroyed property with material or property of like kind and quality or its functional equivalent; and

b. Take all or any part of the damaged property at the value that we agree upon or its appraised value.

I. No Benefit to Bailee

No person or organization, other than you, having custody of insured property will benefit from this insurance.

J. Loss Payment

1. We will adjust all losses with you. We will pay you unless some other person or entity is named in the policy or is legally entitled to receive payment. Loss will be payable 60 days after we receive your proof of loss (or within 90 days after the insurance adjuster files the adjuster's report signed and sworn to by you in lieu of a proof of loss) and:

a. We reach an agreement with you;

b. There is an entry of a final judgment; or

c. There is a filing of an appraisal award with us, as provided in VIII.M.

2. If we reject your proof of loss in whole or in part you may:

a. Accept our denial of your claim;

b. Exercise your rights under this policy; or

c. File an amended proof of loss as long as it is filed within 60 days of the date of the loss.

K. Abandonment

You may not abandon damaged or undamaged insured property to us.

L. Salvage

We may permit you to keep damaged insured property after a loss, and we will reduce the amount of the loss proceeds payable to you under the policy by the value of the salvage.

M. Appraisal

If you and we fail to agree on the actual cash value or, if applicable, replacement cost of the damaged property so as to determine the amount of loss, then either may demand an appraisal of the loss. In this event, you and we will each choose a competent and impartial appraiser within 20 days after receiving a written request from the other. The two appraisers will choose an umpire. If they cannot agree upon an umpire within 15 days, you or we may request that the choice be made by a judge of a court of record in the state where the insured property is located. The appraisers will separately state the actual cash value, the replacement cost, and the amount of loss to each item. If the appraisers submit a written report of an agreement to us, the amount agreed upon will be the amount of loss. If they fail to agree, they will submit their differences to the umpire. A decision agreed to by any two will set the amount of actual cash value and loss, or if it applies, the replacement cost and loss.

Each party will:

1. Pay its own appraiser; and

2. Bear the other expenses of the appraisal and umpire equally.

N. Mortgage Clause

1. The word ''mortgagee'' includes trustee.

2. Any loss payable under Coverage A—Building Property will be paid to any mortgagee of whom we have actual notice, as well as any other mortgagee or loss payee determined to exist at the time of loss, and you, as interests appear. If more than one mortgagee is named, the order of payment will be the same as the order of precedence of the mortgages.

3. If we deny your claim, that denial will not apply to a valid claim of the mortgagee, if the mortgagee:

a. Notifies us of any change in the ownership or occupancy, or substantial change in risk of which the mortgagee is aware;

b. Pays any premium due under this policy on demand if you have neglected to pay the premium; and

c. Submits a signed, sworn proof of loss within 60 days after receiving notice from us of your failure to do so.

4. All terms of this policy apply to the mortgagee.

5. The mortgagee has the right to receive loss payment even if the mortgagee has started foreclosure or similar action on the building.

6. If we decide to cancel or not renew this policy, it will continue in effect for the benefit of the mortgagee only for 30 days after we notify the mortgagee of the cancellation or non-renewal.

7. If we pay the mortgagee for any loss and deny payment to you, we are subrogated to all the rights of the mortgagee granted under the mortgage on the property. Subrogation will not impair the right of the mortgagee to recover the full amount of the mortgagee's claim.

O. Suit Against Us

You may not sue us to recover money under this policy unless you have complied with all the requirements of the policy. If you do sue, you must start the suit within one year of the date of the written denial of all or part of the claim, and you must file the suit in the United States District Court of the district in which the insured property was located at the time of loss. This requirement applies to any claim that you may have under this policy and to any dispute that you may have arising out of the handling of any claim under the policy.

P. Subrogation

Whenever we make a payment for a loss under this policy, we are subrogated to your right to recover for that loss from any other person. That means that your right to recover for a loss that was partly or totally caused by someone else is automatically transferred to us, to the extent that we have paid you for the loss. We may require you to acknowledge this transfer in writing. After the loss, you may not give up our right to recover this money or do anything that would prevent us from recovering it. If you make any claim against any person who caused your loss and recover any money, you must pay us back first before you may keep any of that money.

Q. Continuous Lake Flood

1. If an insured building has been flooded by rising lake waters continuously for 90 days or more and it appears reasonably certain that a continuation of this flooding will result in an insured loss to the insured building equal to or greater than the building policy limits plus the deductible or the maximum payable under the policy for any one building loss, we will pay you the lesser of these two amounts without waiting for the further damage to occur if you sign a release agreeing:

a. To make no further claim under this policy;

b. Not to seek renewal of this policy;

c. Not to apply for any flood insurance under the Act for property at the described location;

d. Not to seek a premium refund for current or prior terms.

If the policy term ends before the insured building has been flooded continuously for 90 days, the provisions of this paragraph Q.1 will apply when the insured building suffers a covered loss before the policy term ends.

2. If your insured building is subject to continuous lake flooding from a closed basin lake, you may elect to file a claim under either paragraph Q.1 above or this paragraph Q.2 (A ''closed basin lake'' is a natural lake from which water leaves primarily through evaporation and whose surface area now exceeds or has exceeded one square mile at any time in the recorded past. Most of the nation's closed basin lakes are in the western half of the United States where annual evaporation exceeds annual precipitation and where lake levels and surface areas are subject to considerable fluctuation due to wide variations in the climate. These lakes may overtop their basins on rare occasions.) Under this paragraph Q.2, we will pay your claim as if the building is a total loss even though it has not been continuously inundated for 90 days, subject to the following conditions:

a. Lake floodwaters must damage or imminently threaten to damage your building.

b. Before approval of your claim, you must:

(1) Agree to a claim payment that reflects your buying back the salvage on a negotiated basis; and

(2) Grant the conservation easement contained in FEMA's ''Policy Guidance for Closed Basin Lakes,'' to be recorded in the office of the local recorder of deeds. FEMA, in consultation with the community in which the property is located, will identify on a map an area or areas of special consideration (ASC) in which there is a potential for flood damage from continuous lake flooding. FEMA will give the community the agreed-upon map showing the ASC. This easement will only apply to that portion of the property in the ASC. It will allow certain agricultural and recreational uses of the land. The only structures that it will allow on any portion of the property within the ASC are certain simple agricultural and recreational structures. If any of these allowable structures are insurable buildings under the NFIP and are insured under the NFIP, they will not be eligible for the benefits of this paragraph Q.2. If a U.S. Army Corps of Engineers certified flood control project or otherwise certified flood control project later protects the property, FEMA will, upon request, amend the ASC to remove areas protected by those projects. The restrictions of the easement will then no longer apply to any portion of the property removed from the ASC; and

(3) Comply with paragraphs Q.1.a through Q.1.d above.

c. Within 90 days of approval of your claim, you must move your building to a new location outside the ASC. FEMA will give you an additional 30 days to move if you show there is sufficient reason to extend the time.

d. Before the final payment of your claim, you must acquire an elevation certificate and a floodplain development permit from the local floodplain administrator for the new location of your building.

e. Before the approval of your claim, the community having jurisdiction over your building must:

(1) Adopt a permanent land use ordinance, or a temporary moratorium for a period not to exceed 6 months to be followed immediately by a permanent land use ordinance, that is consistent with the provisions specified in the easement required in paragraph Q.2.b above;

(2) Agree to declare and report any violations of this ordinance to FEMA so that under Section 1316 of the National Flood Insurance Act of 1968, as amended, flood insurance to the building can be denied; and

(3) Agree to maintain as deed-restricted, for purposes compatible with open space or agricultural or recreational use only, any affected property the community acquires an interest in. These deed restrictions must be consistent with the provisions of paragraph Q.2.b above, except that even if a certified project protects the property, the land use restrictions continue to apply if the property was acquired under the Hazard Mitigation Grant Program or the Flood Mitigation Assistance Program. If a non-profit land trust organization receives the property as a donation, that organization must maintain the property as deed-restricted, consistent with the provisions of paragraph Q.2.b above.

f. Before the approval of your claim, the affected State must take all action set forth in FEMA's ''Policy Guidance for Closed Basin Lakes.''

g. You must have NFIP flood insurance coverage continuously in effect from a date established by FEMA until you file a claim

under this paragraph Q.2. If a subsequent owner buys NFIP insurance that goes into effect within 60 days of the date of transfer of title, any gap in coverage during that 60-day period will not be a violation of this continuous coverage requirement. For the purpose of honoring a claim under this paragraph Q.2, we will not consider to be in effect any increased coverage that became effective after the date established by FEMA. The exception to this is any increased coverage in the amount suggested by your insurer as an inflation adjustment.

h. This paragraph Q.2 will be in effect for a community when the FEMA Regional Administrator for the affected region provides to the community, in writing, the following:

(1) Confirmation that the community and the State are in compliance with the conditions in paragraphs Q2.e and Q.2.f above; and

(2) The date by which you must have flood insurance in effect.

R. Loss Settlement

1. Introduction

This policy provides three methods of settling losses: Replacement Cost, Special Loss Settlement, and Actual Cash Value. Each method is used for a different type of property, as explained in a–c below.

a. Replacement Cost Loss Settlement, described in R.2 below applies to buildings other than manufactured homes or travel trailers.

b. Special Loss Settlement, described in R.3 below applies to a residential condominium building that is a travel trailer or a manufactured home.

c. Actual Cash Value Loss Settlement applies to all other property insured under this policy, as outlined in R.4. below.

2. Replacement Cost Loss Settlement

a. We will pay to repair or replace a damaged or destroyed building, after application of the deductible and without deduction for depreciation, but not more than the least of the following amounts:

(1) The amount of insurance in this policy that applies to the building;

(2) The replacement cost of that part of the building damaged, with materials of like kind and quality, and for like occupancy and use; or

(3) The necessary amount actually spent to repair or replace the damaged part of the building for like occupancy and use.

b. We will not be liable for any loss on a Replacement Cost Coverage basis unless and until actual repair or replacement of the damaged building or parts thereof, is completed.

c. If a building is rebuilt at a location other than the described location, we will pay no more than it would have cost to repair or rebuild at the described location, subject to all other terms of Replacement Cost Loss Settlement.

3. Special Loss Settlement

a. The following loss settlement conditions apply to a residential condominium building that is:

(1) A manufactured home or travel trailer, as defined in II.C.6.b and c; and

(2) at least 16 feet wide when fully assembled and has at least 600 square feet within its perimeter walls when fully assembled.

b. If such a building is totally destroyed or damaged to such an extent that, in our judgment, it is not economically feasible to repair, at least to its pre-damaged condition, we will, at our discretion, pay the least of the following amounts:

(1) The lesser of the replacement cost of the manufactured home or travel trailer or 1.5 times the actual cash value; or

(2) The building limit of liability shown on your Declarations Page.

c. If such a manufactured home or travel trailer is partially damaged and, in our judgment, it is economically feasible to repair it to its pre-damaged condition, we will settle the loss according to the Replacement Cost Loss Settlement conditions in R.2 above.

4. Actual Cash Value Loss Settlement

a. The types of property noted below are subject to actual cash value loss settlement:

(1) Personal property;

(2) Insured property abandoned after a loss and that remains as debris at the described location;

(3) Outside antennas and aerials, awnings, and other outdoor equipment;

(4) Carpeting and pads;

(5) Appliances; and

(6) A manufactured home or mobile home or a travel trailer as defined in II.C.6.b or c that does not meet the conditions for special loss settlement in R.3 above.

b. We will pay the least of the following amounts:

(1) The applicable amount of insurance under this policy;

(2) The actual cash value, as defined in II.C.2; or

(3) The amount it would cost to repair or replace the property with material of like kind and quality within a reasonable time after the loss.

IX. Policy Nullification, Cancellation, and Non-Renewal

A. Policy Nullification for Fraud, Misrepresentation, or Making False Statements

1. With respect to all insureds under this policy, this policy is void and has no legal force and effect if at any time, before or after a loss, you or any other insured or your

agent have, with respect to this policy or any other NFIP insurance:

a. Concealed or misrepresented any material fact or circumstance;

b. Engaged in fraudulent conduct; or

c. Made false statements.

2. Policies voided under A.1 cannot be renewed or replaced by a new NFIP policy.

3. Policies are void as of the date the acts described in A.1.above were committed.

4. Fines, civil penalties, and imprisonment under applicable Federal laws may also apply to the acts of fraud or concealment described above.

B. Policy Nullification for Reasons Other Than Fraud

1. This policy is void from its inception, and has no legal force or effect, if:

a. The property listed on the application is located in a community that was not participating in the NFIP on this policy's inception date and did not join or reenter the program during the policy term and before the loss occurred;

b. The property listed on the application is otherwise not eligible for coverage under the NFIP at the time of the initial application;

c. You never had an insurable interest in the property listed on the application;

d. You provided an agent with an application and payment, but the payment did not clear; or

e. We receive notice from you, prior to the policy effective date, that you have determined not to take the policy and you are not subject to a requirement to obtain and maintain flood insurance pursuant to any statute, regulation, or contract.

2. In such cases, you will be entitled to a full refund of all premium, fees, and surcharges received. However, if a claim was paid for a policy that is void, the claim payment must be returned to FEMA or offset from the premiums to be refunded before the refund will be processed.

C. Cancellation of the Policy by You

1. You may cancel this policy in accordance with the terms and conditions of this policy and the applicable rules and regulations of the NFIP.

2. If you cancel this policy, you may be entitled to a full or partial refund of premium, surcharges, or fees under the terms and conditions of this policy and the applicable rules and regulations of the NFIP.

D. Cancellation of the Policy by Us

1. Cancellation for Underpayment of Amounts Owed on This Policy. This policy will be cancelled, pursuant to VIII.D.2, if it is determined that the premium amount you paid is not sufficient to buy any amount of coverage, and you do not pay the additional amount of premium owed to increase the coverage to the originally requested amount within the required time period.

2. Cancellation Due to Lack of an Insurable Interest.

a. If you no longer have an insurable interest in the insured property, we will cancel this policy. You will cease to have an insurable interest if:

(1) For building coverage, the building was sold, destroyed, or removed.

(2) For contents coverage, the contents were sold or transferred ownership, or the contents were completely removed from the described location.

b. If your policy is cancelled for this reason, you may be entitled to a partial refund of premium under the applicable rules and regulations of the NFIP.

3. Cancellation of Duplicate Policies.

a. Except as allowed under Article I.F, your property may not be insured by more than one NFIP policy, and payment for damages to your property will only be made under one policy.

b. Except as allowed under Article I.G, if the property is insured by more than one NFIP policy, we will cancel all but one of the policies. The policy, or policies, will be selected for cancellation in accordance with 44 CFR 62.5 and the applicable rules and guidance of the NFIP.

c. If this policy is cancelled pursuant to IX.D.3.b, you may be entitled to a full or partial refund of premium, surcharges, or fees under the terms and conditions of this policy and the applicable rules and regulations of the NFIP.

4. Cancellation Due to Physical Alteration of Property.

a. If the insured building has been physically altered in such a manner that it is no longer eligible for flood insurance coverage, we will cancel this policy.

b. If your policy is cancelled for this reason, you may be entitled to a partial refund of premium under the terms and conditions of this policy and the applicable rules and regulations of the NFIP.

E. Non-Renewal of the Policy by Us

Your policy will not be renewed if:

1. The community where your insured property is located is suspended or stops participating in the NFIP;

2. Your building is otherwise ineligible for flood insurance under the Act;

3. You have failed to provide the information we requested for the purpose of rating the policy within the required deadline.

X. LIBERALIZATION CLAUSE

If we make a change that broadens your coverage under this edition of our policy, but does not require any additional premium, then that change will automatically apply to your insurance as of the date we implement

the change, provided that this implementation date falls within 60 days before or during the policy term stated on the Declarations Page.

XI. WHAT LAW GOVERNS

This policy and all disputes arising from the insurer's policy issuance, policy administration, or the handling of any claim under the policy are governed exclusively by the flood insurance regulations issued by FEMA, the National Flood Insurance Act of 1968, as amended (42 U.S.C. 4001, *et seq.*), and Federal common law.

In Witness Whereof, we have signed this policy below and hereby enter into this Insurance Agreement.

Federal Insurance and Mitigation Administration

[85 FR 43976, July 20, 2020; 86 FR 10029, Feb. 18, 2021; 86 FR 31178, June 11, 2021; 86 FR 48511, Aug. 31, 2021]

PART 62—SALE OF INSURANCE AND ADJUSTMENT OF CLAIMS

Subpart A—Issuance of Policies

Sec.
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62.20 Claims appeals.
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Subpart C—Write-Your-Own (WYO) Companies

62.23 WYO Companies authorized.
62.24 WYO participation criteria.

AUTHORITY: 42 U.S.C. 4001 *et seq.;* 6 U.S.C. 101 *et seq.*

SOURCE: 43 FR 2573, Jan. 17, 1978, unless otherwise noted. Redesignated at 44 FR 31177, May 31, 1979.

Subpart A—Issuance of Policies

§ 62.1 Purpose of part.

The purpose of this part is to set forth the manner in which flood insurance under the Program is made available to the general public in those communities designated as eligible for the sale of insurance under part 64 of this subchapter, and to prescribe the general method by which the Federal Insurance Administrator exercises his/her responsibility regarding the manner in which claims for losses are paid.

§ 62.2 Definitions.

The definitions set forth in part 59 of this subchapter are applicable to this part.

§ 62.3 Servicing agent.

(a) Pursuant to sections 1345 and 1346 of the Act, the Federal Insurance Administrator may enter into an agreement with a servicing agent to authorize it to assist in issuing flood insurance policies under the Program in communities designated by the Federal Insurance Administrator and to accept responsibility for delivery of policies and payment of claims for losses as prescribed by and at the discretion of the Federal Insurance Administrator.

(b) The servicing agent will arrange for the issuance of flood insurance to any person qualifying for such coverage under parts 61 and 64 of this subchapter who submits an application to the servicing agent in accordance with the terms and conditions of the contract between the Agency and the servicing agent.

[85 FR 43985, July 20, 2020]

§ 62.4 Limitations on sale of policies.

(a) The servicing agent shall be deemed to have agreed, as a condition of its contract that it shall not offer flood insurance under any authority or auspices in any amount within the maximum limits of coverage specified in §61.6 of this subchapter, in any area the Federal Insurance Administrator designates in part 64 of this subchapter as eligible for the sale of flood insurance under the Program, other than in accordance with this part, and the Standard Flood Insurance Policy.

(b) The agreement and all activities thereunder are subject to title VI of the Civil Rights Act of 1964, 42 U.S.C. 2000d, and to the applicable Federal regulations and requirements issued from time to time pursuant thereto. No

person shall be excluded from participation in, denied the benefits of, or subjected to discrimination under the Program, on the ground of race, color, sex, creed or national origin. Any complaint or information concerning the existence of any such unlawful discrimination in any matter within the purview of this part should be referred to the Federal Insurance Administrator.

[43 FR 2573, Jan. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44544, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

§ 62.5 Nullifications, cancellations, and premium refunds.

(a) *Nullification*—(1) *Property ineligible at time of application.* FEMA will void a policy for a property that was not eligible for coverage at the time of the initial application from the commencement of the policy. FEMA must pay the policyholder a refund of all premium, fees, and surcharges paid from the date of commencement of the policy, but no more than 5 years prior to the date of receipt of verifiable evidence that the property was ineligible for coverage at the time of the initial application. If FEMA paid a claim for an ineligible property, the policyholder must return the claim payment to FEMA, or offset the payment from the premiums to be refunded, before FEMA will process the refund.

(2) *Property later becomes ineligible.* FEMA may not renew a policy for a property that was eligible for coverage at the time of the initial application, but later became ineligible for coverage. In such instances, FEMA must nullify the policy from the first renewal date after the property became ineligible. FEMA must refund all premium, fees, and surcharges paid from the first renewal date after the property became ineligible, but no more than 5 years prior to the date of receipt of verifiable evidence that the property was eligible for coverage at the time of the initial application, but later became ineligible for coverage. If FEMA paid a claim for a property after it became ineligible for coverage, the policyholder must return the claim payment to FEMA or FEMA must offset the amount of claim payment from the premiums to be refunded before FEMA may process the refund.

(3) *Nullification prior to policy effective date.* If FEMA nullifies a policy prior to the policy effective date, that policy will be void from the commencement of the nullified policy term. In such case, FEMA will refund all premium, fees, and surcharges paid for the current policy term only. If FEMA paid a claim for a policy that was improperly issued, the policyholder must return the claim payment to FEMA or FEMA must offset the amount of claim payment from the premiums to be refunded before the NFIP may process the refund.

(b) *Cancellation due to lack of an insurable interest.* If the policyholder had an insurable interest, but no longer has an insurable interest, in the insured property, FEMA must cancel the policy on the insured property. If FEMA cancels a policy for this reason, FEMA must refund the policyholder a pro rata share of the premium from the date the policyholder lost an insurable interest in the property, but no more than 5 years prior to the date of the cancellation request. FEMA must pay the policyholder a refund of all fees or surcharges for any full policy term during which the policyholder had no insurable interest in the insured property, but no more than 5 years prior to the date of the cancellation request. A policyholder ceases to have an insurable interest if:

(1) For building coverage, the building was sold, destroyed, or removed.

(2) For contents coverage, the contents were sold or transferred, or the contents were completely removed from the described location.

(c) *No insurance coverage requirement.* A policyholder may cancel a policy if the policyholder was subject to a requirement by a lender, loss payee, or other Federal agency to obtain and maintain flood insurance pursuant to statute, regulation, or contract, but there is no longer such a requirement. The policyholder will receive a refund of a pro rata share of the premium for the current policy term only, calculated from the date of the cancellation request, but will not receive a refund of any fees or surcharges.

(d) *Establishment of a common expiration date.* A policyholder may purchase a new policy and cancel an existing policy in order to establish a common expiration date between flood insurance coverage and other coverage. The policyholder will receive a refund of a pro rata share of the premium calculated from the effective date of the new policy to the end date of the previous policy. The policyholder will not receive a refund of any fees or surcharges. In order to rewrite and cancel the policy, the following conditions must apply:

(1) The new policy must be written with the same company for the same or higher amount of coverage. If the policy is written for a higher amount or different type of coverage, the waiting period in § 61.11 will apply.

(2) The other insurance coverage for which the common expiration date is being established must be for coverage on the same building that is insured by the flood policy being cancelled and rewritten.

(3) The coverage for the new policy must be effective prior to cancelling the existing policy.

(e) *Cancelation or nullification of duplicate NFIP policies*—(1) *Generally.* (i) Except as described in 44 CFR 62.5(e)(2), if an insured property is insured by more than one NFIP policy not in accordance with applicable regulations and the Standard Flood Insurance Policy, FEMA must nullify the policy with the later effective date. The policy with the earlier effective date will continue. The policyholder will receive a pro rata refund of all premium for the nullified policy from the effective date of the nullified policy, but no more than 5 years prior to the date of receipt of verifiable evidence that the insured property is insured by more than one NFIP policy. The policyholder will receive a refund of all fees or surcharges for any full policy term during which the policyholder was insured by more than one policy, but no more than 5 years prior to the date of receipt of verifiable evidence that the insured property is insured by more than one NFIP policy.

(ii) If both polices have the same policy effective date, the policyholder may choose which policy will remain in effect, and the policyholder will receive a refund of all premium, fees, and surcharges for the cancelled policy from the effective date of the cancelled policy, but no more than 5 years prior to the date of receipt of verifiable evidence that the insured property is insured by more than one NFIP policy.

(2) *Exceptions.* In the following cases, the policyholder may maintain the policy with the later policy effective date while cancelling the policy with the earlier policy effective date:

(i) The policy with the earlier effective date has expired for more than 30 days. In such cases, the policyholder will receive a refund of a pro rata share of the premium, calculated from the effective date of the policy with the later effective date to the end date of the policy with the earlier effective date, but no more than 5 years prior to the date of cancellation. The policyholder will also receive a refund of all fees and surcharges for any full policy terms during which the insured property is insured by both policies, but no more than 5 years prior to the date of the cancellation request.

(ii) The policy with the earlier policy effective date is a Group Flood Insurance Policy. In such cases, there will be no refund of any premium, fees, or surcharges.

(iii) The policy with the earlier effective date is cancelled to establish a common policy expiration date pursuant to paragraph (d) of this section. In such cases, refunds will be provided in accordance with paragraph (d) of this section.

(iv) The policy with the earlier effective date was force placed pursuant to 42 U.S.C. 4012a using the NFIP's Mortgage Portfolio Protection Program. In such cases, the policyholder will receive a refund of the pro rata share of the premium calculated from the policy effective date of the new policy to the expiration date of the cancelled policy. There will be no refund of any fees or surcharges.

(v) The policy with the earlier effective date is a Dwelling Form policy with building coverage on a condominium unit that is also insured by a Residential Condominium Building Association Policy (RCBAP) that is

issued at the statutory maximum coverage limit for buildings. In such cases, the policyholder will receive a refund of a pro rata share of the premium for the building coverage issued under the Dwelling Form policy, as calculated from the effective date of the RCBAP policy to the end date of the Dwelling Form policy. The policyholder will also receive a refund of all fees and surcharges for any full policy terms during which the condominium unit is insured by both a Dwelling Form policy and an RCBAP in which the coverage equals the statutory maximum coverage limits for buildings, but no more than 5 years prior to the date of the cancellation request.

(f) *Other cancellations and nullifications.* Except as indicated below, FEMA will not refund premiums, assessments, fees, or surcharges if FEMA cancels a policy for any of the following reasons:

(1) *Fraud.* FEMA will cancel a policy for fraud committed by the policyholder or the agent. FEMA may cancel a policy for misrepresentation of a material fact by the policyholder or agent. Such cancellations will take effect as of the date of the fraudulent act or material misrepresentation of fact.

(2) *Administrative cancellation.* FEMA may cancel and rewrite a policy to correct an administrative error, such as when the policy is written with the wrong policy effective date. In such cases, FEMA will apply any premium, assessments, fees, or surcharges to the new policy. FEMA will refund any excess premium, fees, surcharges, or assessments paid.

(3) *Nullification for properties ineligible due to physical alteration of property.* A policy insuring a building or its contents, or both, may be cancelled if the building has been physically altered in such a manner that the building and its contents are no longer eligible for flood insurance coverage. The policyholder will receive a refund of a pro rata share of the premium for the current policy term only, but the policyholder will not receive a refund of any fees or surcharges.

[85 FR 43985, July 20, 2020]

§ 62.6 Brokers and agents writing NFIP policies through the NFIP Direct Servicing Agent.

(a) A broker or agent selling policies of flood insurance placed with the NFIP at the offices of its servicing agent must be duly licensed by the state insurance regulatory authority in the state in which the property is located.

(b) The earned commission which will be paid to any property or casualty insurance agent or broker, with respect to each policy or renewal the agent duly procures on behalf of the insured, in connection with policies of flood insurance placed with the NFIP at the offices of its servicing agent, but not with respect to policies of flood insurance issued pursuant to subpart C of this part, will not be less than $10 and is computed as follows:

(1) In the case of a new or renewal policy, the following commissions shall apply based on the total premiums paid for the policy term:

Premium amount	Commissions (percent)
First $2,000 of Premium	15
Excess of $2,000	5

(2) In the case of mid-term increases in amounts of insurance added by endorsements, the following commissions shall apply based on the total premiums paid for the increased amounts of insurance:

Premium amount	Commissions (percent)
First $2,000 of Premium	15
Excess of $2,000	5

(c) Any refunds of premiums authorized under this subchapter shall not affect a previously earned commission; and no agent shall be required to return that earned commission, unless the refund is made to establish a common policy term anniversary date with other insurance providing coverage against loss by other perils in which case a return of commission will be required by the agent on a pro rata basis. In such cases, the policy shall be immediately rewritten for a new term with the same amount(s) of coverage and with premium calculated at the then

current rate and, as to return premium, returned, pro rata, to the insured based on the former policy's premium rate.

[46 FR 13515, Feb. 23, 1981, as amended at 53 FR 15221, Apr. 28, 1988; 57 FR 19541, May 7, 1992; 86 FR 10029, Feb. 18, 2021]

Subpart B—Claims Adjustment, Claims Appeals, and Judicial Review

§ 62.20 Claims appeals.

(a) *Definitions.*

Appeal decision means the disposition of the appeal by the Federal Insurance Administrator.

Decision means the insurer's final claim determination, which is the insurer's written denial, in whole or in part, of the insured's claim.

(b) *Appeal.* A National Flood Insurance Program (NFIP) policyholder, whether insured by a participating Write-Your-Own (WYO) Company or directly by the Federal Emergency Management Agency (FEMA), may appeal a *decision*, including a determination of any insurance agent, adjuster, insurance company, or any FEMA employee or contractor with respect to a claim, proof of loss, and loss estimate. In order to file an appeal, the insured must comply with all requirements set out in the Standard Flood Insurance Policy (SFIP). This appeals process is available after the issuance of the insurer's final claim determination, which is the insurer's written denial, in whole or in part, of the insured's claim. Once the final claim determination is issued, an insured may appeal any action taken by the insurer, FEMA employee, FEMA contractor, insurance adjuster, or insurance agent.

(c) *Limitations on Appeals.* The appeals process is intended to resolve claim issues and is not intended to grant coverage or limits that are not provided by the SFIP. Filing an appeal does not waive any of the requirements for perfecting a claim under the SFIP or extend any of the time limitations set forth in the SFIP.

(1) Disputes that are or have been subject to appraisal as provided for in the SFIP cannot be appealed under this section.

(2) When a policyholder files an appeal on any issue, that issue is no longer subject to resolution by appraisal or other pre-litigation remedies.

(d) *Litigation preclusion.* An insured who files suit against an insurer on the flood insurance claim issue is prohibited from filing an appeal under this section. All appeals submitted for decision but not yet resolved shall be terminated upon notice of the commencement of litigation regarding the claim.

(e) *Procedures.* To pursue an appeal under this section a policyholder must:

(1) Submit a written appeal to FEMA within 60 days from the date of the decision.

(2) Provide a copy of the insurer's written denial, in whole or in part, of the claim;

(3) Identify relevant policy and claim information and state the basis for the appeal; and

(4) Submit relevant documentation to support the appeal. The policyholder should submit only the documentation that pertains to his or her claim. The following are examples of the kinds of documentation which FEMA will require to adjudicate the appeal: A copy of the proof of loss submitted to the insurer as required in the policy; room by room itemized estimates from the adjuster (includes contractors' estimates), detailing unit cost and quantities for the items needing repair or replacement; replacement cost proofs of loss; Preliminary Report; Final Report; detailed damaged personal property inventories that include the approximate age of the items; completed Mobile Home Worksheet; Mobile Home Title, including Salvage Titles; real estate appraisals that exclude land values; advance payment information; clear photographs (exterior and interior) confirming damage resulted from direct physical loss by or from flood; proof of prior repair; evidence of insurance and policy information , *i.e.* declarations page; Elevation Certificate, if the risk is an elevated building; the community's determination made concerning substantial damage; information regarding substantial improvement; zone determinations; pre-loss and post-loss inventories; financial

statements; tax records, lease agreements, sales contracts, settlement papers, deed, *etc.*; emergency (911) address change information; salvage information (proceeds and sales); condominium association by-laws; proof of other insurance, including homeowners or wind policies and any claim information submitted to the other companies; Waiver, Letter of Map Revision (LOMR) or Letter of Map Amendment (LOMA) information; paid receipts and invoices including cancelled checks that support an insured's out-of-pocket expenses pertaining to the claim; underwriting decisions; architectural plans and drawings; death certificates; a copy of the will; divorce decree, power of attorney; current lienholder information; current loss payee information; paid receipts and invoices documenting damaged stock; detailed engineering reports specifically addressing flood-related damage and pre-existing damage; engineering surveys; market values; documentation of Flood Insurance Rate Maps (FIRM) dates; documentation reflecting date(s) of construction and substantial improvement; loan documents including closings; evidence of insurability as a Residential Condominium Association; Franchise Agreements; letters of representation, *i.e.* attorneys and public adjusters; any assignment of interest in a claim; and, any other pertinent information which FEMA may request in processing a claim.

(f) *Appeal resolution.* (1) FEMA will acknowledge, in writing, receipt of a policyholder's appeal and include in the acknowledgement contact information for a FEMA point of contact who can advise the policyholder as to the status of his or her claim.

(2) The *Federal Insurance Administrator* will review the appeal documents and may notify the policyholder in writing of the need for additional information. A request for the additional information will include the date by which the information must be provided, and shall in no case be less than 14 calendar days. Failure to provide the requested information in full, or to request an extension by the due date, may result in a dismissal of the appeal. A re-inspection of the policyholder's property may be conducted at the discretion of the *Federal Insurance Administrator* to gather more information. The *Federal Insurance Administrator* will ensure that all information necessary to rule on the appeal has been provided prior to making an *appeal decision*.

(3) The *Federal Insurance Administrator* will review the appeal documents, including any reinspection report, if appropriate. The Federal Insurance Administrator will provide specific information on what grounds the claim was denied initially. The Federal Insurance Administrator will provide an *appeal decision* in writing to the policyholder and insurer within 90 days from the date that all information has been submitted by the policyholder and include specific information for the resolution of the appeal. No further administrative review will be provided to the insured.

(4) A policyholder who does not agree with FEMA's appeal decision should refer to the SFIP, for options for further action (*see* Part 61, App. A(1) VII.R., Part 61, App. A(2) VII.R., and Part 61, App. A(3) VIII.R.). The one-year period to file suit commences with the written denial from the insurer and is not extended by the appeals process.

[71 FR 30298, May 26, 2006, as amended at 71 FR 60438, Oct. 13, 2006; 74 FR 56123, Oct. 30, 2009; 81 FR 20258, Apr. 7, 2016]

§ 62.21 Claims adjustment.

(a) In accordance with the Agreement, the servicing agent shall arrange for the prompt adjustment and settlement and payment of all claims arising from policies of insurance issued under the program. Investigation of such claims may be made through the facilities of its subcontractors or insurance adjustment organizations, to the extent required and appropriate for the expeditious processing of such claims.

(b) All adjustment of losses and settlements of claims shall be made in accordance with the terms and conditions of the policy and parts 61 and 62 of this subchapter.

§ 62.22 Judicial review.

(a) Upon the disallowance by the Federal Insurance and Mitigation Administration, a participating Write-Your-Own Company, or the servicing agent

of any claim on grounds other than failure to file a proof of loss, or upon the refusal of the claimant to accept the amount allowed upon any claim after appraisal pursuant to policy provisions, the claimant within one year after the date of mailing by the Federal Insurance and Mitigation Administration, the participating Write-Your-Own Company, or the servicing agent of the notice of disallowance or partial disallowance of the claim may, pursuant to 42 U.S.C. 4072, institute an action on such claim against the insurer only in the U.S. District Court for the district in which the insured property or the major portion thereof shall have been situated, without regard to the amount in controversy.

(b) Service of process for all judicial proceedings where a claimant is suing the Administrator of FEMA pursuant to 42 U.S.C. 4071 shall be made upon the appropriate United States Attorney, the Attorney General of the United States, and the Federal Insurance Administrator of the Federal Emergency Management Agency.

[43 FR 2573, Jan. 17, 1978. Redesignated at 44 FR 31177, May 31, 1979, as amended at 47 FR 43061 Sept. 30, 1982; 49 FR 33879, Aug. 27, 1984; 69 FR 45610, July 30, 2004; 85 FR 43986, July 20, 2020]

Subpart C—Write-Your-Own (WYO) Companies

§ 62.23 WYO Companies authorized.

(a) Pursuant to section 1345 of the Act, the Federal Insurance Administrator may enter into arrangements with individual private sector property insurance companies or other insurers, such as public entity risk sharing organizations. Under these arrangements, such companies or other insurers may offer flood insurance coverage under the program to eligible applicants. Such WYO companies may offer flood coverage to policyholders insured by them under their own property business lines of insurance, pursuant to their customary business practices, including their usual arrangements with agents and producers. WYO companies may sell flood insurance coverage in any State in which the WYO company is authorized to engage in the business of property insurance. Other WYO insurers may offer flood insurance coverage to their pool members insured by them under their own property business lines of coverage, pursuant to their customary business practices. These other WYO insurers may provide flood coverage in any State that has authorized the other insurer to provide property coverage to its members. Arrangements entered into by WYO companies or other insurers under this subpart must be in the form and substance of the standard arrangement, titled ''Financial Assistance/Subsidy Arrangement.'' Each year, at least six months before the effective date of the ''Financial Assistance/Subsidy Arrangement,'' FEMA must publish in the FEDERAL REGISTER and make available to the WYO companies the terms for subscription or re-subscription to the ''Financial Assistance/Subsidy Arrangement.''

(b) Any duly authorized insurer so engaged in the Program shall be a WYO Company. (The term ''WYO Company'' shall include the following kinds of insurers: Public entity risk-sharing organizations, an association of local governments, a State association of political subdivisions, a State-sponsored municipal league, and other intergovernmental risk-sharing pool for covering public entity structures.)

(c) A WYO Company is authorized to arrange for the issuance of flood insurance in any amount within the maximum limits of coverage specified in § 61.6 of this subchapter, as Insurer, to any person qualifying for such coverage under parts 61 and 64 of this subchapter who submits an application to the WYO Company; coverage shall be issued under the Standard Flood Insurance Policy.

(d) A WYO Company issuing flood insurance coverage shall arrange for the adjustment, settlement, payment and defense of all claims arising from policies of flood insurance it issues under the Program, based upon the terms and conditions of the Standard Flood Insurance Policy.

(e) In carrying out its functions under this subpart, a WYO Company shall use its own customary standards, staff and independent contractor resources, as it would in the ordinary and necessary conduct of its own business

affairs, subject to the Act and regulations prescribed by the Federal Insurance Administrator under the Act.

(f) To facilitate the marketing of flood insurance coverage under the Program to policyholders of WYO Companies, the Federal Insurance Administrator will enter into arrangements with such companies whereby the Federal Government will be a guarantor in which the primary relationship between the WYO Company and the Federal Government will be one of a fiduciary nature, i.e., to assure that any taxpayer funds are accounted for and appropriately expended. In furtherance of this end, the Federal Insurance Administrator has established ''A Plan to Maintain Financial Control for Business Written Under the Write Your Own Program.''

(g) A WYO Company shall act as a fiscal agent of the Federal Government, but not as its general agent. WYO Companies are solely responsible for their obligations to their insured under any flood insurance policies issued under agreements entered into with the Federal Insurance Administrator, such that the Federal Government is not a proper party defendant in any lawsuit arising out of such policies.

(h) To facilitate the underwriting of flood insurance coverage by WYO Companies, the following procedures will be used by WYO Companies:

(1) To expedite business growth, the WYO Company will encourage its present property insurance policyholders to purchase flood insurance through the NFIP WYO Program.

(2) To conform its underwriting practices to the underwriting rules and rates in effect as to the NFIP, the WYO Company will establish procedures to carry out the NFIP rating system and provide its policyholders with the same coverage as is afforded under the NFIP.

(3) The WYO Company may follow its customary billing practices to meet the Federal rules on the presentment of premium and net premium deposits to a Letter of Credit bank account authorized by the Federal Insurance Administrator and reduction of coverage when an underpayment is discovered.

(4) The WYO Company is expected to meet the recording and reporting requirements of the WYO Transaction Record Reporting and Processing Plan. Transactions reported by the WYO Company under the WYO Transaction Record Reporting and Processing Plan will be analyzed by the NFIP Bureau & Statistical Agent. A monthly report will be submitted to the WYO Company and the FIA. The analysis will cover the timeliness of WYO Company submissions, the disposition of transactions that have not passed systems edits and the reconciliation of the totals generated from transaction reports with those submitted on the WYO Company's reconciliation reports.

(5) If a WYO Company rejects an application from an agent or a producer, the agent or producer shall be notified so that the business can be placed through the NFIP Servicing Agent, or another WYO Company.

(6) Flood insurance coverage will be issued by the WYO Company on a separate policy form and will not be added, by endorsement, to the Company's other property insurance forms.

(7) Premium payment plans can be offered by the WYO Company so long as the net premium depository requirements specified under the NFIP/WYO Program accounting procedures are met. A cancellation by the WYO Company for non-payment of premium will not produce a pro rata return of the net premium deposit to the WYO Company.

(8) NFIP business will not be assumed by the WYO Companies at any time other than at renewal time, at which time the insurance producer may submit the business to the WYO Company as new business. However, it is permissible to cancel and rewrite flood policies to obtain concurrent expiration dates with other policies covering the property.

(i) To facilitate the adjustment of flood insurance claims by WYO Companies, the following procedures will be used by WYO Companies.

(1) WYO companies will adjust claims in accordance with general company standards, guided by NFIP Claims manuals. The Arrangement provides that claim adjustments shall be binding upon the FIA.

(2) The WYO Company may use its staff adjusters, independent adjusters,

or both. It is important that the Company's Claims Department verifies the correctness of the coverage interpretations and reasonableness of the payments recommended by the adjusters.

(3) An established loss adjustment Fee Schedule is part of the Arrangement and cannot be changed during an Arrangement year. This is the expense allowance to cover costs of independent or WYO Company adjusters.

(4) The normal catastrophe claims procedure currently operated by a WYO Company should be implemented in the event of a claim catastrophe situation. Flood claims will be handled along with other catastrophe claims.

(5) It will be the WYO Company's responsibility to try to detect fraud (as it does in the case of property insurance) and coordinate its findings with FIA.

(6) Pursuant to the Arrangement, the responsibility for defending claims will be upon the Write Your Own Company and defense costs will be part of the unallocated or allocated claim expense allowance, depending on whether a staff counsel or an outside attorney handles the defense of the matter. Claims in litigation will be reported by WYO Companies to FIA upon joinder of issue and FIA may inquire and be advised of the disposition of such litigation.

(7) The claim reserving procedures of the individual WYO Company can be used.

(8) Regarding the handling of subrogation, if a WYO Company prefers to forego pursuit of subrogation recovery, it may do so by referring the matter, with a complete copy of the claim file, to FIA. Subrogation initiatives may be truncated at any time before suit is commenced (after commencing an action, special arrangement must bemade). FIA, after consultation with FEMA's Office of the Chief Counsel (OCC), will forward the cause of action to OCC or to the NFIP Bureau and Statistical Agent for prosecution. Any funds received will be deposited, less expenses, in the National Flood Insurance Fund.

(9) Special allocated loss adjustment expenses will include such items as: nonstaff attorney fees, engineering fees and special investigation fees over and above normal adjustment practices.

(10) The customary content of claim files will include coverage verification, normal adjuster investigations, including statements where necessary, police reports, building reports and investigations, damage verification and other documentation relevant to the adjustment of claims under the NFIP's and the WYO Company's traditional claim adjustment practices and procedures. The WYO Company's claim examiners and managers will supervise the adjustment of flood insurance claims by staff and independent claims adjusters.

(11) The WYO Company will extend reasonable cooperation to FEMA's Office of the Chief Counsel on matters pertaining to litigation and subrogation, under paragraph (i)(8) of this section.

(j) To facilitate establishment of financial controls under the WYO Program, the WYO Company will:

(1) Have a biennial audit of the flood insurance financial statements conducted by an independent Certified Public Accountant (CPA) firm at the Company's expense to ensure that the financial data reported to us accurately represents the flood insurance activities of the Company. The CPA firm must conduct its audits in accordance with the generally accepted auditing standards (GAAS) and Government Auditing Standards issued by the Comptroller General of the United States (commonly known as ''yellow book'' requirements). The Company must file with us (the Federal Insurance Administration) a report of the CPA firm's detailed biennial audit, and, after our review of the audit report, we will convey our determination to the Standards Committee.

(2) Participate in a WYO Company/FIA Operation review. We will conduct a review of the WYO Company's flood insurance claims, underwriting, customer service, marketing, and litigation activities at least once every three (3) years. As part of these reviews, we will reconcile specific files with a listing of transactions submitted by the Company under the Transaction Record Reporting and Processing (TRPP) Plan (Part 5). We will file a report of the Operation Review with the Standards Committee.

(3) Meet the recording and reporting requirements of the WYO Transaction Record Reporting and Processing Plan and the WYO Accounting Procedures Manual. Transactions reported to the National Flood Insurance Program's (NFIP's) Bureau and Statistical Agent by the WYO Company under the WYO Transaction Record Reporting and Processing Plan and the WYO Accounting Procedures Manual will be analyzed by the Bureau and Statistical Agent and a monthly report will be submitted to the WYO Company and the FIA. The analysis will cover the timeliness of the WYO Company submissions, the disposition of transactions which do not pass systems edits and the reconciliation of the totals generated from transaction reports with those submitted on WYO Company reconciliation reports.

(4) Cooperate with FEMA's Chief Financial Officer on Letter of Credit matters.

(5) Cooperate with FIA in the implementation of a claims reinspection program.

(6) Cooperate with FIA in the verification of risk rating information.

(7) Cooperate with DHS's Office of the Inspector General on matters pertaining to fraud.

(k) To facilitate the operation of the WYO Program and in order that a WYO Company can use its own customary standards, staff and independent contractor resources, as it would in the ordinary and necessary conduct of its own business affairs, subject to the Act, the Federal Insurance Administrator, for good cause shown, may grant exceptions to and waivers of the regulations contained in this title relative to the administration of the NFIP.

(l)(1) WYO Companies may, on a voluntary basis, elect to participate in the Mortgage Portfolio Protection Program (MPPP), under which they can offer, as a last resort, flood insurance at special high rates, sufficient to recover the full cost of this program in recognition of the uncertainty as to the degree of risk a given building presents due to the limited underwriting data required, to properties in a lending institution's mortgage portfolio to achieve compliance with the flood insurance purchase requirements of the Flood Disaster Protection Act of 1973. Flood insurance policies under the MPPP may only be issued for those properties that:

(i) Are determined to be located within special flood hazard areas of communities that are participating in the NFIP, and

(ii) Are not covered by a flood insurance policy even after a required series of notices have been given to the property owner (mortgagor) by the lending institution of the requirement for obtaining and maintaining such coverage, but the mortgagor has failed to respond.

(2) WYO Companies participating in the MPPP must provide a detailed implementation package to any lending institution that, on a voluntary basis, chooses to participate in the MPPP to ensure the lending institution has full knowledge of the criteria in that program and must obtain a signed receipt for that package from the lending institution. Participating WYO companies must also maintain evidence of compliance with paragraph (l)(3) of this section for review during the audits and reviews required by the WYO Financial Control Plan.

(3) The mortgagor must be protected against the lending institution's arbitrary placing of flood insurance for which the mortgagor will be billed by being sent three notification letters as described in paragraphs (l)(4) through (6) of this section.

(4) The initial notification letter must:

(i) State the requirements of the Flood Disaster Protection Act of 1973, as amended;

(ii) Announce the determination that the mortgagor's property is in an identified special flood hazard area as delineated on the appropriate FEMA map, necessitating flood insurance coverage for the duration of the loan;

(iii) Describe the procedure to follow should the mortgagor wish to challenge the determination;

(iv) Request evidence of a valid flood insurance policy or, if there is none, encourage the mortgagor to obtain a Standard Flood Insurance Policy (SFIP) promptly from a local insurance agent (or WYO Company);

(v) Advise that the premium for a MPPP policy is significantly higher than a conventional SFIP policy and advise as to the option for obtaining less costly flood insurance; and

(vi) Advise that a MPPP policy will be purchased by the lender if evidence of flood insurance coverage is not received by a date certain.

(5) The second notification letter must remind the mortgagor of the previous notice and provide essentially the same information.

(6) The final notification letter must:

(i) Enclose a copy of the flood insurance policy purchased under the MPPP on the mortgagor's (insured's) behalf, together with the Declarations Page,

(ii) Advise that the policy was purchased because of the failure to respond to the previous notices, and

(iii) Remind the insured that similar coverage may be available at significantly lower cost and advise that the policy can be cancelled at any time during the policy year and a pro rata refund provided for the unearned portion of the premium in the event the insured purchases another policy that is acceptable to satisfy the requirements of the 1973 Act.

[61 FR 51219, Oct. 1, 1996, as amended at 64 FR 56176, Oct. 18, 1999; 67 FR 13549, Mar. 22, 2002; 69 FR 45610, July 30, 2004; 74 FR 15341, Apr. 3, 2009; 81 FR 84490, Nov. 23, 2016]

§ 62.24 WYO participation criteria.

New companies or organizations eligible for the pilot project we describe in paragraph (b) of this section that seek to participate in the WYO program, as well as former WYO companies seeking to return to the WYO program, must meet standards for financial capability and stability for statistical and financial reporting and for commitment to program objectives.

(a) To demonstrate the ability to meet the financial requirements, a private insurance company wishing to enter or reenter the WYO program must:

(1) Be a licensed property insurance company;

(2) Have a five (5) year history of writing property insurance;

(3) Disclose any legal proceedings, suspensions, judgments, settlements, or agreements reached with any State insurance department, State attorney general, State corporation commission, or the Federal Government during the immediately prior five (5) years regarding the company's business practices;

(4) Submit its most recent National Association of Insurance Commissioners (NAIC) annual statement;

(5) Submit information, as data become available, to indicate that the company meets or exceeds NAIC standards for risk-based capital and surplus; and

(6) Submit its last State or regional audit, which should contain no material negative findings.

(b) To demonstrate the ability to meet the financial requirements, a public entity risk-sharing organization, an association of local governments, a State association of political subdivisions, a State-sponsored municipal league, and any other intergovernmental risk-sharing pool for covering public entity structures, wishing to enter the WYO program, which will end September 30, 2004, must:

(1) Have authority by a State to provide property coverage to its members;

(2) Have a five (5) year history of writing property coverage;

(3) Disclose any legal proceedings, suspensions, judgments, settlements, or agreements reached with any State insurance department, State attorney general, State corporation commission, or the Federal Government during the immediately prior five (5) years regarding the other insurer's business practices; and

(4) Submit its most recent two annual audits from an independent accounting firm performed in compliance with generally accepted accounting principles that show no material negative findings; and submit, as data become available, information to indicate that the other insurer meets or exceeds standards comparable to those of the NAIC for risk-based capital and surplus.

(c) An applicant for entry or reentry in the WYO program must also pass a test to determine the applicant's ability to process flood insurance and meet the Transaction Record Reporting and Processing (TRRP) Plan requirements of the WYO Financial Control Plan. Unless the test requirement is waived,

e.g., where an already qualified performer will fulfill the applicant's reporting requirements, the applicant must prepare and submit test output monthly tape(s) and monthly financial statements and reconciliations for processing by the NFIP Bureau and Statistical Agent contractor. For test purposes, no error tolerance will be allowed. If the applicant fails the initial test, a second test will be run, which the applicant must pass to participate in the Program.

(d) To satisfy the requirement for commitment to Program goals, including marketing of flood insurance policies, the applicant will submit information concerning its plans for the WYO Program including plans for the training and support of producers and staff, marketing plans and sales targets, and claims handling and disaster response plans. Applicants must also identify those aspects of their planned flood insurance operations to be performed by another organization, managing agent, another WYO Company, a WYO vendor, a service bureau or related organization. Applicants will also name, in addition to a Principal Coordinator, a corporate officer point of contact—an individual, e.g., at the level of Senior Executive Vice President, who reports directly to the Chief Executive Officer or the Chief Operating Officer. Each applicant shall furnish the latest available information regarding the number of its fire, allied lines, farm-owners multiple peril, homeowners multiple peril, and commercial multiple peril policies or coverage documents in force, by line.

[67 FR 13550, Mar. 22, 2002, as amended at 86 FR 67659, Nov. 29, 2021]

PART 63—IMPLEMENTATION OF SECTION 1306(c) OF THE NATIONAL FLOOD INSURANCE ACT OF 1968

Subpart A—General

Sec.

63.1 Purpose of part.
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63.3 Requirement to be covered by a contract for flood insurance by June 1, 1988.
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63.5 Coverage for contents removal.
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Subpart B—State Certification of Structures Subject to Imminent Collapse

63.13 Purpose of subpart.
63.14 Criteria for State qualification to perform imminent collapse certifications.
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63.16 Review of State application by the Federal Insurance Administrator.
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63.18 Review of State certification by the Federal Insurance Administrator.

AUTHORITY: 42 U.S.C. 4001 *et seq.;* Reorganization Plan No. 3 of 1978; E.O. 12127.

SOURCE: 53 FR 36975, Sept. 23, 1988, unless otherwise noted.

Subpart A—General

§ 63.1 Purpose of part.

The purpose of this part is to implement section 1306(c) of the National Flood Insurance Act of 1968, as amended (the Act). Section 544 of the Housing and Community Development Act of 1987 (Pub. L. 100–242) amended the Act by adding subsection (c) to section 1306 of the Act. Under this amendment, effective February 5, 1988, section 1306(c) of the Act provides for benefit payments under the Standard Flood Insurance Policy (SFIP) for demolition or relocation of a structure insured under the Act that is located along the shore of a lake or other body of water and that is certified by an appropriate State or local land use authority to be subject to imminent collapse or subsidence as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels. This part establishes criteria by which States can obtain the approval of the Federal Insurance Administrator to make these certifications and sets

forth the procedures and data requirements to be used by those States in making these certifications. This part also contains provisions regarding other aspects of section 1306(c) of the Act. For example, there are provisions regarding section 1306(c)(6)(B) of the Act (which provides for condemnation in lieu of certification), including clarification as to the form of condemnation issued under a State or local law that is required.

§ 63.2 Condemnation in lieu of certification.

(a) The condemnation required by section 1306(c)(6)(B) of the Act in lieu of certification need not be grounded in a finding that the structure is subject to imminent collapse or subsidence as a result of erosion, but may be issued for other reasons deemed sufficient by the State or local authority.

(b) The condemnation may be in the form of a court order or other instrument authorized by State or local law, e.g., a notification to the property owner of an unsafe condition, or unsanitary condition, or other deficiency at the property address, coupled with a statement that the property owner must vacate the property if the condition giving rise to the condemnation notice is not cured by repair, removal, or demolition of the building by a date certain.

(c) In addition to a condemnation in accordance with paragraphs (a) and (b) of this section, a structure must be found by the Federal Insurance Administrator to be subject to imminent collapse or subsidence as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels to be eligible for benefits under section 1306(c) of the Act.

§ 63.3 Requirement to be covered by a contract for flood insurance by June 1, 1988.

The requirement in section 1306(c)(4)(C)(i) of the Act that a structure be ''covered by a contract for flood insurance under this title—(i) on or before June 1, 1988'' was met if presentation of the appropriate premium and a properly completed flood insurance application form was made to the National Flood Insurance Program or a Write Your Own (WYO) Company on or before June 1, 1988.

§ 63.4 Property not covered.

Benefits under section 1306(c) of the Act do not include compensation for items excluded under the provisions of the Standard Flood Insurance Policy (SFIP).

§ 63.5 Coverage for contents removal.

Whenever a structure is subject to imminent collapse or subsidence as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels and otherwise meets the requirements of section 1306(c) of the Act so that benefits are payable under those provisions, the coverage in the definition of ''Direct Physical Loss by or from Flood'' in the SFIP for the expense of removing contents, up to the minimum deductible of $500.00, to protect and preserve them from flood or from the imminent danger of flood, applies if contents coverage is in effect.

§ 63.6 Reimbursable relocation costs.

In addition to the coverage described in § 63.5 of this part, relocation costs for which benefits are payable under section 1306(c) of the Act include the costs of:

(a) Removing the structure from the site,

(b) Site cleanup,

(c) Debris removal,

(d) Moving the structure to a new site, and

(e) At the new site, a new foundation and related grading, including elevating the structure as required by local flood plain management ordinances, and sewer, septic, electric, gas, telephone, and water connections at the building.

§ 63.7 Amount of coverage and deductible on effective date of condemnation or certification.

The amount of building coverage and the deductible applicable to a claim for benefits under section 1306(c) of the Act are what was in effect on the date of

condemnation or the date of application for certification.

[53 FR 36975, Sept. 23, 1988, as amended at 53 FR 44193, Nov. 2, 1988]

§ 63.8 Limitation on amount of benefits.

(a) In section 1306(c)(3)(C) of the Act, the phrase *under the flood insurance contract issued pursuant to this title* means the value of the structure under section 1306(c)(3)(C) of the Act is limited to the amount of building coverage provided by the insured's policy.

(b) Where the amount payable under section 1306(c)(1)(A)(ii) of the Act for the cost of demolition, together with the amount payable under section 1306(c)(1)(A) of the Act for the value of the structure under the demolition option, exceeds the amount of building coverage provided by the insured's policy, such amounts will be paid beyond the amount of that building coverage, even if this payment exceeds the limits of coverage otherwise authorized by section 1306(a) of the Act for the particular class of property.

§ 63.9 Sale while claim pending.

If a claimant sells a structure prior to its demolition or relocation, no benefits are payable to that claimant under section 1306(c) of the Act, and any payments which may have been made under those provisions shall be reimbursed to the insurer making them.

§ 63.10 Demolition or relocation contractor to be joint payee.

If a demolition or relocation contractor is used, the instrument of payment for benefits under section 1306(c) of the Act for the fee of that contractor, shall include that contractor as a joint payee, unless that contractor has already been paid when the instrument of payment is issued.

§ 63.11 Requirement for a commitment before October 1, 1989.

The requirement in section 1306(c)(7) of the Act that a commitment be made on or before September 30, 1989 as a necessary condition to making any payments after September 30, 1989, is met if before October 1, 1989,

(a) There is either a condemnation in accordance with § 63.2 of this part or a certification in accordance with subpart B of this part, and

(b) A policyholder's notice of claim for benefits under section 1306(c) of the Act is received by the insurer.

§ 63.12 Setback and community flood plain management requirements.

(a) Where benefits have been paid under section 1306(c) of the Act, the setback requirements in section 1306(c)(5) of the Act, which if not met result in a prohibition against subsequently providing flood insurance or assistance under the Disaster Relief Act of 1974, shall apply:

(1) To the structure involved wherever it is located, and

(2) To any other structure subsequently constructed on or moved to the parcel of land on which the structure involved was located when the claim under section 1306(c) of the Act arose.

(b) In addition, any structures relocated under section 1306 of the Act must comply with the flood plain management criteria set forth in § 60.3 of this chapter.

Subpart B—State Certification of Structures Subject to Imminent Collapse

§ 63.13 Purpose of subpart.

The purpose of this subpart is to establish criteria under the provisions of section 1306(c) of the National Flood Insurance Act of 1968, as amended, by which States can obtain approval from the Federal Insurance Administrator to certify that structures are subject to imminent collapse or subsidence as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels. The subpart also sets forth the procedures and data requirements to be utilized by those States in certifying structures as subject to imminent collapse. The State certification procedure represents an option to the use of the procedure whereby a structure is condemned by a State or local authority as a prerequisite to consideration for imminent collapse insurance benefits.

§ 63.14 Criteria for State qualification to perform imminent collapse certifications.

In order to qualify under this subpart, the State must be administering a coastal zone management program which includes the following components, as a minimum:

(a) A state-wide requirement that prohibits new construction and the relocation of structures seaward of an adopted erosion setback. Such setback must be based in whole or in part on some multiple of the local mean annual erosion (recession) rate; and

(b) An established, complete and functional data base of mean annual erosion rates for all reaches of coastal shorelines subject to erosion in the State, which is used as the basis to enforce these setback requirements.

§ 63.15 State application for eligibility to certify structures subject to imminent collapse.

(a) Application pursuant to this part shall be made by the Governor or other duly authorized official of the State.

(b) The application must be submitted to the Federal Emergency Management Agency, Federal Insurance Administration, 500 C Street SW., Washington, DC 20472.

(c) Documents to be included in the application are as follows:

(1) Copies of all applicable State statutes and regulations verifying the existence of a coastal zone management program including setback requirements for new and relocated construction which are based in whole or in part on mean annual erosion rates established for the State's shorelines.

(2) A copy of the State's mean annual erosion rate data base, if not already provided, showing such rates for all reaches of coastal shorelines subject to erosion within the State.

(3) The title, address and phone number of a contact person within the State agency having authority for administering the coastal zone management program.

(4) A statement that adequate resources are available to carry out the certification services, and that certifications will be performed in accordance with the procedures described in § 63.17.

§ 63.16 Review of State application by the Federal Insurance Administrator.

(a) The Federal Insurance Administrator may return the application for eligibility upon finding it incomplete or upon finding that additional information is required in order to make a determination as to the adequacy of the coastal zone management program and erosion rate data base.

(b) Upon determining that the State's program and/or data base does not meet the criteria set forth in § 63.14, the Federal Insurance Administrator shall in writing reject the application for eligibility and indicate in what respects the State program and/or data base fails to comply with the criteria.

(c) Upon determining that the State program and data base meets the criteria set forth in § 63.14, the Federal Insurance Administrator shall approve the State as eligible to certify structures subject to imminent collapse. Such approval, however, is in all cases provisional. The Federal Insurance Administrator shall review the State program and data base for continued compliance with the criteria set forth in this part and may request updated documentation for the purpose of such review. If the program and/or data base is found to be inadequate and is not corrected within ninety days from the date that such inadequacies were identified, the Federal Insurance Administrator may revoke his approval.

§ 63.17 Procedures and data requirements for imminent collapse certifications by States.

Any State that has been determined to be eligible by the Federal Insurance Administrator may certify that a coastal structure is subject to imminent collapse. Such certification requires that the State collect scientific or technical information relative to the structure and its site and provide such information to the insured to be filed with a claim for insurance benefits under Section 1306 of the National Flood Insurance Act of 1968, as amended. The information which is provided to the insured shall include, but is not limited to, the following:

(a) Certification from the State agency that the structure is subject to imminent collapse. The certification shall cite the property address, legal description (e.g., lot, block), the date of application for certification, and the date of and basis for the certification, and

(b) Supporting scientific and technical data to substantiate the certification consisting of the following:

(1) Photographs of the structure in relation to the obvious peril. All photographs should be labeled with the location, direction, date and time from which they were taken. The collection of photographs should adequately display the following:

(i) Any evidence of existing damage. The damage can include loss or erosion of soil near or around the foundation, or structural damage to the foundation components.

(ii) Structure and waterbody. These photographs shall show both the structure and the waterbody that presents the peril. If the structure is on a high bluff or dune and not accessible from the water side, the top edge of the bluff or dune will be sufficient. These will usually be taken from one or both sides of the structure.

(iii) Physical reference features used in the measurements discussed below. The reference feature shall be in or near the area affected by normal tides, when applicable. If a reference is not clearly distinguishable on the photograph, it should be annotated to identify the feature. If possible, all reference features described below should be photographed showing their relationship to the site of the threatened structure.

(2) Identification and selection of reference features. The following reference features are presented according to priority. If the first feature is not present, the next feature shall be located and photographed, and so forth.

(i) Top edge of bluff (cliff top).

(ii) Top edge of escarpment on an eroding dune (i.e., a nearly vertical erosional cut at the seaward face of the dune). The normal high tide should be near the toe of the dune and there should be indications that the dune is actively eroding.

(iii) The normal high tide limit may be indicated by one of the following:

(A) Vegetation line (the seaward most edge of permanent vegetation).

(B) Beach scarp (erosion line on beach, usually a sharp, nearly vertical drop of 0.5 to 3.0 feet at the upper limit of high tide).

(C) Debris line deposited by the normal high tide, not by a recent storm.

(D) Upper limit of wet sand.

(3) Distance measurements from the threatened structure to the nearest points on the reference features. These measurements should be taken from all photographed reference features to the closest point on the supporting foundation. For purposes of making this measurement, decks, stairs, and other exterior attachments that do not contribute to the structural support of the building are not considered part of the structure. The measurements shall be taken horizontally with a tape and recorded to the nearest foot. The date and time of the measurement shall be noted. The location of the measurements (i.e., reference feature and closest structural member) shall be identified on the appropriate photograph or sketch of the site. If some or all of the reference features coincide, this shall also be noted and identified on the photographs. Reference features landward of the structure need not be measured, but shall be noted on the photographs.

(4) A determination of the average annual erosion rate at the site and a copy of the pertinent section of the reference document used to obtain the annual erosion rate at the site.

(5) Copy of the effective Flood Insurance Rate Map panel annotated with the location of the threatened structure.

(6) In the event that a structure is not situated within a ''zone of imminent collapse'' using the criteria and procedures in paragraphs (b) (1) through (5) of this section, then the State may submit other scientific and technical data, in addition to the information described in paragraphs (b) (1) through (5) of this section, that would reveal unusual erosive or stability conditions at the site. Such data must include engineering analyses or reports performed on the structure or site which evaluates local rates of erosion, or the condition or stability of the

structure's foundation including supporting soil.

(c) In the case of structures planned to be relocated, a certification as to whether the proposed relocation site is outside the 30-year setback for 1–4 family residential structures, or outside the 60-year setback for all other structures, must also be submitted by the State.

[53 FR 36975, Sept. 23, 1988, as amended at 53 FR 44193, Nov. 2, 1988]

§ 63.18 Review of State certification by the Federal Insurance Administrator.

The Federal Insurance Administrator, after a claim has been filed by the property owner, will review the certification and data prepared by the State. Upon completion of the review, the State will be notified that:

(a) The structure has been determined to be subject to imminent collapse, or

(b) The structure has not been determined to be subject to imminent collapse and the basis for such determination, or

(c) Additional data are needed to verify that the procedures and criteria for imminent collapse certification have been met.

PART 64—COMMUNITIES ELIGIBLE FOR THE SALE OF INSURANCE

Sec.

64.1 Purpose of part.
64.2 Definitions.
64.3 Flood Insurance Maps.
64.4 Effect on community eligibility resulting from boundary changes, governmental reorganization, etc.
64.5 Relationship of rates to zone designations.
64.6 List of eligible communities.

AUTHORITY: 42 U.S.C. 4001 *et seq.*, Reorganization Plan No. 3 of 1978, 3 CFR, 1978 Comp.; p. 329; E.O. 12127, 44 FR 19367, 3 CFR, 1979 Comp.; p. 376.

§ 64.1 Purpose of part.

(a) 42 U.S.C. 4012(c), 4022 and 4102 require that flood insurance in the maximum limits of coverage under the regular program shall be offered in communities only after the Federal Insurance Administrator has: (1) Identified the areas of special flood, mudslide (i.e., mudflow) or flood-related erosion hazards within the community; and/or (2) completed a risk study for the applicant community. The priorities for conducting such risk studies are set forth in §§ 59.23 and 60.25 of this subchapter. The purpose of this part is to define the types of zones which the Agency will use for identifying the hazard areas on maps.

(b) 42 U.S.C. 4056 authorizes an emergency implementation of the National Flood Insurance Program whereby the Federal Insurance Administrator may make subsidized coverage available to eligible communities prior to the completion of detailed risk studies for such areas. This part also describes procedures under the emergency program and lists communities which become eligible under the NFIP.

[48 FR 28278, June 21, 1983, as amended at 49 FR 4751, Feb. 8, 1984; 49 FR 33879, Aug. 27, 1984]

§ 64.2 Definitions.

The definitions set forth in part 59 of this subchapter are applicable to this part.

[41 FR 46986, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979]

§ 64.3 Flood Insurance Maps.

(a) The following maps may be prepared by the Federal Insurance Administrator for use in connection with the sale of flood insurance:

(1) Flood Insurance Rate Map: This map is prepared after the flood hazard study for the community has been completed and the risk premium rates have been established. The FIRM indicates the risk premium rate zones applicable in the community and when those rates are effective. The FIRM also may indicate, at the request of the community, zones to identify areas of future-conditions flood hazards. The symbols used to designate the risk premium rate zones and future-conditions zones are as follows:

Zone symbol	
A	Area of special flood hazard without water surface elevations determined
A1–30, AE	Area of special flood hazard with water surface elevations determined

Zone symbol	
A0	Area of special flood hazards having shallow water depths and/or unpredictable flow paths between (1) and (3) ft
A99	Area of special flood hazard where enough progress has been made on a protective system, such as dikes, dams, and levees, to consider it complete for insurance rating purposes
AH	Areas of special flood hazards having shallow water depths and/or unpredictable flow paths between (1) and (3) feet, and with water surface elevations determined
AR	Area of special flood hazard that results from the decertification of a previously accredited flood protection system that is determined to be in the process of being restored to provide base flood protection
V	Area of special flood hazards without water surface elevations determined, and with velocity, that is inundated by tidal floods (coastal high hazard area)
V1–30, VE	Area of special flood hazards, with water surface elevations determined and with velocity, that is inundated by tidal floods (coastal high hazard area)
V0	Area of special flood hazards having shallow water depths and/or unpredictable flow paths between (1) and (3) ft. and with velocity
B, X	Areas of moderate flood hazards or areas of future-conditions flood hazard.
C, X	Area of minimal hazards
D	Area of undetermined but possible, flood hazards
M	Area of special mudslide (i.e., mudflow) hazards
N	Area of moderate mudslide (i.e., mudflow) hazards
P	Area of undetermined, but possible, mudslide hazards
E	Area of special flood-related erosion hazards.

Areas identified as subject to more than one hazard (flood, mudslide (i.e., mudflow), flood-related erosion) or potential hazard (i.e., future-conditions flooding) will be designated on the FIRM by use of the proper zone symbols in combination.

(2) Flood Hazard Boundary Map (FHBM). This map is issued by the Administrator delineating Zones A, M, and E within a community.

(b) Notice of the issuance of new or revised FHBMs or FIRMs is given in Part 65 of this subchapter. The mandatory purchase of insurance is required within designated Zones A, A1–30, AE, A99, AO, AH, AR, AR/A1–30, AR/AE, AR/AO, AR/AH, AR/A, V1–30, VE, V, VO, M, and E.

(c) The FHBM or FIRM shall be maintained for public inspection at the following locations:

(1) The information office of the State agency or agencies designated by statute or the respective Governors to cooperate with the Federal Insurance Administrator in implementing the Program whenever a community becomes eligible for Program participation and the sale of insurance pursuant to this section or is identified as flood prone.

(2) One or more official locations within the community in which flood insurance is offered.

(3) [Reserved]

(4) The official record copy of each official map shall be maintained in FEMA files in Washington, DC.

[41 FR 46986, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 46 FR 1274, Jan. 6, 1981; 48 FR 28278, June 21, 1983; 48 FR 44544 and 44552, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984; 50 FR 36028, Sept. 4, 1985; 59 FR 53599, Oct. 25, 1994; 62 FR 55716, Oct. 27, 1997; 66 FR 59170, Nov. 27, 2001]

§ 64.4 Effect on community eligibility resulting from boundary changes, governmental reorganization, etc.

(a) When a community not participating in the Program acquires by means of annexation, incorporation, or otherwise, an area within another community participating in the Program, no new flood insurance shall be made available as of the effective date of annexation until the newly acquiring community participates in the Program. Until the effective date of participation, existing flood insurance policies remain in effect until the policy's date of expiration, but shall not be renewed.

(b) When a community participating in the Program acquires by means of annexation, incorporation, or otherwise, another area which was previously located in a community either participating or not participating in the Program, the community shall have six months from the date of acquisition to formally amend its flood plain management regulations in order to include all flood-prone areas within the newly acquired area. The amended regulations shall satisfy the applicable requirements in § 60.3 of this subchapter based on the data previously provided by the Administrator. In the event that the newly acquired area was previously located in a community participating in the Program, the provisions of this section shall only apply if the community, upon acquisition, and

pending formal adoption of the amendment to its flood plain management regulations, certifies in writing over the signature of a community official that within the newly acquired area the flood plain management requirements previously applicable in the area remain in force. In the event that the newly-acquired area was previously located in a community not participating in the Program, the provisions of the section shall only apply if the community, upon acquisition, and pending formal adoption of the amendments to its flood plain management regulations, certifies in writing over the signature of a community official that it shall enforce within the newly-acquired area the requirements of §60.3(b) of this subchapter. During the six month period, existing flood insurance policies shall remain in effect until their date of expiration may be renewed, and new policies may be issued. Failure to satisfy the applicable requirements in §60.3 shall result in the community's suspension from Program participation pursuant to §59.24 of this subchapter.

(c) When an area previously a part of a community participating in the Program becomes autonomous or becomes a portion of a newly autonomous community resulting from boundary changes, governmental reorganization, changes in state statutes or constitution, or otherwise, such new community shall be given six months from the date of its independence, to adopt flood plain management regulations within the special hazard areas subject to its jurisdiction and to submit its application for participation as a separate community in order to retain eligibility for the sale of flood insurance. The regulations adopted by such new community shall satisfy the applicable requirements in §60.3 of this subchapter based on the data previously provided by the Federal Insurance Administrator. The provisions of this section shall only apply where the new community upon the date of its independence certifies in writing over the signature of a community official that, pending formal adoption of flood plain management regulations, the flood plain management requirements previously applicable in that area remain in effect. During the six month period, existing flood insurance policies shall remain in effect until their dates of expiration may be renewed, and new policies may be issued. Failure to satisfy the applicable requirements in §60.3 of this subchapter shall result in the community's suspension from Program participation pursuant to §59.24 of this subchapter.

(d) Where any community or any area within a community had in effect a FHBM or FIRM, but all or a portion of that community has been acquired by another community, or becomes autonomous, that map shall remain in effect until it is superseded by the Federal Insurance Administrator, whether by republication as part of the map of the acquiring community, or otherwise.

(e) When a community described in paragraph (a), (b), (c), or (d) of this section has flood elevations in effect, no new appeal period under parts 66, 67, and 68 of this subchapter will begin except as new scientific and technical data are available.

[41 FR 46986, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44552, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

§ 64.5 Relationship of rates to zone designations.

(a) In order to expedite a community's qualification for flood insurance under the emergency program, the Administrator may authorize the sale of such insurance without designating any Zones A, M, or E within a community, provided the community has previously adopted flood plain management regulations meeting the requirements of §60.3(a), §60.4(a) or §60.5(a) of this subchapter. When the Administrator has obtained sufficient technical information to delineate Zones A, M, or E, he/she shall delineate the tentative boundaries on a FHBM.

(b) Upon the effective date of the FIRM, flood insurance will continue to be available throughout the entire community at chargeable rates (i.e., subsidized) for first layer coverage of existing structures, but will be only available at risk premium rates for all new construction and substantial improvements. Upon the effective date of

a FIRM, second layer coverage is available only at risk premium rates for all structures.

(c) Detailed insurance information may be obtained from the servicing companies. See part 62 of this subchapter.

[41 FR 46986, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44552, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

§ 64.6 List of eligible communities.

FEMA will maintain a list of communities eligible for the sale of flood insurance pursuant to the National Flood Insurance Program (42 U.S.C. 4001–4128). This list will be published and maintained on the internet or through another comparable method.

[85 FR 68790, Oct. 30, 2020]

PART 65—IDENTIFICATION AND MAPPING OF SPECIAL HAZARD AREAS

Sec.

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65.17 Review of determinations.

AUTHORITY: 42 U.S.C. 4001 *et seq.;* Reorganization Plan No. 3 of 1978, 43 FR 41943, 3 CFR, 1978 Comp., p. 329; E.O. 12127 of Mar. 31, 1979, 44 FR 19367, 3 CFR, 1979 Comp., p. 376.

§ 65.1 Purpose of part.

42 U.S.C. 4104 authorizes the Administrator to identify and publish information with respect to all areas within the United States having special flood, mudslide (i.e., mudflow) and flood-related erosion hazards. The purpose of this part is to outline the steps a community needs to take in order to assist the Agency's effort in providing up-to-date identification and publication, in the form of the maps described in part 64, on special flood, mudslide (i.e., mudflow) and flood-related erosion hazards.

[48 FR 28278, June 21, 1983]

§ 65.2 Definitions.

(a) Except as otherwise provided in this part, the definitions set forth in part 59 of this subchapter are applicable to this part.

(b) For the purpose of this part, a certification by a registered professional engineer or other party does not constitute a warranty or guarantee of performance, expressed or implied. Certification of data is a statement that the data is accurate to the best of the certifier's knowledge. Certification of analyses is a statement that the analyses have been performed correctly and in accordance with sound engineering practices. Certification of structural works is a statement that the works are designed in accordance with sound engineering practices to provide protection from the base flood. Certification of ''as built'' conditions is a statement that the structure(s) has been built according to the plans being certified, is in place, and is fully functioning.

(c) For the purposes of this part, ''reasonably safe from flooding'' means base flood waters will not inundate the land or damage structures to be removed from the SFHA and that any subsurface waters related to the base flood will not damage existing or proposed buildings.

[51 FR 30313, Aug. 25, 1986, as amended at 66 FR 22442, May 4, 2001]

§ 65.3 Requirement to submit new technical data.

A community's base flood elevations may increase or decrease resulting

from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, a community shall notify the Administrator of the changes by submitting technical or scientific data in accordance with this part. Such a submission is necessary so that upon confirmation of those physical changes affecting flooding conditions, risk premium rates and flood plain management requirements will be based upon current data.

[51 FR 30313, Aug. 25, 1986]

§ 65.4 Right to submit new technical data.

(a) A community has a right to request changes to any of the information shown on an effective map that does not impact flood plain or floodway delineations or base flood elevations, such as community boundary changes, labeling, or planimetric details. Such a submission shall include appropriate supporting documentation in accordance with this part and may be submitted at any time.

(b) All requests for changes to effective maps, other than those initiatedby FEMA, must be made in writing by the Chief Executive Officer of the community (CEO) or an official designated by the CEO. Should the CEO refuse to submit such a request on behalf of another party, FEMA will agree to review it only if written evidence is provided indicating the CEO or designee has been requested to do so.

(c) Requests for changes to effective Flood Insurance Rate Maps (FIRMs) and Flood Boundary and Floodway Maps (FBFMs) are subject to the cost recovery procedures described in 44 CFR part 72. As indicated in part 72, revisions requested to correct mapping errors or errors in the Flood Insurance Study analysis are not to be subject to the cost-recovery procedures.

[51 FR 30313, Aug. 25, 1986, as amended at 57 FR 29038, June 30, 1992; 61 FR 46331, Aug. 30, 1996; 62 FR 5736, Feb. 6, 1997]

EDITORIAL NOTE: For references to FR pages showing lists of eligible communities, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.govinfo.gov*.

§ 65.5 Revision to special hazard area boundaries with no change to base flood elevation determinations.

(a) *Data requirements for topographic changes.* In many areas of special flood hazard (excluding V zones and floodways) it may be feasible to elevate areas with engineered earthen fill above the base flood elevation. Scientific and technical information to support a request to gain exclusion from an area of special flood hazard of a structure or parcel of land that has been elevated by the placement of engineered earthen fill will include the following:

(1) A copy of the recorded deed indicating the legal description of the property and the official recordation information (deed book volume and page number) and bearing the seal of the appropriate recordation official (*e.g.*, County Clerk or Recorder of Deeds).

(2) If the property is recorded on a plat map, a copy of the recorded plat indicating both the location of the property and the official recordation information (plat book volume and page number) and bearing the seal of the appropriate recordation official. If the property is not recorded on a plat map, FEMA requires copies of the tax map or other suitable maps to help in locating the property accurately.

(3) A topographic map or other information indicating existing ground elevations and the date of fill. FEMA's determination to exclude a legally defined parcel of land or a structure from the area of special flood hazard will be based upon a comparison of the base flood elevations to the lowest ground elevation of the parcel or the lowest adjacent grade to the structure. If the lowest ground elevation of the entire legally defined parcel of land or the lowest adjacent grade to the structure are at or above the elevations of the base flood, FEMA will exclude the parcel and/or structure from the area of special flood hazard.

(4) Written assurance by the participating community that they have complied with the appropriate minimum floodplain management requirements under § 60.3. This includes the requirements that:

(i) Existing residential structures built in the SFHA have their lowest floor elevated to or above the base flood;

(ii) The participating community has determined that the land and any existing or proposed structures to be removed from the SFHA are ''reasonably safe from flooding'', and that they have on file, available upon request by FEMA, all supporting analyses and documentation used to make that determination;

(iii) The participating community has issued permits for all existing and proposed construction or other development; and

(iv) All necessary permits have been received from those governmental agencies where approval is required by Federal, State, or local law.

(5) If the community cannot assure that it has complied with the appropriate minimum floodplain management requirements under § 60.3, of this chapter, the map revision request will be deferred until the community remedies all violations to the maximum extent possible through coordination with FEMA. Once the remedies are in place, and the community assures that the land and structures are ''reasonably safe from flooding,'' we will process a revision to the SFHA using the criteria set forth in § 65.5(a). The community must maintain on file, and make available upon request by FEMA, all supporting analyses and documentation used in determining that the land or structures are ''reasonably safe from flooding.''

(6) Data to substantiate the base flood elevation. If we complete a Flood Insurance Study (FIS), we will use those data to substantiate the base flood elevation. Otherwise, the community may submit data provided by an authoritative source, such as the U.S. Army Corps of Engineers, U.S. Geological Survey, Natural Resources Conservation Service, State and local water resource departments, or technical data prepared and certified by a registered professional engineer. If base flood elevations have not previously been established, we may also request hydrologic and hydraulic calculations.

(7) A revision of floodplain delineations based on fill must demonstrate that any such fill does not result in a floodway encroachment.

(b) *New topographic data.* A community may also follow the procedures described in paragraphs (a)(1) through (6) of this section to request a map revision when no physical changes have occurred in the area of special flood hazard, when no fill has been placed, and when the natural ground elevations are at or above the elevations of the base flood, where new topographic maps are more detailed or more accurate than the current map.

(c) *Certification requirements.* A registered professional engineer or licensed land surveyor must certify the items required in paragraphs (a)(3) and (6) and (b) of this section. Such certifications are subject to the provisions under § 65.2.

(d) *Submission procedures.* Submit all requests to the appropriate address serving the community's geographic area or to the FEMA Headquarters Office in Washington, DC.

[66 FR 22442, May 4, 2001]

§ 65.6 Revision of base flood elevation determinations.

(a) *General conditions and data requirements.* (1) The supporting data must include all the information FEMA needs to review and evaluate the request. This may involve the requestor's performing new hydrologic and hydraulic analysis and delineation of new flood plain boundaries and floodways, as necessary.

(2) To avoid discontinuities between the revised and unrevised flood data, the necessary hydrologic and hydraulic analyses submitted by the map revision requestor must be extensive enough to ensure that a logical transition can be shown between the revised flood elevations, flood plain boundaries, and floodways and those developed previously for areas not affected by the revision. Unless it is demonstrated that it would not be appropriate, the revised and unrevised base flood elevations must match within one-half foot where such transitions occur.

(3) Revisions cannot be made based on the effects of proposed projects or

future conditions. Section 65.8 of this subchapter contains provisions for obtaining conditional approval of proposed projects that may effect map changes when they are completed.

(4) The datum and date of releveling of benchmarks, if any, to which the elevations are referenced must be indicated.

(5) Maps will not be revised when discharges change as a result of the use of an alternative methodology or data for computing flood discharges unless the change is statistically significant as measured by a confidence limits analysis of the new discharge estimates.

(6) Any computer program used to perform hydrologic or hydraulic analyses in support of a flood insurance map revision must meet all of the following criteria:

(i) It must have been reviewed and accepted by a governmental agency responsible for the implementation of programs for flood control and/or the regulation of flood plain lands. For computer programs adopted by non-Federal agencies, certification by a responsible agency official must be provided which states that the program has been reviewed, tested, and accepted by that agency for purposes of design of flood control structures or flood plain land use regulation.

(ii) It must be well-documented including source codes and user's manuals.

(iii) It must be available to FEMA and all present and future parties impacted by flood insurance mapping developed or amended through the use of the program. For programs not generally available from a Federal agency, the source code and user's manuals must be sent to FEMA free of charge, with fully-documented permission from the owner that FEMA may release the code and user's manuals to such impacted parties.

(7) A revised hydrologic analysis for flooding sources with established base flood elevations must include evaluation of the same recurrence interval(s) studied in the effective FIS, such as the 10-, 50-, 100-, and 500-year flood discharges.

(8) A revised hydraulic analysis for a flooding source with established base flood elevations must include evaluation of the same recurrence interval(s) studied in the effective FIS, such as the 10-, 50-, 100-, and 500-year flood elevations, and of the floodway. Unless the basis of the request is the use of an alternative hydraulic methodology or the requestor can demonstrate that the data of the original hydraulic computer model is unavailable or its use is inappropriate, the analysis shall be made using the same hydraulic computer model used to develop the base flood elevations shown on the effective Flood Insurance Rate Map and updated to show present conditions in the flood plain. Copies of the input and output data from the original and revised hydraulic analyses shall be submitted.

(9) A hydrologic or hydraulic analysis for a flooding source without established base flood elevations may be performed for only the 100-year flood.

(10) A revision of flood plain delineations based on topographic changes must demonstrate that any topographic changes have not resulted in a floodway encroachment.

(11) Delineations of flood plain boundaries for a flooding source with established base flood elevations must provide both the 100- and 500-year flood plain boundaries. For flooding sources without established base flood elevations, only 100-year flood plain boundaries need be submitted. These boundaries should be shown on a topographic map of suitable scale and contour interval.

(12) If a community or other party seeks recognition from FEMA, on its FHBM or FIRM, that an altered or relocated portion of a watercourse provides protection from, or mitigates potential hazards of, the base flood, the Federal Insurance Administrator may request specific documentation from the community certifying that, and describing how, the provisions of § 60.3(b)(7) of this subchapter will be met for the particular watercourse involved. This documentation, which may be in the form of a written statement from the Community Chief Executive Officer, an ordinance, or other legislative action, shall describe the nature of the maintenance activities to be performed, the frequency with which they will be performed, and the title of the local community official who will

be responsible for assuring that the maintenance activities are accomplished.

(13) Notwithstanding any other provisions of §65.6, a community may submit, in lieu of the documentation specified in §65.6(a)(12), certification by a registered professional engineer that the project has been designed to retain its flood carrying capacity without periodic maintenance.

(14) The participating community must provide written assurance that they have complied with the appropriate minimum floodplain management requirements under §60.3 of this chapter. This includes the requirements that:

(i) Existing residential structures built in the SFHA have their lowest floor elevated to or above the base flood;

(ii) The participating community has determined that the land and any existing or proposed structures to be removed from the SFHA are ''reasonably safe from flooding,'' and that they have on file, available upon request by FEMA, all supporting analyses and documentation used to make that determination;

(iii) The participating community has issued permits for all existing and proposed construction or other development; and

(iv) All necessary permits have been received from those governmental agencies where approval is required by Federal, State, or local law.

(15) If the community cannot assure that it has complied with the appropriate minimum floodplain management requirements under §60.3, of this chapter the map revision request will be deferred until the community remedies all violations to the maximum extent possible through coordination with FEMA. Once the remedies are in place, and the community assures that the land and structures are ''reasonably safe from flooding,'' we will process a revision to the SFHA using the criteria set forth under §65.6. The community must maintain on file, and make available upon request by FEMA, all supporting analyses and documentation used in determining that the land or structures are ''reasonably safe from flooding.''

(b) *Data requirements for correcting map errors.* To correct errors in the original flood analysis, technical data submissions shall include the following:

(1) Data identifying mathematical errors.

(2) Data identifying measurement errors and providing correct measurements.

(c) *Data requirements for changed physical conditions.* Revisions based on the effects of physical changes that have occurred in the flood plain shall include:

(1) *Changes affecting hydrologic conditions.* The following data must be submitted:

(i) General description of the changes (e.g., dam, diversion channel, or detention basin).

(ii) Construction plans for as-built conditions, if applicable.

(iii) New hydrologic analysis accounting for the effects of the changes.

(iv) New hydraulic analysis and profiles using the new flood discharge values resulting from the hydrologic analysis.

(v) Revised delineations of the flood plain boundaries and floodway.

(2) *Changes affecting hydraulic conditions.* The following data shall be submitted:

(i) General description of the changes (e.g., channelization or new bridge, culvert, or levee).

(ii) Construction plans for as-built conditions.

(iii) New hydraulic analysis and flood elevation profiles accounting for the effects of the changes and using the original flood discharge values upon which the original map is based.

(iv) Revised delineations of the flood plain boundaries and floodway.

(3) *Changes involving topographic conditions.* The following data shall be submitted:

(i) General description of the changes (e.g., grading or filling).

(ii) New topographic information, such as spot elevations, cross sections grading plans, or contour maps.

(iii) Revised delineations of the flood plain boundaries and, if necessary, floodway.

(d) *Data requirements for incorporating improved data.* Requests for revisions

based on the use of improved hydrologic, hydraulic, or topographic data shall include the following data:

(1) Data that are believed to be better than those used in the original analysis (such as additional years of stream gage data).

(2) Documentation of the source of the data.

(3) Explanation as to why the use of the new data will improve the results of the original analysis.

(4) Revised hydrologic analysis where hydrologic data are being incorporated.

(5) Revised hydraulic analysis and flood elevation profiles where new hydrologic or hydraulic data are being incorporated.

(6) Revised delineations of the flood plain boundaries and floodway where new hydrologic, hydraulic, or topographic data are being incorporated.

(e) *Data requirements for incorporating improved methods.* Requests for revisions based on the use of improved hydrologic or hydraulic methodology shall include the following data:

(1) New hydrologic analysis when an alternative hydrologic methodology is being proposed.

(2) New hydraulic analysis and flood elevation profiles when an alternative hyrologic or hydraulic methodology is being proposed.

(3) Explanation as to why the alternative methodologies are superior to the original methodologies.

(4) Revised delineations of the flood plain boundaries and floodway based on the new analysis(es).

(f) *Certification requirements.* All analysis and data submitted by the requester shall be certified by a registered professional engineer or licensed land surveyor, as appropriate, subject to the definition of ''certification'' given at §65.2 of this subchapter.

(g) *Submission procedures.* All requests shall be submitted to the FEMA Regional Office servicing the community's geographic area or to the FEMA Headquarters Office in Washington, DC, and shall be accompanied by the appropriate payment, in accordance with 44 CFR part 72.

[51 FR 30314, Aug. 25, 1986, as amended at 53 FR 16279, May 6, 1988; 54 FR 33550, Aug. 15, 1989; 61 FR 46331, Aug. 30, 1996; 62 FR 5736, Feb. 6, 1997; 66 FR 22442, May 4, 2001]

§ 65.7 Floodway revisions.

(a) *General.* Floodway data is developed as part of FEMA Flood Insurance Studies and is utilized by communities to select and adopt floodways as part of the flood plain management program required by §60.3 of this subchapter. When it has been determined by a community that no practicable alternatives exist to revising the boundaries of its previously adopted floodway, the procedures below shall be followed.

(b) *Data requirements when base flood elevation changes are requested.* When a floodway revision is requested in association with a change to base flood elevations, the data requirements of §65.6 shall also be applicable. In addition, the following documentation shall be submitted:

(1) Copy of a public notice distributed by the community stating the community's intent to revise the floodway or a statement by the community that it has notified all affected property owners and affected adjacent jurisdictions.

(2) Copy of a letter notifying the appropriate State agency of the floodway revision when the State has jurisdiction over the floodway or its adoption by communities participating in the NFIP.

(3) Documentation of the approval of the revised floodway by the appropriate State agency (for communities where the State has jurisdiction over the floodway or its adoption by communities participating in the NFIP).

(4) Engineering analysis for the revised floodway, as described below:

(i) The floodway analysis must be performed using the hydraulic computer model used to determine the proposed base flood elevations.

(ii) The floodway limits must be set so that neither the effective base flood elevations nor the proposed base flood elevations if less than the effective base flood elevations, are increased by more than the amount specified under

§ 60.3 (d)(2). Copies of the input and output data from the original and modified computer models must be submitted.

(5) Delineation of the revised floodway on the same topographic map used for the delineation of the revised flood boundaries.

(c) *Data requirements for changes not associated with base flood elevation changes.* The following data shall be submitted:

(1) Items described in paragraphs (b)(1) through (3) of this section must be submitted.

(2) Engineering analysis for the revised floodway, as described below:

(i) The original hydraulic computer model used to develop the established base flood elevations must be modified to include all encroachments that have occurred in the flood plain since the existing floodway was developed. If the original hydraulic computer model is not available, an alternate hydraulic computer model may be used provided the alternate model has been calibrated so as to reproduce the original water surface profile of the original hydraulic computer model. The alternate model must be then modified to include all encroachments that have occurred since the existing floodway was developed.

(ii) The floodway analysis must be performed with the modified computer model using the desired floodway limits.

(iii) The floodway limits must be set so that combined effects of the past encroachments and the new floodway limits do not increase the effective base flood elevations by more than the amount specified in § 60.3(d)(2). Copies of the input and output data from the original and modified computer models must be submitted.

(3) Delineation of the revised floodway on a copy of the effective NFIP map and a suitable topographic map.

(d) *Certification requirements.* All analyses submitted shall be certified by a registered professional engineer. All topographic data shall be certified by a registered professional engineer or licensed land surveyor. Certifications are subject to the definition given at § 65.2 of this subchapter.

(e) *Submission procedures.* All requests that involve changes to floodways shall be submitted to the appropriate FEMA Regional Office servicing the community's geographic area.

[51 FR 30315, Aug. 25, 1986]

§ 65.8 Review of proposed projects.

A community, or an individual through the community, may request FEMA's comments on whether a proposed project, if built as proposed, would justify a map revision. FEMA's comments will be issued in the form of a letter, termed a Conditional Letter of Map Revision, in accordance with 44 CFR part 72. The data required to support such requests are the same as those required for final revisions under §§ 65.5, 65.6, and 65.7, except as-built certification is not required. All such requests shall be submitted to the FEMA Headquarters Office in Washington, DC, and shall be accompanied by the appropriate payment, in accordance with 44 CFR part 72.

[62 FR 5736, Feb. 6, 1997]

§ 65.9 Review and response by the Administrator.

If any questions or problems arise during review, FEMA will consult the Chief Executive Officer of the community (CEO), the community official designated by the CEO, and/or the requester for resolution. Upon receipt of a revision request, the Federal Insurance Administrator shall mail an acknowledgment of receipt of such request to the CEO. Within 90 days of receiving the request with all necessary information, the Federal Insurance Administrator shall notify the CEO of one or more of the following:

(a) The effective map(s) shall not be modified;

(b) The base flood elevations on the effective FIRM shall be modified and new base flood elevations shall be established under the provisions of part 67 of this subchapter;

(c) The changes requested are approved and the map(s) amended by Letter of Map Revision (LOMR);

(d) The changes requested are approved and a revised map(s) will be printed and distributed;

(e) The changes requested are not of such a significant nature as to warrant a reissuance or revision of the flood insurance study or maps and will be deferred until such time as a significant change occurs;

(f) An additional 90 days is required to evaluate the scientific or technical data submitted; or

(g) Additional data are required to support the revision request.

(h) The required payment has not been submitted in accordance with 44 CFR part 72, no review will be conducted and no determination will be issued until payment is received.

[51 FR 30315, Aug. 25, 1986; 61 FR 46331, Aug. 30, 1996, as amended at 62 FR 5736, Feb. 6, 1997]

§ 65.10 Mapping of areas protected by levee systems.

(a) *General.* For purposes of the NFIP, FEMA will only recognize in its flood hazard and risk mapping effort those levee systems that meet, and continue to meet, minimum design, operation, and maintenance standards that are consistent with the level of protection sought through the comprehensive flood plain management criteria established by §60.3 of this subchapter. Accordingly, this section describes the types of information FEMA needs to recognize, on NFIP maps, that a levee system provides protection from the base flood. This information must be supplied to FEMA by the community or other party seeking recognition of such a levee system at the time a flood risk study or restudy is conducted, when a map revision under the provisions of part 65 of this subchapter is sought based on a levee system, and upon request by the Federal Insurance Administrator during the review of previously recognized structures. The FEMA review will be for the sole purpose of establishing appropriate risk zone determinations for NFIP maps and shall not constitute a determination by FEMA as to how a structure or system will perform in a flood event.

(b) *Design criteria.* For levees to be recognized by FEMA, evidence that adequate design and operation and maintenance systems are in place to provide reasonable assurance that protection from the base flood exists must be provided. The following requirements must be met:

(1) *Freeboard.* (i) Riverine levees must provide a minimum freeboard of three feet above the water-surface level of the base flood. An additional one foot above the minimum is required within 100 feet in either side of structures (such as bridges) riverward of the levee or wherever the flow is constricted. An additional one-half foot above the minimum at the upstream end of the levee, tapering to not less than the minimum at the downstream end of the levee, is also required.

(ii) Occasionally, exceptions to the minimum riverine freeboard requirement described in paragraph (b)(1)(i) of this section, may be approved. Appropriate engineering analyses demonstrating adequate protection with a lesser freeboard must be submitted to support a request for such an exception. The material presented must evaluate the uncertainty in the estimated base flood elevation profile and include, but not necessarily be limited to an assessment of statistical confidence limits of the 100-year discharge; changes in stage-discharge relationships; and the sources, potential, and magnitude of debris, sediment, and ice accumulation. It must be also shown that the levee will remain structurally stable during the base flood when such additional loading considerations are imposed. Under no circumstances will freeboard of less than two feet be accepted.

(iii) For coastal levees, the freeboard must be established at one foot above the height of the one percent wave or the maximum wave runup (whichever is greater) associated with the 100-year stillwater surge elevation at the site.

(iv) Occasionally, exceptions to the minimum coastal levee freeboard requirement described in paragraph (b)(1)(iii) of this section, may be approved. Appropriate engineering analyses demonstrating adequate protection with a lesser freeboard must be submitted to support a request for such an exception. The material presented must evaluate the uncertainty in the estimated base flood loading conditions. Particular emphasis must be placed on the effects of wave attack and overtopping on the stability of the

levee. Under no circumstances, however, will a freeboard of less than two feet above the 100-year stillwater surge elevation be accepted.

(2) *Closures.* All openings must be provided with closure devices that are structural parts of the system during operation and design according to sound engineering practice.

(3) *Embankment protection.* Engineering analyses must be submitted that demonstrate that no appreciable erosion of the levee embankment can be expected during the base flood, as a result of either currents or waves, and that anticipated erosion will not result in failure of the levee embankment or foundation directly or indirectly through reduction of the seepage path and subsequent instability. The factors to be addressed in such analyses include, but are not limited to: Expected flow velocities (especially in constricted areas); expected wind and wave action; ice loading; impact of debris; slope protection techniques; duration of flooding at various stages and velocities; embankment and foundation materials; levee alignment, bends, and transitions; and levee side slopes.

(4) *Embankment and foundation stability.* Engineering analyses that evaluate levee embankment stability must be submitted. The analyses provided shall evaluate expected seepage during loading conditions associated with the base flood and shall demonstrate that seepage into or through the levee foundation and embankment will not jeopardize embankment or foundation stability. An alternative analysis demonstrating that the levee is designed and constructed for stability against loading conditions for Case IV as defined in the U.S. Army Corps of Engineers (COE) manual, ''Design and Construction of Levees'' (EM 1110–2–1913, Chapter 6, Section II), may be used. The factors that shall be addressed in the analyses include: Depth of flooding, duration of flooding, embankment geometry and length of seepage path at critical locations, embankment and foundation materials, embankment compaction, penetrations, other design factors affecting seepage (such as drainage layers), and other design factors affecting embankment and foundation stability (such as berms).

(5) *Settlement.* Engineering analyses must be submitted that assess the potential and magnitude of future losses of freeboard as a result of levee settlement and demonstrate that freeboard will be maintained within the minimum standards set forth in paragraph (b)(1) of this section. This analysis must address embankment loads, compressibility of embankment soils, compressibility of foundation soils, age of the levee system, and construction compaction methods. In addition, detailed settlement analysis using procedures such as those described in the COE manual, ''Soil Mechanics Design—Settlement Analysis'' (EM 1100–2–1904) must be submitted.

(6) *Interior drainage.* An analysis must be submitted that identifies the source(s) of such flooding, the extent of the flooded area, and, if the average depth is greater than one foot, the water-surface elevation(s) of the base flood. This analysis must be based on the joint probability of interior and exterior flooding and the capacity of facilities (such as drainage lines and pumps) for evacuating interior floodwaters.

(7) *Other design criteria.* In unique situations, such as those where the levee system has relatively high vulnerability, FEMA may require that other design criteria and analyses be submitted to show that the levees provide adequate protection. In such situations, sound engineering practice will be the standard on which FEMA will base its determinations. FEMA will also provide the rationale for requiring this additional information.

(c) *Operation plans and criteria.* For a levee system to be recognized, the operational criteria must be as described below. All closure devices or mechanical systems for internal drainage, whether manual or automatic, must be operated in accordance with an officially adopted operation manual, a copy of which must be provided to FEMA by the operator when levee or drainage system recognition is being sought or when the manual for a previously recognized system is revised in any manner. All operations must be under the jurisdiction of a Federal or State agency, an agency created by

Federal or State law, or an agency of a community participating in the NFIP.

(1) *Closures.* Operation plans for closures must include the following:

(i) Documentation of the flood warning system, under the jurisdiction of Federal, State, or community officials, that will be used to trigger emergency operation activities and demonstration that sufficient flood warning time exists for the completed operation of all closure structures, including necessary sealing, before floodwaters reach the base of the closure.

(ii) A formal plan of operation including specific actions and assignments of responsibility by individual name or title.

(iii) Provisions for periodic operation, at not less than one-year intervals, of the closure structure for testing and training purposes.

(2) *Interior drainage systems.* Interior drainage systems associated with levee systems usually include storage areas, gravity outlets, pumping stations, or a combination thereof. These drainage systems will be recognized by FEMA on NFIP maps for flood protection purposes only if the following minimum criteria are included in the operation plan:

(i) Documentation of the flood warning system, under the jurisdiction of Federal, State, or community officials, that will be used to trigger emergency operation activities and demonstration that sufficient flood warning time exists to permit activation of mechanized portions of the drainage system.

(ii) A formal plan of operation including specific actions and assignments of responsibility by individual name or title.

(iii) Provision for manual backup for the activation of automatic systems.

(iv) Provisions for periodic inspection of interior drainage systems and periodic operation of any mechanized portions for testing and training purposes. No more than one year shall elapse between either the inspections or the operations.

(3) *Other operation plans and criteria.* Other operating plans and criteria may be required by FEMA to ensure that adequate protection is provided in specific situations. In such cases, sound emergency management practice will be the standard upon which FEMA determinations will be based.

(d) *Maintenance plans and criteria.* For levee systems to be recognized as providing protection from the base flood, the maintenance criteria must be as described herein. Levee systems must be maintained in accordance with an officially adopted maintenance plan, and a copy of this plan must be provided to FEMA by the owner of the levee system when recognition is being sought or when the plan for a previously recognized system is revised in any manner. All maintenance activities must be under the jurisdiction of a Federal or State agency, an agency created by Federal or State law, or an agency of a community participating in the NFIP that must assume ultimate responsibility for maintenance. This plan must document the formal procedure that ensures that the stability, height, and overall integrity of the levee and its associated structures and systems are maintained. At a minimum, maintenance plans shall specify the maintenance activities to be performed, the frequency of their performance, and the person by name or title responsible for their performance.

(e) *Certification requirements.* Data submitted to support that a given levee system complies with the structural requirements set forth in paragraphs (b)(1) through (7) of this section must be certified by a registered professional engineer. Also, certified as-built plans of the levee must be submitted. Certifications are subject to the definition given at § 65.2 of this subchapter. In lieu of these structural requirements, a Federal agency with responsibility for levee design may certify that the levee has been adequately designed and constructed to provide protection against the base flood.

[51 FR 30316, Aug. 25, 1986]

§ 65.11 Evaluation of sand dunes in mapping coastal flood hazard areas.

(a) *General conditions.* For purposes of the NFIP, FEMA will consider storm-induced dune erosion potential in its determination of coastal flood hazards and risk mapping efforts. The criterion to be used in the evaluation of dune erosion will apply to primary frontal dunes as defined in § 59.1, but does not

apply to artificially designed and constructed dunes that are not well-established with long-standing vegetative cover, such as the placement of sand materials in a dune-like formation.

(b) *Evaluation criterion.* Primary frontal dunes will not be considered as effective barriers to base flood storm surges and associated wave action where the cross-sectional area of the primary frontal dune, as measured perpendicular to the shoreline and above the 100-year stillwater flood elevation and seaward of the dune crest, is equal to, or less than, 540 square feet.

(c) *Exceptions.* Exceptions to the evaluation criterion may be granted where it can be demonstrated through authoritative historical documentation that the primary frontal dunes at a specific site withstood previous base flood storm surges and associated wave action.

[53 FR 16279, May 6, 1988]

§ 65.12 Revision of flood insurance rate maps to reflect base flood elevations caused by proposed encroachments.

(a) When a community proposes to permit encroachments upon the flood plain when a regulatory floodway has not been adopted or to permit encroachments upon an adopted regulatory floodway which will cause base flood elevation increases in excess of those permitted under paragraphs (c)(10) or (d)(3) of § 60.3 of this subchapter, the community shall apply to the Federal Insurance Administrator for conditional approval of such action prior to permitting the encroachments to occur and shall submit the following as part of its application:

(1) A request for conditional approval of map change and the appropriate initial fee as specified by § 72.3 of this subchapter or a request for exemption from fees as specified by § 72.5 of this subchapter, whichever is appropriate;

(2) An evaluation of alternatives which would not result in a base flood elevation increase above that permitted under paragraphs (c)(10) or (d)(3) of § 60.3 of this subchapter demonstrating why these alternatives are not feasible;

(3) Documentation of individual legal notice to all impacted property owners within and outside of the community, explaining the impact of the proposed action on their property.

(4) Concurrence of the Chief Executive Officer of any other communities impacted by the proposed actions;

(5) Certification that no structures are located in areas which would be impacted by the increased base flood elevation;

(6) A request for revision of base flood elevation determination according to the provisions of § 65.6 of this part;

(7) A request for floodway revision in accordance with the provisions of § 65.7 of this part;

(b) Upon receipt of the Federal Insurance Administrator's conditional approval of map change and prior to approving the proposed encroachments, a community shall provide evidence to the Federal Insurance Administrator of the adoption of flood plain management ordinances incorporating the increased base flood elevations and/or revised floodway reflecting the post-project condition.

(c) Upon completion of the proposed encroachments, a community shall provide as-built certifications in accordance with the provisions of § 65.3 of this part. The Federal Insurance Administrator will initiate a final map revision upon receipt of such certifications in accordance with part 67 of this subchapter.

[53 FR 16279, May 6, 1988]

§ 65.13 Mapping and map revisions for areas subject to alluvial fan flooding.

This section describes the procedures to be followed and the types of information FEMA needs to recognize on a NFIP map that a structural flood control measure provides protection from the base flood in an area subject to alluvial fan flooding. This information must be supplied to FEMA by the community or other party seeking recognition of such a flood control measure at the time a flood risk study or restudy is conducted, when a map revision under the provisions of part 65 of this subchapter is sought, and upon request by the Federal Insurance Administrator during the review of previously recognized flood control measures. The

FEMA review will be for the sole purpose of establishing appropriate risk zone determinations for NFIP maps and shall not constitute a determination by FEMA as to how the flood control measure will perform in a flood event.

(a) The applicable provisions of §§ 65.2, 65.3, 65.4, 65.6, 65.8 and 65.10 shall also apply to FIRM revisions involving alluvial fan flooding.

(b) The provisions of § 65.5 regarding map revisions based on fill and the provisions of part 70 of this chapter shall not apply to FIRM revisions involving alluvial fan flooding. In general, elevations of a parcel of land or a structure by fill or other means, will not serve as a basis for removing areas subject to alluvial fan flooding from an area of special food hazards.

(c) FEMA will credit on NFIP maps only major structural flood control measures whose design and construction are supported by sound engineering analyses which demonstrate that the measures will effectively eliminate alluvial fan flood hazards from the area protected by such measures. The provided analyses must include, but are not necessarily limited to, the following:

(1) Engineering analyses that quantify the discharges and volumes of water, debris, and sediment movement associated with the flood that has a one-percent probability of being exceeded in any year at the apex under current watershed conditions and under potential adverse conditions (e.g., deforestation of the watershed by fire). The potential for debris flow and sediment movement must be assessed using an engineering method acceptable to FEMA. The assessment should consider the characteristics and availability of sediment in the drainage basin above the apex and on the alluvial fan.

(2) Engineering analyses showing that the measures will accommodate the estimated peak discharges and volumes of water, debris, and sediment, as determined in accordance with paragraph (c)(1) of this section, and will withstand the associated hydrodynamic and hydrostatic forces.

(3) Engineering analyses showing that the measures have been designed to withstand the potential erosion and scour associated with estimated discharges.

(4) Engineering analyses or evidence showing that the measures will provide protection from hazards associated with the possible relocation of flow paths from other parts of the fan.

(5) Engineering analyses that assess the effect of the project on flood hazards, including depth and velocity of floodwaters and scour and sediment deposition, on other areas of the fan.

(6) Engineering analyses demonstrating that flooding from sources other than the fan apex, including local runoff, is either insignificant or has been accounted for in the design.

(d) *Coordination.* FEMA will recognize measures that are adequately designed and constructed, provided that: evidence is submitted to show that the impact of the measures on flood hazards in all areas of the fan (including those not protected by the flood control measures), and the design and maintenance requirements of the measures, were reviewed and approved by the impacted communities, and also by State and local agencies that have jurisdiction over flood control activities.

(e) *Operation and maintenance plans and criteria.* The requirements for operation and maintenance of flood control measures on areas subject to alluvial fan flooding shall be those specified under § 65.10, paragraphs (c) and (d), when applicable.

(f) *Certification requirements.* Data submitted to support that a given flood control measure complies with the requirements set forth in paragraphs (c)(1) through (6) of this section must be certified by a registered professional engineer. Also, certified as-built plans of the flood control measures must be submitted. Certifications are subject to the definition given at § 65.2.

[54 FR 33551, Aug. 15, 1989, as amended at 74 FR 15342, Apr. 3, 2009]

§ 65.14 Remapping of areas for which local flood protection systems no longer provide base flood protection.

(a) *General.* (1) This section describes the procedures to follow and the types

of information FEMA requires to designate flood control restoration zones. A community may be eligible to apply for this zone designation if the Federal Insurance Administrator determines that it is engaged in the process of restoring a flood protection system that was:

(i) Constructed using Federal funds;

(ii) Recognized as providing base flood protection on the community's effective FIRM; and

(iii) Decertified by a Federal agency responsible for flood protection design or construction.

(2) Where the Federal Insurance Administrator determines that a community is in the process of restoring its flood protection system to provide base flood protection, a FIRM will be prepared that designates the temporary flood hazard areas as a flood control restoration zone (Zone AR). Existing special flood hazard areas shown on the community's effective FIRM that are further inundated by Zone AR flooding shall be designated as a ''dual'' flood insurance rate zone, Zone AR/AE or AR/AH with Zone AR base flood elevations, and AE or AH with base flood elevations and Zone AR/AO with Zone AR base flood elevations and Zone AO with flood depths, or Zone AR/A with Zone AR base flood elevations and Zone A without base flood elevations.

(b) *Limitations.* A community may have a flood control restoration zone designation only once while restoring a flood protection system. This limitation does not preclude future flood control restoration zone designations should a fully restored, certified, and accredited system become decertified for a second or subsequent time.

(1) A community that receives Federal funds for the purpose of designing or constructing, or both, the restoration project must complete restoration or meet the requirements of 44 CFR 61.12 within a specified period, not to exceed a maximum of 10 years from the date of submittal of the community's application for designation of a flood control restoration zone.

(2) A community that does not receive Federal funds for the purpose of constructing the restoration project must complete restoration within a specified period, not to exceed a maximum of 5 years from the date of submittal of the community's application for designation of a flood control restoration zone. Such a community is not eligible for the provisions of §61.12. The designated restoration period may not be extended beyond the maximum allowable under this limitation.

(c) *Exclusions.* The provisions of these regulations do not apply in a coastal high hazard area as defined in 44 CFR 59.1, including areas that would be subject to coastal high hazards as a result of the decertification of a flood protection system shown on the community's effective FIRM as providing base flood protection.

(d) *Effective date for risk premium rates.* The effective date for any risk premium rates established for Zone AR shall be the effective date of the revised FIRM showing Zone AR designations.

(e) *Application and submittal requirements for designation of a flood control restoration zone.* A community must submit a written request to the Federal Insurance Administrator, signed by the community's Chief Executive Officer, for a flood plain designation as a flood control restoration zone. The request must include a legislative action by the community requesting the designation. The Federal Insurance Administrator will not initiate any action to designate flood control restoration zones without receipt of the formal request from the community that complies with all requirements of this section. The Federal Insurance Administrator reserves the right to request additional information from the community to support or further document the community's formal request for designation of a flood control restoration zone, if deemed necessary.

(1) At a minimum, the request from a community that receives Federal funds for the purpose of designing, constructing, or both, the restoration project must include:

(i) A statement whether, to the best of the knowledge of the community's Chief Executive Officer, the flood protection system is currently the subject matter of litigation before any Federal, State or local court or administrative agency, and if so, the purpose of that litigation;

(ii) A statement whether the community has previously requested a determination with respect to the same subject matter from the Federal Insurance Administrator, and if so, a statement that details the disposition of such previous request;

(iii) A statement from the community and certification by a Federal agency responsible for flood protection design or construction that the existing flood control system shown on the effective FIRM was originally built using Federal funds, that it no longer provides base flood protection, but that it continues to provide protection from the flood having at least a 3-percent chance of occurrence during any given year;

(iv) An official map of the community or legal description, with supporting documentation, that the community will adopt as part of its flood plain management measures, which designates developed areas as defined in § 59.1 and as further defined in § 60.3(f).

(v) A restoration plan to return the system to a level of base flood protection. At a minimum, this plan must:

(A) List all important project elements, such as acquisition of permits, approvals, and contracts and construction schedules of planned features;

(B) Identify anticipated start and completion dates for each element, as well as significant milestones and dates;

(C) Identify the date on which ''as built'' drawings and certification for the completed restoration project will be submitted. This date must provide for a restoration period not to exceed the maximum allowable restoration period for the flood protection system, or;

(D) Identify the date on which the community will submit a request for a finding of adequate progress that meets all requirements of § 61.12. This date may not exceed the maximum allowable restoration period for the flood protection system;

(vi) A statement identifying the local project sponsor responsible for restoration of the flood protection system;

(vii) A copy of a study, performed by a Federal agency responsible for flood protection design or construction in consultation with the local project sponsor, which demonstrates a Federal interest in restoration of the system and which deems that the flood protection system is restorable to a level of base flood protection.

(viii) A joint statement from the Federal agency responsible for flood protection design or construction involved in restoration of the flood protection system and the local project sponsor certifying that the design and construction of the flood control system involves Federal funds, and that the restoration of the flood protection system will provide base flood protection;

(2) At a minimum, the request from a community that receives no Federal funds for the purpose of constructing the restoration project must:

(i) Meet the requirements of § 65.14(e)(1)(i) through (iv);

(ii) Include a restoration plan to return the system to a level of base flood protection. At a minimum, this plan must:

(A) List all important project elements, such as acquisition of permits, approvals, and contracts and construction schedules of planned features;

(B) Identify anticipated start and completion dates for each element, as well as significant milestones and dates; and

(C) Identify the date on which ''as built'' drawings and certification for the completed restoration project will be submitted. This date must provide for a restoration period not to exceed the maximum allowable restoration period for the flood protection system;

(iii) Include a statement identifying the local agency responsible for restoration of the flood protection system;

(iv) Include a copy of a study, certified by registered Professional Engineer, that demonstrates that the flood protection system is restorable to provide protection from the base flood;

(v) Include a statement from the local agency responsible for restoration of the flood protection system certifying that the restored flood protection system will meet the applicable requirements of Part 65; and

(vi) Include a statement from the local agency responsible for restoration of the flood protection system that identifies the source of funds for the purpose of constructing the restoration project and a percentage of the total funds contributed by each source. The statement must demonstrate, at a minimum, that 100 percent of the total financial project cost of the completed flood protection system has been appropriated.

(f) *Review and response by the Federal Insurance Administrator.* The review and response by the Federal Insurance Administrator shall be in accordance with procedures specified in §65.9.

(g) *Requirements for maintaining designation of a flood control restoration zone.* During the restoration period, the community and the cost-sharing Federal agency, if any, must certify annually to the FEMA Regional Office having jurisdiction that the restoration will be completed in accordance with the restoration plan within the time period specified by the plan. In addition, the community and the cost-sharing Federal agency, if any, will update the restoration plan and will identify any permitting or construction problems that will delay the project completion from the restoration plan previously submitted to the Federal Insurance Administrator. The FEMA Regional Office having jurisdiction will make an annual assessment and recommendation to the Federal Insurance Administrator as to the viability of the restoration plan and will conduct periodic on-site inspections of the flood protection system under restoration.

(h) *Procedures for removing flood control restoration zone designation due to adequate progress or complete restoration of the flood protection system.* At any time during the restoration period:

(1) A community that receives Federal funds for the purpose of designing, constructing, or both, the restoration project shall provide written evidence of certification from a Federal agency having flood protection design or construction responsibility that the necessary improvements have been completed and that the system has been restored to provide protection from the base flood, or submit a request for a finding of adequate progress that meets all requirements of §61.12. If the Administrator determines that adequate progress has been made, FEMA will revise the zone designation from a flood control restoration zone designation to Zone A99.

(2) After the improvements have been completed, certified by a Federal agency as providing base flood protection, and reviewed by FEMA, FEMA will revise the FIRM to reflect the completed flood control system.

(3) A community that receives no Federal funds for the purpose of constructing the restoration project must provide written evidence that the restored flood protection system meets the requirements of part 65. A community that receives no Federal funds for the purpose of constructing the restoration project is not eligible for a finding of adequate progress under §61.12.

(4) After the improvements have been completed and reviewed by FEMA, FEMA will revise the FIRM to reflect the completed flood protection system.

(i) *Procedures for removing flood control restoration zone designation due to non-compliance with the restoration schedule or as a result of a finding that satisfactory progress is not being made to complete the restoration.* At any time during the restoration period, should the Federal Insurance Administrator determine that the restoration will not be completed in accordance with the time frame specified in the restoration plan, or that satisfactory progress is not being made to restore the flood protection system to provide complete flood protection in accordance with the restoration plan, the Federal Insurance Administrator shall notify the community and the responsible Federal agency, in writing, of the determination, the reasons for that determination, and that the FIRM will be revised to remove the flood control restoration zone designation. Within thirty (30) days of such notice, the community may submit written information that provides assurance that the restoration will be completed in accordance with the time frame specified in the restoration plan, or that satisfactory progress is being made to restore complete protection in accordance with the restoration plan, or that, with reasonable certainty, the

restoration will be completed within the maximum allowable restoration period. On the basis of this information the Federal Insurance Administrator may suspend the decision to revise the FIRM to remove the flood control restoration zone designation. If the community does not submit any information, or if, based on a review of the information submitted, there is sufficient cause to find that the restoration will not be completed as provided for in the restoration plan, the Federal Insurance Administrator shall revise the FIRM, in accordance with 44 CFR Part 67, and shall remove the flood control restoration zone designations and shall redesignate those areas as Zone A1–30, AE, AH, AO, or A.

[62 FR 55717, Oct. 27, 1997]

§ 65.15 List of communities submitting new technical data.

This section provides a cumulative list of communities where modifications of the base flood elevation determinations have been made because of submission of new scientific or technical data. Due to the need for expediting the modifications, the revised map is already in effect and the appeal period commences on or about the effective date of the modified map. An interim rule, followed by a final rule, will list the revised map effective date, local repository and the name and address of the Chief Executive Officer of the community. The map(s) is (are) effective for both flood plain management and insurance purposes.

[51 FR 30317, Aug. 25, 1986. Redesignated at 53 FR 16279, May 6, 1988, and further redesignated at 54 FR 33551, Aug. 15, 1989. Redesignated at 59 FR 53599, Oct. 25, 1994]

EDITORIAL NOTE: For references to FR pages showing lists of eligible communities, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.govinfo.gov*.

§ 65.16 Standard Flood Hazard Determination Form and Instructions.

(a) Section 528 of the National Flood Insurance Reform Act of 1994 (42 U.S.C. 1365(a)) directs FEMA to develop a standard form for determining, in the case of a loan secured by improved real estate or a mobile home, whether the building or mobile home is located in an area identified by the Director as an area having special flood hazards and in which flood insurance under this title is available. The purpose of the form is to determine whether a building or mobile home is located within an identified Special Flood Hazard Area (SFHA), whether flood insurance is required, and whether federal flood insurance is available. Use of this form will ensure that required flood insurance coverage is purchased for structures located in an SFHA, and will assist federal entities for lending regulation in assuring compliance with these purchase requirements.

(b) The form is available by written request to Federal Emergency Management Agency, PO Box 2012, Jessup, MD 20794; ask for the Standard Flood Hazard Determination form. It is also available by fax-on-demand; call (202) 646–3362, form #23103. Finally, the form is available through the Internet at *http://www.fema.gov/nfip/mpurfi.htm*.

[63 FR 27857, May 21, 1998]

§ 65.17 Review of determinations.

This section describes the procedures that shall be followed and the types of information required by FEMA to review a determination of whether a building or manufactured home is located within an identified Special Flood Hazard Area (SFHA).

(a) *General conditions.* The borrower and lender of a loan secured by improved real estate or a manufactured home may jointly request that FEMA review a determination that the building or manufactured home is located in an identified SFHA. Such a request must be submitted within 45 days of the lender's notification to the borrower that the building or manufactured home is in the SFHA and that flood insurance is required. Such a request must be submitted jointly by the lender and the borrower and shall include the required fee and technical information related to the building or manufactured home. Elevation data will not be considered under the procedures described in this section.

(b) *Data and other requirements.* Items required for FEMA's review of a determination shall include the following:

(1) Payment of the required fee by check or money order, in U.S. funds,

payable to the National Flood Insurance Program;

(2) A request for FEMA's review of the determination, signed by both the borrower and the lender;

(3) A copy of the lender's notification to the borrower that the building or manufactured home is in an SFHA and that flood insurance is required (the request for review of the determination must be postmarked within 45 days of borrower notification);

(4) A completed Standard Flood Hazard Determination Form for the building or manufactured home, together with a legible hard copy of all technical data used in making the determination; and

(5) A copy of the effective NFIP map (Flood Hazard Boundary Map (FHBM) or Flood Insurance Rate Map (FIRM)) panel for the community in which the building or manufactured home is located, with the building or manufactured home location indicated. Portions of the map panel may be submitted but shall include the area of the building or manufactured home in question together with the map panel title block, including effective date, bar scale, and north arrow.

(c) *Review and response by FEMA.* Within 45 days after receipt of a request to review a determination, FEMA will notify the applicants in writing of one of the following:

(1) Request submitted more than 45 days after borrower notification; no review will be performed and all materials are being returned;

(2) Insufficient information was received to review the determination; therefore, the determination stands until a complete submittal is received; or

(3) The results of FEMA's review of the determination, which shall include the following:

(i) The name of the NFIP community in which the building or manufactured home is located;

(ii) The property address or other identification of the building or manufactured home to which the determination applies;

(iii) The NFIP map panel number and effective date upon which the determination is based;

(iv) A statement indicating whether the building or manufactured home is within the Special Flood Hazard Area;

(v) The time frame during which the determination is effective.

[60 FR 62218, Dec. 5, 1995]

PART 66—CONSULTATION WITH LOCAL OFFICIALS

Sec.

66.1 Purpose of part.
66.2 Definitions.
66.3 Establishment of community case file and flood elevation study docket.
66.4 Appointment of consultation coordination officer.
66.5 Responsibilities for consultation and coordination.

AUTHORITY: 42 U.S.C. 4001 *et seq.;* Reorganization Plan No. 3 of 1978; E.O. 12127.

§ 66.1 Purpose of part.

(a) The purpose of this part is to comply with section 206 of the Flood Disaster Protection Act of 1973 (42 U.S.C. 4107) by establishing procedures for flood elevation determinations of Zones A1–30, AE, AH, AO and V1–30, and VE within the community so that adequate consultation with the community officials shall be assured.

(b) The procedures in this part shall apply when base flood elevations are to be determined or modified.

(c) The Federal Insurance Administrator or his delegate shall:

(1) Specifically request that the community submit pertinent data concerning flood hazards, flooding experience, plans to avoid potential hazards, estimate of historical and prospective economic impact on the community, and such other appropriate data (particularly if such data will necessitate a modification of a base flood elevation).

(2) Notify local officials of the progress of surveys, studies, investigations, and of prospective findings, along with data and methods employed in reaching such conclusions; and

(3) Encourage local dissemination of surveys, studies, and investigations so that interested persons will have an opportunity to bring relevant data to the attention of the community and to the Federal Insurance Administrator.

(4) Carry out the responsibilities for consultation and coordination set forth in § 66.5 of this part.

[41 FR 46988, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 47 FR 771, Jan. 7, 1982; 48 FR 44553, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984; 50 FR 36028, Sept. 4, 1985]

§ 66.2 Definitions.

The definitions set forth in part 59 of this subchapter are applicable to this part.

[41 FR 46988, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979]

§ 66.3 Establishment of community case file and flood elevation study docket.

(a) A file shall be established for each community at the time initial consideration is given to studying that community in order to establish whether or not it contains flood-prone areas. Thereafter, the file shall include copies of all correspondence with officials in that community. As the community is tentatively identified, provided with base flood elevations, or suspended and reinstated, documentation of such actions by the Federal Insurance Administrator shall be placed in the community file. Even if a map is administratively rescinded or withdrawn after notice under part 65 of this subchapter or the community successfully rebuts its flood-prone designation, the file will be maintained indefinitely.

(b) A portion of the community file shall be designated a flood elevation study consultation docket and shall be established for each community at the time the contract is awarded for a flood elevation study. The docket shall include copies of (1) all correspondence between the Federal Insurance Administrator and the community concerning the study, reports of any meetings among the Agency representatives, property owners of the community, the state coordinating agency, study contractors or other interested persons, (2) relevant publications, (3) a copy of the completed flood elevation study, and (4) a copy of the Federal Insurance Administrator's final determination.

(c) A flood elevation determination docket shall be established and maintained in accordance with part 67 of this subchapter.

[41 FR 46988, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44544 and 44553, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

§ 66.4 Appointment of consultation coordination officer.

The Federal Insurance Administrator may appoint an employee of the Federal Emergency Management Agency, or other designated Federal employee, as the Consultation Coordination Officer, for each community when an analysis is undertaken to establish or to modify flood elevations pursuant to a new study or a restudy. When a CCO is appointed by the Federal Insurance Administrator, the responsibilities for consultation and coordination as set forth in § 66.5 shall be carried out by the CCO. The Federal Insurance Administrator shall advise the community and the state coordinating agency, in writing, of this appointment.

[47 FR 771, Jan. 7, 1982, as amended at 49 FR 4751, Feb. 8, 1984]

§ 66.5 Responsibilities for consultation and coordination.

(a) Contact shall be made with appropriate officials of a community in which a proposed investigation is undertaken, and with the state coordinating agency.

(b) Local dissemination of the intent and nature of the investigation shall be encouraged so that interested parties will have an opportunity to bring relevant data to the attention of the community and to the Federal Insurance Administrator.

(c) Submission of information from the community concerning the study shall be encouraged.

(d) Appropriate officials of the community shall be fully informed of (1) The responsibilities placed on them by the Program, (2) the administrative procedures followed by the Federal Emergency Management Agency, (3) the community's role in establishing elevations, and (4) the responsibilities of the community if it participates or continues to participate in the Program.

(e) Before the commencement of an initial Flood Insurance Study, the CCO

or other FEMA representative, together with a representative of the organization undertaking the study, shall meet with officials of the community. The state coordinating agency shall be notified of this meeting and may attend. At this meeting, the local officials shall be informed of (1) The date when the study will commence, (2) the nature and purpose of the study, (3) areas involved, (4) the manner in which the study shall be undertaken, (5) the general principles to be applied, and (6) the intended use of the data obtained. The community shall be informed in writing if any of the six preceding items are or will be changed after this initial meeting and during the course of the ongoing study.

(f) The community shall be informed in writing of any intended modification to the community's final flood elevation determinations or the development of new elevations in additional areas of the community as a result of a new study or restudy. Such information to the community will include the data set forth in paragraph (e) of this section. At the discretion of the Regional Administrator in each FEMA Regional Office, a meeting may be held to accomplish this requirement.

[47 FR 771, Jan. 7, 1982, as amended at 49 FR 4751, Feb. 8, 1984]

PART 67—APPEALS FROM PROPOSED FLOOD ELEVATION DETERMINATIONS

Sec.

67.1 Purpose of part.
67.2 Definitions.
67.3 Establishment and maintenance of a flood elevation determination docket (FEDD).
67.4 Proposed flood elevation determination.
67.5 Right of appeal.
67.6 Basis of appeal.
67.7 Collection of appeal data.
67.8 Appeal procedure.
67.9 Final determination in the absence of an appeal by the community.
67.10 Rates during pendency of final determination.
67.11 Notice of final determination.
67.12 Appeal to District Court.

AUTHORITY: 42 U.S.C. 4001 *et seq.*; Reorganization Plan No. 3 of 1978, 3 CFR, 1978 Comp., p. 329; E.O. 12127, 44 FR 19367, 3 CFR, 1979 Comp., p. 376.

SOURCE: 41 FR 46989, Oct. 26, 1976, unless otherwise noted. Redesignated at 44 FR 31177, May 31, 1979.

§ 67.1 Purpose of part.

The purpose of this part is to establish procedures implementing the provisions of section 110 of Flood Disaster Protection Act of 1973.

§ 67.2 Definitions.

The definitions set forth in part 59 of this subchapter are applicable to this part.

§ 67.3 Establishment and maintenance of a flood elevation determination docket (FEDD).

The Federal Insurance Administrator shall establish a docket of all matters pertaining to flood elevation determinations. The docket files shall contain the following information:

(a) The name of the community subject to the flood elevation determination;

(b) A copy of the notice of the proposed flood elevation determination to the Chief Executive Officer (CEO) of the Community;

(c) A copy of the notice of the proposed flood elevation determination published in a prominent local newspaper of the community;

(d) A copy of the notice of the proposed flood elevation determination published in the FEDERAL REGISTER;

(e) Copies of all appeals by private persons received by the Federal Insurance Administrator from the CEO;

(f) Copies of all comments received by the Federal Insurance Administrator on the notice of the proposed flood elevation determination published in the FEDERAL REGISTER.

(g) A copy of the community's appeal or a copy of its decision not to appeal the proposed flood elevation determination;

(h) A copy of the flood insurance study for the community;

(i) A copy of the FIRM for the community;

(j) Copies of all materials maintained in the flood elevation study consultation docket; and

(k) A copy of the final determination with supporting documents.

[41 FR 46989, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44553, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

§ 67.4 Proposed flood elevation determination.

The Federal Insurance Administrator shall propose flood elevation determinations in the following manner:

(a) Publication of the proposed flood elevation determination for comment in the FEDERAL REGISTER;

(b) Notification by certified mail, return receipt requested, of the proposed flood elevation determination to the CEO; and

(c) Publication of the proposed flood elevation determination in a prominent local newspaper at least twice during the ten day period immediately following the notification of the CEO.

[41 FR 46989, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44553, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

EDITORIAL NOTE: For references to FR pages showing lists of flood elevation determinations, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.govinfo.gov*.

§ 67.5 Right of appeal.

(a) Any owner or lessee of real property, within a community where a proposed flood elevation determination has been made pursuant to section 1363 of the National Flood Insurance Act of 1968, as amended, who believes his property rights to be adversely affected by the Federal Insurance Administrator's proposed determination, may file a written appeal of such determination with the CEO, or such agency as he shall publicly designate, within ninety days of the second newspaper publication of the Federal Insurance Administrator's proposed determination.

(b) [Reserved]

[41 FR 46989, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44553, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

§ 67.6 Basis of appeal.

(a) The sole basis of appeal under this part shall be the possession of knowledge or information indicating that the elevations proposed by FEMA are scientifically or technically incorrect. Because scientific and technical correctness is often a matter of degree rather than absolute (except where mathematical or measurement error or changed physical conditions can be demonstrated), appellants are required to demonstrate that alternative methods or applications result in more correct estimates of base flood elevations, thus demonstrating that FEMA's estimates are incorrect.

(b) *Data requirements.* (1) If an appellant believes the proposed base flood elevations are technically incorrect due to a mathematical or measurement error or changed physical conditions, then the specific source of the error must be identified. Supporting data must be furnished to FEMA including certifications by a registered professional engineer or licensed land surveyor, of the new data necessary for FEMA to conduct a reanalysis.

(2) If an appellant believes that the proposed base flood elevations are technically incorrect due to error in application of hydrologic, hydraulic or other methods or use of inferior data in applying such methods, the appeal must demonstrate technical incorrectness by:

(i) Identifying the purported error in the application or the inferior data.

(ii) Supporting why the application is incorrect or data is inferior.

(iii) Providing an application of the same basic methods utilized by FEMA but with the changes itemized.

(iv) Providing background technical support for the changes indicating why the appellant's application should be accepted as more correct.

(v) Providing certification of correctness of any alternate data utilized or measurements made (such as topographic information) by a registered professional engineer or licensed land surveyor, and

(vi) Providing documentation of all locations where the appellant's base flood elevations are different from FEMA's.

(3) If any appellant believes the proposed base flood elevations are scientifically incorrect, the appeal must demonstrate scientific incorrectness by:

(i) Identifying the methods, or assumptions purported to be scientifically incorrect.

(ii) Supporting why the methods, or assumptions are scientifically incorrect.

(iii) Providing an alternative analysis utilizing methods, or assumptions purported to be correct.

(iv) Providing technical support indicating why the appellant's methods should be accepted as more correct and

(v) Providing documentation of all locations where the appellant's base flood elevations are different from FEMA's.

[48 FR 31644, July 1, 1983]

§ 67.7 Collection of appeal data.

(a) Appeals by private persons to the CEO shall be submitted within ninety (90) days following the second newspaper publication of the Federal Insurance Administrator's proposed flood elevation determination to the CEO or to such agency as he may publicly designate and shall set forth scientific or technical data that tend to negate or contradict the Federal Insurance Administrator's findings.

(b) Copies of all individual appeals received by the CEO shall be forwarded, as soon as they are received, to the Federal Insurance Administrator for information and placement in the Flood Elevation Determination Docket.

(c) The CEO shall review and consolidate all appeals by private persons and issue a written opinion stating whether the evidence presented is sufficient to justify an appeal on behalf of such persons by the community in its own name.

(d) The decision issued by the CEO on the basis of his review, on whether an appeal by the community in its own name shall be made, shall be filed with the Federal Insurance Administrator not later than ninety days after the date of the second newspaper publication of the Federal Insurance Administrator's proposed flood elevation determination and shall be placed in the FEDD.

[41 FR 46989, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44553, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

§ 67.8 Appeal procedure.

(a) If a community appeals the proposed flood elevation determination, the Federal Insurance Administrator shall review and take fully into account any technical or scientific data submitted by the community that tend to negate or contradict the information upon which his/her proposed determination is based.

(b) The Federal Insurance Administrator shall resolve such appeal by consultation with officials of the local government, or by administrative hearings under the procedures set forth in part 68 of this subchapter, or by submission of the conflicting data to an independent scientific body or appropriate Federal agency for advice.

(c) The final determination by the Federal Insurance Administrator where an appeal is filed shall be made within a reasonable time.

(d) Nothing in this section shall be considered to compromise an appellant's rights granted under § 67.12.

(e) The Federal Insurance Administrator shall make available for public inspection the reports and other information used in making the final determination. This material shall be admissible in a court of law in the event the community seeks judicial review in accordance with § 67.12.

[41 FR 46989, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44553, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

§ 67.9 Final determination in the absence of an appeal by the community.

(a) If the Federal Insurance Administrator does not receive an appeal from the community within the ninety days provided, he shall consolidate and review on their own merits the individual appeals which, in accordance with § 67.7 are filed within the community and forwarded by the CEO.

(b) The final determination shall be made pursuant to the procedures in § 67.8 and, modifications shall be made of his proposed determination as may be appropriate, taking into account the written opinion, if any, issued by the

community in not supporting such appeals.

[41 FR 46989, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44553, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

§ 67.10 Rates during pendency of final determination.

(a) Until such time as a final determination is made and proper notice is given, no person within a participating community shall be denied the right to purchase flood insurance at the subsidized rate.

(b) After the final determination and upon the effective date of a FIRM, risk premium rates will be charged for new construction and substantial improvements. The effective date of a FIRM shall begin not later than six months after the final flood elevation determination.

§ 67.11 Notice of final determination.

The Federal Insurance Administrator's notice of the final flood elevation determination for a community shall be in written form and published in the FEDERAL REGISTER, and copies shall be sent to the CEO, all individual appellants and the State Coordinating Agency.

[41 FR 46989, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44553, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

EDITORIAL NOTE: For the list of communities issued under this section, and not carried in the CFR, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.govinfo.gov*.

§ 67.12 Appeal to District Court.

(a) An appellant aggrieved by the final determination of the Federal Insurance Administrator may appeal such determination only to the United States District Court for the District within which the community is located within sixty days after receipt of notice of determination.

(b) During the pendency of any such litigation, all final determinations of the Federal Insurance Administrator shall be effective for the purposes of this title unless stayed by the court for good cause shown.

(c) The scope of review of the appellate court shall be in accordance with the provisions of 5 U.S.C. 706, as modified by 42 U.S.C. 4104(b).

[41 FR 46989, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44544 and 44553, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984; 49 FR 33879, Aug. 27, 1984]

PART 68—ADMINISTRATIVE HEARING PROCEDURES

Sec.

68.1 Purpose of part.
68.2 Definitions.
68.3 Right to administrative hearings.
68.4 Hearing board.
68.5 Establishment of a docket.
68.6 Time and place of hearing.
68.7 Conduct of hearings.
68.8 Scope of review.
68.9 Admissible evidence.
68.10 Burden of proof.
68.11 Determination.
68.12 Relief.

AUTHORITY: 42 U.S.C. 4001 *et seq.;* Reorganization Plan No. 3 of 1978; E.O. 12127.

SOURCE: 47 FR 23449, May 28, 1982, unless otherwise noted.

§ 68.1 Purpose of part.

The purpose of this part is to establish procedures for appeals of the Federal Insurance Administrator's base flood elevation determinations, whether proposed pursuant to section 1363(e) of the Act (42 U.S.C. 4104) or modified because of changed conditions or newly acquired scientific and technical information.

[47 FR 23449, May 29, 1982, as amended at 49 FR 33879, Aug. 27, 1984]

§ 68.2 Definitions.

The definitions set forth in part 59 of this subchapter are applicable to this part.

[47 FR 23449, May 29, 1982, as amended at 49 FR 33879, Aug. 27, 1984]

§ 68.3 Right to administrative hearings.

If a community appeals the Federal Insurance Administrator's flood elevation determination established pursuant to §67.8 of this subchapter, and the Federal Insurance Administrator has determined that such appeal cannot be resolved by consultation with

officials of the community or by submitting the conflicting data to an independent scientific body or appropriate Federal agency for advice, the Federal Insurance Administrator shall hold an administrative hearing to resolve the appeal.

[47 FR 23449, May 29, 1982, as amended at 49 FR 33879, Aug. 27, 1984]

§ 68.4 Hearing board.

(a) Each hearing shall be conducted by a three member hearing board (hereinafter ''board''). The board shall consist of a hearing officer (hereinafter ''Judge'') appointed by the Administrator based upon a recommendation by the Office of Personnel Management and two members selected by the Judge who are qualified in the technical field of flood elevation determinations. The Judge shall consult with anyone he deems appropriate to determine the technical qualifications of individuals being considered for appointment to the board. The board members shall not be FEMA employees.

(b) The Judge shall be responsible for conducting the hearing, and shall make all procedural rulings during the course of the hearing. Any formal orders and the final decision on the merits of the hearing shall be made by a majority of the board. A dissenting member may submit a separate opinion for the record.

(c) A technically qualified alternate will be appointed by the Judge as a member of the board when a technically qualified appointed member becomes unavailable. The Administrator will appoint an alternate Judge if the appointed Judge becomes unavailable.

§ 68.5 Establishment of a docket.

The Chief Counsel shall establish a docket for appeals referred to him/her by the Federal Insurance Administrator for administrative hearings. This docket shall include, for each appeal, copies of all materials contained in the flood elevation determination docket (FEDD) file on the matter, copies of all correspondence in connection with the appeal, all motions, orders, statements, and other legal documents, a transcript of the hearing, and the board's final determination.

[47 FR 23449, May 29, 1982, as amended at 49 FR 33879, Aug. 27, 1984]

§ 68.6 Time and place of hearing.

(a) The time and place of each hearing shall be designated by the Judge for that hearing. The Federal Insurance Administrator and the Chief Counsel shall be promptly advised of such designations.

(b) The board's notice of the time and place of hearing shall be sent by the Flood Insurance Docket Clerk by registered or certified mail, return receipt requested, to all appellants. Such notice shall include a statement indicating the nature of the proceedings and their purpose and all appellants' entitlement to counsel. Notice of the hearing shall be sent no later than 30 days before the date of hearing unless such period is waived by all appellants.

[47 FR 23449, May 29, 1982, as amended at 49 FR 33879, Aug. 27, 1984]

§ 68.7 Conduct of hearings.

(a) The Judge shall be responsible for the fair and expeditious conduct of proceedings.

(b) The Federal Insurance Administrator shall be represented by the Chief Counsel or his/her designee.

(c) One administrative hearing shall be held for any one community unless the Federal Insurance Administrator for good cause shown grants a separate hearing or hearings.

(d) The Chief Executive Officer (CEO) of the community or his/her designee shall represent all appellants from that community; *Provided*, That any appellant may petition the board to allow such appellant to make an appearance on his/her own behalf. Such a petition shall be granted only upon a showing of good cause.

(e) Hearings shall be open to the public.

(f) A verbatim transcript will be made of the hearing. An appellant may order copies of the transcribed verbatim record directly from the reporter and will be responsible for payments.

[47 FR 23449, May 29, 1982, as amended at 49 FR 33879, Aug. 27, 1984]

§ 68.8 Scope of review.

Review at administrative hearings shall be limited to: An examination of any information presented by each appellant within the 90 day appeal period indicating that elevations proposed by the Federal Insurance Administrator are scientifically or technically incorrect; the FIRM; the flood insurance study; its backup data and the references used in development of the flood insurance study; and responses by FEMA to the issues raised by the appellant(s).

[47 FR 23449, May 29, 1982, as amended at 49 FR 33879, Aug. 27, 1984]

§ 68.9 Admissible evidence.

(a) Legal rules of evidence shall not be in effect at administrative hearings. However, *only* evidence relevant to issues within the scope of review under § 68.8 shall be admissible.

(b) Documentary and oral evidence shall be admissible.

(c) Admissibility of non-expert testimony shall be within the discretion of the board.

(d) All testimony shall be under oath.

(e) *Res judicata*/collateral estoppel. Where there has been a previous determination, decision or finding of fact by the Director, one of his delegees, an administrative law judge, hearing officer, or hearing board regarding the base flood elevations of any other community, such determination, decision, or finding of fact shall not be binding on the board and may only be admissible into evidence if relevant.

§ 68.10 Burden of proof.

The burden shall be on appellant(s) to prove that the flood elevation determination is not scientifically or technically correct.

§ 68.11 Determination.

The board shall render its written decision within 45 days after the conclusion of the hearing. The entire record of the hearing including the board's decision will be sent to the Administrator for review and approval. The Administrator shall make the final base flood elevation determination by accepting in whole or in part or by rejecting the board's decision.

§ 68.12 Relief.

The final determination may be appealed by the appellant(s) to the United States district court as provided in section 1363(f) of the Act (42 U.S.C. 4104).

PART 69 [RESERVED]

PART 70—PROCEDURE FOR MAP CORRECTION

MAPPING DEFICIENCIES UNRELATED TO COMMUNITY-WIDE ELEVATION DETERMINATIONS

Sec.

70.1 Purpose of part.
70.2 Definitions.
70.3 Right to submit technical information.
70.4 Review by the Administrator.
70.5 Letter of Map Amendment.
70.6 Distribution of Letter of Map Amendment.
70.7 Notice of Letter of Map Amendment.
70.8 Premium refund after Letter of Map Amendment.
70.9 Review of proposed projects.

AUTHORITY: 42 U.S.C. 4001 *et seq.;* Reorganization Plan No. 3 of 1978, 43 FR 41943, 3 CFR, 1978 Comp., p. 329; E.O. 12127 of Mar. 31, 1979, 44 FR 19367, 3 CFR, 1979 Comp., p. 376.

MAPPING DEFICIENCIES UNRELATED TO COMMUNITY-WIDE ELEVATION DETERMINATIONS

§ 70.1 Purpose of part.

The purpose of this part is to provide an administrative procedure whereby the Federal Insurance Administrator will review the scientific or technical submissions of an owner or lessee of property who believes his property has been inadvertently included in designated A, AO, A1–30, AE, AH, A99, AR, AR/A1–30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1–30, VE, and V Zones, as a result of the transposition of the curvilinear line to either street or to other readily identifiable features. The necessity for this part is due in part to the technical difficulty of accurately delineating the curvilinear line on either an FHBM or FIRM. These procedures shall not apply when there has been any alteration of topography since the effective date of the first

NFIP map (i.e., FHBM or FIRM) showing the property within an area of special flood hazard. Appeals in such circumstances are subject to the provisions of part 65 of this subchapter.

[62 FR 55718, Oct. 27, 1997]

§ 70.2 Definitions.

The definitions set forth in part 59 of this subchapter are applicable to this part.

[41 FR 46991, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979]

§ 70.3 Right to submit technical information.

(a) Any owner or lessee of property (applicant) who believes his property has been inadvertently included in a designated A, AO, A1–30, AE, AH, A99, AR, AR/A1–30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1–30, VE, and V Zones on a FHBM or a FIRM, may submit scientific or technical information to the Federal Insurance Administrator for the Federal Insurance Administrator's review.

(b) Scientific and technical information for the purpose of this part may include, but is not limited to the following:

(1) An actual copy of the recorded plat map bearing the seal of the appropriate recordation official (e.g. County Clerk, or Recorder of Deeds) indicating the official recordation and proper citation (Deed or Plat Book Volume and Page Numbers), or an equivalent identification where annotation of the deed or plat book is not the practice.

(2) A topographical map showing (i) ground elevation contours in relation to the National Geodetic Vertical Datum (NVGD) of 1929, (ii) the total area of the property in question, (iii) the location of the structure or structures located on the property in question, (iv) the elevation of the lowest adjacent grade to a structure or structures and (v) an indication of the curvilinear line which represents the area subject to inundation by a base flood. The curvilinear line should be based upon information provided by any appropriate authoritative source, such as a Federal Agency, the appropriate state agency (e.g. Department of Water Resources), a County Water Control District, a County or City Engineer, a Federal Emergency Management Agency Flood Insurance Study, or a determination by a Registered Professional Engineer;

(3) A copy of the FHBM or FIRM indicating the location of the property in question;

(4) A certification by a Registered Professional Engineer or Licensed Land Surveyor that the lowest grade adjacent to the structure is above the base flood elevation.

[41 FR 46991, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44544 and 44553, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984; 50 FR 36028, Sept. 4, 1985; 51 FR 30317, Aug. 25, 1986; 53 FR 16280, May 6, 1988; 59 FR 53601, Oct. 25, 1994; 62 FR 55719, Oct. 27, 1997]

§ 70.4 Review by the Administrator.

The Administrator, after reviewing the scientific or technical information submitted under the provisions of § 70.3, shall notify the applicant in writing of his/her determination within 60 days after we receive the applicant's scientific or technical information that we have compared either the ground elevations of an entire legally defined parcel of land or the elevation of the lowest adjacent grade to a structure with the elevation of the base flood and that:

(a) The property is within a designated A, A0, A1–30, AE, AH, A99, AR, AR/A1–30, AR/AE, AR/AO, AR/AH, AR/A, V0, V1–30, VE, or V Zone, and will state the basis of such determination; or

(b) The property should not be within a designated A, A0, A1–30, AE, AH, A99, AR, AR/A1–30, AR/AE, AR/AO, AR/AH, AR/A,V0, V1–30, VE, or V Zone and that we will modify the FHBM or FIRM accordingly; or

(c) The property is not within a designated A, A0, A1–30, AE, AH, A99, AR, AR/A1–30, AR/AE, AR/AO, AR/AH, AR/A,V0, V1–30, VE, or V Zone as shown on the FHBM or FIRM and no modification of the FHBM or FIRM is necessary; or

(d) We need an additional 60 days to make a determination.

[66 FR 33900, June 26, 2001]

§ 70.5 Letter of Map Amendment.

Upon determining from available scientific or technical information that a FHBM or a FIRM requires modification under the provisions of § 70.4(b), the Administrator shall issue a Letter of Map Amendment which shall state:

(a) The name of the Community to which the map to be amended was issued;

(b) The number of the map;

(c) The identification of the property to be excluded from a designated A, AO, A1–30, AE, AH, A99, AR, AR/A1–30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1–30, VE, or V Zone.

[41 FR 46991, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44553, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984; 50 FR 36028, Sept. 4, 1985; 59 FR 53601, Oct. 25, 1994; 62 FR 55719, Oct. 27, 1997]

§ 70.6 Distribution of Letter of Map Amendment.

(a) A copy of the Letter of Map Amendment shall be sent to the applicant who submitted scientific or technical data to the Federal Insurance Administrator.

(b) A copy of the Letter of Map Amendment shall be sent to the local map repository with instructions that it be attached to the map which the Letter of Map Amendment is amending.

(c) A copy of the Letter of Map Amendment shall be sent to the map repository in the state with instructions that it be attached to the map which it is amending.

(d) A copy of the Letter of Map Amendment will be sent to any community or governmental unit that requests such Letter of Map Amendment.

(e) [Reserved]

(f) A copy of the Letter of Map Amendment will be maintained by the Agency in its community case file.

[41 FR 46991, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44544 and 44553, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

§ 70.7 Notice of Letter of Map Amendment.

(a) The Federal Insurance Administrator, shall not publish a notice in the FEDERAL REGISTER that the FIRM for a particular community has been amended by letter determination pursuant to this part unless such amendment includes alteration or change of base flood elevations established pursuant to part 67. Where no change of base flood elevations has occurred, the Letter of Map Amendment provided under §§ 70.5 and 70.6 serves to inform the parties affected.

(b) [Reserved]

EDITORIAL NOTE: For a list of communities issued under this section and not carried in the CFR see the List of CFR Sections Affected, which appears in the Finding Aids Section of the printed volume and at *www.govinfo.gov*.

§ 70.8 Premium refund after Letter of Map Amendment.

A Standard Flood Insurance Policyholder whose property has become the subject of a Letter of Map Amendment under this part may cancel the policy within the current policy year and receive a premium refund under the conditions set forth in § 62.5 of this subchapter.

[41 FR 46991, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979]

§ 70.9 Review of proposed projects.

An individual who proposes to build one or more structures on a portion of property that may be included inadvertently in a Special Flood Hazard Area (SFHA) may request FEMA's comments on whether the proposed structure(s), if built as proposed, will be in the SFHA. FEMA's comments will be issued in the form of a letter, termed a Conditional Letter of Map Amendment. The data required to support such requests are the same as those required for final Letters of Map Amendment in accordance with § 70.3, except as-built certification is not required and the requests shall be accompanied by the appropriate payment, in accordance with 44 CFR part 72. All such requests for CLOMAs shall be submitted to the FEMA Regional Office servicing the community's geographic area or to the FEMA Headquarters Office in Washington, DC.

[62 FR 5736, Feb. 6, 1997]

PART 71—IMPLEMENTATION OF COASTAL BARRIER LEGISLATION

Sec.
71.1 Purpose of part.
71.2 Definitions.
71.3 Denial of flood insurance.
71.4 Documentation.
71.5 Violations.

AUTHORITY: 42 U.S.C. 4001, *et seq.;* Reorganization Plan No. 3 of 1978, 3 CFR, 1978 Comp., p. 329; E.O. 12127, 44 FR 19367, 3 CFR, 1979 Comp., p. 376; 42 U.S.C. 4028; secs. 9 and 14, Pub. L. 101–591, 42 U.S.C. 4028(b).

SOURCE: 48 FR 37039, Aug. 16, 1983, unless otherwise noted.

§ 71.1 Purpose of part.

This part implements section 11 of the Coastal Barrier Resources Act (Pub. L. 97–348) and section 9 of the Coastal Barrier Improvement Act of 1990 (Pub. L. 101–591), as those Acts amend the National Flood Insurance Act of 1968 (42 U.S.C. 4001 *et seq.*).

[48 FR 37039, Aug. 16, 1983, as amended at 57 FR 22661, May 29, 1992]

§ 71.2 Definitions.

(a) Except as otherwise provided in this part, the definitions set forth in part 59 of this subchapter are applicable to this part.

(b) For the purpose of this part, a structure located in an area identified as being in the Coastal Barrier Resources System (CBRS) both as of October 18, 1982, and as of November 16, 1990, is ''new construction'' unless it meets the following criteria:

(1)(i) A legally valid building permit or equivalent documentation was obtained for the construction of such structure prior to October 18, 1982; and

(ii) The start of construction (see part 59) took place prior to October 18, 1982; *or*

(2)(i) A legally valid building permit or equivalent documentation was obtained for the construction of such structure prior to October 1, 1983; and

(ii) The structure constituted an insurable building, having walls and a roof permanently in place no later than October 1, 1983.

(c) For the purpose of this part, a structure located in an area newly identified as being in the CBRS as of November 16, 1990, is ''new construction'' unless it meets the following criteria:

(1) A legally valid building permit or equivalent documentation was obtained for the construction of such structure prior to November 16, 1990; and

(2) The start of construction (see 44 CFR part 59) took place prior to November 16, 1990.

(d) For the purpose of this part, a structure located in an ''otherwise protected area'' is ''new construction'' unless it meets the following criteria:

(1)(i) A legally valid building permit or equivalent documentation was obtained for the construction of such structure prior to November 16, 1990; and

(ii) The start of construction took place prior to November 16, 1990; or

(2)(i) A legally valid building permit or equivalent documentation was obtained for the construction of such structure prior to November 16, 1991; and

(ii) The structure constituted an insurable building, having walls and a roof permanently in place, no later than November 16, 1991.

(e) For the purpose of this part, a structure located in an area identified as being in the CBRS both as of October 18, 1982, and as of November 16, 1990, is a ''substantial improvement'' if the substantial improvement (see 44 CFR part 59) of such structure took place on or after October 1, 1983.

(f) For the purpose of this part, a structure located in an area newly identified as being in the CBRS as of November 16, 1990, is a ''substantial improvement'' if the substantial improvement of such structure took place on or after November 16, 1990.

(g) For the purpose of this part, a structure located in an ''otherwise protected area'' is a ''substantial improvement'' if the substantial improvement of such structure took place after November 16, 1991.

(h) For the purpose of this part, a *policy of flood insurance* means a policy issued pursuant to the National Flood Insurance Act of 1968, as amended. This includes a policy issued directly by the Federal Government as well as by a private sector insurance company

under the Write Your Own Program as authorized by 44 CFR part 62.

(i) For the purpose of this part, *new policy of flood insurance* means a policy of flood insurance other than one issued by an insurer (Write Your Own insurer or the Federal Government as the direct insurer) effective upon the expiration of a prior policy of flood insurance issued by the same insurer without any lapse in coverage between these two policies.

(j) For the purpose of this part, *new flood insurance coverage* means a new or renewed policy of flood insurance.

(k) For the purpose of this part, *otherwise protected area* means an undeveloped coastal barrier within the boundaries of an area established under Federal, State, or local law, or held by a qualified organization, primarily for wildlife refuge, sanctuary, recreational, or natural resource conservation purposes and identified and depicted on the maps referred to in section 4(a) of the Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990, as an area that is:

(1) Not within the CBRS and

(2) In an ''otherwise protected area.''

[48 FR 37039, Aug. 16, 1983, as amended at 49 FR 33879, Aug. 27, 1984; 57 FR 22661, May 29, 1992]

§ 71.3 Denial of flood insurance.

(a) No new flood insurance coverage may be provided on or after October 1, 1983, for any new construction or substantial improvement of a structure located in an area identified as being in the CBRS both as of October 18, 1982, and as of November 16, 1990.

(b) No new flood insurance coverage may be provided on or after November 16, 1990, for any new construction or substantial improvement of a structure located in any area newly identified as being in the CBRS as of November 16, 1990.

(c) No new flood insurance coverage may be provided after November 16, 1991, for any new construction or substantial improvement of a structure which is located in an ''otherwise protected area.''

(d) Notwithstanding paragraph (c) of this section, new flood insurance coverage may be provided for a structure which is newly constructed or substantially improved in an ''otherwise protected area'' if the building is used in a manner consistent with the purpose for which the area is protected.

[57 FR 22662, May 29, 1992]

§ 71.4 Documentation.

(a) In order to obtain a new policy of flood insurance for a structure which is located in an area identified as being in the CBRS as of November 16, 1990, or in order to obtain a new policy of flood insurance after November 16, 1991, for a structure located in an ''otherwise protected area,'' the owner of the structure must submit the documentation described in this section in order to show that such structure is eligible to receive flood insurance. However, if the new policy of flood insurance is being obtained from an insurer (Write Your Own or the Federal Government as direct insurer) that has previously obtained the documentation described in this section, the property owner need only submit a signed written certification that the structure has not been substantially improved since the date of the previous documentation.

(b) The documentation must be submitted along with the application for the flood insurance policy.

(c) For a structure located in an area identified as being in the CBRS both as of October 18, 1982, and as of November 16, 1990, where the start of construction of the structure took place prior to October 18, 1982, the documentation shall consist of:

(1) A legally valid building permit or its equivalent for the construction of the structure dated prior to October 18, 1982;

(i) If the community did not have a building permit system at the time the structure was built, a written statement to this effect signed by the responsible community official will be accepted in lieu of the building permit;

(ii) If the building permit was lost or destroyed, a written statement to this effect signed by the responsible community official will be accepted in lieu of the building permit. This statment must also include a certification that the official has inspected the structure and found no evidence that the structure was not in compliance with the

building code at the time it was built; and

(2) A written statement signed by the community official responsible for building permits, attesting to the fact that he or she knows of his/her own knowledge or from official community records, that:

(i) The start of construction took place prior to October 18, 1982; and

(ii) The structure has not been substantially improved since September 30, 1983.

(d) For a structure located in an area identified as being in the CBRS both as of October 18, 1982, and as of November 16, 1990, where the start of construction of the structure took place on or after October 18, 1982, but the structure was completed (walls and roof permanently in place) prior to October 1, 1983, the documentation shall consist of:

(1) A legally valid building permit or its equivalent for the construction of the structure dated prior to October 1, 1983;

(i) If the community did not have a building permit system at the time the structure was built, a written statement to this effect signed by the responsible community official will be accepted in lieu of the building permit;

(ii) If the building permit was lost or destroyed, a written statement to this effect signed by the responsible community official will be accepted in lieu of the building permit. This statement must also include a certification that the official has inspected the structure and found no evidence that the structure was not in compliance with the building code at the time it was built; and

(2) A written statement signed by the community official responsible for building permits, attesting to the fact that he or she knows of his/her own knowledge or from official community records, that:

(i) The structure constituted an insurable building, having walls and a roof permanently in place no later than October 1, 1983; and

(ii) The structure has not been substantially improved since September 30, 1983; and

(3) A community issued final certificate of occupancy or other use permit or equivalent proof certifying the building was completed (walled and roofed) by October 1, 1983.

(e) For a structure located in an area newly identified as being in the CBRS as of November 16, 1990, where the start of construction of the structure took place prior to November 16, 1990, the documentation shall consist of:

(1) A legally valid building permit or its equivalent for the construction of the structure, dated prior to November 16, 1990.

(i) If the community did not have a building permit system at the time the structure was built, a written statement to this effect signed by the responsible community official will be accepted in lieu of the building permit;

(ii) If the building permit was lost or destroyed, a written statement to this effect signed by the responsible community official will be accepted in lieu of the building permit. This statement must also include a certification that the official has inspected the structure and found no evidence that the structure was not in compliance with the building code at the time it was built; and

(2) A written statement signed by the community official responsible for building permits, attesting to the fact that he or she knows of his or her own knowledge or from official community records, that:

(i) The start of construction took place prior to November 16, 1990; and

(ii) The structure has not been substantially improved since November 15, 1990.

(f) For a structure located in an area identified as an ''otherwise protected area'' where the start of construction of the structure took place prior to November 16, 1990, the documentation shall consist of:

(1) A legally valid building permit or its equivalent for the construction of the structure, dated prior to November 16, 1990.

(i) If the community did not have a building permit system at the time the structure was built, a written statement to this effect signed by the responsible community official will be accepted in lieu of the building permit;

(ii) If the building permit was lost or destroyed, a written statement to this

effect signed by the responsible community official will be accepted in lieu of the building permit. This statement must also include a certification that the official has inspected the structure and found no evidence that the structure was not in compliance with the building code at the time it was built; and

(2) A written statement signed by the community official responsible for building permits, attesting to the fact that he or she knows of his or her own knowledge or from official community records, that:

(i) The start of construction took place prior to November 16, 1990; and

(ii) The structure has not been substantially improved since November 16, 1991.

(g) For a structure located in an area identified as an ''otherwise protected area'' where the start of construction of the structure took place after November 15, 1990, but construction was completed with the walls and a roof permanently in place no later than November 16, 1991, the documentation shall consist of:

(1) A legally valid building permit or its equivalent for the construction of the structure, dated prior to November 16, 1991.

(i) If the community did not have a building permit system at the time the structure was built, a written statement to this effect signed by the responsible community official will be accepted in lieu of the building permit;

(ii) If the building permit was lost or destroyed, a written statement to this effect signed by the responsible community official will be accepted in lieu of the building permit. This statement must also include a certification that the official has inspected the structure and found no evidence that the structure was not in compliance with the building code at the time it was built; and

(2) A statement signed by the community official responsible for building permits, attesting to the fact that he or she knows of his or her own knowledge or from official community records that:

(i) The structure constituted an insurable building, having walls and a roof permanently in place, no later than November 16, 1991; and

(ii) The structure has not been substantially improved since November 16, 1991; and

(3) A community issued final certificate of occupancy or other use permit or equivalent proof certifying that the building was completed (walled and roofed) by November 16, 1991.

(h) For a structure located in an area identified as an ''otherwise protected area'' for which the documentation requirements of neither paragraph (f) nor paragraph (g) of this section have been met, the documentation shall consist of a written statement from the governmental body or qualified organization overseeing the ''otherwise protected area'' certifying that the building is used in a manner consistent with the purpose for which the area is protected.

[48 FR 37039, Aug. 16, 1983, as amended at 57 FR 22662, May 29, 1992; 74 FR 15343, Apr. 3, 2009]

§ 71.5 Violations.

(a) Any flood insurance policy which has been issued where the terms of this section have not been complied with or is otherwise inconsistent with the provisions of this section, is void *ab initio* and without effect.

(b) Any false statements or false representations of any kind made in connection with the requirements of this part may be punishable by fine or imprisonment under 18 U.S. Code section 1001.

PART 72—PROCEDURES AND FEES FOR PROCESSING MAP CHANGES

Sec.

72.1 Purpose of part.
72.2 Definitions.
72.3 Fee schedule.
72.4 Submittal/payment procedures and FEMA response.
72.5 Exemptions.
72.6 Unfavorable response.
72.7 Resubmittals.

AUTHORITY: 42 U.S.C. 4001 *et seq.;* Reorganization Plan No. 3 of 1978, 43 FR 41943, 3 CFR, 1978 Comp., p. 329; E.O. 12127, 44 FR 19367, 3 CFR, 1979 Comp., p. 376.

§ 72.1 Purpose of part.

This part provides administrative and cost-recovery procedures for the engineering review and administrative processing associated with FEMA's response to requests for Conditional Letters of Map Amendment (CLOMAs), Conditional Letters of Map Revision (CLOMRs), Conditional Letters of Map Revision Based on Fill (CLOMR-Fs), Letters of Map Revision Based on Fill (LOMR-Fs), Letters of Map Revision (LOMRs), and Physical Map Revisions (PMRs). Such requests are based on proposed or actual manmade alterations within the floodplain, such as the placement of fill; modification of a channel; construction or modification of a bridge, culvert, levee, or similar measure; or construction of single or multiple residential or commercial structures on single or multiple lots.

[62 FR 5736, Feb. 6, 1997]

§ 72.2 Definitions.

Except as otherwise provided in this part, the definitions in 44 CFR part 59 are applicable to this part. For the purposes of this part, the products are defined as follows:

CLOMA. A CLOMA is FEMA's comment on a proposed structure or group of structures that would, upon construction, be located on existing natural ground above the base (1-percent-annual-chance) flood elevation on a portion of a legally defined parcel of land that is partially inundated by the base flood.

CLOMR. A CLOMR is FEMA's comment on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective base flood elevations, or the Special Flood Hazard Area (SFHA).

CLOMR-F. A CLOMR-F is FEMA's comment on a proposed project that would, upon construction, result in a modification of the SFHA through the placement of fill outside the existing regulatory floodway.

LOMR. A LOMR is FEMA's modification to an effective Flood Insurance Rate Map (FIRM), or Flood Boundary and Floodway Map (FBFM), or both. LOMRs are generally based on the implementation of physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective base flood elevations, or the SFHA. The LOMR officially revises the FIRM or FBFM, and sometimes the Flood Insurance Study (FIS) report, and, when appropriate, includes a description of the modifications. The LOMR is generally accompanied by an annotated copy of the affected portions of the FIRM, FBFM, or FIS report.

LOMR-F. A LOMR-F is FEMA's modification of the SFHA shown on the FIRM based on the placement of fill outside the existing regulatory floodway.

PMR. A PMR is FEMA's physical revision and republication of an effective FIRM, FBFM, or FIS report. PMRs are generally based on physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective base flood elevations, or the SFHA.

[62 FR 5737, Feb. 6, 1997]

§ 72.3 Fee schedule.

(a) For requests for CLOMRs, LOMRs, and PMRs based on structural measures on alluvial fans, an initial fee of $5,000, subject to the provisions of § 72.4, shall be paid to FEMA before FEMA begins its review of the request. The initial fee represents the minimum cost for reviewing these requests and is based on the prevailing private-sector labor rate. A revision to this initial fee, if necessary, will be published as a notice in the FEDERAL REGISTER.

(b) For requests for CLOMRs, LOMRs, and PMRs based on structural measures on alluvial fans, the total fee will be calculated based on the total hours by FEMA to review and process the request multiplied by an hourly rate based on the prevailing private-sector labor rate. The hourly rate is published as a notice in the FEDERAL REGISTER. A revision to the hourly rate, if necessary, shall be published as a notice in the FEDERAL REGISTER.

(c) For conditional and final map revision requests for the following categories, flat user fees, subject to the provisions of §72.4, shall be paid to FEMA before FEMA begins its review of the request:

(1) Requests for CLOMAs, CLOMR-Fs, and LOMR-Fs for single structures or single lots;

(2) Requests for CLOMAs for multiple structures or multiple lots;

(3) Requests for CLOMR-Fs and LOMR-Fs for multiple structures or multiple lots;

(4) Requests LOMR-Fs for single structures or single lots based on as-built information for projects for which FEMA issued CLOMR-Fs previously;

(5) Requests for LOMR-Fs for multiple structures or multiple lots based on as-built information for projects for which FEMA issued CLOMR-Fs previously;

(6) Requests for LOMRs and PMRs based on projects involving bridges, culverts, or channels, or combinations thereof;

(7) Requests for LOMRs and PMRs based on projects involving levees, berms, or other structural measures;

(8) Requests for LOMRs and PMRs based on as-built information for projects for which FEMA issued CLOMRs previously, except those based on structural measures on alluvial fans;

(9) Requests for LOMRs and PMRs based solely on more detailed data;

(10) Requests for CLOMRs based on projects involving new hydrologic information, bridges, culverts, or channels, or combinations thereof; and

(11) Requests for CLOMRs based on projects involving levees, berms, or other structural measures.

(d) If a request involves more than one of the categories listed above, the highest applicable flat user fee must be submitted.

(e) The flat user fees for conditional and final map amendments and map revisions are based on the actual costs for reviewing and processing the requests. The fees for requests for LOMR-Fs, LOMRs, and PMRs also include a fee of $35 to cover FEMA's costs for physically revising affected FIRM and FBFM panels to reflect the map changes.

(f) Revisions to the fees, if necessary, shall be published as a notice in the FEDERAL REGISTER.

[62 FR 5737, Feb. 6, 1997]

§ 72.4 Submittal/payment procedures and FEMA response.

(a) The initial fee shall be submitted with a request for FEMA review and processing of CLOMRs, LOMRs, and PMRs based on structural measures on alluvial fans; the appropriate flat user fee shall be submitted with all other requests for FEMA review and processing.

(b) FEMA must receive initial or flat user fees before it will begin any review. The fee is non-refundable once FEMA begins its review.

(c) Following completion of FEMA's review for any CLOMR, LOMR, or PMR based on structural measures on alluvial fans, FEMA shall invoice the requester at the established hourly rate for any actual costs exceeding the initial fee incurred for review and processing. FEMA shall not issue a determination letter or revised map panel(s) until it receives the invoiced amount.

(d) For all map revision requests, FEMA shall bear the cost of reprinting and distributing the revised FIRM panel(s), FBFM panel(s), or combination.

(e) The entity that applies to FEMA through the local community for review is responsible for the cost of the review. The local community incurs no financial obligation under the reimbursement procedures of this part when another party sends the application to FEMA.

(f) Requesters shall submit payments by check or money order or by credit card. Checks or money orders, in U.S. funds, shall be made payable to the National Flood Insurance Program.

(g) For CLOMA, CLOMR-F, LOMA, and LOMR-F requests, FEMA shall:

(1) Notify the requester and community within 30 days as to the adequacy of the submittal, and

(2) Provide to the requester and the community, within 60 days of receipt of adequate information and fee, a determination letter or other written comment in response to the request.

(h) For CLOMR, LOMR, and PMR requests, FEMA shall:

(1) Notify the requester and community within 60 days as to the adequacy of the submittal; and

(2) Provide to the requester and the community, within 90 days of receipt of adequate information and fee, a CLOMR, a LOMR, other written comment in response to the request, or preliminary copies of the revised FIRM panels, FBFM panels, and/or affected portions of the FIS report for review and comment.

[62 FR 5737, Feb. 6, 1997]

§ 72.5 Exemptions.

Requesters are exempt from submitting review and processing fees for:

(a) Requests for map changes based on mapping or study analysis errors;

(b) Requests for map changes based on the effects of natural changes within SFHAs;

(c) Requests for a Letter of Map Amendment (LOMA);

(d) Requests for map changes based on federally sponsored flood-control projects where 50 percent or more of the project's costs are federally funded;

(e) Requests for map changes based on detailed hydrologic and hydraulic studies conducted by Federal, State, or local agencies to replace approximate studies conducted by FEMA and shown on the effective FIRM; and

(f) Requests for map changes based on flood hazard information meant to improve upon that shown on the flood map or within the flood study will be exempt from review and processing fees. Improvements to flood maps or studies that partially or wholly incorporate man-made modifications within the special flood hazard area will not be exempt from review and processing fees.

[64 FR 51462, Sept. 23, 1999]

§ 72.6 Unfavorable response.

(a) Requests for CLOMAs, CLOMRs, or CLOMR-Fs may be denied or the determinations may contain specific comments, concerns, or conditions regarding proposed projects or designs and their impacts on flood hazards in a community. Requesters are not entitled to any refund of fees paid if the determinations contain such comments, concerns, or conditions, or if the requests are denied. Requesters are not entitled to any refund of fees paid if the requesters are unable to provide the appropriate scientific or technical documentation or to obtain required authorizations, permits, financing, etc., for which requesters seek the CLOMAs, CLOMRs, or CLOMR-Fs.

(b) Requests for LOMRs, LOMR-Fs, or PMRs may be denied or the revisions to the FIRM, FBFM, or both, may not be in the manner or to the extent desired by the requesters. Requesters are not entitled to any refund of fees paid if the revision requests are denied or if the LOMRs, LOMR-Fs, or PMRs do not revise the map specifically as requested.

[62 FR 5738, Feb. 6, 1997]

§ 72.7 Resubmittals.

(a) Resubmittals of CLOMA, CLOMR, CLOMR-F, LOMR, LOMR-F, or PMR requests more than 90 days after FEMA notification that the requests were denied or after FEMA ended its review because the requester provided insufficient information will be treated as original submissions and subject to all submittal/payment procedures described in §72.4. The procedure in §72.4 also applies to a resubmitted request (regardless of when submitted) if the project on which the request is based has been altered significantly in design or scope other than as necessary to respond to comments, concerns, or other findings made by FEMA regarding the original submission.

(b) When LOMR, LOMR-F, or PMR requests are made after FEMA issues CLOMRs or CLOMR-Fs, the procedures in §72.4 and the appropriate fee apply, as referenced in §72.3(c). When the as-built conditions differ from the proposed conditions on which FEMA issued the CLOMRs or CLOMR-Fs, the reduced fee for as-built requests will not apply.

[62 FR 5738, Feb. 6, 1997]

PART 73—IMPLEMENTATION OF SECTION 1316 OF THE NATIONAL FLOOD INSURANCE ACT OF 1968

Sec.

73.1 Purpose of part.

73.2 Definitions.
73.3 Denial of flood insurance coverage.
73.4 Restoration of flood insurance coverage.

AUTHORITY: 42 U.S.C. 4001 *et seq.;* Reorganization Plan No. 3 of 1978; E.O. 12127.

SOURCE: 51 FR 30318, Aug. 25, 1986, unless otherwise noted.

§ 73.1 Purpose of part.

This part implements section 1316 of the National Flood Insurance Act of 1968.

§ 73.2 Definitions.

(a) Except as otherwise provided in this part, the definitions set forth in part 59 of this subchapter are applicable to this part.

(b) For the purpose of this part a *duly constituted State or local zoning authority or other authorized public body* means an official or body authorized under State or local law to declare a structure to be in violation of a law, regulation or ordinance.

(c) For the purpose of this part, *State or local laws, regulations or ordinances intended to discourage or restrict development or occupancy of flood-prone areas* are measures such as those defined as *Flood plain management regulations* in § 59.1 of this subchapter. Such measures are referred to in this part as State or local flood plain management regulations.

§ 73.3 Denial of flood insurance coverage.

(a) No new flood insurance shall be provided for any property which the Federal Insurance Administrator finds has been declared by a duly constituted State or local zoning authority or other authorized public body, to be in violation of State or local laws, regulations or ordinances which are intended to discourage or otherwise restrict land development or occupancy in flood-prone areas.

(b) New and renewal flood insurance shall be denied to a structure upon a finding by the Federal Insurance Administrator of a valid declaration of a violation.

(c) States and communities shall determine whether to submit a declaration to the Federal Insurance Administrator for the denial of insurance.

(d) A valid declaration shall consist of:

(1) The name(s) of the property owner(s) and address or legal description of the property sufficient to confirm its identity and location;

(2) A clear and unequivocal declaration that the property is in violation of a cited State or local law, regulation or ordinance;

(3) A clear statement that the public body making the declaration has authority to do so and a citation to that authority;

(4) Evidence that the property owner has been provided notice of the violation and the prospective denial of insurance; and

(5) A clear statement that the declaration is being submitted pursuant to section 1316 of the National Flood Insurance Act of 1968, as amended.

§ 73.4 Restoration of flood insurance coverage.

(a) Insurance availability shall be restored to a property upon a finding by the Federal Insurance Administrator of a valid rescission of a declaration of a violation.

(b) A valid rescission shall be submitted to the Federal Insurance Administrator and shall consist of:

(1) The name of the property owner(s) and an address or legal description of the property sufficient to identify the property and to enable FEMA to identify the previous declaration;

(2) A clear and unequivocal statement by an authorized public body rescinding the declaration and giving the reason(s) for the rescission;

(3) A description of and supporting documentation for the measures taken in lieu of denial of insurance in order to bring the structure into compliance with the local flood plain management regulations; and

(4) A clear statement that the public body rescinding the declaration has the authority to do so and a citation to that authority.

PART 74 [RESERVED]

PART 75—EXEMPTION OF STATE-OWNED PROPERTIES UNDER SELF-INSURANCE PLAN

Subpart A—General

Sec.
75.1 Purpose of part.
75.2 Definitions.
75.3 Burden of proof.

Subpart B—Standards for Exemption

75.10 Applicability.
75.11 Standards.
75.12 Application by a State for exemption.
75.13 Review by the Federal Insurance Administrator.
75.14 States exempt under this part.

AUTHORITY: 42 U.S.C. 4001 *et seq.;* Reorganization Plan No. 3 of 1978, 43 FR 41943, 3 CFR, 1978 Comp., p. 329; E.O. 12127 of Mar. 31, 1979, 44 FR 19367, 3 CFR, 1979 Comp., p. 376.

SOURCE: 41 FR 46991, Oct. 26, 1976, unless otherwise noted. Redesignated at 44 FR 31177, May 31, 1979.

Subpart A—General

§ 75.1 Purpose of part.

The purpose of this part is to establish standards with respect to the Federal Insurance Administrator's determinations that a State's plan of self-insurance is adequate and satisfactory for the purposes of exempting such State, under the provisions of section 102(c) of the Act, from the requirement of purchasing flood insurance coverage for State-owned structures and their contents in areas identified by the Federal Insurance Administrator as A, AO, AH, A1–30, AE, AR, AR/A1–30, AR/AE, AR/AO, AR/AH, AR/A, A99, M, V, VO, V1–30, VE, and E Zones, in which the sale of insurance has been made available, and to establish the procedures by which a State may request exemption under section 102(c).

[62 FR 55719, Oct. 27, 1997]

§ 75.2 Definitions.

The definitions set forth in part 59 of this subchapter are applicable to this part.

§ 75.3 Burden of proof.

In any application made by a State to the Administrator for certification of its self-insurance plan, the burden of proof shall rest upon the State making application to establish that its policy of self-insurance is adequate and equals or exceeds the standards provided in this part.

Subpart B—Standards for Exemption

§ 75.10 Applicability.

A State shall be exempt from the requirement to purchase flood insurance in respect to State-owned structures and, where applicable, their contents located or to be located in areas identified by the Federal Insurance Administrator as A, AO, AH, A1–30, AE, AR, AR/A1–30, AR/AE, AR/AO, AR/AH, AR/A, A99, M, V, VO, V1–30, VE, and E Zones, and in which the sale of flood insurance has been made available under the National Flood Insurance Act of 1968, as amended, provided that the State has established a plan of self-insurance determined by the Federal Insurance Administrator to equal or exceed the standards set forth in this subpart.

[62 FR 55719, Oct. 27, 1997]

§ 75.11 Standards.

(a) In order to be exempt under this part, the State's self-insurance plan shall, as a minimum:

(1) Constitute a formal policy or plan of self-insurance created by statute or regulation authorized pursuant to statute.

(2) Specify that the hazards covered by the self-insurance plan expressly include the flood and flood-related hazards which are covered under the Standard Flood Insurance Policy.

(3) Provide coverage to state-owned structures and their contents equal to that which would otherwise be available under a Standard Flood Insurance Policy.

(4) Consist of a self-insurance fund, or a commercial policy of insurance or reinsurance, for which provision is made in statute or regulation and that is funded by periodic premiums or charges allocated for state-owned structures and their contents in areas identified by the Federal Insurance Administrator as A, AO, AH, A1–30, AE, AR, AR/A1–30, AR/AE, AR/AO, AR/AH,

AR/A, A99, M, V, VO, V1–30, VE, and E Zones. The person or persons responsible for such self-insurance fund shall report on its status to the chief executive authority of the State, or to the legislature, or both, not less frequently than annually. The loss experience shall be shown for each calendar or fiscal year from inception to current date based upon loss and loss adjustment expense incurred during each separate calendar or fiscal year compared to the premiums or charges for each of the respective calendar or fiscal years. Such incurred losses shall be reported in aggregate by cause of loss under a loss coding system adequate, as a minimum, to identify and isolate loss caused by flood, mudslide (i.e., mudflow) or flood-related erosion. The Federal Insurance Administrator may, subject to the requirements of paragraph (a)(5) of this section, accept and approve in lieu of, and as the reasonable equivalent of the self-insurance fund, an enforceable commitment of funds by the State, the enforceability of which shall be certified to by the State's Attorney General, or other principal legal officer. Such funds, or enforceable commitment of funds in amounts not less than the limits of coverage that would be applicable under Standard Flood Insurance Policies, shall be used by the State for the repair or restoration of State-owned structures and their contents damaged as a result of flood-related losses occurring in areas identified by the Federal Insurance Administrator as A, AO, AH, A1–30, AE, AR, AR/A1–30, AR/AE, AR/AO, AR/AH, AR/A, A99, M, V, VO, V1–30, VE, and E Zones.

(5) Provide for the maintaining and updating by a designated State official or agency not less frequently than annually of an inventory of all State-owned structures and their contents within A, AO, AH, A1–30, AE, AR, AR/A1–30, AR/AE, AR/AO, AR/AH, AR/A, A99, M, V, VO, V1–30, VE, and E zones. The inventory shall:

(i) Include the location of individual structures;

(ii) Include an estimate of the current replacement costs of such structures and their contents, or of their current economic value; and

(iii) Include an estimate of the anticipated annual loss due to flood damage.

(6) Provide the flood loss experience for State-owned structures and their contents based upon incurred losses for a period of not less than the 5 years immediately preceding application for exemption, and certify that such historical information shall be maintained and updated.

(7) Include, pursuant to § 60.12 of this subchapter, a certified copy of the flood plain management regulations setting forth standards for State-owned properties within A, AO, AH, A1–30, AE, AR, AR/A1–30, AR/AE, AR/AO, AR/AH, AR/A, A99, M, V, VO, V1–30, VE, and E Zones.

(b) The Federal Insurance Administrator shall determine the adequacy of the insurance provisions whether they be based on available funds, an enforceable commitment of funds, commercial insurance, or some combination thereof, but has discretion to waive specific requirements under this part.

[41 FR 46991, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44544, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984; 49 FR 5621, Feb. 14, 1984; 50 FR 36029, Sept. 4, 1985; 59 FR 53601, Oct. 25, 1994; 62 FR 55719, Oct. 27, 1997]

§ 75.12 Application by a State for exemption.

Application for exemption made pursuant to this part shall be made by the Governor or other duly authorized official of the State accompanied by sufficient supporting documentation which certifies that the plan of self-insurance upon which the application for exemption is based meets or exceeds the standards set forth in § 75.11.

§ 75.13 Review by the Federal Insurance Administrator.

(a) The Federal Insurance Administrator may return the application for exemption upon finding it incomplete or upon finding that additional information is required in order to make a determination as to the adequacy of the self-insurance plan.

(b) Upon determining that the State's plan of self-insurance is inadequate, the Federal Insurance Administrator shall in writing reject the application for exemption and shall state in what respects the plan fails to comply with the standards set forth in § 75.11 of this subpart.

(c) Upon determining that the State's plan of self-insurance equals or exceeds the standards set forth in § 75.11 of this subpart, the Federal Insurance Administrator shall certify that the State is exempt from the requirement for the purchase of flood insurance for State-owned structures and their contents located or to be located in areas identified by the Federal Insurance Administrator as A, AO, AH, A1–30, AE, AR, AR/A1–30, AR/AE, AR/AO, AR/AH, AR/A, A99, M, V, VO, V1–30, VE, and E Zones. Such exemption, however, is in all cases provisional. The Federal Insurance Administrator shall review the plan for continued compliance with the criteria set forth in this part and may request updated documentation for the purpose of such review. If the plan is found to be inadequate and is not corrected within ninety days from the date that such inadequacies were identified, the Federal Insurance Administrator may revoke his certification.

(d) Documentation which cannot reasonably be provided at the time of application for exemption shall be submitted within six months of the application date. The Federal Insurance Administrator may revoke his certification for a State's failure to submit adequate documentation after the six month period.

[41 FR 46991, Oct. 26, 1976. Redesignated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44544, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984; 49 FR 5621, Feb. 14, 1984; 50 FR 36029, Sept. 4, 1985; 59 FR 53601, Oct. 25, 1994; 62 FR 55719, Oct. 27, 1997]

§ 75.14 States exempt under this part.

The following States have submitted applications and adequate supporting documentation and have been determined by the Federal Insurance Administrator to be exempt from the requirement of flood insurance on State-owned structures and their contents because they have in effect adequate State plans of self-insurance: Florida, Georgia, Iowa, Kentucky, Maine, New Jersey, New York, North Carolina, Oregon, Pennsylvania, South Carolina, Tennessee, and Vermont.

[48 FR 44544, Sept. 29, 1983, as amended at 57 FR 19542, May 7, 1992]

PART 76 [RESERVED]

PART 77—FLOOD MITIGATION GRANTS

Sec.

77.1 Purpose and applicability.
77.2 Definitions.
77.3 Responsibilities.
77.4 Availability of funding.
77.5 Application process.
77.6 Eligibility.
77.7 Allowable costs.
77.8 Grant administration.

AUTHORITY: 6 U.S.C. 101 *et seq.;* 42 U.S.C. 4001 *et seq.;* 42 U.S.C. 4104c, 4104d.

SOURCE: 86 FR 50667, Sept. 10, 2021, unless otherwise noted.

§ 77.1 Purpose and applicability.

(a) The purpose of this part is to prescribe actions, procedures, and requirements for administration of the Flood Mitigation Assistance (FMA) grant program made available under the National Flood Insurance Act of 1968, as amended, and the Flood Disaster Protection Act of 1973, as amended, 42 U.S.C. 4001 *et seq*. The purpose of the FMA program is to assist States, Indian Tribal governments, and communities for planning and carrying out mitigation activities designed to reduce the risk of flood damage to structures insured under the National Flood Insurance Program (NFIP).

(b) This part applies to the administration of funds under the FMA program for which the application period opens on or after October 12, 2021.

§ 77.2 Definitions.

(a) Except as otherwise provided in this part, the definitions set forth in § 59.1 of this subchapter are applicable to this part.

(b) *Applicant* means the entity, such as a State or Indian Tribal government, applying to FEMA for a Federal award under the FMA program. Once funds have been awarded, the applicant

becomes the recipient and may also be a pass-through entity.

(c) *Closeout* means the process by which FEMA or the pass-through entity determines that all applicable administrative actions and all required work of the Federal award have been completed and takes actions as described in 2 CFR 200.344, ''Closeout.''

(d) *Community* means:

(1) A political subdivision, including any Indian Tribe, authorized Tribal organization, Alaska Native village or authorized native organization, that has zoning and building code jurisdiction over a particular area having special flood hazards, and is participating in the NFIP; or

(2) A political subdivision of a State or other authority that is designated by political subdivisions, all of which meet the requirements of paragraph (d)(1) of this section, to administer grants for mitigation activities for such political subdivisions.

(e) *Federal award* means the Federal financial assistance a recipient or subrecipient receives directly from FEMA or indirectly from a pass-through entity. The terms ''award'' and ''grant'' may also be used to describe a Federal award under this part.

(f) *Indian Tribal government* means any Federally recognized governing body of an Indian or Alaska Native Tribe, band, nation, pueblo, village, or community that the Secretary of Interior acknowledges to exist as an Indian Tribe under the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. 5131. This does not include Alaska Native corporations, the ownership of which is vested in private individuals.

(g) *Pass-through entity* means a recipient that provides a subaward to a subrecipient to carry out part of the FMA program.

(h) *Recipient* means the State or Indian Tribal government that receives a Federal award directly from FEMA. A recipient may also be a pass-through entity. The term recipient does not include subrecipients.

(i) *Repetitive loss structure* means a structure covered under an NFIP flood insurance policy that:

(1) Has incurred flood-related damage on 2 occasions, in which the cost of repair, on average, equaled or exceeded 25% of the value of the structure at the time of each such flood event; and

(2) At the time of the second incidence of flood related damage, the contract for flood insurance contains increased cost of compliance coverage.

(j) *Severe repetitive loss structure* means a structure that is covered under an NFIP flood insurance policy and has incurred flood-related damage:

(1) For which 4 or more separate claims payments have been made under flood insurance coverage under subchapter B of this chapter, with the amount of each claim (including building and contents payments) exceeding $5,000, and with the cumulative amount of such claims payments exceeding $20,000; or

(2) For which at least 2 separate flood insurance claims payments (building payments only) have been made, with cumulative amount of such claims exceeding the value of the insured structure.

(k) *State* means any state of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

(l) *Subaward* means an award provided by a pass-through entity to a subrecipient, for the subrecipient to carry out part of a Federal award received by the pass-through entity. It does not include payments to a contractor or payments to an individual that is a beneficiary of a Federal program. A subaward may be provided through any form of legal agreement, including an agreement that the pass-through entity considers a contract.

(m) *Subapplicant* means a State agency, community, or Indian Tribal government submitting a subapplication to the applicant for assistance under the FMA program. Upon grant award, the subapplicant is referred to as the subrecipient.

(n) *Subrecipient* means the State agency, community, or Indian Tribal government that receives a subaward from a pass-through entity for the subrecipient to carry out an activity under the FMA program.

(o) *Administrator* means the head of the Federal Emergency Management

Agency, or his/her designated representative.

(p) *Regional Administrator* means the head of a Federal Emergency Management Agency regional office, or his/her designated representative.

§ 77.3 Responsibilities.

(a) *Federal Emergency Management Agency (FEMA).* Administer and provide oversight to all FEMA-related hazard mitigation programs and grants, including:

(1) Issue program implementation procedures, as necessary, which will include information on availability of funding;

(2) Award all grants to the recipient after evaluating subaward applications for eligibility and ensuring compliance with applicable Federal laws, giving priority to such properties, or to the subset of such properties, as the Administrator may determine are in the best interest of the NFIF;

(3) Provide technical assistance and training to State, local and Indian Tribal governments regarding the mitigation and grants management process;

(4) Review and approve State, Indian Tribal, and local mitigation plans in accordance with part 201 of this chapter;

(5) Comply with applicable Federal statutory, regulatory, and Executive Order requirements related to environmental and historic preservation compliance, including reviewing and supplementing, if necessary, the environmental analyses conducted by the State and subrecipient in accordance with applicable laws, regulations, and agency policy;

(6) Monitor implementation of awards through quarterly reports; and

(7) Review all closeout documentation for compliance and sending the recipient a request for additional supporting documentation, if needed.

(b) *Recipient.* The recipient must have working knowledge of NFIP goals, requirements, and processes and ensure that the program is coordinated with other mitigation activities. Recipients will:

(1) Have a FEMA approved Mitigation Plan in accordance with part 201 of this chapter;

(2) Provide technical assistance and training to communities on mitigation planning, mitigation project activities, developing subaward applications, and implementing approved subawards;

(3) Prioritize and recommend subaward applications to be approved by FEMA, based on the applicable mitigation plan(s), other evaluation criteria, and the eligibility criteria described in § 77.6;

(4) Award FEMA-approved subawards;

(5) Monitor and evaluate the progress of the mitigation activity in accordance with the approved original scope of work and budget through quarterly reports;

(6) Closeout the subaward in accordance with 2 CFR 200.344 and 200.345, and applicable FEMA guidance; and

(7) Comply with program requirements under this part, grant management requirements identified under 2 CFR parts 200 and 3002, the grant agreement articles, and other applicable Federal, State, Tribal and local laws and regulations.

(c) *Subrecipient.* The subrecipient (or subapplicant, as applicable) will:

(1) Complete and submit subaward applications to the recipient for FMA planning and project subawards;

(2) Implement all approved subawards;

(3) Monitor and evaluate the progress of the mitigation activity in accordance with the approved original scope of work and budget through quarterly reports;

(4) Comply with program requirements under this part, grant management requirements identified under 2 CFR parts 200 and 3002, the grant agreement articles, and other applicable Federal, State, Tribal and local laws and regulations; and

(5) Closeout the subaward in accordance with 2 CFR 200.344 and 200.345, and applicable FEMA guidance.

§ 77.4 Availability of funding.

(a) *Allocation.* (1) For the amount made available for the FMA program, the Administrator will allocate the available funds based upon criteria established for each application period. The criteria may include the number of NFIP policies, severe repetitive loss

structures, repetitive loss structures, and any other factors the Administrator determines are in the best interests of the NFIF.

(2) The amount of FMA funds used may not exceed $50,000 for any mitigation plan of a State or $25,000 for any mitigation plan of a community.

(b) *Cost share.* All mitigation activities approved under the grant will be subject to the following cost share provisions:

(1) For each severe repetitive loss structure, FEMA may contribute either:

(i) Up to 100 percent of all eligible costs if the activities are technically feasible and cost effective; or

(ii) Up to the amount of the expected savings to the NFIP for acquisition or relocation activities;

(2) For repetitive loss structures, FEMA may contribute up to 90 percent of the eligible costs;

(3) For all other mitigation activities, FEMA may contribute up to 75 percent of all eligible costs.

(4) For projects that contain a combination of severe repetitive loss, repetitive loss, and/or other insured structures, the cost share will be calculated as appropriate for each type of structure submitted in the project subapplication.

(c) *Failure to make award within 5 years.* Any FMA application or subapplication that does not receive a Federal award within 5 years of the application/subapplication submission date is considered to be denied, and any funding amounts allocated for such applications/subapplications will be made available for other FMA awards and subawards.

§ 77.5 Application process.

(a) *Applicant.* (1) Applicants will be notified of the availability of funding for the FMA program pursuant to 2 CFR 200.203 and 200.204.

(2) The applicant is responsible for soliciting applications from eligible communities, or subapplicants, and for reviewing and prioritizing applications prior to forwarding them to FEMA for review and award.

(b) *Subapplicant.* Communities or other subapplicants who choose to apply must develop subapplications within the timeframes and requirements established by FEMA and must submit subapplications to the applicant.

§ 77.6 Eligibility.

(a) *NFIP requirements.* (1) States, Indian Tribal governments, and communities must be participating in the NFIP and may not be suspended or withdrawn under the program.

(2) For projects that impact individual structures, for example, acquisitions and elevations, an NFIP policy for the structure must be in effect prior to the opening of the application period and be maintained for the life of the structure.

(b) *Plan requirement*—(1) *Applicants.* States must have a FEMA-approved mitigation plan meeting the requirements of § 201.4 of this chapter that provides for reduction of flood losses to structures for which NFIP coverage is available. Indian Tribal governments must have a FEMA-approved mitigation plan meeting the requirements of § 201.7 of this chapter that provides for reduction of flood losses to structures for which NFIP coverage is available. The FEMA-approved mitigation plan is required at the time of application and award.

(2) *Subapplicants.* To be eligible for FMA project grants, subapplicants must have an approved mitigation plan in accordance with part 201 of this chapter that provides for reduction of flood losses to structures for which NFIP coverage is available. The FEMA-approved mitigation plan is required at the time of application and award.

(c) *Eligible activities*—(1) *Planning.* FMA planning grants may be used to develop or update State, Indian Tribal and/or local mitigation plans that meet the planning criteria outlined in part 201 of this chapter and provide for reduction of flood losses to structures for which NFIP coverage is available.

(2) *Projects.* Projects funded under the FMA program are limited to activities that reduce flood damages to properties insured under the NFIP. Applications involving any activities for which implementation has already been initiated or completed are not eligible for

funding, and will not be considered. Eligible activities are:

(i) Acquisition of real property from property owners, and demolition or relocation of buildings and/or structures to areas outside of the floodplain to convert the property to open space use in perpetuity, in accordance with part 80 of this subchapter;

(ii) Elevation of existing structures to at least base flood levels or higher, if required by FEMA or if required by any State or local ordinance, and in accordance with criteria established by the Administrator;

(iii) Floodproofing of existing non-residential structures in accordance with the requirements of the NFIP or higher standards if required by FEMA or if required by any State or local ordinance, and in accordance with criteria established by the Administrator;

(iv) Floodproofing of historic structures as defined in §59.1 of this subchapter;

(v) Demolition and rebuilding of properties to at least base flood levels or higher, if required by FEMA or if required by any State or local ordinance, and in accordance with criteria established by the Administrator;

(vi) Localized flood risk reduction projects that lessen the frequency or severity of flooding and decrease predicted flood damages, and that do not duplicate the flood prevention activities of other Federal agencies. Non-localized flood risk reduction projects such as dikes, levees, floodwalls, seawalls, groins, jetties, dams and large-scale waterway channelization projects are not eligible unless the Administrator specifically determines in approving a mitigation plan that such activities are the most cost-effective mitigation activities for the National Flood Mitigation Fund;

(vii) Elevation, relocation, or floodproofing of utilities; and

(viii) Other mitigation activities not described or identified in (c)(2)(i) through (vii) of this section that are described in the State, Tribal or local mitigation plan.

(3) *Technical assistance*. If a recipient applied for and was awarded at least $1 million in the prior fiscal year, that recipient may be eligible to receive a technical assistance grant for up to $50,000.

(4) *Project scoping*. Activities that enable subapplicants to develop complete subapplications for eligible mitigation activities including but not limited to data development.

(d) *Minimum project criteria*. In addition to being an eligible project type, mitigation grant projects must also:

(1) Be in conformance with State, Tribal and/or local mitigation plans approved under part 201 of this chapter for the jurisdiction where the project is located;

(2) Be in conformance with applicable environmental and historic preservation laws, regulations, and agency policy, including parts 9 and 60 of this chapter, and other applicable Federal, State, Tribal, and local laws and regulations;

(3) Be technically feasible and cost-effective; or, eliminate future payments from the NFIF for severe repetitive loss structures through an acquisition or relocation activity;

(4) Solve a problem independently, or constitute a functional portion of a long-term solution where there is assurance that the project as a whole will be completed. This assurance will include documentation identifying the remaining funds necessary to complete the project, and the timeframe for completing the project;

(5) Consider long-term changes to the areas and entities it protects, and have manageable future maintenance and modification requirements. The subrecipient is responsible for the continued maintenance needed to preserve the hazard mitigation benefits of these measures; and

(6) Not duplicate benefits available from another source for the same purpose or assistance that another Federal agency or program has more primary authority to provide.

§ 77.7 Allowable costs.

(a) *General*. General policies for allowable costs for implementing awards and subawards are addressed in 2 CFR 200.101, 200.102, 200.400–200.476.

(1) *Eligible management costs*—(i) *Recipient*. Recipients are eligible to receive management costs (direct and indirect administrative costs pursuant to

2 CFR part 200 subpart E) consisting of a maximum of 10 percent of the planning and project activities awarded to the recipient, each fiscal year under FMA. These costs must be included in the application to FEMA.

(ii) *Subrecipient.* Subapplicants may include a maximum of 5 percent of the total funds requested for their subapplication for management costs to support the implementation of their planning or project activity. These costs must be included in the subapplication to the recipient.

(2) *Indirect costs.* Indirect costs of administering the FMA program are eligible as part of the 10 percent management costs for the recipient or the 5 percent management costs of the subrecipient, but in no case do they make the recipient eligible for additional management costs that exceed the caps identified in paragraph (a)(1) of this section. In addition, all costs must be in accordance with the provisions of 2 CFR parts 200 and 3002.

(b) *Pre-award costs.* FEMA may fund eligible pre-award costs related to developing the application or subapplication at its discretion and as funds are available. Recipients and subrecipients may be reimbursed for eligible pre-award costs for activities directly related to the development of the project or planning proposal. Costs associated with implementation of the activity but incurred prior to award are not eligible. Therefore, activities where implementation is initiated or completed prior to award are not eligible and will not be reimbursed.

(c) *Duplication of benefits.* Grant funds may not duplicate benefits received by or available to applicants, subapplicants and project participants from insurance, other assistance programs, legal awards, or any other source to address the same purpose. Such individual or entity must notify the recipient and FEMA of all benefits that it receives or anticipates from other sources for the same purpose. FEMA will reduce the subaward by the amounts available for the same purpose from another source.

(d) *Negligence or other tortious conduct.* FEMA grant funds are not available where an applicant, subapplicant, other project participant, or third party's negligence or intentional actions contributed to the conditions to be mitigated. If the applicant, subapplicant, or project participant suspects negligence or other tortious conduct by a third party for causing such condition, they are responsible for taking all reasonable steps to recover all costs attributable to the tortious conduct of the third party. FEMA generally considers such amounts to be duplicated benefits available for the same purpose, and will treat them consistent with paragraph (c) of this section.

(e) *Legal obligations.* FEMA grant funds are not available to satisfy or reimburse for legal obligations, such as those imposed by a legal settlement, court order, or State law.

§ 77.8 Grant administration.

(a) *General.* Recipients must comply with the requirements contained in 2 CFR parts 200 and 3002 and FEMA award requirements, including submission of performance and financial status reports. Recipients must also ensure that subrecipients are aware of and comply with 2 CFR parts 200 and 3002.

(b) *Cost overruns.* (1) During the implementation of an approved grant, the recipient may find that actual costs are exceeding the approved award amount. While there is no guarantee of additional funding, FEMA will only consider requests made by the recipient to pay for such overruns if:

(i) Funds are available to meet the requested increase in funding; and

(ii) The amended grant award meets the eligibility requirements, including cost share requirements, identified in this section.

(2) Recipients may use cost underruns from ongoing subawards to offset overruns incurred by another subaward(s) awarded under the same award. All costs for which funding is requested must have been included in the original subapplication's cost estimate. In cases where an underrun is not available to cover an overrun, the Administrator may, with justification from the recipient and subrecipient, use other available FMA funds to cover the cost overrun.

(3) For all cost overruns that exceed the amount approved under the award,

and which require additional Federal funds, the recipient must submit a written request with a recommendation, including a justification for the additional funding to the Regional Administrator for a determination. If approved, the Regional Administrator will increase the award through an amendment to the original award document.

(c) *Recapture.* At the time of closeout, FEMA will recapture any funds provided to a State or a community under this part if the applicant has not provided the appropriate matching funds, the approved project has not been completed within the timeframes specified in the grant agreement, or the completed project does not meet the criteria specified in this part.

(d) *Remedies for noncompliance.* FEMA may terminate an award or take other remedies for noncompliance in accordance with 2 CFR 200.339 through 200.343.

(e) *Reconsideration.* FEMA will reconsider determinations of noncompliance, additional award conditions, or its decision to terminate a Federal award. Requests for reconsideration must be made in writing to FEMA within 60 calendar days after receipt of a notice of the action, and in accordance with submission procedures set out in guidance. FEMA will notify the requester of the disposition of the request for reconsideration. If the decision is to grant the request for reconsideration, FEMA will take appropriate implementing action.

PARTS 78–79 [RESERVED]

PART 80—PROPERTY ACQUISITION AND RELOCATION FOR OPEN SPACE

Subpart A—General

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Subpart C—Post-Award Requirements

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Subpart D—After the Grant Requirements

80.21 Closeout requirements.

AUTHORITY: Robert T. Stafford disaster relief and emergency assistance act, 42 U.S.C. 5121 through 5207; the National Flood Insurance Act of 1968, as amended, 42 U.S.C. 4001 *et seq.;* Homeland Security Act of 2002, 6 U.S.C. 101.

SOURCE: 72 FR 61743, Oct. 31, 2007, unless otherwise noted.

Subpart A—General

§ 80.1 Purpose and scope.

This part provides guidance on the administration of FEMA mitigation assistance for projects to acquire property for open space purposes under all FEMA hazard mitigation assistance programs. It provides information on the eligibility and procedures for implementing projects for acquisition and relocation of at-risk properties from the hazard area to maintain the property for open space purposes. This part applies to property acquisition for open space project awards made under any FEMA hazard mitigation assistance program. This part supplements general program requirements of the funding grant program and must be read in conjunction with the relevant program regulations and guidance available at *http://www.fema.gov.*This part, with the exception of § 80.19 Land use and oversight, applies to projects for which the funding program application period opens or for which funding is made available pursuant to a major disaster declared on or after December 3, 2007. Prior to that date, applicable program regulations and guidance in effect for the funding program (available at *http://www.fema.gov*) shall apply. Section 80.19 Land use and oversight apply as of December 3, 2007 to all FEMA funded acquisitions for the purpose of open space.

§ 80.3 Definitions.

(a) Except as noted in this part, the definitions applicable to the funding program apply to implementation of

this part. In addition, for purposes of this part:

(b) *Applicant* means a State or Indian Tribal government applying to FEMA for a Federal award that will be accountable for the use of funds. Once funds have been awarded, the applicant becomes the recipient and may also be a pass-through entity.

(c) *Federal award* means the Federal financial assistance that a recipient or subrecipient receives directly from FEMA or indirectly from a pass-through entity. The terms ''award'' and ''grant'' may also be used to describe a ''Federal award'' under this part.

(d) *Market Value* means the price that the seller is willing to accept and a buyer is willing to pay on the open market and in an arm's length transaction.

(e) *National of the United States* means a person within the meaning of the term as defined in the Immigration and Nationality Act, 8 U.S.C. 1101(a)(22).

(f) *Pass-through entity* means a recipient that provides a subaward to a subrecipient.

(g) *Purchase offer* is the initial value assigned to the property, which is later adjusted by applicable additions and deductions, resulting in a final offer amount to a property owner.

(h) *Qualified alien* means a person within the meaning of the term as defined at 8 U.S.C. 1641.

(i) *Qualified conservation organization* means a qualified organization with a conservation purpose pursuant to 26 CFR 1.170A–14 and applicable implementing regulations, that is such an organization at the time it acquires the property interest and that was such an organization at the time of the major disaster declaration, or for at least 2 years prior to the opening of the grant application period.

(j) *Recipient* means the State or Tribal government that receives a Federal award directly from FEMA. A recipient may also be a pass-through entity. The term recipient does not include subrecipients.

(k) *Subapplicant* means the entity that submits an application for FEMA mitigation assistance to the State or Indian Tribal applicant/recipient. With respect to open space acquisition projects under the Hazard Mitigation Grant Program (HMGP), this term has the same meaning as given to the term ''applicant'' in part 206, subpart N of this chapter. Upon grant award, the subapplicant is referred to as the subrecipient.

(l) *Subaward* means an award provided by a pass-through entity to a subrecipient, for the subrecipient to carry out part of a Federal award received by the pass-through entity.

(m) *Subrecipient* means the State agency, community or Indian Tribal government or other legal entity to which a subaward is awarded and which is accountable to the recipient for the use of the funds provided.

(n) *Administrator* means the head of the Federal Emergency Management Agency, or his/her designated representative.

(o) *Regional Administrator* means the head of a Federal Emergency Management Agency regional office, or his/her designated representative.

[86 FR 50670, Sept. 10, 2021]

§ 80.5 Roles and responsibilities.

The roles and responsibilities of FEMA, the State, the subapplicant/subrecipient, and participating property owners in the particular context of mitigation projects for the purpose of creating open space include the activities in this section. These are in addition to grants management roles and responsibilities identified in regulations and guidance of the program funding the project (available at *http://www.fema.gov*) and other responsibilities specified in this part.

(a) *Federal roles and responsibilities.* Oversee property acquisition activities undertaken under FEMA mitigation grant programs, including:

(1) Providing technical assistance to the applicant/recipient to assist in implementing project activities in compliance with this part;

(2) Reviewing applications for eligibility and compliance with this part;

(3) Reviewing proposals for subsequent transfer of a property interest and approving appropriate transferees;

(4) Making determinations on the compatibility of proposed uses with the open space purpose, in accordance with § 80.19;

(5) Complying with applicable Federal statutory, regulatory, and Executive Order requirements related to environmental and historic preservation compliance, including reviewing and supplementing, if necessary, environmental analyses conducted by the State and subrecipient in accordance with applicable laws, regulations, and agency policy;

(6) Providing no Federal disaster assistance, flood insurance claims payments, or other FEMA assistance with respect to the property or any open-space related improvements, after the property interest transfers; and

(7) Enforcing the requirements of this part and the deed restrictions to ensure that the property remains in open space use in perpetuity.

(b) *State (applicant/recipient) roles and responsibilities.* Serve as the point of contact for all property acquisition activities by coordinating with the subapplicant/subrecipient and with FEMA to ensure that the project is implemented in compliance with this part, including:

(1) Providing technical assistance to the subapplicant/subrecipient to assist in implementing project activities in compliance with this part;

(2) Ensuring that applications are not framed in a manner that has the effect of circumventing any requirements of this part;

(3) Reviewing the application to ensure that the proposed activity complies with this part, including ensuring that the property acquisition activities remain voluntary in nature, and that the subrecipient and property owners are made aware of such;

(4) Submitting to FEMA subapplications for proposed projects in accordance with the respective program schedule and programmatic requirements, and including all the requisite information to enable FEMA to determine the eligibility, technical feasibility, cost effectiveness, and environmental and historic preservation compliance of the proposed projects;

(5) Reviewing proposals for subsequent transfer of property interest and obtaining FEMA approval of such transfers; and ensuring that all uses proposed for the property are compatible with open space project purposes;

(6) Making no application for, nor providing, Federal disaster assistance or other FEMA assistance for the property or any open-space related improvements, after the property interest transfers;

(7) Enforcing the terms of this part and the deed restrictions to ensure that the property remains in open space use in perpetuity; and

(8) Reporting on property compliance with the open space requirements after the grant is awarded.

(c) *Subapplicant/Subrecipient roles and responsibilities.* Coordinate with the applicant/recipient and with the property owners to ensure that the project is implemented in compliance with this part, including:

(1) Submitting all applications for proposed projects in accordance with the respective program schedule and programmatic requirements, and including all the requisite information to enable the applicant/recipient and FEMA to determine the eligibility, technical feasibility, cost effectiveness, and environmental and historic preservation compliance of the proposed projects;

(2) Ensuring that applications are not framed in a manner that has the effect of circumventing any requirements of this part;

(3) Coordinating with the property owners to ensure they understand the benefits and responsibilities of participating in the project, including that participation in the project is voluntary, and that the property owner(s) are made aware of such;

(4) Developing the application and implementing property acquisition activities in compliance with this part, and ensuring that all terms of the deed restrictions and grant award are enforced;

(5) Ensuring fair procedures and processes are in place to compensate property owners and tenants affected by the purchase of property; such as determining property values and/or the amount of the mitigation offer, and reviewing property owner disputes regarding such offers;

(6) Making no application for Federal disaster assistance, flood insurance, or other FEMA benefits for the property

or any open-space related improvements, after the property interest transfers;

(7) Taking and retaining full property interest, consistent with this part; or if transferring such interest, obtaining approval of the recipient and FEMA;

(8) Submitting to the recipient and FEMA proposed uses on the property for open space compatibility determinations; and

(9) Monitoring and reporting on property compliance after the grant is awarded.

(d) *Participating property owner roles and responsibilities.* Notify the subapplicant/subrecipient of its interest to participate, provide information to the subapplicant/subrecipient, and take all required actions necessary for the completion of the grant application and the implementation of property acquisition activities in accordance with this part.

[72 FR 61743, Oct. 31, 2007, as amended at 81 FR 56533, Aug. 22, 2016; 86 FR 50671, Sept. 10, 2021]

Subpart B—Requirements Prior to Award

§ 80.7 General.

A project involving property acquisition or the relocation of structures for open space is eligible for hazard mitigation assistance only if the subapplicant meets the pre-award requirements set forth in this subpart. A project may not be framed in a manner that has the effect of circumventing the requirements of this subpart.

§ 80.9 Eligible and ineligible costs.

(a) *Allowable costs.* Eligible project costs may include compensation for the value of structures, for their relocation or demolition, for associated land, and associated costs. For land that is already held by an eligible entity, compensation for the land is not an allowable cost, but compensation for development rights may be allowable.

(b) *Pre-award costs.* FEMA may fund eligible pre-award project costs at its discretion and as funds are available. Recipients and subrecipients may be reimbursed for eligible pre-award costs for activities directly related to the development of the project proposal. These costs can only be incurred during the open application period of the respective grant program. Costs associated with implementation of the project but incurred prior to grant award are not eligible. Therefore, activities where implementation is initiated or completed prior to award are not eligible and will not be reimbursed.

(c) *Duplication of benefits.* Grant funds may not duplicate benefits received by or available to applicants, subapplicants and other project participants from insurance, other assistance programs, legal awards, or any other source to address the same purpose. Such individual or entity must notify the subapplicant and FEMA of all benefits that it receives, anticipates, or has available from other sources for the same purpose. FEMA will reduce the subaward by the amounts available for the same purpose from another source.

(d) *Negligence or other tortious conduct.* FEMA acquisition funds are not available where an applicant, subapplicant, other project participant, or third party's negligence or intentional actions contributed to the conditions to be mitigated. If the applicant, subapplicant, or project participant suspects negligence or other tortious conduct by a third party for causing such condition, they are responsible for taking all reasonable steps to recover all costs attributable to the tortious conduct of the third party. FEMA generally considers such amounts to be duplicated benefits available for the same purpose, and will treat them consistent with paragraph (c) of this section.

(e) FEMA mitigation grant funds are not available to satisfy or reimburse for legal obligations, such as those imposed by a legal settlement, court order, or State law.

[72 FR 61743, Oct. 31, 2007, as amended at 86 FR 50671, Sept. 10, 2021]

§ 80.11 Project eligibility.

(a) *Voluntary participation.* Eligible acquisition projects are those where the property owner participates voluntarily, and the recipient/subrecipient will not use its eminent domain authority to acquire the property for the open space purposes should negotiations fail.

(b) *Acquisition of improved properties.* Eligible properties are those with at-risk structures on the property, including those that are damaged or destroyed due to an event. In some cases, undeveloped, at-risk land adjacent to an eligible property with existing structures may be eligible.

(c) *Subdivision restrictions.* The land may not be subdivided prior to acquisition except for portions outside the identified hazard area, such as the Special Flood Hazard Area or any risk zone identified by FEMA.

(d) *Subapplicant property interest.* To be eligible, the subapplicant must acquire or retain fee title (full property interest), except for encumbrances FEMA determines are compatible with open space uses, as part of the project implementation. A pass through of funds from an eligible entity to an ineligible entity must not occur.

(e) *Hazardous materials.* Eligible properties include only those that are not contaminated with hazardous materials, except for incidental demolition and household hazardous waste.

(f) *Open space restrictions.* Property acquired or from which a structure is removed must be dedicated to and maintained as open space in perpetuity consistent with this part.

[72 FR 61743, Oct. 31, 2007, as amended at 74 FR 47481, Sept. 16, 2009; 86 FR 50671, Sept. 10, 2021]

§ 80.13 Application information.

(a) An application for acquisition of property for the purpose of open space must include:

(1) A photograph that represents the appearance of each property site at the time of application;

(2) Assurances that the subapplicant will implement the project grant award in compliance with subparts C and D of this part;

(3) The deed restriction language, which must be consistent with the FEMA model deed restriction that the local government will record with the property deeds. Any variation from the model deed restriction language can only be made with prior approval from FEMA's Office of Chief Counsel;

(4) The documentation of voluntary interest signed by each property owner, which must include that the subapplicant has informed them in writing that it will not use its eminent domain authority for the open space purpose; and

(5) Assurance that the subject property is not part of an intended, planned, or designated project area for which the land is to be acquired by a certain date, and that local and State governments have no intention to use the property for any public or private facility in the future inconsistent with this part;

(6) If the subapplicant is offering pre-event value: the property owner's certification that the property owner is a National of the United States or qualified alien; and

(7) Other information as determined by the Administrator.

(b) *Consultation regarding other ongoing Federal activities.* (1) The subapplicant must demonstrate that it has consulted with the United States Army Corps of Engineers (USACE) regarding the subject land's potential future use for the construction of a levee system. The subapplicant must also demonstrate that it has, and will, reject any future consideration of such use if it accepts FEMA assistance to convert the property to permanent open space.

(2) The subapplicant must demonstrate that it has coordinated with its State Department of Transportation to ensure that no future, planned modifications, improvements, or enhancements to Federal aid systems are under consideration that will affect the subject property.

(c) *Restriction on alternate properties.* Changes to the properties in an approved mitigation project will be considered by FEMA but not approved automatically. The subapplicant must identify the alternate properties in the project application and each alternate property must meet eligibility requirements in order to be considered.

[72 FR 61743, Oct. 31, 2007, as amended at 74 FR 47481, Sept. 16, 2009; 86 FR 50671, Sept. 10, 2021]

Subpart C—Post-Award Requirements

§ 80.15 General.

A project involving property acquisition or the relocation of structures for

open space must be implemented consistent with the requirements set forth in this subpart.

§ 80.17 Project implementation.

(a) *Hazardous materials.* The subrecipient must take steps to ensure it does not acquire or include in the project properties contaminated with hazardous materials by seeking information from property owners and from other sources on the use and presence of contaminants affecting the property from owners of properties that are or were industrial or commercial, or adjacent to such. A contaminated property must be certified clean prior to participation. This excludes permitted disposal of incidental demolition and household hazardous wastes. FEMA mitigation grant funds may not be used for clean up or remediation of contaminated properties.

(b) *Clear title.* The subrecipient will obtain a title insurance policy demonstrating that fee title conveys to the subrecipient for each property to ensure that it acquires only a property with clear title. The property interest generally must transfer by a general warranty deed. Any incompatible easements or other encumbrances to the property must be extinguished before acquisition.

(c) *Purchase offer and supplemental payments.* (1) The amount of purchase offer is the current market value of the property or the market value of the property immediately before the relevant event affecting the property (''pre-event'').

(i) The relevant event for Robert T. Stafford Disaster Relief and Emergency Assistance Act assistance under HMGP is the major disaster under which funds are available; for assistance under the Pre-disaster Mitigation program (PDM) (42 U.S.C. 5133), it is the most recent major disaster. Where multiple disasters have affected the same property, the recipient and subrecipient will determine which is the relevant event.

(ii) The relevant event for assistance under the National Flood Insurance Act is the most recent event resulting in a National Flood Insurance Program (NFIP) claim of at least $5,000.

(2) The recipient should coordinate with the subrecipient in their determination of whether the valuation should be based on pre-event or current market value. Generally, the same method to determine market value should be used for all participants in the project.

(3) A property owner who did not own the property at the time of the relevant event, or who is not a National of the United States or qualified alien, is not eligible for a purchase offer based on pre-event market value of the property. Subrecipients who offer pre-event market value to the property owner must have already obtained certification during the application process that the property owner is either a National of the United States or a qualified alien.

(4) Certain tenants who must relocate as a result of the project are entitled to relocation benefits under the Uniform Relocation Assistance and Real Property Acquisition Act (such as moving expenses, replacement housing rental payments, and relocation assistance advisory services) in accordance with 49 CFR part 24.

(5) If a purchase offer for a residential property is less than the cost of the homeowner-occupant to purchase a comparable replacement dwelling outside the hazard-prone area in the same community, subrecipients for mitigation grant programs may make such a payment available in accordance with criteria determined by the Administrator.

(6) The subrecipient must inform each property owner, in writing, of what it considers to be the market value of the property, the method of valuation and basis for the purchase offer, and the final offer amount. The offer will also clearly state that the property owner's participation in the project is voluntary.

(d) *Removal of existing buildings.* Existing incompatible facilities must be removed by demolition or by relocation outside of the hazard area within 90 days of settlement of the property transaction. The FEMA Regional Administrator may grant an exception to this deadline only for a particular property based upon written justification if extenuating circumstances

exist, but will specify a final date for removal.

(e) *Deed restriction*. The subrecipient, upon settlement of the property transaction, must record with the deed of the subject property notice of applicable land use restrictions and related procedures described in this part, consistent with FEMA model deed restriction language.

[86 FR 50671, Sept. 10, 2021]

§ 80.19 Land use and oversight.

This section applies to acquisitions for open space projects to address flood hazards. If the Administrator determines to mitigate in other circumstances, he/she will adapt the provisions of this section as appropriate.

(a) *Open space requirements*. The property must be dedicated and maintained in perpetuity as open space for the conservation of natural floodplain functions.

(1) These uses may include: Parks for outdoor recreational activities; wetlands management; nature reserves; cultivation; grazing; camping (except where adequate warning time is not available to allow evacuation); unimproved, unpaved parking lots; buffer zones; and other uses FEMA determines compatible with this part.

(i) Allowable uses generally do not include: Walled buildings, levees, dikes, or floodwalls, paved roads, highways, bridges, cemeteries, landfills, storage of any hazardous or toxic materials, above or below ground pumping and switching stations, above or below ground storage tanks, paved parking, off-site fill or other uses that obstruct the natural and beneficial functions of the floodplain.

(ii) In the rare circumstances where the Administrator has determined competing Federal interests were unavoidable and has analyzed floodplain impacts for compliance with § 60.3 of this subchapter or higher standards, the Administrator may find only USACE projects recognized by FEMA in 2000 and improvements to pre-existing Federal-aid transportation systems to be allowable uses.

(2) No new structures or improvements will be built on the property except as indicated below:

(i) A public facility that is open on all sides and functionally related to a designated open space or recreational use;

(ii) A public restroom; or

(iii) A structure that is compatible with open space and conserves the natural function of the floodplain, which the Administrator approves in writing before the construction of the structure begins.

(3) Any improvements on the property must be in accordance with proper floodplain management policies and practices. Structures built on the property according to paragraph (a)(2) of this section must be floodproofed or elevated to at least the base flood level plus 1 foot of freeboard, or greater, if required by FEMA, or if required by any State or local ordinance, and in accordance with criteria established by the Administrator.

(4) After the date of property settlement, no Federal entity or source may provide disaster assistance for any purpose with respect to the property, nor may any application for such assistance be made to any Federal entity or source.

(5) The property is not eligible for coverage under the NFIP for damage to structures on the property occurring after the date of the property settlement, except for pre-existing structures being relocated off the property as a result of the project.

(b) *Subsequent transfer*. After acquiring the property interest, the subrecipient, including successors in interest, will convey any interest in the property only if the Regional Administrator, through the State, gives prior written approval of the transferee in accordance with this paragraph.

(1) The request by the subrecipient, through the State, to the Regional Administrator must include a signed statement from the proposed transferee that it acknowledges and agrees to be bound by the terms of this section, and documentation of its status as a qualified conservation organization if applicable.

(2) The subrecipient may convey a property interest only to a public entity or to a qualified conservation organization. However, the subrecipient may convey an easement or lease to a

private individual or entity for purposes compatible with the uses described in paragraph (a) of this section, with the prior approval of the Regional Administrator, and so long as the conveyance does not include authority to control and enforce the terms and conditions of this section.

(3) If title to the property is transferred to a public entity other than one with a conservation mission, it must be conveyed subject to a conservation easement that must be recorded with the deed and must incorporate all terms and conditions set forth in this section, including the easement holder's responsibility to enforce the easement. This must be accomplished by one of the following means:

(i) The subrecipient will convey, in accordance with this paragraph (b), a conservation easement to an entity other than the title holder, which must be recorded with the deed, or

(ii) At the time of title transfer, the subrecipient will retain such conservation easement, and record it with the deed.

(4) Conveyance of any property interest must reference and incorporate the original deed restrictions providing notice of the conditions in this section and must incorporate a provision for the property interest to revert to the subrecipient or recipient in the event that the transferee ceases to exist or loses its eligible status under this section.

(c) *Inspection.* FEMA, its representatives and assigns, including the recipient will have the right to enter upon the property, at reasonable times and with reasonable notice, for the purpose of inspecting the property to ensure compliance with the terms of this part, the property conveyance and of the grant award.

(d) *Monitoring and reporting.* Every 3 years the subrecipient (in coordination with any current successor in interest) through the recipient, must submit to the FEMA Regional Administrator a report certifying that the subrecipient has inspected the property within the month preceding the report, and that the property continues to be maintained consistent with the provisions of this part, the property conveyance and the grant award.

(e) *Enforcement.* The subrecipient, recipient, FEMA, and their respective representatives, successors and assigns, are responsible for taking measures to bring the property back into compliance if the property is not maintained according to the terms of this part, the conveyance, and the grant award. The relative rights and responsibilities of FEMA, the recipient, the subrecipient, and subsequent holders of the property interest at the time of enforcement, include the following:

(1) The recipient will notify the subrecipient and any current holder of the property interest in writing and advise them that they have 60 days to correct the violation. If the subrecipient or any current holder of the property interest fails to demonstrate a good faith effort to come into compliance with the terms of the grant within the 60-day period, the recipient will enforce the terms of the grant by taking any measures it deems appropriate, including but not limited to bringing an action at law or in equity in a court of competent jurisdiction.

(2) FEMA, its representatives, and assignees may enforce the terms of the grant by taking any measures it deems appropriate, including but not limited to 1 or more of the following:

(i) Withholding FEMA mitigation awards or assistance from the State and subrecipient; and current holder of the property interest.

(ii) Requiring transfer of title. The subrecipient or the current holder of the property interest will bear the costs of bringing the property back into compliance with the terms of the grant; or

(iii) Bringing an action at law or in equity in a court of competent jurisdiction against any or all of the following parties: The recipient, the subrecipient, and their respective successors.

[73 FR 61743, Oct. 31, 2007, as amended at 86 FR 50672, Sept. 10, 2021]

Subpart D—After the Grant Requirements

§ 80.21 Closeout requirements.

Upon closeout of the grant, the subrecipient, through the recipient, must provide FEMA, with the following:

(a) A copy of the deed recorded for each property, demonstrating that each property approved in the original application was mitigated and that the deed restrictions recorded are consistent with the FEMA model deed restriction language to meet the requirements of this part;

(b) A photo of each property site after project completion;

(c) The latitude-longitude coordinates of each property site;

(d) Identification of each property as a repetitive loss structure, if applicable; and

(e) Other information as determined by the Administrator.

[73 FR 61743, Oct. 31, 2007, as amended at 86 FR 50672, Sept. 10, 2021]

PARTS 81–149 [RESERVED]

SUBCHAPTER C—FIRE PREVENTION AND CONTROL

PART 150—PUBLIC SAFETY AWARDS TO PUBLIC SAFETY OFFICERS

Sec.
150.1 Background and purpose.
150.2 Definitions.
150.3 Nomination process.
150.4 Nomination and selection criteria.
150.5 Joint Public Safety Awards Board.
150.6 Design and procurement of awards.
150.7 Selection process.
150.8 Presentation of awards.
150.9 Funding.
150.10 Date of submission of nominations.

AUTHORITY: Federal Fire Prevention and Control Act of 1974, sec. 15, 15 U.S.C. 2214; Reorg. Plan No. 3 of 1978, 3 CFR, 1978 Comp., p. 329, and E.O. 12127, dated Mar. 31, 1979, 3 CFR, 1979 Comp., p. 376.

SOURCE: 49 FR 39845, Oct. 11, 1984, unless otherwise noted.

§ 150.1 Background and purpose.

The regulations in this part are issued under the authority of the Federal Fire Prevention and Control Act of 1974 (the Act), 15 U.S.C. 2201 *et seq*. The Act establishes two classes of honorary awards for public safety officers and directs the issuance of the necessary joint regulations by the Administrator of the Federal Emergency Management Agency (FEMA) and the Attorney General. The functions of the Secretary of Commerce were transferred by Reorganization Plan No. 3 of 1978 to the Administrator , FEMA. Since initial passage of the Act, civil defense functions which then were delegated to the Secretary of Defense have been delegated to theAdministrator, FEMA. Section 15 of the Act has been amended to delete the Secretary of Defense from participating in the granting of awards. *See* Public Law 98–241, 98 Stat. 95, 96 (1984). The Administrator , FEMA, and the Attorney General are issuing this regulation to implement the statutory provisions for FEMA and the Department of Justice.

§ 150.2 Definitions.

Civil defense officer (or member of a recognized civil defense or emergency preparedness organization) means any individual who is assigned to and is performing the assigned tasks of the unit or organization which has been given a mission under the direction or operational control of a Civil Defense or Emergency Preparedness Director/Coordinator in accordance with a Federal, State or local emergency plan and sanctioned by the government concerned. This also includes emergency management officers. This includes volunteers and paid employees for any governmental entity.

Distinguished Public Safety Service Award means the *Secretary's Award for Distinguished Public Safety Service*, presented by either the Attorney General or the Administrator of FEMA to public safety officers for distinguished service in the field of public safety.

FEMA means the Federal Emergency Management Agency.

Firefighter means a member, regardless of rank or duties, of any organization (including such Federal organizations) in any State consisting of personnel, apparatus, and equipment which has as its purpose protecting property and maintaining the safety and welfare of the public from the dangers of fire. This term includes volunteer or paid employees. The location of any such organization may include, but is not limited to, a Federal installation, a State, city, town, borough, parish, county, fire district, rural fire district or other special district.

Joint Board means the Joint Public Safety Awards Board established by the Administrator of the Federal Emergency Management Agency and the Attorney General to carry out the purposes of the Federal Fire Prevention and Control Act of 1974.

Law enforcement officer means a person involved in the control or reduction of crime and juvenile delinquency or enforcement of the criminal laws. This includes, but is not limited to, police, corrections, probation, parole, and court officers, and Federal civilian officers in such capacities.

Nominating official means the head of a Federal government department or agency, or his delegatee(s), the governor or other head of a State, or the chief executive or executives of any

general governmental unit within any State.

President's Award means the President's Award for Outstanding Public Safety Service, presented by the President of the United States to public safety officers for extraordinary valor in the line of duty or for outstanding contributions to public safety.

Public safety officer means a person serving a public agency, with or without compensation, as a firefighter, a civil defense officer (or member of a recognized civil defense or emergency preparedness organization), or a law enforcement officer, including a corrections or court officer.

State means any State, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Islands and any other territory or possession of the United States.

§ 150.3 Nomination process.

(a) The Nominating Officials nominating Firefighters and Civil Defense Officers shall submit their nominations for the President's Award or Distinguished Public Safety Service Award to the Executive Secretary, Joint Public Safety Awards Board, National Emergency Training Center, Emmitsburg, MD 21727. Copies of all nominations shall also be forwarded, depending on the category of the nominee, as follows:

(1) *Firefighter:*

FEMA, Attention: Superintendent, National Fire Academy, Emmitsburg, MD 21727

(2) *Civil defense officer (or member of a recognized civil defense or emergency preparedness organization):*

FEMA, Attention: Superintendent, Emergency Management Institute, Emmitsburg, MD 21727

(b) The Nominating Officials nominating law enforcement, corrections or court officers shall submit their nominations for the President's Award or Distinguished Public Safety Service Awards to: Assistant Attorney General for Administration, U.S. Department of Justice, Washington, DC 20530.

(c) All nominations shall be submitted in writing in accordance with the requirements prescribed in this section and §150.4 at the earliest practicable date after the performance of the act or acts for which the nomination is made. Nominations for each year shall be made before November 15; any received thereafter will be considered as having been made for the following year. However, for the year 1983, nominations may be made by February 28, 1985.

(d) Nominations for the President's Award or the Distinguished Public Safety Service Award should include the name of the candidate, his/her position, title and address, and public agency served, the locale where the candidate performs his/her duties, the name, address and telephone number of the nominating official, a summary describing the outstanding contribution, distinguished service or extraordinary valor, and the dates relating thereto. The description should be sufficiently concise and specific to justify the request for recognition of the public safety officer through the presentation of either of the awards. Copies of any published factual accounts of the nominee's accomplishment should also be attached when available.

(e) An annual invitation shall be issued by the Joint Board for nominations for the President's Award and, on behalf of the Attorney General and the Administrator of FEMA, for the Distinguished Public Safety Service Award. The invitation shall be issued by letter or by notice in apporpriate publications of interest to the public safety community. However, nominating officials need not wait for such invitation but may nominate at the most appropriate time in accordance with the other provisions of this part.

[49 FR 39845, Oct. 11, 1984, as amended at 50 FR 3350, Jan. 24, 1985; 74 FR 15344, Apr. 3, 2009]

§ 150.4 Nomination and selection criteria.

(a) Nominations for the President's Award or the Distinguished Public Safety Service Award shall be made on the basis of, and in conformity with, the following uniform criteria.

(1) *President's Award.* Documentation accompanying the nomination for this Award must indicate not only that the

nominee unquestionably meets the standards established for the Distinguished Public Safety Service Award (see paragraph (a)(2) of this section), but also deserves greater public recognition because he/she has demonstrated unique qualities of courage, imagination or ability, which have resulted in outstanding contributions to the public safety.

(2) *Distinguished Public Safety Service Award.* Nomination for this award shall clearly show that the public safety officer's qualifying service or act is marked by courage, imagination or ability or has resulted in a significant contribution to the public safety accomplished through an originality of effort which far exceeds the expected quality of performance of the normal duties assigned to the nominee.

(b) A nomination shall specify whether it is being submitted for the President's Award or the Distinguished Public Safety Award.

[49 FR 39845, Oct. 11, 1984, as amended at 74 FR 15344, Apr. 3, 2009]

§ 150.5 Joint Public Safety Awards Board.

(a) A Joint Public Safety Awards Board (Joint Board) is hereby established to fulfill the responsibilities of the Administrator of FEMA and the Attorney General by administering the process of nomination for the President's Award and by participating in the selection process with the Executive Office of the President. The Joint Board shall consist of ten representatives who are Federal employees and are of appropriate rank (at or equivalent to grades GM–14 or above). Five persons shall be named by and represent the Administrator of FEMA, and five persons shall be named by and represent the Attorney General. The representatives serving on the Joint Board shall select one of their number to act as the chairperson.

(b) Representatives on the Joint Board shall serve in addition to their regular duties and without additional compensation. Consistent with the requirements of this part, the members of the Joint Board shall establish the procedures by which the selections for the President's Award shall be made to assure the timely presentation of these awards.

(c) A National Emergency Training Center employee shall act as Executive Secretary of the Joint Board. The Executive Secretary shall perform such functions as are appropriate to the Board's responsibilities, including the receipt of all nominations and the communication of nomination information, for the purpose of receiving comments thereon, from members of the public safety community pursuant to §150.5(e). The Executive Secretary shall be appointed by the Associate Director, Training and Fire Programs of FEMA.

(d) The Joint Board shall review the nominations for the President's Award and shall recommend to the Administrator , FEMA, and the Attorney General by February 1 of each year, those nominees determined by it to merit consideration for the President's Award together with reasons therefor. The Administrator and the Attorney General shall then recommend to the President those nominees determined by them to merit the President's Award, together with the reasons therefor. Recommendations for 1983 shall be submitted on or before March 29, 1985.

(e) The Joint Board may request that persons representing a cross-section of the national public safety community comment upon nominations made to the Board for the President's Award. Both the request for comments and the comments themselves shall be made in writing.

[49 FR 39845, Oct. 11, 1984, as amended at 50 FR 3350, Jan. 24, 1985]

§ 150.6 Design and procurement of awards.

(a) The Joint Board shall consult with the Department of the Treasury and the Executive Office of the President in regard to the design and procurement of the appropriate citations and medal for the President's Award in accordance with applicable laws and regulations.

(b) Insofar as practicable, the designs for Distinguised Public Safety Service Awards of FEMA and the Department of Justice shall be coordinate so as to avoid distinctly different recognition of the various public safety officers.

§ 150.7 Selection process.

(a) *President's Award.* Nominations for the President's Award shall be reviewed, and winners selected by the President (or his designee) in accordance with the requirements of § 150.3, the criteria in § 150.4(a)(1), and the procedures of § 150.5.

(b) *Distinguished Public Safety Service Award.* Upon receipt of nominations for this Award, the Administrator of FEMA or the Attorney General shall cause an evaluation and selection of the nominees to be made in accordance with the requirements of § 150.3 and the criteria prescribed in § 150.4(a)(2). In reviewing nominations, the Attorney General or the Administrator of FEMA may request that persons representing the relevant segment of the national public safety community comment upon the nomination and accompanying documentation. Both the request for comments and the comments themselves shall be made in writing.

(c) Individuals nominated for the President's Award who are considered not to meet the criteria for the Award by the Joint Board or who are not recommended to or selected by the President shall be automatically considered by the appropriate authority for nomination for the Distinguished Public Safety Service Award.

(d) Individuals nominated for the Distinguished Public Safety Service Award may be considered by the Joint Board for the President's Award if the Administratorof FEMA or the Attorney General determines that consideration for the President's Award is merited.

§ 150.8 Presentation of awards.

(a) Presentation of the President's Award shall be made at such time, place and circumstances as the Executive Office of the President directs. There shall not be more twelve President's Awards given out during any calendar year.

(b) Presentation of the Distinguished Public Safety Service Award shall be made by the Attorney General or the Administrator of FEMA or a designee at such time, place and circumstances as the Administrator of FEMA or the Attorney General determines. There is no limit on the number of these awards made during any calendar year.

§ 150.9 Funding.

(a) *President's Award.* The costs involved in designing and striking the medal to be presented in conjunction with the President's Award shall be prorated among the agencies concerned. The cost of producing the medal and printing the certificate shall be borne by FEMA if the recipient is a firefighter or a civil defense officer. If the award recipient is a law enforcement officer, then such cost shall be borne by the Department of Justice.

(b) *Distinguished Public Safety Service Award.* All expenses in connection with this Award shall be borne by the appropriate Agency.

§ 150.10 Date of submission of nominations.

Nominations may only be submitted for acts, services, or contributions occurring within two years preceding the November 15 cut-off date described in § 150.3(c) of this part. However, nominations submitted prior to the February 28, 1985 cut-off date may be made for acts, services or contributions occurring on or after October 29, 1972 (two years before the effective date of the Act).

[50 FR 3350, Jan. 24, 1985]

PART 151—REIMBURSEMENT FOR COSTS OF FIREFIGHTING ON FEDERAL PROPERTY

Subpart A—Purpose, Scope, Definitions

Sec.

151.01 Purpose.
151.02 Scope.
151.03 Definitions.

Subpart B—Submission, Determination, Appeal

151.11 Submission of claims.
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151.14 Adjudication.

Subpart C—Administration, Penalties

151.21 [Reserved]
151.22 Audits.

151.23 Penalties.

AUTHORITY: Secs. 11 and 21(b)(5), Federal Fire Prevention and Control Act of 1974 (15 U.S.C. 2210 and 2218(b)(5)); Reorganization Plan No. 3 of 1978 (3 CFR, 1978 Comp., p. 379) and E.O. 12127, dated Mar. 31, 1979 (3 CFR, 1979 Comp., p. 376).

SOURCE: 49 FR 5929, Feb. 16, 1984, unless otherwise noted.

Subpart A—Purpose, Scope, Definitions

§ 151.01 Purpose.

Section 11 of the Federal Fire Prevention and Control Act of 1974, provides that ''each fire service that engages in the fighting of a fire on property which is under the jurisdiction of the United States may file a claim with the Administrator of the Federal Emergency Management Agency for the amount of direct expenses and direct losses incurred by such fire service as a result of fighting such fire.'' This part, implements section 11 of the Act and governs the submission, determination, and appeal of claims under section 11.

§ 151.02 Scope.

Fire services, in any State, may file claims for reimbursement under section 11 and this part for the direct expenses and losses which are additional firefighting costs over and above normal operating costs incurred while fighting a fire on property which is under the jurisdiction of the United States. Section 11 requires that certain payments be deducted from those costs and that the Treasury Department will ordinarily pay the amount resulting from the application of that formula. Where the United States has entered into a contract (which is not a mutual aid agreement, defined in §151.03) for the provision of fire protection, and it is the intent of the parties that reimbursement under section 11 is unavailable, this intent will normally govern. Where a mutual aid agreement is in effect between the claimant and an agency of the United States for the property upon which the fire occurred, reimbursement will be available in otherwise proper situations. However, any payments (including the value of services) rendered under the agreement during the term of the agreement (or the Federal fiscal year in which the fire occurred, if no term is discernible) shall be deducted from the costs claimed, pursuant to §151.12.

§ 151.03 Definitions.

(a) *The Act* means the Federal Fire Prevention and Control Act of 1974, 15 U.S.C. 2201 *et seq.*

(b) *Additional firefighting costs over and above normal operating costs* means reasonable and authorized (or ratified by a responsible Federal official) costs ordinarily associated with the function of firefighting as performed by a fire service. Such costs would normally arise out of response of personnel and apparatus to the site of the fire, search and rescue, exposure protection, fire containment, ventilation, salvage, extinguishment, overhaul, and preparation of the equipment for further use. This would also include costs associated with emergency medical services to the extent normally rendered by a fire service in connection with a fire. Not included are administrative expenses, costs of employee benefits, insurance, disability, death, litigation or health care, and the costs associated with processing claims under section 11 of the Act and this part.

(c) *Administrator* means the Administrator of the Federal Emergency Management Agency, or his/her designee.

(d) *Claimant* means a fire service as defined in paragraph (g) of this section.

(e) *Direct expenses and losses* means expenses and losses which would not have been incurred had not the fire in question taken place. This includes salaries for specially employed personnel, overtime pay, the cost of supplies expended, and the depreciated value of equipment destroyed or damaged. It does not include such costs as the ordinary wages of firefighters, overhead costs, or depreciation (if based on other than hours of use during fires). Expenses as defined herein would normally be incurred after the first call or alarm and would normally cease upon the first of the following: Return to station, report in-service and ready for further operations, or commence response to another incident.

(f) *Fire* means any instance of destructive or uncontrolled burning, including scorch burns and explosions of combustible dusts or solids, flammable liquids, and gases. The definition does not include the following except where they cause fire or occur as a consequence of fire: Lightning or electrical discharge, explosion of steam boilers, hot water tanks, or other pressure vessels, explosions of ammunition or other detonating materials, overheating, mechanical failures, or breakdown of electrical equipment in power transmission facilities, and accidents involving ships, aircraft, or other vehicles. Not included in this definition are any costs associated with false alarms, regardless of cause.

(g) *Fire service* means any organization in any State consisting of personnel, apparatus, and equipment which has as its purpose protecting property and maintaining the safety and welfare of the public from the dangers of fire, including a private firefighting brigade. The personnel of any such organization may be paid employees or unpaid volunteers or any combination thereof. The location of any such organization and its responsibility for extinguishment and suppression of fires may include, but need not be limited to, a State, city, town, borough, parish, county, fire district, fire protection district, rural fire district, or other special district.

(h) *Mutual aid agreement* means any reciprocal agreement whether written or oral between a Federal agency and the claimant fire service, or its parent jurisdiction, for the purpose of providing fire protection for the property of the United States upon which the fire which gave rise to the claim occurred and for other property for which the claimant normally provides fire protection. Such agreement must be primarily one of service rendered for service, or must be entered into under 42 U.S.C. 1856 through 1856d. Not included are all other agreements and contracts, particularly those in which the intent of the parties is that the United States pays for fire protection.

(i) *FEMA* means the Federal Emergency Management Agency.

(j) *Over and above normal operating expenses* means costs, losses and expenses which are not ordinarily and necessarily associated with the maintenance, administration, and day-to-day operations of a fire service and which would not have been incurred absent the fire out of which the claim arises.

(k) *Payments to the fire service or its parent jurisdiction, including taxes or payments in lieu of taxes, the United States has made for the support of fire services on the property in question* means any Federal monies, or the value of services, including those made available through categorical or block grants, contracts, mutual aid agreements, taxes, and payments in lieu of taxes which the United States has paid to the fire service or its parent jurisdiction for fire protection and firefighting services. Such payments will be determined on the basis of the term of the arrangement, or if no such term is discernible, on the basis of the Federal fiscal year in which the fire occurred.

(l) *Property which is under the jurisdiction of the United States* means real property and Federal improvements thereon and appurtenances thereto in which the United States holds legal fee simple title. This excludes Federal leasehold interests. This likewise excludes Federal personal property on land in which the United States does not hold fee simple title.

(m) *State* means any State of the United States of America, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, The Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, and any other territory or possession of the United States.

[49 FR 5929, Feb. 16, 1984, as amended at 74 FR 15344, Apr. 3, 2009]

Subpart B—Submission, Determination, Appeal

§ 151.11 Submission of claims.

Any fire service in any State which believes it has a claim(s) cognizable under section 11 shall submit its claim(s) in writing within 90 days of the occurrence of the fire(s) for which a claim(s) is made. If the fire is of such duration that the claimant desires to

submit a claim before its conclusion, it may do so, but only for the eligible costs actually incurred to date. Additional claims may be filed for costs later incurred. Claims shall be submitted to the Administrator, FEMA, Washington, DC, 20472. Each claim shall include the following information:

(a) Name, address, jurisdiction and nature (volunteer, private, municipal, etc.) of claimant's fire service organization;

(b) Name, title, address and telephone number of individual authorized by the claimant fire service to make this claim in its behalf and his/her certification as to the accuracy of the information provided;

(c) Name and telephone number of Federal employee familiar with the facts of the event and the name and address of the Federal agency having jurisdiction over the property on which the fire occurred;

(d) Proof of authority to fight the fire (source of alarm, whether fire service was requested by responsible Federal official or whether such an official accepted the assistance when offered);

(e) Personnel and equipment committed to fighting of fire (type of equipment and number of items); and an itemized list of direct expenses (e.g., hours of equipment operation, fuel costs, consumables, overtime pay and wages for any specially hired personnel) and direct losses (e.g., damaged or destroyed equipment, to include purchase cost, estimate of the cost of repairs, statement of depreciated value immediately preceding and subsequent to the damage or destruction and the extent of insurance coverage) actually incurred in fighting the fire. A statement should be included explaining why each such expense or loss is considered by the claimant not be a normal operating cost, or to be in excess of normal operating costs;

(f) Copy of fire report which includes the location of the fire, a description of the property burned, the time of alarm, etc.;

(g) Such other information or documentation as the Administrator considers relevant to those considerations to be made in determining the amount authorized for payment, as set forth in §151.12 of these regulations;

(h) Source and amount of any payments received or to be received for the fiscal year in which the fire occurred, including taxes or payments in lieu of taxes and including all monies received or receivable from the United States through any program or agreement including categorical or block grants, and contracts, by the claimant fire service or its parent jurisdiction for the support of fire services on the property on which the fire occurred. If this information is available when the claim is submitted, it should accompany the claim. If it is not, the information should be submitted as soon as practicable, but no later than 15 days after the end of the Federal fiscal year in which the fire occurred.

[49 FR 5929, Feb. 16, 1984, as amended at 74 FR 15344, Apr. 3, 2009]

§151.12 Determination of amount authorized for payment.

(a) The Administrator shall determine the amount to be paid on a claim (subject to payment by the Department of the Treasury). The amount to be paid is the total of eligible expenses, costs and losses under paragraph (a)(1) of this section which exceeds the amount of payments under paragraph (a)(2) of this section. The Administrator shall establish the reimbursable amount by determining:

(1) The extent to which the fire service incurred additional firefighting costs, over and above its normal operating costs, in connection with the fire which is the subject of the claim, i.e., the ''amount of costs''; and

(2) What payments, if any, including taxes or payments in lieu of taxes, the fire service or its parent jurisdiction has received from the United States for the support of fire services on the property on which the fire occurred.

The reimbursable amount is the amount, if any, by which the amount of costs, determined under paragraph (a)(1) of this section exceeds the amount of payments determined under paragraph (a)(2) of this section. Where more than one claim is filed the aggregate reimbursable amount is the amount by which the total amount of costs, determined under paragraph

(a)(1) of this section exceed the amount of Federal payments (in the case of a mutual aid agreement—its term or if none is determinable, the Federal fiscal year) determined under paragraph (a)(2) of this section.

(b) The Administrator will first determine the costs as contemplated in paragraph (a)(1) of this section. The Administrator will then notify the claimant as to that amount. The claimant must indicate within 30 days its acceptance or rejection of that amount.

(1) If the determination is accepted by the claimant, this will be the final and conclusive determination of the amount of costs by the claimant in conjunction with the fire for which the claims are submitted.

(2) If the claimant rejects this amount, it must notify the Administrator, within 30 days, of its reasons for its rejection. Upon receipt of notification of rejection, the Administrator shall reconsider his determination and notify the claimant of the results of the reconsideration. The amount determined on reconsideration will constitute the costs to be used by the Administrator in determining the reimbursable amount.

(c) Upon receipt of documentation from the claimant on the amount of payments the Federal Government has made for the support of fire services on the property in question, the Administrator will, following such verification or investigation as the Administrator may deem appropriate, calculate the full amount to be reimbursed under the section 11 formula as set forth in §151.12(a). This calculation of the reimbursable amount is based upon the costs determined pursuant to §151.12(b) and the documentation of Federal payments that the claimant submitted.

(d) The Administrator's determination of the reimbursable amount will be sent to the Secretary of the Treasury. The Secretary of the Treasury shall, upon receipt of the claim and determination made under §151.12 (a), (b), and (c), determine the amount authorized for payment, which shall be the amount actually available for payment from any monies in the Treasury not otherwise appropriated but subject to reimbursement (from any appropriations which may be available or which may be made available for the purpose) by the Federal department or agency under whose jurisdiction the fire occurred. This shall be a sum no greater, although it may be less, that the reimbursable amount determined by the Administrator, FEMA, with respect to the claim under §151.12 (a), (b) and (c).

(e) Upon receipt of written notification from the claimant of its intention to accept the amount authorized as full settlement of the claim, accompanied by a properly executed document of release, the Administrator will forward the claim, a copy of the Administrator's determination and the claimant's document of release to the Secretary of the Treasury for payment of the claim in the amount authorized.

(f) Subject to the discovery of additional material evidence, the Administrator may reconsider any determination in this section, whether or not made as his final determination.

[49 FR 5929, Feb. 16, 1984, as amended at 49 FR 38119, Sept. 27, 1984]

§ 151.13 Reconsideration of amount authorized for payment.

(a) If the claimant elects to protest the amount authorized for payment, after the applicable procedures of §151.12 have been followed, it must within 30 days of receipt of notification of the amount authorized notify the Administrator in writing of its objections and set forth the reasons why the Administrator should reconsider the determination. The Administrator will upon notice of protest and receipt of additional evidence reconsider the determination of the amount of Federal payments under §151.12(a)(2) but not the determination of the amount of costs under §151.12(a)(1). The Administrator shall cause a reconsideration by the Secretary of the Treasury of the amount actually available and authorized for payment by the Treasury. The Administrator, upon receipt of the Secretary of the Treasury's reconsidered determination, will notify the claimant in writing of the amount authorized, upon reconsideration, for payment in full settlement of the claim.

(b) If the claimant elects to accept the amount authorized, upon reconsideration, for payment in full settlement

of its claims, it must within 30 days (or a longer period of time acceptable to the Administrator) of its receipt of that determination notify the Administrator of its acceptance in writing accompanied by a properly executed document of release. Upon receipt of such notice and document of release, the Administrator will forward the claim, a copy of the Administrator's final determination, and the claimant's document of release to the Secretary of the Treasury for payment of the claim in the amount of final authorization.

§ 151.14 Adjudication.

If the claimant, after written notice by the Administrator of the amount authorized for payment in full settlement of the claim and after all applicable procedures of §§151.12 and 151.13 have been followed elects to dispute the amount authorized, it may then initiate action in the United States Claims Court, which shall have jurisdiction to adjudicate the claim and enter judgment in accordance with section 11(d) of the Act.

Subpart C—Administration, Penalties

§ 151.21 [Reserved]

§ 151.22 Audits.

At the discretion of the Administrator, all claims submitted under section 11 of the Act and all records of the claimant will be subject to audit by the Administrator or his/her designee. In addition, the Comptroller General of the United States or his/her designee shall have access to all books and records of all claimants making claims under section 11.

§ 151.23 Penalties.

Claimant's officials or others who provide information or documentation under this part are subject to, among other laws, the criminal penalties of Title 18 of the United States Code, sections 287 and 1001, which punish the submission of false, fictitious or fraudulent claims and the making of false, fictitious or fraudulent statements and which provide for a fine of not more than $10,000 or imprisonment for not more than five years, or both. For such a violation, the person is likewise subject to the civil penalties set out in 31 U.S.C. 3729 and 3730.

PART 152—ASSISTANCE TO FIREFIGHTERS GRANT PROGRAM

Sec.

152.1 Purpose and eligible uses of grant funds.
152.2 Definitions.
152.3 Availability of funds.
152.4 Roles and responsibilities.
152.5 Review process and evaluation criteria.
152.6 Application review and award process.
152.7 Grant payment, reporting and other requirements.
152.8 Application submission and deadline.
152.9 Reconsideration.

AUTHORITY: Federal Fire Protection and Control Act, 15 U.S.C. 2201 *et seq*.

SOURCE: 68 FR 12547, Mar. 14, 2003, unless otherwise noted.

§ 152.1 Purpose and eligible uses of grant funds.

(a) This competitive grant program will provide funding directly to fire departments of a State for the purpose of enhancing departments abilities to protect the health and safety of the public, as well as that of firefighting personnel, facing fire and fire-related hazards. Eligible applicants can submit only one application per application period. Departments that submit multiple applications in one application period will have each of their applications deemed ineligible.

(b) Eligible applicants are fire departments or fire departments of a State which is defined as an agency or organization that has a ''formally recognized arrangement'' with a State, local or tribal authority (city, county, parish, fire district, township, town, or other non-Federal governing body) to provide fire suppression services within a fixed geographical area. A fire department can apply for assistance for its emergency medical services unit provided the unit falls organizationally under the auspices of the fire department. A municipality or fire district may submit an application on behalf of a fire department when the fire department lacks the legal status to do so, e.g., where the fire department falls

within the auspices of the municipality. When a municipality or fire district submits an application on behalf of a fire department, the fire department is precluded from submitting an additional application. Non-Federal airport and/or port authority fire departments are eligible, but only if they have a formally recognized arrangement with the local jurisdiction to provide fire suppression, on a first-due basis, outside the confines of the airport or port facilities. Airport or port authority fire departments whose sole responsibility is suppression of fires on the airport grounds or port facilities are not eligible for this grant program. Fire departments that are Federal or contracted by the Federal government and whose sole responsibility is suppression of fires on Federal installations are not eligible for this grant program. Fire stations that are not independent but are part of, or controlled by a larger fire department or agency, are typically not eligible. Fire departments that are for-profit departments (*i.e.*, do not have specific non-profit status or are not municipally based) are not eligible to apply for assistance under this program. Also not eligible for this program are ambulance services, rescue squads, auxiliaries, dive teams, urban search and rescue teams, fire service organizations or associations, and State/local agencies such as a forest service, fire marshal, hospitals, and training offices.

(c) Congress included in the legislation a list of fourteen activities eligible for funding under this program. Those activities are as follows:

(1) To hire additional firefighting personnel;

(2) To train firefighting personnel in firefighting, emergency response (including response to a terrorism incident or use of a weapon of mass destruction), arson prevention and detection, or the handling of hazardous materials, or to train firefighting personnel to provide any of the training in this paragraph (c);

(3) To fund the creation of rapid intervention teams to protect firefighting personnel at scenes of fires and other emergencies;

(4) To certify fire inspectors;

(5) To establish wellness and fitness programs for firefighting personnel to ensure that the firefighting personnel can carry out their duties;

(6) To fund emergency medical services provided by fire departments;

(7) To acquire additional firefighting vehicles, including fire trucks;

(8) To acquire additional firefighting equipment, including equipment for communications, monitoring, and response to a terrorism incident or use of a weapon of mass destruction;

(9) To acquire personal protective equipment required for firefighting personnel by the Occupational Safety and Health Administration, and other personal protective equipment for firefighting personnel, including protective equipment to respond to a terrorism incident or the use of a weapon of mass destruction;

(10) To modify fire stations, fire training facilities, and other facilities to protect the health and safety of firefighting personnel;

(11) To enforce fire codes;

(12) To fund fire prevention programs;

(13) To educate the public about arson prevention and detection; and

(14) To provide incentives for the recruitment and retention of volunteer firefighting personnel for volunteer firefighting departments and other firefighting departments that utilize volunteers.

(d) The specific activities that will be eligible for funding will be announced in the Notice of Funding Availability (NOFA) that we will publish pursuant to the program's annual appropriation.

§ 152.2 Definitions.

Active firefighter is a member of a fire department or organization in good standing that is qualified to respond to and extinguish fires or perform other fire department emergency services and has actively participated in such activities during the past year.

Bay is the part or compartment of a building that provides parking for one or more pieces of firefighting apparatus.

Career department is a fire suppression agency or organization in which all active firefighters are considered full-time employees, are assigned regular

duty shifts, and receive financial compensation for their services rendered on behalf of the department. Departments with active firefighters that are paid stipends on a per-call basis are not career departments. See the definition of combination department in this section.

Combination department is a fire suppression agency or organization in which at least one active firefighter receives financial compensation for his/her services rendered on behalf of the department and at least one active firefighter does not receive financial compensation for his/her services rendered on behalf of the department other than life/health insurance, workmen's compensation insurance, length of service awards, pay per-call or per-hour, or similar token compensation.

Construction is the creation of a new structure or any modification of the footprint or profile of an existing structure. Changes or renovations to an existing structure that do not change the footprint or profile of the structure but exceed either $10,000 or 50 percent of the value of the structure, are also considered construction for the purposes of this grant program. Changes that are less than $10,000 and/or 50 percent of the value of the structure are considered renovations, for the purposes of this grant program.

Direct delivery of training is training conducted within a training organization's own jurisdiction using the organization's own resources (trainers, facilities, equipment, etc.).

Fire boat is a vessel designed primarily for firefighting operations, however, may also be capable of water rescue and hazardous materials spills mitigation, etc. These vessels may also have the capability to pump a large volume of water from a drafting operation.

Fire department or fire department of a State is an agency or organization that has a ''formally recognized arrangement'' with a State, local or tribal authority (city, county, parish, fire district, township, town, or other non-Federal governing body) to provide fire suppression services within a fixed geographical area. A fire department can apply for assistance for its emergency medical services unit provided the unit falls organizationally under the auspices of the fire department. A municipality or fire district may submit an application on behalf of a fire department when the fire department lacks the legal status to do so, e.g., where the fire department falls within the auspices of the municipality. When a municipality or fire district submits an application on behalf of a fire department, the fire department is precluded from submitting an additional application. Non-Federal airport and/or port authority fire departments are eligible, but only if they have a formally recognized arrangement with the local jurisdiction to provide fire suppression services, on a first-due basis, outside the confines of the airport or port facilities. Airport or port authority fire departments whose sole responsibility is suppression of fires on the airport grounds or port facilities are not eligible for this grant program. Fire departments that are Federal or contracted by the Federal government and whose sole responsibility is suppression of fires on Federal installations are not eligible for this grant program. Fire departments or fire stations that are not independent but are part of, or controlled by a larger fire department or agency, are typically not eligible. Fire departments that are for-profit departments (*i.e.,* do not have specific non-profit status or are not municipally based) are not eligible to apply for assistance under this program. Also not eligible for this program are ambulance services, rescue squads, auxiliaries, dive teams, urban search and rescue teams, fire service organizations or associations, and State/local agencies such as a forest service, fire marshal, hospitals, and training offices.

Firefighter. See the definition of *Active firefighter* in this section.

First-due response area is a geographical area in proximity to a fire or rescue facility and normally served by the personnel and apparatus from that facility in the event of a fire or other emergency.

Formally recognized arrangement is an agreement between the fire department and a local jurisdiction such that the jurisdiction has publicly or otherwise

formally deemed that the fire department has the first-due response responsibilities within a fixed geographical area of the jurisdiction. Often this agreement is recognized or reported to the appropriate State entity with cognizance over fire departments, such as registration with the State Fire Marshal's office, or the agreement is specifically contained in the fire department's or jurisdiction's charter.

Integrated communication systems and devices are equipment or systems for dispatch centers or communication infrastructure. Examples of these include 911 systems, computer-aided dispatch systems, global positioning systems, fixed repeaters, etc. Towers are an integral part of any communication system, but they are not eligible to be included in any award under this program.

New mission is a first-responder function that a department has never delivered in the past or that was once delivered but has since been abandoned by the department due to the lack of funding or community support. Examples include technical search and rescue, emergency medical services, hazardous materials response, etc. A new mission does not include services already provided from existing facilities. Opening additional stations to provide similar services would be considered an expansion of existing services.

Population means permanent residents in the first-due response area or jurisdiction served by the applicant. It would include students but does not include seasonal population or any population in area that the fire department responds to under mutual/automatic aid agreements.

Prop is something that can be held up in a classroom or moved from site to site in order to facilitate or enhance the training experience. A training tower (pre-fabricated or constructed) is not a prop.

Renovation is changes or alterations or modifications to an existing structure that do not exceed either $10,000 and/or 50 percent of the market value of the structure and do not involve a change in the footprint or profile of the structure.

Rural community is a community that has low population density, zoned agricultural or parkland, and whose fire department has a relatively low volume of fire calls.

State means any of the fifty States, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

Suburban community is a community that has a medium density population with a portion of their jurisdiction being zoned for industrial and/or commercial uses, and whose fire department has a high call volume relative to a rural community.

Supplies means any expendable property that typically has a one-time use limit and an expectation of being replaced within one year.

The United States Fire Administrator's (USFA) operational and performance objectives are to reduce losses of life and reduce economic losses due to fire and related emergencies. Specific target groups are children under 14 years old, seniors over 65 years old, and firefighters.

Urban community is a community with a high density population with a major proportion of its jurisdiction zoned for commercial and/or industrial use and a significant call volume.

Vehicle is a mechanized device used for carrying passengers, goods, or equipment. Examples of vehicles include, but are not limited to: pumpers, brush trucks, tankers, tenders, attack pumpers, rescue (transport and non-transport), ambulances, foam units, quints, aerials, ladders, hazmat vehicles, squads, crash rescue (ARFF), boats, hovercraft, planes, and helicopters. Details concerning vehicle eligibility will be provided in the NOFA that will be published pursuant to this program's annual appropriation.

Volunteer department is a fire suppression agency or organization in which no active firefighters are considered full-time employees, and which no members receive financial compensation for their services rendered on behalf of the department other than life/health insurance, workers' compensation insurance, length of service awards, pay per-call or per-hour, or similar token compensation.

Watercraft is a small boat (less than 13 feet in length) or other watercraft

designed and equipped for water and/or ice rescue, rather than basic firefighting operations. Generally, these vessels will be equipped with water rescue equipment, flotation devices, and other basic medical and rescue equipment and their primary function will be rescue activities.

§ 152.3 Availability of funds.

(a) Fire departments that have received funding under the Assistance to Firefighter Grant Program in previous years are eligible to apply for funding in the current year. However, due to our responsibilities under this program to assure adequate distribution of awards amongst certain types of departments (career, combination and volunteer) and certain types of communities (urban, suburban or rural) as well as an equitable geographic distribution, we reserve the right to fund or not to fund previous recipients of grants under this program in order for us to fulfill these responsibilities.

(b) No applicant can receive more than $750,000 in Federal grant funds under this program in any fiscal year.

(c) No applicant can submit more than one application per fiscal year. Applicants that submit multiple applications will have each of their applications deemed ineligible.

(d) The scoring of the applications will determine the distribution of the funding across the eligible programs. Notwithstanding anything in this part, no more than twenty-five (25) percent of the funds appropriated for grants shall be used to assist grant recipients to purchase firefighting vehicles and not less than five (5) percent of the funds shall be used for fire prevention programs.

(e) We will not provide assistance under this part for activities for which another Federal agency has more specific or primary authority to provide assistance for the same purpose. We may disallow or recoup amounts that fall within other Federal agency's authority.

§ 152.4 Roles and responsibilities.

(a) Applicants must:

(1) Complete the application and certify to the accuracy of all the information contained therein;

(2) Certify that they are an eligible applicant, *i.e.*, a fire department, as defined in this part;

(3) Certify that the person submitting the application is duly authorized to do so, and

(b) Recipients (Grantees) must agree to:

(1) Share in the costs of the projects funded under this grant program. Fire departments in areas serving populations over 50,000 must agree to match the Federal grant funds with an amount of non-Federal funds equal to thirty (30) percent of the total project cost. Fire departments serving areas with a population of 50,000 or less will have to match the Federal grant funds with an amount of non-Federal funds equal to ten (10) percent of the total project cost. No waivers of this requirement will be granted except for fire departments of Insular Areas as provided for in 48 U.S.C. 1469a.

(2) Maintain operating expenditures during the grant's period of performance in the areas funded by a grant at a level equal to or greater than the average of their operating expenditures in the two years preceding the year in which this assistance is received.

(3) Obtain the appropriate Federal, State, or local permits necessary to fulfill the grant's scope of work including historical and/or environmental clearances as required.

(4) Retain grant files and supporting documentation for three years after the official closeout of the grant.

(5) Report to FEMA on the progress made on the grant and financial status of the grant. The award documents will detail the specific period of performance for each grantee and provide instructions on the frequency and timing of the required performance reports.

(6) Maintain documentation to support the expenditure of grant funds as well as pertinent grant decisions.

(7) Make their grant files and other books and records related to the grant, available if requested for an audit to ensure compliance with any requirement of the grant program.

(8) Agree to provide information to the U.S. Fire Administration's National Fire Incident Reporting System (NFIRS) for the period covered by the grant. If a grantee does not currently

participate in the incident reporting system and does not have the capacity to report at the time of the award, that grantee must agree to provide information to the system for a twelve-month period commencing as soon as they develop the capacity to report. Capacity to report to the NFIRS must be established prior to the termination of the one-year performance period.

(c) FEMA activities:

(1) We will ensure that the funds are awarded based on the priorities and expected benefits articulated in the statute, this part, USFA's strategic plan, and the Notice of Funds Availability.

(2) We will ensure that not more than twenty-five (25) percent of the appropriated funding will be used to purchase firefighting vehicles.

(3) We will ensure that not less than five (5) percent of the funds are made available to national, State, local, or community organizations, including fire departments, for the purpose of carrying out fire prevention programs.

(4) We will ensure that fire departments with volunteer staff, or staff comprised of a combination of career fire fighters and volunteers, receive a proportion of the total grant funding that is not less than the proportion of the United States population that those firefighting departments protect.

(5) We will ensure that grants are made to fire departments located in urban, suburban, and rural communities.

(6) We will strive to ensure geographic diversity of awards as stipulated in § 152.6.

(7) We will strive to ensure that activities funded under this grant program are consistent with the programs goals and intent, and generally in the government's best interest.

(8) We will provide the chief executives of the States with information concerning the total number and dollar amount of awards made to fire departments in their States; the program areas and activities supported by these grants; and other information about specific awards when generated and available.

[68 FR 12547, Mar. 14, 2003, as amended at 74 FR 15344, Apr. 3, 2009]

§ 152.5 Review process and evaluation criteria.

(a) Every application will be evaluated based on the answers to the activity-specific questions during our initial screening. The applications that are determined to best address the Assistance to Firefighters Grant Program's established priorities during this initial screening will be in the ''competitive range'' and subject to a second level of review. We will use the narratives/supplemental information provided by the applicants in their grant applications to evaluate, on a competitive basis, the merits and benefits of each request for funding. In selecting applications for award, we will evaluate each application for assistance independently based on established eligibility criteria and the program priorities. Eligible applicants that best address the priorities will advance to a second level of review. The second level of review involves an assessment of the financial needs of the applicant, and an analysis of the benefits that would result from the grant award.

(b) In order to be successful at this second level of the evaluation, an applicant must complete the narrative section of the application package. The narrative should include a detailed description of the planned program, uses for the grant funds including details of each budget line item. For example, if personnel costs are included in the budget, please provide a break down of what those costs are for. The narrative should explain why the grant funds are needed and why the department has not been able to obtain funding for the planned activities on its own. A discussion of financial need should include a discussion of any Federal funding received for similar activities. Finally, the applicant's narrative should detail the benefits the department or community will realize as a result of the grant award.

(c) This second level of review will be conducted using a panel of technical evaluation panelists. These panelists are largely made up of non-Federal experts with a fire service background. The panelists will assess the application's merits with respect to the clarity and detail provided in the narrative

about the project, the applicant's financial need, and the project's purported benefit to be derived from the cost. Technical evaluation panelists will independently score each application before them and then discuss the merits/shortcomings of the application in an effort to reconcile any major discrepancies. A consensus on the score is not required. The highest scoring applications resulting from this second level of review will then be considered for award. We seek to maximize the benefits derived from the funding by crediting applicants with the greatest financial need and whose proposed activities provide the greatest benefit versus the cost.

(d) In addition to the project narrative, the applicant must provide an itemized budget detailing the use of the grant funds. If an applicant is seeking funds in more than one eligible activity within a program, separate budgets will have to be generated for each activity and then an overall or summary budget will have to be generated. For those applicants applying on line, the summary budget will be automatically generated by the e-grants system.

(e) Specific rating criteria for each of the eligible programs will be published in a Notice of Funding Availability that we will publish pursuant to the program's annual appropriation.

§ 152.6 Application review and award process.

(a) As stated in §152.5, we will evaluate each application in the preliminary screening process to determine which applications best address the program's established priorities. The best applications as determined in this preliminary step will be deemed to be in the ''competitive range.'' All applications in the competitive range will advance to a second level review by a technical evaluation panel. Using the evaluation criteria detailed in the Program Guidance and in the NOFA (both of which are published pursuant to this program's annual appropriation), the panelists will score each application they evaluate. The assigned score will reflect the degree to which the applicant: clearly relates their proposed project; demonstrates financial need; and, details a high benefit to cost value of the proposed activities. We will provide the panelists the complete application content for their evaluation. We will also provide them with reference materials for national standards or regulations and guidelines with respect to typical costs for proposed apparatus and equipment purchases.

(b) Our award decisions will be based on the stated priorities of the grant program first, then on the demonstrated need of the applicant and the benefits to be derived from the proposed projects. We will make awards on a competitive basis, *i.e.*, we will fund the highest scored applications before considering lower scored applications.

(c) In a few cases, to fulfill our obligations under the law to make grants to a variety of departments, we may also make funding decisions using rank order as the preliminary basis, and then analyze the type of fire department (paid, volunteer, or combination fire departments), the size and character of the community it serves (urban, suburban, or rural), and/or the geographic location of the fire department. In these instances where we are making decisions based on geographic location, we will use States as the basic geographic unit. We may also base our funding decisions on previous grant awards funded by this program and/or grantees' performance on previous grants and a technical evaluation of reasonable costs for labor, services, materials or equipment.

§ 152.7 Grant payment, reporting and other requirements.

(a) Grantees will have twelve months to incur obligations and complete the scope of work to fulfill their responsibilities under this grant program. The performance period of each grant will be detailed in the Articles of Agreement that we provide each grantee. Grantees may request funds from FEMA as reimbursement for expenditures made under the grant program or they may request funds for immediate cash needs under 2 CFR 200.305. Advances of funds may also be approved to meet immediate cash needs.

(b) Generally, fire departments cannot use grant funds to pay for products and services contracted for, or purchased prior to the effective date of the

grant. However, we will consider requests for reimbursement for these on an exception basis. Expenses incurred after the application deadline but prior to award may be eligible for reimbursement if the expenses were justified, unavoidable (i.e., urgent and compelling), consistent with the scope of work, and specifically approved by the Assistance Officer. Expenses, obligations, commitments or contracts incurred or entered into prior to the application deadline are not eligible to be included as an expense.

(c) All grantees must follow their own established procurement process when buying anything with Federal grant funds as provided in 2 CFR 200.317–200.326. If the grantee does not have an established procurement process, they must seek a minimum of two bids for any acquisition.

(d) When requesting funding, grantees can only request an amount that is necessary to satisfy their immediate cash needs directly related to the grant, i.e., an amount equal to the total eligible grant expenses due within 30 days. Grantees can request payments of up to one hundred (100) percent of the federal share of the award amount but only if delivery of the ordered products and/or services is imminent (approximately 30 days) and the resulting payment will require the entire amount of funds.

(e) A grantee may request sufficient funding for a down payment if required to do so by the seller, such as in grants involving some purchases of firefighting vehicles. The grantee may request as much as fifty (50) percent of the federal share of the award amount at the time of the order placement to pay the down payment. The grantee may request the balance of the federal share upon delivery of the ordered equipment or vehicle.

(f) The recipients of funding under this program must report to us on how the grant funding was used and the benefits that resulted. This will be accomplished via submission of performance reports. Details regarding the reporting requirements will be provided in the Articles of Agreement provided to each grantee.

(g) Fire departments that receive funding under this program must agree to provide information to the National Fire Incident Reporting System (NFIRS) for the period covered by the assistance. If a grantee does not currently participate in the incident reporting system and does not have the capacity to report at the time of the award, that grantee must agree to provide information to the system for a twelve-month period commencing as soon as possible after they develop the capacity to report. Capacity to report to the NFIRS must be established prior to the termination of the one-year performance period.

[68 FR 12547, Mar. 14, 2003, as amended at 74 FR 15344, Apr. 3, 2009; 79 FR 76085, Dec. 19, 2014]

§ 152.8 Application submission and deadline.

In each year that this program is authorized and receives an appropriation, we will announce the grants availability via Notice of Funds Availability. That Notice will contain all pertinent information concerning the eligible funding activities, funding priorities, funding levels, application period, timelines, and deadlines.

§ 152.9 Reconsideration.

(a) *Reconsideration of initial grant award decisions.* We will review our decision with respect to an initial grant award decision only when the applicant asserts that we have made a material technical or procedural error in the processing of the application and can substantiate such assertions. As grants are awarded on a competitive basis, in accordance with the findings of an independent panel of experts, we cannot consider requests for reconsideration based upon the merits of an original application. Similarly, we will not consider new information provided after the submission of the original application. In the case of new information, we encourage applicants to incorporate their changed circumstances into their applications for future grant cycles.

(b) *Reconsideration of other decisions.* We will consider requests for reconsideration of decisions other than those related to the initial grant award on their merits.

(c) We must receive a request for reconsideration under this section within 60 days of the date of the notice of the decision for which reconsideration is requested.

(d) Requests for reconsideration should be directed to: Assistant Administrator, Grant Programs Directorate, Assistance to Firefighters Grant Program, FEMA, 800 K Street, NW., South Tower 5th Floor, Washington, DC 20001.

PARTS 153–199 [RESERVED]

SUBCHAPTER D—DISASTER ASSISTANCE

PART 200 [RESERVED]

PART 201—MITIGATION PLANNING

Sec.
201.1 Purpose.
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201.5 Enhanced State Mitigation Plans.
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201.7 Tribal Mitigation Plans.

AUTHORITY: Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 through 5207; Homeland Security Act of 2002, 6 U.S.C. 101; National Flood Insurance Act of 1968, 42 U.S.C. 4104c.

SOURCE: 67 FR 8848, Feb. 26, 2002, unless otherwise noted.

§ 201.1 Purpose.

(a) The purpose of this part is to provide information on the policies and procedures for mitigation planning as required by the provisions of section 322 of the Stafford Act, 42 U.S.C. 5165, and section 1366 of the National Flood Insurance Act of 1968, 42 U.S.C. 4104c.

(b) The purpose of mitigation planning is for State, local, and Indian tribal governments to identify the natural hazards that impact them, to identify actions and activities to reduce any losses from those hazards, and to establish a coordinated process to implement the plan, taking advantage of a wide range of resources.

[67 FR 8848, Feb. 26, 2002, as amended at 86 FR 50673, Sept. 10, 2021]

§ 201.2 Definitions.

Administrator means the head of the Federal Emergency Management Agency, or his/her designated representative.

Applicant means the entity applying to FEMA for a Federal award that will be accountable for the use of funds.

Federal award means the Federal financial assistance that a recipient or subrecipient receives directly from FEMA or indirectly from a pass-through entity. The term ''grant'' or ''award'' may also be used to describe a Federal award under this part.

Flood Mitigation Assistance (FMA) means the program authorized by section 1366 of the National Flood Insurance Act of 1968, as amended, 42 U.S.C. 4104c, and implemented at part 77.

Hazard mitigation means any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards.

Hazard Mitigation Grant Program (HMGP) means the program authorized under section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5170c, and implemented at part 206, subpart N of this chapter.

Indian Tribal government means any Federally recognized governing body of an Indian or Alaska Native Tribe, band, nation, pueblo, village, or community that the Secretary of Interior acknowledges to exist as an Indian Tribe under the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. 5131. This does not include Alaska Native corporations, the ownership of which is vested in private individuals.

Local government is any county, municipality, city, town, township, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian Tribe or authorized Tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity.

Managing State means a State to which FEMA has delegated the authority to administer and manage the HMGP under the criteria established by FEMA pursuant to 42 U.S.C. 5170c(c). FEMA may also delegate authority to Tribal governments to administer and manage the HMGP as a Managing State.

Pass-through entity means a recipient that provides a subaward to a subrecipient to carry out part of a Federal program.

Pre-Disaster Mitigation Program (PDM) means the program authorized under section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5133.

Recipient means the government that receives a Federal award directly from FEMA. A recipient may also be a pass-through entity. The term recipient does not include subrecipients. The recipient is the entire legal entity even if only a particular component of the entity is designated in the grant award document. Generally, the State is the recipient. However, an Indian Tribal government may choose to be a recipient, or may act as a subrecipient under the State. An Indian Tribal government acting as recipient will assume the responsibilities of a ''State'', as described in this part, for the purposes of administering the grant.

Regional Administrator means the head of a Federal Emergency Management Agency regional office, or his/her designated representative.

Repetitive loss structure means a structure as defined at §77.2 of this chapter.

Severe repetitive loss structure is a structure as defined at §77.2 of this chapter.

Small and impoverished communities means a community of 3,000 or fewer individuals that is identified by the State as a rural community, and is not a remote area within the corporate boundaries of a larger city; is economically disadvantaged, by having an average per capita annual income of residents not exceeding 80 percent of national, per capita income, based on best available data; the local unemployment rate exceeds by one percentage point or more, the most recently reported, average yearly national unemployment rate; and any other factors identified in the State Plan in which the community is located.

The Stafford Act refers to the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93–288, as amended (42 U.S.C. 5121–5207).

State is any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

State Hazard Mitigation Officer is the official representative of State government who is the primary point of contact with FEMA, other Federal agencies, and local governments in mitigation planning and implementation of mitigation programs and activities required under the Stafford Act.

Subapplicant means an entity submitting a subapplication to the applicant for a subaward to carry out part of a Federal award.

Subaward means an award provided by a pass-through entity to a subrecipient for the subrecipient to carry out part of a Federal award.

Subrecipient means the entity that receives a subaward from a pass-through entity. Depending on the program, subrecipients of hazard mitigation assistance subawards can be a State agency, local government, private nonprofit organization, or Indian Tribal government. Subrecipients of FMA subawards can be a State agency, community, or Indian Tribal government, as described in 44 CFR part 77. Indian Tribal governments acting as a subrecipient are accountable to the State recipient.

[86 FR 50673, Sept. 10, 2021]

§ 201.3 Responsibilities.

(a) *General.* This section identifies the key responsibilities of FEMA, States, and local/Tribal governments in carrying out section 322 of the Stafford Act, 42 U.S.C. 5165.

(b) *FEMA.* The key responsibilities of the Regional Administrator are to:

(1) Oversee all FEMA related pre- and post-disaster hazard mitigation programs and activities;

(2) Provide technical assistance and training to State, local, and Indian Tribal governments regarding the mitigation planning process;

(3) Review and approve all Standard and Enhanced State Mitigation Plans;

(4) Review and approve all local mitigation plans, unless that authority has been delegated to the State in accordance with §201.6(d);

(5) Conduct reviews, at least once every 5 years, of State mitigation activities, plans, and programs to ensure that mitigation commitments are fulfilled, and when necessary, take action, including recovery of funds or denial of

future funds, if mitigation commitments are not fulfilled.

(c) *State.* The key responsibilities of the State are to coordinate all State and local activities relating to hazard evaluation and mitigation and to:

(1) Prepare and submit to FEMA a Standard State Mitigation Plan following the criteria established in § 201.4 as a condition of receiving non-emergency Stafford Act assistance and FEMA mitigation grants. In accordance with § 77.6(b) of this chapter, applicants and subapplicants for FMA project grants must have a FEMA-approved mitigation plan that addresses identified flood hazards and provides for reduction of flood losses to structures for which NFIP coverage is available.

(2) In order to be considered for the 20 percent HMGP funding, prepare and submit an Enhanced State Mitigation Plan in accordance with § 201.5, which must be reviewed and updated, if necessary, every 5 years from the date of the approval of the previous plan.

(3) At a minimum, review and update the Standard State Mitigation Plan every 5 years from the date of the approval of the previous plan in order to continue program eligibility.

(4) Make available the use of up to the 7 percent of HMGP funding for planning in accordance with § 206.434.

(5) Provide technical assistance and training to local governments to assist them in applying for HMGP planning grants, and in developing local mitigation plans.

(6) For Managing States that have been approved under the criteria established by FEMA pursuant to 42 U.S.C. 5170c(c), review and approve local mitigation plans in accordance with § 201.6(d).

(d) *Local governments.* The key responsibilities of local governments are to:

(1) Prepare and adopt a jurisdiction-wide natural hazard mitigation plan as a condition of receiving project grant funds under the HMGP, in accordance with § 201.6.

(2) At a minimum, review and update the local mitigation plan every 5 years from date of plan approval of the previous plan in order to continue program eligibility.

(e) *Indian tribal governments.* The key responsibilities of the Indian tribal government are to coordinate all tribal activities relating to hazard evaluation and mitigation and to:

(1) Prepare and submit to FEMA a Tribal Mitigation Plan following the criteria established in § 201.7 as a condition of receiving non-emergency Stafford Act assistance and FEMA mitigation grants as a recipient. This plan will also allow Indian Tribal governments to apply through the State, as a subrecipient, for any FEMA mitigation project grant. In accordance with § 77.6(b) of this chapter, applicants and subapplicants for FMA project grants must have a FEMA-approved mitigation plan that addresses identified flood hazards and provides for reduction of flood losses to structures for which NFIP coverage is available.

(2) Review and update the Tribal Mitigation Plan at least every 5 years from the date of approval of the previous plan in order to continue program eligibility.

(3) In order to be considered for the increased HMGP funding, the Tribal Mitigation Plan must meet the Enhanced State Mitigation Plan criteria identified in § 201.5. The plan must be reviewed and updated at least every 5 years from the date of approval of the previous plan.

[67 FR 8848, Feb. 26, 2002, as amended at 67 FR 61515, Oct. 1, 2002; 69 FR 55096, Sept. 13, 2004; 72 FR 61748, Oct. 31, 2007; 74 FR 47482, Sept. 16, 2009; 79 FR 22882, Apr. 25, 2014; 86 FR 50673, Sept. 10, 2021]

§ 201.4 Standard State Mitigation Plans.

(a) *Plan requirement.* States must have an approved Standard State Mitigation Plans meeting the requirements of this section as a condition of receiving non-emergency Stafford Act assistance and FEMA mitigation grants. Emergency assistance provided under 42 U.S.C. 5170a, 5170b, 5173, 5174, 5177, 5179, 5180, 5182, 5183, 5184, 5192 will not be affected. Mitigation planning grants provided through the Pre-disaster Mitigation (PDM) program, authorized under section 203 of the Stafford Act, 42 U.S.C. 5133, will also continue to be available. The mitigation plan is the

demonstration of the State's commitment to reduce risks from natural hazards and serves as a guide for State decision makers as they commit resources to reducing the effects of natural hazards.

(b) *Planning process.* An effective planning process is essential in developing and maintaining a good plan. The mitigation planning process should include coordination with other State agencies, appropriate Federal agencies, interested groups, and be integrated to the extent possible with other ongoing State planning efforts as well as other FEMA mitigation programs and initiatives.

(c) *Plan content.* To be effective the plan must include the following elements:

(1) Description of the *planning process* used to develop the plan, including how it was prepared, who was involved in the process, and how other agencies participated.

(2) Statewide *risk assessments* that provide the factual basis for activities proposed in the strategy portion of the mitigation plan. Statewide risk assessments must characterize and analyze natural hazards and risks to provide a statewide overview. This overview will allow the State to compare potential losses throughout the State and to determine their priorities for implementing mitigation measures under the strategy, and to prioritize jurisdictions for receiving technical and financial support in developing more detailed local risk and vulnerability assessments. The risk assessment must include the following:

(i) An overview of the type and location of all natural hazards that can affect the State, including information on previous occurrences of hazard events, as well as the probability of future hazard events, using maps where appropriate;

(ii) An overview and analysis of the State's vulnerability to the hazards described in this paragraph (c)(2), based on estimates provided in local risk assessments as well as the State risk assessment. The State must describe vulnerability in terms of the jurisdictions most threatened by the identified hazards, and most vulnerable to damage and loss associated with hazard events. State owned or operated critical facilities located in the identified hazard areas must also be addressed;

(iii) An overview and analysis of potential losses to the identified vulnerable structures, based on estimates provided in local risk assessments as well as the State risk assessment. The State must estimate the potential dollar losses to State owned or operated buildings, infrastructure, and critical facilities located in the identified hazard areas.

(3) A *Mitigation Strategy* that provides the State's blueprint for reducing the losses identified in the risk assessment. This section must include:

(i) A description of State goals to guide the selection of activities to mitigate and reduce potential losses.

(ii) A discussion of the State's pre- and post-disaster hazard management policies, programs, and capabilities to mitigate the hazards in the area, including: An evaluation of State laws, regulations, policies, and programs related to hazard mitigation as well as to development in hazard-prone areas; a discussion of State funding capabilities for hazard mitigation projects; and a general description and analysis of the effectiveness of local mitigation policies, programs, and capabilities.

(iii) An identification, evaluation, and prioritization of cost-effective, environmentally sound, and technically feasible mitigation actions and activities the State is considering and an explanation of how each activity contributes to the overall mitigation strategy. This section should be linked to local plans, where specific local actions and projects are identified.

(iv) Identification of current and potential sources of Federal, State, local, or private funding to implement mitigation activities.

(v) In accordance with §77.6(b) of this chapter, applicants and subapplicants for FMA project grants must have a FEMA-approved mitigation plan that addresses identified flood hazards and provides for reduction of flood losses to structures for which NFIP coverage is available.

(4) A section on the *Coordination of Local Mitigation Planning* that includes the following:

(i) A description of the State process to support, through funding and technical assistance, the development of local mitigation plans.

(ii) A description of the State process and timeframe by which the local plans will be reviewed, coordinated, and linked to the State Mitigation Plan.

(iii) Criteria for prioritizing communities and local jurisdictions that would receive planning and project grants under available funding programs, which should include consideration for communities with the highest risks, repetitive loss structures, and most intense development pressures. Further, that for non-planning grants, a principal criterion for prioritizing grants will be the extent to which benefits are maximized according to a cost benefit review of proposed projects and their associated costs.

(5) A *Plan Maintenance Process* that includes:

(i) An established method and schedule for monitoring, evaluating, and updating the plan.

(ii) A system for monitoring implementation of mitigation measures and project closeouts.

(iii) A system for reviewing progress on achieving goals as well as activities and projects identified in the Mitigation Strategy.

(6) A *Plan Adoption Process*. The plan must be formally adopted by the State prior to submittal to us for final review and approval.

(7) *Assurances*. The plan must include assurances that the State will comply with all applicable Federal statutes and regulations in effect with respect to the periods for which it receives grant funding, including 2 CFR parts 200 and 3002. The State will amend its plan whenever necessary to reflect changes in State or Federal statutes and regulations.

(d) *Review and updates*. Plan must be reviewed and revised to reflect changes in development, progress in statewide mitigation efforts, and changes in priorities and resubmitted for approval to the appropriate Regional Administrator every 5 years. The Regional review will be completed within 45 days after receipt from the State, whenever possible. We also encourage a State to review its plan in the post-disaster timeframe to reflect changing priorities, but it is not required.

[67 FR 8848, Feb. 26, 2002, as amended at 67 FR 61515, Oct. 1, 2002; 69 FR 55096, Sept. 13, 2004; 72 FR 61565, 61738, Oct. 31, 2007; 79 FR 22883, Apr. 25, 2014; 79 FR 76085, Dec. 19, 2014; 80 FR 59551, Oct. 2, 2015; 86 FR 50674, Sept. 10, 2021]

§ 201.5 Enhanced State Mitigation Plans.

(a) A State with a FEMA approved Enhanced State Mitigation Plan at the time of a disaster declaration is eligible to receive increased funds under the HMGP, based on twenty percent of the total estimated eligible Stafford Act disaster assistance. The Enhanced State Mitigation Plan must demonstrate that a State has developed a comprehensive mitigation program, that the State effectively uses available mitigation funding, and that it is capable of managing the increased funding. In order for the State to be eligible for the 20 percent HMGP funding, FEMA must have approved the plan within 5 years prior to the disaster declaration.

(b) Enhanced State Mitigation Plans must include all elements of the Standard State Mitigation Plan identified in § 201.4, as well as document the following:

(1) Demonstration that the plan is integrated to the extent practicable with other State and/or regional planning initiatives (comprehensive, growth management, economic development, capital improvement, land development, and/or emergency management plans) and FEMA mitigation programs and initiatives that provide guidance to State and regional agencies.

(2) Documentation of the State's project implementation capability, identifying and demonstrating the ability to implement the plan, including:

(i) Established eligibility criteria for multi-hazard mitigation measures.

(ii) A system to determine the cost effectiveness of mitigation measures, consistent with OMB Circular A–94, Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs, and to rank the measures according to the State's eligibility criteria.

(iii) Demonstration that the State has the capability to effectively manage the HMGP as well as other mitigation grant programs, including a record of the following:

(A) Meeting HMGP and other mitigation grant application timeframes and submitting complete, technically feasible, and eligible project applications with appropriate supporting documentation;

(B) Preparing and submitting accurate environmental reviews and benefit-cost analyses;

(C) Submitting complete and accurate quarterly progress and financial reports on time; and

(D) Completing HMGP and other mitigation grant projects within established performance periods, including financial reconciliation.

(iv) A system and strategy by which the State will conduct an assessment of the completed mitigation actions and include a record of the effectiveness (actual cost avoidance) of each mitigation action.

(3) Demonstration that the State effectively uses existing mitigation programs to achieve its mitigation goals.

(4) Demonstration that the State is committed to a comprehensive state mitigation program, which might include any of the following:

(i) A commitment to support local mitigation planning by providing workshops and training, State planning grants, or coordinated capability development of local officials, including Emergency Management and Floodplain Management certifications.

(ii) A statewide program of hazard mitigation through the development of legislative initiatives, mitigation councils, formation of public/private partnerships, and/or other executive actions that promote hazard mitigation.

(iii) The State provides a portion of the non-Federal match for HMGP and/or other mitigation projects.

(iv) To the extent allowed by State law, the State requires or encourages local governments to use a current version of a nationally applicable model building code or standard that addresses natural hazards as a basis for design and construction of State sponsored mitigation projects.

(v) A comprehensive, multi-year plan to mitigate the risks posed to existing buildings that have been identified as necessary for post-disaster response and recovery operations.

(vi) A comprehensive description of how the State integrates mitigation into its post-disaster recovery operations.

(c) *Review and updates.* (1) A State must review and revise its plan to reflect changes in development, progress in statewide mitigation efforts, and changes in priorities, and resubmit it for approval to the appropriate Regional Administrator every 5 years. The Regional review will be completed within 45 days after receipt from the State, whenever possible.

(2) In order for a State to be eligible for the 20 percent HMGP funding, the Enhanced State Mitigation plan must be approved by FEMA within the 5 years prior to the current major disaster declaration.

[67 FR 8848, Feb. 26, 2002, as amended at 79 FR 22883, Apr. 25, 2014]

§ 201.6 Local Mitigation Plans.

The local mitigation plan is the representation of the jurisdiction's commitment to reduce risks from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards. Local plans will also serve as the basis for the State to provide technical assistance and to prioritize project funding.

(a) *Plan requirements.* (1) A local government must have a mitigation plan approved pursuant to this section in order to receive HMGP project grants. A local government must have a mitigation plan approved pursuant to this section in order to apply for and receive mitigation project grants under all other mitigation grant programs.

(2) Plans prepared for the FMA program, described at part 77 of this chapter, need only address these requirements as they relate to flood hazards in order to be eligible for FMA project grants. However, these plans must be clearly identified as being flood mitigation plans, and they will not meet the eligibility criteria for other mitigation grant programs, unless flooding is the

only natural hazard the jurisdiction faces.

(3) Regional Administrators may grant an exception to the plan requirement in extraordinary circumstances, such as in a small and impoverished community, when justification is provided. In these cases, a plan will be completed within 12 months of the award of the project grant. If a plan is not provided within this timeframe, the project grant will be terminated, and any costs incurred after notice of grant's termination will not be reimbursed by FEMA.

(4) Multi-jurisdictional plans (*e.g.*, watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process and has officially adopted the plan. Statewide plans will not be accepted as multi-jurisdictional plans.

(b) *Planning process.* An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process must include:

(1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;

(2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and nonprofit interests to be involved in the planning process; and

(3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

(c) *Plan content.* The plan must include the following:

(1) Documentation of the *planning process* used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

(2) A *risk assessment* that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards. The risk assessment must include:

(i) A description of the type, location, and extent of all natural hazards that can affect the jurisdiction. The plan must include information on previous occurrences of hazard events and on the probability of future hazard events.

(ii) A description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description must include an overall summary of each hazard and its impact on the community. All plans approved after October 1, 2008 must also address NFIP insured structures that have been repetitively damaged by floods. The plan should describe vulnerability in terms of:

(A) The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas;

(B) An estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(ii)(A) of this section and a description of the methodology used to prepare the estimate;

(C) Providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

(iii) For multi-jurisdictional plans, the risk assessment section must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.

(3) A *mitigation strategy* that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools. This section must include:

(i) A description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

(ii) A section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure. All plans approved by FEMA

after October 1, 2008, must also address the jurisdiction's participation in the NFIP, and continued compliance with NFIP requirements, as appropriate.

(iii) An action plan describing how the actions identified in paragraph (c)(3)(ii) of this section will be prioritized, implemented, and administered by the local jurisdiction. Prioritization will include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

(iv) For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.

(4) A *plan maintenance process* that includes:

(i) A section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.

(ii) A process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.

(iii) Discussion on how the community will continue public participation in the plan maintenance process.

(5) *Documentation* that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (*e.g.*, City Council, County Commissioner, Tribal Council). For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted.

(d) *Plan review*. (1) Plans must be submitted to the State Hazard Mitigation Officer (SHMO) for initial review and coordination. The State will then send the plan to the appropriate FEMA Regional Office for formal review and approval. Where the State point of contact for the FMA program is different from the SHMO, the SHMO will be responsible for coordinating the local plan reviews between the FMA point of contact and FEMA.

(2) The Regional review will be completed within 45 days after receipt from the State, whenever possible.

(3) A local jurisdiction must review and revise its plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit it for approval within 5 years in order to continue to be eligible for mitigation project grant funding.

(4) Managing States that have been approved under the criteria established by FEMA pursuant to 42 U.S.C. 5170c(c) will be delegated approval authority for local mitigation plans, and the review will be based on the criteria in this part. Managing States will review the plans within 45 days of receipt of the plans, whenever possible, and provide a copy of the approved plans to the Regional Office.

[67 FR 8848, Feb. 26, 2002, as amended at 67 FR 61515, Oct. 1, 2002; 68 FR 61370, Oct. 28, 2003; 69 FR 55096, Sept. 13, 2004; 72 FR 61748, Oct. 31, 2007 ; 74 FR 47482, Sept. 16, 2009; 86 FR 50674, Sept. 10, 2021]

§ 201.7 Tribal Mitigation Plans.

The Indian Tribal Mitigation Plan is the representation of the Indian tribal government's commitment to reduce risks from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards.

(a) *Plan requirement*. (1) Indian Tribal governments applying to FEMA as a recipient must have an approved Tribal Mitigation Plan meeting the requirements of this section as a condition of receiving non-emergency Stafford Act assistance and FEMA mitigation grants. Emergency assistance provided under 42 U.S.C. 5170a, 5170b, 5173, 5174, 5177, 5179, 5180, 5182, 5183, 5184, 5192 will not be affected. Mitigation planning grants provided through the PDM program, authorized under section 203 of the Stafford Act, 42 U.S.C. 5133, will also continue to be available.

(2) Indian Tribal governments applying through the State as a subrecipient must have an approved Tribal Mitigation Plan meeting the requirements of this section in order to receive HMGP project grants. A Tribe must have an approved Tribal Mitigation Plan in order to apply for and receive FEMA mitigation project grants, under all other mitigation grant programs. The provisions in §201.6(a)(3) are available to Tribes applying as subrecipients.

(3) Multi-jurisdictional plans (*e.g.*, county-wide or watershed plans) may

be accepted, as appropriate, as long as the Indian Tribal government has participated in the process and has officially adopted the plan. Indian Tribal governments must address all the elements identified in this section to ensure eligibility as a recipient or as a subrecipient.

(b) An effective planning process is essential in developing and maintaining a good plan. The mitigation planning process should include coordination with other tribal agencies, appropriate Federal agencies, adjacent jurisdictions, interested groups, and be integrated to the extent possible with other ongoing tribal planning efforts as well as other FEMA mitigation programs and initiatives.

(c) *Plan content.* The plan must include the following:

(1) Documentation of the *planning process* used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved. This must include:

(i) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval, including a description of how the Indian Tribal government defined ''public;''

(ii) As appropriate, an opportunity for neighboring communities, Tribal and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia, and other private and nonprofit interests to be involved in the planning process;

(iii) Review and incorporation, if appropriate, of existing plans, studies, and reports; and

(iv) Be integrated to the extent possible with other ongoing Tribal planning efforts as well as other FEMA programs and initiatives.

(2) A *risk assessment* that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Tribal risk assessments must provide sufficient information to enable the Indian Tribal government to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards. The risk assessment must include:

(i) A description of the type, location, and extent of all natural hazards that can affect the Tribal planning area. The plan must include information on previous occurrences of hazard events and on the probability of future hazard events.

(ii) A description of the Indian Tribal government's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description must include an overall summary of each hazard and its impact on the Tribe. The plan should describe vulnerability in terms of:

(A) The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas;

(B) An estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(ii)(A) of this section and a description of the methodology used to prepare the estimate;

(C) A general description of land uses and development trends within the Tribal planning area so that mitigation options can be considered in future land use decisions; and

(D) Cultural and sacred sites that are significant, even if they cannot be valued in monetary terms.

(3) A *mitigation strategy* that provides the Indian Tribal government's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools. This section must include:

(i) A description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

(ii) A section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.

(iii) An action plan describing how the actions identified in paragraph (c)(3)(ii) of this section will be prioritized, implemented, and administered by the Indian Tribal government.

(iv) A discussion of the Indian Tribal government's pre- and post-disaster

hazard management policies, programs, and capabilities to mitigate the hazards in the area, including: An evaluation of Tribal laws, regulations, policies, and programs related to hazard mitigation as well as to development in hazard-prone areas; and a discussion of Tribal funding capabilities for hazard mitigation projects.

(v) Identification of current and potential sources of Federal, Tribal, or private funding to implement mitigation activities.

(vi) In accordance with §77.6(b) of this chapter, applicants and subapplicants for FMA project grants must have a FEMA-approved mitigation plan that addresses identified flood hazards and provides for reduction of flood losses to structures for which NFIP coverage is available.

(4) A *plan maintenance process* that includes:

(i) A section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan.

(ii) A system for monitoring implementation of mitigation measures and project closeouts.

(iii) A process by which the Indian Tribal government incorporates the requirements of the mitigation plan into other planning mechanisms such as reservation master plans or capital improvement plans, when appropriate.

(iv) Discussion on how the Indian Tribal government will continue public participation in the plan maintenance process.

(v) A system for reviewing progress on achieving goals as well as activities and projects identified in the mitigation strategy.

(5) The plan must be formally adopted by the governing body of the Indian Tribal government prior to submittal to FEMA for final review and approval.

(6) The plan must include assurances that the Indian Tribal government will comply with all applicable Federal statutes and regulations in effect with respect to the periods for which it receives grant funding, including 2 CFR parts 200 and 3002. The Indian Tribal government will amend its plan whenever necessary to reflect changes in Tribal or Federal laws and statutes.

(d) *Plan review and updates.* (1) Plans must be submitted to the appropriate FEMA Regional Office for formal review and approval. Indian Tribal governments who would like the option of being a subrecipient under the State must also submit their plan to the State Hazard Mitigation Officer for review and coordination.

(2) The Regional review will be completed within 45 days after receipt from the Indian Tribal government, whenever possible.

(3) Indian Tribal governments must review and revise their plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit it for approval within 5 years in order to continue to be eligible for non-emergency Stafford Act assistance and FEMA mitigation grant funding.

[72 FR 61749, Oct. 31, 2007, as amended at 74 FR 47482, Sept. 16, 2009; 79 FR 76085, Dec. 19, 2014; 80 FR 59551, Oct. 2, 2015; 86 FR 50675, Sept. 10, 2021]

PARTS 202–203 [RESERVED]

PART 204—FIRE MANAGEMENT ASSISTANCE GRANT PROGRAM

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AUTHORITY: 42 U.S.C. 5121 through 5207; 6 U.S.C. 101 *et seq.;* Department of Homeland Security Delegation 9001.1.

SOURCE: 66 FR 57347, Nov. 14, 2001, unless otherwise noted.

Subpart A—General

§ 204.1 Purpose.

This part provides information on the procedures for the declaration and grants management processes for the Fire Management Assistance Grant Program in accordance with the provisions of section 420 of the Stafford Act. This part also details applicant eligibility and the eligibility of costs to be considered under the program. FEMA will actively work with State and Tribal emergency managers and foresters on the efficient delivery of fire management assistance as directed by this part.

[66 FR 57347, Nov. 14, 2001, as amended at 79 FR 63545, Oct. 24, 2014]

§ 204.2 Scope.

This part is intended for those individuals responsible for requesting declarations and administering grants under the Fire Management Assistance Grant Program, as well as those applying for assistance under the program.

§ 204.3 Definitions used throughout this part.

Applicant. A State or Indian tribal government submitting an application to FEMA for a fire management assistance grant, or a State, local, or Indian tribal government submitting an application to the recipient for a subgrant under an approved fire management assistance grant.

Application for Federal Assistance. The form the State submits to apply for a grant under a fire management assistance declaration.

Declared fire. An uncontrolled fire or fire complex, threatening such destruction as would constitute a major disaster, which the Administrator has approved in response to a State's request for a fire management assistance declaration and in accordance with the criteria listed in § 204.21.

Demobilization. The process and procedures for deactivating, disassembling, and transporting back to their point of origin all resources that had been provided to respond to and support a declared fire.

Fire complex. Two or more individual fires located in the same general area, which are assigned to a single Incident Commander.

Governor's Authorized Representative (GAR). The person empowered by the Governor to execute, on behalf of the State, all necessary documents for fire management assistance, including the request for a fire management assistance declaration.

Grant. An award of financial assistance, including cooperative agreements, by FEMA to an eligible recipient. The grant award will be based on the projected amount of total eligible costs for which a State submits an application and that FEMA approves related to a declared fire.

Hazard mitigation plan. A plan to develop actions the State, local, or tribal government will take to reduce the risk to people and property from all hazards. The intent of hazard mitigation planning under the Fire Management Assistance Grant Program is to identify wildfire hazards and cost-effective mitigation alternatives that produce long-term benefits. FEMA addresses mitigation of fire hazards as part of the State's comprehensive Mitigation Plan, described in 44 CFR part 201.

Incident commander. The ranking official responsible for overseeing the management of fire operations, planning, logistics, and finances of the field response.

Incident period. The time interval during which the declared fire occurs. The Regional Administrator , in consultation with the Governor's Authorized Representative and the Principal Advisor, will establish the incident period. Generally, costs must be incurred during the incident period to be considered eligible.

Indian tribal government. An Indian tribal government is any Federally recognized governing body of an Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of Interior acknowledges to exist as an Indian tribe under the Federally Recognized Tribe List Act of 1994, 25 U.S.C. 479a. This does not include Alaska Native corporations, the ownership of which is vested in private individuals.

Individual assistance. Supplementary Federal assistance provided under the Stafford Act to individuals and families adversely affected by a major disaster or an emergency. Such assistance may be provided directly by the Federal Government or through State or local governments or disaster relief organizations. For further information, see subparts D, E, and F of part 206.

Local government. A local government is any county, municipality, city, town, township, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribal government or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity, for which an application for assistance is made by a State or political subdivision of a State.

Mitigation, management, and control. Those activities undertaken, generally during the incident period of a declared fire, to minimize immediate adverse effects and to manage and control the fire. Eligible activities may include associated emergency work and pre-positioning directly related to the declared fire.

Mobilization. The process and procedures used for activating, assembling, and transporting all resources that the recipient requested to respond to support a declared fire.

Performance period. The time interval designated on the Application for Federal Assistance for the recipient and all subrecipients to submit eligible costs and have those costs processed, obligated, and closed out by FEMA.

Pre-positioning. Moving existing fire prevention or suppression resources from an area of lower fire danger to one of higher fire danger in anticipation of an increase in fire activity likely to constitute the threat of a major disaster.

Principal advisor. An individual appointed by the Forest Service, United States Department of Agriculture, or Bureau of Land Management, Department of the Interior, who is responsible for providing FEMA with a technical assessment of the fire or fire complex for which a State is requesting a fire management assistance declaration. The Principal Advisor also frequently participates with FEMA on other wildland fire initiatives.

Project worksheet. The form which identifies actual costs incurred by eligible applicants as a result of the eligible firefighting activities.

Public assistance. Supplementary Federal assistance provided under the Stafford Act to State and local governments or certain private, nonprofit organizations for eligible emergency measures and repair, restoration, and replacement of damaged facilities. For further information, see Subparts G and H of Part 206.

Recipient. The recipient is the government to which a grant is awarded which is accountable for the use of the funds provided. The recipient is the entire legal entity even if only a particular component of the entity is designated in the grant award document. Generally, the State, as designated in the FEMA-State Agreement for the Fire Management Assistance Grant Program, is the recipient. However, after a declaration, an Indian tribal government may choose to be a recipient, or it may act as a subgrantee

under the State. An Indian tribal government acting as recipient will assume the responsibilities of a ''state'', as described in this Part, for the purpose of administering the grant.

Regional Administrator. The administrator of a regional office of FEMA, or his/her designated representative.

Subgrant. An award of financial assistance under a grant by a recipient to an eligible subrecipient.

Subrecipient. An applicant that is awarded a subgrant and is accountable to the recipient for the use of grant funding provided.

Threat of a major disaster. The potential impact of the fire or fire complex is of a severity and magnitude that would result in a presidential major disaster declaration for the Public Assistance Program, the Individual Assistance Program, or both.

Uncontrolled fire. Any fire not safely confined to predetermined control lines as established by firefighting resources.

[66 FR 57347, Nov. 14, 2001, as amended at 68 FR 61370, Oct. 28, 2003; 74 FR 15345, Apr. 3, 2009; 75 FR 50715, Aug. 17, 2010; 79 FR 63545, Oct. 24, 2014; 82 FR 42, Jan. 3, 2017]

§§ 204.4–204.20 [Reserved]

Subpart B—Declaration Process

§ 204.21 Fire management assistance declaration criteria.

(a) *Determinations*. FEMA will approve declarations for fire management assistance when the Administrator determines that a fire or fire complex on public or private forest land or grassland threatens such destruction as would constitute a major disaster.

(b) *Evaluation criteria*. FEMA will evaluate the threat posed by a fire or fire complex based on consideration of the following specific criteria:

(1) Threat to lives and improved property, including threats to critical facilities/infrastructure, and critical watershed areas;

(2) Availability of State and local firefighting resources;

(3) High fire danger conditions, as indicated by nationally accepted indices such as the National Fire Danger Ratings System;

(4) Potential major economic impact.

[66 FR 57347, Nov. 14, 2001, as amended at 75 FR 50715, Aug. 17, 2010; 79 FR 63546, Oct. 24, 2014]

§ 204.22 Submitting a request for a fire management assistance declaration.

The Governor of a State, or the Governor's Authorized Representative (GAR), may submit a request for a fire management assistance declaration. The request must be submitted while the fire is burning uncontrolled and threatens such destruction as would constitute a major disaster. The request must be submitted to the Regional Administrator and should address the relevant criteria listed in § 204.21, with supporting documentation that contains factual data and professional estimates on the fire or fire complex. To ensure that FEMA can process a State's request for a fire management assistance declaration as expeditiously as possible, the State should transmit the request by telephone, promptly followed by written documentation.

[66 FR 57347, Nov. 14, 2001, as amended at 79 FR 63546, Oct. 24, 2014]

§ 204.23 Processing a request for a fire management assistance declaration.

(a) In processing a State's request for a fire management assistance declaration, the Regional Administrator, in coordination with the Principal Advisor, will verify the information submitted in the State's request.

(b) The Principal Advisor, at the request of the Regional Administrator, is responsible for providing FEMA a technical assessment of the fire or fire complex for which the State is requesting a fire management assistance declaration. The Principal Advisor may consult with State agencies, usually emergency management or forestry, as well as the Incident Commander, in order to provide FEMA with an accurate assessment.

[75 FR 50715, Aug. 17, 2010]

§ 204.24 Determination on request for a fire management assistance declaration.

The Administrator will review all information submitted in the State's request along with the Principal Advisor's assessment and render a determination. The determination will be based on the conditions of the fire or fire complex existing at the time of the State's request. When possible, the Administrator will evaluate the request and make a determination within several hours. Once the Administrator renders a determination, FEMA will promptly notify the State of the determination.

[75 FR 50715, Aug. 17, 2010]

§ 204.25 FEMA–State agreement for fire management assistance grant program.

(a) After a State's request for a fire management assistance declaration has been approved, the Governor and Regional Administrator will enter into a standing FEMA–State Agreement (the Agreement) for the declared fire and for future declared fires in that calendar year. The State must have a signed and up-to-date FEMA–State Agreement before receiving Federal funding for fire management assistance grants. FEMA will provide no funding absent a signed and up-to-date Agreement. An Indian tribal government serving as recipient, must sign a FEMA–Tribal Agreement, modeled upon the FEMA–State Agreement.

(b) The Agreement states the understandings, commitments, and conditions under which FEMA will provide Federal assistance, including the cost share provision and articles of agreement necessary for the administration of grants approved under fire management assistance declarations. The Agreement must also identify the State legislative authority for firefighting, as well as the State's compliance with the laws, regulations, and other provisions applicable to the Fire Management Assistance Grant Program.

(c) For each subsequently declared fire within the calendar year, the parties must add a properly executed amendment, which defines the incident period and contains the official declaration number. Other amendments modifying the standing Agreement may be added throughout the year to reflect changes in the program or signatory parties.

[66 FR 57347, Nov. 14, 2001, as amended at 79 FR 63546, Oct. 24, 2014; 82 FR 42, Jan. 3, 2017]

§ 204.26 Appeal of fire management assistance declaration denial.

(a) *Submitting an appeal.* When a State's request for a fire management assistance declaration is denied, the Governor or GAR may appeal the decision in writing within 30 days after the date of the letter denying the request. The State should submit this one-time request for reconsideration in writing, with appropriate additional information to the Administrator through the Regional Administrator. The Administrator will reevaluate the State's request and notify the State of the final determination within 90 days of receipt of the appeal or the receipt of additional requested information.

(b) *Requesting a time-extension.* The Administrator may extend the 30-day period for filing an appeal, provided that the Governor or the GAR submits a written

(c) *Request for such an extension within the 30-day period.* The Administrator will evaluate the need for an extension based on the reasons cited in the request and either approve or deny the request for an extension.

[75 FR 50715, Aug. 17, 2010]

§§ 204.27–204.40 [Reserved]

Subpart C—Eligibility

§ 204.41 Applicant eligibility.

(a) The following entities are eligible to apply through a State recipient for a subgrant under an approved fire management assistance grant:

(1) State agencies;

(2) Local governments; and

(3) Indian tribal governments.

(b) Entities that are not eligible to apply for a subgrant as identified in (a), such as privately owned entities and volunteer firefighting organizations, may be reimbursed through a contract or compact with an eligible

applicant for eligible costs associated with the fire or fire complex.

(c) Eligibility is contingent upon a finding that the Incident Commander or comparable State official requested the applying entity's resources.

(d) The activities performed must be the legal responsibility of the applying entity, required as the result of the declared fire, and located within the designated area.

[66 FR 57347, Nov. 14, 2001, as amended at 82 FR 42, Jan. 3, 2017]

§ 204.42 Eligible costs.

(a) *General.* (1) All eligible work and related costs must be associated with the incident period of a declared fire.

(2) Before obligating Federal funds the Regional Administrator must review and approve the initial grant application, along with Project Worksheets submitted with the application and any subsequent amendments to the application.

(3) Recipients will award Federal funds to subrecipients under State law and procedure and complying with 2 CFR parts 200 and 3002.

(b) *Equipment and supplies.* Eligible costs include:

(1) Personal comfort and safety items normally provided by the State under field conditions for firefighter health and safety.

(2) Firefighting supplies, tools, materials, expended or lost, to the extent not covered by reasonable insurance, will be replaced with comparable items.

(3) Operation and maintenance costs of publicly owned, contracted, rented, or volunteer firefighting department equipment used in eligible firefighting activities to the extent any of these costs are not included in applicable equipment rates.

(4) Use of U.S. Government-owned equipment based on reasonable costs as billed by the Federal agency and paid by the State. (Only direct costs for use of Federal Excess Personal Property (FEPP) vehicles and equipment on loan to State Forestry and local cooperators may be eligible.)

(5) Repair of equipment damaged in firefighting activities to the extent not covered by reasonable insurance. FEMA will use the lowest applicable equipment rates, or other rates that FEMA determines, to calculate the eligible cost of repairs.

(6) Replacement of equipment lost or destroyed in firefighting activities, to the extent not covered by reasonable insurance, will be replaced with comparable equipment.

(c) *Labor costs.* Eligible costs include:

(1) Overtime for permanent or reassigned State and local employees.

(2) Regular time and overtime for temporary and contract employees hired to perform fire-related activities.

(d) *Travel and per diem costs.* Eligible costs include:

(1) Travel and per diem of employees who are providing services directly associated with eligible fire-related activities may be eligible.

(2) Provision of field camps and meals when made available in place of per diem;

(e) *Pre-positioning costs.* (1) The actual costs of pre-positioning Federal, out-of-State (including compact), and international resources for a limited period may be eligible when those resources are used in response to a declared fire.

(2) The Regional Administrator must approve all pre-positioning costs.

(i) Upon approval of a State's request for a fire management assistance declaration by the Assistant Administrator for the Disaster Assistance Directorate , the State should immediately notify the Regional Administrator of its intention to seek funding for pre-positioning resources.

(ii) The State must document the number of pre-positioned resources to be funded and their respective locations throughout the State, estimate the cost of the pre-positioned resources that were used on the declared fire and the amount of time the resources were pre-positioned, and provide a detailed explanation of the need to fund the pre-positioned resources.

(iii) The State will base the detailed explanation on recognized scientific indicators, that include, but are not limited to, drought indices, short-term weather forecasts, the current number of fires burning in the State, and the availability of in-State firefighting resources. The State may also include other quantitative indicators with

which to measure the increased risk of the threat of a major disaster.

(iv) Based on the information contained in the State's notification, the Regional Administrator will determine the number of days of pre-positioning to be approved for Federal funding, up to a maximum of 21 days before the fire declaration.

(3) Upon rendering his/her determination on pre-positioning costs, the Regional Administrator will notify the Assistant Administrator for the Disaster Assistance Directorate of his/her determination.

(f) *Emergency work.* FEMA may authorize the use of section 403 of the Stafford Act, Essential Assistance, under an approved fire management assistance grant when directly related to the mitigation, management, and control of the declared fire. Essential assistance activities that may be eligible include, but are not limited to, police barricading and traffic control, extraordinary emergency operations center expenses, evacuations and sheltering, search and rescue, arson investigation teams, public information, and the limited removal of trees that pose a threat to the general public.

(g) *Temporary repair of damage caused by firefighting activities.* Temporary repair of damage caused by eligible firefighting activities listed in this subpart involves short-term actions to repair damage directly caused by the firefighting effort or activities. This includes minimal repairs to bulldozer lines, camps, and staging areas to address safety concerns; as well as minimal repairs to facilities damaged by the firefighting activities such as fences, buildings, bridges, roads, etc. All temporary repair work must be completed within thirty days of the close of the incident period for the declared fire.

(h) *Mobilization and demobilization.* Costs for mobilization to, and demobilization from, a declared fire may be eligible for reimbursement. Demobilization may be claimed at a delayed date if deployment involved one or more declared fires. If resources are being used on more than one declared fire, mobilization and demobilization costs must be claimed against the first declared fire.

(i) *Fires on co-mingled Federal/State lands.* Reasonable costs for the mitigation, management, and control of a declared fire burning on co-mingled Federal and State land may be eligible in cases where the State has a responsibility for suppression activities under an agreement to perform such action on a non-reimbursable basis. (This provision is an exception to normal FEMA policy under the Stafford Act and is intended to accommodate only those rare instances that involve State firefighting on a Stafford Act section 420 fire incident involving co-mingled Federal/State and privately-owned forest or grassland.)

[66 FR 57347, Nov. 14, 2001, as amended at 79 FR 63546, Oct. 24, 2014; 79 FR 76085, Dec. 19, 2014; 82 FR 42, Jan. 3, 2017]

§ 204.43 Ineligible costs.

Costs not directly associated with the incident period are ineligible. Ineligible costs include the following:

(a) Costs incurred in the mitigation, management, and control of undeclared fires;

(b) Costs related to planning, pre-suppression (*i.e.*, cutting fire-breaks without the presence of an imminent threat, training, road widening, and other similar activities), and recovery (*i.e.*, land rehabilitation activities, such as seeding, planting operations, and erosion control, or the salvage of timber and other materials, and restoration of facilities damaged by fire);

(c) Costs for the straight or regular time salaries and benefits of a subrecipient's permanently employed or reassigned personnel;

(d) Costs for mitigation, management, and control of a declared fire on co-mingled Federal land when such costs are reimbursable to the State by a Federal agency under another statute (See 44 CFR part 51);

(e) Fires fought on Federal land are generally the responsibility of the Federal Agency that owns or manages the land. Costs incurred while fighting fires on federally owned land are not eligible under the Fire Management Assistance Grant Program except as noted in § 204.42(i).

[66 FR 57347, Nov. 14, 2001, as amended at 82 FR 42, Jan. 3, 2017]

§§ 204.44–204.50 [Reserved]

Subpart D—Application Procedures

§ 204.51 Application and approval procedures for a fire management assistance grant.

(a) *Preparing and submitting an application.* (1) After the approval of a fire management assistance declaration, the State may submit an application package for a grant to the Regional Administrator. The application package must include the Application for Federal Assistance and Summary of Assurances—Non-construction Programs, as well as supporting documentation for the budget.

(2) The State must submit its grant application within 9 months of the declaration. Upon receipt of the written request from the State, the Regional Administrator may grant an extension for up to 6 months. The State's request must include a justification for the extension.

(b) *Fire cost threshold.* (1) FEMA will approve the initial grant award to the State when FEMA determines that the State's application demonstrates either of the following:

(i) Total eligible costs for the declared fire meet or exceed the individual fire cost threshold; or

(ii) Total costs of all declared and non-declared fires for which a State has assumed responsibility in a given calendar year meet the cumulative fire cost threshold.

(2) The individual fire cost threshold for a State is the greater of the following:

(i) $100,000; or

(ii) Five percent × $1.07 × the State population, adjusted annually for inflation using the Consumer Price Index for All Urban Consumers published annually by the Department of Labor.

(3) The cumulative fire cost threshold for a State is the greater of the following:

(i) $500,000; or

(ii) Three times the five percent × $1.07 × the State population as described in § 204.51(b)(2)(ii).

(4) States must document the total eligible costs for a declared fire on Project Worksheets, which they must submit with the grant application.

(5) FEMA will not consider the costs of pre-positioning resources for the purposes of determining whether the grant application meets the fire cost threshold.

(6) When the State's total eligible costs associated with the fire management assistance declaration meet or exceed the fire cost threshold eligible costs will be cost shared in accordance with § 204.61.

(c) *Approval of the State's grant application.* The Regional Administrator has 45 days from receipt the State's grant application or an amendment to the State's grant application, including attached supporting Project Worksheet(s), to review and approve or deny the grant application or amendment; or to notify the recipient of a delay in processing funding.

(d) *Obligation of the grant.* Before FEMA approves the State's grant application, the State must have an up-to-date State Administrative Plan and a Hazard Mitigation Plan that has been reviewed and approved by the Regional Administrator. Once these plans are approved by the Regional Administrator, the State's grant application may be approved and FEMA may begin to obligate the Federal share of funding for subgrants to the recipient.

(1) *State administrative plan.* (i) The State must develop an Administrative Plan (or have a current Administrative Plan on file with FEMA) that describes the procedures for the administration of the Fire Management Assistance Grant Program. The Plan will include, at a minimum, the items listed below:

(A) The designation of the State agency or agencies which will have responsibility for program administration.

(B) The identification of staffing functions for the Fire Management Assistance Program, the sources of staff to fill these functions, and the management and oversight responsibilities of each.

(C) The procedures for:

(*1*) Notifying potential applicants of the availability of the program;

(*2*) Assisting FEMA in determining applicant eligibility;

(*3*) Submitting and reviewing subgrant applications;

(*4*) Processing payment for subgrants;

(*5*) Submitting, reviewing, and accepting subgrant performance and financial reports;

(*6*) Monitoring, close-out, and audit and reconciliation of subgrants;

(*7*) Recovering funds for disallowed costs;

(*8*) Processing appeal requests and requests for time extensions; and

(*9*) Providing technical assistance to applicants and subgrant recipients, including briefings for potential applicants and materials on the application procedures, program eligibility guidance and program deadlines.

(ii) The recipient may request the Regional Administrator to provide technical assistance in the preparation of the State Administrative Plan.

(2) *Hazard Mitigation Plan.* As a requirement of receiving funding under a fire management assistance grant, a State, or tribal organization, acting as recipient, must:

(i) Develop a Mitigation Plan in accordance with 44 CFR part 201 that addresses wildfire risks and mitigation measures; or

(ii) Incorporate wildfire mitigation into the existing Mitigation Plan developed and approved under 44 CFR part 201 that also addresses wildfire risk and contains a wildfire mitigation strategy and related mitigation initiatives.

[66 FR 57347, Nov. 14, 2001, as amended at 68 FR 61371, Oct. 28, 2003; 79 FR 63546, Oct. 24, 2014; 82 FR 42, Jan. 3, 2017]

§ 204.52 Application and approval procedures for a subgrant under a fire management assistance grant.

(a) *Request for Fire Management Assistance.* (1) State, local, and tribal governments interested in applying for fire management assistance subgrants must submit a Request for Fire Management Assistance subgrant to the recipient in accordance with State procedures and within timelines set by the recipient, but no longer than 30 days after the close of the incident period.

(2) The recipient will review and forward the Request to the Regional Administrator for final review and determination. The recipient may also forward a recommendation for approval of the Request to the Regional Administrator when appropriate.

(3) The Regional Administrator will approve or deny the request based on the eligibility requirements outlined in § 204.41.

(4) The Regional Administrator will notify the recipient of his/her determination; the recipient will inform the applicant.

(b) *Preparing a Project Worksheet.* (1) Once the Regional Administrator approves an applicant's Request for Fire Management Assistance, the Regional Administrator's staff may begin to work with the recipient and local staff to prepare Project Worksheets.

(2) The Regional Administrator may request the Principal Advisor to assist in the preparation of Project Worksheets.

(3) The State will be the primary contact for transactions with and on behalf of the applicant.

(c) *Submitting a Project Worksheet.* (1) Applicants should submit all Project Worksheets through the recipient for approval and transmittal to the Regional Administrator as part of the State's application.

(2) The recipient will determine the deadline for an applicant to submit completed Project Worksheets, but the deadline must be no later than six months from close of the incident period.

(3) At the request of the recipient, the Regional Administrator may extend the time limitations in this section for up to 6 months when the recipient justifies and makes a request in writing.

(4) Project Worksheets will not be accepted after the deadline in paragraph (c)(2) of this section has expired, or, if applicable, after an extension specified by the Regional Administrator in paragraph (c)(3) of this section has expired.

(5) *$1,000 Project Worksheet minimum.* When the costs reported are less than $1,000, that work is not eligible and FEMA will not approve that Project Worksheet. This minimum threshold does not apply to Project Worksheets submitted for the direct and indirect

costs of administration of a fire grant, as defined in § 204.63.

[66 FR 57347, Nov. 14, 2001, as amended at 79 FR 63546, Oct. 24, 2014; 82 FR 42, Jan. 3, 2017]

§ 204.53 Certifying costs and payments.

(a) By submitting applicants' Project Worksheets to FEMA, the recipient is certifying that all costs reported on applicant Project Worksheets were incurred for work that was performed in compliance with FEMA laws, regulations, policy and guidance applicable to the Fire Management Assistance Grant Program, as well as with the terms and conditions outlined for the administration of the grant in the FEMA-State Agreement for the Fire Management Assistance Grant Program.

(b) Advancement/Reimbursement for State grant costs will be processed as follows:

(1) Through the U.S. Department of Health and Human Services SMARTLINK system; and

(2) In compliance with 2 CFR 200.305 and U.S. Treasury 31 CFR part 205, Cash Management Improvement Act.

[66 FR 57347, Nov. 14, 2001, as amended at 79 FR 63546, Oct. 24, 2014; 79 FR 76085, Dec. 19, 2014; 82 FR 42, Jan. 3, 2017]

§ 204.54 Appeals.

An eligible applicant, subrecipient, or recipient may appeal any determination FEMA makes related to an application for the provision of Federal assistance according to the procedures below.

(a) *Format and content.* The applicant or subrecipient will make the appeal in writing through the recipient to the Regional Administrator. The recipient will review and evaluate all subrecipient appeals before submission to the Regional Administrator. The recipient may make recipient-related appeals to the Regional Administrator. The appeal will contain documented justification supporting the appellant's position, specifying the monetary figure in dispute and the provisions in Federal law, regulation, or policy with which the appellant believes the initial action was inconsistent.

(b) *Levels of appeal.* (1) The Regional Administrator will consider first appeals for fire management assistance grant-related decisions under subparts A through E of this part.

(2) The Assistant Administrator for the Disaster Assistance Directorate will consider appeals of the Regional Administrator's decision on any first appeal under paragraph (b)(1) of this section.

(c) *Time limits.* (1) Appellants must file appeals within 60 days after receipt of a notice of the action that is being appealed.

(2) The recipient will review and forward appeals from an applicant or subrecipient, with a written recommendation, to the Regional Administrator within 60 days of receipt.

(3) Within 90 days following receipt of an appeal, the Regional Administrator (for first appeals) or Assistant Administrator for the Disaster Assistance Directorate (for second appeals) will notify the recipient in writing of the disposition of the appeal or of the need for additional information. A request by the Regional Administrator or Assistant Administrator for the Disaster Assistance Directorate for additional information will include a date by which the information must be provided. Within 90 days following the receipt of the requested additional information or following expiration of the period for providing the information, the Regional Administrator or Assistant Administrator for the Disaster Assistance Directorate will notify the recipient in writing of the disposition of the appeal. If the decision is to grant the appeal, the Regional Administrator will take appropriate implementing action.

(d) *Technical advice.* In appeals involving highly technical issues, the Regional Administrator or may, at his or her discretion, submit the appeal to an independent scientific or technical person or group having expertise in the subject matter of the appeal for advice or recommendation. The period for this technical review may be in addition to other allotted time periods. Within 90 days of receipt of the report, the Regional Administrator or Assistant Administrator for the Disaster Assistance Directorate will notify the recipient in writing of the disposition of the appeal.

(e) The decision of the Assistant Administrator for the Disaster Assistance

Directorate at the second appeal level will be the final administrative decision of FEMA.

[66 FR 57347, Nov. 14, 2001, as amended at 79 FR 63546, Oct. 24, 2014; 82 FR 42, Jan. 3, 2017]

§§ 204.55–204.60 [Reserved]

Subpart E—Grant Administration

§ 204.61 Cost share.

(a) All fire management assistance grants are subject to a cost share. The Federal cost share for fire management assistance grants is seventy-five percent (75%).

(b) As stated in § 204.25, the cost share provision will be outlined in the terms and conditions of the FEMA-State Agreement for the Fire Management Assistance Grant Program.

§ 204.62 Duplication and recovery of assistance.

(a) *Duplication of benefits.* FEMA provides supplementary assistance under the Stafford Act, which generally may not duplicate benefits received by or available to the applicant from insurance, other assistance programs, legal awards, or any other source to address the same purpose. An applicant must notify FEMA of all benefits that it receives or anticipates from other sources for the same purpose, and must seek all such benefits available to them. FEMA will reduce the grant by the amounts available for the same purpose from another source. FEMA may provide assistance under this Part when other benefits are available to an applicant, but the applicant will be liable to FEMA for any duplicative amounts that it receives or has available to it from other sources, and must repay FEMA for such amounts.

(b) *Duplication of programs.* FEMA will not provide assistance under this part for activities for which another Federal agency has more specific or primary authority to provide assistance for the same purpose. FEMA may disallow or recoup amounts that fall within another Federal agency's authority. FEMA may provide assistance under this part, but the applicant must agree to seek assistance from the appropriate Federal agency and to repay FEMA for amounts that are within another Agency's authority.

(c) *Negligence.* FEMA will provide no assistance to an applicant for costs attributable to applicant's own negligence. If the applicant suspects negligence by a third party for causing a condition for which FEMA made assistance available under this Part, the applicant is responsible for taking all reasonable steps to recover all costs attributable to the negligence of the third party. FEMA generally considers such amounts to be duplicated benefits available to the recipient or subrecipient, and will treat them consistent with (a) of this section.

(d) *Intentional acts.* Any person who intentionally causes a condition for which assistance is provided under this part shall be liable to the United States to the extent that FEMA incurs costs attributable to the intentional act or omission that caused the condition. FEMA may provide assistance under this part, but it will be conditioned on an agreement by the applicant to cooperate with FEMA in efforts to recover the cost of the assistance from the liable party. A person shall not be liable under this section as a result of actions the person takes or omits in the course of rendering care or assistance in response to the fire.

[66 FR 57347, Nov. 14, 2001, as amended at 79 FR 63546, Oct. 24, 2014; 82 FR 42, Jan. 3, 2017]

§ 204.63 Allowable costs.

2 CFR part 200, subpart E—Cost Principles establishes general policies for determining allowable costs.

(a) FEMA will reimburse direct costs for the administration of a fire management assistance grant under 2 CFR part 200.

(b) FEMA will reimburse indirect costs for the administration of a fire management assistance grant in compliance with the recipient's approved indirect cost rate under 2 CFR part 200.

(c) Management costs as defined in 44 CFR part 207 do not apply to this section.

[79 FR 76085, Dec. 19, 2014, as amended at 82 FR 42, Jan. 3, 2017]

§ 204.64 Reporting and audit requirements

(a) *Reporting.* Within 90-days of the Performance Period expiration date, the State will submit a final Financial Status Report, which reports all costs incurred within the incident period and all administrative costs incurred within the performance period; and

(b) *Audit.* (1) Audits will be performed, for both the recipient and the subrecipients, under 2 CFR 200.500–200.520.

(2) FEMA may elect to conduct a program-specific Federal audit on the Fire Management Assistance Grant or a subgrant.

[66 FR 57347, Nov. 14, 2001, as amended at 79 FR 63546, Oct. 24, 2014; 79 FR 76085, Dec. 19, 2014; 82 FR 42, Jan. 3, 2017]

PART 205 [RESERVED]

PART 206—FEDERAL DISASTER ASSISTANCE

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AUTHORITY: Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 through 5207; Homeland Security Act of 2002, 6 U.S.C. 101 *et seq.*; Department of Homeland Security Delegation 9001.1; sec. 1105, Pub. L. 113–2, 127 Stat. 43 (42 U.S.C. 5189a note).

SOURCE: 54 FR 11615, Mar. 21, 1989, unless otherwise noted.

Subpart A—General

SOURCE: 55 FR 2288, Jan. 23, 1990, unless otherwise noted.

§ 206.1 Purpose.

(a) *Purpose.* The purpose of this subpart is to prescribe the policies and procedures to be followed in implementing those sections of Public Law 93–288, as amended, delegated to the Administrator, Federal Emergency Management Agency (FEMA). The

rules in this subpart apply to major disasters and emergencies declared by the President on or after November 23, 1988, the date of enactment of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq*.

(b) *Prior regulations*. Prior regulations relating to major disasters and emergencies declared by the President before November 23, 1988 were published in 44 CFR part 205 (see 44 CFR part 205 as contained in the CFR edition revised as of October 1, 1994).

[59 FR 53363, Oct. 24, 1994]

§ 206.2 Definitions.

(a) *General*. The following definitions have general applicability throughout this part:

(1) *The Stafford Act:* The Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93–288, as amended.

(2) *Applicant:* Individuals, families, States and local governments, or private nonprofit organizations who apply for assistance as a result of a declaration of a major disaster or emergency.

(3) [Reserved]

(4) *Concurrent, multiple major disasters:* In considering a request for an advance, the term concurrent multiple major disasters means major disasters which occur within a 12-month period immediately preceding the major disaster for which an advance of the non-Federal share is requested pursuant to section 319 of the Stafford Act.

(5) *Contractor:* Any individual, partnership, corporation, agency, or other entity (other than an organization engaged in the business of insurance) performing work by contract for the Federal Government or a State or local agency.

(6) *Designated area:* Any emergency or major disaster-affected portion of a State which has been determined eligible for Federal assistance.

(7) *Administrator:* The Administrator, FEMA.

(8) *Disaster Recovery Manager (DRM):* The person appointed to exercise the authority of a Regional Administrator for a particular emergency or major disaster.

(9) *Emergency:* Any occasion or instance for which, in the determination of the President, Federal assistance is needed to supplement State and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States.

(10) *Federal agency:* Any department, independent establishment, Government corporation, or other agency of the executive branch of the Federal Government, including the United States Postal Service, but shall not include the American National Red Cross.

(11) *Federal Coordinating Officer (FCO):* The person appointed by the Administrator, or in his absence, the Deputy Administrator, to coordinate Federal assistance in an emergency or a major disaster.

(12) *Governor:* The chief executive of any State or the Acting Governor.

(13) *Governor's Authorized Representative (GAR):* The person empowered by the Governor to execute, on behalf of the State, all necessary documents for disaster assistance.

(14) *Hazard mitigation:* Any cost effective measure which will reduce the potential for damage to a facility from a disaster event.

(15) *Individual assistance:* Supplementary Federal assistance provided under the Stafford Act to individuals and families adversely affected by a major disaster or an emergency. Such assistance may be provided directly by the Federal Government or through State or local governments or disaster relief organizations. For further information, see subparts D, E, and F of these regulations.

(16) *Local government:*

(i) A county, municipality, city, town, township, local public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government;

(ii) An Indian tribe or authorized tribal organization, or Alaska Native village or organization; and

(iii) A rural community, unincorporated town or village, or other public

entity, for which an application for assistance is made by a State or political subdivision of a State.

(17) *Major disaster:* Any natural catastrophe (including any hurricane, tornado, storm, high water, winddriven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought), or, regardless of cause, any fire, flood, or explosion, in any part of the United States, which in the determination of the President causes damage of sufficient severity and magnitude to warrant major disaster assistance under this Act to supplement the efforts and available resources of States, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby.

(18) *Mission assignment:* Work order issued to a Federal agency by the Regional Administrator, Assistant Administrator for the Disaster Operations Directorate, or Administrator, directing completion by that agency of a specified task and citing funding, other managerial controls, and guidance.

(19) *Private nonprofit organization:* Any nongovernmental agency or entity that currently has:

(i) An effective ruling letter from the U.S. Internal Revenue Service granting tax exemption under section 501 (c), (d), or (e) of the Internal Revenue Code of 1954; or

(ii) Satisfactory evidence from the State that the organization or entity is a nonprofit one organized or doing business under State law.

(20) *Public Assistance:* Supplementary Federal assistance provided under the Stafford Act to State and local governments or certain private, nonprofit organizations other than assistance for the direct benefit of individuals and families. For further information, see subparts G and H of this part. Fire Management Assistance Grants under section 420 of the Stafford Act are also considered Public Assistance. See subpart K of this part and part 204 of this chapter.

(21) *Regional Administrator:* An administrator of a regional office of FEMA, or his/her designated representative. As used in these regulations, Regional Administrator also means the Disaster Recovery Manager who has been appointed to exercise the authority of the Regional Administrator for a particular emergency or major disaster.

(22) *State:* Any State of the United States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

(23) *State Coordinating Officer (SCO):* The person appointed by the Governor to act in cooperation with the Federal Coordinating Officer to administer disaster recovery efforts.

(24) *State emergency plan:* As used in section 401 or section 501 of the Stafford Act means that State plan which is designated specifically for State-level response to emergencies or major disasters and which sets forth actions to be taken by the State and local governments, including those for implementing Federal disaster assistance.

(25) *Temporary housing:* Temporary accommodations provided by the Federal Government to individuals or families whose homes are made unlivable by an emergency or a major disaster.

(26) *United States:* The 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

(27) *Voluntary organization:* Any chartered or otherwise duly recognized tax-exempt local, State, or national organization or group which has provided or may provide needed services to the States, local governments, or individuals in coping with an emergency or a major disaster.

(b) *Additional definitions.* Definitions which apply to individual subparts are found in those subparts.

[54 FR 11615, Mar. 21, 1989, as amended at 63 FR 17110, Apr. 8, 1998; 66 FR 57352, 57353, Nov. 14, 2001; 69 FR 24083, May 3, 2004; 74 FR 15346, Apr. 3, 2009]

§ 206.3 Policy.

It is the policy of FEMA to provide an orderly and continuing means of assistance by the Federal Government to State and local governments in carrying out their responsibilities to alleviate the suffering and damage that result from major disasters and emergencies by:

(a) Providing Federal assistance programs for public and private losses and needs sustained in disasters;

(b) Encouraging the development of comprehensive disaster preparedness and assistance plans, programs, capabilities, and organizations by the States and local governments;

(c) Achieving greater coordination and responsiveness of disaster preparedness and relief programs;

(d) Encouraging individuals, States, and local governments to obtain insurance coverage and thereby reduce their dependence on governmental assistance; and

(e) Encouraging hazard mitigation measures, such as development of land-use and construction regulations, floodplain management, protection of wetlands, and environmental planning, to reduce losses from disasters.

§ 206.4 State emergency plans.

The State shall set forth in its emergency plan all responsibilities and actions specified in the Stafford Act and these regulations that are required of the State and its political subdivisions to prepare for and respond to major disasters and emergencies and to facilitate the delivery of Federal disaster assistance. Although not mandatory, prior to the adoption of the final plan, the State is encouraged to circulate the plan to local governments for review and comment.

[55 FR 2288, Jan. 23, 1990, 55 FR 5458, Feb. 15, 1990]

§ 206.5 Assistance by other Federal agencies.

(a) In any declared major disaster, the Administrator, Assistant Administrator for the Disaster Operations Directorate, or the Regional Administrator may direct any Federal agency to utilize its authorities and the resources granted to it under Federal law (including personnel, equipment, supplies, facilities, and managerial, technical, and advisory services) to support State and local assistance efforts.

(b) In any declared emergency, the Administrator, Assistant Administrator for the Disaster Operations Directorate, or the Regional Administrator may direct any Federal agency to utilize its authorities and the resources granted to it under Federal law (including personnel, equipment, supplies, facilities, and managerial, technical, and advisory services) to support emergency efforts by State and local governments to save lives; protect property, public health and safety; and lessen or avert the threat of a catastrophe.

(c) In any declared major disaster or emergency, the Administrator, Assistant Administrator for the Disaster Operations Directorate, or the Regional Administrator may direct any Federal agency to provide emergency assistance necessary to save lives and to protect property, public health, and safety by:

(1) Utilizing, lending, or donating to State and local governments Federal equipment, supplies, facilities, personnel, and other resources, other than the extension of credit, for use or distribution by such governments in accordance with the purposes of this Act;

(2) Distributing medicine, food, and other consumable supplies; or

(3) Performing work or services to provide emergency assistance authorized in the Stafford Act.

(d) Disaster assistance by other Federal agencies is subject to the coordination of the FCO. Federal agencies shall provide any reports or information about disaster assistance rendered under the provisions of these regulations or authorities independent of the Stafford Act, that the FCO or Regional Administrator considers necessary and requests from the agencies.

(e) Assistance furnished by any Federal agency under paragraphs (a), (b), or (c) of this section is subject to the criteria provided by the Assistant Administrator for the Disaster Operations Directorate under these regulations.

(f) Assistance under paragraphs (a), (b), or (c) of this section, when directed by the Administrator, Assistant Administrator for the Disaster Operations Directorate, or the Regional Administrator, does not apply to nor shall it affect the authority of any Federal agency to provide disaster assistance independent of the Stafford Act.

(g) In carrying out the purposes of the Stafford Act, any Federal agency may accept and utilize, with the consent of the State or local government,

the services, personnel, materials, and facilities of any State or local government, agency, office, or employee. Such utilization shall not make such services, materials, or facilities Federal in nature nor make the State or local government or agency an arm or agent of the Federal Government.

(h) Any Federal agency charged with the administration of a Federal assistance program may, if so requested by the applicant State or local authorities, modify or waive, for a major disaster, such administrative conditions for assistance as would otherwise prevent the giving of assistance under such programs if the inability to meet such conditions is a result of the major disaster.

§ 206.6 Donation or loan of Federal equipment and supplies.

(a) In any major disaster or emergency, the Administrator, Assistant Administrator for the Disaster Operations Directorate, or the Regional Administrator may direct Federal agencies to donate or loan their equipment and supplies to State and local governments for use and distribution by them for the purposes of the Stafford Act.

(b) A donation or loan may include equipment and supplies determined under applicable laws and regulations to be surplus to the needs and responsibilities of the Federal Government. The State shall certify that the surplus property is usable and necessary for current disaster purposes in order to receive a donation or loan. Such a donation or loan is made in accordance with procedures prescribed by the General Services Administration.

§ 206.7 Implementation of assistance from other Federal agencies.

All directives, known as mission assignments, to other Federal agencies shall be in writing, or shall be confirmed in writing if made orally, and shall identify the specific task to be performed and the requirements or criteria to be followed. If the Federal agency is to be reimbursed, the letter will also contain a dollar amount which is not to be exceeded in accomplishing the task without prior approval of the issuing official.

§ 206.8 Reimbursement of other Federal agencies.

(a) Assistance furnished under § 206.5 (a) or (b) of this subpart may be provided with or without compensation as considered appropriate by the Administrator, Assistant Administrator for the Disaster Assistance Directorate, or the Regional Administrator or Regional Director.

(b) The Administrator, Assistant Administrator for the Disaster Assistance Directorate, or the Regional Administrator or the Regional Director may not approve reimbursement of costs incurred while performing work pursuant to disaster assistance authorities independent of the Stafford Act.

(c) *Expenditures eligible for reimbursement.* The Administrator, Assistant Administrator for the Disaster Assistance Directorate, or the Regional Administrator or the Regional Director may approve reimbursement of the following costs which are incurred in providing requested assistance.

(1) Overtime, travel, and per diem of permanent Federal agency personnel.

(2) Wages, travel, and per diem of temporary Federal agency personnel assigned solely to performance of services directed by the Administrator, Assistant Administrator for the Disaster Assistance Directorate, or the Regional Administrator or the Regional Director in the major disaster or emergency area designated by the Regional Director.

(3) Travel and per diem of Federal military personnel assigned solely to the performance of services directed by the Administrator, Assistant Administrator for the Disaster Assistance Directorate, or the Regional Administrator or the Regional Director in the major disaster or emergency area designated by the Regional Director.

(4) Cost of work, services, and materials procured under contract for the purposes of providing assistance directed by the Administrator, Assistant Administrator for the Disaster Assistance Directorate, or the Regional Administrator or the Regional Director.

(5) Cost of materials, equipment, and supplies (including transportation, repair, and maintenance) from regular stocks used in providing directed assistance.

(6) All costs incurred which are paid from trust, revolving, or other funds, and whose reimbursement is required by law.

(7) Other costs submitted by an agency with written justification or otherwise agreed to in writing by the Administrator, Assistant Administrator for the Disaster Assistance Directorate, or the Regional Administrator or the Regional Director and the agency.

(d) *Procedures for reimbursement.* Federal agencies performing work under a mission assignment will submit requests for reimbursement, as follows:

(1) Federal agencies may submit requests for reimbursement of amounts greater than $1,000 at any time. Requests for lesser amounts may be submitted only quarterly. An agency shall submit a final accounting of expenditures after completion of the agency's work under each directive for assistance. The time limit and method for submission of reimbursement requests will be stipulated in the mission assignment letter.

(2) An agency shall document its request for reimbursement with specific details on personnel services, travel, and all other expenses by object class as specified in OMB Circular A–12 and by any other subobject class used in the agency's accounting system. Where contracts constitute a significant portion of the billings, the agency shall provide a listing of individual contracts and their associated costs.

(3) Reimbursement requests shall cite the specific mission assignment under which the work was performed, and the major disaster or emergency identification number. Requests for reimbursement of costs incurred under more than one mission assignment may not be combined for billing purposes.

(4) Unless otherwise agreed, an agency shall direct all requests for reimbursement to the Regional Administrator of the region in which the costs were incurred.

(5) A Federal agency requesting reimbursement shall retain all financial records, supporting documents, statistical records, and other records pertinent to the provision of services or use of resources by that agency. These materials shall be accessible to duly authorized representatives of FEMA and the U.S. Comptroller General, for the purpose of making audits, excerpts, and transcripts, for a period of 3 years starting from the date of submission of the final billing.

§ 206.9 Nonliability.

The Federal Government shall not be liable for any claim based upon the exercise or performance of, or the failure to exercise or perform a discretionary function or duty on the part of a Federal agency or an employee of the Federal Government in carrying out the provisions of the Stafford Act.

§ 206.10 Use of local firms and individuals.

In the expenditure of Federal funds for debris removal, distribution of supplies, reconstruction, and other major disaster or emergency assistance activities which may be carried out by contract or agreement with private organizations, firms, or individuals, preference shall be given, to the extent feasible and practicable, to those organizations, firms, and individuals residing or doing business primarily in the area affected by such major disaster or emergency. This shall not be considered to restrict the use of Department of Defense resources in the provision of major disaster assistance under the Stafford Act.

§ 206.11 Nondiscrimination in disaster assistance.

(a) Federal financial assistance to the States or their political subdivisions is conditioned on full compliance with 44 CFR part 7, Nondiscrimination in Federally-Assisted Programs.

(b) All personnel carrying out Federal major disaster or emergency assistance functions, including the distribution of supplies, the processing of the applications, and other relief and assistance activities, shall perform their work in an equitable and impartial manner, without discrimination on the grounds of race, color, religion, nationality, sex, age, or economic status.

(c) As a condition of participation in the distribution of assistance or supplies under the Stafford Act, or of receiving assistance under the Stafford

Act, government bodies and other organizations shall provide a written assurance of their intent to comply with regulations relating to nondiscrimination.

(d) The agency shall make available to employees, applicants, participants, beneficiaries, and other interested parties such information regarding the provisions of this regulation and its applicability to the programs or activities conducted by the agency, and make such information available to them in such manner as the head of the agency finds necessary to apprise such persons of the protections against discrimination assured them by the Act and this regulation.

§ 206.12 Use and coordination of relief organizations.

(a) In providing relief and assistance under the Stafford Act, the FCO or Regional Administrator may utilize, with their consent, the personnel and facilities of the American National Red Cross, the Salvation Army, the Mennonite Disaster Service, and other voluntary organizations in the distribution of medicine, food, supplies, or other items, and in the restoration, rehabilitation, or reconstruction of community services and essential facilities, whenever the FCO or Regional Administrator finds that such utilization is necessary.

(b) The Administrator is authorized to enter into agreements with the American Red Cross, The Salvation Army, the Mennonite Disaster Service, and other voluntary organizations engaged in providing relief during and after a major disaster or emergency. Any agreement shall include provisions assuring that use of Federal facilities, supplies, and services will be in compliance with §206.11, Nondiscrimination in Disaster Assistance, and §206.191, Duplication of Benefits, of these regulations and such other regulations as the Administrator may issue. The FCO may coordinate the disaster relief activities of the voluntary organizations which agree to operate under his/her direction.

(c) Nothing contained in this section shall be construed to limit or in any way affect the responsibilities of the American National Red Cross as stated in Public Law 58–4.

§ 206.13 Standards and reviews.

(a) The Administrator shall establish program standards and assess the efficiency and effectiveness of programs administered under the Stafford Act by conducting annual reviews of the activities of Federal agencies and State and local governments involved in major disaster or emergency response efforts.

(b) In carrying out this provision, the Administrator may direct Federal agencies to submit reports relating to their disaster assistance activities. The Administrator may request similar reports from the States relating to these activities on the part of State and local governments. Additionally, the Administrator may conduct independent investigations, studies, and evaluations as necessary to complete the reviews.

[55 FR 2288, Jan. 23, 1990; 55 FR 5458, Feb. 15, 1990]

§ 206.14 Criminal and civil penalties.

(a) *Misuse of funds.* Any person who knowingly misapplies the proceeds of a loan or other cash benefit obtained under the Stafford Act shall be fined an amount equal to one and one-half times the misapplied amount of the proceeds or cash benefit.

(b) *Civil enforcement.* Whenever it appears that any person has violated or is about to violate any provision of the Stafford Act, including any civil penalty imposed under the Stafford Act, the Attorney General may bring a civil action for such relief as may be appropriate. Such action may be brought in an appropriate United States district court.

(c) *Referral to Attorney General.* The Office of Chief Counsel shall expeditiously refer to the Attorney General for appropriate action any evidence developed in the performance of functions under the Stafford Act that may warrant consideration for criminal prosecution.

(d) *Civil penalty*. Any individual who knowingly violates any order or regulation shall be subject to a civil penalty of not more than $5,500 for each violation.

[55 FR 2288, Jan. 23, 1990, as amended at 74 FR 15346, Apr. 3, 2009; 74 FR 58850, Nov. 16, 2009]

§ 206.15 Recovery of assistance.

(a) *Party liable*. Any person who intentionally causes a condition for which Federal assistance is provided under this Act or under any other Federal law as a result of a declaration of a major disaster or emergency under this Act shall be liable to the United States for the reasonable costs incurred by the United States in responding to such disaster or emergency to the extent that such costs are attributable to the intentional act or omission of such person which caused such condition. Such action shall be brought in an appropriate United States District Court.

(b) *Rendering of care*. A person shall not be liable under this section for costs incurred by the United States as a result of actions taken or omitted by such person in the course of rendering care or assistance in response to a major disaster or emergency.

§ 206.16 Audit and investigations.

(a) Subject to the provisions of chapter 75 of title 31, United States Code, and 2 CFR parts 200 and 3002, relating to requirements for single audits, the Administrator, the Assistant Administrator for the Disaster Operations Directorate, or the Regional Administrator shall conduct audits and investigations as necessary to assure compliance with the Stafford Act, and in connection therewith may question such persons as may be necessary to carry out such audits and investigations.

(b) For purposes of audits and investigations under this section, FEMA or State auditors, the Governor's Authorized Representative, the Administrator, the Regional Administrator, the Assistant Administrator for the Disaster Assistance Directorate, the DHS Inspector General, and the Comptroller General of the United States, or their duly authorized representatives, may inspect any books, documents, papers, and records of any person relating to any activity undertaken or funded under the Stafford Act.

[55 FR 2288, Jan. 23, 1990, as amended at 74 FR 15346, Apr. 3, 2009; 79 FR 76085, Dec. 19, 2014]

§ 206.17 Effective date.

These regulations are effective for all major disasters or emergencies declared on or after November 23, 1988.

§§ 206.18–206.30 [Reserved]

Subpart B—The Declaration Process

SOURCE: 55 FR 2292, Jan. 23, 1990, unless otherwise noted.

§ 206.31 Purpose.

The purpose of this subpart is to describe the process leading to a Presidential declaration of a major disaster or an emergency and the actions triggered by such a declaration.

§ 206.32 Definitions.

All definitions in the Stafford Act and in § 206.2 apply. In addition, the following definitions apply:

(a) *Appeal:* A request for reconsideration of a determination on any action related to Federal assistance under the Stafford Act and these regulations. Specific procedures for appeals are contained in the relevant subparts of these regulations.

(b) *Commitment:* A certification by the Governor that the State and local governments will expend a reasonable amount of funds to alleviate the effects of the major disaster or emergency, for which no Federal reimbursement will be requested.

(c) *Disaster Application Center:* A center established in a centralized location within the disaster area for individuals, families, or businesses to apply for disaster aid.

(d) *FEMA-State Agreement:* A formal legal document stating the understandings, commitments, and binding conditions for assistance applicable as the result of the major disaster or emergency declared by the President.

(e) *Incident:* Any condition which meets the definition of major disaster or emergency as set forth in §206.2 which causes damage or hardship that may result in a Presidential declaration of a major disaster or an emergency.

(f) *Incident period:* The time interval during which the disaster-causing incident occurs. No Federal assistance under the Act shall be approved unless the damage or hardship to be alleviated resulted from the disaster-causing incident which took place during the incident period or was in anticipation of that incident. The incident period will be established by FEMA in the FEMA-State Agreement and published in the FEDERAL REGISTER.

§ 206.33 Preliminary damage assessment.

The preliminary damage assessment (PDA) process is a mechanism used to determine the impact and magnitude of damage and the resulting unmet needs of individuals, businesses, the public sector, and the community as a whole. Information collected is used by the State as a basis for the Governor's request, and by FEMA to document the recommendation made to the President in response to the Governor's request. It is in the best interest of all parties to combine State and Federal personnel resources by performing a joint PDA prior to the initiation of a Governor's request, as follows.

(a) *Preassessment by the State.* When an incident occurs, or is imminent, which the State official responsible for disaster operations determines may be beyond the State and local government capabilities to respond, the State will request the Regional Administrator to perform a joint FEMA-State preliminary damage assessment. It is not anticipated that all occurrences will result in the requirement for assistance; therefore, the State will be expected to verify their initial information, in some manner, before requesting this support.

(b) *Damage assessment teams.* Damage assessment teams will be composed of at least one representative of the Federal Government and one representative of the State. A local government representative, familiar with the extent and location of damage in his/her community, should also be included, if possible. Other State and Federal agencies, and voluntary relief organizations may also be asked to participate, as needed. It is the State's responsibility to coordinate State and local participation in the PDA and to ensure that the participants receive timely notification concerning the schedule. A FEMA official will brief team members on damage criteria, the kind of information to be collected for the particular incident, and reporting requirements.

(c) *Review of findings.* At the close of the PDA, FEMA will consult with State officials to discuss findings and reconcile any differences.

(d) *Exceptions.* The requirement for a joint PDA may be waived for those incidents of unusual severity and magnitude that do not require field damage assessments to determine the need for supplemental Federal assistance under the Act, or in such other instances determined by the Regional Administrator upon consultation with the State. It may be necessary, however, to conduct an assessment to determine unmet needs for managerial response purposes.

§ 206.34 Request for utilization of Department of Defense (DOD) resources.

(a) *General.* During the immediate aftermath of an incident which may ultimately qualify for a Presidential declaration of a major disaster or emergency, when threats to life and property are present which cannot be effectively dealt with by the State or local governments, the Assistant Administrator for the Disaster Assistance Directorate may direct DOD to utilize DOD personnel and equipment for removal of debris and wreckage and temporary restoration of essential public facilities and services.

(b) *Request process.* The Governor of a State, or the Acting Governor in his/her absence, may request such DOD assistance. The Governor should submit the request to the Assistant Administrator for the Disaster Assistance Directorate through the appropriate Regional Administrator to ensure prompt acknowledgment and processing. The

request must be submitted within 48 hours of the occurrence of the incident. Requests made after that time may still be considered if information is submitted indicating why the request for assistance could not be made during the initial 48 hours. The request shall include:

(1) Information describing the types and amount of DOD emergency assistance being requested;

(2) Confirmation that the Governor has taken appropriate action under State law and directed the execution of the State emergency plan;

(3) A finding that the situation is of such severity and magnitude that effective response is beyond the capabilities of the State and affected local governments and that Federal assistance is necessary for the preservation of life and property;

(4) A certification by the Governor that the State and local government will reimburse FEMA for the non-Federal share of the cost of such work; and

(5) An agreement:

(i) To provide all lands, easements and rights-of-way necessary to accomplish the approved work without cost to the United States;

(ii) To hold and save the United States free from damages due to the requested work, and to indemnify the Federal government against any claims arising from such work; and

(iii) To assist DOD in all support and local jurisdictional matters.

(c) *Processing the request.* Upon receipt of the request, the Regional Administrator shall gather adequate information to support a recommendation and forward it to the Assistant Administrator for the Disaster Assistance Directorate. If the Assistant Administrator for the Disaster Assistance Directorate determines that such work is essential to save lives and protect property, he/she will issue a mission assignment to DOD authorizing direct Federal assistance to the extent deemed appropriate.

(d) *Implementation of assistance.* The performance of emergency work may not exceed a period of 10 days from the date of the mission assignment.

(e) *Limits.* Generally, no work shall be approved under this section which falls within the statutory authority of DOD or another Federal agency. However, where there are significant unmet needs of sufficient severity and magnitude, not addressed by other assistance, which could appropriately be addressed under this section of the Stafford Act, the involvement of other Federal agencies would not preclude the authorization of DOD assistance by the Assistant Administrator for the Disaster Assistance Directorate.

(f) *Federal share.* The Federal share of assistance under this section shall be not less than 75 percent of the cost of eligible work.

(g) *Project management.* DOD shall ensure that the work is completed in accordance with the approved scope of work, costs, and time limitations in the mission assignment. DOD shall also keep the Regional Administrator and the State advised of work progress and other project developments. It is the responsibility of DOD to ensure compliance with applicable Federal, State and local legal requirements. A final report will be submitted to the Regional Administrator upon termination of all direct Federal assistance work. Final reports shall be signed by a representative of DOD and the State. Once the final eligible cost is determined, DOD will request reimbursement from FEMA and FEMA will submit a bill to the State for the non-Federal share of the mission assignment.

(h) *Reimbursement of DOD.* Reimbursement will be made in accordance with § 206.8 of these regulations.

§ 206.35 Requests for emergency declarations.

(a) When an incident occurs or threatens to occur in a State, which would not qualify under the definition of a major disaster, the Governor of a State, or the Acting Governor in his/her absence, may request that the President declare an emergency. The Governor should submit the request to the President through the appropriate Regional Administrator to ensure prompt acknowledgment and processing. The request must be submitted within 5 days after the need for assistance under title V becomes apparent, but no longer than 30 days after the occurrence of the incident, in order to be

considered. The period may be extended by the Assistant Administrator for the Disaster Assistance Directorate provided that a written request for such extension is made by the Governor, or Acting Governor, during the 30-day period immediately following the incident. The extension request must stipulate the reason for the delay.

(b) The basis for the Governor's request must be the finding that the situation:

(1) Is of such severity and magnitude that effective response is beyond the capability of the State and the affected local government(s); and

(2) Requires supplementary Federal emergency assistance to save lives and to protect property, public health and safety, or to lessen or avert the threat of a disaster.

(c) In addition to the above findings, the complete request shall include:

(1) Confirmation that the Governor has taken appropriate action under State law and directed the execution of the State emergency plan;

(2) Information describing the State and local efforts and resources which have been or will be used to alleviate the emergency;

(3) Information describing other Federal agency efforts and resources which have been or will be used in responding to this incident; and

(4) Identification of the type and extent of additional Federal aid required.

(d) *Modified declaration for Federal emergencies.* The requirement for a Governor's request under paragraph (a) of this section can be waived when an emergency exists for which the primary responsibility rests in the Federal government because the emergency involves a subject area for which, under the Constitution or laws of the United States, the Federal government exercises exclusive or preeminent responsibility and authority. Any party may bring the existence of such a situation to the attention of the FEMA Regional Administrator. Any recommendation for a Presidential declaration of emergency in the absence of a Governor's request must be initiated by the Regional Administrator or transmitted through the Regional Administrator by another Federal agency. In determining that such an emergency exists, the Assistant Administrator for the Disaster Assistance Directorate or Regional Administrator shall consult the Governor of the affected State, if practicable.

(e) *Other authorities.* It is not intended for an emergency declaration to preempt other Federal agency authorities and/or established plans and response mechanisms in place prior to the enactment of the Stafford Act.

§ 206.36 Requests for major disaster declarations.

(a) When a catastrophe occurs in a State, the Governor of a State, or the Acting Governor in his/her absence, may request a major disaster declaration. The Governor should submit the request to the President through the appropriate Regional Administrator to ensure prompt acknowledgment and processing. The request must be submitted within 30 days of the occurrence of the incident in order to be considered. The 30-day period may be extended by the Assistant Administrator for the Disaster Assistance Directorate, provided that a written request for an extension is submitted by the Governor, or Acting Governor, during this 30-day period. The extension request will stipulate reasons for the delay.

(b) The basis for the request shall be a finding that:

(1) The situation is of such severity and magnitude that effective response is beyond the capabilities of the State and affected local governments; and

(2) Federal assistance under the Act is necessary to supplement the efforts and available resources of the State, local governments, disaster relief organizations, and compensation by insurance for disaster-related losses.

(c) In addition to the above findings, the complete request shall include:

(1) Confirmation that the Governor has taken appropriate action under State law and directed the execution of the State emergency plan;

(2) An estimate of the amount and severity of damages and losses stating the impact of the disaster on the public and private sector;

(3) Information describing the nature and amount of State and local resources which have been or will be committed to alleviate the results of the disaster;

(4) Preliminary estimates of the types and amount of supplementary Federal disaster assistance needed under the Stafford Act; and

(5) Certification by the Governor that State and local government obligations and expenditures for the current disaster will comply with all applicable cost sharing requirements of the Stafford Act.

(d) For those catastrophes of unusual severity and magnitude when field damage assessments are not necessary to determine the requirement for supplemental Federal assistance, the Governor or Acting Governor may send an abbreviated written request through the Regional Administrator for a declaration of a major disaster. This may be transmitted in the most expeditious manner available. In the event the FEMA Regional Office is severely impacted by the catastrophe, the request may be addressed to the Administrator of FEMA. The request must indicate a finding in accordance with §206.36(b), and must include as a minimum the information requested by §206.36 (c)(1), (c)(3), and (c)(5). Upon receipt of the request, FEMA shall expedite the processing of reports and recommendations to the President. Notification to the Governor of the Presidential declaration shall be in accordance with 44 CFR 206.39. The Assistant Administrator for the Disaster Assistance Directorateshall assure that documentation of the declaration is later assembled to comply fully with these regulations.

§ 206.37 Processing requests for declarations of a major disaster or emergency.

(a) *Acknowledgment.* The Regional Administrator shall provide written acknowledgment of the Governor's request.

(b) *Regional summary.* Based on information obtained by FEMA/State preliminary damage assessments of the affected area(s) and consultations with appropriate State and Federal officials and other interested parties, the Regional Administrator shall promptly prepare a summary of the PDA findings. The data will be analyzed and submitted with a recommendation to the Assistant Administrator for the Disaster Assistance Directorate. The Regional Analysis shall include a discussion of State and local resources and capabilities, and other assistance available to meet the major disaster or emergency-related needs.

(c) *FEMA recommendation.* Based on all available information, the Administrator shall formulate a recommendation which shall be forwarded to the President with the Governor's request.

(1) *Major disaster recommendation.* The recommendation will be based on a finding that the situation is or is not of such severity and magnitude as to be beyond the capabilities of the State and its local governments. It will also contain a determination of whether or not supplemental Federal assistance under the Stafford Act is necessary and appropriate. In developing a recommendation, FEMA will consider such factors as the amount and type of damages; the impact of damages on affected individuals, the State, and local governments; the available resources of the State and local governments, and other disaster relief organizations; the extent and type of insurance in effect to cover losses; assistance available from other Federal programs and other sources; imminent threats to public health and safety; recent disaster history in the State; hazard mitigation measures taken by the State or local governments, especially implementation of measures required as a result of previous major disaster declarations; and other factors pertinent to a given incident.

(2) *Emergency recommendation.* The recommendation will be based on a report which will indicate whether or not Federal emergency assistance under section 502 of the Stafford Act is necessary to supplement State and local efforts to save lives, protect property and public health and safety, or to lessen or avert the threat of a catastrophe. Only after it has been determined that all other resources and authorities available to meet the crisis are inadequate, and that assistance provided in section 502 of the Stafford Act would be

appropriate, will FEMA recommend an emergency declaration to the President.

(d) *Modified Federal emergency recommendation.* The recommendation will be based on a report which will indicate that an emergency does or does not exist for which assistance under section 502 of the Stafford Act would be appropriate. An emergency declaration will not be recommended in situations where the authority to respond or coordinate is within the jurisdiction of one or more Federal agencies without a Presidential declaration. However, where there are significant unmet needs of sufficient severity and magnitude, not addressed by other assistance, which could appropriately be addressed under the Stafford Act, the involvement of other Federal agencies would not preclude a declaration of an emergency under the Act.

§ 206.38 Presidential determination.

(a) The Governor's request for a major disaster declaration may result in either a Presidential declaration of a major disaster or an emergency, or denial of the Governor's request.

(b) The Governor's request for an emergency declaration may result only in a Presidential declaration of an emergency, or denial of the Governor's request.

[55 FR 2292, Jan. 23, 1990; 55 FR 5458, Feb. 15, 1990]

§ 206.39 Notification.

(a) The Governor will be promptly notified by the Administrator or his/her designee of a declaration by the President that an emergency or a major disaster exists. FEMA also will notify other Federal agencies and other interested parties.

(b) The Governor will be promptly notified by the Administrator or his/her designee of a determination that the Governor's request does not justify the use of the authorities of the Stafford Act.

(c) Following a major disaster or emergency declaration, the Regional Administrator or the Assistant Administrator for the Disaster Assistance Directorate will promptly notify the Governor of the designations of assistance and areas eligible for such assistance.

§ 206.40 Designation of affected areas and eligible assistance.

(a) *Eligible assistance.* The Assistant Administrator for the Disaster Assistance Directorate has been delegated authority to determine and designate the types of assistance to be made available. The initial designations will usually be announced in the declaration. Determinations by the Assistant Administrator for the Disaster Assistance Directorate of the types and extent of FEMA disaster assistance to be provided are based upon findings whether the damage involved and its effects are of such severity and magnitude as to be beyond the response capabilities of the State, the affected local governments, and other potential recipients of supplementary Federal assistance. The Assistant Administrator for the Disaster Assistance Directorate may authorize all, or only particular types of, supplementary Federal assistance requested by the Governor.

(b) *Areas eligible to receive assistance.* The Assistant Administrator for the Disaster Assistance Directorate also has been delegated authority to designate the affected areas eligible for supplementary Federal assistance under the Stafford Act. These designations shall be published in the FEDERAL REGISTER. An affected area designated by the Assistant Administrator for the Disaster Assistance Directorate includes all local government jurisdictions within its boundaries. The Assistant Administrator for the Disaster Assistance Directorate may, based upon damage assessments in any given area, designate all or only some of the areas requested by the Governor for supplementary Federal assistance.

(c) *Requests for additional designations after a declaration.* After a declaration by the President, the Governor, or the GAR, may request that additional areas or types of supplementary Federal assistance be authorized by the Assistant Administrator for the Disaster Assistance Directorate. Such requests shall be accompanied by appropriate verified assessments and commitments by State and local governments to demonstrate that the requested designations are justified and that the unmet needs are beyond State

and local capabilities without supplementary Federal assistance. Additional assistance or areas added to the declaration will be published in the FEDERAL REGISTER.

(d) *Time limits to request.* In order to be considered, all supplemental requests under paragraph (c) of this section must be submitted within 30 days from the termination date of the incident, or 30 days after the declaration, whichever is later. The 30-day period may be extended by the Assistant Administrator for the Disaster Assistance Directorate provided that a written request is made by the appropriate State official during this 30-day period. The request must include justification of the State's inability to meet the deadline.

[55 FR 2292, Jan. 23, 1990, as amended at 74 FR 60213, Nov. 20, 2009]

§ 206.41 Appointment of disaster officials.

(a) *Federal Coordinating Officer.* Upon a declaration of a major disaster or of an emergency by the President, the Administrator or Deputy Administrator shall appoint an FCO who shall initiate action immediately to assure that Federal assistance is provided in accordance with the declaration, applicable laws, regulations, and the FEMA-State Agreement.

(b) *Disaster Recovery Manager.* The Regional Administrator shall designate a DRM to exercise all the authority of the Regional Administrator in a major disaster or an emergency.

(c) *State Coordinating Officer.* Upon a declaration of a major disaster or of an emergency, the Governor of the affected State shall designate an SCO who shall coordinate State and local disaster assistance efforts with those of the Federal Government.

(d) *Governor's Authorized Representative.* In the FEMA-State Agreement, the Governor shall designate the GAR, who shall administer Federal disaster assistance programs on behalf of the State and local governments and other grant or loan recipients. The GAR is responsible for the State compliance with the FEMA-State Agreement.

§ 206.42 Responsibilities of coordinating officers.

(a) Following a declaration of a major disaster or an emergency, the FCO shall:

(1) Make an initial appraisal of the types of assistance most urgently needed;

(2) In coordination with the SCO, establish field offices and Disaster Application Centers as necessary to coordinate and monitor assistance programs, disseminate information, accept applications, and counsel individuals, families and businesses concerning available assistance;

(3) Coordinate the administration of relief, including activities of State and local governments, activities of Federal agencies, and those of the American Red Cross, the Salvation Army, the Mennonite Disaster Service, and other voluntary relief organizations which agree to operate under the FCO's advice and direction;

(4) Undertake appropriate action to make certain that all of the Federal agencies are carrying out their appropriate disaster assistance roles under their own legislative authorities and operational policies; and

(5) Take other action, consistent with the provisions of the Stafford Act, as necessary to assist citizens and public officials in promptly obtaining assistance to which they are entitled.

(b) The SCO coordinates State and local disaster assistance efforts with those of the Federal Government working closely with the FCO. The SCO is the principal point of contact regarding coordination of State and local disaster relief activities, and implementation of the State emergency plan. The functions, responsibilities, and authorities of the SCO are set forth in the State emergency plan. It is the responsibility of the SCO to ensure that all affected local jurisdictions are informed of the declaration, the types of assistance authorized, and the areas eligible to receive such assistance.

§ 206.43 Emergency support teams.

The Federal Coordinating Officer may activate emergency support teams, composed of Federal program and support personnel, to be deployed

into an area affected by a major disaster or emergency. These emergency support teams assist the FCO in carrying out his/her responsibilities under the Stafford Act and these regulations. Any Federal agency can be directed to detail personnel within the agency's administrative jurisdiction to temporary duty with the FCO. Each detail shall be without loss of seniority, pay, or other employee status.

§ 206.44 FEMA-State Agreements.

(a) *General.* Upon the declaration of a major disaster or an emergency, the Governor, acting for the State, and the FEMA Regional Administrator or his/her designee, acting for the Federal Government, shall execute a FEMA-State Agreement. The FEMA-State Agreement states the understandings, commitments, and conditions for assistance under which FEMA disaster assistance shall be provided. This Agreement imposes binding obligations on FEMA, States, their local governments, and private nonprofit organizations within the States in the form of conditions for assistance which are legally enforceable. No FEMA funding will be authorized or provided to any grantees or other recipients, nor will direct Federal assistance be authorized by mission assignment, until such time as this Agreement for the Presidential declaration has been signed, except where it is deemed necessary by the Regional Administrator to begin the process of providing essential emergency services or housing assistance under the Individuals and Households Program.

(b) *Terms and conditions.* This Agreement describes the incident and the incident period for which assistance will be made available, the type and extent of the Federal assistance to be made available, and contains the commitment of the State and local government(s) with respect to the amount of funds to be expended in alleviating damage and suffering caused by the major disaster or emergency. The Agreement also contains such other terms and conditions consistent with the declaration and the provisions of applicable laws, Executive Order and regulations.

(c) *Provisions for modification.* In the event that the conditions stipulated in the original Agreement are changed or modified, such changes will be reflected in properly executed amendments to the Agreement, which may be signed by the GAR and the Regional Administrator or his/her designee for the specified major disaster or emergency. Amendments most often occur to close or amend the incident period, to add forms of assistance not originally authorized, or to designate additional areas eligible for assistance.

(d) In a modified declaration for a Federal emergency, a FEMA-State Agreement may or may not be required based on the type of assistance being provided.

[55 FR 2292, Jan. 23, 1990, as amended at 67 FR 61460, Sept. 30, 2002]

§ 206.45 Loans of non-Federal share.

(a) *Conditions for making loans.* At the request of the Governor, the Assistant Administrator for the Disaster Assistance Directorate together with the Chief Financial Officer may lend or advance to a State, either for its own use or for the use of public or private nonprofit applicants for disaster assistance under the Stafford Act, the portion of assistance for which the State or other eligible disaster assistance applicant is responsible under the cost-sharing provisions of the Stafford Act in any case in which:

(1) The State or other eligible disaster assistance applicant is unable to assume their financial responsibility under such cost sharing provisions:

(i) As a result of concurrent, multiple major disasters in a jurisdiction, or

(ii) After incurring extraordinary costs as a result of a particular disaster;

(2) The damages caused by such disasters or disaster are so overwhelming and severe that it is not possible for the State or other eligible disaster assistance applicant to immediately assume their financial responsibility under the Act; and

(3) The State and the other eligible disaster applicants are not delinquent in payment of any debts to FEMA incurred as a result of Presidentially declared major disasters or emergencies.

(b) *Repayment of loans.* Any loan made to a State under paragraph (a) of this section must be repaid to the United States. The Governor must include a repayment schedule as part of the request for advance.

(1) The State shall repay the loan (the principal disbursed plus interest) in accordance with the repayment schedule approved by the Assistant Administrator for the Disaster Assistance Directorate together with the Chief Financial Officer.

(2) If the State fails to make payments in accordance with the approved repayment schedule, FEMA will offset delinquent amounts against the current, prior, or any subsequent disasters, or monies due the State under other FEMA programs, in accordance with the established Claims Collection procedures.

(c) *Interest.* Loans or advances under paragraph (a) of this section shall bear interest at a rate determined by the Secretary of the Treasury, taking into consideration the current market yields on outstanding marketable obligations of the United States with remaining periods to maturity comparable to the reimbursement period of the loan or advance. Simple interest will be computed from the date of the disbursement of each drawdown of the loan/advance by the State based on 365 days/year.

§ 206.46 Appeals.

(a) *Denial of declaration request.* When a request for a major disaster declaration or for any emergency declaration is denied, the Governor may appeal the decision. An appeal must be made within 30 days after the date of the letter denying the request. This one-time request for reconsideration, along with appropriate additional information, is submitted to the President through the appropriate Regional Administrator. The processing of this request is similar to the initial request.

(b) *Denial of types of assistance or areas.* In those instances when the type of assistance or certain areas requested by the Governor are not designated or authorized, the Governor, or the GAR, may appeal the decision. An appeal must be submitted in writing within 30 days of the date of the letter denying the request. This one-time request for reconsideration, along with justification and/or additional information, is sent to the Assistant Administrator for the Disaster Assistance Directoratethrough the appropriate Regional Administrator.

(c) *Denial of advance of non-Federal share.* In those instances where the Governor's request for an advance is denied, the Governor may appeal the decision. An appeal must be submitted in writing within 30 days of the date of the letter denying the request. This one-time request for reconsideration, along with justification and/or additional information, is sent to the Assistant Administrator for the Disaster Assistance Directoratethrough the appropriate Regional Administrator.

(d) *Extension of time to appeal.* The 30-day period referred to in paragraphs (a), (b), or (c) of this section may be extended by the Assistant Administrator for the Disaster Assistance Directorate provided that a written request for such an extension, citing reasons for the delay, is made during this 30-day period, and if the Assistant Administrator for the Disaster Assistance Directorate agrees that there is a legitimate basis for extension of the 30-day period. Only the Governor may request a time extension for appeals covered in paragraphs (a) and (c) of this section. The Governor, or the GAR if one has been named, may submit the time extension request for appeals covered in paragraph (b) of this section.

§ 206.47 Cost-share adjustments.

(a) We pay seventy-five percent (75%) of the eligible cost of permanent restorative work under section 406 of the Stafford Act and for emergency work under section 403 and section 407 of the Stafford Act, unless the Federal share is increased under this section.

(b) We recommend an increase in the Federal cost share from seventy-five percent (75%) to not more than ninety percent (90%) of the eligible cost of permanent work under section 406 and of emergency work under section 403 and section 407 whenever a disaster is so extraordinary that actual Federal obligations under the Stafford Act, excluding FEMA administrative cost,

meet or exceed a qualifying threshold of:

(1) Beginning in 1999 and effective for disasters declared on or after May 21, 1999, $75 per capita of State population;

(2) Effective for disasters declared after January 1, 2000, and through December 31, 2000, $85 per capita of State population;

(3) Effective for disasters declared after January 1, 2001, $100 per capita of State population; and,

(4) Effective for disasters declared after January 1, 2002 and for later years, $100 per capita of State population, adjusted annually for inflation using the Consumer Price Index for All Urban Consumers published annually by the Department of Labor.

(c) When we determine whether to recommend a cost-share adjustment we consider the impact of major disaster declarations in the State during the preceding twelve-month period.

(d) If warranted by the needs of the disaster, we recommend up to one hundred percent (100%) Federal funding for emergency work under section 403 and section 407, including direct Federal assistance, for a limited period in the initial days of the disaster irrespective of the per capita impact.

[64 FR 19498, Apr. 21, 1999]

§ 206.48 Factors considered when evaluating a Governor's request for a major disaster declaration.

When we review a Governor's request for major disaster assistance under the Stafford Act, these are the primary factors in making a recommendation to the President whether assistance is warranted. We consider other relevant information as well.

(a) *Public Assistance Program.* We evaluate the following factors to evaluate the need for assistance under the Public Assistance Program.

(1) *Estimated cost of the assistance.* We evaluate the estimated cost of Federal and nonfederal public assistance against the statewide population to give some measure of the per capita impact within the State. We use a figure of $1 per capita as an indicator that the disaster is of such size that it might warrant Federal assistance, and adjust this figure annually based on the Consumer Price Index for all Urban Consumers. We are establishing a minimum threshold of $1 million in public assistance damages per disaster in the belief that we can reasonably expect even the lowest population States to cover this level of public assistance damage.

(2) *Localized impacts.* We evaluate the impact of the disaster at the county and local government level, as well as impacts at the American Indian and Alaskan Native Tribal Government levels, because at times there are extraordinary concentrations of damages that might warrant Federal assistance even if the statewide per capita is not met. This is particularly true where critical facilities are involved or where localized per capita impacts might be extremely high. For example, we have at times seen localized damages in the tens or even hundreds of dollars per capita though the statewide per capita impact was low.

(3) *Insurance coverage in force.* We consider the amount of insurance coverage that is in force or should have been in force as required by law and regulation at the time of the disaster, and reduce the amount of anticipated assistance by that amount.

(4) *Hazard mitigation.* To recognize and encourage mitigation, we consider the extent to which State and local government measures contributed to the reduction of disaster damages for the disaster under consideration. For example, if a State can demonstrate in its disaster request that a Statewide building code or other mitigation measures are likely to have reduced the damages from a particular disaster, we consider that in the evaluation of the request. This could be especially significant in those disasters where, because of mitigation, the estimated public assistance damages fell below the per capita indicator.

(5) *Recent multiple disasters.* We look at the disaster history within the last twelve-month period to evaluate better the overall impact on the State or locality. We consider declarations under the Stafford Act as well as declarations by the Governor and the extent to which the State has spent its own funds.

(6) *Programs of other Federal assistance.* We also consider programs of

other Federal agencies because at times their programs of assistance might more appropriately meet the needs created by the disaster.

(b) *Factors for the Individual Assistance Program.* The following factors are used to evaluate the need for supplemental Federal assistance to individuals under the Stafford Act, as Federal assistance may not supplant the combined capabilities of a State, Tribal, or local government. Federal Individual Assistance, if authorized, is intended to assist eligible individuals and families when State, Tribal, and local government resources and assistance programs are overwhelmed. State fiscal capacity (44 CFR 206.48(b)(1)(i)) and uninsured home and personal property losses (44 CFR 206.48(b)(2)) are the principal factors that FEMA will consider when evaluating the need for supplemental Federal assistance under the Individuals and Households Program but FEMA will always consider all relevant information submitted as part of a declaration request. If the need for supplemental Federal assistance under the Individuals and Households Program is not clear from the evaluation of the principal factors, FEMA will turn to the other factors to determine the level of need.

(1) *State fiscal capacity and resource availability.* FEMA will evaluate the availability of State resources, and where appropriate, any extraordinary circumstances that contributed to the absence of sufficient resources.

(i) *Fiscal capacity (principal factor for individuals and households program).* Fiscal capacity is a State's potential ability to raise revenue from its own sources to respond to and recover from a disaster. The following data points are indicators of fiscal capacity.

(A) *Total taxable resources (TTR) of the State.* TTR is the U.S. Department of Treasury's annual estimate of the relative fiscal capacity of a State. A low TTR may indicate a greater need for supplemental Federal assistance than a high TTR.

(B) *Gross domestic product (GDP) by State.* GDP by State is calculated by the Bureau of Economic Analysis. GDP by State may be used as an alternative or supplemental evaluation method to TTR.

(C) *Per capita personal income by local area.* Per capita personal income by local area is calculated by the Bureau of Economic Analysis. A low per capita personal income by local area may indicate a greater need for supplemental Federal assistance than a high per capita personal income by local area.

(D) *Other factors.* Other limits on a State's treasury or ability to collect funds may be considered.

(ii) *Resource availability.* Federal disaster assistance under the Stafford Act is intended to be supplemental in nature, and is not a replacement for State emergency relief programs, services, and funds. FEMA evaluates the availability of resources from State, Tribal, and local governments as well as non-governmental organizations and the private sector.

(A) *State, tribal, and local government; non-governmental organizations (NGO); and Private Sector Activity.* State, Tribal, and local government, Non-Governmental Organizations, and private sector resources may offset the need for or reveal an increased need for supplemental Federal assistance. The State may provide information regarding the resources that have been and will be committed to meet the needs of disaster survivors such as housing programs, resources provided through financial and in-kind donations, and the availability of affordable (as determined by the U.S. Department of Urban and Housing Development's fair market rent standards) rental housing within a reasonable commuting distance of the impacted area.

(B) *Cumulative effect of recent disasters.* The cumulative effect of recent disasters may affect the availability of State, Tribal, local government, NGO, and private sector disaster recovery resources. The State should provide information regarding the disaster history within the last 24-month period, particularly those occurring within the current fiscal cycle, including both Presidential (public and individual assistance) and gubernatorial disaster declarations.

(2) *Uninsured home and personal property losses (principal factor for individuals and households program).* Uninsured home and personal property losses may

suggest a need for supplemental Federal assistance. The State may provide the following preliminary damage assessment data:

(i) The cause of damage.

(ii) The jurisdictions impacted and concentration of damage.

(iii) The number of homes impacted and degree of damage.

(iv) The estimated cost of assistance.

(v) The homeownership rate of impacted homes.

(vi) The percentage of affected households with sufficient insurance coverage appropriate to the peril.

(vii) Other relevant preliminary damage assessment data.

(3) *Disaster impacted population profile.* The demographics of a disaster impacted population may identify additional needs that require a more robust community response and delay a community's ability to recover from a disaster. FEMA will consider demographics of the impacted communities for the following data points as reported by the U.S. Census Bureau or other Federal agencies:

(i) The percentage of the population for whom poverty status is determined.

(ii) The percentage of the population already receiving government assistance such as Supplemental Security Income and Supplemental Nutrition Assistance Program benefits.

(iii) The pre-disaster unemployment rate.

(iv) The percentage of the population that is 65 years old and older.

(v) The percentage of the population 18 years old and younger.

(vi) The percentage of the population with a disability.

(vii) The percentage of the population who speak a language other than English and speak English less than ''very well.''

(viii) Any unique considerations regarding American Indian and Alaskan Native Tribal populations raised in the State's request for a major disaster declaration that may not be reflected in the data points referenced in paragraphs (b)(3)(i) through (vii) of this section.

(4) *Impact to community infrastructure.* The following impacts to a community's infrastructure may adversely affect a population's ability to safely and securely reside within the community.

(i) *Life saving and life sustaining services.* The effects of a disaster may cause disruptions to or increase the demand for life-saving and life-sustaining services, necessitate a more robust response, and may delay a community's ability to recover from a disaster. The State may provide information regarding the impact on life saving and life sustaining services for a period of greater than 72 hours. Such services include but are not limited to police, fire/EMS, hospital/medical, sewage, and water treatment services.

(ii) *Essential community services.* The effects of a disaster may cause disruptions to or increase the demand for essential community services and delay a community's ability to recover from a disaster. The State may provide information regarding the impact on essential community services for a period greater than 72 hours. Such services include but are not limited to schools, social services programs and providers, child care, and eldercare.

(iii) *Transportation infrastructure and utilities.* Transportation infrastructure or utility disruptions may render housing uninhabitable or inaccessible. Such conditions may also affect the delivery of life sustaining commodities, provision of emergency services, ability to shelter in place, and efforts to rebuild. The State may provide information regarding the impact on transportation infrastructure and utilities for a period of greater than 72 hours.

(5) *Casualties.* The number of individuals who are missing, injured, or deceased due to a disaster may indicate a heightened need for supplemental Federal disaster assistance. The State may report the number of missing, injured, or deceased individuals.

(6) *Disaster related unemployment.* The number of disaster survivors who lost work or became unemployed due to a disaster and who do not qualify for standard unemployment insurance may indicate a heightened need for supplemental Federal assistance. This usually includes the self-employed, service industry workers, and seasonal workers such as those employed in tourism, fishing, or agriculture industries. The State may provide an estimate of the

number of disaster survivors impacted under this paragraph as well as information regarding major employers affected.

[64 FR 47698, Sept. 1, 1999, as amended at 84 FR 10663, Mar. 21, 2019; 85 FR 2039, Jan. 14, 2020]

§§ 206.49–206.60 [Reserved]

Subpart C—Emergency Assistance

SOURCE: 55 FR 2296, Jan. 23, 1990, unless otherwise noted.

§ 206.61 Purpose.

The purpose of this subpart is to identify the forms of assistance which may be made available under an emergency declaration.

§ 206.62 Available assistance.

In any emergency declaration, the Regional Administrator or Administrator may provide assistance, as follows:

(a) Direct any Federal agency, with or without reimbursement, to utilize its authorities and the resources granted to it under Federal law (including personnel, equipment, supplies, facilities, and managerial, technical and advisory services) in support of State and local emergency assistance efforts to save lives, protect property and public health and safety, and lessen or avert the threat of a catastrophe;

(b) Coordinate all disaster relief assistance (including voluntary assistance) provided by Federal agencies, private organizations, and State and local governments;

(c) Provide technical and advisory assistance to affected State and local governments for:

(1) The performance of essential community services;

(2) Issuance of warnings of risks or hazards;

(3) Public health and safety information, including dissemination of such information;

(4) Provision of health and safety measures; and

(5) Management, control, and reduction of immediate threats to public health and safety;

(d) Provide emergency assistance under the Stafford Act through Federal agencies;

(e) Remove debris in accordance with the terms and conditions of section 407 of the Stafford Act;

(f) Provide assistance in accordance with section 408 of the Stafford Act; and

(g) Assist State and local governments in the distribution of medicine, food, and other consumable supplies, and emergency assistance.

[55 FR 2296, Jan. 23, 1990, as amended at 67 FR 61460, Sept. 30, 2002]

§ 206.63 Provision of assistance.

Assistance authorized by an emergency declaration is limited to immediate and short-term assistance, essential to save lives, to protect property and public health and safety, or to lessen or avert the threat of a catastrophe.

§ 206.64 Coordination of assistance.

After an emergency declaration by the President, all Federal agencies, voluntary organizations, and State and local governments providing assistance shall operate under the coordination of the Federal Coordinating Officer.

§ 206.65 Cost sharing.

The Federal share for assistance provided under this title shall not be less than 75 percent of the eligible costs.

§ 206.66 Limitation on expenditures.

Total assistance provided in any given emergency declaration may not exceed $5,000,000, except when it is determined by the Administrator that:

(a) Continued emergency assistance is immediately required;

(b) There is a continuing and immediate risk to lives, property, public health and safety; and

(c) Necessary assistance will not otherwise be provided on a timely basis.

§ 206.67 Requirement when limitation is exceeded.

Whenever the limitation described in § 206.66 is exceeded, the Administrator must report to the Congress on the nature and extent of continuing emergency assistance requirements and shall propose additional legislation if necessary.

§§ 206.68–206.100 [Reserved]

Subpart D—Federal Assistance to Individuals and Households

§§ 206.101–206.109 [Reserved]

§ 206.110 Federal assistance to individuals and households.

(a) *Purpose.* This section implements the policy and procedures set forth in the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended (Stafford Act), 42 U.S.C. 5174. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5174, as amended by the Disaster Mitigation Act of 2000. This program provides financial assistance and, if necessary, direct assistance to eligible individuals and households who, as a direct result of a major disaster or emergency, have uninsured or under-insured, necessary expenses and serious needs and are unable to meet such expenses or needs through other means.

(b) *Maximum amount of assistance.* No individual or household will receive financial assistance greater than $25,000 under this subpart with respect to a single major disaster or emergency for the repair or replacement of their predisaster primary residence. No individual or household will receive financial assistance greater than $25,000 under this subpart with respect to a single major disaster or emergency for Other Needs Assistance. FEMA will adjust the $25,000 limits annually to reflect changes in the Consumer Price Index (CPI) for All Urban Consumers that the Department of Labor publishes.

(1) The maximum amount of financial assistance excludes rental assistance under § 206.117(b)(1)(i) and lodging expense reimbursement under § 206.117(b)(1)(i).

(2) The maximum amount of financial assistance excludes expenses to repair or replace eligible damaged accessibility-related real property improvements and personal property for individuals with disabilities.

(c) *Multiple types of assistance.* One or more types of housing assistance may be made available under this section to meet the needs of individuals and households in the particular disaster situation. FEMA will determine the appropriate types of housing assistance to be provided under this section based on considerations of cost effectiveness, convenience to the individuals and households and the suitability and availability of the types of assistance. An applicant is expected to accept the first offer of housing assistance; unwarranted refusal of assistance may result in the forfeiture of future housing assistance. Temporary housing and repair assistance must be utilized to the fullest extent practicable before other types of housing assistance.

(d) *Date of eligibility.* Eligibility for Federal assistance under this subpart is limited to losses or expenses resulting from damage that occurred during the dates of the incident period established in a presidential declaration that a major disaster or emergency exists, except that reasonable lodging expenses that are incurred in anticipation of and immediately preceding such event may be eligible for Federal assistance under this chapter.

(e) *Period of assistance.* FEMA may provide assistance under this subpart for a period not to exceed 18 months from the date of declaration. The Assistant Administrator for the Recovery Directorate may extend the period of assistance if he/she determines that due to extraordinary circumstances an extension would be in the public interest.

(f) *Assistance not counted as income.* Assistance under this subpart is not to be counted as income or a resource in the determination of eligibility for welfare, income assistance or income-tested benefit programs that the Federal Government funds.

(g) *Exemption from garnishment.* All assistance provided under this subpart is exempt from garnishment, seizure, encumbrance, levy, execution, pledge, attachment, release or waiver. Recipients of rights under this provision may not reassign or transfer the rights. These exemptions do not apply to FEMA recovering assistance fraudulently obtained or misapplied.

(h) *Duplication of benefits.* In accordance with the requirements of the Stafford Act, 42 U.S.C. 5155, FEMA will not provide assistance under this subpart

when any other source has already provided such assistance or when such assistance is available from any other source. In the instance of insured applicants, we will provide assistance under this subpart only when:

(1) Payment of the applicable benefits are significantly delayed;

(2) Applicable benefits are insufficient to cover the housing or other needs; or

(3) Applicants cannot use their insurance because there is no housing on the private market.

(i) *Cost sharing*. (1) Except as provided in paragraph (i)(2) of this section, the Federal share of eligible costs paid under this subpart is 100 percent.

(2) Federal and State cost shares for ''Other Needs'' assistance under the Stafford Act, 42 U.S.C. 5174(e) and (f), are as follows:

(i) The Federal share is 75 percent; and

(ii) The non-Federal share is 25 percent and must be paid from funds made available by the State. If the State does not provide the non-Federal share to FEMA before FEMA begins to provide assistance to individuals and households under the Stafford Act, 42 U.S.C. 5174(e), FEMA will still process applications. The State will then be obliged to reimburse FEMA for the non-Federal cost share of such assistance on a monthly basis. If the State does not provide such reimbursement on a monthly basis, then FEMA will issue a billing notice to the State on a monthly basis for the duration of the program. FEMA will charge interest, penalties, and administrative costs on delinquent billing notices in accordance with the Debt Collection Improvement Act. Cost shared funds, interest, penalties and administrative costs owed to FEMA through delinquent billing notices may be offset from other FEMA disaster assistance programs (*i.e.*, Public Assistance) from which the State is receiving assistance, or future grant awards from FEMA or other Federal Agencies. Debt Collection procedures will be followed as outlined in 44 CFR part 11.

(j) *Application of the Privacy Act*. (1) All provisions of the Privacy Act of 1974, 5 U.S.C. 552a, apply to this subpart. FEMA may not disclose an applicant's record except:

(i) In response to a release signed by the applicant that specifies the purpose for the release, to whom the release is to be made, and that the applicant authorizes the release;

(ii) In accordance with one of the published routine uses in our system of records; or

(iii) As provided in paragraph (j)(2) of this section.

(2) Under the Stafford Act, 42 U.S.C. 5174(f)(2), FEMA must share applicant information with States in order for the States to make available any additional State and local disaster assistance to individuals and households.

(i) States receiving applicant information under this paragraph must protect such information in the same manner that the Privacy Act requires FEMA to protect it.

(ii) States receiving such applicant information must not further disclose the information to other entities, and must not use it for purposes other than providing additional State or local disaster assistance to individuals and households.

(k) *Flood Disaster Protection Act requirement*. (1) The Flood Disaster Protection Act of 1973, Public Law 93–234, as amended (42 U.S.C. 4106), imposes certain restrictions on federal financial assistance for acquisition and construction purposes. For the purpose of this paragraph, *financial assistance for acquisition or construction purposes* means assistance to an individual or household to buy, receive, build, repair or improve insurable portions of a home and/or to purchase or repair insurable contents. For a discussion of what elements of a home and contents are insurable, *See* 44 CFR part 61, Insurance Coverage and Rates.

(2) Individuals or households that are located in a special flood hazard area may not receive Federal Assistance for National Flood Insurance Program (NFIP)—insurable real and/or personal property, damaged by a flood, unless the community in which the property is located is participating in the NFIP (See 44 CFR 59.1), or the exception in 42 U.S.C. 4105(d) applies. However, if the community in which the damaged

property is located qualifies for and enters the NFIP during the six-month period following the declaration, the Governor's Authorized Representative may request a time extension for FEMA (*See* § 206.112) to accept registrations and to process assistance applications in that community.

(3) *Flood insurance purchase requirement:* (i) As a condition of the assistance and in order to receive any Federal assistance for future flood damage to any insurable property, individuals and households named by FEMA as eligible recipients under the Stafford Act, 42 U.S.C. 5174, who receive assistance, due to flood damage, for acquisition or construction purposes under this subpart must buy and maintain flood insurance, as required in 42 U.S.C. 4012a, for at least the assistance amount. This applies only to real and personal property that is in or will be in a designated Special Flood Hazard Area and that can be insured under the National Flood Insurance Program.

(A) If the applicant is a homeowner, flood insurance coverage must be maintained at the address of the flood-damaged property for as long as there is a residential building (See 44 CFR 59.1) at the address. The flood insurance requirement is reassigned to any subsequent owner of the flood-damaged address.

(B) If the applicant is a renter, flood insurance coverage must be maintained on the contents for as long as the renter resides at the flood-damaged rental unit. The restriction is lifted once the renter moves from the rental unit.

(C) When financial assistance is used to purchase a dwelling, flood insurance coverage must be maintained on the dwelling for as long as the dwelling exists and is located in a designated Special Flood Hazard Area. The flood insurance requirement is reassigned to any subsequent owner of the dwelling.

(ii) FEMA may not provide financial assistance for acquisition or construction purposes to individuals or households who fail to buy and maintain flood insurance required under paragraph (k)(3)(i) of this section or required by the Small Business Administration.

(l) *Environmental requirements.* Assistance provided under this subpart must comply with the National Environmental Policy Act (NEPA) and other environmental laws, regulations, Executive Orders, and applicable agency policy.

(m) *Historic preservation.* Assistance provided under this subpart generally does not have the potential to affect historic properties and thus FEMA has no further obligations under the National Historic Preservation Act, 54 U.S.C. 306108, with the exception of ground disturbing activities and construction related to §§ 206.117(b)(1)(ii) (direct housing), 206.117(b)(2)(ii)(F) (repair assistance for privately owned roads and bridges), 206.117(b)(3) (replacement assistance), and 206.117(b)(4) (permanent housing construction).

(n) *Severability.* Any provision of this subpart held to be invalid or unenforceable as applied to any person or circumstance should be construed so as to continue to give the maximum effect to the provision permitted by law, including as applied to persons not similarly situated or to dissimilar circumstances, unless such holding is that the provision of this subpart is invalid and unenforceable in all circumstances, in which event the provision should be severable from the remainder of this subpart and should not affect the remainder thereof.

[67 FR 61452, Sept. 30, 2002; 67 FR 62896, Oct. 9, 2002, as amended at 81 FR 56533, Aug. 22, 2016; 89 FR 4118, Jan. 22, 2024]

§ 206.111 Definitions.

Adequate, alternate housing means housing that accommodates the needs of the occupants; is within the normal commuting patterns of the area or is within reasonable commuting distance of work, school, or agricultural activities that provide over 50 percent of the household income; and is within the financial ability of the occupant.

Alternative housing resources means any housing that is available or can quickly be made available in lieu of permanent housing construction and is cost-effective when compared to permanent construction costs. Some examples are rental resources, manufactured housing units, and travel trailers.

Applicant means an individual or household who has applied for assistance under this subpart.

Assistance from other means includes monetary or in-kind contributions from voluntary or charitable organizations, insurance, other governmental programs, or from any sources other than those of the applicant.

Dependent means someone who is normally claimed as such on the Federal tax return of another, according to the Internal Revenue Code. It may also mean the minor children of a couple not living together, where the children live in the affected residence with the parent or guardian who does not claim them on the tax return.

Destroyed means the primary residence is a total loss or damaged to such an extent that repairs are infeasible.

Displaced applicant means one whose disaster-damaged primary residence is uninhabitable, inaccessible, or made unavailable by the landlord.

Effective date of assistance means the date that the applicant was determined eligible for assistance.

Eligible hazard mitigation measures are home improvements that an applicant can accomplish in order to reduce or prevent future disaster damage to the primary residence, utilities, or infrastructure.

Essential tools means tools and equipment required for employment and items required for education.

Fair market rent means estimates of rent plus the cost of utilities, except telephone, identified by the Department of Housing and Urban Development as being adequate for existing rental housing in a particular geographic area.

Financial ability means the applicant's capability to pay 30 percent of gross post-disaster household income for housing. When computing financial ability, extreme or unusual financial circumstances may be considered by FEMA.

Financial assistance means cash that may be provided to eligible individuals and households, usually in the form of a check or electronic funds transfer.

Functioning means an item or home capable of being used for its intended purpose.

Household means all persons (adults and children) who lived in the pre-disaster residence who request assistance under this subpart, as well as any persons, such as infants, spouse, or part-time residents who were not present at the time of the disaster, but who are expected to return during the assistance period.

Housing costs means rent and mortgage payments, including principal, interest, real estate taxes, real property insurance, homeowners or condominium association fees, and utility costs.

Inaccessible means as a result of the incident, the applicant cannot reasonably be expected to gain entry to his or her pre-disaster residence due to the disruption, or destruction, of access routes or other impediments to access, or restrictions placed on movement by a responsible official due to continued health, safety or security problems.

In-kind contributions mean something other than monetary assistance, such as goods, commodities or services.

Lodging expenses means expenses for reasonable short-term accommodations that individuals or households incur in the immediate aftermath of a disaster. Lodging expenses may include but are not limited to the cost of brief hotel stays.

Manufactured housing sites means those sites used for the placement of travel trailers and other manufactured housing units, including:

(1) *Commercial site*, a site customarily leased for a fee, which is fully equipped to accommodate a housing unit;

(2) *Private site*, a site that the applicant provides or obtains at no cost to the Federal Government, complete with utilities; and

(3) *Group site*, a site provided by the State or local government or FEMA, if determined that such site would be more economical or accessible than one that the State or local government provides, that accommodates two or more units and is complete with utilities.

Necessary expense means the cost associated with acquiring an item or items, obtaining a service, or paying for any other activity that meets a serious need.

Occupant means a resident of a housing unit.

Owner-occupied means that the residence is occupied by:

(1) The legal owner with verifiable documentation; or

(2) A person who does not hold formal title to the residence and pays no rent, but can produce verifiable documentation demonstrative of legal responsibility including tax payment receipts; receipts for major repairs, maintenance, or improvements of the residence; court documents, a letter from a public official, or, for mobile home or travel trailer owners residing in a commercial park, a letter from the mobile home park owner or manager; or

(3) A person who has verifiable documentation of lifetime occupancy rights with formal title vested in another.

Permanent housing plan means a realistic plan that, within a reasonable timeframe, puts the displaced applicant back into permanent housing that is similar to their pre-disaster housing situation. A reasonable timeframe includes sufficient time within the period of assistance for securing funds and services to repair the home, completing repairs or locating a permanent dwelling, and moving into the dwelling.

Primary residence means the dwelling where the applicant normally lives, during the major portion of the calendar year; or the dwelling that is required because of proximity to employment, including agricultural activities, that provide 50 percent of the household's income.

Reasonable commuting distance means a distance that does not place undue hardship on an applicant. It also takes into consideration the traveling time involved due to road conditions, *e.g.*, mountainous regions or road closures and the normal commuting patterns of the area.

Recertification means the process that FEMA uses to evaluate an applicant's eligibility for continued temporary housing assistance under § 206.114.

Repairs means repairs of a quality necessary for a safe and sanitary living or functioning condition.

Safe means secure from hazards or threats to occupants.

Sanitary means free of health hazards.

Serious need means the requirement for an item, or service, that is necessary to an applicant's ability to prevent, mitigate, or overcome a disaster-related hardship, injury or adverse condition.

Significantly delayed means the process has taken more than 30 days.

State means, for the purposes of this subpart and where consistent with the requirements of the Stafford Act, any State as defined in § 206.2(a)(22) or Indian tribal government as defined in the Stafford Act (42 U.S.C. 5122(6)).

Uninhabitable means the dwelling is not safe or sanitary.

We, our, and *us* mean FEMA.

[67 FR 61452, Sept. 30, 2002; 67 FR 62896, Oct. 9, 2002, as amended at 89 FR 4119, Jan. 22, 2024]

§ 206.112 Registration period.

(a) *Initial period.* The standard FEMA registration period is 60 days following the date that the President declares an incident a major disaster or an emergency.

(b) *Extension of the registration period.* FEMA may extend the registration period when the State requests more time to collect registrations from the affected population. FEMA may also extend the standard registration period when necessary to establish the same registration deadline for contiguous counties or States.

(c) *Reopening of the registration period.* After the registration period for the major disaster or emergency has expired, FEMA may reopen the registration period for 60 days only when the President's declaration is amended to include additional counties and only for the additional counties.

(d) *Late registrations.* After the standard or extended registration period ends, FEMA will accept late registrations for an additional 60 days. We will process late registrations for those registrants who explain the reason for the delay in their registration.

[67 FR 61452, Sept. 30, 2002; 67 FR 62896, Oct. 9, 2002, as amended at 89 FR 4120, Jan. 22, 2024]

§ 206.113 Eligibility factors.

(a) *Conditions of eligibility.* In general, FEMA may provide assistance to individuals and households who qualify for

such assistance under the Stafford Act, 42 U.S.C. 5174, and this subpart. FEMA may only provide assistance:

(1) When the individual or household has incurred a disaster-related necessary expense and serious need in the State in which the disaster has been declared, without regard to their residency in that State;

(2) In a situation where the applicant has insurance, when the individual or household files a claim with their insurance provider for all potentially applicable types of insurance coverage and the claim is denied;

(3) In a situation where the applicant has insurance, when the insured individual or household's insurance proceeds have been significantly delayed through no fault of his, her or their own, and the applicant has agreed to repay the assistance to FEMA or the State from insurance proceeds that he, she or they receive later;

(4) In a situation where the applicant has insurance, but the applicant cannot use their insurance because housing is not available on the private market;

(5) In a situation where the applicant has insurance, when the insured individual or household has accepted all assistance from other sources for which he, she, or they are eligible, including insurance, and that assistance and insurance is insufficient to cover the necessary expense and serious need;

(6) When the applicant agrees to refund to FEMA or the State any portion of the assistance that the applicant receives or is eligible to receive as assistance from another source;

(7) With respect to housing assistance, if the primary residence has been destroyed, is uninhabitable, or is inaccessible;

(8) With respect to housing assistance, if a renter's primary residence is no longer available as a result of the disaster; and

(9) With respect to home repair for accessibility-related items, if an applicant meets the following conditions:

(i) The applicant is either an individual with a disability as defined in 42 U.S.C. 5122 whose disability existed prior to the disaster and whose primary residence was damaged by the disaster, or an individual with a disability as defined in 42 U.S.C. 5122 whose disability was caused by the disaster and whose primary residence was damaged by the disaster;

(ii) The real property component is necessary to meet the accessibility-related need of the household; and

(iii) The real property component is not covered by insurance or any other source.

(b) *Conditions of ineligibility*. We may not provide assistance under this subpart:

(1) For housing or displacement assistance, to individuals or households who are displaced from other than their pre-disaster primary residence;

(2) For temporary housing or displacement assistance, to individuals or households who have adequate rent-free housing accommodations;

(3) For temporary housing or displacement assistance, to individuals or households who own a secondary or vacation residence within reasonable commuting distance to the disaster area, or who own available rental property that meets their temporary housing needs;

(4) For temporary housing or displacement assistance to individuals or households who evacuated the residence in response to official warnings solely as a precautionary measure and are able to return to and safely occupy the residence immediately after the incident;

(5) For housing assistance, for improvements or additions to the pre-disaster condition of property, except for the following:

(i) Improvements or additions required to make repairs that comply with local and State ordinances;

(ii) Eligible hazard mitigation measures; or

(iii) Accessibility-related items for individuals with disabilities, consistent with paragraph (a)(9) of this section;

(6) To individuals or households who have adequate insurance coverage and where there is no indication that insurance proceeds will be significantly delayed, or who have refused assistance from insurance providers;

(7) To individuals or households whose damaged primary residence is located in a designated special flood hazard area, and in a community that

is not participating in the National Flood Insurance Program, except that financial assistance may be provided to rent alternate housing and for medical, dental, funeral expenses and uninsurable items to such individuals or households. However, if the community in which the damaged property is located qualifies for and enters the NFIP during the six-month period following the declaration then the individual or household may be eligible;

(8) To individuals or households who did not fulfill the condition to purchase and maintain flood insurance as a requirement of receiving previous Federal disaster assistance;

(9) For business losses, including farm businesses; or

(10) For any items not otherwise authorized by §§ 206.117 and 206.119.

[67 FR 61452, Sept. 30, 2002; 67 FR 62896, Oct. 9, 2002, as amended at 89 FR 4120, Jan. 22, 2024]

§ 206.114 Criteria for continued or additional assistance.

(a) *General.* FEMA expects all recipients of assistance under this subpart to obtain and occupy permanent housing at the earliest possible time. FEMA may provide initial and continued temporary housing assistance, financial or direct, upon request during the period of assistance, based on need, and generally only when adequate, alternate housing is not available or when the permanent housing plan has not been fulfilled through no fault of the applicant.

(b) *Rental assistance.* FEMA may provide initial financial assistance for rent, also known as initial rental assistance, as described in § 206.117(b)(1)(i), to displaced eligible applicants to rent alternate housing accommodations for an initial time period established by FEMA.

(1) FEMA may periodically recertify all displaced applicants who received initial rental assistance and request continued rental assistance. All displaced applicants requesting continued rental assistance must take the following actions at certain points throughout the recertification process:

(i) Submit rent receipts to show that they have exhausted or will exhaust previously provided funds;

(ii) Provide documentation demonstrating they lack the financial ability to pay their post-disaster housing costs and have a continued need for rental assistance;

(iii) Establish a realistic permanent housing plan; and

(iv) Provide documentation showing that they are making efforts to obtain permanent housing.

(2) FEMA expects that pre-disaster renters will use their initial rental assistance to obtain permanent housing. However, FEMA may provide continued rental assistance to pre-disaster renters with a continuing disaster-related housing need.

(c) *Direct housing assistance.* FEMA may provide direct housing assistance as described in § 206.117(b)(1)(ii), to displaced eligible applicants who are unable to make use of financial assistance to rent adequate alternate housing. FEMA may periodically recertify all displaced applicants receiving direct housing assistance for continued direct housing assistance. All displaced applicants who need continued direct housing assistance must take the following actions at certain points throughout the recertification process:

(1) Establish a realistic permanent housing plan; and

(2) Provide documentation showing that they are making efforts to obtain permanent housing throughout the recertification process.

(d) *Other assistance.* FEMA may provide repairs or housing replacement assistance, as described in § 206.117(b)(2) and § 206.117(b)(3), lodging expense reimbursement, as described in § 206.117(b)(1)(i), or other needs assistance, as described in § 206.119, to eligible applicants.

(1) If FEMA requires more information to process an applicant's initial request for assistance, it may request additional information.

(2) After the initial award of assistance, applicants requesting additional assistance for repairs, housing replacement, lodging expense reimbursement, personal property, transportation, child care, medical, dental, funeral, moving and storage, or other necessary expenses and serious needs may submit an appeal as outlined in § 206.115 and will be required to submit information

and/or verifiable documentation established via guidance identifying the additional need.

[89 FR 4120, Jan. 22, 2024]

§ 206.115 Appeals.

(a) Under the provisions of the Stafford Act, 42 U.S.C. 5189a, applicants for assistance under this subpart may appeal any determination of eligibility for assistance made under this subpart. Applicants must file their appeal within 60 days after the date that we notify the applicant of the award or denial of assistance. Applicants may appeal the following:

(1) Eligibility for assistance, including recoupment;

(2) Amount or type of assistance;

(3) Cancellation of an application;

(4) The rejection of a late application;

(5) The denial of continued assistance under § 206.114, Criteria for continued assistance;

(6) FEMA's intent to collect rent from occupants of a housing unit that FEMA provides;

(7) Termination of direct housing assistance;

(8) Denial of a request to purchase a FEMA-provided housing unit at the termination of eligibility;

(9) The sales price of a FEMA-provided housing unit they want to purchase; or

(10) Any other eligibility-related decision.

(b) Appeals must include a written explanation or verifiable documentation for the appeal and meet the requirements of § 206.117, as applicable. See §§ 206.117(b)(2)(vi), 206.117(b)(3)(iv), and 206.117(b)(4)(iii). If someone other than the applicant files the appeal, then the applicant must also submit a signed statement giving that person authority to represent them. If a written explanation is submitted, it must be signed by the applicant or a person the applicant designates to represent them.

(c) Applicants must appeal to FEMA for decisions made under this subpart, unless FEMA has made a grant to the State to provide assistance to individuals and households under § 206.120(a), State administration of other needs assistance; then the applicant must appeal to the State.

(d) An applicant may ask for a copy of information in his or her file by writing to FEMA or the State as appropriate. If someone other than the applicant is submitting the request, then the applicant must also submit a signed statement giving that person authority to represent them.

(e) FEMA or the appropriate State official will review the original decision after receiving the appeal. FEMA or the State, as appropriate, will give the appellant a written notice of the disposition of the appeal and a reason for the determination within 90 days of receiving the appeal. The decision of the FEMA or State appellate authority is final.

[67 FR 61452, Sept. 30, 2002; 67 FR 62896, Oct. 9, 2002, as amended at 89 FR 4121, Jan. 22, 2024]

§ 206.116 Recovery of funds.

(a) The applicant must agree to repay to FEMA (when funds are provided by FEMA) and/or the State (when funds are provided by the State) from insurance proceeds or recoveries from any other source an amount equivalent to the value of the assistance provided. In no event must the amount repaid to FEMA and/or the State exceed the amount that the applicant recovers from insurance or any other source.

(b) An applicant must return funds to FEMA and/or the State (when funds are provided by the State) when FEMA and/or the State determines that the assistance was provided erroneously, that the applicant spent the funds inappropriately, or that the applicant obtained the assistance through fraudulent means.

[67 FR 61452, Sept. 30, 2002; 67 FR 62896, Oct. 9, 2002]

§ 206.117 Housing assistance.

(a) *Definitions.* The definitions in this paragraph apply to this section only.

''*Multifamily Rental Housing*'' means a rental property that contains three or more dwelling units contained within one building, each such unit providing complete and independent living facilities for one or more persons, including

permanent provisions for living, sleeping, cooking, and sanitation.

''*Real Property Component*'' *or* ''*Component*'' means each individual part of a dwelling as enumerated in paragraph (b)(2)(ii) of this section.

''*Semi-Permanent Housing*'' means housing designed and constructed with finishes, material, and systems selected for moderate (or better) energy efficiency, maintenance, and life cycle cost, and with a life expectancy of more than 5 years but less than 25 years.

(b) *Types of housing assistance*—(1) *Temporary housing assistance*—(i) *Rental assistance.* Eligible displaced applicants may receive rental assistance to rent alternate housing resources. FEMA may also provide assistance for the reasonable cost of any transportation, utility hookups, or installation of a manufactured housing unit or recreational vehicle to be used for housing. This may include lodging expense reimbursement for reasonable short-term lodging expenses for individuals or households who have not received displacement assistance (See § 206.119(b)(2)) in the immediate aftermath of a disaster.

(A) FEMA will include all members of a pre-disaster household in a single registration and will provide assistance for one temporary housing residence, unless FEMA determines that the size or nature of the household requires that we provide assistance for more than one residence.

(B) FEMA will base the amount of assistance on the current fair market rent for existing rental units. FEMA will further base the applicable rate on the location of the rental unit and the number of bedrooms the household requires, as determined by FEMA.

(C) Rental assistance may include the payment of the cost of utilities, excluding telephone, cable, television, and internet service.

(D) Rental assistance may include the payment of the cost of security deposits, not to exceed an amount equal to the fair market rent for one month, as determined under paragraph (b)(1)(i)(B) of this section.

(E) Applicants that receive displacement assistance under § 206.119(b)(2) must request rental assistance if their disaster-caused temporary housing needs continue once displacement assistance is exhausted.

(ii) *Direct assistance.* (A) FEMA may provide direct assistance in the form of purchased or leased temporary housing units directly to displaced applicants who lack available housing resources and are unable to make use of the assistance provided under paragraph (b)(1)(i) of this section.

(B) FEMA will include all members of a pre-disaster household in a single application and will provide assistance for one temporary housing unit, unless FEMA determines that the size or nature of the household requires that we provide assistance for more than one temporary housing unit.

(C) Any site upon which a FEMA-provided temporary housing unit is placed must comply with applicable State and local codes and ordinances, as well as 44 CFR part 9, Floodplain Management and Protection of Wetlands, and all other applicable environmental and historic preservation laws, regulations, Executive orders, and agency policy.

(D) All utility costs and utility security deposits are the responsibility of the occupant except where the utility does not meter utility services separately and utility services are a part of the rental charge.

(E) FEMA-provided or funded temporary housing units may be placed in the following locations:

(*1*) A commercial site that is complete with utilities, when FEMA determines that the upgrading of commercial sites, or installation of utilities on such sites, will provide more cost-effective, timely and suitable temporary housing than other types of resources.

(*2*) A private site that an applicant provides, complete with utilities, when FEMA determines that the cost of installation or repairs of essential utilities on private sites will provide more cost effective, timely, and suitable temporary housing than other types of resources.

(*3*) A group site that accommodates two or more temporary housing units and is complete with utilities, provided by the State or local government, when FEMA determines that the cost of developing a group site provided by the State or local government, to include

installation or repairs of essential utilities on the sites, will provide more cost effective, timely, and suitable temporary housing than other types of resources.

(*4*) A group site provided by FEMA, if determined that such a site would be more economical or accessible than one that the State or local government provides.

(F) If FEMA determines it would be a cost-effective alternative to other temporary housing options, FEMA may enter into lease agreements with owners of multifamily rental housing properties to house displaced applicants eligible for assistance under this subpart.

(*1*) FEMA may only enter into lease agreements with owners of multifamily rental housing properties impacted by a major disaster or located in areas covered by a major disaster declaration.

(*2*) FEMA may make repairs or improvements to properties under such lease agreements, to the extent necessary to serve as temporary housing, provided, however, that the value of the improvements or repairs must be deducted from the value of the lease agreement.

(G) After the end of the 18-month period of assistance, FEMA may begin to charge up to the fair market rent for each temporary housing unit provided. We will base the rent charged on the number of bedrooms occupied and needed by the household. When establishing the amount of rent, FEMA will take into account the financial ability of the household.

(H) We may terminate direct assistance for reasons that include, but are not limited to, the following:

(*1*) The period of assistance expired under § 206.110(e) and has not been extended;

(*2*) Adequate alternate housing is available to the occupant(s);

(*3*) The occupant(s) obtained housing assistance through either misrepresentation or fraud;

(*4*) The occupant(s) failed to comply with any term of the lease/rental agreement or other rules of the site where the temporary housing unit is located; or

(*5*) The occupant(s) does not provide evidence documenting that they are working towards a permanent housing plan.

(I) FEMA will provide a 15 day written notice when initiating the termination of direct assistance that we provide under our lease agreements. This notice will specify the reasons for termination of assistance and occupancy, the date of termination, the procedure for appealing the determination, and the occupant's liability for such additional charges as FEMA deems appropriate after the termination date, including fair market rent for the unit.

(J) Duplication of benefits may occur when an applicant has additional living expense insurance benefits to cover the cost of renting alternate housing. In these instances, FEMA may provide a temporary housing unit if adequate alternate housing is not available, or if doing so is in the best interest of the household and the government. We will establish fair market rent, not to exceed insurance benefits available.

(2) *Repairs.* (i) FEMA may provide financial assistance for the repair of an owner-occupied primary residence if:

(A) The eligibility criteria in § 206.113 are met;

(B) FEMA determines the dwelling was damaged by the disaster; and,

(C) The damage is not covered by insurance.

(ii) FEMA may provide financial assistance for the repair of the disaster damaged dwelling to a safe and sanitary living or functioning condition including:

(A) Structural components of the residence. This includes real property components, such as the foundation, exterior walls, and roof.

(B) Windows and doors.

(C) The Heating, Ventilation and Air Conditioning system.

(D) Utility systems. This includes electrical, gas, water and sewage systems.

(E) Interior components. This includes, but is not limited to, the structure's floors, walls, ceilings, and cabinetry.

(F) The structure's access and egress, including privately owned access roads and privately owned bridges.

(G) Blocking, leveling, and anchoring of a mobile home, and reconnecting or

resetting mobile home sewer, water, electrical and fuel lines and tanks.

(H) Eligible hazard mitigation measures.

(iii) FEMA financial assistance for the repair of disaster damage will be limited to repairs of a quality necessary for a safe and sanitary living or functioning condition. In some instances, when the extent of the damage is unclear, FEMA may provide assistance for the average cost of a licensed technician's professional assessment. FEMA may provide for the replacement of a component if repair is not feasible.

(iv) Eligible individuals or households may receive up to the maximum amount of assistance (See §206.110(b)) to repair damage to their primary residence irrespective of other financial resources, except insurance proceeds.

(v) The individual or household is responsible for obtaining all local permits or inspections that applicable State or local building codes may require.

(vi) If the applicant disputes a determination made by FEMA regarding eligibility for repair assistance, the applicant may appeal that determination pursuant to the procedures in §206.115. In addition to the requirements in §206.115, the applicant must provide proof that the component meets the requirements of paragraph (b)(2)(i) of this section. If the applicant disputes the amount of repair assistance awarded, the applicant must also provide justification for the amount sought.

(3) *Housing replacement*. (i) FEMA may provide financial assistance for the replacement of an owner-occupied primary residence if:

(A) The eligibility criteria in §206.113 are met;

(B) The residence was destroyed by the disaster; and

(C) The damage to the residence is not covered by insurance.

(ii) If replacement assistance is granted, the applicant may either use the maximum amount of assistance (See §206.110(b)) to replace the dwelling in its entirety, or may use the assistance toward the cost of acquiring a new permanent residence.

(iii) Housing replacement assistance will be based on the average replacement cost established by FEMA for the type of residence destroyed, or the statutory maximum (See §206.110(b)), whichever is less.

(iv) If the applicant disputes a determination made by FEMA regarding eligibility for replacement assistance, the applicant may appeal that determination pursuant to the procedures in §206.115. In addition to the requirements in §206.115, the applicant must provide proof that repair is not feasible, or will not ensure the safety or health of the occupant. If the applicant disputes the amount of replacement assistance awarded, the applicant must also provide justification for the amount sought.

(4) *Permanent and semi-permanent housing construction*. (i) FEMA may provide financial or direct assistance to applicants for the purpose of constructing permanent and semi-permanent housing if:

(A) The eligibility criteria in §206.113 are met;

(B) The residence was damaged by the event;

(C) The damage to the residence is not covered by insurance;

(D) The residence was an owner-occupied primary residence; and

(E) The residence is in a location where alternative housing resources are not available and the types of financial or direct temporary housing assistance described in paragraphs (b)(1), (2), and (3) of this section are unavailable, infeasible, or not cost-effective.

(ii) Permanent and semi-permanent housing construction, in general, must be consistent with current minimal local building codes and standards where they exist, or minimal acceptable construction industry standards in the area, including reasonable hazard mitigation measures, and Federal environmental laws and regulations. Dwellings will be of average quality, size and capacity, taking into consideration the needs of the occupant.

(iii) If the applicant disputes a determination made by FEMA regarding eligibility for construction assistance, the applicant may appeal that determination pursuant to the procedures in §206.115. In addition to the requirements in §206.115, the applicant must

provide proof that the property is in a location where alternative housing resources are not available. The applicant must also provide proof that the types of financial or direct temporary housing assistance described in paragraph (b)(1) of this section are unavailable, infeasible, or not cost effective. If the applicant disputes the amount of construction assistance awarded, the applicant must also provide justification for the amount sought.

[67 FR 61452, Sept. 30, 2002; 67 FR 62896, Oct. 9, 2002, as amended at 78 FR 66856, Nov. 7, 2013; 81 FR 56533, Aug. 22, 2016; 89 FR 4121, Jan. 22, 2024]

§ 206.118 Disposal of housing units.

(a) FEMA may sell temporary housing units purchased under § 206.117(b)(1)(ii), Temporary housing, direct assistance, as follows:

(1) *Sale to an occupant.* (i) FEMA may sell a temporary housing unit to the occupant, if they lack permanent housing and have a site that complies with local codes and ordinances and part 9 of this Title.

(ii) FEMA may approve adjustments to the sales price when selling a temporary housing unit to the occupant if the occupant is unable to pay the fair market value of the temporary housing unit and when doing so is in the best interest of the occupant and FEMA.

(iii) FEMA may sell a temporary housing unit to the occupant only on the condition that the purchaser agrees to obtain and maintain hazard insurance, as well as flood insurance on the temporary housing unit if it is or will be in a designated Special Flood Hazard Area.

(2) *Other methods of disposal.* (i) FEMA may sell, transfer, donate, or otherwise make a temporary housing unit available directly to a State or other governmental entity, or to a voluntary organization, for the sole purpose of providing temporary housing to eligible displaced applicants in major disasters and emergencies. As a condition of the sale, transfer, or donation, or other method of provision, the State, governmental entity, or voluntary organization must agree to:

(A) Comply with the nondiscrimination provisions of the Stafford Act, 42 U.S.C. 5151; and

(B) Obtain and maintain hazard insurance on the temporary housing unit, as well as flood insurance if the housing unit is or will be in a designated Special Flood Hazard Area.

(ii) FEMA may also sell temporary housing units at a fair market value to any other person.

(b) A temporary housing unit will be sold ''as is, where is'', except for repairs FEMA deems necessary to protect health or safety, which are to be completed before the sale. There will be no implied warranties. In addition, FEMA will inform the purchaser that they may have to bring the installation of the temporary housing unit up to codes and standards that are applicable at the proposed site.

[89 FR 4123, Jan. 22, 2024]

§ 206.119 Financial assistance to address other needs.

(a) *Purpose.* FEMA and the State may provide financial assistance to individuals and households who are adversely affected by a major disaster and have other verifiable, documented disaster-related necessary expenses or serious needs.

(b) *Types of assistance.* (1) *Serious needs.* Necessary expenses to assist applicants who report they are displaced as a result of the disaster, who report a need for shelter as a result of the disaster, or who have other emergency disaster expenses. These needs will vary according to each applicant and FEMA will not require receipts documenting the use of this assistance. FEMA will adjust the amount of this assistance to reflect changes in the CPI for all Urban Consumers that the Department of Labor publishes.

(2) *Displacement.* Necessary expenses to assist displaced applicants with short-term living arrangements immediately following a disaster. Applicants must have registered within the 60-day or extended registration period. The award amount is based on a time period established by FEMA and approved in the State Administrative Option, as required by § 206.120(b). FEMA will not require receipts documenting the use of this assistance.

(3) *Medical and dental.* Necessary expenses to assist applicants with medical and dental costs, which may include the following:

(i) Medical service costs;

(ii) Dental service costs;

(iii) Repair or replacement of medical or dental equipment;

(iv) Loss or injury of a service animal; and

(v) Costs for prescription medicines related to eligible medical or dental services, or which need to be replaced due to the disaster.

(4) *Child care.* Necessary expenses to assist applicants with child care costs, which may include the following:

(i) Standard child care service fees, including personal assistance services that support activities of daily living for children with disabilities; and

(ii) Registration and health inventory fees for applicants who require a new child care provider.

(5) *Funeral.* Necessary expenses to assist applicants with funeral costs, which may include the following:

(i) Funeral services;

(ii) Burial or cremation; and

(iii) Other related funeral expenses.

(6) *Personal property.* Necessary expenses to assist applicants whose primary residences were damaged by the disaster with personal property costs, which may include the following:

(i) Clothing;

(ii) Household items, furnishings or appliances;

(iii) Computing devices;

(iv) Essential tools, specialized or protective clothing, computing devices, and equipment required for employment;

(v) Computing devices, uniforms, schoolbooks and supplies required for educational purposes; and

(vi) Cleaning or sanitizing any eligible personal property item.

(7) *Transportation.* Necessary expenses to assist applicants with transportation costs, which may include the following:

(i) Repairing or replacing vehicles;

(ii) Public transportation; and

(iii) Other transportation related costs or services.

(8) *Moving and storage.* Necessary expenses to assist applicants whose primary residences were damaged by the disaster with costs related to moving and storing personal property, which may include the following:

(i) Moving and storing personal property to avoid additional disaster damage;

(ii) Storage of personal property while disaster-related repairs are being made to the primary residence; and

(iii) Return of the personal property to the individual or household's primary residence.

(9) *Group Flood Insurance purchase.* Individuals identified by FEMA as eligible for assistance for flood insurable damage under the Stafford Act, 42 U.S.C. 5174, as a result of flood damage caused by a Presidentially-declared major disaster and who reside in a special flood hazard area (SFHA) may be included in a Group Flood Insurance Policy (GFIP) established under the National Flood Insurance Program (NFIP) regulations at 44 CFR 61.17.

(i) The premium for the GFIP is a necessary expense within the meaning of this section. FEMA or the State must withhold this portion of the Other Needs award and provide it to the NFIP on behalf of individuals and households who are eligible for coverage. The coverage must be equivalent to the maximum assistance amount established under the Stafford Act, 42 U.S.C. 5174.

(ii) FEMA or the State IHP staff must provide the NFIP with records of individuals who received assistance for flood-insurable losses within a SFHA and are to be insured through the GFIP. Records of applicants to be insured must be accompanied by payments to cover the premium amounts for each applicant for the 3-year policy term. The NFIP will then issue a Certificate of Flood Insurance to each applicant. Flood insurance coverage becomes effective on the 30th day following the receipt of records of GFIP insureds and their premium payments from the State or FEMA, and such coverage terminates 36 months from the inception date of the GFIP, which is 60 days from the date of the disaster declaration.

(iii) Insured applicants would not be covered if they are determined to be ineligible for coverage based on a number of exclusions established by the NFIP.

Therefore, once applicants/policyholders receive the Certificate of Flood Insurance that contains a list of the policy exclusions, they should review that list to see if they are ineligible for coverage. Those applicants who fail to do this may find that their property is, in fact, not covered by the insurance policy when the next flooding incident occurs and they file for losses. Once the applicants find that their damaged buildings, contents, or both, are ineligible for coverage, they should notify the NFIP in writing in order to have their names removed from the GFIP, and to have the flood insurance maintenance requirement expunged from the data-tracking system.

(10) *Miscellaneous.* Other miscellaneous items or services that FEMA, in consultation with the State, determines are necessary expenses and serious needs.

[89 FR 4123, Jan. 22, 2024]

§ 206.120 State administration of other needs assistance.

(a) *State administration of other needs assistance.* A State may request a grant from FEMA to provide financial assistance to individuals and households in the State under § 206.119. The State may also expend administrative costs not to exceed 5 percent of the amount of the grant in accordance with section 408(f)(1)(b) of the Stafford Act. Any State that administers the program to provide financial assistance to individuals and households must administer the program consistent with § 206.119 and the State Administrative Option and the State Administrative Plan that we describe at paragraph (b) and (c) of this section.

(b) *State administrative options.* The delivery of assistance under § 206.119 is contingent upon the State choosing an administrator for the assistance. The State may either request that FEMA administer the assistance or the State may request a grant from FEMA for State administration. The Governor or designee will execute the State Administrative Option annually. During non-disaster periods the State may submit any proposed amendments to the administrative option in writing to the FEMA Regional Administrator. FEMA shall review the request and respond to the Governor or his/her designee within 45 days of receipt of the proposed amendment;

(c) *State Administrative Plan (SAP).* The delivery of assistance by a State under this section is contingent upon approval of a SAP, which describes the procedures the State will use to deliver assistance under section 408 of the Stafford Act, 42 U.S.C. 5174, when a State requests a grant to administer Other Needs assistance. All implementation procedures must be in compliance with Federal laws and requirements, State laws and procedures, and paragraphs (c) and (d) of this section.

(1) *Timeframe for submission of SAP.* A signed SAP, or renewal, must be provided to the FEMA Regional Administrator prior to November 30 of each year. A SAP shall be effective for at least one year, and must be resubmitted in full every three years.

(2) *Renewals.* Annual updates/revisions to the SAP must be submitted by November 30 of each year for FEMA's review and approval by December 31. If the SAP does not need to be updated/revised, a letter from the State stating the SAP is still current must be submitted by November 30 to document the SAP submission requirement.

(3) *Amendments.* The State may request amendments to the SAP at any time. An amendment is effective upon signature by the FEMA Regional Administrator and the Governor or his/her designee. The State may request an amendment to the administrative plan as follows:

(i) *During non-disaster periods.* The State may submit any proposed amendments to the SAP in writing to the FEMA Regional Administrator. FEMA shall review the request and respond to the Governor or his/her designee within 45 days of receipt of the proposed amendment;

(ii) *During Presidentially-declared disasters.* The State shall submit any proposed amendments to the SAP in writing to FEMA within three days after disaster declaration. FEMA shall review the request and respond to the Governor or his/her designee within three days of receipt.

(d) *State administrative plan requirements.* The State shall develop a plan for the administration of the Other

Needs assistance that describes, at a minimum, the following items:

(1) Assignment of grant program responsibilities to State officials or agencies.

(2) Staffing Schedule that identifies the position, salary and percent of time for each staff person assigned to program administration and/or implementation.

(3) Procedures for interaction with applicants:

(i) Procedures for notifying potential applicants of the availability of the program, to include the publication of application deadlines, pertinent program descriptions, and further program information on the requirements which must be met by the applicant in order to receive assistance;

(ii) Procedures for registration and acceptance of applications, including late applications, up to the prescribed time limitations as described in § 206.112;

(iii) Procedures for damage inspection and/or other verifications.

(iv) Eligibility determinations.

(A) *Under a cooperative agreement:* The procedure for eligibility determinations when the FEMA application and inspection systems are used by the State but additional eligibility criteria are necessary to make State eligibility determinations.

(B) *Under a grant:* The procedure for eligibility determinations when the FEMA application and inspection systems are not used by the State, including the method for determination of costs for personal property and provision of a standard list for personal property items with allowable costs identified for each item.

(v) Procedures for checking compliance for mandated flood insurance in accordance with § 206.110(k);

(vi) Procedures for notifying applicants of the State's eligibility decision;

(vii) Procedures for disbursement of funds to applicants;

(viii) Procedures for applicant appeal processing. Procedures must provide for any appealable determination as identified in § 206.115(a);

(ix) Procedures for expeditious reporting of allegations of fraud, waste or abuse to DHS Office of Inspector General.

(x) Capacity to investigate allegations of waste, fraud and abuse independently if requested by DHS OIG, or in conjunction with DHS OIG.

(xi) Provisions for safeguarding the privacy of applicants and the confidentiality of information, in accordance with § 206.110(j).

(xii) Provisions for complying with § 206.116(b), Recovery of funds.

(4) Procedures for financial management, accountability and oversight.

(i) Procedures for verifying by random sample that assistance funds are meeting applicants' needs, are not duplicating assistance from other means, and are meeting flood insurance requirements.

(ii) Provisions for specifically identifying, in the accounts of the State, all Federal and State funds committed to each grant program; and for immediately returning, upon discovery, all Federal funds that are excess to program needs.

(iii) Provisions for accounting for cash in compliance with State law and procedure and the Cash Management Improvement Act of 1990, as amended.

(iv) Reports.

(A) Procedures for preparing and submitting quarterly and final Financial Status Reports in compliance with 2 CFR 200.327.

(B) Procedures for submitting Program Status Reports in compliance with paragraph (f)(2)(iii) of this section.

(C) Procedures for preparing and submitting the PSC 272, Federal Cash Transactions Report.

(v) Procedures for inventory control, including a system for identifying and tracking placement of equipment purchased with grant funds or loaned by FEMA to the State for purposes of administering the Individuals and Households Program.

(vi) Procedures for return of funds to FEMA.

(vii) State criteria and requirements for closing out Federal grants.

(viii) Process for retention of records.

(e) *Application for assistance procedure.* This section describes the procedures that must be followed by the State to submit an application to administer

the Individuals and Households Program through a Grant Award or a Cooperative Agreement.

(1) The State must submit an Other Needs assistance application to the Regional Administrator within 72 hours of the major disaster declaration before IHP assistance may be provided. FEMA will work with the State to approve the application or to modify it so it can be approved.

(2) The application shall include:

(i) Standard Form (SF) 424, Application for Federal Assistance;

(ii) FEMA Form (FF) 20–20 Budget Information—Non Construction Programs;

(iii) Copy of approved indirect cost rate from a Federal cognizant agency if indirect costs will be charged to the grant. Indirect costs will be included in the administrative costs of the grant allowed under paragraph (a) of this section; and

(iv) Disaster specific changes to the State Administrative Plan, if applicable.

(f) *Grants management oversight*—(1) *Period of assistance.* All costs must be incurred within the period of assistance, which is 18 months from the date of the disaster declaration. This period of assistance may be extended if requested in writing by the State and approved in writing by the Assistant Administrator for the Disaster Assistance Directorate. The State must include a justification for an extension of the assistance period.

(2) *Reporting requirements.* (i) The State shall provide financial status reports as required by 2 CFR 200.327.

(ii) The State shall provide copies of PSC 272, Federal Cash Transactions Report to FEMA. The PSC 272 is required quarterly by the Department of Health and Human Services from users of its SMARTLINK service.

(iii) The State shall provide weekly program status reports which include the number and dollar amount of applications approved, the amount of assistance disbursed and the number of appeals received.

(3) *Ineligible costs.* Funds provided to the State for the administrative costs of administering Other Needs assistance shall not be used to pay regular time for State employees, but may be used to pay overtime for those employees.

(4) *Closeout.* The State has primary responsibility to closeout the tasks approved under the Grant Award. In compliance with the period of assistance, as identified in the award, the State must reconcile costs and payments, resolve negative audit findings, and submit final reports within 90 days of the end of the period of assistance. The State must also provide an inventory of equipment purchased with grant funds and loaned to it by FEMA for purposes of administering IHP, which lists the items, dates, and costs of equipment purchased.

(5) *Recovery of funds.* The State is responsible for recovering assistance awards from applicants obtained fraudulently, expended for unauthorized items or services, expended for items for which assistance is received from other means, and awards made in error.

(i) Adjustments to expenditures will be made as funding is recovered and will be reported quarterly on the Financial Status Report.

(ii) A list of applicants from whom recoveries are processed will be submitted on the quarterly progress report to allow FEMA to adjust its program and financial information systems.

(iii) The State will reimburse FEMA for the Federal share of awards not recovered through quarterly financial adjustments within the 90 day close out liquidation period of the grant award.

(iv) If the State does not reimburse FEMA within the 90 day close out liquidation period, a bill for collection will be issued. FEMA will charge interest, penalties, and administrative fees on delinquent bills for collection in accordance with the Debt Collection Improvement Act. Recovered funds, interest, penalties, and fees owed to FEMA through delinquent bills for collection may be offset from other FEMA disaster assistance programs from which the State is receiving funds or future grant awards from FEMA or other Federal agencies. Debt collection procedures will be followed as outlined in 44 CFR part 11.

(6) *Audit requirements.* Pursuant to 2 CFR 200.500–200.520, uniform audit requirements apply to all grants provided under this subpart.

(7) *Document retention.* Pursuant to 2 CFR 200.333–200.337, States are required to retain records, including source documentation, to support expenditures/costs incurred against the grant award, for 3 years from the date of submission to FEMA of the Financial Status Report. The State is responsible for resolving questioned costs that may result from an audit conducted during the three-year record retention period and for returning disallowed costs from ineligible activities.

[67 FR 61452, Sept. 30, 2002; 67 FR 62896, 62897, Oct. 9, 2002; 79 FR 76085, Dec. 19, 2014; 82 FR 42, Jan. 3, 2017]

§§ 206.121–206.130 [Reserved]

Subpart E [Reserved]

Subpart F—Other Individual Assistance

§ 206.141 Disaster unemployment assistance.

The authority to implement the disaster unemployment assistance (DUA) program authorized by section 410 of the Stafford Act, and the authority to issue regulations, are currently delegated to the Secretary of Labor.

§§ 206.142–206.150 [Reserved]

§ 206.151 Food commodities.

(a) The Administrator will assure that adequate stocks of food will be ready and conveniently available for emergency mass feeding or distribution in any area of the United States which suffers a major disaster or emergency.

(b) In carrying out the responsibilities in paragraph (a) of this section, the Administrator may direct the Secretary of Agriculture to purchase food commodities in accordance with authorities prescribed in section 413(b) of the Stafford Act.

§§ 206.152–206.160 [Reserved]

§ 206.161 Relocation assistance.

Notwithstanding any other provision of law, no person otherwise eligible for any kind of replacement housing payment under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Pub. L. 91–646) shall be denied such eligibility as a result of his being unable, because of a major disaster as determined by the President, to meet the occupancy requirements set by such Act.

§§ 206.162–206.163 [Reserved]

§ 206.164 Disaster legal services.

(a) Legal services, including legal advice, counseling, and representation in non fee-generating cases, except as provided in paragraph (b) of this section, may be provided to low-income individuals who require them as a result of a major disaster. For the purpose of this section, *low-income individuals* means those disaster victims who have insufficient resources to secure adequate legal services, whether the insufficiency existed prior to or results from the major disaster. In cases where questions arise about the eligibility of an individual for legal services, the Regional Administrator or his/her representative shall make a determination.

(b) Disaster legal services shall be provided free to such individuals. Fee-generating cases shall not be accepted by lawyers operating under these regulations. For purposes of this section, a fee-generating case is one which would not ordinarily be rejected by local lawyers as a result of its lack of potential remunerative value. Where any question arises as to whether a case is fee-generating as defined in this section, the Regional Administrator or his/her representative, after any necessary consultation with local or State bar associations, shall make the determination. Any fee-generating cases shall be referred by the Regional Administrator or his/her representative to private lawyers, through existing lawyer referral services, or, where that is impractical or impossible, the Regional Administrator may provide a list of lawyers from which the disaster victim may choose. Lawyers who have rendered voluntary legal assistance under these regulations are not precluded from taking fee-generating cases referred to them in this manner while in their capacity as private lawyers.

(c) When the Regional Administrator determines after any necessary consultation with the State Coordinating

Officer, that implementation of this section is necessary, provision of disaster legal services may be accomplished by:

(1) Use of volunteer lawyers under the terms of appropriate agreements;

(2) Use of Federal lawyers, provided that these lawyers do not represent an eligible disaster victim before a court or Federal agency in a matter directly involving the United States, and further provided that these lawyers do not act in a way which will violate the standards of conduct of their respective agencies or departments;

(3) Use of private lawyers who may be paid by the Federal Emergency Management Agency when the Regional Administrator has determined that there is no other means of obtaining adequate legal assistance for qualified disaster victims; or

(4) Any other arrangement the Regional Administrator deems appropriate.

The Assistant Administrator for the Disaster Assistance Directorate shall coordinate with appropriate Federal agencies and the appropriate national, state and local bar associations, as necessary, in the implementation of the disaster legal services programs.

(d) In the event it is necessary for FEMA to pay lawyers for the provision of legal services under these regulations, the Regional Administrator, in consultation with State and local bar associations, shall determine the amount of reimbursement due to the lawyers who have provided disaster legal services at the request of the Regional Administrator. At the Regional Administrator's discretion, administrative costs of lawyers providing legal services requested by him or her may also be paid.

(e) Provision of disaster legal services is confined to the securing of benefits under the Act and claims arising out of a major disaster.

(f) Any disaster legal services shall be provided in accordance with subpart A of these regulations, Non-discrimination in disaster assistance.

§§ 206.165–206.170 [Reserved]

§ 206.171 Crisis counseling assistance and training.

(a) *Purpose.* This section establishes the policy, standards, and procedures for implementing section 416 of the Act, Crisis Counseling Assistance and Training. FEMA will look to the Director, National Institute of Mental Health (NIMH), as the delegate of the Secretary of the Department of Health and Human Services (DHHS).

(b) *Definitions.* (1) *Assistant Administrator* means the head of the Disaster Assistance Directorate; the official who approves or disapproves a request for assistance under section 416 of the Act, and is the final appeal authority.

(2) *Crisis* means any life situation resulting from a major disaster or its aftermath which so affects the emotional and mental equilibrium of a disaster victim that professional mental health counseling services should be provided to help preclude possible damaging physical or psychological effects.

(3) *Crisis counseling* means the application of individual and group treatment procedures which are designed to ameliorate the mental and emotional crises and their subsequent psychological and behavioral conditions resulting from a major disaster or its aftermath.

(4) *Federal Coordinating Officer (FCO)* means the person appointed by the Administrator or Deputy Administrator to coordinate Federal assistance in an emergency or a major disaster.

(5) *Grantee* means the State mental health agency or other local or private mental health organization which is designated by the Governor to receive funds under section 416 of the Act.

(6) *Immediate services* means those screening or diagnostic techniques which can be applied to meet mental health needs immediately after a major disaster. Funds for immediate services may be provided directly by the Regional Administrator to the State or local mental health agency designated by the Governor, prior to and separate from the regular program application process of crisis counseling assistance.

(7) *Major disaster* means any natural catastrophe (including any hurricane,

tornado, storm, high water, winddriven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm or drought), or, regardless of cause, any fire, flood, or explosion, in any part of the United States, which in the determination of the President causes damage of sufficient severity and magnitude to warrant major disaster assistance under this Act to supplement the efforts and available resources of States, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby.

(8) *Project Officer* means the person assigned by the Secretary, DHHS, to monitor a crisis counseling program, provide consultation, technical assistance, and guidance, and be the contact point within the DHHS for program matters.

(9) *Regional Administrator* means the director of a regional office of FEMA, or the Disaster Recovery Manager, as the delegate of the Regional Administrator.

(10) *Secretary* means the Secretary of DHHS or his/her delegate.

(11) *State Coordinating Officer (SCO)* means the person appointed by the Governor to act in cooperation with the FCO.

(c) *Agency policy*. (1) It is agency policy to provide crisis counseling services, when required, to victims of a major disaster for the purpose of relieving mental health problems caused or aggravated by a major disaster or its aftermath. Assistance provided under this section is short-term in nature and is provided at no cost to eligible disaster victims.

(2) The Regional Administrator and Assistant Administrator for the Disaster Assistance Directorate, in fulfilling their responsibilities under this section, shall coordinate with the Secretary.

(3) In meeting the responsibilities under this section, the Secretary or his/her delegate will coordinate with the Assistant Administrator for the Disaster Assistance Directorate.

(d) *State initiation of the crisis counseling program.* To obtain assistance under this section, the Governor or his/her authorized representative must initiate an assessment of the need for crisis counseling services within 10 days of the date of the major disaster declaration. The purpose of the assessment is to provide an estimate of the size and cost of the program needed and to determine if supplemental Federal assistance is required. The factors of the assessment must include those described in paragraphs (f)(2) (ii) and (iii) and (g)(2) (iii) and (iv) of this section.

(e) *Public or private mental health agency programs.* If the Governor determines during the assessment that because of unusual circumstances or serious conditions within the State or local mental health network, the State cannot carry out the crisis counseling program, he/she may identify a public or private mental health agency or organization to carry out the program or request the Regional Administrator to identify, with the assistance of the Secretary, such an agency or organization. Preference should be given to the extent feasible and practicable to those public and private agencies or organizations which are located in or do business primarily in the major disaster area.

(f) *Immediate services.* If, during the course of the assessment, the State determines that immediate mental health services are required because of the severity and magnitude of the disaster, and if State or local resources are insufficient to provide these services, the State may request and the Regional Administrator, upon determining that State resources are insufficient, may provide funds to the State, separate from the application process for regular program funds (described at paragraph (g) of this section).

(1) The application must be submitted to the Regional Administrator no later than 14 days following the declaration of the major disaster. This application represents the Governor's agreement and/or certification:

(i) That the requirements are beyond the State and local governments' capabilities;

(ii) That the program, if approved, will be implemented according to the plan contained in the application approved by the Regional Administrator;

(iii) To maintain close coordination with and provide reports to the Regional Administrator; and

(iv) To include mental health disaster planning in the State's emergency plan prepared under title II of the Stafford Act.

(2) The application must include:

(i) The geographical areas within the designated disaster area for which services will be provided;

(ii) An estimate of the number of disaster victims requiring assistance;

(iii) A description of the State and local resources and capabilities, and an explanation of why these resources cannot meet the need;

(iv) A description of response activities from the date of the disaster incident to the date of application;

(v) A plan of services to be provided to meet the identified needs; and

(vi) A detailed budget, showing the cost of proposed services separately from the cost of reimbursement for any eligible services provided prior to application.

(3) *Reporting requirements.* The State shall submit to the Regional Administrator:

(i) A mid-program report only when a regular program grant application is being prepared and submitted. This report will be included as part of the regular program grant application;

(ii) A final program report, a financial status report, and a final voucher 90 days after the last day of immediate services funding.

(4) Immediate services program funding:

(i) Shall not exceed 60 days following the declaration of the major disaster, except when a regular program grant application has been submitted;

(ii) May continue for up to 30 additional days when a regular program grant application has been submitted;

(iii) May be extended by the Regional Administrator, upon written request from the State, documenting extenuating circumstances; and

(iv) May reimburse the State for documented, eligible expenses from the date of the occurrence of the event or incurred in anticipation of and immediately preceding the disaster event which results in a declaration.

(v) Any funds granted pursuant to an immediate services program, paragraph (f) of this section, shall be expended solely for the purposes specified in the approved application and budget, these regulations, the terms and conditions of the award, and the applicable principles prescribed in 2 CFR parts 200 and 3002.

(5) *Appeals.* There are two levels of appeals. If a State submits appeals at both levels, the first appeal must be submitted early enough to allow the latter appeal to be submitted within 60 days following the date of the funding determination on the immediate services program application.

(i) The State may appeal the Regional Administrator's decision. This appeal must be submitted in writing within 60 days of the date of notification of the application decision, but early enough to allow for further appeal if desired. The appeal must include information justifying a reversal of the decision. The Regional Director shall review the material submitted, and after consultation with the Secretary, notify the State, in writing within 15 days of receipt of the appeal, of his/her decision;

(ii) The State may further appeal the Regional Administrator's decision to the Assistant Administrator for the Disaster Assistance Directorate. This appeal shall be made in writing within 60 days of the date of the Regional Administrator's notification of the decision on the immediate services application. The appeal must include information justifying a reversal of the decision. The Assistant Administrator for the Disaster Assistance Directorate, or other impartial person, shall review the material submitted, and after consultation with the Secretary and Regional Administrator, notify the State, in writing, within 15 days of receipt of the appeal, of his/her decision.

(g) *Regular program.* (1) The application must be submitted by the Governor or his/her authorized representative to the Assistant Administrator for the Disaster Assistance Directorate through the Regional Administrator, and simultaneously to the Secretary

no later than 60 days following the declaration of the major disaster. This application represents the Governor's agreement and/or certification:

(i) That the requirements are beyond the State and local governments' capabilities;

(ii) That the program, if approved, will be implemented according to the plan contained in the application approved by the Assistant Administrator for the Disaster Assistance Directorate;

(iii) To maintain close coordination with and provide reports to the Regional Administrator, the Assistant Administrator for the Disaster Assistance Directorate, and the Secretary; and

(iv) To include mental health disaster planning in the State's emergency plan prepared under title II of the Stafford Act.

(2) The application must include:

(i) Standard Form 424, Application for Federal Assistance;

(ii) The geographical areas within the designated disaster area for which services will be supplied;

(iii) An estimate of the number of disaster victims requiring assistance. This documentation of need should include the extent of physical, psychological, and social problems observed, the types of mental health problems encountered by victims, and a description of how the estimate was made;

(iv) A description of the State and local resources and capabilities, and an explanation of why these resources cannot meet the need;

(v) A plan of services which must include at a minimum:

(A) The manner in which the program will address the needs of the affected population, including the types of services to be offered, an estimate of the length of time for which mental health services will be required, and the manner in which long-term cases will be handled;

(B) A description of the organizational structure of the program, including designation by the Governor of an individual to serve as administrator of the program. If more than one agency will be delivering services, the plan to coordinate services must also be described;

(C) A description of the training program for project staff, indicating the number of workers needing such training;

(D) A description of the facilities to be utilized, including plans for securing office space if necessary to the project; and

(E) A detailed budget, including identification of the resources the State and local governments will commit to the project, proposed funding levels for the different agencies if more than one is involved, and an estimate of the required Federal contribution.

(3) *Reporting requirements.* The State shall submit the following reports to the Regional Administrator, the Secretary, and the State Coordinating Officer:

(i) Quarterly progress reports, as required by the Regional Administrator or the Secretary, due 30 days after the end of the reporting period. This is consistent with 2 CFR 200.328, Monitoring and Reporting Program Performance;

(ii) A final program report, to be submitted within 90 days after the end of the program period. This is also consistent with 2 CFR 200.328, Monitoring and Reporting Program Performance;

(iii) An accounting of funds, in accordance with 2 CFR 200.327, Financial Reporting, to be submitted with the final program report; and

(iv) Such additional reports as the Regional Administrator, Secretary, or SCO may require.

(4) Regular program funding:

(i) Shall not exceed 9 months from the date of the DHHS notice of grant award, except that upon the request of the State to the Regional Administrator and the Secretary, the Assistant Administrator for the Disaster Assistance Directorate may authorize up to 90 days of additional program period because of documented extraordinary circumstances. In limited circumstances, such as disasters of a catastrophic nature, the Assistant Administrator for the Disaster Assistance Directorate may extend the program period for more than 90 days where he or she deems it to be in the public interest.

(ii) The amount of the regular program grant award will take into consideration the Secretary's estimate of

the sum necessary to carry out the grant purpose.

(iii) Any funds granted pursuant to a regular program, paragraph (g) of this section, shall be expended solely for the purposes specified in the approved application and budget, these regulations, the terms and conditions of the award, and the applicable cost principles prescribed in subpart Q of 45 CFR part 92.

(5) *Appeals.* The State may appeal the Assistant Administrator for the Disaster Assistance Directorate 's decision, in writing, within 60 days of the date of notification of the decision. The appeal must include information justifying a reversal of the decision. The Assistant Administrator for the Disaster Assistance Directorate, or other impartial person, in consultation with the Secretary and Regional Administrator, shall review the material submitted and notify the State, in writing within 15 days of receipt of the appeal, of his/her decision.

(h) *Eligibility guidelines.* (1) For services. An individual may be eligible for crisis counseling services if he/she was a resident of the designated major disaster areas or was located in the area at the time of the disaster event and if:

(i) He/she has a mental health problem which was caused or aggravated by the major disaster or its aftermath; or

(ii) He/she may benefit from preventive care techniques.

(2) For training. (i) The crisis counseling project staff or consultants to the project are eligible for the specific instruction that may be required to enable them to provide professional mental health crisis counseling to eligible individuals;

(ii) All Federal, State, and local disaster workers responsible for assisting disaster victims are eligible for general instruction designed to enable them to deal effectively and humanely with disaster victims.

(i) *Assignment of responsibilities.* (1) The Regional Administrator shall:

(i) In the case of an immediate services program application, acknowledge receipt of the request, verify (with assistance from the Secretary) that State resources are insufficient, approve or disapprove the State's application, obligate and advance funds for this purpose, review appeals, make a determination (with assistance from the Secretary), and notify the State;

(ii) In the case of a regular program grant application:

(A) Acknowledge receipt of the request;

(B) Request the Secretary to conduct a review to determine the extent to which assistance requested by the Governor or his/her authorized representative is warranted;

(C) Considering the Secretary's recommendation, recommend approval or disapproval of the application for assistance under this section; and forward the Regional Administrator's and Secretary's recommendations and documentation to the Assistant Administrator for the Disaster Assistance Directorate;

(D) Assist the State in preliminary surveys and provide guidance and technical assistance if requested to do so; and

(E) Maintain liaison with the Secretary and look to the Secretary for program oversight and monitoring.

(2) The Secretary shall:

(i) Provide technical assistance, consultation, and guidance to the Regional Administrator in reviewing a State's application, to a State during program implementation and development, and to mental health agencies, as appropriate;

(ii) At the request of the Regional Administrator, conduct a review to verify the extent to which the requested assistance is needed and provide a recommendation on the need for supplementary Federal assistance. The review must include:

(A) A verification of the need for services with an indication of how the verification was conducted;

(B) Identification of the Federal mental health programs in the area, and the extent to which such existing programs can help alleviate the need;

(C) An identification of State, local, and private mental health resources, and the extent to which these resources can assume the workload without assistance under this section and the extent to which supplemental assistance is warranted;

(D) A description of the needs; and

(E) A determination of whether the plan adequately addresses the mental health needs;

(iii) If the application is approved, provide grant assistance to States or the designated public or private entities;

(iv) If the application is approved, monitor the progress of the program and perform program oversight;

(v) Coordinate with, and provide program reports to, the Regional Administrator, and the Assistant Administrator for the Disaster Assistance Directorate;

(vi) Make the appeal determination, for regular program grants, involving allowable costs and termination for cause as described in paragraph (j)(2) of this section;

(vii) As part of the project monitoring responsibilities, report to the Regional Administrator and Assistant Administrator for the Disaster Assistance Directorate at least quarterly on the progress of crisis counseling programs, in a report format jointly agreed upon by the Secretary and FEMA; provide special reports, as requested by the Regional Administrator, FCO, or Assistant Administrator for the Disaster Assistance Directorate;

(viii) Require progress reports and other reports from the grantee to facilitate his/her project monitoring responsibilities;

(ix) Properly account for all Federal funds made available to grantees under this section. Submit to the Assistant Administrator for the Disaster Assistance Directorate, within 120 days of completion of a program, a final accounting of all expenditures for the program and return to FEMA all excess funds. Attention is called to the reimbursement requirements of this part.

(3) The Assistant Administrator for the Disaster Assistance Directorate shall:

(i) Approve or disapprove a State's request for assistance based on recommendations of the Regional Administrator and the Secretary;

(ii) Obligate funds and authorize advances of funds to the DHHS;

(iii) Request that the Secretary designate a Project Officer;

(iv) Maintain liaison with the Secretary and Regional Administrator; and

(v) Review and make determinations on appeals, except for regular program appeals involving allowable costs and termination for cause as described in paragraph (j)(2) of this section, and notify the State of the decision.

(j) *Grant awards.* (1) Neither the approval of any application nor the award of any grant commits or obligates the United States in any way to make any additional, supplemental, continuation, or other award with respect to any approved application or portion of any approved application.

(2) Several other regulations of the DHHS apply to grants under this section. These include, but are not limited to:

45 CFR part 16—DHHS grant appeals procedures
42 CFR part 50, subpart D—PHS grant appeals procedures
45 CFR part 74—Administration of grants
45 CFR part 75—Informal grant appeals procedures (indirect cost rates and other cost allocations)
45 CFR part 80—Nondiscrimination under programs receiving Federal assistance through the DHHS (effectuation of Title VI of the Civil Rights Act of 1964)
45 CFR part 81—Practice and procedure for hearings under part 80
45 CFR part 84—Nondiscrimination on the basis of handicap in federally assisted programs
45 CFR part 86—Nondiscrimination on the basis of sex in federally assisted programs
45 CFR part 91—Nondiscrimination on the basis of age in federally assisted programs
45 CFR part 92—Uniform administrative requirements for grants and cooperative agreements to State and local governments

(k) *Federal audits.* The crisis counseling program is subject to Federal audit. The Assistant Administrator for the Disaster Assistance Directorate, the Regional Administrator, the DHS Inspector General, The Secretary, and the Comptroller General of the United States, or their duly authorized representatives, shall have access to any books, documents, papers, and records that pertain to Federal funds, equipment, and supplies received under this

section for the purpose of audit and examination.

[54 FR 11615, Mar. 21, 1989, as amended at 68 FR 9900, Mar. 3, 2003; 79 FR 76085, Dec. 19, 2014]

§§ 206.172–206.180 [Reserved]

§ 206.181 Use of gifts and bequests for disaster assistance purposes.

(a) *General.* FEMA sets forth procedures for the use of funds made possible by a bequest of funds from the late Cora C. Brown of Kansas City, Missouri, who left a portion of her estate to the United States for helping victims of natural disasters and other disasters not caused by or attributable to war. FEMA intends to use the funds, and any others that may be bequeathed under this authority, in the manner and under the conditions described below.

(b) *Purposes for awarding funds.* Money from the Cora Brown Fund may only be used to provided for disaster-related needs that have not been or will not be met by governmental agencies or any other organizations which have programs to address such needs; however, the fund is not intended to replace or supersede these programs. For example, if assistance is available from another source, including the Individual and Family Grant program and government-sponsored disaster loan assistance, then money from the Cora Brown Fund will not be available to the applicant for the same purpose. Listed below are the general categories of assistance which can be provided by the Cora Brown Fund:

(1) Disaster-related home repair and rebuilding assistance to families for permanent housing purposes, including site acquisition and development, relocation of residences out of hazardous areas, assistance with costs associated with temporary housing or permanent rehousing (e.g., utility deposits, access, transportation, connection of utilities, etc.);

(2) Disaster-related unmet needs of families who are unable to obtain adequate assistance under the Act or from other sources. Such assistance may include but is not limited to: health and safety measures; evacuation costs; assistance delineated in the Act or other Federal, State, local, or volunteer programs; hazard mitigation or floodplain management purposes; and assistance to self-employed persons (with no employees) to reestablish their businesses; and

(3) Other services which alleviate human suffering and promote the well being of disaster victims. For example, services to the elderly, to children, or to handicapped persons, such as transportation, recreational programs, provision of special ramps, or hospital or home visiting services. The funds may be provided to individual disaster victims, or to benefit a group of disaster victims.

(c) *Conditions for use of the Cora Brown Fund.* (1) The Cora Brown Fund is available only when the President declares that a major disaster or emergency exists under the Act, only in areas designated as eligible for Federal disaster assistance through notice in the FEDERAL REGISTER, and only at the discretion of the Assistant Administrator for the Disaster Assistance Directorate. The fund is limited to the initial endowment plus accrued interest, and this assistance program will cease when the fund is used up.

(2) A disaster victim normally will receive no more than $2,000 from this fund in any one declared disaster unless the Assistant Administrator for the Disaster Assistance Directorate determines that a larger amount is in the best interest of the disaster victim and the Federal Government. Funds to provide service which benefit a group may be awarded in an amount determined by the Assistant Administrator for the Disaster Assistance Directorate, based on the Regional Administrator's recommendation.

(3) The fund may not be used in a way that is inconsistent with other federally mandated disaster assistance or insurance programs, or to modify other generally applicable requirements.

(4) Funds awarded to a disaster victim may be provided by FEMA jointly to the disaster victim and to a State or local agency, or volunteer organization, to enable such an agent to assist in providing the approved assistance to an applicant. Example: Repair funds may be provided jointly to an applicant and the Mennonite Disaster Service,

who will coordinate the purchase of supplies and provide the labor.

(5) Money from this fund will not duplicate assistance for which a person is eligible from other sources.

(6) In order to comply with the Flood Disaster Protection Act of 1973 (Pub. L. 93–234), as amended, any award for acquisition or construction purposes shall carry a requirement that any adequate flood insurance policy be purchased and maintained. The Assistant Administrator for the Disaster Assistance Directorate shall determine what is adequate based on the purpose of the award.

(7) The fund shall be administered in an equitable and impartial manner without discrimination on the grounds of race, color, religion, national origin, sex, age, or economic status.

(8) Funds awarded to a disaster victim from this fund may be combined with funds from other sources.

(d) *Administrative procedures.* (1) The Assistant Administrator for the Disaster Assistance Directorate, shall be responsible for awarding funds and authorizing disbursement.

(2) The Chief Financial Officer shall be responsible for fund accountability and, in coordination with the Assistant Administrator for the Disaster Assistance Directorate, for liaison with the Department of the Treasury concerning the investment of excess money in the fund pursuant to the provisions contained in section 601 of the Act.

(3) Each FEMA Regional Administrator may submit requests to the Assistant Administrator for the Disaster Assistance Directorate on a disaster victim's behalf by providing documentation describing the needs of the disaster victim, a verification of the disaster victim's claim, a record of other assistance which has been or will be available for the same purpose, and his/her recommendation as to the items and the amount. The Assistant Administrator for the Disaster Assistance Directorate shall review the facts and make a determination. If the award amount is below $2,000, the Assistant Administrator for the Disaster Assistance Directorate may appoint a designee to have approval authority; approval authority of $2,000 or above shall be retained by the Assistant Administrator for the Disaster Assistance Directorate. The Assistant Administrator for the Disaster Assistance Directorate shall notify the Chief Financial Officer of a decision for approval, and the Chief Financial Officer shall order a check to be sent to the disaster victim (or jointly to the disaster victim and an assistance organization), through the Regional Administrator. The Assistant Administrator for the Disaster Assistance Directorate shall also notify the Regional Administrator of the decision, whether for approval or disapproval. The Regional Administrator shall notify the disaster victim in writing, identify any award as assistance from the Cora Brown Fund, and advise the recipient of appeal procedures.

(4) If the award is to be for a service to a group of disaster victims, the Regional Administrator shall submit his/her recommendation and supporting documentation to the Assistant Administrator for the Disaster Assistance Directorate (or his/her designee if the award is below $2,000), who shall review the information and make a determination. In cases of approval, the Assistant Administrator for the Disaster Assistance Directorate shall request the Chief Financial Officer to send a check to the intended recipient or provider, as appropriate. The Assistant Administrator for the Disaster Assistance Directorate shall notify the Regional Administrator of the decision. The Regional Administrator shall notify a representative of the group in writing.

(5) The Chief Financial Officer shall process requests for checks, shall keep records of disbursements and balances in the account, and shall provide the Assistant Administrator for the Disaster Assistance Directorate with quarterly reports.

(e) *Audits.* The Inspector General of DHS may audit the use of money in this account to determine whether the funds are being administered according to these regulations and whether the financial management of the account is adequate. The Inspector General shall provide his/her findings to the Administrator, for information, comments and appropriate action. A copy

shall be provided to the Chief Financial Officer for the same purpose.

§§ 206.182–206.190 [Reserved]

§ 206.191 Duplication of benefits.

(a) *Purpose.* This section establishes the policies for implementing the Stafford Act, 42 U.S.C. 5155, entitled Duplication of Benefits. This section relates to assistance for individuals and families.

(b) *Government policy.* (1) Federal agencies providing disaster assistance under the Act or under their own authorities triggered by the Act, must cooperate to prevent and rectify duplication of benefits, according to the general policy guidance of the Federal Emergency Management Agency. The agencies must establish appropriate agency policies and procedures to prevent duplication of benefits.

(2) Major disaster and emergency assistance provided to individuals and families under the Act, and comparable disaster assistance provided by States, local governments, and disaster assistance organizations, is not considered as income or a resource when determining eligibility for or benefit levels under federally funded income assistance or resource-tested programs. Examples of federally funded income assistance or resource-tested programs are the food stamp program and welfare assistance programs.

(c) *FEMA policy.* It is FEMA policy:

(1) To prevent duplication of benefits between its own programs and insurance benefits, and between its own programs and other disaster assistance. Assistance under the Act may be provided in instances where the applicant has not received other benefits to which he/she may be entitled by the time of application and if the applicant agrees to repay all duplicated assistance to the agency providing the Federal assistance;

(2) To examine a debt resulting from duplication to determine that the likelihood of collecting the debt and the best interests of the Federal Government justify taking the necessary recovery actions to remedy duplication which has occurred when other assistance has become available;

(3) To assure uniformity in preventing duplication of benefits, by consulting with other Federal agencies and by performing selected quality control reviews, that the other disaster relief agencies establish and follow policies and procedures to prevent and remedy duplication among their programs, other programs, and insurance benefits; and

(4) To coordinate the effort of agencies providing assistance so that each agency understands the prevention and remedial policies of the others and is able to fulfill its own responsibilities regarding duplication of benefits.

(d) *Guidance to prevent duplication of benefits.* (1) Delivery sequence. FEMA provides the following policy and procedural guidance to ensure uniformity in preventing duplication of benefits.

(i) Duplication occurs when an agency has provided assistance which was the primary responsibility of another agency, and the agency with primary responsibility later provides assistance. A delivery sequence establishes the order in which disaster relief agencies and organizations provide assistance. The specific sequence, in accordance with the mandates of the assistance programs, is to be generally followed in the delivery of assistance.

(ii) When the delivery sequence has been disrupted, the disrupting agency is responsible for rectifying the duplication. The delivery sequence pertains to that period of time in the recovery phase when most of the traditional disaster assistance programs are available.

(2) The delivery sequence is, in order of delivery:

(i) Volunteer agencies' emergency assistance (except expendable items such as clothes, linens, and basic kitchenware); insurance (including flood insurance);

(ii) Housing assistance pursuant to the Stafford Act, 42 U.S.C. 5174;

(iii) Other Needs assistance, pursuant to the Stafford Act, 42 U.S.C. 5174;

(iv) Small Business Administration and Department of Agriculture disaster loans;

(v) Volunteer agencies' ''additional assistance'' programs; and

(vi) The ''Cora Brown Fund.''

(3) Two significant points about the delivery sequence are that:

(i) Each assistance agency should, in turn, offer and be responsible for delivering assistance without regard to duplication with a program later in the sequence; and

(ii) The sequence itself determines what types of assistance can duplicate other assistance (i.e., a Federal program can duplicate insurance benefits, however, insurance benefits cannot duplicate the Federal assistance). An agency's position in the sequence determines the order in which it should provide assistance and what other resources it must consider before it does so.

(4) If following the delivery sequence concept would adversely affect the timely receipt of essential assistance by an individual or household, an agency may offer assistance which is the primary responsibility of another agency. There also may be cases when an agency (Agency B) delivers assistance which is normally the primary responsibility of another agency (Agency A) because Agency A has, for good cause, denied assistance. After the assistance is delivered, Agency A reopens the case. If the primary response Agency A then provides assistance, that Agency A is responsible for coordinating with Agency B to either:

(i) Assist Agency B in preventing the duplication of benefits, or

(ii) In the case where the individual or household has refused assistance from Agency A, Agency A must notify Agency B that it must recover assistance previously provided.

(e) *Program guidance*—(1) *Programs under the Act vs. other agency assistance.* (i) In making an eligibility determination, FEMA, in the case of federally operated programs, or the State, in the case of State operated programs, must determine whether assistance is the primary responsibility of another agency to provide, according to the delivery sequence; and determine whether that primary response agency can provide assistance in a timely way.

(ii) If it is determined that timely assistance can be provided by the agency with primary responsibility, refrain from providing assistance under the Act. If it is determined that assistance from the agency with primary responsibility will be delayed, assistance under the Act may be provided, but then must be recovered from the applicant when the other assistance becomes available.

(2) *Programs under the Act vs. insurance.* In making an eligibility determination, FEMA or the State must:

(i) Remind the applicant about his/her responsibility to pursue an adequate settlement. The applicant must provide information concerning insurance recoveries.

(ii) Determine whether the applicant's insurance settlement will be sufficient to cover the loss or need without disaster assistance; and

(iii) Determine whether insurance benefits (including flood insurance) will be provided in a timely way. Where flood insurance is involved, FEMA must coordinate with the Federal Insurance Administration. The purpose of this coordination is to obtain information about flood insurance coverage and settlements.

(3) *Random sample.* Each disaster assistance agency is responsible for preventing and rectifying duplication of benefits under the general authority of the Stafford Act, 42 U.S.C. 5155. To determine whether duplication has occurred and established procedures have been followed, FEMA must, within 90 days after the close of the disaster assistance program's application period, for selected disaster declarations, examine on a random sample basis, FEMA's and other government and voluntary agencies' case files and document the findings in writing.

(4) *Duplication when assistance under the Act is involved.* If duplication is discovered, FEMA must determine whether the duplicating agency followed its own remedial procedures.

(i) If the duplicating agency followed its procedures and was successful in correcting the duplication, FEMA will take no further action. If the agency was not successful in correcting the duplication, and FEMA is satisfied that the duplicating agency followed its remedial procedures, no further action will be taken.

(ii) If the duplicating agency did not follow its duplication of benefits procedures, or FEMA is not satisfied that

the procedures were followed in an acceptable manner, then FEMA must provide an opportunity for the agency to take the required corrective action. If the agency cannot fulfill its responsibilities for remedial action, FEMA must notify the recipient of the excess assistance, and after examining the debt, then as appropriate, take those recovery actions in conjunction with agency representatives for each identified case in the random sample (or larger universe, at FEMA's discretion).

(5) *Duplication when assistance under other authorities is involved.* When the random sample shows evidence that duplication has occurred and corrective action is required, FEMA must urge the duplicating agency to follow its own procedures to take corrective action, and must work with the agency toward that end. Under its authority in the Stafford Act, 42 U.S.C. 5155, FEMA must require the duplicating agency to report to FEMA on the agency's attempt to correct the duplications identified in the sample.

(f) *Recovering FEMA funds: debt collection.* Funds due to FEMA are recovered in accordance with the Department of Homeland Security's Debt Collection Regulations (6 CFR part 11—Claims) and the Federal Claims Collection Standards (Department of the Treasury—Department of Justice) (31 CFR chapter IX). Section 1216 of the Disaster Recovery Reform Act of 2018, 42 U.S.C. 5174a, also provides FEMA the authority to waive debts owed by individuals and households who received assistance under subpart D of this part.

(g) *Severability.* Any provision of this section held to be invalid or unenforceable as applied to any person or circumstance should be construed so as to continue to give the maximum effect to the provision permitted by law, including as applied to persons not similarly situated or to dissimilar circumstances, unless such holding is that the provision of this section is invalid and unenforceable in all circumstances, in which event the provision should be severable from the remainder of this section and should not affect the remainder thereof.

[54 FR 11615, Mar. 21, 1989, as amended at 67 FR 61460, Sept. 30, 2002; 74 FR 15350, Apr. 3, 2009; 89 FR 4124, Jan. 22, 2024]

§§ 206.192–206.199 [Reserved]

Subpart G—Public Assistance Project Administration

SOURCE: 55 FR 2304, Jan. 23, 1990, unless otherwise noted.

§ 206.200 General.

(a) *Purpose.* This subpart establishes procedures for the administration of Public Assistance grants approved under the provisions of the Stafford Act.

(b) *What policies apply to FEMA public assistance grants?* (1) The Stafford Act requires that we deliver eligible assistance as quickly and efficiently as possible consistent with Federal laws and regulations. We expect the recipient and the subrecipient to adhere to Stafford Act requirements and to these regulations when administering our public assistance grants.

(2) The regulations entitled ''Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards,'' published at 2 CFR parts 200 and 3002, place requirements on the State in its role as recipient and gives the recipient discretion to administer federal programs under their own procedures. We expect the recipient to:

(i) Inform subrecipients about the status of their applications, including notifications of our approvals of Project Worksheets and our estimates of when we will make payments;

(ii) Pay the full amounts due to subrecipients as soon as practicable after we approve payment, including the State contribution required in the FEMA-State Agreement; and

(iii) Pay the State contribution consistent with State laws.

[55 FR 2304, Jan. 23, 1990, as amended at 63 FR 64425, Nov. 20, 1998; 64 FR 55160, Oct. 12, 1999; 79 FR 76086, Dec. 19, 2014; 82 FR 42, Jan. 3, 2017]

§ 206.201 Definitions used in this subpart.

(a) *Applicant* means a State agency, local government, or eligible private nonprofit organization, as identified in Subpart H of this regulation, submitting an application to the recipient for assistance under the State's grant.

(b) *Emergency work* means that work which must be done immediately to save lives and to protect improved property and public health and safety, or to avert or lessen the threat of a major disaster.

(c) *Facility* means any publicly or privately owned building, works, system, or equipment, built or manufactured, or an improved and maintained natural feature. Land used for agricultural purposes is not a facility.

(d) *Grant* means an award of financial assistance. The grant award shall be based on the total eligible Federal share of all approved projects.

(e) *Hazard mitigation* means any cost effective measure which will reduce the potential for damage to a facility from a disaster event.

(f) *Host-State.* A State or Indian Tribal government that by agreement with FEMA provides sheltering and/or evacuation support to evacuees from an impact-State. An Indian Tribal government may also be referred to as a ''Host-Tribe.''

(g) *Impact-State.* The State for which the President has declared an emergency or major disaster and that, due to a need to evacuate and/or shelter affected individuals outside the State, requests such assistance from FEMA pursuant to § 206.208.

(h) *Indian Tribal government* means any federally recognized governing body of an Indian or Alaska Native Tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian Tribe under the Federally Recognized Tribe List Act of 1994, 25 U.S.C. 479a. This does not include Alaska Native corporations, the ownership of which is vested in private individuals.

(i) *Permanent work* means that restorative work that must be performed through repairs or replacement, to restore an eligible facility on the basis of its predisaster design and current applicable standards.

(j) *Predisaster design* means the size or capacity of a facility as originally designed and constructed or subsequently modified by changes or additions to the original design. It does not mean the capacity at which the facility was being used at the time the major disaster occurred if different from the most recent designed capacity.

(k) A *project* is a logical grouping of work required as a result of the declared major disaster or emergency. The scope of work and cost estimate for a project are documented on a Project Worksheet (FEMA Form 90–91).

(1) We must approve a scope of eligible work and an itemized cost estimate before funding a project.

(2) A project may include eligible work at several sites.

(l) *Project approval* means the process in which the Regional Administrator, or designee, reviews and signs an approval of work and costs on a Project Worksheet or on a batch of Project Worksheets. Such approval is also an obligation of funds to the recipient.

(m) *Recipient.* Recipient means the government to which a grant is awarded, and which is accountable for the use of the funds provided. The recipient is the entire legal entity even if only a particular component of the entity is designated in the grant award document. Generally, except as provided in § 206.202(f), the State for which the emergency or major disaster is declared is the recipient. However, an Indian Tribal government may choose to be a recipient, or it may act as a subrecipient under the State. If an Indian Tribal government is the recipient, it will assume the responsibilities of the ''recipient'' or ''State'' as described in this part with respect to administration of the Public Assistance program.

(n) *Subgrant* means an award of financial assistance under a grant by a recipient to an eligible subrecipient.

(o) *Subrecipient* means the government or other legal entity to which a subgrant is awarded and which is accountable to the recipient for the use of the funds provided.

[55 FR 2304, Jan. 23, 1990, as amended at 63 FR 64425, Nov. 20, 1998; 64 FR 55160, Oct. 12, 1999; 74 FR 60213, Nov. 20, 2009; 82 FR 43, Jan. 3, 2017]

§ 206.202 Application procedures.

(a) *General.* This section describes the policies and procedures that we use to process public assistance grants to States. Under this section the State is the recipient. As recipient you are responsible for processing subgrants to

applicants under 2 CFR parts 200 and 3002, and 44 CFR part 206, and your own policies and procedures.

(b) *Recipient.* You are the grant administrator for all funds provided under the Public Assistance grant program. Your responsibilities under this section include:

(1) Providing technical advice and assistance to eligible subrecipients;

(2) Providing State support for project identification activities to include small and large project formulation and the validation of small projects;

(3) Ensuring that all potential applicants are aware of available public assistance; and

(4) Submitting documents necessary for the award of grants.

(c) *Request for Public Assistance (Request).* The recipient must send a completed *Request* (FEMA Form 90–49) to the Regional Administrator for each applicant who requests public assistance. You must send *Requests* to the Regional Administrator within 30 days after designation of the area where the damage occurred.

(d) *Project Worksheets.* (1) An applicant's authorized local representative is responsible for representing the applicant and for ensuring that the applicant has identified all eligible work and submitted all costs for disaster-related damages for funding.

(i) We or the applicant, assisted by the State as appropriate, will prepare a Project Worksheet (FEMA Form 90–91) for each project. The Project Worksheet must identify the eligible scope of work and must include a quantitative estimate for the eligible work.

(ii) The applicant will have 60 days following its first substantive meeting with us to identify and to report damage to us.

(2) When the estimated cost of work on a project is less than $3,000, that work is not eligible and we will not approve a Project Worksheet for the project. Such $3,000 amount shall be adjusted annually to reflect changes in the Consumer Price Index for All Urban Consumers published by the Department of Labor.

(e) *Grant approval.* (1) Before we obligate any funds to the State, the recipient must complete and send to the Regional Administrator a Standard Form (SF) 424, Application for Federal Assistance, and a SF 424D, Assurances for Construction Programs. After we receive the SF 424 and SF 424D, the Regional Administrator will obligate funds to the recipient based on the approved Project Worksheets. The recipient will then approve subgrants based on the Project Worksheets approved for each applicant.

(2) When the applicant submits the Project Worksheets, we will have 45 days to obligate Federal funds. If we have a delay beyond 45 days we will explain the delay to the recipient.

(f) *Exceptions.* The following are exceptions to the procedures and time limitations outlined in this section.

(1) *Host-State Evacuation and/or Sheltering*—(i) *General.* A grant to a host-State for sheltering and/or evacuation support is available under this section when an impact-State requests direct Federal assistance for sheltering and/or evacuation support pursuant to § 206.208. To receive this grant, a host-State must enter into a FEMA–Host-State Agreement, amend its State Administrative Plan pursuant to § 206.207, and submit a Standard Form SF424 *Application for Federal Assistance* directly to FEMA to apply for reimbursement of eligible costs for evacuating and/or sheltering individuals from an impact-State. Upon award, the host-State assumes the responsibilities of the ''recipient'' or ''State'' under this part with respect to its grant award.

(ii) *Force Account Labor Costs.* For the performance of eligible evacuation and sheltering support under sections 403 or 502 of the Stafford Act, the straight-time salaries and benefits of a host-State's permanently employed personnel are eligible for reimbursement. This is an exception to § 206.228(a)(2).

(2) *Time limitations.* The Regional Administrator may extend the time limitations shown in paragraphs (c) and (d) of this section when the recipient justifies and makes a request in writing. The justification must be based on extenuating circumstances beyond the recipient's or subrecipient's control.

[64 FR 55160, Oct. 12, 1999, as amended at 74 FR 15350, Apr. 3, 2009; 74 FR 60213, Nov. 20, 2009; 79 FR 10686, Feb. 26, 2014; 79 FR 76086, Dec. 19, 2014; 82 FR 43, Jan. 3, 2017]

§ 206.203 Federal grant assistance.

(a) *General.* This section describes the types and extent of Federal funding available under State disaster assistance grants, as well as limitations and special procedures applicable to each.

(b) *Cost sharing.* All projects approved under State disaster assistance grants will be subject to the cost sharing provisions established in the FEMA-State Agreement and the Stafford Act.

(c) *Project funding*—(1) *Large projects.* When the approved estimate of eligible costs for an individual project is $1,000,000 or greater, Federal funding shall equal the Federal share of the actual eligible costs documented by a recipient. Such $1,000,000 amount shall be adjusted annually to reflect changes in the Consumer Price Index for All Urban Consumers published by the Department of Labor.

(2) *Small projects.* When the approved estimate of costs for an individual project is less than $1,000,000, Federal funding shall equal the Federal share of the approved estimate of eligible costs. Such $1,000,000 amount shall be adjusted annually as indicated in paragraph (c)(1) of this section.

(3) *Applicability date.* The dollar threshold provided in this paragraph (c) applies to project worksheets that have not been obligated as of August 3, 2022 for major disasters and emergencies declared on or after March 13, 2020.

(d) *Funding options*—(1) *Improved projects.* If a subrecipient desires to make improvements, but still restore the predisaster function of a damaged facility, the recipient's approval must be obtained. Federal funding for such improved projects shall be limited to the Federal share of the approved estimate of eligible costs.

(2) *Alternate projects.* In any case where a subrecipient determines that the public welfare would not be best served by restoring a damaged public facility or the function of that facility, the recipient may request that the Regional Administrator approve an alternate project.

(i) The alternate project option may be taken only on permanent restorative work.

(ii) Federal funding for alternate projects for damaged public facilities will be 90 percent of the Federal share of the Federal estimate of the cost of repairing, restoring, reconstructing, or replacing the facility and of management expenses.

(iii) Federal funding for alternate projects for damaged private nonprofit facilities will be 75 percent of the Federal share of the Federal estimate of the cost of repairing, restoring, reconstructing, or replacing the facility and of management expenses.

(iv) Funds contributed for alternate projects may be used to repair or expand other selected public facilities, to construct new facilities, or to fund hazard mitigation measures. These funds may not be used to pay the nonFederal share of any project, nor for any operating expense.

(v) Prior to the start of construction of any alternate project the recipient shall submit for approval by the Regional Administrator the following: a description of the proposed alternate project(s); a schedule of work; and the projected cost of the project(s). The recipient shall also provide the necessary assurances to document compliance with special requirements, including, but not limited to floodplain management, environmental assessment, hazard mitigation, protection of wetlands, and insurance.

[55 FR 2304, Jan. 23, 1990, as amended at 66 FR 22444, May 4, 2001; 73 FR 20551, Apr. 16, 2008; 79 FR 10686, Feb. 26, 2014; 82 FR 43, Jan. 3, 2017; 87 FR 47379, Aug. 3, 2022]

§ 206.204 Project performance.

(a) *General.* This section describes the policies and procedures applicable during the performance of eligible work.

(b) *Advances of funds.* Advances of funds will be made in accordance with 2 CFR 200.305.

(c) *Time limitations for completion of work*—(1) *Deadlines.* The project completion deadlines shown below are set from the date that a major disaster or emergency is declared and apply to all projects approved under State disaster assistance grants.

COMPLETION DEADLINES

Type of work	Months
Debris clearance	6
Emergency work	6

COMPLETION DEADLINES—Continued

Type of work	Months
Permanent work	18

(2) *Exceptions.* (i) The recipient may impose lesser deadlines for the completion of work under paragraph (c)(1) of this section if considered appropriate.

(ii) Based on extenuating circumstances or unusual project requirements beyond the control of the subrecipient, the recipient may extend the deadlines under paragraph (c)(1) of this section for an additional 6 months for debris clearance and emergency work and an additional 30 months, on a project by project basis for permanent work.

(d) *Requests for time extensions.* Requests for time extensions beyond the recipient's authority shall be submitted by the recipient to the Regional Administrator and shall include the following:

(1) The dates and provisions of all previous time extensions on the project; and

(2) A detailed justification for the delay and a projected completion date. The Regional Administrator shall review the request and make a determination. The recipient shall be notified of the Regional Administrator's determination in writing. If the Regional Administrator approves the request, the letter shall reflect the approved completion date and any other requirements the Regional Administrator may determine necessary to ensure that the new completion date is met. If the Regional Administrator denies the time extension request, the recipient may, upon completion of the project, be reimbursed for eligible project costs incurred only up to the latest approved completion date. If the project is not completed, no Federal funding will be provided for that project.

(e) *Cost Overruns.* (1) During the execution of approved work a subrecipient may find that the actual project costs exceed the approved Project Worksheet estimates. Such cost overruns normally fall into the following three categories:

(i) Variations in unit prices;

(ii) Change in the scope of eligible work; or

(iii) Delays in timely starts or completion of eligible work.

(2) The subrecipient must evaluate each cost overrun and, when justified, submit a request for additional funding through the recipient to the Regional Administrator for a final determination. All requests for the Regional Administrator's approval will contain sufficient documentation to support the eligibility of all claimed work and costs. The recipient must include a written recommendation when forwarding the request. The Regional Administrator will notify the recipient in writing of the final determination. FEMA will not normally review an overrun for an individual small project. The normal procedure for small projects will be that when a subrecipient discovers a significant overrun related to the total final cost for all small projects, the subrecipient may submit an appeal for additional funding in accordance with § 206.206, within 60 days following the completion of all its small projects.

(f) *Progress reports.* Progress reports will be submitted by the recipient to the Regional Administrator quarterly. The Regional Administrator and recipient shall negotiate the date for submission of the first report. Such reports will describe the status of those projects on which a final payment of the Federal share has not been made to the recipient and outline any problems or circumstances expected to result in noncompliance with the approved grant conditions.

[55 FR 2304, Jan. 23, 1990; 55 FR 5458, Feb. 15, 1990, as amended at 64 FR 55161, Oct. 12, 1999; 79 FR 76086, Dec. 19, 2014; 82 FR 43, Jan. 3, 2017]

§ 206.205 Payment of claims.

(a) *Small Projects.* Final payment of the Federal share of these projects will be made to the recipient upon approval of the Project Worksheet. The recipient will make payment of the Federal share to the subrecipient as soon as practicable after Federal approval of

funding. Before the closeout of the disaster contract, the recipient must certify that all such projects were completed in accordance with FEMA approvals and that the State contribution to the non-Federal share, as specified in the FEMA-State Agreement, has been paid to each subrecipient. Such certification is not required to specify the amount spent by a subrecipient on small projects. The Federal payment for small projects shall not be reduced if all of the approved funds are not spent to complete a project. However, failure to complete a project may require that the Federal payment be refunded.

(b) *Large projects.* (1) The recipient shall make an accounting to the Regional Administrator of eligible costs for each approved large project. In submitting the accounting the recipient shall certify that reported costs were incurred in the performance of eligible work, that the approved work was completed, that the project is in compliance with the provisions of the FEMA-State Agreement, and that payments for that project have been made in accordance with 2 CFR 200.305. Each large project shall be submitted as soon as practicable after the subrecipient has completed the approved work and requested payment.

(2) The Regional Administrator shall review the accounting to determine the eligible amount of reimbursement for each large project and approve eligible costs. If a discrepancy between reported costs and approved funding exists, the Regional Administrator may conduct field reviews to gather additional information. If discrepancies in the claim cannot be resolved through a field review, a Federal audit may be conducted. If the Regional Administrator determines that eligible costs exceed the initial approval, he/she will obligate additional funds as necessary.

[55 FR 2304, Jan. 23, 1990, as amended at 64 FR 55161, Oct. 12, 1999; 79 FR 76086, Dec. 19, 2014; 82 FR 43, Jan. 3, 2017]

§ 206.206 Appeals and arbitrations.

(a) *Definitions.* The following definitions apply to this section:

Administrator means the Administrator of the Federal Emergency Management Agency.

Amount in dispute means the difference between the amount of financial assistance sought for a Public Assistance project and the amount of financial assistance for which FEMA has determined such Public Assistance project is eligible.

Applicant has the same meaning as the definition at § 206.201(a).

Final agency determination means: (1) The decision of FEMA, if the applicant or recipient does not submit a first appeal within the time limits provided for in paragraph (b)(1)(ii)(A) of this section; or

(2) The decision of FEMA, if the applicant or recipient withdraws the pending appeal and does not file a request for arbitration within 30 calendar days of the withdrawal of the pending appeal; or

(3) The decision of the FEMA Regional Administrator, if the applicant or recipient does not submit a second appeal within the time limits provided for in paragraph (b)(2)(ii)(A) of this section.

Recipient has the same meaning as the definition at § 206.201(m).

Regional Administrator means an administrator of a regional office of FEMA, or his/her designated representative.

Rural area means an area with a population of less than 200,000 outside an urbanized area.

Urbanized area means an area that consists of densely settled territory that contains 50,000 or more people.

(b) *Appeals and arbitrations.* An eligible applicant or recipient may appeal any determination previously made related to an application for or the provision of Public Assistance according to the procedures of this section. An eligible applicant may request arbitration to dispute the eligibility for assistance or repayment of assistance.

(1) *First appeal.* The applicant must make a first appeal in writing and submit it electronically through the recipient to the Regional Administrator. The recipient must include a written recommendation on the applicant's appeal with the electronic submission of the applicant's first appeal to the Regional Administrator. The recipient may make recipient-related appeals to the Regional Administrator.

(i) *Content.* A first appeal must:

(A) Contain all documented justification supporting the applicant or recipient's position;

(B) Specify the amount in dispute, as applicable; and

(C) Specify the provisions in Federal law, regulation, or policy with which the applicant or recipient believes the FEMA determination was inconsistent.

(ii) *Time limits.* (A) The applicant may make a first appeal through the recipient within 60 calendar days from the date of the FEMA determination that is the subject of the appeal and the recipient must electronically forward to the Regional Administrator the applicant's first appeal with a recommendation within 120 calendar days from the date of the FEMA determination that is the subject of the appeal. If the applicant or the recipient do not meet their respective 60-calendar day and 120-calendar day deadlines, FEMA will deny the appeal. A recipient may make a recipient-related first appeal within 60 calendar days from the date of the FEMA determination that is the subject of the appeal and must electronically submit their first appeal to the Regional Administrator.

(B) Within 90 calendar days following receipt of a first appeal, if there is a need for additional information, the Regional Administrator will provide electronic notice to the recipient and applicant. If there is no need for additional information, then FEMA will not provide notification. The Regional Administrator will generally allow the recipient 30 calendar days to provide any additional information.

(C) The Regional Administrator will provide electronic notice of the disposition of the appeal to the applicant and recipient within 90 calendar days of receipt of the appeal or within 90 calendar days following the receipt of additional information or following expiration of the period for providing the information.

(iii) *Technical advice.* In appeals involving highly technical issues, the Regional Administrator may, at his or her discretion, submit the appeal to an independent scientific or technical person or group having expertise in the subject matter of the appeal for advice or recommendation. The period for this technical review may be in addition to other allotted time periods. Within 90 calendar days of receipt of the report, the Regional Administrator will provide electronic notice of the disposition of the appeal to the recipient and applicant.

(iv) *Effect of an appeal.* (A) FEMA will take no action to implement any determination pending an appeal decision from the Regional Administrator, subject to the exceptions in paragraph (b)(1)(iv)(B) of this section.

(B) Notwithstanding paragraph (b)(1)(iv)(A) of this section, FEMA may:

(*1*) Suspend funding (see 2 CFR 200.339);

(*2*) Defer or disallow other claims questioned for reasons also disputed in the pending appeal; or

(*3*) Take other action to recover, withhold, or offset funds if specifically authorized by statute or regulation.

(v) *Implementation.* If the Regional Administrator grants an appeal, the Regional Administrator will take appropriate implementing action(s).

(vi) *Guidance.* FEMA may issue separate guidance as necessary to supplement paragraph (b)(1) of this section.

(2) *Second appeal.* If the Regional Administrator denies a first appeal in whole or in part, the applicant may make a second appeal in writing and submit it electronically through the recipient to the Assistant Administrator for the Recovery Directorate. The recipient must include a written recommendation on the applicant's appeal with the electronic submission of the applicant's second appeal to the Assistant Administrator for the Recovery Directorate. The recipient may make recipient-related second appeals to the Assistant Administrator for the Recovery Directorate.

(i) *Content.* A second appeal must:

(A) Contain all documented justification supporting the applicant or recipient's position;

(B) Specify the amount in dispute, as applicable; and

(C) Specify the provisions in Federal law, regulation, or policy with which the applicant or recipient believes the FEMA determination was inconsistent.

(ii) *Time limits.* (A) If the Regional Administrator denies a first appeal in

whole or in part, the applicant may make a second appeal through the recipient within 60 calendar days from the date of the Regional Administrator's first appeal decision and the recipient must electronically forward to the Assistant Administrator for the Recovery Directorate the applicant's second appeal with a recommendation within 120 calendar days from the date of the Regional Administrator's first appeal decision. If the applicant or the recipient do not meet their respective 60-calendar day and 120-calendar day deadlines, FEMA will deny the appeal. If the Regional Administrator denies a recipient-related first appeal in whole or in part, the recipient may make a recipient-related second appeal within 60 calendar days from the date of the Regional Administrator's first appeal decision and the recipient must electronically submit their second appeal to the Assistant Administrator for the Recovery Directorate.

(B) Within 90 calendar days following receipt of a second appeal, if there is a need for additional information, the Assistant Administrator for the Recovery Directorate will provide electronic notice to the recipient and applicant. If there is no need for additional information, then FEMA will not provide notification. The Assistant Administrator for the Recovery Directorate will generally allow the recipient 30 calendar days to provide any additional information.

(C) The Assistant Administrator for the Recovery Directorate will provide electronic notice of the disposition of the appeal to the recipient and applicant within 90 calendar days of receipt of the appeal or within 90 calendar days following the receipt of additional information or following expiration of the period for providing the information.

(iii) *Technical advice.* In appeals involving highly technical issues, the Assistant Administrator for the Recovery Directorate may, at his or her discretion, submit the appeal to an independent scientific or technical person or group having expertise in the subject matter of the appeal for advice or recommendation. The period for this technical review may be in addition to other allotted time periods. Within 90 calendar days of receipt of the report, the Assistant Administrator for the Recovery Directorate will provide electronic notice of the disposition of the appeal to the recipient and applicant.

(iv) *Effect of an appeal.* (A) FEMA will take no action to implement any determination pending an appeal decision from the Assistant Administrator for the Recovery Directorate, subject to the exceptions in paragraph (b)(2)(iv)(B) of this section.

(B) Notwithstanding paragraph (b)(2)(iv)(A) of this section, FEMA may:

(*1*) Suspend funding (see 2 CFR 200.339);

(*2*) Defer or disallow other claims questioned for reasons also disputed in the pending appeal; or

(*3*) Take other action to recover, withhold, or offset funds if specifically authorized by statute or regulation.

(v) *Implementation.* If the Assistant Administrator for the Recovery Directorate grants an appeal, the Assistant Administrator for the Recovery Directorate will direct the Regional Administrator to take appropriate implementing action(s).

(vi) *Guidance.* FEMA may issue separate guidance as necessary to supplement paragraph (b)(2) of this section.

(3) *Arbitration*—(i) *Applicability.* An applicant may request arbitration from the Civilian Board of Contract Appeals (CBCA) if:

(A) There is a dispute of the eligibility for assistance or of the repayment of assistance arising from a major disaster declared on or after January 1, 2016; and

(B) The amount in dispute is greater than $500,000, or greater than $100,000 for an applicant for assistance in a rural area; and

(C) The Regional Administrator has denied a first appeal decision or received a first appeal but not rendered a decision within 180 calendar days of receipt.

(ii) *Limitations.* A request for arbitration is in lieu of a second appeal.

(iii) *Request for arbitration.* (A) An applicant may initiate arbitration by submitting an electronic request simultaneously to the recipient, the CBCA, and FEMA. See 48 CFR part 6106.

(B) *Time limits.* (*1*) An applicant must submit a request for arbitration within 60 calendar days from the date of the Regional Administrator's first appeal decision; or

(*2*) If the first appeal was timely submitted, and the Regional Administrator has not rendered a decision within 180 calendar days of receiving the appeal, an applicant may arbitrate the decision of FEMA. To request arbitration, the applicant must first electronically submit a withdrawal of the pending appeal simultaneously to the recipient and the FEMA Regional Administrator. The applicant must then submit a request for arbitration to the recipient, the CBCA, and FEMA within 30 calendar days from the date of the withdrawal of the pending appeal.

(C) *Content of request.* The request for arbitration must contain a written statement that specifies the amount in dispute, all documentation supporting the position of the applicant, the disaster number, and the name and address of the applicant's authorized representative or counsel.

(iv) *Expenses.* Expenses for each party will be paid by the party who incurred the expense.

(v) *Guidance.* FEMA may issue separate guidance as necessary to supplement paragraph (b)(3) of this section.

(c) *Finality of decision.* (1) A FEMA final agency determination or a decision of the Assistant Administrator for the Recovery Directorate on a second appeal constitutes a final decision of FEMA. Final decisions are not subject to further administrative review.

(2) In the alternative, a decision of the majority of the CBCA panel constitutes a final decision, binding on all parties. See 48 CFR 6106.613. Final decisions are not subject to further administrative review.

[86 FR 45683, Aug. 16, 2021]

§ 206.207 Administrative and audit requirements.

(a) *General.* Uniform administrative requirements which are set forth in 2 CFR parts 200 and 3002 apply to all disaster assistance grants and subgrants.

(b) *State administrative plan.* (1) The State shall develop a plan for the administration of the Public Assistance program that includes at a minimum, the items listed below:

(i) The designation of the State agency or agencies which will have the responsibility for program administration.

(ii) The identification of staffing functions in the Public Assistance program, the sources of staff to fill these functions, and the management and oversight responsibilities of each.

(iii) Procedures for:

(A) Notifying potential applicants of the availability of the program;

(B) Conducting briefings for potential applicants and application procedures, program eligibility guidance and program deadlines;

(C) Assisting FEMA in determining applicant eligibility;

(D) Participating with FEMA in conducting damage surveys to serve as a basis for obligations of funds to subrecipients;

(E) Participating with FEMA in the establishment of hazard mitigation and insurance requirements;

(F) Processing appeal requests, requests for time extensions and requests for approval of overruns, and for processing appeals of recipient decisions;

(G) Compliance with the administrative requirements of 2 CFR parts 200 and 3002 and 44 CFR part 206;

(H) Compliance with the audit requirements of 2 CFR parts 200 and 3002;

(I) Processing requests for advances of funds and reimbursement; and

(J) Determining staffing and budgeting requirements necessary for proper program management.

(K) Determining the reasonable percentage or amount of pass-through funds for management costs provided under 44 CFR part 207 that the recipient will make available to subrecipients, and the basis, criteria, or formula for determining the subrecipient percentage or amount.

(2) The recipient may request the Regional Administrator to provide technical assistance in the preparation of such administrative plan.

(3) In accordance with the Interim Rule published March 21, 1989, the recipient was to have submitted an administrative plan to the RD for approval by September 18, 1989. An approved plan must be on file with FEMA

before grants will be approved in a future major disaster. Thereafter, the recipient shall submit a revised plan to the Regional Administrator annually. In each disaster for which Public Assistance is included, the Regional Administrator shall request the recipient to prepare any amendments required to meet current policy guidance.

(4) The recipient shall ensure that the approved administrative plan is incorporated into the State emergency plan.

(c) *Audit*—(1) *Nonfederal audit.* For recipients or subrecipients, requirements for nonfederal audit are contained in 2 CFR parts 200 and 3002.

(2) *Federal audit.* In accordance with 2 CFR part 200 and 3002, FEMA may elect to conduct a Federal audit of the disaster assistance grant or any of the subgrants.

[55 FR 2304, Jan. 23, 1990; 55 FR 5458, Feb. 15, 1990, as amended at 72 FR 57875, Oct. 11, 2007; 74 FR 15350, Apr. 3, 2009; 79 FR 76086, Dec. 19, 2014; 82 FR 43, Jan. 3, 2017]

§ 206.208 Direct Federal assistance.

(a) *General.* When the State and local government lack the capability to perform or to contract for eligible emergency work and/or debris removal, under sections 402(1) and (4), 403, 407, 502(a)(1), (5) and (7) of the Act, the recipient may request that the work be accomplished by a Federal agency. Such assistance is subject to the cost sharing provisions outlined in § 206.203(b) of this subpart. Direct Federal assistance is also subject to the eligibility criteria contained in Subpart H of these regulations. FEMA will reimburse other Federal agencies in accordance with Subpart A of these regulations.

(b) *Requests for assistance.* All requests for direct Federal assistance shall be submitted by the recipient to the Regional Administrator and shall include:

(1) A written agreement that the State will:

(i) Provide without cost to the United States all lands, easements and rights-of-ways necessary to accomplish the approved work;

(ii) Hold and save the United States free from damages due to the requested work, and shall indemnify the Federal Government against any claims arising from such work;

(iii) Provide reimbursement to FEMA for the nonFederal share of the cost of such work in accordance with the provisions of the FEMA-State Agreement; and

(iv) Assist the performing Federal agency in all support and local jurisdictional matters.

(2) A statement as to the reasons the State and the local government cannot perform or contract for performance of the requested work.

(3) A written agreement from an eligible applicant that such applicant will be responsible for the items in subparagraph (b)(1) (i) and (ii) of this section, in the event that a State is legally unable to provide the written agreement.

(c) *Implementation.* (1) If the Regional Administrator approves the request, a mission assignment will be issued to the appropriate Federal agency. The mission assignment letter to the agency will define the scope of eligible work, the estimated cost of the eligible work and the billing period frequency. The Federal agency must not exceed the approved funding limit without the authorization of the Regional Administrator.

(2) If all or any part of the requested work falls within the statutory authority of another Federal agency, the Regional Administrator shall not approve that portion of the work. In such case, the unapproved portion of the request will be referred to the appropriate agency for action.

(3) If an impact-State requests assistance in providing evacuation and sheltering support outside an impact-State, FEMA may directly reimburse a host-State for such eligible costs through a grant to a host-State under an impact-State's declaration, consistent with § 206.202(f)(1). FEMA may award a grant to a host-State when FEMA determines that a host-State has sufficient capability to meet some or all of the sheltering and/or evacuation needs of an impact-State, and a host-State agrees in writing to provide such support to an impact-State.

(d) *Time limitation.* The time limitation for completion of work by a Federal agency under a mission assignment is 60 days after the President's

declaration. Based on extenuating circumstances or unusual project requirements, the Regional Administrator may extend this time limitation.

(e) *Project management.* (1) The performing Federal agency shall ensure that the work is completed in accordance with the Regional Administrator's approved scope of work, costs and time limitations. The performing Federal agency shall also keep the Regional Administrator and recipient advised of work progress and other project developments. It is the responsibility of the performing Federal agency to ensure compliance with applicable Federal, State and local legal requirements. A final inspection report will be completed upon termination of all direct Federal assistance work. Final inspection reports shall be signed by a representative of the performing Federal agency and the State. Once the final eligible cost is determined (including Federal agency overhead), the State will be billed for the nonFederal share of the mission assignment in accordance with the cost sharing provisions of the FEMA-State Agreement.

(2) Pursuant to the agreements provided in the request for assistance the recipient shall assist the performing Federal agency in all State and local jurisdictional matters. These matters include securing local building permits and rights of entry, control of traffic and pedestrians, and compliance with local building ordinances.

[55 FR 2304, Jan. 23, 1990, as amended at 64 FR 55161, Oct. 12, 1999; 74 FR 60214, Nov. 20, 2009; 82 FR 43, Jan. 3, 2017]

§ 206.209 Arbitration for Public Assistance determinations related to Hurricanes Katrina and Rita (Major disaster declarations DR–1603, DR–1604, DR–1605, DR–1606, and DR–1607).

(a) *Scope.* Pursuant to section 601 of the American Recovery and Reinvestment Act of 2009, Public Law 111–5, this section establishes procedures for arbitration to resolve disputed Public Assistance applications under the following major disaster declarations: DR–1603, DR–1604, DR–1605, DR–1606, and DR–1607.

(b) *Applicability.* An applicant or subrecipient (hereinafter ''applicant'' for purposes of this section) may request arbitration of a determination made by FEMA on an application for Public Assistance, provided that the total amount of the project is greater than $500,000, and provided that:

(1) the applicant is eligible to file an appeal under § 206.206; or

(2) the applicant had a first or second level appeal pending with FEMA pursuant to § 206.206 on or after February 17, 2009.

(c) *Governing rules.* An applicant that elects arbitration agrees to abide by this section and applicable guidance. The arbitration will be conducted pursuant to procedure established by the arbitration panel.

(d) *Limitations*—(1) *Election of remedies.* A request for arbitration under this section is in lieu of filing or continuing an appeal under § 206.206.

(2) *Final agency action under § 206.206.* Arbitration is not available for any matter that obtained final agency action by FEMA pursuant to § 206.206 prior to February 17, 2009. Arbitration is not available for determinations for which the applicant failed to file a timely appeal under the provisions of § 206.206 prior to August 31, 2009, or for determinations which received a decision on a second appeal from FEMA prior to February 17, 2009.

(e) *Request for arbitration*—(1) *Content of request.* The request for arbitration must contain a written statement and all documentation supporting the position of the applicant, the disaster number, and the name and address of the applicant's authorized representative or counsel.

(2) *Submission by the applicant to the recipient, the FEMA Regional Administrator, and the arbitration administrator.* An applicant under paragraph (b)(1) of this section must submit its request for arbitration in writing simultaneously to the recipient, the FEMA Regional Administrator, and the arbitration administrator within 30 calendar days after receipt of notice of the determination that is the subject of the arbitration request or by September 30, 2009, whichever is later. An applicant under paragraph (b)(2) of this section must make a request for arbitration in writing and, if FEMA has not issued a

decision on the appeal, submit a withdrawal of the pending appeal, simultaneously to the recipient, the FEMA Regional Administrator, and the arbitration administrator by October 30, 2009.

(3) *Submission by the recipient to the arbitration administrator and FEMA.* Within 15 calendar days of receipt of the applicant's request for arbitration, the recipient must forward the name and address of the recipient's authorized representative or counsel, and may forward a written recommendation in support or opposition to the applicant's request for arbitration, simultaneously to the FEMA Regional Administrator, the arbitration administrator, and the applicant.

(4) *Submission of FEMA's response.* FEMA will submit a memorandum in support of its position, a copy of the Project Worksheet(s), and any other supporting information, as well as the name and address of its authorized representative or counsel, simultaneously to the arbitration administrator, the recipient, and the applicant, within 30 calendar days of receipt of the applicant's request for arbitration.

(5) *Process for submissions.* When submitting a request for arbitration, the applicant should describe its claim with sufficient detail so that the circumstances of the dispute are clear to the arbitration panel. All papers, notices, or other documents submitted to the arbitration administrator under this section by the applicant, the recipient, or FEMA will be served on each party's authorized representative or counsel. The submitting party will make such service by courier or overnight delivery service (such as Federal Express, DHL, United Parcel Service, or the United States Postal Service overnight delivery), addressed to the party, representative, or counsel, as applicable, at its last known address.

(f) *Selection of arbitration panel.* The arbitration administrator will select the arbitration panel for arbitration and notify the applicant, FEMA, and the recipient of the names and identities of the arbitrators selected for the panel.

(g) *Preliminary conference.* The arbitration panel will hold a preliminary conference with the parties and/or representatives of the parties within 10 business days of the panel's receipt of FEMA's response to the request for arbitration. The panel and the parties will discuss the future conduct of the arbitration, including clarification of the disputed issues, request for disqualification of an arbitrator (if applicable), and any other preliminary matters. The date and place of any oral hearing will be set at the preliminary conference. The preliminary conference will be conducted by telephone.

(h) *Hearing*—(1) *Request for hearing.* The panel will provide the applicant and FEMA with an opportunity to make an oral presentation on the substance of the applicant's claim in person, by telephone conference, or other means during which all the parties may simultaneously hear all other participants. If the applicant or FEMA would like to request an oral hearing, the request must be made no later than the preliminary conference.

(2) *Location of hearing.* If an in-person hearing is authorized, it will be held at a hearing facility of the arbitration panel's choosing.

(3) *Conduct of hearing.* Each party may present its position through oral presentations by individuals designated in advance of the hearing. These presentations may reference documents submitted pursuant to paragraph (e) of this section; the parties may not provide additional paper submissions at the hearing. If the panel deems it appropriate or necessary, it may request additional written materials from either or both parties or seek the advice or expertise of independent scientific or technical subject matter experts.

(4) *Closing of hearing.* The panel will inquire of each party whether it has any further argument. When satisfied that the record is complete, the panel will declare the hearing closed, unless a post-hearing submission of additional information or a memorandum of law is to be provided in accordance with this paragraph. The hearing will be declared closed as of the date set by the panel for the submission of the additional information or the memorandum of law.

(5) *Time limits.* The panel will endeavor to hold the hearing within 60 calendar days of the preliminary conference.

(6) *Postponement.* The arbitration panel may postpone a hearing upon agreement of the parties, or upon request of a party for good cause shown. Within 10 business days of the postponement, the arbitration panel will notify the parties of the rescheduled date of the hearing.

(7) *Record of the hearing.* There will be no recording of the hearing, unless a party specifically requests and arranges for such recording at its own expense.

(8) *Post-hearing submission of additional information.* A party may file with the arbitration panel additional information or a memorandum of law after the hearing upon the arbitration panel's request or upon the request of one of the parties with the panel's consent. The panel will set the time for submission of the additional information or the memorandum of law.

(9) *Reopening of hearing.* The hearing may be reopened on the panel's initiative under compelling circumstances at any time before the decision is made.

(i) *Review by the arbitration panel*—(1) *Determination of timeliness.* Upon notification by FEMA, or on its own initiative, the arbitration panel will determine whether the applicant timely filed a request for arbitration.

(2) *Substantive review.* The arbitration panel will consider all relevant written materials provided by the applicant, the recipient, and FEMA, as well as oral presentations, if any. If the panel deems it appropriate or necessary, it may request additional written materials from either or both parties or seek the advice or expertise of independent scientific or technical subject matter experts.

(j) *Ex parte communications.* No party and no one acting on behalf of any party will engage in ex parte communications with a member of the arbitration panel. If a party or someone acting on behalf of any party engages in ex parte communications with a member of the arbitration panel, the party that engaged in such communication will provide a summary or a transcript of the entire communication to the other parties.

(k) *Decision*—(1) *Time limits.* The panel will make every effort to issue a written decision within 60 calendar days after the panel declares the hearing closed pursuant to paragraph (h)(4) of this section, or, if a hearing was not requested, within 60 calendar days following the receipt of FEMA's response to the request for arbitration. A decision of the panel may take longer than 60 calendar days if the arbitration involves a highly technical or complex matter.

(2) *Form and content.* The decision of the panel will be in writing and signed by each member of the panel. The panel will issue a reasoned decision that includes a brief and informal discussion of the factual and legal basis for the decision.

(3) *Finality of decision.* A decision of the majority of the panel shall constitute a final decision, binding on all parties. Final decisions are not subject to further administrative review. Final decisions are not subject to judicial review, except as permitted by 9 U.S.C. 10.

(4) *Delivery of decision.* Notice and delivery of the decision will be by facsimile or other electronic means and by regular mail to each party or its authorized representative or counsel.

(l) *Costs.* FEMA will pay the fees associated with the arbitration panel, the costs of any expert retained by the panel, and the arbitration facility costs, if any. The expenses for each party, including attorney's fees, representative fees, copying costs, costs associated with attending any hearing, or any other fees not listed in this paragraph will be paid by the party incurring such costs.

(m) *Guidance.* FEMA may issue separate guidance as necessary to supplement this section.

[74 FR 44767, Aug. 31, 2009, as amended at 82 FR 43, Jan. 3, 2017]

§§ 206.210–206.219 [Reserved]

Subpart H—Public Assistance Eligibility

SOURCE: 55 FR 2307, Jan. 23, 1990, unless otherwise noted.

§ 206.220 General.

This subpart provides policies and procedures for determinations of eligibility of applicants for public assistance, eligibility of work, and eligibility of costs for assistance under sections 402, 403, 406, 407, 418, 419, 421(d), 502, and 503 of the Stafford Act. Assistance under this subpart must also conform to requirements of 44 CFR part 201, Mitigation Planning, 44 CFR part 206, subparts G—Public Assistance Project Administration, I—Public Assistance Insurance Requirements, J—Coastal Barrier Resources Act, and M—Minimum Standards, 44 CFR part 9—Floodplain Management, and other applicable environmental and historic preservation laws, regulations, Executive Orders, and agency policy.

[81 FR 56533, Aug. 22, 2016]

§ 206.221 Definitions.

(a) *Educational institution* means:

(1) Any elementary school as defined by section 801(c) of the Elementary and Secondary Education Act of 1965; or

(2) Any secondary school as defined by section 801(h) of the Elementary and Secondary Education Act of 1965; or

(3) Any institution of higher education as defined by section 1201 of the Higher Education Act of 1965.

(b) *Force account* means an applicant's own labor forces and equipment.

(c) *Immediate threat* means the threat of additional damage or destruction from an event which can reasonably be expected to occur within five years.

(d) *Improved property* means a structure, facility or item of equipment which was built, constructed or manufactured. Land used for agricultural purposes is not improved property.

(e) *Private nonprofit facility* means any private nonprofit educational, utility, emergency, medical, or custodial care facility, including a facility for the aged or disabled, and other facility providing essential governmental type services to the general public, and such facilities on Indian reservations. Further definition is as follows:

(1) *Educational facilities* means classrooms plus related supplies, equipment, machinery, and utilities of an educational institution necessary or appropriate for instructional, administrative, and support purposes, but does not include buildings, structures and related items used primarily for religious purposes or instruction.

(2) *Utility* means buildings, structures, or systems of energy, communication, water supply, sewage collection and treatment, or other similar public service facilities.

(3) *Irrigation facility* means those facilities that provide water for essential services of a governmental nature to the general public. Irrigation facilities include water for fire suppression, generating and supplying electricity, and drinking water supply; they do not include water for agricultural purposes.

(4) *Emergency facility* means those buildings, structures, equipment, or systems used to provide emergency services, such as fire protection, ambulance, or rescue, to the general public, including the administrative and support facilities essential to the operation of such emergency facilities even if not contiguous.

(5) *Medical facility* means any hospital, outpatient facility, rehabilitation facility, or facility for long term care as such terms are defined in section 645 of the Public Health Service Act (42 U.S.C. 2910) and any similar facility offering diagnosis or treatment of mental or physical injury or disease, including the administrative and support facilities essential to the operation of such medical facilities even if not contiguous.

(6) *Custodial care facility* means those buildings, structures, or systems including those for essential administration and support, which are used to provide institutional care for persons who require close supervision and some physical constraints on their daily activities for their self-protection, but do not require day-to-day medical care.

(7) *Other essential governmental service facility* means museums, zoos, community centers, libraries, homeless shelters, senior citizen centers, rehabilitation facilities, shelter workshops and facilities which provide health and safety services of a governmental nature. All such facilities must be open to the general public.

(f) *Private nonprofit organization* means any nongovernmental agency or entity that currently has:

(1) An effective ruling letter from the U.S. Internal Revenue Service, granting tax exemption under sections 501(c), (d), or (e) of the Internal Revenue Code of 1954, or

(2) Satisfactory evidence from the State that the nonrevenue producing organization or entity is a nonprofit one organized or doing business under State law.

(g) *Public entity* means an organization formed for a public purpose whose direction and funding are provided by one or more political subdivisions of the State.

(h) *Public facility* means the following facilities owned by a State or local government: any flood control, navigation, irrigation, reclamation, public power, sewage treatment and collection, water supply and distribution, watershed development, or airport facility; any non-Federal aid, street, road, or highway; and any other public building, structure, or system, including those used for educational, recreational, or cultural purposes; or any park.

(i) *Standards* means codes, specifications or standards required for the construction of facilities.

[55 FR 2307, Jan. 23, 1990, as amended at 58 FR 47994, Sept. 14, 1993; 66 FR 22445, May 4, 2001]

§ 206.222 Applicant eligibility.

The following entities are eligible to apply for assistance under the State public assistance grant:

(a) State and local governments.

(b) Private non-profit organizations or institutions which own or operate a private nonprofit facility as defined in § 206.221(e).

(c) Indian tribes or authorized tribal organizations and Alaska Native villages or organizations, but not Alaska Native Corporations, the ownership of which is vested in private individuals.

[55 FR 2307, Jan. 23, 1990, as amended at 82 FR 44, Jan. 3, 2017]

§ 206.223 General work eligibility.

(a) *General.* To be eligible for financial assistance, an item of work must:

(1) Be required as the result of the emergency or major disaster event;

(2) Be located within the designated area of a major disaster or emergency declaration, except that sheltering and evacuation activities may be located outside the designated area; and

(3) Be the legal responsibility of an eligible applicant.

(b) *Private nonprofit facilities.* To be eligible, all private nonprofit facilities must be owned and operated by an organization meeting the definition of a private nonprofit organization [see § 206.221(f)].

(c) *Public entities.* Facilities belonging to a public entity may be eligible for assistance when the application is submitted through the State or a political subdivision of the State.

(d) *Facilities serving a rural community or unincorporated town or village.* To be eligible for assistance, a facility not owned by an eligible applicant, as defined in § 206.222, must be owned by a private nonprofit organization; and provide an essential governmental service to the general public. Applications for these facilities must be submitted through a State or political subdivision of the State.

(e) *Negligence.* No assistance will be provided to an applicant for damages caused by its own negligence. If negligence by another party results in damages, assistance may be provided, but will be conditioned on agreement by the applicant to cooperate with FEMA in all efforts necessary to recover the cost of such assistance from the negligent party.

[55 FR 2307, Jan. 23, 1990, as amended at 71 FR 40027, July 14, 2006; 74 FR 60214, Nov. 20, 2009]

§ 206.224 Debris removal.

(a) *Public interest.* Upon determination that debris removal is in the public interest, the Regional Administrator may provide assistance for the removal of debris and wreckage from publicly and privately owned lands and waters. Such removal is in the public interest when it is necessary to:

(1) Eliminate immediate threats to life, public health, and safety; or

(2) Eliminate immediate threats of significant damage to improved public or private property; or

(3) Ensure economic recovery of the affected community to the benefit of the community-at-large; or

(4) Mitigate the risk to life and property by removing substantially damaged structures and associated appurtenances as needed to convert property acquired through a FEMA hazard mitigation program to uses compatible with open space, recreation, or wetlands management practices. Such removal must be completed within two years of the declaration date, unless the Assistant Administrator for the Disaster Assistance Directorate extends this period.

(b) *Debris removal from private property.* When it is in the public interest for an eligible applicant to remove debris from private property in urban, suburban and rural areas, including large lots, clearance of the living, recreational and working area is eligible except those areas used for crops and livestock or unused areas.

(c) *Assistance to individuals and private organizations.* No assistance will be provided directly to an individual or private organization, or to an eligible applicant for reimbursement of an individual or private organization, for the cost of removing debris from their own property. Exceptions to this are those private nonprofit organizations operating eligible facilities.

[55 FR 2307, Jan. 23, 1990, as amended at 66 FR 33901, June 26, 2001]

§ 206.225 Emergency work.

(a) *General.* (1) Emergency protective measures to save lives, to protect public health and safety, and to protect improved property are eligible.

(2) In determining whether emergency work is required, the Regional Administrator may require certification by local State, and/or Federal officials that a threat exists, including identification and evaluation of the threat and recommendations of the emergency work necessary to cope with the threat.

(3) In order to be eligible, emergency protective measures must:

(i) Eliminate or lessen immediate threats to live, public health or safety; or

(ii) Eliminate or lessen immediate threats of significant additional damage to improved public or private property through measures which are cost effective.

(b) *Emergency access.* An access facility that is not publicly owned or is not the direct responsibility of an eligible applicant for repair or maintenance may be eligible for emergency repairs or replacement provided that emergency repair or replacement of the facility economically eliminates the need for temporary housing. The work will be limited to that necessary for the access to remain passable through events which can be considered an immediate threat. The work must be performed by an eligible applicant and will be subject to cost sharing requirements.

(c) *Emergency communications.* Emergency communications necessary for the purpose of carrying out disaster relief functions may be established and may be made available to State and local government officials as deemed appropriate. Such communications are intended to supplement but not replace normal communications that remain operable after a major disaster. FEMA funding for such communications will be discontinued as soon as the needs have been met.

(d) *Emergency public transportation.* Emergency public transportation to meet emergency needs and to provide transportation to public places and such other places as necessary for the community to resume its normal pattern of life as soon as possible is eligible. Such transportation is intended to supplement but not replace predisaster transportation facilities that remain operable after a major disaster. FEMA funding for such transportation will be discontinued as soon as the needs have been met.

§ 206.226 Restoration of damaged facilities.

Work to restore eligible facilities on the basis of the design of such facilities as they existed immediately prior to the disaster and in conformity with the following is eligible:

(a) *Assistance under other Federal agency (OFA) programs.* (1) Generally, disaster assistance will not be made available under the Stafford Act when another Federal agency has specific authority to restore facilities damaged or destroyed by an event which is declared a major disaster.

(2) An exception to the policy described in paragraph (a)(1) of this section exists for public elementary and secondary school facilities which are otherwise eligible for assistance from the Department of Education (ED) under 20 U.S.C. 241–1 and 20 U.S.C. 646. Such facilities are also eligible for assistance from FEMA under the Stafford Act, and recipients shall accept applications from local educational agencies for assistance under the Stafford Act.

(3) The exception does not cover payment of increased current operating expenses or replacement of lost revenues as provided in 20 U.S.C. 241–1(a) and implemented by 34 CFR 219.14. Such assistance shall continue to be granted and administered by the Department of Education.

(b) *Mitigation planning.* In order to receive assistance under this section, the State or Indian Tribal government applying to FEMA as a recipient must have in place a FEMA approved State or Tribal Mitigation Plan, as applicable, in accordance with 44 CFR part 201.

(c) *Private nonprofit facilities.* Eligible private nonprofit facilities may receive funding under the following conditions:

(1) The facility provides critical services, which include power, water (including water provided by an irrigation organization or facility in accordance with § 206.221(e)(3)), sewer services, wastewater treatment, communications, emergency medical care, fire department services, emergency rescue, and nursing homes; or

(2) The private nonprofit organization not falling within the criteria of § 206.226(c)(1) has applied for a disaster loan under section 7(b) of the Small Business Act (15 U.S.C.636(b)) and

(i) The Small Business Administration has declined the organization's application; or

(ii) Has eligible damages greater than the maximum amount of the loan for which it is eligible, in which case the excess damages are eligible for FEMA assistance.

(d) *Standards.* For the costs of Federal, State, and local repair or replacement standards which change the predisaster construction of facility to be eligible, the standards must:

(1) Apply to the type of repair or restoration required; (Standards may be different for new construction and repair work)

(2) Be appropriate to the predisaster use of the facility;

(3)(i) Be found reasonable, in writing, and formally adopted and implemented by the State or local government on or before the disaster declaration date or be a legal Federal requirement applicable to the type of restoration.

(ii) This paragraph (d) applies to local governments on January 1, 1999 and to States on January 1, 2000. Until the respective applicability dates, the standards must be in writing and formally adopted by the applicant prior to project approval or be a legal Federal or State requirement applicable to the type of restoration.

(4) Apply uniformly to all similar types of facilities within the jurisdiction of owner of the facility; and

(5) For any standard in effect at the time of a disaster, it must have been enforced during the time it was in effect.

(e) *Hazard mitigation.* In approving grant assistance for restoration of facilities, the Regional Administrator may require cost effective hazard mitigation measures not required by applicable standards. The cost of any requirements for hazard mitigation placed on restoration projects by FEMA will be an eligible cost for FEMA assistance.

(f) *Repair vs. replacement.* (1) A facility is considered repairable when disaster damages do not exceed 50 percent of the cost of replacing a facility to its predisaster condition, and it is feasible to repair the facility so that it can perform the function for which it was being used as well as it did immediately prior to the disaster.

(2) If a damaged facility is not repairable in accordance with paragraph (f)(1) of this section, approved restorative work may include replacement of the facility. The applicant may elect to perform repairs to the facility, in lieu of replacement, if such work is in conformity with applicable standards. However, eligible costs shall be limited to the less expensive of repairs or replacement.

(3) An exception to the limitation in paragraph (d)(2) of this section may be allowed for facilities eligible for or on

the National Register of Historic Properties. If an applicable standard requires repair in a certain manner, costs associated with that standard will be eligible.

(g) *Relocation*. (1) The Regional Administrator may approve funding for and require restoration of a destroyed facility at a new location when:

(i) The facility is and will be subject to repetitive heavy damage;

(ii) The approval is not barred by other provisions of title 44 CFR; and

(iii) The overall project, including all costs, is cost effective.

(2) When relocation is required by the Regional Administrator, eligible work includes land acquisition and ancillary facilities such as roads and utilities, in addition to work normally eligible as part of a facility reconstruction. Demolition and removal of the old facility is also an eligible cost.

(3) When relocation is required by the Regional Administrator, no future funding for repair or replacement of a facility at the original site will be approved, except those facilities which facilitate an open space use in accordance with 44 CFR part 9.

(4) When relocation is required by the Regional Administrator, and, instead of relocation, the applicant requests approval of an alternate project [see § 206.203(d)(2)], eligible costs will be limited to 90 percent of the estimate of restoration at the original location excluding hazard mitigation measures.

(5) If relocation of a facility is not feasible or cost effective, the Regional Administrator shall disapprove Federal funding for the original location when he/she determines in accordance with 44 CFR parts 9, 10, 201, or subpart M of this part 206, that restoration in the original location is not allowed. In such cases, an alternative project may be applied for.

(h) *Equipment and furnishings*. If equipment and furnishings are damaged beyond repair, comparable items are eligible as replacement items.

(i) *Library books and publications*. Replacement of library books and publications is based on an inventory of the quantities of various categories of books or publications damaged or destroyed. Cataloging and other work incidental to replacement are eligible.

(j) *Beaches*. (1) Replacement of sand on an unimproved natural beach is not eligible.

(2) Improved beaches. Work on an improved beach may be eligible under the following conditions:

(i) The beach was constructed by the placement of sand (of proper grain size) to a designed elevation, width, and slope; and

(ii) A maintenance program involving periodic renourishment of sand must have been established and adhered to by the applicant.

(k) *Restrictions*—(1) *Alternative use facilities*. If a facility was being used for purposes other than those for which it was designed, restoration will only be eligible to the extent necessary to restore the immediate predisaster alternate purpose.

(2) *Inactive facilities*. Facilities that were not in active use at the time of the disaster are not eligible except in those instances where the facilities were only temporarily inoperative for repairs or remodeling, or where active use by the applicant was firmly established in an approved budget or the owner can demonstrate to FEMA's satisfaction an intent to begin use within a reasonable time.

[55 FR 2307, Jan. 23, 1990, as amended at 58 FR 55022, Oct. 25, 1993; 63 FR 5897, Feb. 5, 1998; 66 FR 22445, May 4, 2001; 67 FR 8854, Feb. 26, 2002; 68 FR 61371, Oct. 28, 2003; 69 FR 55097, Sept. 13, 2004; 74 FR 15350, Apr. 3, 2009; 74 FR 47482, Sept. 16, 2009; 82 FR 44, Jan. 3, 2017]

§ 206.227 Snow assistance.

Emergency or major disaster declarations based on snow or blizzard conditions will be made only for cases of record or near record snowstorms, as established by official government records. Federal assistance will be provided for all costs eligible under 44 CFR 206.225 for a specified period of time which will be determined by the circumstances of the event.

[62 FR 45330, Aug. 27, 1997]

§ 206.228 Allowable costs.

General policies for determining allowable costs are established in2 CFR 200, subpart E. Exceptions to those policies as allowed in 2 CFR 200, subpart E and 2 CFR 200.102 are explained below.

(a) *Eligible direct costs*—(1) *Applicant-owned equipment.* Reimbursement for ownership and operation costs of applicant-owned equipment used to perform eligible work shall be provided in accordance with the following guidelines:

(i) *Rates established under State guidelines.* In those cases where an applicant uses reasonable rates which have been established or approved under State guidelines, in its normal daily operations, reimbursement for applicant-owned equipment which has an hourly rate of $75 or less shall be based on such rates. Reimbursement for equipment which has an hourly rate in excess of $75 shall be determined on a case by case basis by FEMA.

(ii) *Rates established under local guidelines.* Where local guidelines are used to establish equipment rates, reimbursement will be based on those rates or rates in a Schedule of Equipment Rates published by FEMA, whichever is lower. If an applicant certifies that its locally established rates do not reflect actual costs, reimbursement may be based on the FEMA Schedule of Equipment Rates, but the applicant will be expected to provide documentation if requested. If an applicant wishes to claim an equipment rate which exceeds the FEMA Schedule, it must document the basis for that rate and obtain FEMA approval of an alternate rate.

(iii) *No established rates.* The FEMA Schedule of Equipment Rates will be the basis for reimbursement in all cases where an applicant does not have established equipment rates.

(2) *Force Account Labor Costs.* The straight- or regular-time salaries and benefits of a recipient's or subrecipient's permanently employed personnel are:

(i) Eligible in calculating the cost of eligible permanent repair, restoration, and replacement of facilities under section 406 of the Stafford Act;

(ii) Eligible, at the Administrator's discretion, in calculating the cost of eligible debris removal work under sections 403(a)(3)(A), 502(a)(5), and 407 of the Stafford Act for a period not to exceed 30 consecutive calendar days, provided the recipient's or subrecipient's permanently employed personnel are dedicated solely to eligible debris removal work for any major disaster or emergency declared by the President on or after October 27, 2012, in response to Hurricane Sandy; and

(iii) Not eligible in calculating the cost of other eligible emergency protective measures under sections 403 and 502 of the Stafford Act, except for those costs associated with host state evacuation and sheltering, as established in § 206.202.

(3) Administrative and management costs for major disasters and emergencies will be paid in accordance with 44 CFR part 207.

(b) [Reserved]

[55 FR 2307, Jan. 23, 1990, as amended at 58 FR 47996, Sept. 14, 1993; 63 FR 64426, Nov. 20, 1998; 64 FR 55161, Oct. 12, 1999; 72 FR 57875, Oct. 11, 2007; 77 FR 67290, Nov. 9, 2012; 82 FR 44, Jan. 3, 2017]

§§ 206.229–206.249 [Reserved]

Subpart I—Public Assistance Insurance Requirements

SOURCE: 56 FR 64560, Dec. 11, 1991, unless otherwise noted.

§ 206.250 General.

(a) Sections 311 and 406(d) of the Stafford Act, and the Flood Disaster Protection Act of 1973, Public Law 93–234, set forth certain insurance requirements which apply to disaster assistance provided by FEMA. The requirements of this subpart apply to all assistance provided pursuant to section 406 of the Stafford Act with respect to any major disaster declared by the President after November 23, 1988.

(b) Insurance requirements prescribed in this subpart shall apply equally to private nonprofit (PNP) facilities which receive assistance under section 406 of the Act. PNP organizations shall submit the necessary documentation and assurances required by this subpart to the recipient.

(c) Actual and anticipated insurance recoveries shall be deducted from otherwise eligible costs, in accordance with this subpart.

(d) The full coverage available under the standard flood insurance policy from the National Flood Insurance Program (NFIP) will be subtracted from otherwise eligible costs for a building and its contents within the

special flood hazard area in accordance with § 206.252.

(e) The insurance requirements of this subpart should not be interpreted as a substitute for various hazard mitigation techniques which may be available to reduce the incidence and severity of future damage.

[56 FR 64560, Dec. 11, 1991, as amended at 82 FR 44, Jan. 3, 2017]

§ 206.251 Definitions.

(a) *Assistance* means any form of a Federal grant under section 406 of the Stafford Act to replace, restore, repair, reconstruct, or construct any facility and/or its contents as a result of a major disaster.

(b) *Building* means a walled and roofed structure, other than a gas, or liquid storage tank, that is principally above ground and affixed to a permanent site, as well as a manufactured home on a permanent foundation.

(c) *Community* means any State or political subdivision thereof, or any Indian tribe or authorized tribal organization, or Alaskan Native Village or authorized native organization which has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction.

(d) *National Flood Insurance Program* (NFIP) means the program authorized by the National Flood Insurance Act of 1968, as amended, 42 U.S.C. 4001 *et seq*.

(e) *Special flood hazard area* means an area having special flood, mudslide, and/or flood-related erosion hazards, and shown on a Flood Hazard Boundary map (FHBM) or the Flood Insurance Rate Map (FIRM) issued by FEMA as Zone A, AO, A1–30, AE, A99, AH, VO, V1–30 VE, V, M, or E. ''Special flood hazard area'' is synonymous with ''special hazard area'', as defined in 44 CFR part 59.

(f) *Standard Flood Insurance Policy* means the flood insurance policy issued by the Federal Insurance Administrator, or by a Write-Your-Own Company pursuant to 44 CFR 62.23.

§ 206.252 Insurance requirements for facilities damaged by flood.

(a) Where an insurable building damaged by flooding is located in a special flood hazard area identified for more than one year by the Administrator, assistance pursuant to section 406 of the Stafford Act shall be reduced. The amount of the reduction shall be the maximum amount of the insurance proceeds which would have been received had the building and its contents been fully covered by a standard flood insurance policy.

(b) The reduction stated above shall not apply to a PNP facility which could not be insured because it was located in a community not participating in the NFIP. However, the provisions of the Flood Disaster Protection Act of 1973 prohibit approval of assistance for the PNP unless the community agrees to participate in the NFIP within six months after the major disaster declaration date, and the required flood insurance is purchased.

(c) Prior to approval of a Federal grant for the restoration of a facility and its contents which were damaged by a flood, the recipient shall notify the Regional Administrator of any entitlement to an insurance settlement or recovery. The Regional Administrator shall reduce the eligible costs by the amount of insurance proceeds which the recipient receives.

(d) The recipient or subrecipient is required to obtain and maintain flood insurance in the amount of eligible disaster assistance, as a condition of receiving Federal assistance that may be available. This requirement also applies to insurable flood damaged facilities located outside a special flood hazard area when it is reasonably available, adequate, and necessary. However, the Regional Administrator shall not require greater types and amounts of insurance than are certified as reasonable by the State Insurance Commissioner. The requirement to purchase flood insurance is waived when eligible costs for an insurable facility do not exceed $5,000.

[56 FR 64560, Dec. 11, 1991, as amended at 82 FR 44, Jan. 3, 2017]

§ 206.253 Insurance requirements for facilities damaged by disasters other than flood.

(a) Prior to approval of a Federal grant for the restoration of a facility and its contents which were damaged

by a disaster other than flood, the recipient shall notify the Regional Administrator of any entitlement to insurance settlement or recovery for such facility and its contents. The Regional Administrator shall reduce the eligible costs by the actual amount of insurance proceeds relating to the eligible costs.

(b)(1) Assistance under section 406 of the Stafford Act will be approved only on the condition that the recipient obtain and maintain such types and amounts of insurance as are reasonable and necessary to protect against future loss to such property from the types of hazard which caused the major disaster. The extent of insurance to be required will be based on the eligible damage that was incurred to the damaged facility as a result of the major disaster. The Regional Administrator shall not require greater types and extent of insurance than are certified as reasonable by the State Insurance Commissioner.

(2) Due to the high cost of insurance, some applicants may request to insure the damaged facilities under a blanket insurance policy covering all their facilities, an insurance pool arrangement, or some combination of these options. Such an arrangement may be accepted for other than flood damages. However, if the same facility is damaged in a similar future disaster, eligible costs will be reduced by the amount of eligible damage sustained on the previous disaster.

(c) The Regional Administrator shall notify the recipient of the type and amount of insurance required. The recipient may request that the State Insurance Commissioner review the type and extent of insurance required to protect against future loss to a disaster-damaged facility, the Regional Administrator shall not require greater types and extent of insurance than are certified as reasonable by the State Insurance Commissioner.

(d) The requirements of section 311 of the Stafford Act are waived when eligible costs for an insurable facility do not exceed $5,000. The Regional Administrator may establish a higher waiver amount based on hazard mitigation initiatives which reduce the risk of future damages by a disaster similar to the one which resulted in the major disaster declaration which is the basis for the application for disaster assistance.

(e) The recipient shall provide assurances that the required insurance coverage will be maintained for the anticipated life of the restorative work or the insured facility, whichever is the lesser.

(f) No assistance shall be provided under section 406 of the Stafford Act for any facility for which assistance was provided as a result of a previous major disaster unless all insurance required by FEMA as a condition of the previous assistance has been obtained and maintained.

[56 FR 64560, Dec. 11, 1991, as amended at 82 FR 44, Jan. 3, 2017]

§§ 206.254–206.339 [Reserved]

Subpart J—Coastal Barrier Resources Act

SOURCE: 55 FR 2311, Jan. 23, 1990, unless otherwise noted.

§ 206.340 Purpose of subpart.

This subpart implements the Coastal Barrier Resources Act (CBRA) (Pub. L. 97–348) as that statute applies to disaster relief granted to individuals and State and local governments under the Stafford Act. CBRA prohibits new expenditures and new financial assistance within the Coastal Barrier Resources System (CBRS) for all but a few types of activities identified in CBRA. This subpart specifies what actions may and may not be carried out within the CBRS. It establishes procedures for compliance with CBRA in the administration of disaster assistance by FEMA.

§ 206.341 Policy.

It shall be the policy of FEMA to achieve the goals of CBRA in carrying out disaster relief on units of the Coastal Barrier Resources System. It is FEMA's intent that such actions be consistent with the purpose of CBRA to minimize the loss of human life, the wasteful expenditure of Federal revenues, and the damage to fish, wildlife and other natural resources associated

with coastal barriers along the Atlantic and Gulf coasts and to consider the means and measures by which the long-term conservation of these fish, wildlife, and other natural resources may be achieved under the Stafford Act.

§ 206.342 Definitions.

Except as otherwise provided in this subpart, the definitions set forth in part 206 of subchapter D are applicable to this subject.

(a) *Consultation* means that process by which FEMA informs the Secretary of the Interior through his/her designated agent of FEMA proposed disaster assistance actions on a designated unit of the Coastal Barrier Resources System and by which the Secretary makes comments to FEMA about the appropriateness of that action. Approval by the Secretary is not required in order that an action be carried out.

(b) *Essential link* means that portion of a road, utility, or other facility originating outside of the system unit but providing access or service through the unit and for which no alternative route is reasonably available.

(c) *Existing facility* on a unit of CBRS established by Public Law 97–348 means a publicly owned or operated facility on which the start of a construction took place prior to October 18, 1982, and for which this fact can be adequately documented. In addition, a legally valid building permit or equivalent documentation, if required, must have been obtained for the construction prior to October 18, 1982. If a facility has been substantially improved or expanded since October 18, 1982, it is not an existing facility. For any other unit added to the CBRS by amendment to Public Law 97–348, the enactment date of such amendment is substituted for October 18, 1982, in this definition.

(d) *Expansion* means changing a facility to increase its capacity or size.

(e) *Facility* means ''public facility'' as defined in § 206.201. This includes any publicly owned flood control, navigation, irrigation, reclamation, public power, sewage treatment and collection, water supply and distribution, watershed development, or airport facility; and nonfederal-aid street, road, or highway; and any other public building, structure, or system, including those used for educational, recreational, or cultural purposes, or any park.

(f) *Financial assistance* means any form of Federal loan, grant guaranty, insurance, payment rebate, subsidy or any other form of direct or indirect Federal assistance.

(g) *New financial assistance* on a unit of the CBRS established by Public Law 97–348 means an approval by FEMA of a project application or other disaster assistance after October 18, 1982. For any other unit added to the CBRS by amendment to Public Law 97–348, the enactment date such amendment is substituted for October 18, 1982, in this definition.

(h) *Start of construction* for a structure means the first placement of permanent construction, such as the placement of footings or slabs or any work beyond the stage of excavation. Permanent construction for a structure does not include land preparation such as clearing, grading, and placement of fill, nor does it include excavation for a basement, footings, or piers. For a facility which is not a structure, start of construction means the first activity for permanent construction of a substantial part of the facility. Permanent construction for a facility does not include land preparation such as clearing and grubbing but would include excavation and placement of fill such as for a road.

(i) *Structure* means a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a mobile home.

(j) *Substantial improvement* means any repair, reconstruction or other improvement of a structure or facility, that has been damaged in excess of, or the cost of which equals or exceeds, 50 percent of the market value of the structure or placement cost of the facility (including all ''public facilities'') as defined in the Stafford Act) either:

(1) Before the repair or improvement is started; or

(2) If the structure or facility has been damaged and is proposed to be restored, before the damage occurred. If a facility is a link in a larger system, the percentage of damage will be based on

the relative cost of repairing the damaged facility to the replacement cost of that portion of the system which is operationally dependent on the facility. The term *substantial improvement* does not include any alternation of a structure or facility listed on the National Register of Historic Places or a State Inventory of Historic Places.

(k) *System unit* means any undeveloped coastal barrier, or combination of closely related undeveloped coastal barriers included within the Coastal Barrier Resources System as established by the section 4 of the CBRA, or as modified by the Secretary in accordance with that statute.

§ 206.343 Scope.

(a) The limitations on disaster assistance as set forth in this subpart apply only to FEMA actions taken on a unit of the Coastal Barrier Resources System or any conduit to such unit, including, but not limited to a bridge, causeway, utility, or similar facility.

(b) FEMA assistance having a social program orientation which is unrelated to development is not subject to the requirements of these regulations. This assistance includes:

(1) Individual and Family Grants that are not for acquisition or construction purposes;

(2) Crisis counseling;

(3) Disaster Legal services; and

(4) Disaster unemployment assistance.

§ 206.344 Limitations on Federal expenditures.

Except as provided in §§ 206.345 and 206.346, no new expenditures or financial assistance may be made available under authority of the Stafford Act for any purpose within the Coastal Barrier Resources System, including but not limited to:

(a) Construction, reconstruction, replacement, repair or purchase of any structure, appurtenance, facility or related infrastructure;

(b) Construction, reconstruction, replacement, repair or purchase of any road, airport, boat landing facility, or other facility on, or bridge or causeway to, any System unit; and

(c) Carrying out of any project to prevent the erosion of, or to otherwise stabilize, any inlet, shoreline, or inshore area, except that such assistance and expenditures may be made available on units designated pursuant to Section 4 on maps numbered S01 through S08 for purposes other than encouraging development and, in all units, in cases where an emergency threatens life, land, and property immediately adjacent to that unit.

§ 206.345 Exceptions.

The following types of disaster assistance actions are exceptions to the prohibitions of § 206.344.

(a) After consultation with the Secretary of the Interior, the Regional Administrator may make disaster assistance available within the CBRS for:

(1) Replacement, reconstruction, or repair, but not the expansion, of publicly owned or publicly operated roads, structures, or facilities that are essential links in a larger network or system;

(2) Repair of any facility necessary for the exploration, extraction, or transportation of energy resources which activity can be carried out only on, in, or adjacent to coastal water areas because the use or facility requires access to the coastal water body; and

(3) Restoration of existing channel improvements and related structures, such as jetties, and including the disposal of dredge materials related to such improvements.

(b) After consultation with the Secretary of the Interior, the Regional Administrator may make disaster assistance available within the CBRS for the following types of actions, provided such assistance is consistent with the purposes of CBRA;

(1) Emergency actions essential to the saving of lives and the protection of property and the public health and safety, if such actions are performed pursuant to sections 402, 403, and 502 of the Stafford Act and are limited to actions that are necessary to alleviate the impacts of the event;

(2) Replacement, reconstruction, or repair, but not the expansion, of publicly owned or publicly operated roads, structures, or facilities, except as provided in § 206.347(c)(5);

(3) Repair of air and water navigation aids and devices, and of the access thereto;

(4) Repair of facilities for scientific research, including but not limited to aeronautical, atmospheric, space, geologic, marine, fish and wildlife and other research, development, and applications;

(5) Repair of facilities for the study, management, protection and enhancement of fish and wildlife resources and habitats, including but not limited to, acquisition of fish and wildlife habitats and related lands, stabilization projects for fish and wildlife habitats, and recreational projects; and

(6) Repair of nonstructural projects for shoreline stabilization that are designed to mimic, enhance, or restore natural stabilization systems.

§ 206.346 Applicability to disaster assistance.

(a) *Emergency assistance.* The Regional Administrator may approve assistance pursuant to sections 402, 403, or 502 of the Stafford Act, for emergency actions which are essential to the saving of lives and the protection of property and the public health and safety, are necessary to alleviate the emergency, and are in the public interest. Such actions include but are not limited to:

(1) Removal of debris from public property;

(2) Emergency protection measures to prevent loss of life, prevent damage to improved property and protect public health and safety;

(3) Emergency restoration of essential community services such as electricity, water or sewer;

(4) Provision of access to a private residence;

(5) Provision of emergency shelter by means of providing emergency repair of utilities, provision of heat in the season requiring heat, or provision of minimal cooking facilities;

(6) Relocation of individuals or property out of danger, such as moving a mobile home to an area outside of the CBRS (but disaster assistance funds may not be used to relocate facilities back into the CBRS);

(7) Home repairs to private owner-occupied primary residences to make them habitable;

(8) Housing eligible families in existing resources in the CBRS; and

(9) Mortgage and rental payment assistance.

(b) *Permanent restoration assistance.* Subject to the limitations set out below, the Regional Administrator may approve assistance for the repair, reconstruction, or replacement but not the expansion of the following publicly owned or operated facilities and certain private nonprofit facilities.

(1) Roads and bridges;

(2) Drainage structures, dams, levees;

(3) Buildings and equipment;

(4) Utilities (gas, electricity, water, etc.); and

(5) Park and recreational facilities.

§ 206.347 Requirements.

(a) *Location determination.* For each disaster assistance action which is proposed on the Atlantic or Gulf Coasts, the Regional Administrator shall:

(1) Review a proposed action's location to determine if the action is on or connected to the CBRS unit and thereby subject to these regulations. The appropriate Department of Interior map identifying units of the CBRS will be the basis of such determination. The CBRS units are also identified on FEMA Flood Insurance Maps (FIRM's) for the convenience of field personnel.

(2) If an action is determined not to be on or connected to a unit of the CBRS, no further requirements of these regulations needs to be met, and the action may be processed under other applicable disaster assistance regulations.

(3) If an action is determined to be on or connected to a unit of the CBRS, it is subject to the consultation and consistency requirements of CBRA as prescribed in §§ 206.348 and 206.349.

(b) *Emergency disaster assistance.* For each emergency disaster assistance action listed in § 206.346(a), the Regional Administrator shall perform the required consultation. CBRA requires that FEMA consult with the Secretary of the Interior before taking any action on a System unit. The purpose of such consultation is to solicit advice on whether the action is or is not one

which is permitted by section 6 of CBRA and whether the action is or is not consistent with the purposes of CBRA as defined in section 1 of that statute.

(1) FEMA has conducted advance consultation with the Department of the Interior concerning such emergency actions. The result of the consultation is that the Secretary of the Interior through the Assistance Secretary for Fish and Wildlife and Parks has concurred that the emergency work listed in § 206.346(a) is consistent with the purposes of CBRA and may be approved by FEMA without additional consultation.

(2) *Notification.* As soon as practicable, the Regional Administrator will notify the designated Department of the Interior representative at the regional level of emergency projects that have been approved. Upon request from the Secretary of the Interior, the Director, Office of Environmental Planning and Historic Preservation, Mitigation Directorate will supply reports of all current emergency actions approved on CBRS units. Notification will contain the following information:

(i) Identification of the unit in the CBRS;

(ii) Description of work approved;

(iii) Amount of Federal funding; and

(iv) Additional measures required.

(c) *Permanent restoration assistance.* For each permanent restoration assistance action including but not limited to those listed in § 206.346(b), the Regional Administrator shall meet the requirements set out below.

(1) *Essential links.* For the repair or replacement of publicly owned or operated roads, structures or facilities which are essential links in a larger network or system:

(i) No facility may be expanded beyond its predisaster design.

(ii) Consultation in accordance with § 206.348 shall be accomplished.

(2) *Channel improvements.* For the repair of existing channels, related structures and the disposal of dredged materials:

(i) No channel or related structure may be repaired, reconstructed, or replaced unless funds were appropriated for the construction of such channel or structure before October 18, 1982;

(ii) Expansion of the facility beyond its predisaster design is not permitted;

(iii) Consultation in accordance with § 206.348 shall be accomplished.

(3) *Energy facilities.* For the repair of facilities necessary for the exploration, extraction or transportation of energy resources:

(i) No such facility may be repaired, reconstructed or replaced unless such function can be carried out only in, on, or adjacent to a coastal water area because the use or facility requires access to the coastal water body;

(ii) Consultation in accordance with § 206.348 shall be accomplished.

(4) *Special-purpose facilities.* For the repair of facilities used for the study, management, protection or enhancement of fish and wildlife resources and habitats and related recreational projects; air and water navigation aids and devices and access thereto; and facilities used for scientific research, including but not limited to aeronautical, atmospheric, space, geologic, marine, fish and wildlife and other research, development, and applications; and, nonstructural facilities that are designed to mimic, enhance or restore natural shoreline stabilization systems:

(i) Consultation in accordance with § 206.348 shall be accomplished;

(ii) No such facility may be repaired, reconstructed, or replaced unless it is otherwise consistent with the purposes of CBRA in accordance with § 206.349.

(5) *Other public facilities.* For the repair, reconstruction, or replacement of publicly owned or operated roads, structures, or facilities that do not fall within the categories identified in paragraphs (c)(1), (2), (3), and (4) of this section:

(i) No such facility may be repaired, reconstructed, or replaced unless it is an ''existing facility;''

(ii) Expansion of the facility beyond its predisaster design is not permitted;

(iii) Consultation in accordance with § 206.348 shall be accomplished;

(iv) No such facility may be repaired, reconstructed, or replaced unless it is otherwise consistent with the purposes of CBRA in accordance with § 206.349.

(6) *Private nonprofit facilities.* For eligible private nonprofit facilities as defined in these regulations and of the

type described in paragraphs (c)(1), (2), (3), and (4) of this section:

(i) Consultation in accordance with § 206.348 shall be accomplished.

(ii) No such facility may be repaired, reconstructed, or replaced unless it is otherwise consistent with the purposes of CBRA in accordance with § 206.349.

(7) *Improved project.* An improved project may not be approved for a facility in the CBRS if such grant is to be combined with other funding, resulting in an expansion of the facility beyond the predisaster design. If a facility is exempt from the expansion prohibitions of CBRA by virtue of falling into one of the categories identified in paragraph (c)(1), (2), (3), or (4) of this section, then an improved project for such facilities is not precluded.

(8) *Alternate project.* A new or enlarged facility may not be constructed on a unit of the CBRS under the provisions of the Stafford Act unless the facility is exempt from the expansion prohibition of CBRA by virtue of falling into one of the categories identified in paragraph (c)(1), (2), (3), or (4) of this section.

§ 206.348 Consultation.

As required by section 6 of the CBRA, the FEMA Regional Administrator will consult with the designated representative of the Department of the Interior (DOI) at the regional level before approving any action involving permanent restoration of a facility or structure on or attached to a unit of the CBRS.

(a) The consultation shall be by written memorandum to the DOI representative and shall contain the following:

(1) Identification of the unit within the CBRS;

(2) Description of the facility and the proposed repair or replacement work; including identification of the facility as an exception under section 6 of CBRA; and full justification of its status as an exception;

(3) Amount of proposal Federal funding;

(4) Additional mitigation measures required; and

(5) A determination of the action's consistency with the purposes of CBRA, if required by these regulations, in accordance with § 206.349.

(b) Pursuant to FEMA understanding with DOI, the DOI representative will provide technical information and an opinion whether or not the proposed action meets the criteria for a CBRA exception, and on the consistency of the action with the purposes of CBRA (when such consistency is required). DOI is expected to respond within 12 working days from the date of the FEMA request for consultation. If a response is not received within the time limit, the FEMA Regional Administrator shall contact the DOI representative to determine if the request for consultation was received in a timely manner. If it was not, an appropriate extension for response will be given. Otherwise, he or she may assume DOI concurrence and proceed with approval of the proposed action.

(c) For those cases in which the regional DOI representative believes that the proposed action should not be taken and the matter cannot be resolved at the regional level, the FEMA Regional Administrator will submit the issue to the Director, Office of Environmental Planning and Historic Preservation, Mitigation Directorate. In coordination with the Office of Chief Counsel (OCC), consultation will be accomplished at the FEMA National Office with the DOI consultation officer. After this consultation, the Director, Office of Environmental Planning and Historic Preservation, Mitigation Directorate, determines whether or not to approve the proposed action.

§ 206.349 Consistency determinations.

Section 6(a)(6) of CBRA requires that certain actions be consistent with the purposes of that statute if the actions are to be carried out on a unit of the CBRA. The purpose of CBRA, as stated in section 2(b) of that statute, is to minimize the loss of human life, wasteful expenditure of Federal revenues, and the damage to fish, wildlife, and other natural resources associated with the coastal barriers along with Atlantic and Gulf coasts. For those actions where a consistency determination is required, the FEMA Regional Administrator shall evaluate the action according to the following procedures, and the evaluation shall be included in the

written request for consultation with DOI.

(a) *Impact identification.* FEMA shall identify impacts of the following types that would result from the proposed action:

(1) Risks to human life;

(2) Risks of damage to the facility being repaired or replaced;

(3) Risks of damage to other facilities;

(4) Risks of damage to fish, wildlife, and other natural resources;

(5) Condition of existing development served by the facility and the degree to which its redevelopment would be encouraged; and

(6) Encouragement of new development.

(b) *Mitigation.* FEMA shall modify actions by means of practicable mitigation measures to minimize adverse effects of the types listed in paragraph (a) of this section.

(c) *Conservation.* FEMA shall identify practicable measures that can be incorporated into the proposed action and will conserve natural and wildlife resources.

(d) *Finding.* For those actions required to be consistent with the purposes of CBRA, the above evaluation must result in a finding of consistency with CBRA by the Regional Administrator before funding may be approved for that action.

§§ 206.350–206.359 [Reserved]

Subpart K—Community Disaster Loans

SOURCE: 55 FR 2314, Jan. 23, 1990, unless otherwise noted.

§ 206.360 Purpose.

This subpart provides policies and procedures for local governments and State and Federal officials concerning the Community Disaster Loan program under section 417 of the Stafford Act. Sections 206.360 through 206.367 of the subpart do not implement the Community Disaster Loan Act of 2005. (see § 206.370).

[70 FR 60446, Oct. 18, 2005]

§ 206.361 Loan program.

(a) *General.* The Assistant Administrator for the Disaster Assistance Directorate may make a Community Disaster Loan to any local government which has suffered a substantial loss of tax and other revenues as a result of a major disaster and which demonstrates a need for Federal financial assistance in order to perform its governmental functions.

(b) *Amount of loan.* The amount of the loan is based upon need, not to exceed 25 percent of the operating budget of the local government for the fiscal year in which the disaster occurs, but shall not exceed $5 million. The term *fiscal year* as used in this subpart means the local government's fiscal year.

(c) *Interest rate.* The interest rate is the rate for five year maturities as determined by the Secretary of the Treasury in effect on the date that the Promissory Note is executed. This rate is from the monthly Treasury schedule of certified interest rates which takes into consideration the current average yields on outstanding marketable obligations of the United States, adjusted to the nearest ⅛ percent.

(d) *Time limitation.* The Assistant Administrator for the Disaster Assistance Directorate may approve a loan in either the fiscal year in which the disaster occurred or the fiscal year immediately following that year. Only one loan may be approved under section 417(a) for any local government as the result of a single disaster.

(e) *Term of loan.* The term of the loan is 5 years, unless otherwise extended by the Assistant Administrator for the Disaster Assistance Directorate. The Assistant Administrator for the Disaster Assistance Directorate may consider requests for an extensions of loans based on the local government's financial condition. The total term of any loan under section 417(a) normally may not exceed 10 years from the date the Promissory Note was executed. However, when extenuating circumstances exist and the Community Disaster Loan recipient demonstrates an inability to repay the loan within the initial 10 years, but agrees to repay such loan over an extended period of

time, additional time may be provided for loan repayment. (See § 206.367(c).)

(f) *Use of loan funds.* The local government shall use the loaned funds to carry on existing local government functions of a municipal operation character or to expand such functions to meet disaster-related needs. The funds shall not be used to finance capital improvements nor the repair or restoration of damaged public facilities. Neither the loan nor any cancelled portion of the loans may be used as the nonFederal share of any Federal program, including those under the Act.

(g) *Cancellation.* The Assistant Administrator for the Disaster Assistance Directorate shall cancel repayment of all or part of a Community Disaster Loan to the extent that he/she determines that revenues of the local government during the 3 fiscal years following the disaster are insufficient to meet the operating budget of that local government because of disaster-related revenue losses and additional unreimbursed disaster-related municipal operating expenses.

(h) *Relation to other assistance.* Any community disaster loans including cancellations made under this subpart shall not reduce or otherwise affect any commitments, grants, or other assistance under the Act or these regulations.

[55 FR 2314, Jan. 23, 1990, as amended at 66 FR 22445, May 4, 2001]

§ 206.362 Responsibilities.

(a) The local government shall submit the financial information required by FEMA in the application for a Community Disaster Loan and in the application for loan cancellation, if submitted, and comply with the assurances on the application, the terms and conditions of the Promissory Note, and these regulations. The local government shall send all loan application, loan administration, loan cancellation, and loan settlement correspondence through the GAR and the FEMA Regional Office to the FEMA Assistant Administrator for the Disaster Assistance Directorate.

(b) The GAR shall certify on the loan application that the local government can legally assume the proposed indebtedness and that any proceeds will be used and accounted for in compliance with the FEMA-State Agreement for the major disaster. States are encouraged to take appropriate pre-disaster action to resolve any existing State impediments which would preclude a local government from incurring the increased indebtedness associated with a loan in order to avoid protracted delays in processing loan application requests in major disasters or emergencies.

(c) The Regional Administrator or designee shall review each loan application or loan cancellation request received from a local government to ensure that it contains the required documents and transmit the application to the Assistant Administrator for the Disaster Assistance Directorate. He/she may submit appropriate recommendations to the Assistant Administrator for the Disaster Assistance Directorate.

(d) The Assistant Administrator for the Disaster Assistance Directorate, or a designee, shall execute a Promissory Note with the local government, and the FEMA Finance Center, shall administer the loan until repayment or cancellation is completed and the Promissory Note is discharged.

(e) The Assistant Administrator for the Disaster Assistance Directorate or designee shall approve or disapprove each loan request, taking into consideration the information provided in the local government's request and the recommendations of the GAR and the Regional Administrator. The Assistant Administrator for the Disaster Assistance Directorate or designee shall approve or disapprove a request for loan cancellation in accordance with the criteria for cancellation in these regulations.

(f) The Chief Financial Officer shall establish and maintain a financial account for each outstanding loan and disburse funds against the Promissory Note.

§ 206.363 Eligibility criteria.

(a) *Local government.* (1) The local government must be located within the area designated by the Assistant Administrator for the Disaster Assistance Directorate as eligible for assistance under a major disaster declaration. In

addition, State law must not prohibit the local government from incurring the indebtedness resulting from a Federal loan.

(2) Criteria considered by FEMA in determining the eligibility of a local government for a Community Disaster Loan include the loss of tax and other revenues as result of a major disaster, a demonstrated need for financial assistance in order to perform its governmental functions, the maintenance of an annual operating budget, and the responsibility to provide essential municipal operating services to the community. Eligibility for other assistance under the Act does not, by itself, establish entitlement to such a loan.

(b) *Loan eligibility*—(1) *General.* To be eligible, the local government must show that it may suffer or has suffered a substantial loss of tax and other revenues as a result of a major disaster or emergency, must demonstrate a need for financial assistance in order to perform its governmental functions, and must not be in arrears with respect to any payments due on previous loans. Loan eligibility is based on the financial condition of the local government and a review of financial information and supporting documentation accompanying the application.

(2) *Substantial loss of tax and other revenues.* The fiscal year of the disaster or the succeeding fiscal year is the base period for determining whether a local government may suffer or has suffered a substantial loss of revenue. Criteria used in determining whether a local government has or may suffer a substantial loss of tax and other revenue include the following disaster-related factors:

(i) Whether the disaster caused a large enough reduction in cash receipts from normal revenue sources, excluding borrowing, which affects significantly and adversely the level and/or categories of essential municipal services provided prior to the disaster;

(ii) Whether the disaster caused a revenue loss of over 5 percent of total revenue estimated for the fiscal year in which the disaster occurred or for the succeeding fiscal year;

(3) *Demonstrated need for financial assistance.* The local government must demonstrate a need for financial assistance in order to perform its governmental functions. The criteria used in making this determination include the following:

(i) Whether there are sufficient funds to meet current fiscal year operating requirements;

(ii) Whether there is availability of cash or other liquid assets from the prior fiscal year;

(iii) Current financial condition considering projected expenditures for governmental services and availability of other financial resources;

(iv) Ability to obtain financial assistance or needed revenue from State and other Federal agencies for direct program expenditures;

(v) Debt ratio (relationship of annual receipts to debt service);

(vi) Ability to obtain financial assistance or needed revenue from State and other Federal agencies for direct program expenditures;

(vii) Displacement of revenue-producing business due to property destruction;

(viii) Necessity to reduce or eliminate essential municipal services; and

(ix) Danger of municipal insolvency.

[55 FR 2314, Jan. 23, 1990, as amended at 66 FR 22445, May 4, 2001]

§ 206.364 Loan application.

(a) *Application.* (1) The local government shall submit an application for a Community Disaster Loan through the GAR. The loan must be justified on the basis of need and shall be based on the actual and projected expenses, as a result of the disaster, for the fiscal year in which the disaster occurred and for the 3 succeeding fiscal years. The loan application shall be prepared by the affected local government and be approved by the GAR. FEMA has determined that a local government, in applying for a loan as a result of having suffered a substantial loss of tax and other revenue as a result of a major disaster, is not required to first seek credit elsewhere (see § 206.367(c)).

(2) The State exercises administrative authority over the local government's application. The State's review should include a determination that the applicant is legally qualified, under State law, to assume the proposed

debt, and may include an overall review for accuracy for the submission. The Governor's Authorized Representative may request the Regional Administrator to waive the requirement for a State review if an otherwise eligible applicant is not subject to State administration authority and the State cannot legally participate in the loan application process.

(b) *Financial requirements.* (1) The loan application shall be developed from financial information contained in the local government's annual operating budget (see §206.364(b)(2)) and shall include a Summary of Revenue Loss and Unreimbursed Disaster-Related Expenses, a Statement of the Applicant's Operating Results—Cash Position, a Debt History, Tax Assessment Data, Financial Projections, Other Information, a Certification, and the Assurances listed on the application.

(i) Copies of the local government's financial reports (Revenue and Expense and Balance Sheet) for the 3 fiscal years immediately prior to the fiscal year of the disaster and the applicant's most recent financial statement must accompany the application. The local government's financial reports to be submitted are those annual (or interim) consolidated and/or individual official annual financial presentations for the General Fund and all other funds maintained by the local government.

(ii) Each application for a Community Disaster Loan must also include:

(A) A statement by the local government identifying each fund (i.e. General Fund, etc.) which is included as its annual Operating budget, and

(B) A copy of the pertinent State statutes, ordinance, or regulations which prescribe the local government's system of budgeting, accounting and financial reporting, including a description of each fund account.

(2) *Operating budget.* For loan application purposes, the operating budget is that document or documents approved by an appropriating body, which contains an estimate of proposed expenditures, other than capital outlays for fixed assets for a stated period of time, and the proposed means of financing the expenditures. For loan cancellation purposes, FEMA interprets the term ''operating budget'' to mean actual revenues and expenditures of the local government as published in the official financial statements of the local government.

(3) *Operating budget increases.* Budget increases due to increases in the level of, or additions to, municipal services not rendered at the time of the disaster or not directly related to the disaster shall be identified.

(4) *Revenue and assessment information.* The applicant shall provide information concerning its method of tax assessment including assessment dates and the dates payments are due. Tax revenues assessed but not collected, or other revenues which the local government chooses to forgive, stay, or otherwise not exercise the right to collect, are not a legitimate revenue loss for purposes of evaluating the loan application.

(5) *Estimated disaster-related expense.* Unreimbursed disaster-related expenses of a municipal operating character should be estimated. These are discussed in §206.366(b).

(c) *Federal review.* (1) The Assistant Administrator for the Disaster Assistance Directorate or designee shall approve a community disaster loan to the extent it is determined that the local government has suffered a substantial loss of tax and other revenues and demonstrates a need for financial assistance to perform its governmental function as the result of the disaster.

(2) *Resubmission of application.* If a loan application is disapproved, in whole or in part, by the Assistant Administrator for the Disaster Assistance Directorate because of inadequacy of information, a revised application may be resubmitted by the local government within sixty days of the date of the disapproval. Decision by the Assistant Administrator for the Disaster Assistance Directorate on the resubmission is final.

(d) *Community disaster loan.* (1) The loan shall not exceed the lesser of:

(i) The amount of projected revenue loss plus the projected unreimbursed disaster-related expenses of a municipal operating character for the fiscal year of the major disaster and the subsequent 3 fiscal years, or

(ii) 25 percent of the local government's annual operating budget for the fiscal year in which the disaster occurred.

(2) *Promissory note.* (i) Upon approval of the loan by the Assistant Administrator for the Disaster Assistance Directorate or designee, he or she, or a designated Loan Officer will execute a Promissory Note with the applicant. The Note must be co-signed by the State (see § 206.364(d)(2)(ii)). The applicant should indicate its funding requirements on the Schedule of Loan Increments on the Note.

(ii) If the State cannot legally cosign the Promissory Note, the local government must pledge collateral security, acceptable to the Assistant Administrator for the Disaster Assistance Directorate, to cover the principal amount of the Note. The pledge should be in the form of a resolution by the local governing body identifying the collateral security.

[55 FR 2314, Jan. 23, 1990, as amended at 74 FR 15351, Apr. 3, 2009]

§ 206.365 Loan administration.

(a) *Funding.* (1) FEMA will disburse funds to the local government when requested, generally in accordance with the Schedule of Loan Increments in the Promissory Note. As funds are disbursed, interest will accrue against each disbursement.

(2) When each incremental disbursement is requested, the local government shall submit a copy of its most recent financial report (if not submitted previously) for consideration by FEMA in determining whether the level and frequency of periodic payments continue to be justified. The local government shall also provide the latest available data on anticipated and actual tax and other revenue collections. Desired adjustments in the disbursement schedule shall be submitted in writing at least 10 days prior to the proposed disbursement date in order to ensure timely receipt of the funds. A sinking fund should be established to amortize the debt.

(b) *Financial management.* (1) Each local government with an approved Community Disaster Loan shall establish necessary accounting records, consistent with local government's financial management system, to account for loan funds received and disbursed and to provide an audit trail.

(2) FEMA auditors, State auditors, the GAR, the Regional Administrator, the Assistant Administrator for the Disaster Assistance Directorate, and the Comptroller General of the United States or their duly authorized representatives shall, for the purpose of audits and examination, have access to any books, documents, papers, and records that pertain to Federal funds, equipments, and supplies received under these regulations.

(c) *Loan servicing.* (1) The applicant annually shall submit to FEMA copies of its annual financial reports (operating statements, balance sheets, etc.) for the fiscal year of the major disaster, and for each of the 3 subsequent fiscal years.

(2) The Disaster Assistance Directorate, will review the loan periodically. The purpose of the reevaluation is to determine whether projected revenue losses, disaster-related expenses, operating budgets, and other factors have changed sufficiently to warrant adjustment of the scheduled disbursement of the loan proceeds.

(3) The Disaster Assistance Directorate, shall provide each loan recipient with a loan status report on a quarterly basis. The recipient will notify FEMA of any changes of the responsible municipal official who executed the Promissory Note.

(d) *Inactive loans.* If no funds have been disbursed from the Treasury, and if the local government does not anticipate a need for such funds, the note may be cancelled at any time upon a written request through the State and Regional Office to FEMA. However, since only one loan may be approved, cancellation precludes submission of a second loan application request by the same local government for the same disaster.

§ 206.366 Loan cancellation.

(a) *Policies.* (1) FEMA shall cancel repayment of all or part of a Community Disaster Loan to the extent that the Assistant Administrator for the Disaster Assistance Directorate determines that revenues of the local government during the full three fiscal

year period following the disaster are insufficient, as a result of the disaster, to meet the operating budget for the local government, including additional unreimbursed disaster-related expenses for a municipal operating character. For loan cancellation purposes, FEMA interprets that term *operating budget* to mean actual revenues and expenditures of the local government as published in the official financial statements of the local government.

(2) If the tax and other revenues rates or the tax assessment valuation of property which was not damaged or destroyed by the disaster are reduced during the 3 fiscal years subsequent to the major disaster, the tax and other revenue rates and tax assessment valuation factors applicable to such property in effect at the time of the major disaster shall be used without reduction for purposes of computing revenues received. This may result in decreasing the potential for loan cancellations.

(3) If the local government's fiscal year is changed during the ''full 3 year period following the disaster'' the actual period will be modified so that the required financial data submitted covers an inclusive 36-month period.

(4) If the local government transfers funds from its operating funds accounts to its capital funds account, utilizes operating funds for other than routine maintenance purposes, or significantly increases expenditures which are not disaster related, except increases due to inflation, the annual operating budget or operating statement expenditures will be reduced accordingly for purposes of evaluating any request for loan cancellation.

(5) It is not the purpose of this loan program to underwrite predisaster budget or actual deficits of the local government. Consequently, such deficits carried forward will reduce any amounts otherwise eligible for loan cancellation.

(b) *Disaster-related expenses of a municipal operation character.* (1) For purpose of this loan, unreimbursed expenses of a municipal operating character are those incurred for general government purposes, such as police and fire protection, trash collection, collection of revenues, maintenance of public facilities, flood and other hazard insurance, and other expenses normally budgeted for the general fund, as defined by the Municipal Finance Officers Association.

(2) Disaster-related expenses do not include expenditures associated with debt service, any major repairs, rebuilding, replacement or reconstruction of public facilities or other capital projects, intragovernmental services, special assessments, and trust and agency fund operations. Disaster expenses which are eligible for reimbursement under project applications or other Federal programs are not eligible for loan cancellation.

(3) Each applicant shall maintain records including documentation necessary to identify expenditures for unreimbursed disaster-related expenses. Examples of such expenses include but are not limited to:

(i) Interest paid on money borrowed to pay amounts FEMA does not advance toward completion of approved Project Applications.

(ii) Unreimbursed costs to local governments for providing usable sites with utilities for mobile homes used to meet disaster temporary housing requirements.

(iii) Unreimbursed costs required for police and fire protection and other community services for mobile home parks established as the result of or for use following a disaster.

(iv) The cost to the applicant of flood insurance required under Public Law 93–234, as amended, and other hazard insurance required under section 311, Public Law 93–288, as amended, as a condition of Federal disaster assistance for the disaster under which the loan is authorized.

(4) The following expenses are not considered to be disaster-related for Community Disaster Loan purposes:

(i) The local government's share for assistance provided under the Act including flexible funding under section 406(c)(1) of the Act.

(ii) Improvements related to the repair or restoration of disaster public facilities approved on Project Applications.

(iii) Otherwise eligible costs for which no Federal reimbursement is requested as a part of the applicant's disaster response commitment, or cost sharing as specified in the FEMA-State Agreement for the disaster.

(iv) Expenses incurred by the local government which are reimbursed on the applicant's project application.

(c) *Cancellation application.* A local government which has drawn loan funds from the Treasury may request cancellation of the principal and related interest by submitting an Application for Loan Cancellation through the Governor's Authorized Representative to the Regional Administrator prior to the expiration date of the loan.

(1) Financial information submitted with the application shall include the following:

(i) Annual Operating Budgets for the fiscal year of the disaster and the 3 subsequent fiscal years;

(ii) Annual Financial Reports (Revenue and Expense and Balance Sheet) for each of the above fiscal years. Such financial records must include copies of the local government's annual financial reports, including operating statements balance sheets and related consolidated and individual presentations for each fund account. In addition, the local government must include an explanatory statement when figures in the Application for Loan Cancellation form differ from those in the supporting financial reports.

(iii) The following additional information concerning annual real estate property taxes pertaining to the community for each of the above fiscal years:

(A) The market value of the tax base (dollars);

(B) The assessment ratio (percent);

(C) The assessed valuation (dollars);

(D) The tax levy rate (mils);

(E) Taxes levied and collected (dollars).

(iv) Audit reports for each of the above fiscal years certifying to the validity of the Operating Statements. The financial statements of the local government shall be examined in accordance with generally accepted auditing standards by independent certified public accountants. The report should not include recommendations concerning loan cancellation or repayment.

(v) Other financial information specified in the Application for Loan Cancellation.

(2) *Narrative justification.* The application may include a narrative presentation to amplify the financial material accompanying the application and to present any extenuating circumstances which the local government wants the Assistant Administrator for the Disaster Assistance Directorate to consider in rendering a decision on the cancellation request.

(d) *Determination.* (1) If, based on a review of the Application for Loan Cancellation and FEMA audit, when determined necessary, the Assistant Administrator for the Disaster Assistance Directorate determines that all or part of the Community Disaster Loan funds should be canceled, the principal amount which is canceled will become a grant, and the related interest will be forgiven. The Assistant Administrator for the Disaster Assistance Directorate's determination concerning loan cancellation will specify that any uncancelled principal and related interest must be repaid immediately and that, if immediate repayment will constitute a financial hardship, the local government must submit for FEMA review and approval, a repayment schedule for settling the indebtedness on timely basis. Such repayments must be made to the Treasurer of the United States and be sent to FEMA, Attention: Chief Financial Officer.

(2) A loan or cancellation of a loan does not reduce or affect other disaster-related grants or other disaster assistance. However, no cancellation may be made that would result in a duplication of benefits to the applicant.

(3) The uncancelled portion of the loan must be repaid in accordance with § 206.367.

(4) *Appeals.* If an Application for Loan Cancellation is disapproved, in whole or in part, by the Assistant Administrator for the Disaster Assistance Directorate or designee, the local government may submit any additional information in support of the application within 60 days of the date of disapproval. The decision by the Assistant

Administrator for the Disaster Assistance Directorate or designee on the submission is final.

[55 FR 2314, Jan. 23, 1990, as amended at 74 FR 15351, Apr. 3, 2009]

§ 206.367 Loan repayment.

(a) *Prepayments.* The local government may make prepayments against loan at any time without any prepayment penalty.

(b) *Repayment.* To the extent not otherwise cancelled, Community Disaster Loan funds become due and payable in accordance with the terms and conditions of the Promissory Note. The note shall include the following provisions:

(1) The term of a loan made under this program is 5 years, unless extended by the Assistant Administrator for the Disaster Assistance Directorate. Interest will accrue on outstanding cash from the actual date of its disbursement by the Treasury.

(2) The interest amount due will be computed separately for each Treasury disbursement as follows: $I = P \times R \times T$, where I = the amount of simple interest, P = the principal amount disbursed; R = the interest rate of the loan; and, T = the outstanding term in years from the date of disbursement to date of repayment, with periods less than 1 year computed on the basis of 365 days/year. If any portion of the loan is cancelled, the interest amount due will be computed on the remaining principal with the shortest outstanding term.

(3) Each payment made against the loan will be applied first to the interest computed to the date of the payment, and then to the principal. Prepayments of scheduled installments, or any portion thereof, may be made at any time and shall be applied to the installments last to become due under the loan and shall not affect the obligation of the borrower to pay the remaining installments.

(4) The Assistant Administrator for the Disaster Assistance Directorate may defer payments of principal and interest until FEMA makes its final determination with respect to any Application for Loan Cancellation which the borrower may submit. However, interest will continue to accrue.

(5) Any costs incurred by the Federal Government in collecting the note shall be added to the unpaid balance of the loan, bear interest at the same rate as the loan, and be immediately due without demand.

(6) In the event of default on this note by the borrower, the FEMA claims collection officer will take action to recover the outstanding principal plus related interest under Federal debt collection authorities, including administrative offset against other Federal funds due the borrower and/or referral to the Department of Justice for judicial enforcement and collection.

(c) *Additional time.* In unusual circumstances involving financial hardship, the local government may request an additional period of time beyond the original 10 year term to repay the indebtedness. Such request may be approved by the Assistant Administrator for the Disaster Assistance Directorate subject to the following conditions:

(1) The local government must submit documented evidence that it has applied for the same credit elsewhere and that such credit is not available at a rate equivalent to the current Treasury rate.

(2) The principal amount shall be the original uncancelled principal plus related interest.

(3) The interest rate shall be the Treasury rate in effect at the time the new Promissory Note is executed but in no case less than the original interest rate.

(4) The term of the new Promissory Note shall be for the settlement period requested by the local government but not greater than 10 years from the date the new note is executed.

§§ 206.368–206.369 [Reserved]

§ 206.370 Purpose and scope.

(a) *Purpose.* Sections 206.370 through 206.377 provide procedures for local governments and State and Federal officials concerning the Special Community Disaster Loans program under section 417 of the Stafford Act (42 U.S.C. 5184), the Community Disaster Loan Act of 2005, Public Law 109–88, and the Emergency Supplemental Appropriations Act for Defense, the Global War

on Terror, and Hurricane Recovery, 2006, Public Law 109–234.

(b) *Scope.* Sections 206.370 through 206.377 apply only to Special Community Disaster Loans issued under the Community Disaster Loan Act of 2005, Public Law 109–88, and the Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006, Public Law 109–234.

[70 FR 60446, Oct. 18, 2005, as amended at 75 FR 2817, Jan. 19, 2010]

§ 206.371 Loan program.

(a) *General.* The Assistant Administrator for the Disaster Assistance Directorate may make a Special Community Disaster Loan to any local government which has suffered a substantial loss of tax and other revenues as a result of a major disaster and which demonstrates a need for Federal financial assistance in order to provide essential services.

(b) *Amount of loan.* The amount of the loan is based upon need, not to exceed 25 percent of the operating budget of the local government for the fiscal year in which the disaster occurs. The term fiscal year as used in this subpart means the local government's fiscal year.

(c) *Interest rate.* The interest rate is the rate for five year maturities as determined by the Secretary of the Treasury in effect on the date that the Promissory Note is executed. This rate is from the monthly Treasury schedule of certified interest rates which takes into consideration the current average yields on outstanding marketable obligations of the United States. If an applicant can demonstrate *unusual circumstances involving financial hardship*, the Assistant Administrator for the Disaster Assistance Directorate may approve a rate equal to the five year maturity rate plus 1 per centum, adjusted to the nearest ⅛ percent, and further reduced by one-half.

(d) *Time limitation.* The Assistant Administrator for the Disaster Assistance Directorate may approve a loan in either the fiscal year in which the disaster occurred or the fiscal year immediately following that year.

(e) *Term of loan.* The term of the loan is 5 years, unless otherwise extended by the Assistant Administrator for the Disaster Assistance Directorate. The Assistant Administrator for the Disaster Assistance Directorate may consider a request for an extension of a loan based on the local government's financial condition. The total term of any loan under section 417(a) of the Stafford Act normally may not exceed 10 years from the date the Promissory Note was executed. However, when extenuating circumstances exist and the recipient demonstrates an inability to repay the loan within the initial 10 years, but agrees to repay such loan over an extended period of time, additional time may be provided for loan repayment (see § 206.377(c)).

(f) *Use of loan funds.* The local government shall use the loaned funds to assist in providing essential services. The funds shall not be used to finance capital improvements nor the repair or restoration of damaged public facilities. Neither the loan nor any cancelled portion of the loans may be used as the non-Federal share of any Federal program, including those under the Stafford Act.

(g) *Relation to other assistance.* Any Special Community Disaster Loans including cancellations of loans made under this subpart shall not reduce or otherwise affect any commitments, grants, or other assistance provided under the authority of the Stafford Act or this part.

(h) *Cancellation.* The Director of the Public Assistance Division shall cancel repayment of all or part of a Special Community Disaster Loan to the extent that he/she determines that revenues of the local government during the three full fiscal years following the disaster are insufficient to meet the operating budget of that local government because of disaster-related revenue losses and additional unreimbursed disaster-related municipal operating expenses.

[70 FR 60446, Oct. 18, 2005, as amended at 75 FR 2817, Jan. 19, 2010]

§ 206.372 Responsibilities.

(a) The local government shall submit the financial information required by FEMA in the application for a Community Disaster Loan or other format specified by FEMA and comply with

the assurances on the application, the terms and conditions of the Promissory Note, the application for loan cancellation, if submitted, and §§ 206.370 through 206.377. The local government shall send all loan application, loan administration, loan cancellation, and loan settlement correspondence through the Governor's Authorized Representative (GAR) and the FEMA Regional Office to the Director of the Public Assistance Division.

(b) The GAR shall certify on the loan application that the local government can legally assume the proposed indebtedness and that any proceeds will be used and accounted for in compliance with the FEMA-State Agreement for the major disaster. States are encouraged to take appropriate pre-disaster action to resolve any existing State impediments which would preclude a local government from incurring the increased indebtedness associated with a loan in order to avoid protracted delays in processing loan application requests resulting from major disasters.

(c) The Regional Administrator or designee shall review each loan application or loan cancellation request received from a local government to ensure that it contains the required documents and transmit the application to the Director of the Public Assistance Division. He/she may also submit appropriate recommendations to the Director of the Public Assistance Division.

(d) The Director of the Public Assistance Division or a designee, shall execute a Promissory Note with the local government and shall administer the loan until repayment or cancellation is completed and the Promissory Note is discharged.

(e) The Director of the Public Assistance Division shall approve or disapprove each loan request, taking into consideration the information provided in the local government's request and the recommendations of the GAR and the Regional Administrator. The Director of the Public Assistance Division shall approve or disapprove a request for loan cancellation in accordance with the criteria for cancellation in these regulations.

(f) The FEMA Chief Financial Officer shall establish and maintain a financial account for each outstanding loan and disburse funds against the Promissory Note.

[70 FR 60446, Oct. 18, 2005, as amended at 75 FR 2818, Jan. 19, 2010]

§ 206.373 Eligibility criteria.

(a) *Local government.* (1) The local government must be located within the area eligible for assistance under a major disaster declaration. In addition, State law must not prohibit the local government from incurring the indebtedness resulting from a Federal loan.

(2) Criteria considered by FEMA in determining the eligibility of a local government for a Special Community Disaster Loan include the loss of tax and other revenues as result of a major disaster, a demonstrated need for financial assistance in order to perform essential governmental functions, the maintenance of an annual operating budget, and the responsibility to provide essential services to the community. Eligibility for other assistance under the Stafford Act does not, by itself, establish entitlement to such a loan.

(b) *Loan eligibility*—(1) *General.* To be eligible, the local government must show that it may suffer or has suffered a substantial loss of tax and other revenues as a result of a major disaster or emergency, and it must demonstrate a need for financial assistance in order to provide essential municipal services. Loan eligibility is based on the financial condition of the local government and a review of financial information and supporting documentation accompanying the application.

(2) *Substantial loss of tax and other revenues.* The fiscal year of the disaster or the succeeding fiscal year is the base period for determining whether a local government may suffer or has suffered a substantial loss of revenue. Criteria used in determining whether a local government has or may suffer a substantial loss of tax and other revenue include the following disaster-related factors:

(i) Whether the disaster caused a large enough reduction in cash receipts

from normal revenue sources, excluding borrowing, which affects significantly and adversely the level and/or categories of essential services provided prior to the disaster;

(ii) Whether the disaster caused a revenue loss of over 5 percent of total revenue estimated for the fiscal year in which the disaster occurred or for the succeeding fiscal year.

(3) *Demonstrated need for financial assistance.* The local government must demonstrate a need for financial assistance in order to perform essential governmental functions. The criteria used in making this determination may include some or all of the following factors:

(i) Whether there are sufficient funds to meet current fiscal year operating requirements;

(ii) Whether there is availability of cash or other liquid assets from the prior fiscal year;

(iii) Current financial condition considering projected expenditures for governmental services and availability of other financial resources;

(iv) Ability to obtain financial assistance or needed revenue from State and other Federal agencies for direct program expenditures;

(v) Debt ratio (relationship of annual receipts to debt service);

(vi) Displacement of revenue-producing business due to property destruction;

(vii) Necessity to reduce or eliminate essential services; and

(viii) Danger of municipal insolvency.

[70 FR 60446, Oct. 18, 2005]

§ 206.374 Loan application.

(a) *Application.* (1) The local government shall submit an application for a Special Community Disaster Loan through the GAR. The loan must be justified on the basis of need and shall be based on the actual and projected expenses, as a result of the disaster, for the fiscal year in which the disaster occurred and for the 3 succeeding fiscal years. The loan application shall be prepared by the affected local government and be approved by the GAR. FEMA has determined that a local government, in applying for a loan as a result of having suffered a substantial loss of tax and other revenue as a result of a major disaster, is not required to first seek credit elsewhere (see § 206.377(c)).

(2) The State exercises administrative authority over the local government's application. The State's review should include a determination that the applicant is legally qualified, under State law, to assume the proposed debt, and may include an overall review for accuracy of the submission. The GAR may request the Regional Administrator to waive the requirement for a State review if an otherwise eligible applicant is not subject to State administration authority and the State cannot legally participate in the loan application process.

(b) *Financial requirements.* (1) The loan application shall be developed from financial information contained in the local government's annual operating budget (see paragraph (b)(2) of this section) and shall include a Summary of Revenue Loss and Unreimbursed Disaster-Related Expenses, a Statement of the Applicant's Operating Results—Cash Position, and certification and assurances requested by the Assistant Administrator for the Disaster Assistance Directorate.

(i) Copies of the local government's financial reports (Revenue and Expense and Balance Sheet) for the 3 fiscal years immediately prior to the fiscal year of the disaster and the applicant's most recent financial statement must, unless impracticable, accompany the application. The local government's financial reports to be submitted are those annual (or interim) consolidated and/or individual official annual financial presentations for the General Fund and all other funds maintained by the local government.

(ii) Each application for a Special Community Disaster Loan must also include:

(A) A statement by the local government identifying each fund (i.e. General Fund, etc.) which is included as its annual Operating budget, and

(B) A copy of the pertinent State statutes, ordinances, or regulations which prescribe the local government's system of budgeting, accounting and financial reporting, including a description of each fund account.

(2) *Operating budget.* For loan application purposes, the operating budget is that document or documents approved by an appropriating body, which contains an estimate of proposed expenditures, other than capital outlays for fixed assets for a stated period of time, and the proposed means of financing the expenditures. For loan cancellation purposes, FEMA interprets the term ''operating budget'' to mean actual revenues and expenditures of the local government as published in the official financial statements of the local government.

(3) *Operating budget increases.* Budget increases due to increases in the level of, or additions to, municipal services not rendered at the time of the disaster or not directly related to the disaster shall be identified.

(4) *Revenue and assessment information.* The applicant shall provide information concerning its method of tax assessment including assessment dates and the dates payments are due.

(5) *Estimated disaster-related expense.* Unreimbursed disaster-related expenses of a municipal operating character should be estimated.

(c) *Federal review.* (1) The Assistant Administrator for the Disaster Assistance Directorate or designee shall approve a Special Community Disaster Loan to the extent it is determined that the local government has suffered a substantial loss of tax and other revenues and demonstrates a need for financial assistance as the result of the disaster to provide essential municipal services.

(2) *Resubmission of application.* If a loan application is disapproved, in whole or in part, by the Assistant Administrator for the Disaster Assistance Directorate because of inadequacy of information, a revised application may be submitted by the local government within sixty days of the date of the disapproval. Decision by the Assistant Administrator for the Disaster Assistance Directorate on the resubmission is final.

(d) *Special Community Disaster Loan.* (1) The loan shall not exceed the lesser of:

(i) The amount of projected revenue loss plus the projected unreimbursed disaster-related expenses of a municipal operating character for the fiscal year of the major disaster and the subsequent 3 fiscal years, or

(ii) 25 percent of the local government's annual operating budget for the fiscal year in which the disaster occurred.

(2) *Promissory note.* (i) Upon approval of the loan by the Assistant Administrator for the Disaster Assistance Directorate or designee, he or she, or a designated Loan Officer will execute a Promissory Note with the applicant. The Note must be co-signed by the State (see paragraph (d)(2)(ii) of this section). The applicant should indicate its funding requirements on the Schedule of Loan Increments on the Note.

(ii) If the State cannot legally cosign the Promissory Note, the local government must pledge collateral security, acceptable to the Assistant Administrator for the Disaster Assistance Directorate, to cover the principal amount of the Note. The pledge should be in the form of a resolution by the local governing body identifying the collateral security.

(e) *Waiver of requirements.* Notwithstanding any other provision of this or other sections promulgated pursuant to Public Law 109–88, the Assistant Administrator for the Disaster Assistance Directorate may, upon the request of an applicant or loan recipient, waive any specific application requirement or financial reporting requirement (see, e.g., § 206.375(a)(2)) upon a finding by the Assistant Administrator for the Disaster Assistance Directorate that the effects of the major disaster prevent the applicant from fulfilling the application requirement and that waiving the requirements would be consistent with the purposes of the Community Disaster Loan Act of 2005.

[70 FR 60446, Oct. 18, 2005, as amended at 75 FR 2818, Jan. 19, 2010]

§ 206.375 Loan administration.

(a) *Funding.* (1) FEMA will disburse funds to the local government when requested, generally in accordance with the Schedule of Loan Increments in the Promissory Note. As funds are disbursed, interest will accrue against each disbursement.

(2) When each incremental disbursement is requested, the local government shall submit a copy of its most recent financial report (if not submitted previously) for consideration by FEMA in determining whether the level and frequency of periodic payments continue to be justified. The local government shall also provide the latest available data on anticipated and actual tax and other revenue collections. Desired adjustments in the disbursement schedule shall be submitted in writing at least 10 days prior to the proposed disbursement date in order to ensure timely receipt of the funds.

(b) *Financial management.* (1) Each local government with an approved Special Community Disaster Loan shall establish necessary accounting records, consistent with local government's financial management system, to account for loan funds received and disbursed and to provide an audit trail.

(2) FEMA auditors, State auditors, the GAR, the Regional Administrator, the Assistant Administrator for the Disaster Assistance Directorate, the Department of Homeland Security Inspector General, and the Comptroller General of the United States or their duly authorized representatives shall, for the purpose of audits and examination, have access to any books, documents, papers, and records that pertain to Federal funds, equipments, and supplies received under §§ 206.370 through 206.377.

(c) *Loan servicing.* (1) The applicant annually shall submit to FEMA copies of its annual financial reports (operating statements, balance sheets, etc.) for the fiscal year of the major disaster, and for each of the 3 subsequent fiscal years.

(2) FEMA will review the loan periodically. The purpose of the reevaluation is to determine whether projected revenue losses, disaster-related expenses, operating budgets, and other factors have changed sufficiently to warrant adjustment of the scheduled disbursement of the loan proceeds.

(3) FEMA shall provide each loan recipient with a loan status report on a quarterly basis. The recipient will notify FEMA of any changes of the responsible municipal official who executed the Promissory Note.

(d) *Inactive loans.* If no funds have been disbursed from the loan program, and if the local government does not anticipate a need for such funds, the note may be cancelled at any time upon a written request through the State and Regional Office to FEMA.

[70 FR 60446, Oct. 18, 2005]

§ 206.376 Loan cancellation.

(a) FEMA shall cancel repayment of all or part of a Special Community Disaster Loan to the extent that the Director of the Public Assistance Division determines that revenues of the local government during the three-full-fiscal-year period following the disaster are insufficient, as a result of the disaster, to meet the operating budget for the local government, including additional unreimbursed disaster-related expenses of a municipal operating character.

(b) *Definitions.* For loan cancellation purposes,

(1) ''Operating budget'' means actual revenues and expenditures of the local government as published in the official financial statements of the local government.

(2) ''Revenue'' means any source of income from taxes, fees, fines, and other sources of income, and will be recognized only as they become susceptible to accrual (measurable and available).

(3) ''Three-full-fiscal-year period following the disaster'' means either a 36-month period beginning on September 1, 2005, or the 36 months of the applicant's fiscal year as established before the disaster, at the applicant's discretion.

(4) ''Operating expenses'' means those expenses and expenditures incurred as a result of performing services, including salaries and benefits, contractual services, and commodities. Capital expenditures and debt service payments and capital leases are not considered operating expenses. Under accrual accounting, expenses are recognized as soon as a liability is incurred, regardless of the timing of related cash flows.

(c) *Revenue Calculation procedures.* (1) If the tax rates and other revenues or

the tax assessment valuation of property which was not damaged or destroyed by the disaster are reduced during the three full fiscal years subsequent to the major disaster, the tax rates and other revenues and tax assessment valuation factors applicable to such property in effect at the time of the major disaster shall be used without reduction for purposes of computing revenues received.

(2) At the applicant's discretion, the three-full-fiscal-year period following the disaster is either a 36-month period beginning on September 1, 2005 or the 36 months of the applicant's fiscal year as established before the disaster. If the applicant's fiscal year is changed within the 36 months immediately following the disaster, the actual period will be modified so that the required financial data submitted covers an inclusive 36-month period. Should the applicant elect the 36-month period beginning September 1, 2005, FEMA will prorate the revenues and expenses for the partial years based on the applicant's annual financial statements.

(3) If the local government transfers funds from its operating funds accounts to its capital funds account, utilizes operating funds for other than routine maintenance purposes, or significantly increases expenditures which are not disaster related, except increases due to inflation, the annual operating budget or operating statement expenditures will be reduced accordingly for purposes of evaluating any request for loan cancellation.

(4) Notwithstanding paragraph (c)(3) of this section, the amount of property taxes that are transferred to other funds for Debt Service or Pension Obligations funding will not be excluded from the calculation of the operating budget or from expenditures in calculation of the operating deficit, to the extent that the property tax revenues in the General Fund are less than they were pre-disaster. FEMA will consider the impact of the loss of property tax revenue in Debt Service or Pension Funds (non-operating funds) if all of the following conditions are met:

(i) The entity experienced a loss of property tax revenue as a result of the disaster and the assessed value during the three years following the disaster, in the aggregate, is less than the pre-disaster assessed value;

(ii) the entity has a property tax cap limitation on the ability to raise property taxes post-disaster; and

(iii) the property taxes are levied through the General Operating Fund and transfers for obligations mandated by law are made to fund Debt Service or Pension Obligations which result in the entity experiencing a reduction of property tax revenues in the General Fund.

(5) It is not the purpose of this loan program to underwrite pre-disaster budget or actual deficits of the local government. Consequently, such deficits carried forward will reduce any amounts otherwise eligible for loan cancellation.

(6) The provisions of this section apply to all Special Community Disaster loans issued from the dates of enactment of Public Law 109–88 and Public Law 109–234.

(d) *Disaster-related expenses of a municipal operation character*. (1) For purposes of this loan, unreimbursed expenses of a municipal operating character are those incurred for general government purposes, including but not limited to police and fire protection, trash collection, collection of revenues, maintenance of public facilities, flood and other hazard insurance.

(2) Disaster-related expenses do not include expenditures associated with debt service, any major repairs, rebuilding, replacement or reconstruction of public facilities or other capital projects, intragovernmental services, special assessments, and trust and agency fund operations. Disaster expenses which are eligible for reimbursement under project applications or other Federal programs are not eligible for loan cancellation.

(3) Each applicant shall maintain records including documentation necessary to identify expenditures for unreimbursed disaster-related expenses. Examples of such expenses include but are not limited to:

(i) Interest paid on money borrowed to pay amounts FEMA does not advance toward completion of approved Project Applications.

(ii) Unreimbursed costs to local governments for providing usable sites

with utilities for mobile homes used to meet disaster temporary housing requirements.

(iii) Unreimbursed costs required for police and fire protection and other community services for mobile home parks established as the result of or for use following a disaster.

(iv) The cost to the applicant of flood insurance required under Public Law 93–234, as amended, and other hazard insurance required under section 311, Public Law 93–288, as amended, as a condition of Federal disaster assistance for the disaster under which the loan is authorized.

(4) The following expenses are not considered to be disaster-related for Special Community Disaster Loan purposes:

(i) The local government's share for assistance provided under the Stafford Act including flexible funding under section 406(c)(1) of the Act (42 U.S.C. 5172).

(ii) Improvements related to the repair or restoration of disaster public facilities approved on Project Applications.

(iii) Otherwise eligible costs for which no Federal reimbursement is requested as a part of the applicant's disaster response commitment, or cost sharing as specified in the FEMA–State Agreement for the disaster.

(iv) Expenses incurred by the local government which are reimbursed on the applicant's Project Application.

(e) *Cancellation application.* A local government which has drawn loan funds from the U.S. Treasury may request cancellation of the principal and related interest by submitting an Application for Loan Cancellation through the Governor's Authorized Representative to the Regional Administrator prior to the expiration date of the loan.

(1) Financial information submitted with the application shall include the following:

(i) Annual Operating Budgets for the fiscal year of the disaster and the three subsequent fiscal years;

(ii) Annual Financial Reports (Revenue and Expense and Balance Sheet) for each of the above fiscal years. Such financial records must include copies of the local government's annual financial reports, including operating statements and balance sheets and related consolidated and individual presentations for each fund account. In addition, the local government must include an explanatory statement when figures in the Application for Loan Cancellation form differ from those in the supporting financial reports.

(iii) The following additional information concerning annual real estate property taxes pertaining to the community for each of the above fiscal years:

(A) The market value of the tax base (dollars);

(B) The assessment ratio (percent);

(C) The assessed valuation (dollars);

(D) The tax levy rate (mils);

(E) Taxes levied and collected (dollars).

(iv) Audit reports for each of the above fiscal years certifying to the validity of the Operating Statements. The financial statements of the local government shall be examined in accordance with generally accepted auditing standards by independent certified public accountants. The report should not include recommendations concerning loan cancellation or repayment.

(v) Other financial information specified in the Application for Loan Cancellation.

(2) *Narrative justification.* The application may include a narrative presentation to supplement the financial material accompanying the application and to present any extenuating circumstances which the local government wants the Director of the Public Assistance Division to consider in rendering a decision on the cancellation request.

(f) *Determination.* (1) The Director of the Public Assistance Division will make a cancellation determination within 60 days of the date the applicant submits all required and requested information, including documentation in support of un-reimbursed disaster related expenses.

(2) If, based on a review of the Application for Loan Cancellation and FEMA audit, the Director of the Public Assistance Division determines that all or part of the Special Community Disaster Loan funds should be canceled,

the amount of principal canceled and the related interest will be forgiven. The Director of the Public Assistance Division's determination concerning loan cancellation will specify that any uncancelled principal and related interest must be repaid in accordance with the terms and conditions of the Promissory Note, and that, if repayment will constitute a financial hardship, the local government must submit for FEMA review and approval, a repayment schedule for settling the indebtedness on a timely basis. Such repayments must be made to the Treasurer of the United States and be sent to FEMA, Attention: Office of the Chief Financial Officer.

(3) A loan or cancellation of a loan does not reduce or affect other disaster-related grants or other disaster assistance. However, no cancellation may be made that would result in a duplication of benefits to the applicant.

(4) The uncancelled portion of the loan must be repaid in accordance with § 206.377.

(5) *Appeals.* If an Application for Loan Cancellation is disapproved, in whole or in part, by the Director of the Public Assistance Division, the local government may submit any additional information in support of the application within 60 days of the date of disapproval. The decision by the Assistant Administrator for the Disaster Assistance Directorate on the additional information is final.

[75 FR 2818, Jan. 19, 2010]

§ 206.377 Loan repayment.

(a) *Prepayments.* The local government may make prepayments against loan at any time without any prepayment penalty.

(b) *Repayment.* To the extent not otherwise cancelled, loan funds become due and payable in accordance with the terms and conditions of the Promissory Note. The note shall include the following provisions:

(1) The term of a loan made under this program is 5 years, unless extended by the Assistant Administrator for the Disaster Assistance Directorate. Interest will accrue on outstanding cash from the actual date of its disbursement by FEMA or FEMA's designated Disbursing Agency.

(2) The interest amount due will be computed separately for each Treasury disbursement as follows: I = P X R X T, where I = the amount of simple interest, P = the principal amount disbursed; R = the interest rate of the loan; and, T = the outstanding term in years from the date of disbursement to date of repayment, with periods less than 1 year computed on the basis of 365 days/year. If any portion of the loan is cancelled, the interest amount due will be computed on the remaining principal with the shortest outstanding term.

(3) Each payment made against the loan will be applied first to the interest computed to the date of the payment, and then to the principal. Prepayments of scheduled installments, or any portion thereof, may be made at any time and shall be applied to the installments last to become due under the loan and shall not affect the obligation of the borrower to pay the remaining installments.

(4) The Assistant Administrator for the Disaster Assistance Directorate may defer payments of principal and interest until FEMA makes its final determination with respect to any Application for Loan Cancellation which the borrower may submit. However, interest will continue to accrue.

(5) Any costs incurred by the Federal Government in collecting the note shall be added to the unpaid balance of the loan, bear interest at the same rate as the loan, and be immediately due without demand.

(6) In the event of default on this note by the borrower, the FEMA claims collection officer will take action to recover the outstanding principal plus related interest under Federal debt collection authorities, including administrative offset against other Federal funds due the borrower and/or referral to the Department of Justice for judicial enforcement and collection.

(c) *Additional time.* In unusual circumstances involving financial hardship, the local government may request an additional period of time beyond the original 10 year term to repay the indebtedness. Such request may be approved by the Assistant Administrator for the Disaster Assistance Directorate subject to the following conditions:

(1) The local government must submit documented evidence that it has applied for the same credit elsewhere and that such credit is not available at a rate equivalent to the current Treasury rate.

(2) The principal amount shall be the original uncancelled principal plus related interest less any payments made.

(3) The interest rate shall be the Treasury rate in effect at the time the new Promissory Note is executed but in no case less than the original interest rate. A reduced rate may not be applied if was it was not previously applied to the loan.

(4) The term of the new Promissory Note shall be for the settlement period requested by the local government but not greater than 10 years from the date the new note is executed.

[70 FR 60446, Oct. 18, 2005, as amended at 75 FR 2820, Jan. 19, 2010]

§§ 206.378–206.389 [Reserved]

Subpart L [Reserved]

Subpart M—Minimum Standards

SOURCE: 67 FR 8852, Feb. 26, 2002, unless otherwise noted.

§ 206.400 General.

(a) As a condition of the receipt of any disaster assistance under the Stafford Act, the applicant shall carry out any repair or construction to be financed with the disaster assistance in accordance with applicable standards of safety, decency, and sanitation and in conformity with applicable codes, specifications and standards.

(b) Applicable codes, specifications, and standards shall include any disaster resistant building code that meets the minimum requirements of the National Flood Insurance Program (NFIP) as well as being substantially equivalent to the recommended provisions of the National Earthquake Hazards Reduction Program (NEHRP). In addition, the applicant shall comply with any requirements necessary in regards to Executive Order 11988, Floodplain Management, Executive Order 12699, Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction, and any other applicable Executive orders.

(c) In situations where there are no locally applicable standards of safety, decency and sanitation, or where there are no applicable local codes, specifications and standards governing repair or construction activities, or where the Regional Administrator determines that otherwise applicable codes, specifications, and standards are inadequate, then the Regional Administrator may, after consultation with appropriate State and local officials, require the use of nationally applicable codes, specifications, and standards, as well as safe land use and construction practices in the course of repair or construction activities.

(d) The mitigation planning process that is mandated by section 322 of the Stafford Act and 44 CFR part 201 can assist State and local governments in determining where codes, specifications, and standards are inadequate, and may need to be upgraded.

§ 206.401 Local standards.

The cost of repairing or constructing a facility in conformity with minimum codes, specifications and standards may be eligible for reimbursement under section 406 of the Stafford Act, as long as such codes, specifications, and standards meet the criteria that are listed at 44 CFR 206.226(d).

[74 FR 47482, Sept. 16, 2009]

§ 206.402 Compliance.

A recipient of disaster assistance under the Stafford Act must document for the Regional Administrator its compliance with this subpart following the completion of any repair or construction activities.

Subpart N—Hazard Mitigation Grant Program

SOURCE: 55 FR 35537, Aug. 30, 1990, unless otherwise noted.

§ 206.430 General.

This subpart provides guidance on the administration of hazard mitigation grants made under the provisions of section 404 of the Robert T. Stafford

Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5170c, hereafter Stafford Act, or the Act.

[59 FR 24356, May 11, 1994]

§ 206.431 Definitions.

Activity means any mitigation measure, project, or action proposed to reduce risk of future damage, hardship, loss or suffering from disasters.

Applicant means the non-Federal entity consisting of a State or Indian Tribal government, applying to FEMA for a Federal award under the Hazard Mitigation Grant Program. Upon award, the applicant becomes the recipient and may also be a pass-through entity.

Enhanced State Mitigation Plan is the hazard mitigation plan approved under 44 CFR part 201 as a condition of receiving increased funding under the HMGP.

Grant application means the request to FEMA for HMGP funding, as outlined in § 206.436, by a State or Tribal government that will act as recipient.

Grant award means total of Federal and non-Federal contributions to complete the approved scope of work.

Indian Tribal government means any Federally recognized governing body of an Indian or Alaska Native Tribe, band, nation, pueblo, village, or community that the Secretary of Interior acknowledges to exist as an Indian Tribe under the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. 5131. This does not include Alaska Native corporations, the ownership of which is vested in private individuals. Indian Tribal governments have the option to apply as an applicant or subapplicant.

Local Mitigation Plan is the hazard mitigation plan required of a local government acting as a subrecipient as a condition of receiving a project subaward under the HMGP as outlined in 44 CFR 201.6.

Pass-through entity means a recipient that provides a subaward to a subrecipient.

Recipient means the State or Indian Tribal government that receives a Federal award directly from FEMA. A recipient may also be a pass-through entity. The term recipient does not include subrecipients. The recipient is the entire legal entity even if only a particular component of the entity is designated in the grant award document. Generally, the State is the recipient. However, an Indian Tribal government may choose to be a recipient, or may act as a subrecipient under the State. An Indian Tribal government acting as recipient will assume the responsibilities of a ''State'', as described in this part, for the purposes of administering the grant.

Standard State Mitigation Plan is the hazard mitigation plan approved under 44 CFR part 201, as a condition of receiving Stafford Act assistance as outlined in § 201.4 of this chapter.

State Administrative Plan for the Hazard Mitigation Grant Program means the plan developed by the State to describe the procedures for administration of the HMGP.

Subapplicant means the State agency, local government, eligible private nonprofit organization, or Indian Tribal government submitting a subapplication to the applicant for financial assistance under HMGP. Upon award, the subapplicant becomes the subrecipient.

Subaward means an award provided by a pass-through entity to a subrecipient for the subrecipient to carry out part of a Federal award.

Subaward application means the request to the recipient for HMGP funding by the eligible subrecipient, as outlined in § 206.436.

Subrecipient means the government or other legal entity to which a subaward is awarded and which is accountable to the recipient for the use of the funds provided. Subrecipients can be a State agency, local government, private nonprofit organization, or Indian Tribal government as outlined in § 206.433. Indian Tribal governments acting as a subrecipient are accountable to the State recipient.

Tribal Mitigation Plan is the hazard mitigation plan required of an Indian Tribal government acting as a recipient or subrecipient as a condition of receiving a project award or subaward under the HMGP as outlined in 44 CFR 201.7.

[86 FR 50676, Sept. 10, 2021]

§ 206.432 Federal grant assistance.

(a) *General.* This section describes the extent of Federal funding available under the State's grant, as well as limitations and special procedures applicable to each.

(b) *Amounts of assistance.* The total Federal contribution of funds is based on the estimated aggregate grant amount to be made under the Stafford Act for the major disaster (less associated administrative costs), and must be as follows:

(1) *Standard percentages.* Not to exceed 15 percent for the first $2,000,000,000 or less of such amounts; not to exceed 10 percent of the portion of such amounts over $2,000,000,000 and not more than $10,000,000,000; and not to exceed 7.5 percent of the portion of such amounts over $10,000,000,000 and not more than $35,333,000,000.

(2) *Twenty (20) percent.* A State with an approved Enhanced State Mitigation Plan, in effect before the disaster declaration, which meets the requirements outlined in § 201.5 of this subchapter will be eligible for assistance under the HMGP not to exceed 20 percent of such amounts, for amounts not more than $35.333 billion.

(3) The estimates of Federal assistance under this paragraph (b) will be based on the Regional Administrator's estimate of all eligible costs, actual grants, and appropriate mission assignments.

(c) *Cost sharing.* All mitigation measures approved under the State's grant will be subject to the cost sharing provisions established in the FEMA-State Agreement. FEMA may contribute up to 75 percent of the cost of measures approved for funding under the Hazard Mitigation Grant Program for major disasters declared on or after June 10, 1993. The non-Federal share may exceed the Federal share. FEMA will not contribute to costs above the Federally approved estimate.

[55 FR 35537, Aug. 30, 1990, as amended at 59 FR 24356, May 11, 1994; 67 FR 8853, Feb. 26, 2002; 67 FR 61515, Oct. 1, 2002; 69 FR 55097, Sept. 13, 2004; 72 FR 61750, Oct. 31, 2007; 74 FR 47482, Sept. 16, 2009; 86 FR 50677, Sept. 10, 2021]

§ 206.433 State responsibilities.

(a) *Recipient.* The State will be the recipient to which funds are awarded and will be accountable for the use of those funds. There may be subrecipients within the State government.

(b) *Priorities.* The State will determine priorities for funding. This determination must be made in conformance with § 206.435.

(c) *Hazard Mitigation Officer.* The State must appoint a Hazard Mitigation Officer who serves as the responsible individual for all matters related to the Hazard Mitigation Grant Program.

(d) *Administrative plan.* The State must have an approved administrative plan for the Hazard Mitigation Grant Program in conformance with § 206.437.

[55 FR 35537, Aug. 30, 1990, as amended at 72 FR 61750, Oct. 31, 2007; 86 FR 50677, Sept. 10, 2021]

§ 206.434 Eligibility.

(a) *Eligible entities.* The following are eligible to apply for the Hazard Mitigation Program Grant:

(1) Applicants—States and Indian Tribal governments;

(2) Subapplicants—(i) State agencies and local governments;

(ii) Private nonprofit organizations that own or operate a private nonprofit facility as defined in § 206.221(e). A qualified conservation organization as defined at § 80.3(h) of this chapter is the only private nonprofit organization eligible to apply for acquisition or relocation for open space projects;

(iii) Indian Tribal governments.

(b) *Plan requirement.* (1) Local and Indian Tribal government applicants for project subawards must have an approved local or Tribal Mitigation Plan in accordance with 44 CFR part 201 before receipt of HMGP subaward funding for projects.

(2) Regional Administrators may grant an exception to this requirement in extraordinary circumstances, such as in a small and impoverished community when justification is provided. In these cases, a plan will be completed within 12 months of the award of the project subaward. If a plan is not provided within this timeframe, the project subaward will be terminated, and any costs incurred after notice of

subaward's termination will not be reimbursed by FEMA.

(c) *Minimum project criteria.* To be eligible for the Hazard Mitigation Grant Program, a project must:

(1) Be in conformance with the State Mitigation Plan and Local or Tribal Mitigation Plan approved under 44 CFR part 201; or for Indian Tribal governments acting as recipients, be in conformance with the Tribal Mitigation Plan approved under 44 CFR 201.7;

(2) Have a beneficial impact upon the designated disaster area, whether or not located in the designated area;

(3) Be in conformance with 44 CFR part 9, Floodplain Management and Protection of Wetlands, and other applicable environmental and historic preservation laws, regulations, Executive Orders, and agency policy;

(4) Solve a problem independently or constitute a functional portion of a solution where there is assurance that the project as a whole will be completed. Projects that merely identify or analyze hazards or problems are not eligible;

(5) Be cost-effective and substantially reduce the risk of future damage, hardship, loss, or suffering resulting from a major disaster. The recipient must demonstrate this by documenting that the project;

(i) Addresses a problem that has been repetitive, or a problem that poses a significant risk to public health and safety if left unsolved,

(ii) Will not cost more than the anticipated value of the reduction in both direct damages and subsequent negative impacts to the area if future disasters were to occur,

(iii) Has been determined to be the most practical, effective, and environmentally sound alternative after consideration of a range of options,

(iv) Contributes, to the extent practicable, to a long-term solution to the problem it is intended to address,

(v) Considers long-term changes to the areas and entities it protects, and has manageable future maintenance and modification requirements.

(d) *Eligible activities*—(1) *Planning.* Up to 7% of the State's HMGP award may be used to develop State, Tribal and/or local mitigation plans to meet the planning criteria outlined in 44 CFR part 201.

(2) *Types of projects.* Projects may be of any nature that will result in protection to public or private property. Activities for which implementation has already been initiated or completed are not eligible for funding. Eligible projects include, but are not limited to:

(i) Structural hazard control or protection projects;

(ii) Construction activities that will result in protection from hazards;

(iii) Retrofitting of facilities;

(iv) Property acquisition or relocation, as defined in paragraph (e) of this section;

(v) Development of State or local mitigation standards;

(vi) Development of comprehensive mitigation programs with implementation as an essential component;

(vii) Development or improvement of warning systems.

(e) *Property acquisitions and relocation requirements.* Property acquisitions and relocation projects for open space proposed for funding pursuant to a major disaster declared on or after December 3, 2007 must be implemented in accordance with part 80 of this chapter.

(f) *Duplication of programs.* Section 404 funds cannot be used as a substitute or replacement to fund projects or programs that are available under other Federal authorities, except under limited circumstances in which there are extraordinary threats to lives, public health or safety or improved property.

(g) *Packaging of programs.* Section 404 funds may be packaged or used in combination with other Federal, State, local, or private funding sources when appropriate to develop a comprehensive mitigation solution, though section 404 funds cannot be used as a match for other Federal funds.

[55 FR 35537, Aug. 30, 1990, as amended at 59 FR 24356, May 11, 1994; 67 FR 8853, Feb. 26, 2002; 67 FR 61515, Oct. 1, 2002; 69 FR 55097, Sept. 13, 2004; 72 FR 61750, Oct. 31, 2007; 74 FR 47483, Sept. 16, 2009; 81 FR 56534, Aug. 22, 2016; 86 FR 50677, Sept. 10, 2021]

§ 206.435 Project identification and selection criteria.

(a) *Identification.* It is the State's responsibility to identify and select eligible hazard mitigation projects. All funded projects must be consistent with the State Mitigation Plan. Hazard Mitigation projects will be identified and prioritized through the State, Indian tribal, and local planning process.

(b) *Selection.* The State will establish procedures and priorities for the selection of mitigation measures. At a minimum, the criteria must be consistent with the criteria stated in § 206.434(c) and include:

(1) Measures that best fit within an overall plan for development and/or hazard mitigation in the community, disaster area, or State;

(2) Measures that, if not taken, will have a severe detrimental impact on the applicant, such as potential loss of life, loss of essential services, damage to critical facilities, or economic hardship on the community;

(3) Measures that have the greatest potential impact on reducing future disaster losses;

(c) *Other considerations.* In addition to the selection criteria noted above, consideration should be given to measures that are designed to accomplish multiple objectives including damage reduction, environmental enhancement, and economic recovery, when appropriate.

[55 FR 35537, Aug. 30, 1990, as amended at 66 FR 8853, Feb. 26, 2002; 68 FR 63738, Nov. 10, 2003; 86 FR 50678, Sept. 10, 2021]

§ 206.436 Application procedures.

(a) *General.* This section describes the procedures to be used by the recipient in submitting an application for HMGP funding. Under the HMGP, the State or Indian Tribal government is the recipient and is responsible for processing subawards to applicants in accordance with 2 CFR parts 200 and 3002. Subrecipients are accountable to the recipient.

(b) *Governor's Authorized Representative.* The Governor's Authorized Representative serves as the grant administrator for all funds provided under the Hazard Mitigation Grant Program. The Governor's Authorized Representative's responsibilities as they pertain to procedures outlined in this section include providing technical advice and assistance to eligible subrecipients, and ensuring that all potential applicants are aware of assistance available and submission of those documents necessary for grant award.

(c) *Hazard mitigation application.* Upon identification of mitigation measures, the State (Governor's Authorized Representative) will submit its Hazard Mitigation Grant Program application to the FEMA Regional Administrator. The application will identify one or more mitigation measures for which funding is requested. The application must include a Standard Form (SF) 424, Application for Federal Assistance, SF 424D, Assurances for Construction Programs, if appropriate, and a narrative statement. The narrative statement will contain any pertinent project management information not included in the State's administrative plan for Hazard Mitigation. The narrative statement will also serve to identify the specific mitigation measures for which funding is requested. Information required for each mitigation measure must include the following:

(1) Name of the subrecipient, if any;

(2) State or local contact for the measure;

(3) Location of the project;

(4) Description of the measure;

(5) Cost estimate for the measure;

(6) Analysis of the measure's cost-effectiveness and substantial risk reduction, consistent with § 206.434(c);

(7) Work schedule;

(8) Justification for selection;

(9) Alternatives considered;

(10) Environmental information consistent with 44 CFR part 9, Floodplain Management and Protection of Wetlands, and other applicable environmental and historic preservation laws, regulations, Executive Orders, and agency policy.

(d) *Application submission time limit.* The State's application may be amended as the State identifies and selects local project applications to be funded. The State must submit all local HMGP applications and funding requests for the purpose of identifying new projects to the Regional Administrator within 15 months of the date of disaster declaration.

(e) *Extensions.* Upon written request from the applicant, FEMA may extend the application submission timeline as follows:

(1) The State may request the Regional Administrator to extend the application time limit by 30 to 120 day increments, not to exceed a total of 240 days. The applicant must include a justification in its request.

(2) FEMA will only consider requests for extensions beyond 240 days for extenuating circumstances outside of the applicant's control. Such requests must be submitted to the Regional Administrator and must include justification. The Regional Administrator, in coordination with FEMA's Assistant Administrator for the Mitigation Directorate, may extend the application time limit for a reasonable amount of time based upon the extenuating circumstances.

(f) *Reopening of application period.* FEMA's Assistant Administrator for the Mitigation Directorate may reopen a closed application period for up to 180 days in the following circumstances:

(1) *Recalculation of assistance.* If FEMA approves a recalculation of assistance under §206.432 and an applicant requests to reopen the application period within 60 days of FEMA's recalculation approval.

(2) *Appeal.* If FEMA grants an appeal under §206.440 for an application extension denial after an application period is closed.

(g) *FEMA approval.* The applicant must submit its application and supplement(s) to the FEMA Regional Administrator for approval. FEMA has final approval authority for funding of all projects.

(h) *Indian Tribal recipients.* Indian Tribal governments may submit a SF 424 directly to the Regional Administrator.

[67 FR 8853, Feb. 26, 2002, as amended at 79 FR 76086, Dec. 19, 2014; 81 FR 56534, Aug. 22, 2016; 86 FR 50678, Sept. 10, 2021; 89 FR 66253, Aug. 15, 2024]

§ 206.437 State administrative plan.

(a) *General.* The State must develop a plan for the administration of the Hazard Mitigation Grant Program.

(b) *Minimum criteria.* At a minimum, the State administrative plan must include the items listed below:

(1) Designation of the State agency will have responsibility for program administration;

(2) Identification of the State Hazard Mitigation Officer responsible for all matters related to the Hazard Mitigation Grant Program.

(3) Determination of staffing requirements and sources of staff necessary for administration of the program;

(4) Establishment of procedures to:

(i) Identify and notify potential applicants (subrecipients) of the availability of the program;

(ii) Ensure that potential applicants are provided information on the application process, program eligibility and key deadlines;

(iii) Determine applicant eligibility;

(iv) Conduct environmental and floodplain management reviews;

(v) Establish priorities for selection of mitigation projects;

(vi) Process requests for advances of funds and reimbursement;

(vii) Monitor and evaluate the progress and completion of the selected projects;

(viii) Review and approve cost overruns;

(ix) Process appeals;

(x) Provide technical assistance as required to subrecipient(s);

(xi) Comply with the administrative and audit requirements of 2 CFR parts 200 and 3002 and 44 CFR part 206.

(xii) Provide quarterly progress reports to the Regional Administrator on approved projects.

(xiii) Determine the percentage or amount of pass-through funds for management costs provided under 44 CFR part 207 that the recipient will make available to subrecipients, and the basis, criteria, or formula for determining the subrecipient percentage or amount.

(c) *Format.* The administrative plan is intended to be a brief but substantive plan documenting the State's process for the administration of the Hazard Mitigation Grant Program and management of the section 404 funds. This administrative plan should become a part of the State's overall

emergency response or operations plan as a separate annex or chapter.

(d) *Approval.* The State must submit the administrative plan to the Regional Administrator for approval. Following each major disaster declaration, the State must prepare any updates, amendments, or plan revisions required to meet current policy guidance or changes in the administration of the Hazard Mitigation Grant Program. Funds will not be awarded until the State Administrative Plan is approved by the FEMA Regional Administrator.

[55 FR 35537, Aug. 30, 1990, as amended at 55 FR 52172, Dec. 20, 1990; 72 FR 57875, Oct. 11, 2007; 74 FR 15352, Apr. 3, 2009; 79 FR 76086, Dec. 19, 2014; 86 FR 50678, Sept. 10, 2021]

§ 206.438 Project management.

(a) *General.* The State serving as recipient has primary responsibility for project management and accountability of funds as indicated in 2 CFR parts 200 and 3002 and 44 CFR part 206. The State is responsible for ensuring that subrecipients meet all program and administrative requirements.

(b) *Cost overruns.* During the execution of work on an approved mitigation measure the Governor's Authorized Representative may find that actual project costs are exceeding the approved estimates. Cost overruns which can be met without additional Federal funds, or which can be met by offsetting cost underruns on other projects, need not be submitted to the Regional Administrator for approval, so long as the full scope of work on all affected projects can still be met. For cost overruns which exceed Federal obligated funds and which require additional Federal funds, the Governor's Authorized Representative will evaluate each cost overrun and submit a request with a recommendation to the Regional Administrator for a determination. The applicant's justification for additional costs and other pertinent material must accompany the request. The Regional Administrator will notify the Governor's Authorized Representative in writing of the determination and process a supplement, if necessary. All requests that are not justified must be denied by the Governor's Authorized Representative. In no case will the total amount obligated to the State exceed the funding limits set forth in § 206.432(b). Any such problems or circumstances affecting project costs must be identified through the quarterly progress reports required in paragraph (c) of this section.

(c) *Progress reports.* The recipient must submit a quarterly progress report to FEMA indicating the status and completion date for each measure funded. Any problems or circumstances affecting completion dates, scope of work, or project costs which are expected to result in noncompliance with the approved grant conditions must be described in the report.

(d) *Payment of claims.* The Governor's Authorized Representative will make a claim to the Regional Administrator for reimbursement of allowable costs for each approved measure. In submitting such claims the Governor's Authorized Representative must certify that reported costs were incurred in the performance of eligible work, that the approved work was completed and that the mitigation measure is in compliance with the provisions of the FEMA-State Agreement. The Regional Administrator will determine the eligible amount of reimbursement for each claim and approve payment. If a mitigation measure is not completed, and there is not adequate justification for noncompletion, no Federal funding will be provided for that measure.

(e) *Audit requirements.* Uniform audit requirements as set forth in 2 CFR parts 200 and 3002 and 44 CFR part 206 apply to all grant assistance provided under this subpart. FEMA may elect to conduct a Federal audit on the disaster assistance award or on any of the subawards.

[86 FR 50678, Sept. 10, 2021]

§ 206.439 Allowable costs.

(a) General requirements for determining allowable costs are established in 2 CFR part 200, Cost Principles. Exceptions to those requirements as allowed in 2 CFR 200.101 and 2 CFR 200.102 are explained in paragraph (b) of this section.

(b) Administrative and management costs for major disasters will be paid in accordance with 44 CFR part 207.

(c) *Pre-award costs.* FEMA may fund eligible pre-award planning or project

costs at its discretion and as funds are available. Recipients and subrecipients may be reimbursed for eligible pre-award costs for activities directly related to the development of the project or planning proposal. These costs can only be incurred during the open application period of the grant program. Costs associated with implementation of the activity but incurred prior to grant award are not eligible. Therefore, activities where implementation is initiated or completed prior to award are not eligible and will not be reimbursed.

[72 FR 57875, Oct. 11, 2007, as amended at 72 FR 61750, Oct. 31, 2007; 79 FR 76086, Dec. 19, 2014; 86 FR 50679, Sept. 10, 2021]

§ 206.440 Appeals.

An eligible applicant, subrecipient, or recipient may appeal any determination previously made related to an application for or the provision of Federal assistance according to the procedures in this section.

(a) *Format and content.* The applicant or recipient will make the appeal in writing through the recipient to the Regional Administrator. The recipient will review and evaluate all subrecipient appeals before submission to the Regional Administrator. The recipient may make recipient-related appeals to the Regional Administrator. The appeal must contain documented justification supporting the appellant's position, specifying the monetary figure in dispute and the provisions in Federal law, regulation, or policy with which the appellant believes the initial action was inconsistent.

(b) *Levels of appeal.* (1) The Regional Administrator will consider first appeals for hazard mitigation grant program-related decisions under subparts M and N of this part.

(2) The Assistant Administrator for the Mitigation Directorate will consider appeals of the Regional Administrator's decision on any first appeal under paragraph (b)(1) of this section.

(c) *Time limits.* (1) Appellants must make appeals within 60 days after receipt of a notice of the action that is being appealed.

(2) The recipient will review and forward appeals from an applicant or subrecipient, with a written recommendation, to the Regional Administrator within 60 days of receipt.

(3) Within 90 days following receipt of an appeal, the Regional Administrator (for first appeals) or Assistant Administrator for the Mitigation Directorate (for second appeals) will notify the recipient in writing of the disposition of the appeal or of the need for additional information. A request by the Regional Administrator or Assistant Administrator for the Mitigation Directorate for additional information will include a date by which the information must be provided. Within 90 days following the receipt of the requested additional information or following expiration of the period for providing the information, the Regional Administrator or Assistant Administrator for the Mitigation Directorate will notify the recipient in writing of the disposition of the appeal. If the decision is to grant the appeal, the Regional Administrator will take appropriate implementing action.

(d) *Technical advice.* In appeals involving highly technical issues, the Regional Administrator or Assistant Administrator for the Mitigation Directorate may, at his or her discretion, submit the appeal to an independent scientific or technical person or group having expertise in the subject matter of the appeal for advice or recommendation. The period for this technical review may be in addition to other allotted time periods. Within 90 days of receipt of the report, the Regional Administrator or Assistant Administrator for the Mitigation Directorate will notify the recipient in writing of the disposition of the appeal.

(e) *Transition.* (1) This rule is effective for all appeals pending on and appeals from decisions issued on or after May 8, 1998, except as provided in paragraph (e)(2) of this section.

(2) Appeals pending from a decision of an Assistant Administrator for the Mitigation Directorate before May 8, 1998 may be appealed to the Administrator in accordance with 44 CFR 206.440 as it existed before May 8, 1998.

(3) The decision of the FEMA official at the next higher appeal level will be

the final administrative decision of FEMA.

[63 FR 17111, Apr. 8, 1998, as amended at 86 FR 50679, Sept. 10, 2021]

PART 207—MANAGEMENT COSTS

Sec.

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AUTHORITY: Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 through 5206; Reorganization Plan No. 3 of 1978, 43 FR 41943, 3 CFR, 1978 Comp., p. 329; Homeland Security Act of 2002, 6 U.S.C. 101; E.O. 12127, 44 FR 19367, 3 CFR, 1979 Comp., p. 376; E.O. 12148, 44 FR 43239, 3 CFR, 1979 Comp., p. 412; E.O. 13286, 68 FR 10619, 3 CFR, 2003 Comp., p. 166.

SOURCE: 72 FR 57875, Oct. 11, 2007, unless otherwise noted.

§ 207.1 Purpose.

The purpose of this part is to implement section 324 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), 42 U.S.C. 5165b.

§ 207.2 Definitions.

Cap means the maximum dollar amount that may be provided to a grantee for management cost funds for a single declaration pursuant to § 207.5(c) of this part.

Chief Financial Officer (CFO) is the Chief Financial Officer of FEMA, or his/her designated representative.

Cognizant Agency means the Federal agency responsible for reviewing, negotiating, and approving cost allocation plans or indirect cost proposals developed on behalf of all Federal agencies. The Office of Management and Budget (OMB) publishes a listing of cognizant agencies.

Grant means an award of financial assistance making payment in cash, property, or in kind for a specified purpose, by the Federal Government to an eligible grantee.

Grantee(alternatively, Recipient) for purposes of this part means the government to which a Public Assistance (PA) or Hazard Mitigation Grant Program (HMGP) grant is awarded that is accountable for the use of the funds provided. The grantee is the entire legal entity even if only a particular component of the entity is designated in the grant award document. Generally, the State is the grantee. However, after a declaration, an Indian tribal government may choose to be a grantee, or may act as a subgrantee under the State for purposes of administering a grant under PA, HMGP, or both. When an Indian tribal government has chosen to act as grantee, it will also assume the responsibilities of a ''grantee'' under this part for the purposes of administering management cost funding.

Hazard Mitigation Grant Program (HMGP) means the program implemented at part 206, subpart N of this chapter.

HMGP lock-in ceiling means the level of HMGP funding available to a grantee for a particular disaster declaration.

HMGP project narrative refers to the request submitted for HMGP funding.

Indian tribal government is a Federally recognized governing body of an Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of Interior acknowledges to exist as an Indian tribe under the Federally Recognized Tribe List Act of 1994, 25 U.S.C. 479a. This does not include Alaska Native corporations, the ownership of which is vested in private individuals.

Indirect Costs means costs that are incurred by a grantee for a common or joint purpose benefiting more than one cost objective that are not readily assignable to the cost objectives specifically benefited.

Lock-in means the amount of management cost funds available to a grantee for PA or HMGP, respectively, for a particular major disaster or emergency, as FEMA determines at 30 days, 6 months, and 12 months or upon calculation of the final HMGP lock-in ceiling, whichever is later.

Management Costs means any indirect costs, administrative expenses, and any other expenses not directly chargeable to a specific project that are reasonably incurred by a grantee or subgrantee in administering and managing a PA or HMGP grant award. For HMGP, management cost funding is provided outside of Federal assistance limits defined at §206.432(b) of this chapter.

Project refers to a project as defined at §206.201(i) of this chapter for PA or eligible activities as defined at §206.434(d) of this chapter for HMGP.

Project Worksheet (PW) refers to FEMA Form 90–91, or any successor form, on which the scope of work and cost estimate for a logical grouping of work required under the PA program as a result of a declared major disaster or emergency is documented.

Public Assistance (PA) means the program implemented at part 206, subparts G and H of this chapter.

Regional Administrator is the head of a FEMA regional office, or his/her designated representative, appointed under section 507 of the Post-Katrina Emergency Management Reform Act of 2006 (Pub. L. 109–295). The term also refers to Regional Directors as discussed in part 2 of this chapter.

Stafford Act refers to the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended (42 U.S.C. 5121–5206).

State is any State of the United States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

Subgrantee (alternatively, Subrecipient) means the government or other legal entity to which a grantee awards a subgrant and which is accountable to the grantee for the use of the funds provided. Subgrantees can be a State agency, local government, private nonprofit organization, or Indian tribal government.

[72 FR 57875, Oct. 11, 2007, as amended at 82 FR 44, Jan. 3, 2017]

§ 207.3 Applicability and eligibility.

Only PA and HMGP grantees with PA and HMGP grants awarded pursuant to major disasters and emergencies declared by the President on or after November 13, 2007 are eligible to apply to FEMA for management cost funding under this part.

§ 207.4 Responsibilities.

(a) *General.* This section identifies key responsibilities of FEMA and grantees in carrying out section 324 of the Stafford Act, 42 U.S.C. 5165b. These responsibilities are unique to the administration of this part and are in addition to common Federal Government requirements of grantees and subgrantees, consistent with OMB circulars and other applicable requirements, such as 2 CFR parts 200 and 3002.

(b) *FEMA.* FEMA is responsible for:

(1) Determining the lock-in amount for management costs in accordance with §207.5.

(2) Obligating funds for management costs in accordance with §207.5(b).

(3) Deobligating funds provided for management costs not disbursed in accordance with §207.8(b).

(4) Reviewing management cost rates not later than 3 years after this rule is in effect and periodically thereafter.

(c) *Grantee.* The grantee must:

(1) Administer management cost funds to ensure that PA and HMGP, as applicable, are properly implemented and closed out in accordance with program timeframes and guidance.

(2) Determine the reasonable amount or percentage of management cost funding to be passed through to subgrantees for contributions to their costs for administering PA and HMGP projects and ensure that it provides such funds to subgrantees.

(3) Address procedures for subgrantee management costs amount or percentage determination, pass through, closeout, and audit in the State administrative plan required in §206.207(b) of this chapter for PA and §206.437 of this chapter for HMGP.

[72 FR 57875, Oct. 11, 2007, as amended at 79 FR 76086, Dec. 19, 2014]

§ 207.5 Determination of management cost funding.

(a) *General.* This section describes how FEMA determines the amount of funds that it will contribute under this part for management costs for PA and/

or HMGP for a particular major disaster or emergency.

(b) *Lock-in.* FEMA will determine the amount of funds that it will make available for management costs by a lock-in, which will act as a ceiling for funds available to a grantee, including its subgrantees.

(1) Not earlier than 30 days and not later than 35 days from the date of declaration, FEMA will provide the grantee preliminary lock-in amount(s) for management costs based on the projections at that time of the Federal share for financial assistance for PA and HMGP, as applicable. In accordance with § 207.7(c), FEMA will obligate 25 percent of the estimated lock-in amount(s) to the grantee.

(2) For planning purposes, FEMA will revise the lock-in amount(s) at 6 months after the date of the declaration. In accordance with § 207.7(e), FEMA may obligate interim amount(s) to the grantee.

(3) FEMA will determine the final lock-in amount(s) 12 months after date of declaration or after determination of the final HMGP lock-in ceiling, whichever is later. FEMA will obligate the remainder of the lock-in amount(s) to the grantee in accordance with § 207.7(f).

(4) Rates. (i) For major disaster declarations, FEMA will determine the lock-in for PA based on a flat percentage rate of the Federal share of projected eligible program costs for financial assistance pursuant to sections 403, 406, and 407 of the Stafford Act, 42 U.S.C. 5170b, 5172, and 5173, respectively, but not including direct Federal assistance. For major disaster declarations on or after November 13, 2007, the PA rate will be 3.34 percent.

(ii) For major disaster declarations, FEMA will determine the lock-in for HMGP based on a flat percentage rate of the Federal share of projected eligible program costs under section 404 of the Stafford Act, 42 U.S.C. 5170c. For major disaster declarations on or after November 13, 2007, the HMGP rate will be 4.89 percent.

(iii) For emergency declarations, FEMA will determine the lock-in for PA based on a flat percentage rate of the Federal share of projected eligible program costs for financial assistance (sections 502 and 503 of the Stafford Act, 42 U.S.C. 5192 and 5193, respectively), but not including direct Federal assistance. For emergency declarations on or after November 13, 2007 the rate will be 3.90 percent.

(c) The dollar amount provided to a grantee for management cost funds for a single declaration will not exceed 20,000,000, except as described in paragraphs (d) and (e) of this section.

(d) The grantee must justify in writing to the Regional Administrator any requests to change the amount of the lock-in or the cap, extend the time period before lock-in, or request an interim obligation of funding at the time of the 6-month lock-in adjustment. The Regional Administrator will recommend to the Chief Financial Officer whether to approve the extension, change, or interim obligation. Extensions, changes to the lock-in, or interim obligations will not be made without the approval of the Chief Financial Officer.

(e) The Chief Financial Officer may change the amount of the lock-in or the cap, or extend the time before lock-in, if the Chief Financial Officer determines that the projections used to determine the lock-in were inaccurate to such a degree that the change to the lock-in would be material, or for other reasons in his or her discretion that may reasonably warrant such changes. The Chief Financial Officer will not make such changes without consultation with the grantee and the Regional Administrator.

§ 207.6 Use of funds.

(a) The grantee or subgrantee must use management cost funds provided under this part in accordance with 2 CFR part 200, subpart E—Cost Principles, and only for costs related to administration of PA or HMGP, respectively. All charges must be properly documented in accordance with § 207.8(f).

(b) Indirect costs may not be charged directly to a project or reimbursed separately, but rather are considered to be eligible management costs under this part.

(c) Activities and costs that can be directly charged to a project with proper documentation are not eligible for funding under this part.

[72 FR 57875, Oct. 11, 2007, as amended at 79 FR 76086, Dec. 19, 2014]

§ 207.7 Procedures for requesting management cost funding.

(a) *General.* This section describes the procedures to be used by the grantee in requesting management cost funding.

(b) *State administrative plan requirements.* State administrative plans, as required in § 206.207(b) of this chapter for PA and § 206.437 of this chapter for HMGP, must be amended to include procedures for subgrantee management costs amount or percentage determination, pass through, closeout, and audit, as required by § 207.4(c)(3) before management cost funds will be provided under this part.

(c) *Initial funding request submission.* Upon notification of the preliminary lock-in amount(s) for management costs based on the Federal share of the projected eligible program costs for financial assistance at that time for PA and HMGP, as applicable, the grantee must submit its initial management cost funding request to the Regional Administrator. FEMA must receive the initial funding request before it will provide any management cost funds under this part.

(1) For PA management costs, funding requests shall be submitted using a PW.

(2) For HMGP management costs, funding requests shall be submitted using an HMGP project narrative.

(d) *Request documentation.* The grantee is required to submit, no later than 120 days after the date of declaration, documentation to support costs and activities for which the projected lock-in for management cost funding will be used. In extraordinary circumstances, FEMA may approve a request by a grantee to submit support documentation after 120 days. FEMA will work with the grantee to approve or reject the request within 30 days of receipt of the request. If the request is rejected, the grantee will have 30 days to resubmit it for reconsideration and approval. FEMA will not obligate the balance of the management costs lock-in pursuant to a final funding request as described in paragraph (f) of this section or any interim amounts as allowed under paragraph (e) of this section unless the grantee's documentation is approved. The documentation must include:

(1) A description of activities, personnel requirements, and other costs for which the grantee will use management cost funding provided under this part;

(2) The grantee's plan for expending and monitoring the funds provided under this part and ensuring sufficient funds are budgeted for grant closeout; and

(3) An estimate of the percentage or amount of pass-through funds for management costs provided under this part that the grantee will make available to subgrantees, and the basis, criteria, or formula for determining the subgrantee percentage or amount (*e.g.*, number of projects, complexity of projects, X percent to any subgrantee).

(e) *Interim funding request.* If the grantee can justify a bona fide need for an additional obligation of management cost funds at 6 months, the grantee may submit a request to the Regional Administrator. Any interim obligations by FEMA must be approved by the Chief Financial Officer and will not exceed an amount equal to 10 percent of the 6-month lock-in amount, except in extraordinary circumstances.

(f) *Final funding request.* Upon notification of the final lock-in amount(s), the grantee must submit a final management cost funding request to the Regional Administrator. Any necessary revisions to supporting documentation must be attached to the final funding request.

§ 207.8 Management cost funding oversight.

(a) *General.* The grantee has primary responsibility for grants management activities and accountability of funds provided for management costs as required by 2 CFR parts 200 and 3002, especially 2 CFR 200.301–200.304 and 200.317–200.326. The grantee is responsible for ensuring that subgrantees meet all program and administrative requirements.

(b) *Period of availability.* (1) For major disaster declarations, the grantee may expend management cost funds for allowable costs for a maximum of 8 years from the date of the major disaster declaration or 180 days after the latest performance period date of a non-management cost PA PW or HMGP project narrative, respectively, whichever is sooner.

(2) For emergency declarations, the grantee may expend management cost funds for allowable costs for a maximum of 2 years from the date of the emergency declaration or 180 days after the latest performance period of a non-management cost PA PW, whichever is sooner.

(3) The period of availability may be extended only at the written request of the grantee, with the recommendation of the Regional Administrator, and with the approval of the Chief Financial Officer. The grantee must include a justification in its request for an extension, and must demonstrate that there is work in progress that can be completed within the extended period of availability. In no case will an extended period of availability allow more than 180 days after the expiration of any performance period extensions granted under PA or HMGP for project completion. FEMA will deobligate any funds not liquidated by the grantee in accordance with 2 CFR 200.309 and 200.343(b).

(c) *Reporting requirements.* The grantee must provide quarterly progress reports on management cost funds to the Regional Administrator as required by the FEMA-State Agreement.

(d) *Closeout.* The grantee has primary responsibility for the closeout tasks associated with both the program and subgrantee requirements. Complying with each program's performance period requirement, the grantee must conduct final inspections for projects, reconcile subgrantee expenditures, resolve negative audit findings, obtain final reports from subgrantees and reconcile the closeout activities of subgrantees with PA and HMGP grant awards.

(e) *Audit requirements.* Uniform audit requirements in 2 CFR 200.500–200.520 apply to all assistance provided under this part.

(f) *Document retention.* In compliance with State law and procedures and with 2 CFR 200.333–200.337, grantees must retain records, including source documentation to support expenditures/costs incurred for management costs, for 3 years from the date of submission of the final Financial Status Report to FEMA that is required for PA and HMGP. The grantee is responsible for resolving questioned costs that may result from audit findings during the 3-year-record-retention period and returning any disallowed costs from ineligible activities.

[72 FR 57875, Oct. 11, 2007, as amended at 79 FR 76086, Dec. 19, 2014]

§ 207.9 Declarations before November 13, 2007.

(a) *General.* This section describes how FEMA provides administrative and management cost funding for PA and HMGP for major disasters or emergencies declared before November 13, 2007.

(b) *Eligible direct costs.* Eligible direct costs to complete approved activities are governed by 2 CFR parts 200 and 3002. The eligible direct costs for administration and management of the program are divided into two categories as follows:

(1) *Grantee*—(i) *Statutory administrative costs.* FEMA may provide funds to the grantee to cover the extraordinary costs incurred in preparing project worksheets or applications, final inspection reports, quarterly reports, final audits, and related field inspections by State employees, including overtime pay and per diem and travel expenses, but not including regular time for such employees. FEMA will base the funds on the following percentages of the total amount of assistance provided (Federal share) for all subgrantees in the State under sections 403, 404, 406, 407, 502, and 503 of the Stafford Act (42 U.S.C. 5170b, 5170c, 5172, 5173, 5192, and 5193, respectively):

(A) For the first 100,000 of total assistance provided (Federal share), 3 percent of such assistance.

(B) For the next 900,000, 2 percent of such assistance.

(C) For the next 4,000,000, 1 percent of such assistance.

(D) For assistance over $5,000,000, one-half of 1 percent of such assistance.

(ii) *State management administrative costs.* Except for the items listed in paragraph (b)(1)(i) of this section, other administrative costs will be paid in accordance with 2 CFR part 200, subpart E—Cost Principles. The grantee and FEMA will share such costs under the cost share provisions of applicable PA and HMGP regulations.

(2) *Subgrantee.* The grantee may provide funds to the subgrantee to cover necessary costs of requesting, obtaining, and administering Federal disaster assistance subgrants, based on the following percentages of net eligible costs under sections 403, 404, 406, 407, 502, and 503 of the Stafford Act (42 U.S.C. 5170b, 5170c, 5172, 5173, 5192, and 5193, respectively), for an individual applicant (applicants in this context include State agencies):

(i) For the first $100,000 of net eligible costs, 3 percent of such costs.

(ii) For the next $900,000, 2 percent of such costs.

(iii) For the next $4,000,000, 1 percent of such costs.

(iv) For those costs over $5,000,000, one-half of 1 percent of such costs.

(c) *Eligible indirect costs:*

(1) *Grantee.* Indirect costs of administering the disaster program are eligible in accordance with the provisions of 2 CFR parts 200 and 3002 if the grantee provides FEMA with a current Indirect Cost Rate Agreement approved by its Cognizant Agency.

(2) *Subgrantee.* No indirect costs of a subgrantee are separately eligible because the percentage allowance in paragraph (b)(2) of this section covers necessary costs of requesting, obtaining and administering Federal assistance.

(d) *Availability.* (1) For major disaster declarations, FEMA will reimburse grantee eligible costs as described in this section at (b)(1)(ii) and (c)(1) for a maximum of 8 years from the date of the major disaster declaration or 180 days after the latest performance period date of a non-management cost PA PW or predecessor form or HMGP project narrative, respectively, whichever is sooner.

(2) For emergency declarations, FEMA will reimburse grantee eligible costs as described in this section at (b)(1)(ii) and (c)(1) for a maximum of 2 years from the date of the emergency declaration or 180 days after the latest performance period of a non-management cost PA PW or predecessor form, whichever is sooner.

(3) The reimbursement of grantee eligible costs as described in this section at (b)(1)(ii) and (c)(1) may be provided by FEMA after the periods of availability described in this section only at the written request of the grantee, with the recommendation of the Regional Administrator, and with the approval of the Chief Financial Officer. The grantee must include a justification in its request for further reimbursement, and must demonstrate that there is work in progress that can be completed within the extended period of reimbursement. In no case will reimbursement be provided after 180 days after the expiration of any performance period extensions granted under PA or HMGP for project completion.

[72 FR 57875, Oct. 11, 2007, as amended at 79 FR 76087, Dec. 19, 2014]

§ 207.10 Review of management cost rates.

(a) FEMA will review management cost rates not later than 3 years after this rule is in effect and periodically thereafter.

(b) In order for FEMA to review the management cost rates established, and in accordance with 2 CFR parts 200 and 3002, the grantee and subgrantee must document all costs expended for management costs (including cost overruns). After review of this documentation, FEMA will determine whether the established management cost rates are adequate for the administration and closeout of the PA and HMGP programs.

[72 FR 57875, Oct. 11, 2007, as amended at 79 FR 76087, Dec. 19, 2014]

PART 208—NATIONAL URBAN SEARCH AND RESCUE RESPONSE SYSTEM

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AUTHORITY: Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 through 5206; Reorganization Plan No. 3 of 1978, 43 FR 41943, 3 CFR, 1978 Comp., p. 329; Homeland Security Act of 2002, 6 U.S.C. 101; E.O. 12127, 44 FR 19367, 3 CFR, 1979 Comp., p. 376; E.O. 12148, 44 FR 43239, 3 CFR, 1979 Comp., p. 412; E.O. 13286, 68 FR 10619, 3 CFR, 2003 Comp., p. 166.

SOURCE: 70 FR 9194, Feb. 24, 2005, unless otherwise noted.

Subpart A—General

§ 208.1 Purpose and scope of this part.

(a) *Purpose.* The purpose of this part is to prescribe policies and procedures pertaining to the Department of Homeland Security's (DHS) National Urban Search and Rescue Response System.

(b) *Scope.* This part applies to Sponsoring Agencies and other participants in the National Urban Search and Rescue Response System that have executed agreements governed by this part. Part 206 of this chapter does not apply to activities undertaken under this part, except as provided in §§ 208.5 and 208.10 of this part. This part does not apply to reimbursement under part 206, subpart H, of this chapter.

§ 208.2 Definitions of terms used in this part.

(a) *General.* Any capitalized word in this part is a defined term unless such capitalization results from the application of standard capitalization or style rules for Federal regulations. The following definitions have general applicability throughout this part:

Activated or *Activation* means the status of a System resource placed at the direction, control and funding of DHS in response to, or in anticipation of, a presidential declaration of a major disaster or emergency under the Stafford Act.

Activation Order means the DHS communication placing a System resource

under the direction, control, and funding of DHS.

Advisory means a DHS communication to System resources indicating that an event has occurred or DHS anticipates will occur that may require Alert or Activation of System resources.

Alert means the status of a System resource's readiness when triggered by an Alert Order indicating that DHS may Activate the System resource.

Alert Order means the DHS communication that places a System resource on Alert status.

Assistant Administrator means the Assistant Administrator for the Disaster Operations Directorate.

Assistance Officer means the DHS employee who has legal authority to bind DHS by awarding and amending Cooperative Agreements.

Backfill means the personnel practice of temporarily replacing a person in his or her usual position with another person.

Cooperating Agency means a State or Local Government that has executed a Cooperative Agreement to provide Technical Specialists.

Cooperative Agreement means a legal instrument between DHS and a Sponsoring Agency or Cooperating Agency that provides funds to accomplish a public purpose and anticipates substantial Federal involvement during the performance of the contemplated activity.

Daily Cost Estimate means a Sponsoring Agency's estimate of Task Force personnel compensation, itemized fringe benefit rates and amounts including calculations, and Backfill expenditures for a 24-hour period of Activation.

Deputy Assistant Administrator means the Deputy Assistant Administrator for the Disaster Operations Directorate, or other person the Assistant Administrator designates.

DHS means the Department of Homeland Security.

Disaster Search Canine Team means a disaster search canine and handler who have successfully completed the written examination and demonstrated the performance skills required by the Disaster Search Canine Readiness Evaluation Process. A disaster search canine is a dog that has successfully completed the DHS Disaster Search Canine Readiness Evaluation criteria for Type II or both Type II and Type I.

Emergency means any occasion or instance for which, in the determination of the President, Federal assistance is needed to supplement State and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States.

Equipment Cache List means the DHS-issued list that defines:

(1) The equipment and supplies that US & R will furnish to Sponsoring Agencies; and

(2) The maximum quantities and types of equipment and supplies that a Sponsoring Agency may purchase and maintain with DHS funds.

Federal Excess Property means any Federal personal property under the control of a Federal agency that the agency head or a designee determines is not required for its needs or for the discharge of its responsibilities.

Federal Response Plan means the signed agreement among various Federal departments and agencies that provides a mechanism for coordinating delivery of Federal assistance and resources to augment efforts of State and Local Governments overwhelmed by a Major Disaster or Emergency, supports implementation of the Stafford Act, as well as individual agency statutory authorities, and supplements other Federal emergency operations plans developed to address specific hazards.

Joint Management Team or *JMT* means a multi-disciplinary group of National Disaster Medical System (NDMS), Urban Search and Rescue (US&R), and other specialists combined to provide operations, planning, logistics, finance and administrative support for US&R and NDMS resources, and to provide technical advice and assistance to States and Local Governments.

Local Government means any county, city, village, town, district, or other political subdivision of any State; any federally recognized Indian tribe or authorized tribal organization; and any Alaska Native village or organization.

Major Disaster means any natural catastrophe (including any hurricane,

tornado, storm, high water, wind driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought), or regardless of cause, any fire, flood, or explosion, in any part of the United States, that in the determination of the President, causes damage of sufficient severity and magnitude to warrant major disaster assistance under the Stafford Act to supplement the efforts and available resources of States, Local Governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby.

Memorandum of Agreement (MOA) means the document signed by DHS, a Sponsoring Agency and its State that describes the relationship of the parties with respect to the National Urban Search & Rescue Response System.

Participating Agency means a State or Local Government, non-profit organization, or private organization that has executed an agreement with a Sponsoring Agency to participate in the National US&R Response System.

Personnel Rehabilitation Period means the period allowed by DHS for a person's rehabilitation to normal conditions of living following an Activation.

Preparedness Cooperative Agreement means the agreement between DHS and a Sponsoring Agency for reimbursement of allowable expenditures incurred by the Sponsoring Agency to develop and maintain System capabilities and operational readiness.

Program Directive means guidance and direction for action to ensure consistency and standardization across the National US&R Response System.

Program Manager means the individual, or his or her designee, within DHS who is responsible for day-to-day administration of the National US&R Response System.

Program Office means the organizational entity within DHS that is responsible for day-to-day administration of the National US&R Response System.

Response Cooperative Agreement means an agreement between DHS and a Sponsoring Agency for reimbursement of allowable expenditures incurred by the Sponsoring Agency as a result of an Alert or Activation.

Sponsoring Agency means a State or Local Government that has executed an MOA with DHS to organize and administer a Task Force.

Stafford Act means the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 through 5206.

State means any State of the United States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia or the Republic of the Marshall Islands.

Support Specialist means a person participating in the System who assists the Task Force with administrative or other support during mobilization, ground transportation and demobilization as directed.

System or *National US&R Response System* means the national US&R response capability administered by DHS.

System Member means any Task Force Member, JMT Member, Technical Specialist, Support Specialist or Disaster Search Canine Team.

Task Force means an integrated US&R organization of multi-disciplinary resources with common communications and a leader, organized and administered by a Sponsoring Agency and meeting DHS standards.

Task Force Member means a person occupying a position on a Task Force.

Technical Specialist means a person participating in the System contributing technical knowledge and skill who may be placed on Alert or Activated as a single resource and not as a part of a JMT or a Task Force.

US&R means urban search and rescue, the process of searching for, extricating, and providing for the immediate medical stabilization of victims who are entrapped in collapsed structures.

(b) *Additional definitions.* Definitions for certain terms that apply only to individual subparts of this part are located in those subparts.

[70 FR 9194, Feb. 24, 2005, as amended at 74 FR 15353, Apr. 3, 2009]

§ 208.3 Authority for the National US&R Response System.

(a) *Enabling legislation.* The Federal Emergency Management Agency established and operated the System under the authority of §§ 303, 306(a), 306(b), 403(a)(3)(B) and 621(c) of the Stafford Act, 42 U.S.C. 5144, 5149(a), 5149(b), 5170b(a)(3)(B) and 5197(c), respectively. Section 503 of the Homeland Security Act of 2002, 6 U.S.C. 313, transferred the functions of the Administrator of FEMA to the Secretary of Homeland Security. The President redelegated to the Secretary of Homeland Security in Executive Order 13286 those authorities of the President under the Stafford Act that had been delegated previously to the Administrator of FEMA under Executive Order 12148.

(b) *Implementing plan.* The National Response Plan identifies DHS as the primary Federal agency with responsibility for Emergency Support Function 9, Urban Search and Rescue.

§ 208.4 Purpose for System.

It is DHS policy to develop and provide a national system of standardized US&R resources to respond to Emergencies and Major Disasters that are beyond the capabilities of affected State and Local Governments.

§ 208.5 Authority of the Assistant Administrator for the Disaster Operations Directorate.

(a) *Participation in activities of the System.* The Assistant Administrator is responsible for determining participation in the System and any activity thereof, including but not limited to whether a System resource is operationally ready for Activation.

(b) *Standards for and measurement of System efficiency and effectiveness.* In addition to the authority provided in § 206.13 of this chapter, the Assistant Administrator may establish performance standards and assess the efficiency and effectiveness of System resources.

§ 208.6 System resource reports.

(a) *Reports to Assistant Administrator.* The Assistant Administrator may request reports from any System resource relating to its activities as part of the System.

(b) *Reports to FEMA Regional Administrators.* Any FEMA Regional Administrator may request through the Assistant Administrator reports from any System resource used within or based within the Regional Administrator's jurisdiction.

(c) *Audits, investigations, studies and evaluations.* DHS and the General Accounting Office may conduct audits, investigations, studies, and evaluations as necessary. Sponsoring Agencies, Participating Agencies and System Members are expected to cooperate fully in such audits, investigations, studies and evaluations.

§ 208.7 Enforcement.

(a) *Remedies for noncompliance.* In accordance with the provisions of 2 CFR 200.338, 200.341, and 200.342, if a Sponsoring Agency, Participating Agency, Affiliated Personnel or other System Member materially fails to comply with a term of a Cooperative Agreement, Memorandum of Agreement, System directive or other Program Directive, the Assistant Administrator may take one or more of the actions provided in 2 CFR 200.338(a)–(f). Any such enforcement action taken by the Assistant Administrator will be subject to the hearings, appeals, and effects of suspension and termination provisions of 2 CFR 200.341 and 200.342.

(b) The enforcement remedies identified in this section, including suspension and termination, do not preclude a Sponsoring Agency, Participating Agency, Affiliated Personnel or other System Member from being subject to ''Debarment and Suspension'' under E.O. 12549, as amended, in accordance with 2 CFR 200.338(d).

(c) *Other authority for sanctions.* Nothing in this section limits or precludes the application of other authority to impose civil or criminal sanctions, including 42 U.S.C. 5156.

[70 FR 9194, Feb. 24, 2005, as amended at 79 FR 76087, Dec. 19, 2014]

§ 208.8 Code of conduct.

The Assistant Administrator will develop and implement a code of conduct for System Members acting under DHS's direction and control. Nothing

in this section or the DHS code of conduct will limit the authority of a Sponsoring Agency, Participating Agency or Cooperating Agency to apply its own code of conduct to its System Members or employees. If the DHS code is more restrictive, it controls.

§ 208.9 Agreements between Sponsoring Agencies and Participating Agencies.

Every agreement between a Sponsoring Agency and a Participating Agency regarding the System must include a provision making this part applicable to the Participating Agency and its employees who engage in System activities.

§ 208.10 Other regulations.

The following provisions of title 44 CFR, Chapter I also apply to the program in this part:

(a) Section 206.9, which deals with the non-liability of DHS in certain circumstances.

(b) Section 206.11, which prescribes nondiscrimination in the provision of disaster assistance.

(c) Section 206.14, which deals with criminal and civil penalties.

(d) Section 206.15, which permits recovery of assistance by DHS.

§ 208.11 Federal status of System Members.

The Assistant Administrator will appoint all Activated System Members as temporary excepted Federal volunteers. The Assistant Administrator may appoint a System Member who participates in Alert activities as such a Federal volunteer. The Assistant Administrator may also appoint each System Member who participates in DHS-sanctioned preparedness activities as a temporary excepted Federal volunteer. DHS intends these appointments to secure protection for such volunteers under the Federal Employees Compensation Act and the Federal Tort Claims Act and do not intend to interfere with any preexisting employment relationship between a System Member and a Sponsoring Agency, Cooperating Agency or Participating Agency. System Members whom DHS appoints as temporary excepted Federal volunteers will not receive any compensation or employee benefit directly from the United States of America for their service, but will be compensated through their Sponsoring Agency.

§ 208.12 Maximum Pay Rate Table.

(a) *Purpose.* This section establishes the process for creating and updating the Maximum Pay Rate Table (Table), and the Table's use to reimburse Affiliated Personnel (Task Force Physicians, Task Force Engineers, and Canine Handlers) and Backfill for Activated System Members employed by or otherwise associated with a for-profit Participating Agency. Section 208.32 defines the ''Maximum Pay Rate Table'' as ''the DHS-issued table that identifies the maximum pay rates for selected System positions that may be used for reimbursement of Affiliated Personnel compensation and Backfill for Activated System Members employed by or otherwise associated with a for-profit Participating Agency.'' In that same section, the term ''Affiliated Personnel'' is defined as ''individuals not normally employed by a Sponsoring Agency or Participating Agency and individuals normally affiliated with a Sponsoring Agency or Participating Agency as volunteers.''

(b) *Scope of this section.* (1) The Maximum Pay Rate Table applies to those individuals who are not normally employed by a Sponsoring Agency or Participating Agency, or whose affiliation with a Sponsoring Agency or Participating Agency is as a volunteer; that is, an individual whom the Sponsoring Agency or Participating Agency does not normally compensate in any way, at any rate.

(2) The Table also applies to Backfill for Activated System Members employed by or otherwise associated with a for-profit Participating Agency.

(c) *Method for determining maximum pay rates.* (1) DHS uses the United States Office of Personnel Management's salary rates, computed under 5 U.S.C. 5504, as the basis for the maximum pay rate schedule. DHS considers System members' experience and sets maximum pay rates at the maximum grade, middle step for each position, which demonstrates an experience level of five years.

(2) The Office of Personnel Management (OPM) publishes salary and locality pay schedules each calendar year.

(i) *Physicians.* DHS uses the latest Special Salary Rate Table Number 0290 for Medical Officers (Clinical) Worldwide for physicians. The rates used in the initial Table can be found at *http://www.opm.gov/oca/03 tables/SSR/HTML/0290.asp.*

(ii) *Engineers and Canine Handlers.* DHS uses the latest General Schedule pay scale for both positions. Both specialties are compared to the General Schedule pay scale to ensure parity with like specialties on a task force (canine handlers are equated with rescue specialists). The rates used in the initial Table can be found at *http://www.opm.gov/oca/03tables/html/gs.asp.*

(iii) *Locality Pay.* To determine adjustments for locality pay DHS uses the latest locality pay areas (including the ''Rest of U.S.'' area) established by OPM. The rates used in the initial Table can be found at *http://www.opm.gov/oca/03tables/locdef.asp.*

(3) *Review and update.* DHS will review and update the Table periodically, at least annually. The comments of Sponsoring and Participating Agencies and their experience with the Table will be considered and evaluated in the course of the reviews.

(4) *Initial rates and subsequent revisions.* DHS will publish the initial maximum pay rate table in the FEDERAL REGISTER as a notice with request for comments. Subsequent revisions will be made to the pay rate table as OPM changes salary rates as described in this section. When subsequent revisions are made to the maximum pay rate table DHS will publish the new maximum pay rate table in the FEDERAL REGISTER. The rates will be effective for the latest year indicated by OPM.[1]

(d) *Application of the maximum pay rate table*—(1) *Applicability.* The Maximum Pay Rate Table sets forth maximum rates for which DHS will reimburse the Sponsoring Agency for compensation paid to Activated Affiliated Personnel and as Backfill for Activated System Members employed by or otherwise associated with a for-profit Participating Agency.

(2) *Higher rates.* The Sponsoring Agency may choose to pay Affiliated Personnel at a higher rate, but DHS will not reimburse the increment above the maximum rate specified in the Maximum Pay Rate Table. Likewise, the Sponsoring Agency may choose to enter into a Participating Agency agreement with the individual's employer, rather than use the individual as an Affiliated Personnel, in which case the Maximum Pay Rate Table would not apply.

(3) *Compensation for Sponsoring Agency employees serving as Affiliated Personnel.* An employee of a Sponsoring Agency serving on a Task Force in a capacity other than his or her normal job, *e.g.*, a fire department dispatcher affiliated with the Task Force as a canine search specialist, as an Affiliated Personnel, would not necessarily be subject to the Maximum Pay Rate Table for reimbursement for salary and benefits for that individual. However, Sponsoring Agencies may use the rates in the Maximum Pay Rate Table as a guide for establishing compensation levels for such individuals.

(4) *Backfill expenses for Affiliated Personnel under § 208.39(g).* (i) The only way that DHS can reimburse for Backfill costs incurred for Affiliated Personnel is through Participating Agencies. If reimbursement for Backfill expenses is needed for Affiliated Personnel, DHS encourages them to urge their employers or professional association to seek Participating Agency status.

(ii) *Private, for-profit organizations.* Participating Agency status is available to private, for-profit organizations, *e.g.*, HMOs or medical or engineering professional associations, under the revised definition of ''Participating Agency'' set forth in this Interim rule. (See Definitions, § 208.2, *Participating Agency.* and § 208.32, *Maximum Pay Rate Tabl.e*). When a for-profit Participating Agency must backfill an Activated System Member's position we will compensate that Participating Agency up to the maximum rate provided in the Table.

[1] In some years the latest year may not be the current calendar year. For instance, OPM did not change its pay rates for calendar year 2004, and the 2003 schedules apply.

(iii) *Compensation costs.* DHS will reimburse for-profit organizations, for purposes of reimbursement and Backfill, for the System Member's actual compensation or the actual compensation of the individual who Backfills a position (which includes salary and benefits, as described in §§ 208.39 and 208.40), but will not reimburse for billable or other rates that might be charged for services rendered to commercial clients or patients.

§§ 208.13–208.20 [Reserved]

Subpart B—Preparedness Cooperative Agreements

§ 208.21 Purpose.

Subpart B of this part provides guidance on the administration of Preparedness Cooperative Agreements.

§ 208.22 Preparedness Cooperative Agreement process.

(a) *Application.* To obtain DHS funding for an award or amendment of a Preparedness Cooperative Agreement, the Sponsoring Agency must submit an application. Standard form SF–424 ''Application for Federal Assistance'' generally will be used. However, the application must be in a form that the Assistance Officer specifies.

(b) *Award.* DHS will award a Preparedness Cooperative Agreement to each Sponsoring Agency to provide Federal funding to develop and maintain System resource capabilities and operational readiness. For the purposes of the Preparedness Cooperative Agreement, the Sponsoring Agency will be considered the ''recipient.''

(c) *Amendment*—(1) *Procedure.* Absent special circumstances, DHS will fund and amend Preparedness Cooperative Agreements on an annual basis. Before amendment, the Assistance Officer will issue a call for Cooperative Agreement amendment applications. The Assistance Officer will specify required application forms and supporting documentation to be submitted with the application.

(2) *Period of performance.* Absent special circumstances, the period of performance for Preparedness Cooperative Agreements will be 1 year from the date of award. The Assistance Officer may allow for an alternate period of performance with the approval of the Assistant Administrator.

(3) *Assistance Officer.* The Assistance Officer is the only individual authorized to award or modify a Preparedness Cooperative Agreement.

(d) *Award amounts.* The Assistant Administrator will determine award amounts on an annual basis. A Task Force is eligible for an annual award only if the Program Manager receives and approves the Task Force's current-year Daily Cost Estimate.

(e) *DHS priorities.* The Assistant Administrator will establish overall priorities for the use of Preparedness Cooperative Agreement funds taking into consideration the results of readiness evaluations and actual Activations, overall priorities of DHS, and other factors, as appropriate.

(f) *Cost sharing.* The Assistant Administrator may subject Preparedness Cooperative Agreement awards to cost sharing provisions. In the call for Preparedness Cooperative Agreement amendment applications, the Assistance Officer must inform Sponsoring Agencies about any cost sharing obligations.

(g) *Sponsoring Agency priorities.* The Sponsoring Agency should indicate its spending priorities in the application. The Program Manager will review these priorities and will make recommendations to the Assistance Officer for negotiating the final agreement.

(h) *Responsibility to maintain integrity of the equipment cache.* The Sponsoring Agency is responsible to maintain the integrity of the equipment cache, including but not limited to, maintenance of the cache, replacement of equipment or supplies expended in training, activations, or local use of the cache, and timely availability of the cache for Task Force Activations.

§ 208.23 Allowable costs under Preparedness Cooperative Agreements.

System Members may spend Federal funds that DHS provides under any Preparedness Cooperative Agreement and any required matching funds under

2 CFR part 200, subpart E—Cost Principles, and this section to pay reasonable, allowable, necessary and allocable costs that directly support System activities, including the following:

(a) Administration, including:

(1) Management and administration of day-to-day System activities such as personnel compensation and benefits relating to System maintenance and development, record keeping, inventory of equipment, and correspondence;

(2) Travel to and from System activities, meetings, conferences, training, drills and exercises;

(3) Tests and examinations, including vaccinations, immunizations and other tests that are not normally required or provided in the course of a System Member's employment, and that DHS requires to meet its standards.

(b) Training:

(1) Development and delivery of, and participation in, System-related training courses, exercises, and drills;

(2) Construction, maintenance, lease or purchase of System-related training facilities or materials;

(3) Personnel compensation expenses, including overtime and other related expenses associated with System-related training, exercises, or drills;

(4) System-required evaluations and certifications other than the certifications that DHS requires System Members to possess at the time of entry into the System. For instance, DHS will not pay for a medical school degree, paramedic certification or recertification, civil engineering license, etc.

(c) Equipment:

(1) Procurement of equipment and supplies specifically identified on the then-current DHS-approved Equipment Cache List;

(2) Maintenance and repair of equipment included on the current Equipment Cache List;

(3) Maintenance and repair of equipment acquired with DHS approval through the Federal Excess Property program, except as provided in § 208.25 of this part;

(4) Purchase, construction, maintenance or lease of storage facilities and associated equipment for System equipment and supplies.

(d) Disaster search canine expenses limited to:

(1) Procurement for use as a System resource;

(2) Training and certification expenses;

(3) Veterinary care.

(e) Management and administrative costs, actually incurred but not otherwise specified in this section that directly support the Sponsoring Agency's US&R capability, provided that such costs do not exceed 7.5 percent of the award/amendment amount.

[70 FR 9194, Feb. 24, 2005, as amended at 79 FR 76087, Dec. 19, 2014]

§ 208.24 Purchase and maintenance of items not listed on Equipment Cache List.

(a) Requests for purchase or maintenance of equipment and supplies not appearing on the Equipment Cache List, or that exceed the number specified in the Equipment Cache List, must be made in writing to the Program Manager. No Federal funds provided under any Preparedness Cooperative Agreement may be expended to purchase or maintain any equipment or supply item unless:

(1) The equipment and supplies directly support the Sponsoring Agency's US&R capability;

(2) The Program Manager approves the expenditure and gives written notice of his or her approval to the Sponsoring Agency before the Sponsoring Agency purchases the equipment or supply item.

(b) Maintenance of items approved for purchase under this section is eligible for reimbursement, except as provided in § 208.26 of this subpart.

§ 208.25 Obsolete equipment.

(a) The Assistant Administrator will periodically identify obsolete items on the Equipment Cache List and provide such information to Sponsoring Agencies.

(b) Neither funds that DHS provides nor matching funds required under a Preparedness Cooperative Agreement may be used to maintain or repair items that DHS has identified as obsolete.

§ 208.26 Accountability for use of funds.

The Sponsoring Agency is accountable for the use of funds as provided under the Preparedness Cooperative Agreement, including financial reporting and retention and access requirements according to 2 CFR 200.327 and 200.333–200.337.

[79 FR 76087, Dec. 19, 2014]

§ 208.27 Title to equipment.

Title to equipment purchased by a Sponsoring Agency with funds provided under a DHS Preparedness Cooperative Agreement vests in the Sponsoring Agency, provided that DHS reserves the right to transfer title to the Federal Government or a third party that DHS may name, under 2 CFR 200.313(e)(3), for example, when a Sponsoring Agency indicates or demonstrates that it cannot fulfill its obligations under the Memorandum of Agreement.

[79 FR 76087, Dec. 19, 2014]

§§ 208.28–208.30 [Reserved]

Subpart C—Response Cooperative Agreements

§ 208.31 Purpose.

Subpart C of this part provides guidance on the administration of Response Cooperative Agreements.

§ 208.32 Definitions of terms used in this subpart.

Affiliated Personnel means individuals not normally employed by a Sponsoring Agency or Participating Agency and individuals normally affiliated with a Sponsoring Agency or Participating Agency as volunteers.

Demobilization Order means a DHS communication that terminates an Alert or Activation and identifies cost and time allowances for rehabilitation.

Exempt means any System Member who is exempt from the requirements of the Fair Labor Standards Act, 29 U.S.C. 201 *et seq.*, pertaining to overtime compensation and other labor standards.

Maximum Pay Rate Table means the DHS-issued table that identifies the maximum pay rates for selected System positions that may be used for reimbursement of Affiliated Personnel compensation and Backfill for Activated System Members employed by or otherwise associated with a for-profit Participating Agency. The Maximum Pay Rate Table does not apply to a System member whom a Sponsoring Agency or Participating Agency employs.

Mobilization means the process of assembling equipment and personnel in response to an Alert or Activation.

Non-Exempt means any System Member who is covered by 29 U.S.C. 201 *et seq.*

Rehabilitation means the process of returning personnel and equipment to a pre-incident state of readiness after DHS terminates an Activation.

§ 208.33 Allowable costs.

(a) *Cost neutrality.* DHS policy is that an Alert or Activation should be as cost neutral as possible to Sponsoring Agencies and Participating Agencies. To make an Alert or Activation cost-neutral, DHS will reimburse under this subpart all reasonable, allowable, necessary and allocable costs that a Sponsoring Agency or Participating Agency incurs during the Alert or Activation.

(b) *Actual costs.* Notwithstanding any other provision of this chapter, DHS will not reimburse a Sponsoring Agency or Participating Agency for any costs greater than those that the Sponsoring Agency or Participating Agency actually incurs during an Alert, Activation.

(c) *Normal or predetermined practices.* Consistent with 2 CFR parts 200 and 3002, Sponsoring Agencies and Participating Agencies must adhere to their own normal and predetermined practices and policies of general application when requesting reimbursement from DHS except as it sets out in this subpart.

(d) *Indirect costs.* Indirect costs beyond the administrative and management costs allowance established by § 208.41 of this part are not allowable.

[70 FR 9194, Feb. 24, 2005, as amended at 79 FR 76087, Dec. 19, 2014]

§ 208.34 Agreements between Sponsoring Agencies and others.

Sponsoring Agencies are responsible for executing such agreements with Participating Agencies and Affiliated Personnel as may be necessary to implement the Sponsoring Agency's Response Cooperative Agreement with DHS. Those agreements must identify established hourly or daily rates of pay for System Members. The hourly or daily rates of pay for Affiliated Personnel must be in accordance with, and must not exceed, the maximum pay rates contained in the then-current Maximum Pay Rate Table.

§ 208.35 Reimbursement for Advisory.

DHS will not reimburse costs incurred during an Advisory.

§ 208.36 Reimbursement for Alert.

(a) *Allowable costs.* DHS will reimburse costs incurred during an Alert, up to the dollar limit specified in the Alert Order, for the following activities:

(1) Personnel costs, including Backfill, incurred to prepare for Activation.

(2) Transportation costs relating to hiring, leasing, or renting vehicles and drivers.

(3) The administrative allowance provided in § 208.41 of this part.

(4) Food and beverages for Task Force Members and Support Specialists when DHS does not provide meals during the Alert. DHS will limit food and beverage reimbursement to the amount of the then-current Federal meals daily allowance published in the FEDERAL REGISTER for the locality where such food and beverages were provided, multiplied by the number of personnel who received them.

(b) *Calculation of Alert Order dollar limit.* The Alert Order dollar limit will equal:

(1) An allowance of 10 percent of the Task Force's Daily Cost Estimate; and

(2) A supplemental allowance of 1 percent of the Task Force's Daily Cost Estimate for each 24-hour period beyond the first 72 hours of Alert.

(c) *Non-allowable costs.* DHS will not reimburse costs incurred or relating to the leasing, hiring or chartering of aircraft or the purchase of any equipment, aircraft, or vehicles.

§ 208.37 Reimbursement for equipment and supply costs incurred during Activation.

(a) *Allowable costs.* DHS will reimburse costs incurred for the emergency procurement of equipment and supplies in the number, type, and up to the cost specified in the current approved Equipment Cache List, and up to the aggregate dollar limit specified in the Activation Order. The Assistant Administrator may determine emergency procurement dollar limits, taking into account previous Activation history, available funding, the extent and nature of the incident, and the current state of Task Force readiness.

(b) *Non-Allowable costs.* DHS will not reimburse costs incurred for items that are not listed on the Equipment Cache List; for items purchased greater than the cost or quantity identified in the Equipment Cache List; or for any purchase of non-expendable items that duplicate a previous purchase under a Preparedness or Response Cooperative Agreement.

§ 208.38 Reimbursement for re-supply and logistics costs incurred during Activation.

With the exception of emergency procurement authorized in the Activation Order, and replacement of consumable items provided for in § 208.43(a)(2) of this subpart, DHS will not reimburse costs incurred for re-supply and logistical support during Activation. Re-supply and logistical support of Task Forces needed during Activation are the responsibility of the Joint Management Team.

§ 208.39 Reimbursement for personnel costs incurred during Activation.

(a) *Compensation.* DHS will reimburse the Sponsoring Agency for costs incurred for the compensation of each Activated System Member during Activation. Reimbursement of compensation costs for Activated Support Specialists will be limited to periods of time during which they were actively supporting the Activation or traveling to or from locations at which they were actively supporting the Activation. The provisions of § 208.40 of this

part govern costs incurred for providing fringe benefits to System Members.

(b) *Public Safety Exemption not applicable*. DHS will reimburse Sponsoring Agencies for costs incurred by Non-Exempt System Members in accordance with 29 U.S.C. 207(a) of the Fair Labor Standards Act, without regard to the public safety exemption contained in 29 U.S.C. 207(k). In other words, DHS will reimburse Sponsoring Agencies on an overtime basis for any hours worked by Non-Exempt System Members greater than 40 hours during a regular workweek.

(c) *Tour of duty*. The tour of duty for all Activated System Members will be 24 hours. DHS will reimburse the Sponsoring Agency for salary and overtime costs incurred in compensating System Members for meal periods and regularly scheduled sleep periods during Activation. Activated System Members are considered ''on-duty'' and must be available for immediate response at all times during Activation.

(d) *Regular rate*. The regular rate for purposes of calculating allowable salary and overtime costs is the amount determined in accordance with § 208.39(e)(1) through (3) of this subpart.

(e) *Procedures for calculating compensation during Activation*. A Sponsoring Agency or Participating Agency must:

(1) Convert the base hourly wage of any Non-Exempt System Member regularly paid under 29 U.S.C. 207(k) to its equivalent for a 40-hour work week;

(2) Convert the annual salary of any salaried Non-Exempt System Member to its hourly equivalent for a 40-hour workweek;

(3) Calculate the daily compensation of Exempt System Members based on their current annual salary, exclusive of fringe benefits;

(4) Calculate the total number of hours worked by each System Member to be included in the Sponsoring Agency's request for reimbursement; and

(5) Submit a request for reimbursement under § 208.52 of this part according to the following table:

If the Sponsoring Agency or Participating Agency * * *	And the Sponsoring Agency or Participating Agency * * *	Then the following compensation costs are allowable:
(i) Customarily and usually compensates Exempt System Members by paying a salary, but not overtime,	Does not customarily and usually grant compensatory time or other form of overtime substitute to Exempt System members.	The daily compensation equivalent calculated under § 208.39(e)(3) of this part for each Activated Exempt System Member for each full or partial day during Activation.
(ii) Customarily and usually compensates Exempt System Members by paying a salary but not overtime	Customarily and usually awards compensatory time or other overtime substitute for Exempt System Members for hours worked above a predetermined hours threshold (for example, the Sponsoring Agency customarily and usually grants compensatory time for all hours worked above 60 in a given week).	The daily compensation equivalent calculated under § 208.39(e)(3) of this part for each Activated Exempt System Member for each full or partial day during Activation AND the dollar value at the time of accrual of the compensatory time or other overtime substitute for each Activated Exempt System Member based on the duration of the Activation.
(iii) Customarily and usually compensates Exempt System Members by paying a salary and overtime,	Customarily and usually calculates overtime for Exempt System Members by paying a predetermined overtime payment for each hour worked above a predetermined hours threshold,.	The daily compensation equivalent calculated under § 208.39(e)(3) of this part for each Activated Exempt System Member for each full or partial day during Activation AND the predetermined overtime payment for each hour during the Activation above the previously determined hours threshold for each Activated Exempt System Member.
(iv) Customarily and usually compensates Non-Exempt System Members by paying overtime after 40 hours per week,	Does not customarily and usually grant compensatory time or other form of overtime substitute to Non-Exempt System members,.	For each seven-day period during the Activation, the hourly wage of each Activated Non-Exempt System Member for the first 40 hours AND the overtime payment for each Activated Non-Exempt System Member for every hour over 40.
(v) Customarily and usually compensates Non-Exempt System Members according to a compensation plan established under 29 U.S.C. 207(k),	Does not customarily and usually grant compensatory time or other form of overtime substitute to Non-Exempt System Members,.	For each seven-day period during the Activation, the hourly wage equivalent of each Activated Non-Exempt System Member calculated under § 208.39(e)(1) of this part for the first 40 hours AND the overtime payment equivalent for each Activated Non-Exempt System Member calculated under § 208.39(e)(1) of this part for every hour over 40.

If the Sponsoring Agency or Participating Agency * * *	And the Sponsoring Agency or Participating Agency * * *	Then the following compensation costs are allowable:
(vi) Activates Personnel, who are customarily and usually paid an hourly wage according to the Maximum Pay Rate Table,	.....	For each seven-day period during the Affiliated Activation, the hourly wage for each Activated Affiliated Personnel for the first 40 hours and one and one-half times the hourly wage for each Activated Affiliated Personnel for every hour over 40.
(vii) Activates Affiliated Personnel who are customarily and usually paid a daily compensation rate according to the Maximum Pay Rate Table,	.....	The daily compensation rate for each Activated Affiliated Personnel for each full or partial day during the Activation.

(f) *Reimbursement of additional salary and overtime costs.* DHS will reimburse any identified additional salary and overtime cost incurred by a Sponsoring Agency as a result of the temporary conversion of a Non-Exempt System Member normally compensated under 29 U.S.C. 207(k) to a 40-hour work week under 29 U.S.C. 207(a).

(g) *Reimbursement for Backfill costs upon Activation.* DHS will reimburse the cost to Backfill System Members. Backfill costs consist of the expenses generated by filling the position in which the Activated System Member should have been working. These costs are calculated by subtracting the non-overtime compensation, including fringe benefits, of Activated System Members from the total costs (non-overtime and overtime compensation, including fringe benefits) paid to Backfill the Activated System Members. Backfill reimbursement is available only for those positions that are normally Backfilled by the Sponsoring Agency or Participating Agency during Activation. Employees exempt under the Fair Labor Standards Act (FLSA) not normally Backfilled by the Sponsoring Agency or Participating Agency are not eligible for Backfill during Activation.

§ 208.40 Reimbursement of fringe benefit costs during Activation.

(a) Except as specified in § 208.40 (c) of this subpart, DHS will reimburse the Sponsoring Agency for fringe benefit costs incurred during Activation according to the following table:

If the Sponsoring Agency or Participating Agency * * *	Then the Sponsoring Agency or Participating Agency must * * *	Example
(1) Incurs a fringe benefit cost based on the number of base hours worked by a System Member,	Bill DHS for a pro-rata share of the premium based on the number of base hours worked during Activation.	The City Fire Department incurs a premium of 3 percent for dental coverage based on the number of base hours worked in a week (53 hours). The City should bill DHS an additional 3 percent of the firefighter's converted compensation for the first 40 hours Activation.
(2) Incurs a fringe benefit cost based on the number of hours a System Member actually worked (base hours and overtime),	Bill DHS for a pro-rata share of the premium based on the number of hours each System Member worked during Activation.	The City Fire Department pays a premium of 12 percent for retirement based on the number of hours worked by a firefighter. The City should bill DHS an additional 12 percent of the firefighter's total compensation during Activation.
(3) Incurs a fringe benefit cost on a yearly basis based on the number of people employed full-time during the year,	Bill DHS for a pro-rata share of those fringe benefit costs based on the number of non-overtime hours worked during Activation by System Members employed full time.	The City Fire Department pays workers compensation premiums into the City risk fund for the following year, based on the number of full-time firefighters employed during the current year. The City should bill DHS for workers compensation premium costs by multiplying the hourly fringe benefit rate or amount by the number of non-overtime hours worked during Activation by full time firefighters who are System Members.

(b) *Differential pay.* DHS will reimburse the Sponsoring Agency for direct costs incurred because of any separate differential compensation paid for work performed during an Activation

including, but not limited to, differentials paid for holidays, night work, hazardous duty, or other paid fringe benefits, provided such differentials are not otherwise reimbursed under paragraph (a) of this section. A detailed explanation of the differential payment for which the Sponsoring Agency seeks reimbursement must accompany any request for reimbursement under this section together with identification of every fringe benefit sought under § 208.40(a) of this part and the method used to calculate each such payment and the reimbursement sought from DHS.

(c) DHS will not reimburse the Sponsoring Agency for fringe benefit costs for Affiliated Personnel.

§ 208.41 Administrative allowance.

(a) The administrative allowance is intended to defray costs of the following activities, to the extent provided in paragraph (b) of this section:

(1) Collecting expenditure information from Sponsoring Agencies and Participating Agencies;

(2) Compiling and summarizing cost records and reimbursement claims;

(3) Duplicating cost records and reimbursement claims; and

(4) Submitting reimbursement claims, including mailing, transmittal, and related costs.

(b) The administrative allowance will be equal to the following:

(1) If total allowable costs are less than $100,000, 3 percent of total allowable costs included in the reimbursement claim;

(2) If total allowable costs are $100,000 or more but less than $1,000,000, $3,000 plus 2 percent of costs included in the reimbursement claim greater than $100,000;

(3) If total allowable costs are $1,000,000 or more, $21,000 plus 1 percent of costs included in the reimbursement claim greater than $1,000,000.

§ 208.42 Reimbursement for other administrative costs.

Costs incurred for conducting after-action meetings and preparing after-action reports must be billed as direct costs in accordance with DHS administrative policy.

§ 208.43 Rehabilitation.

DHS will reimburse costs incurred to return System equipment and personnel to a state of readiness following Activation as provided in this section.

(a) *Costs for Equipment Cache List items*—(1) *Non-consumable items.* DHS will reimburse costs incurred to repair or replace any non-consumable item on the Equipment Cache List that was lost, damaged, destroyed, or donated at DHS direction to another entity, during Activation. For each such item, the Sponsoring Agency must document, in writing, the circumstances of the loss, damage, destruction, or donation.

(2) *Consumable items.* DHS will reimburse costs incurred to replace any consumable item on the Equipment Cache List that was consumed during Activation.

(3) *Personnel costs associated with equipment cache rehabilitation.* DHS will reimburse costs incurred for the compensation, including benefits, payable for actual time worked by each person engaged in rehabilitating the equipment cache following Activation, in accordance with the standard pay policy of the Sponsoring Agency or Participating Agency and without regard to the provisions of § 208.39(e)(1) of this part, up to the number of hours specified in the Demobilization Order. Fringe benefits are reimbursed under the provisions of § 208.40 of this part.

(b) *Costs for personnel rehabilitation.* DHS will reimburse costs incurred for the compensation, including benefits and Backfill, of each Activated System Member regularly scheduled to work during the rehabilitation period specified in the Demobilization Order, in accordance with the standard pay policy of the Sponsoring Agency or Participating Agency and without regard to the provisions of § 208.39(e)(1) of this part.

(c) *Other allowable costs*—(1) *Local transportation.* DHS will reimburse costs incurred for transporting Task Force Members from the point of assembly to the point of departure and from the point of return to the location where they are released from duty. DHS will also reimburse transportation costs incurred for assembling and moving the equipment cache from its usual

place(s) of storage to the point of departure, and from the point of return to its usual place(s) of storage. Such reimbursement will include costs to return the means of transportation to its point of origin.

(2) *Ground transportation.* When DHS orders a Sponsoring Agency to move its Task Force Members and equipment cache by ground transportation, DHS will reimburse costs incurred for such transportation, including but not limited to charges for contract carriers, rented vehicles, contract vehicle operators, fleet vehicles, fuel and associated transportation expenses. The Assistant Administrator has authority to issue schedules of maximum hourly or per mile reimbursement rates for fleet and contract vehicles.

(3) *Food and beverages.* DHS will reimburse expenditures for food and beverages for Activated Task Force Members and Support Specialists when the Federal government does not provide meals during Activation. Reimbursement of food and beverage costs for Activated Support Specialists will be limited to periods of time during which they were actively supporting the Activation or traveling to or from locations at which they were actively supporting the Activation. Food and beverage reimbursement will be limited to the amount of the then-current Federal meals and incidental expenses daily allowance published in the FEDERAL REGISTER for the locality where such food and beverages were provided, multiplied by the number of personnel who received the same.

§ 208.44 Reimbursement for other costs.

(a) Except as allowed under paragraph (b) of this section, DHS will not reimburse other costs incurred preceding, during or upon the conclusion of an Activation unless, before making the expenditure, the Sponsoring Agency has requested, in writing, permission for a specific expenditure and has received written permission from the Program Manager or his or her designee to make such expenditure.

(b) At the discretion of the Program Manager or his or her designee, a request for approval of costs presented after the costs were incurred must be in writing and establish that:

(1) The expenditure was essential to the Activation and was reasonable;

(2) Advance written approval by the Program Manager was not feasible; and

(3) Advance verbal approval by the Program Manager had been requested and was given.

§ 208.45 Advance of funds.

At the time of Activation of a Task Force, the Task Force will develop the documentation necessary to request an advance of funds be paid to such Task Force's Sponsoring Agency. Upon approval, DHS will submit the documentation to the Assistance Officer and will request an advance of funds up to 75 percent of the estimated personnel costs for the Activation. The estimated personnel costs will include the salaries, benefits, and Backfill costs for Task Force Members and an estimate of the salaries, benefits and Backfill costs required for equipment cache rehabilitation. The advance of funds will not include any costs for equipment purchase.

§ 208.46 Title to equipment.

Title to equipment purchased by a Sponsoring Agency with funds provided under a DHS Response Cooperative Agreement vests in the Sponsoring Agency, provided that DHS reserves the right to transfer title to the Federal Government or a third party that DHS may name, under 2 CFR 200.313(e)(3), when a Sponsoring Agency indicates or demonstrates that it cannot fulfill its obligations under the Memorandum of Agreement.

[79 FR 76087, Dec. 19, 2014]

§§ 208.47–208.50 [Reserved]

Subpart D—Reimbursement Claims and Appeals

§ 208.51 General.

(a) *Purpose.* This subpart identifies the procedures that Sponsoring Agencies must use to request reimbursement from DHS for costs incurred under Response Cooperative Agreements.

(b) *Policy*. It is DHS policy to reimburse Sponsoring Agencies as expeditiously as possible consistent with Federal laws and regulations.

§ 208.52 Reimbursement procedures.

(a) *General*. A Sponsoring Agency must present a claim for reimbursement to DHS in such manner as the Assistant Administrator specifies .

(b) *Time for submission*. (1) Claims for reimbursement must be submitted within 90 days after the end of the Personnel Rehabilitation Period specified in the Demobilization Order.

(2) The Assistant Administrator may extend and specify the time limitation in paragraph (b)(1) of this section when the Sponsoring Agency justifies and requests the extension in writing.

§§ 208.53–208.59 [Reserved]

§ 208.60 Determination of claims.

When DHS receives a reviewable claim for reimbursement, DHS will review the claim to determine whether and to what extent reimbursement is allowable. Except as provided in § 208.63 of this part, DHS will complete its review and give written notice to the Sponsoring Agency of its determination within 90 days after the date DHS receives the claim. If DHS determines that any item of cost is not eligible for reimbursement, its notice of determination will specify the grounds on which DHS disallowed reimbursement.

§ 208.61 Payment of claims.

DHS will reimburse all allowable costs for which a Sponsoring Agency requests reimbursement within 30 days after DHS determines that reimbursement is allowable, in whole or in part, at any stage of the reimbursement and appeal processes identified in this subpart.

§ 208.62 Appeals.

(a) *Initial appeal*. The Sponsoring Agency may appeal to the Program Manager any determination made under § 208.60 of this part to disallow reimbursement of an item of cost:

(1) The appeal must be in writing and submitted within 60 days after receipt of DHS's written notice of disallowance under § 208.60 of this part.

(2) The appeal must contain legal and factual justification for the Sponsoring Agency's contention that the cost is allowable.

(3) Within 90 days after DHS receives an appeal, the Program Manager will review the information submitted, make such additional investigations as necessary, make a determination on the appeal, and submit written notice of the determination of the appeal to the Sponsoring Agency.

(b) *Final appeal*. (1) If the Program Manager denies the initial appeal, in whole or in part, the Sponsoring Agency may submit a final appeal to the Deputy Assistant Administrator. The appeal must be made in writing and must be submitted not later than 60 days after receipt of written notice of DHS's determination of the initial appeal.

(2) Within 90 days following the receipt of a final appeal, the Deputy Assistant Administrator will render a determination and notify the Sponsoring Agency, in writing, of the final disposition of the appeal.

(c) *Failure to file timely appeal*. If the Sponsoring Agency does not file an appeal within the time periods specified in this section, DHS will deem that the Sponsoring Agency has waived its right to appeal any decision that could have been the subject of an appeal.

§ 208.63 Request by DHS for supplemental information.

(a) At any stage of the reimbursement and appeal processes identified in this subpart, DHS may request the Sponsoring Agency to provide supplemental information that DHS considers necessary to determine either a claim for reimbursement or an appeal. The Sponsoring Agency must exercise its best efforts to provide the supplemental information and must submit to DHS a written response that includes such supplemental information as the Sponsoring Agency is able to provide within 30 days after receiving DHS's request.

(b) If DHS makes a request for supplemental information at any stage of the reimbursement and appeal processes, the applicable time within which its determination of the claim or appeal is to be made will be extended by

30 days. However, without the consent of the Sponsoring Agency, no more than one such time extension will be allowed for any stage of the reimbursement and appeal processes.

§ 208.64 Administrative and audit requirements.

(a) *Non-Federal audit.* For Sponsoring Agencies and States, requirements for non-Federal audit are contained in 44 CFR 13.26, in accordance with OMB Circular A–133, Audits of States, Local Governments, and Non-Profit Organizations.

(b) *Federal audit.* DHS or the Government Accountability Office may elect to conduct a Federal audit of any payment made to a Sponsoring Agency or State.

§ 208.65 Mode of transmission.

When sending all submissions, determinations, and requests for supplemental information under this subpart, all parties must use a means of delivery that permits both the sender and addressee to verify the dates of delivery.

§ 208.66 Reopening of claims for retrospective or retroactive adjustment of costs.

(a) Upon written request by the Sponsoring Agency DHS will reopen the time period for submission of a request for reimbursement after the Sponsoring Agency has submitted its request for reimbursement, if:

(1) The salary or wage rate applicable to the period of an Activation is retroactively changed due to the execution of a collective bargaining agreement, or due to the adoption of a generally applicable State or local law, ordinance or wage order or a cost-of-living adjustment;

(2) The Sponsoring Agency or any Participating Agency incurs an additional cost because of a legally-binding determination; or

(3) The Deputy Director determines that other extenuating circumstances existed that prevented the Sponsoring Agency from including the adjustment of costs in its original submission.

(c) The Sponsoring Agency must notify DHS as early as practicable that it anticipates such a request.

§§ 208.67–208.70 [Reserved]

PART 209—SUPPLEMENTAL PROPERTY ACQUISITION AND ELEVATION ASSISTANCE

Sec.

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AUTHORITY: Pub. L. 106–113, Div. B, sec. 1000(a)(5) (enacting H.R. 3425 by cross-reference), 113 Stat. 1501, 1536; Pub. L. 106–246, 114 Stat. 511, 568; Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121, Reorganization Plan No. 3 of 1978, 43 FR 41943, 3 CFR, 1978 Comp., p. 329; E.O. 12127, 44 FR 19367, 3 CFR, 1979 Comp., p. 376; E.O. 12148, 44 FR 43239, 3 CFR, 1979 Comp., p. 412.

SOURCE: 66 FR 32669, June 15, 2001, unless otherwise noted.

§ 209.1 Purpose.

This part provides guidance on the administration of a program to provide supplemental property acquisition and elevation assistance made available by Congress to provide funds for the acquisition or elevation, for hazard mitigation purposes, of properties that have been made uninhabitable by floods in areas that were declared major disasters in federal fiscal years 1999 and 2000.

§ 209.2 Definitions.

Except as noted in this part, the definitions listed at §§ 206.2 and 206.431 apply to the implementation of this part.

Allowable open space uses means recreational and wetland management uses including: Parks for outdoor recreational activities; nature reserves; cultivation; grazing; camping (except where adequate warning time is not available to allow evacuation); temporary storage in the open of wheeled

vehicles which are easily movable (except mobile homes); unimproved, permeable parking lots; and buffer zones. Allowable uses generally do not include walled buildings, flood reduction levees, highways or other uses that obstruct the natural and beneficial functions of the floodplain.

Applicant means a State agency, local government, or qualified private nonprofit organization that submits an application for acquisition or elevation assistance to the State or to FEMA.

Cost-effective means that the mitigation activity will not cost more than the anticipated value of the reduction in both direct damages and subsequent negative impacts to the area if future disasters were to occur. Both costs and benefits will be computed on a net present value basis. The State will complete an analysis of the cost effectiveness of the project, in accordance with FEMA guidance and using a FEMA-approved methodology. FEMA will review the State's analysis.

Pre-event fair market value means the value a willing buyer would have paid and a willing seller would have sold a property for had the disaster not occurred.

Principal residence means a residence that is occupied by the legal owner and is the dwelling where the legal owner normally lives during the major portion of the calendar year.

Qualified alien means an alien who meets one of the following criteria:

(1) An alien lawfully admitted for permanent residence under the Immigration and Nationality Act (INA);

(2) An alien granted asylum under section 208 of the INA;

(3) A refugee admitted to the United States under section 207 of the INA;

(4) An alien paroled into the United States under section 212(d)(5) of the INA for at least one year;

(5) An alien whose deportation is being withheld under section 243(h) of the INA as in effect prior to April 1, 1997, or section 241(b)(3) of the INA;

(6) An alien granted conditional entry pursuant to section 203(a)(7) of the INA as in effect prior to April 1, 1980;

(7) An alien who is a Cuban and Haitian entrant (as defined in section 501(e) of the Refugee Education Assistance Act of 1980); or

(8) An alien who (or whose child or parent) has been battered and meets the requirements of 8 U.S.C. 1641(c).

Qualified private nonprofit organization means an organization with a conservation mission as qualified under section 170(h) of the Internal Revenue Code of 1954, as amended, and the regulations applicable under that section.

Repetitive Loss Structure means a structure covered by a contract for flood insurance under the National Flood Insurance Program (NFIP) that has incurred flood-related damage on two occasions during a 10-year period, each resulting in at least a $1000 claim payment;

State Hazard Mitigation Plan means the hazard mitigation plan that reflects the State's systematic evaluation of the nature and extent of vulnerability to the effects of natural hazards typically present in the State and includes a description of actions needed to minimize future vulnerability to hazards.

Subgrantee means the government or other legal entity to which a subgrant is awarded and which is accountable to the grantee for the use of the funds provided. Subgrantees can be a State agency, local government, qualified private nonprofit organizations, or Indian tribes as outlined in 44 CFR 206.434;

Substantial Damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damage condition would equal or exceed 50 percent of the market value of the structure before the damage occurred;

Uninhabitable means that properties are certified by the appropriate State or local official normally empowered to make such certifications as meeting one or more of the following criteria:

(1) Determined by an authorized local government official to be substantially damaged, according to National Flood Insurance Program criteria contained in 44 CFR 59.1;

(2) Have been red- or yellow-tagged and declared uninhabitable due to environmental contamination by floodwaters, or otherwise determined to be

uninhabitable by a State or local official in accordance with current codes or ordinances; or

(3) Have been demolished due to damage or environmental contamination by floodwaters.

We, *our*, or *us* means FEMA.

[66 FR 32669, June 15, 2001; 66 FR 49554, Sept. 28, 2001]

§ 209.3 Roles and responsibilities.

The following describes the general roles of FEMA, the State, local communities or other organizations that receive grant assistance, and participating homeowners.

(a) *Federal*. We will notify States about the availability of funds, and will allocate available funding to States that received major disaster declarations during the period covered by the supplemental authority. Our Regional Administrators will verify project eligibility, provide technical assistance to States upon request, make grant awards, and oversee program implementation.

(b) *State*. The State will be the Grantee to which we award funds and will be accountable for the use of those funds. The State will determine priorities for funding within the State. This determination must be made in conformance with the HMGP project identification and selection criteria (44 CFR 206.435). The State also will provide technical assistance and oversight to applicants for project development and to subgrantees for project implementation. The State will report program progress and results to us. The States also will recover and return to us any funds made available from other sources for the same purposes. When Native American tribes apply directly to us, they will be the grantee and carry out ''state'' roles.

(c) *Applicant (pre-award) and subgrantee (post-award)*. The applicant (a State agency, local government, or qualified private nonprofit organization) will coordinate with interested homeowners to complete an application to the State. The subgrantee implements all approved projects, generally takes title to all property, and agrees to dedicate and maintain the property in perpetuity for uses compatible with open-space, recreational, or wetlands management practices. The subgrantee will receive, review and make final decisions about any appraisal disputes that are brought by participating homeowners. The subgrantee is accountable to the State, as well as to us, for the use of funds.

(d) *Participating homeowners*. The participating homeowners will notify the community of their interest to participate; provide necessary information to the community coordinator about property ownership, disaster damage, and other disaster benefits received or available; review the offer made from the community; and accept it or request a review appraisal.

§ 209.4 Allocation and availability of funds.

(a) We will allocate available funds based on the number and value of properties that meet the eligibility criteria and whose owners want to participate in an acquisition or elevation project.

(b) We may reallocate funds for which we do not receive and approve adequate applications. We will obligate most available funds within 12 months following the deadline for submitting applications, unless extenuating circumstances exist.

§ 209.5 Applicant eligibility.

The following are eligible to apply to the State for a grant:

(a) State and local governments;

(b) Indian tribes or authorized tribal organizations. A tribe may apply either to the State or directly to us; and

(c) Qualified private nonprofit organizations.

§ 209.6 Project eligibility.

(a) *Eligible types of project activities*. This grant authority is for projects to acquire floodprone properties and demolish or relocate structures per §209.10(i), or to elevate floodprone structures. Approved projects must meet the following criteria and comply with all other program requirements described in this rule;

(b) *Eligibility criteria*. To be eligible, projects must:

(1) Be cost effective. The State will complete an analysis of the cost-effectiveness of the project, in accordance

with our guidance and using a methodology that we approve. We will review the State's analysis;

(2) Include only properties that:

(i) For acquisition, the owner agrees to sell voluntarily;

(ii) Are within the 100-year floodplain based on best available data or as identified by a FIRM or FEMA-approved Disaster Recovery Map;

(iii) Were made uninhabitable (as certified by an appropriate State or local official) by the effects of a declared major disaster during federal fiscal years 1999 or 2000;

(iv) For acquisition, had a pre-event fair market value of less than $300,000 just before the disaster event. Properties submitted for buyout under Pub. L. 106–113 (the original Hurricane Floyd supplemental buyout program) are exempt from this policy, with the limitation that in no case does the Federal share or offer for any such property exceed $225,000; and

(v) Served as the principal residence for the owner. For multifamily units such as condominium buildings, all units within the structure should be principal residences of the owners and not sublet.

(3) Conform with 44 CFR part 9, Floodplain Management and Protection of Wetlands, and other applicable environmental and historic preservation laws, regulations, Executive Orders, and agency policy.

(c) For acquisition projects, an owner who is not a United States citizen or qualified alien may receive current fair market value for his or her property. He or she may not receive additional amounts for pre-event fair market value.

(d) Funds available under Pub. L. 106–113 (the original Floyd supplemental appropriation) are limited to use for acquisition purposes only.

[66 FR 32669, June 15, 2001, as amended at 81 FR 56534, Aug. 22, 2016]

§ 209.7 Priorities for project selection.

(a) It is the State's responsibility to identify and select eligible buyout projects for funding under the supplemental grant program. All funded projects must be consistent with the State Hazard Mitigation Plan. The mitigation planning process or any other appropriate means may identify buyout and elevation projects.

(b) States will set priorities in their State mitigation plan to use as the basis for selecting projects for funding. The State's priorities will address, at a minimum, substantially damaged properties, repetitive loss target properties, and such other criteria that the State deems necessary to comply with the law. States and subgrantees are to give priority consideration to projects for acquisition or elevations of repetitive loss properties, and must include all eligible repetitive loss properties in the projects submitted to us for funding.

[66 FR 32669, June 15, 2001; 66 FR 49554, Sept. 28, 2001, as amended at 74 FR 15353, Apr. 3, 2009]

§ 209.8 Application and review process.

(a) *General.* This section describes the procedures to be used by the State in submitting an application for funding under the Supplemental Property Acquisition and Elevation Assistance program. Under this program, the State is the grantee and is responsible for processing subgrants to applicants in accordance with 44 CFR part 13 and this part.

(b) *Timeframes.* We will establish deadlines for States to submit applications, and States will set local application deadlines. States may begin forwarding applications to us immediately upon Notice of Availability of Funds and must forward all applications not later than the date set by the Regional Administrator. States must provide to us the information described below in paragraph (c) of this section for each property proposed for acquisition or elevation in support of the supplemental allocation requested and within the timeframe that we establish. We will verify project eligibility estimates provided by States in order to assure that all projects meet the criteria for the supplemental grant awards. We will perform an independent verification of this information for not less than 50 percent of the properties submitted.

(c) *Format.* The State will forward its application to the Regional Administrator. The Application will include: a Standard Form (SF) 424, Application

for Federal Assistance; FEMA form 20–15, Budget Information—Construction Programs; Project Narrative (section 209.8(c)—community project applications (buyout plans) selected by the State); FEMA form 20–16, 20–16b and 20–16c Assurances and Certifications; Standard Form LLL, Disclosure of Lobbying Activities; FEMA form 20–10, Financial Status Report; the Performance/Progress Report format; and the State's certification that the State has reviewed all applications and that they meet program eligibility criteria. The Project Narrative (community project applications) will include:

(1) Community applicant information, including contact names and numbers;

(2) Description of the problem addressed by the proposed project;

(3) Description of the applicant's decision-making process, including alternatives considered;

(4) Project description, including property locations/addresses and scope of activities;

(5) Project cost estimate and match source;

(6) For acquisition projects, open space use description and maintenance assurance;

(7) Risk and cost-effectiveness information, or State's benefit-cost analysis;

(8) Environmental and historic preservation information including

(i) Whether the property is now or ever has been used for commercial or industrial purposes, and

(ii) Any information regarding historic preservation that is readily available;

(9) Attachments for each property as follows:

(i) A photograph of the structure from the street;

(ii) Owner's name;

(iii) Complete address, including zip code;

(iv) Latitude and longitude;

(v) The date of construction;

(vi) Proximity to the 100-year floodplain;

(vii) Panel and date of the applicable Flood Insurance Rate Map, if any;

(viii) The elevation of the first habitable floor and an estimate of the depth of flooding in the structure;

(ix) The estimated pre-event fair market value of the home. Applicants will estimate the value of properties using the best available information, such as inspections, public records and market values of similar properties in similar neighborhoods to arrive at a pre-event fair market value that reflects what a willing buyer would have paid a willing seller had the disaster not occurred. If tax assessment data are used as the basis, the applicant should add the relevant adjustment percentage for that jurisdiction to adjust the tax assessment to the current fair market value. These adjustment data should be obtained from the jurisdiction's tax assessor's office. For any jurisdictions where the adjustment factor is over 25 percent, applicants should include a justification for the high adjustment factor. Applicants should not include any other project costs in the property values. These costs will be reflected elsewhere;

(x) Indication whether flood insurance was in force at the time of the loss, and policy number, if available.

(xi) Indications that the property will meet the definition of uninhabitable:

(A) Substantial damage determination, and name and title of determining official, or if not yet determined then:

(*1*) For manufactured homes (mobile homes), inundation of 1 foot or more of water above the first habitable floor or other evidence of substantial damage; or

(*2*) For permanent structures other than manufactured homes, inundation of 5 feet or more of water above the first above-ground habitable floor or other evidence of substantial damage. Habitable floors do not include basements.

(B) Were red- or yellow-tagged and declared uninhabitable due to environmental contamination by floodwaters, or otherwise determined to be uninhabitable by a State or local official under current codes or ordinances; or

(C) Were demolished due to damage or environmental contamination by floodwaters.

(xii) Information regarding whether the structure is on the NFIP repetitive loss list (provide NFIP Repetitive Loss

Property Locator Number, if available); and

(xiii) Observations on whether acquisition or elevation of the structure may result in a mixture of vacant lots and lots with structures remaining on them; and

(10) *FEMA review and approval.* We will review and verify the State's eligibility determination and either approve, deny, or request additional information within 60 days. The Regional Administrator may extend this timeframe if complicated issues arise. We have final approval authority for funding of all projects.

[66 FR 32669, June 15, 2001; 66 FR 49554, Sept. 28, 2001; 74 FR 15353, Apr. 3, 2009]

§ 209.9 Appeals.

The State may appeal any decision that we make regarding projects submitted for funding in the Supplemental Property Acquisition and Elevation Assistance program. The State must submit the appeal in writing to the Regional Administrator and must include documentation that justifies the request for reconsideration. The appeal must specify the monetary figure in dispute and the provisions in Federal law, regulation, or policy with which the appellant believes the initial action was inconsistent. The applicant must appeal within 60 days of the applicant's receipt of our funding decision. The State must forward any appeal from an applicant or subgrantee with a written recommendation to the Regional Administrator within 60 days of receipt. Within 90 days following the receipt of an appeal, the Regional Administrator will notify the State in writing as to the new decision or the need for more information.

§ 209.10 Project implementation requirements.

Subgrantees must enter into an agreement with the State, with the written concurrence of the Regional Administrator, that provides the following assurances:

(a) The subgrantee will administer the grant and implement the project in accordance with program requirements, 44 CFR part 13, the grant agreement, and with applicable Federal, State, and local laws and regulations.

(b) The State and subgrantee will administer the grant in an equitable and impartial manner, without discrimination on the grounds or race, color, religion nationality, sex, age, or economic status in compliance with section 308 of the Stafford Act (42 U.S.C. 5151) and Title VI of the Civil Rights Act. In implementing the grant, the State and the subgrantee will ensure that no discrimination is practiced.

(c) The State and subgrantee will ensure that projects involving alterations to existing structures comply with all applicable State and local codes.

(d) The State and subgrantee will ensure that projects comply with applicable State and local floodplain management requirements. Structures will be elevated to the Base Flood Elevation.

(e) Property owners participating in acquisition projects may receive assistance up to the pre-event fair market value of their real property, except as limited by the eligibility criteria.

(f) The subgrantee will establish a process, which we must approve, whereby property owners participating in acquisition projects may request a review of the appraisal for their property, or request a second appraisal.

(g) The State will reduce buyout assistance by any duplication of benefits from other sources. Such benefits include, but are not limited to, payments made to the homeowner for repair assistance; insurance settlements; legal settlements; Small Business Administration loans; and any other payments made by any source to address the property loss unless the property owner can provide receipts showing that the benefits were used for their intended purpose to make repairs to the property.

(h) Increased Cost of Compliance coverage benefits under the National Flood Insurance Program (NFIP) may be used to match elevation or acquisition and relocation projects. Increased Cost of Compliance claims can only be used for NFIP-approved costs; these can then be applied to the project grant match. This coverage does not pay for property acquisition, but can pay demolition or structure relocation.

(i) The following restrictive covenants must be conveyed in the deed to any property acquired, accepted, or

from which structures are removed (''the property''):

(1) The property must be dedicated and maintained in perpetuity for uses compatible with open space, recreational, or wetlands management practices; and

(2) No new structure(s) will be built on the property except as indicated in this paragraph:

(A) A public facility that is open on all sides and functionally related to a designated open space or recreational use;

(B) A public rest room; or

(C) A structure that is compatible with open space, recreational, or wetlands management usage and proper floodplain management policies and practices, which the Administrator of FEMA approves in writing before the construction of the structure begins.

(D) In general, allowable open space, recreational, and wetland management uses include parks for outdoor recreational activities, nature reserves, cultivation, grazing, camping (except where adequate warning time is not available to allow evacuation), temporary storage in the open of wheeled vehicles that are easily movable (except mobile homes), unimproved, permeable parking lots and buffer zones. Allowable uses generally do not include walled buildings, flood reduction levees, highways or other uses that obstruct the natural and beneficial functions of the floodplain.

(3) After completing the acquisition project, no application for future disaster assistance will be made for any purpose with respect to the property to any Federal entity or source, and no Federal entity or source will provide such assistance, even for the allowable uses of the property described above.

(4) Any structures built on the property according to paragraph (i)(2) of this section, must be: Located to minimize the potential for flood damage; floodproofed; or elevated to the Base Flood Elevation plus one foot of freeboard.

(5) The subgrantee or other public property owner will seek the approval of the State grantee agency and our Regional Administrator before conveying any interest in the property to any other party. The subgrantee or other public entity or qualified private nonprofit organization must retain all development rights to the property. Our Regional Administrator will only approve the transfer of properties that meet the criteria identified in this paragraph.

(6) In order to carry out tasks associated with monitoring, we, the subgrantee, or the State have the right to enter the parcel, with notice to the parcel owner, to ensure compliance with land use restrictions. Subgrantees may identify the open space nature of the property on local tax maps to assist with monitoring. Whether the subgrantee obtains full title or a conservation easement on the parcel, the State must work with subgrantees to ensure that the parcel owner maintains the property in accordance with land use restrictions. Specifically, the State may:

(i) Monitor and inspect the parcel every two years and certify that the owner continues to use the inspected parcel for open space or agricultural purposes; and

(ii) Take measures to bring a noncompliant parcel back into compliance within 60 days of notice.

(7) Only as a last resort, we reserve the right to require the subgrantee to bring the property back into compliance and transfer the title and easement to a qualified third party for future maintenance.

(8) Every 2 years on October 1st, the subgrantee will report to the State, certifying that the property continues to be maintained consistent with the provisions of the agreement. The State will report the certification to us.

[66 FR 32669, June 15, 2001, as amended at 74 FR 15353, Apr. 3, 2009]

§ 209.11 Grant administration.

(a) *Cost share.* We may contribute up to 75 percent of the total eligible costs. The State must ensure that non-Federal sources contribute not less than 25 percent of the total eligible costs for the grant. The State or any subgrantee cannot use funds that we provide under this Act as the non-Federal match for other Federal funds nor can the State or any subgrantee use other Federal funds as the required non-Federal

match for these funds, except as provided by statute.

(b) *Allowable costs.* A State may find guidance on allowable costs for States and subgrantees in Office of Management and Budget (OMB) Circulars A–87 and A–122 on Cost Principles. States may use up to 7 percent of the grant funds for management costs of the grant. The State should include management costs in its application. Subgrantees must include reasonable costs to administer the grant as a direct project cost in their budget.

(c) *Progress reports.* The State must provide a quarterly progress report to us under 44 CFR 13.40, indicating the status and completion date for each project funded. The report will include any problems or circumstances affecting completion dates, scope of work, or project costs that may result in noncompliance with the approved grant conditions.

(d) *Financial reports.* The State must provide a quarterly financial report to us under 44 CFR 13.41.

(e) *SMARTLINK Drawdowns.* The State will make SMARTLINK drawdowns to reimburse or advance allowable costs to subgrantees for approved projects.

(f) *Audit requirements.* Uniform audit requirements as set forth in 44 CFR part 13 apply to all grant assistance provided under this subpart. We may elect to conduct a Federal audit on the disaster assistance grant or on any of the subgrants.

(g) If a mitigation measure is not completed, and there is not adequate justification for non-completion, no Federal funding will be provided for that project.

[66 FR 32669, June 15, 2001, as amended at 74 FR 15353, Apr. 3, 2009]

§ 209.12 Oversight and results.

(a) *FEMA oversight.* Our Regional Administrators are responsible for overseeing this grant authority and for ensuring that States and subgrantees meet all program requirements. Regional Administrators will review program progress quarterly.

(b) *Monitoring and enforcement.* We, subgrantees, and States will monitor the properties purchased under this authority and ensure that the properties are maintained in open space use. We and the State may enforce the agreement by taking any measures that we or they deem appropriate.

(c) *Program results.* The State will review the effectiveness of approved projects after each future flood event in the affected area to monitor whether projects are resulting in expected savings. The State will report to us on program effectiveness after project completion and after each subsequent flood event.

PARTS 210–294 [RESERVED]

SUBCHAPTER E—FIRE ASSISTANCE

PART 295—CERRO GRANDE FIRE ASSISTANCE

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AUTHORITY: Pub. L. 106–246, 114 Stat. 511, 584; Reorganization Plan No. 3 of 1978, 43 FR 41493, 3 CFR, 1978 Comp., p. 329; E.O. 12127, 44 FR 19367, 3 CFR, 1979 Comp., p. 376; E.O. 12148, 44 FR 43239, 3 CFR, 1979 Comp., p. 412.

SOURCE: 66 FR 15959, Mar. 21, 2001, unless otherwise noted.

Subpart A—General

§ 295.1 Purpose.

This part implements the Cerro Grande Fire Assistance Act (CGFAA), Public Law 106–246, 114 Stat. 584, which requires that the Federal Emergency Management Agency (FEMA) establish a process to evaluate, process and pay claims injuries and property damage resulting from the Cerro Grande Fire.

§ 295.2 Policy.

It is our policy to provide for the expeditious resolution of meritorious claims through a process that is administered with sensitivity to the burdens placed upon Claimants by the Cerro Grande Fire.

§ 295.3 Information and assistance.

Information and assistance concerning the CGFAA is available from the Office of Cerro Grande Fire Claims (OCGFC), Federal Emergency Management Agency, P.O. Box 1480, Los Alamos, New Mexico, 87544–1480, or telephone 1–888–748–1853 (toll free). The Cerro Grande Fire Assistance site on the World Wide Web can be accessed at *http://www.fema.gov/cerrogrande*. In the interest of brevity, we do not restate the provisions of the CGFAA in most instances. Our website has a copy of the CGFAA and we will provide a copy upon request.

§ 295.4 Organization of this part 295.

This part contains six subparts. Subpart A provides an overview of the CGFAA process. Subpart B describes the procedures for bringing a claim. Subpart C explains what compensation is available. Subpart D discusses the claims evaluation process. Subpart E explains the dispute resolution process. Subpart F contains a glossary in which various terms used in the rule are defined.

§ 295.5 Overview of the claims process.

(a) The CGFAA is intended to provide persons who suffered losses from the Cerro Grande Fire with a simple, expedited process to seek redress from the

United States. This section provides a brief explanation of the claims process for claims other than subrogation claims. It is not intended to supersede the more specific regulations that follow and explain the claims process in greater detail. In order to obtain benefits under this legislation, a person must submit all Cerro Grande Fire related claims against the United States to FEMA. A person who elects to proceed under the CGFAA is barred from bringing a claim under the Federal Tort Claims Act or filing a civil action against the United States for damages resulting from the Cerro Grande Fire. Judicial review of our decisions under the CGFAA is available.

(b) The first step in the process is to file a Notice of Loss with OCGFC. OCGFC will provide the Claimant with a written acknowledgement that the claim has been filed and the claim number.

(c) Shortly thereafter, a Claims Reviewer will contact the Claimant to review the claim. The Claims Reviewer will help the Claimant formulate a strategy for obtaining any necessary documentation or other support. This assistance does not relieve the Claimant of his or her responsibility for establishing all elements of the Loss and the compensatory damages that are sought, including that the Cerro Grande Fire caused the Loss. After the Claimant has had an opportunity to discuss the claim with the Claims Reviewer, a Proof of Loss will be presented to the Claimant for signature. After any necessary documentation has been obtained and the claim has been fully evaluated, the Claims Reviewer will submit a report to the Authorized Official. The Claims Reviewer is responsible for providing an objective evaluation of the claim to the Authorized Official.

(d) The Authorized Official will review the report and determine whether compensation is due to the Claimant. The Claimant will be notified in writing of the Authorized Official's Determination. If the Claimant is satisfied with the decision payment will be made after the Claimant returns a completed Release and Certification Form. If the Claimant is dissatisfied with the Authorized Official's Determination an Administrative Appeal may be filed with the Director of OCGFC. If the Claimant remains dissatisfied after the appeal is decided, the dispute may be resolved through binding arbitration or heard in the United States District Court for the District of New Mexico.

§ 295.6 Partial payments.

OCGFC, on its own initiative, or in response to a request by a Claimant, may make one or more partial payments on the claim. A partial payment can be made if OCGFC has a reasonable basis to estimate the Claimant's damages. Acceptance of a partial payment in no way affects a Claimant's ability to pursue an Administrative Appeal of the Authorized Official's Determination or to pursue other rights afforded by the CGFAA. Partial payment decisions cannot be appealed.

§ 295.7 Authority to settle or compromise claims.

Notwithstanding any other provision of these regulations, the Director of OCGFC may extend an offer to settle or compromise a claim or any portion of a claim, which if accepted by the Claimant will be binding on the Claimant and on the United States, except that the United States may recover funds improperly paid to a Claimant due to fraud or misrepresentation on the part of the Claimant or the Claimant's representative, a material mistake on our part or the Claimant's failure to cooperate in an audit as required by § 295.35.

Subpart B—Bringing a Claim Under the CGFAA

§ 295.10 Bringing a claim under the CGFAA.

(a) Any Injured Person may bring a claim under the CGFAA by filing a Notice of Loss. A claim submitted on any form other than a Notice of Loss will not be accepted. The Claimant must provide a brief description of each Loss on the Notice of Loss.

(b) A single Notice of Loss may be submitted on behalf of a Household containing Injured Persons provided

that all Injured Persons on whose behalf the claim is presented are identified.

(c) The Notice of Loss must be signed by each Claimant, if the Claimant is an individual or by a duly authorized legal representative of each Claimant, if the Claimant is an entity or an individual who lacks the legal capacity to sign the Notice of Loss. If one is signing a Notice of Loss as the legal representative of a Claimant, the signer must disclose his or her relationship to the Claimant. FEMA may require a legal representative to submit evidence of authority.

(d) Notice of Loss forms are available from OCGFC by request. They may be obtained through the mail, in person at the OCGFC office or by telephone request. The Notice of Loss form can also be downloaded from the Internet at *http://www.fema.gov/cerrogrande*.

(e) Notices of Loss may be filed with OCGFC by mail to P.O. Box 1480, Los Alamos, NM 87544–1480. OCGFC is unable to accept Notices of Loss submitted by facsimile or e-mail.

(f) A Notice of Loss that is completely filled out and properly signed is deemed to be filed on the date it is received by OCGFC.

§ 295.11 Deadline for notifying FEMA of losses.

The deadline for filing a Notice of Loss is August 28, 2002. Except as provided in § 295.21(d) with respect to mitigation and in § 295.31(b) with respect to the lump sum payment described therein, a Loss that has not been described: on a Notice of Loss, on a supplement to a Notice of Loss or a request to supplement a Notice of Loss under § 295.33, or a request to reopen a claim under § 295.34, received by OCGFC on or before August 28, 2002 cannot be compensated under the CGFAA. The CGFAA establishes this deadline and does not provide any extensions of the filing deadline.

§ 295.12 Election of remedies.

(a) By filing a Notice of Loss, an Injured Person waives the right to seek redress for Cerro Grande Fire related claims against the United States through the Federal Tort Claims Act or by filing a civil action authorized by any other provision of law.

(b) An Injured Person who files a Federal Tort Claims Act claim or who initiates a civil action against the United States or any officer, employee or agent of the United States relating to the Cerro Grande Fire on or after August 28, 2000 is not eligible under the CGFAA to file a Notice of Loss.

(c) An Injured Person who filed before August 28, 2000 a Federal Tort Claims Act claim or a civil action against the United States for injuries, losses or damages relating to the Cerro Grande Fire may file a Notice of Loss provided that the Federal Tort Claims Act claim is withdrawn or the Injured Person is dismissed as a party to the civil action with prejudice not later than October 27, 2000. The withdrawal of a Federal Tort Claims Act claim must be in the form of a signed, written statement on a form provided by OCGFC that is filed with OCGFC not later than October 27, 2000. OCGFC will promptly forward the original notice of withdrawal to the applicable federal agency and retain a copy in the Claimant's file.

§ 295.13 Subrogation.

An insurer or other third party with the rights of a subrogee, who has compensated an Injured Person for Cerro Grande Fire related losses, may file a Subrogation Notice of Loss under the CGFAA for the subrogated claim. An insurer or other third party with the rights of a subrogee may file a Subrogation Notice of Loss without regard to whether the Injured Party who received payment from the insurer or third party filed a Notice of Loss. A Subrogation Notice of Loss may not be filed until the insurer or other party with the rights of a subrogee has made all payments that it believes the Injured Person is entitled to receive for Cerro Grande Fire related losses under the terms of the insurance policy or other agreement between the insurer or other party with the rights of a subrogee and the Injured Person. By filing a Subrogation Notice of Loss for any subrogated claim, the insurer or third party elects the CGFAA as its exclusive remedy against the United States for all subrogated claims arising

out of the Cerro Grande Fire. Subrogation claims must be made on a Subrogation Notice of Loss form furnished by OCGFC. FEMA will evaluate subrogation claims on their merits. FEMA may reimburse insurers and other third parties with the rights of a subrogee for reasonable payments made to an Injured Party on or before October 25, 2000, which exceeded or were not required by the terms of the insurance policy or other agreement creating a right of subrogation. FEMA will not reimburse insurers and other third parties with the rights of a subrogee for payments made to an Injured Party after October 25, 2000 that exceeded or are not required by the terms of the insurance policy or other agreement creating a right of subrogation.

§ 295.14 Assignments.

Assignment of claims and the right to receive compensation for claims under the CGFAA is prohibited and will not be recognized by FEMA.

Subpart C—Compensation Available Under the CGFAA

§ 295.20 Prerequisite to compensation.

In order to receive compensation under the CGFAA a Claimant must be an Injured Person who suffered a Loss as a result of the Cerro Grande Fire and sustained damages.

§ 295.21 Allowable compensation.

(a) *Allowable compensation.* The CGFAA provides for the payment of compensatory damages. Compensatory damages are ''real, substantial and just money damages established by the Claimant in compensation for actual or real injury or loss.'' In general, an Injured Person will be compensated for Losses to the same extent that the plaintiff in a successful tort action brought against a private party under the laws of the State of New Mexico would be compensated. In addition the CGFAA permits FEMA to compensate Injured Parties for certain categories of ''loss of property,'' ''business loss,'' and ''financial loss,'' which are enumerated in the CGFAA. Damages must be reasonable in amount. Claimants must take reasonable steps to mitigate (reduce) their damages, if possible, as required by New Mexico tort law.

(b) *Exclusions.* Except as otherwise provided in the CGFAA, a Claimant will not receive compensation for any injury or damage that is not compensable under the Federal Tort Claims Act and New Mexico law. Punitive damages, statutory damages under § 30–32–4 of the New Mexico Statutes Annotated (1978), interest on claims, attorney's fees and agents' fees incurred in prosecuting a claim under the CGFAA or an insurance policy, adjusting costs incurred by an insurer or other third party with the rights of a subrogee, and taxes that may be owed by a Claimant as a consequence of receiving an award are not recoverable from FEMA. The cost to a Claimant of prosecuting a claim under the CGFAA does not constitute compensatory damages and is not recoverable from FEMA, except as provided in § 295.31(b).

(c) *Damages arising in the future.* In the event that a lump sum payment is awarded to a Claimant for future damages the amount of the payment will be Discounted to Present Value.

(d) *Destruction of home*—(1) *Home and contents.* Compensatory damages for the Destruction of a Home may include the reasonable cost of reconstructing a home comparable in design, construction materials, size and improvements to the home that was lost taking into account post-fire construction costs in the community in which the home existed before the fire and current building codes and standards. Compensatory damages may also include the cost of removing debris and burned trees, stabilizing the land, replacing household contents, and compensation for any decrease in the value of land on which the structure sat pursuant to paragraph (e) of this section. (2) *Trees and landscaping.* Compensation for the Replacement Cost of destroyed trees and landscaping will be limited to 25% of the pre-fire value of the structure and lot.

(3) *Mitigation.* If requested by a Claimant, FEMA may compensate a Claimant for the reasonable cost of mitigation measures that will reduce the property's vulnerability to the future risk of wildfire, flood or other natural hazards related to the Cerro

Grande Fire. Mitigation compensation made available under this section may not exceed fifteen percent of payments from all sources (i.e., CGFAA, insurance proceeds, FEMA assistance under the Stafford Act) for damage to the structure and lot. The Claimant must obtain all government permits, approvals and clearances required by applicable law, ordinance or regulation before constructing the mitigation measures. The mitigation measures must be reviewed by FEMA under applicable environmental and historic preservation laws. Claimants must construct the mitigation measures for which they have received compensation.

(e) *Reduction in the value of real property.* Compensatory damages may be awarded for reduction in the value of real property that a Claimant owned before the fire if:

(1) The Claimant sells the real property in a good faith arm's length transaction that is closed no later than August 28, 2002 and realizes a loss in the pre-fire value; or

(2) The Claimant can establish that the value of the real property was permanently diminished as a result of the Cerro Grande Fire.

(f) *Destruction of unique items of personal property.* Compensatory damages may be awarded for unique items of personal property that were destroyed as a result of the Cerro Grande Fire. If the item can be replaced in the current market, the cost to replace the item will be awarded. If the item cannot be replaced in the current market, its fair market value on the date it was destroyed will be awarded.

(g) *Disaster recovery loans.* FEMA will reimburse Claimants awarded compensation under the CGFAA for interest paid on Small Business Administration disaster loans and similar loans obtained after May 4, 2000. Interest will be reimbursed for the period beginning on the date that the loan was taken out and ending on the date when the Claimant receives a compensation award (other than a partial payment). Claimants are required to use the proceeds of their compensation awards to repay Small Business Administration disaster loans. FEMA will cooperate with the Small Business Administration to formulate procedures for assuring that Claimants repay Small Business Administration disaster loans contemporaneously with the receipt of CGFAA compensation awards.

(h) *Mitigation.* FEMA may compensate Claimants for the cost of reasonable and cost-effective efforts incurred on or before August 28, 2003 to mitigate the heightened risks of wildfire, flood or other natural disaster resulting from the Cerro Grande Fire that are consistent with a OCGFC-approved Mitigation Compensation Plan. No more than 15% of the total amount appropriated by Congress for the payment of Cerro Grande fire related claims may be allocated for mitigation compensation under this subsection. Claimants seeking compensation under this provision must file a Notice of Loss under § 295.10 or amend a Notice of Loss previously filed under § 295.33 or § 295.34. The Notice of Loss or amendment must specify that compensation for mitigation is sought. The Notice of Loss must be filed or a proposed amendment under § 295.33 or § 295.34 submitted no later than August 28, 2002. A separate request for mitigation assistance must be filed with OCGFC no later than August 28, 2003. Claimants must construct the mitigation measures for which they have received compensation.

(i) *Subsistence*—(1) *Allowable damages.* FEMA may reimburse an Indian tribe, a Tribal Member or a Household Including Tribal Members for the reasonable cost of replacing Subsistence Resources customarily and traditionally used by the Claimant on or before May 4, 2000, but no longer available to the Claimant as a result of the Cerro Grande Fire. For each category of Subsistence Resources, the Claimant must elect to receive compensatory damages either for the increased cost of obtaining Subsistence Resources from lands not damaged by the Cerro Grande Fire or for the cost of procuring substitute resources in the cash economy. Long-term damage awards will be made in the form of lump sum cash payments to eligible Claimants.

(2) *Proof of subsistence use.* FEMA may consider evidence submitted by Claimants, Indian Tribes and other knowledgeable sources in determining

the nature and extent of a Claimant's subsistence uses.

(3) *Duration of damages.* Compensatory damages for subsistence losses will be paid for the period between May 4, 2000 and the date when Subsistence Resources can reasonably be expected to return to the level of availability that existed before the Cerro Grande Fire. FEMA may rely upon the advice of experts in making this determination.

(j) *Flood insurance.* A Claimant that owned or leased real property in the counties of Los Alamos, Rio Arriba, Sandoval or Santa Fe at the time of the Cerro Grande Fire who was not required by law to maintain flood insurance before the fire and who did not maintain flood insurance before the fire may be reimbursed by FEMA for reasonable flood insurance premiums incurred during the period beginning May 12, 2000 and ending May 12, 2002 on the owned or leased real property. Alternatively, FEMA may provide flood insurance to such Claimants directly through a group or blanket policy.

(k) *Out of pocket expenses for treatment of mental health conditions.* FEMA may reimburse an individual Claimant for reasonable out of pocket expenses incurred for treatment of a mental health condition rendered by a licensed mental health professional, which condition resulted from the Cerro Grande Fire and which could not be effectively addressed through no-cost crisis counseling services available in the community. FEMA will not reimburse for treatment rendered after December 31, 2001.

(l) *Donations.* FEMA will compensate individual or business Claimants in the counties of Los Alamos, Rio Arriba, Sandoval and Santa Fe (including those located on pueblos and Indian reservations) for the cost of merchandise, use of equipment or other nonpersonal services, directly or indirectly donated to survivors of the Cerro Grande Fire not later than June 19, 2000. Donations will be valued at cost. FEMA will also compensate businesses located in the counties of Los Alamos, Rio Arriba, Sandoval and Santa Fe (including those located on pueblos and Indian reservations) for discounts offered to fire survivors on goods and services not later than June 19, 2000 provided that actual revenues earned by the business during the period May 1–June 30, 2000 did not exceed reasonable projections for the period and the shortfall between actual revenues and reasonable projections resulted from the Cerro Grande Fire. Compensation will be the difference between the Claimant's established post-fire price for the good or service actually charged to the general public and the post-fire discounted price charged to fire survivors.

(m) *Duplication of benefits.* The CGFAA allows FEMA to compensate Injured Parties only if their damages have not been paid or will not be paid by insurance or a third party.

(1) *Insurance.* Claimants who carry insurance will be required to disclose the name of the insurer(s) and the nature of the insurance and provide OCGFC with such insurance documentation as OCGFC reasonably requests.

(2) *Coordination with our Public Assistance Program.* Injured Parties eligible for disaster assistance under our Public Assistance Program are expected to apply for all available assistance. Compensation will not be awarded under the CGFAA for:

(i) Emergency costs that are eligible for reimbursement under the Public Assistance Program; or

(ii) Losses that are eligible for repair, restoration or replacement under the Public Assistance Program; or

(iii) Costs or charges determined excessive under the Public Assistance Program.

(3) *Benefits provided by non-governmental organizations and individuals.* Unless otherwise provided by these regulations, disaster relief payments made to a Claimant by a non-governmental organization or an individual, other than wages paid by the Claimant's employer or insurance payments, will be disregarded in evaluating claims and need not be disclosed to OCGFC by Claimants.

(4) *Benefits provided by our Individual Assistance program.* Compensation under the CGFAA will not be awarded

for losses or costs that have been reimbursed under the Individual and Family Grant Program or any other FEMA Individual Assistance Program.

(5) *Worker's compensation claims.* Individuals who have suffered injuries that are compensable under State or Federal worker's compensation laws must apply for all benefits available under such laws.

Subpart D—Claims Evaluation

§ 295.30 Establishing losses and damages.

(a) *Burden of proof.* The burden of proving Losses and damages rests with the Claimant. A Claimant may submit for the Administrative Record a statement explaining why the Claimant believes that the Losses and damages are compensable and any documentary evidence supporting the claim. Claimants will provide documentation, which is reasonably available, to corroborate the nature, extent and value of their losses and/or to execute affidavits in a form established by OCGFC. FEMA may compensate a Claimant for a Loss in the absence of supporting documentation, in its discretion, on the strength of an affidavit or Proof of Loss executed by the Claimant, if documentary evidence substantiating the loss is not reasonably available. FEMA may request that a business Claimant execute an affidavit, which states that the Claimant will provide documentary evidence, including but not limited to income tax returns, if requested by our DHS Office of the Inspector General or the Government Accountability Office during an audit of the claim.

(b) *Proof of Loss.* All Claimants are required to attest to the nature and extent of each Loss for which compensation is sought in the Proof of Loss. The Proof of Loss, which will be in a form specified by OCGFC, must be signed by the Claimant or the Claimant's legal representative if the Claimant is a not an individual or is an individual who lacks the legal capacity to execute the Proof of Loss. The Proof of Loss must be signed under penalty of perjury and subject to the provisions of 18 U.S.C.1001, which establishes penalties for false statements. Non-subrogation Claimants who filed a Notice of Loss before January 1, 2001 should submit a signed Proof of Loss to OCGFC not later than June 19, 2001. Non-subrogation Claimants who file a Notice of Loss on or after January 1, 2001 should submit a signed Proof of Loss to OCGFC not later than 150 days after the date when the Notice of Loss was submitted. These deadlines may be extended at the discretion of the Director of OCGFC for good cause. If a non-subrogation Claimant fails to submit a signed Proof of Loss within the timeframes set forth in this section and does not obtain an extension from the Director of OCGFC, OCGFC may administratively close the claim and require the Claimant to repay any partial payments made on the claim. Subrogation Claimants will submit the Proof of Loss contemporaneously with filing the Notice of Loss.

(c) *Release and Certification Form.* All Claimants who receive compensation under the CGFAA are required to sign a Release and Certification Form. The Release and Certification Form must be executed by the Claimant or the Claimant's legal representative if the Claimant is an entity or lacks the legal capacity to execute the Release and Certification Form. The Release and Certification Form must be received by OCGFC within 120 days of the date when the Authorized Official's Determination is rendered under § 295.32, or if subsequent proceedings occur under Subpart E of these regulations, not later than 60 days after the date when further review of the decision (if available) is precluded. The United States will not attempt to recover compensatory damages paid to a Claimant who has executed and returned a Release and Certification Form within the periods provided above, except in the case of fraud or misrepresentation by the Claimant or the Claimant's representative, failure of the Claimant to cooperate with an audit as required by § 295.35 or a material mistake by FEMA.

§ 295.31 Reimbursement of claim expenses.

(a) FEMA will reimburse Claimants for the reasonable costs they incur in copying documentation requested by OCGFC. FEMA will also reimburse Claimants for the reasonable costs

they incur in providing appraisals, or other third-party opinions, requested by OCGFC. FEMA will not reimburse Claimant for the cost of appraisals, or other third party opinions, not requested by OCGFC.

(b) FEMA will provide a lump sum payment for incidental expenses incurred in claims preparation to individual and business Claimants that are awarded compensatory damages under the CGFAA after a properly executed Release and Certification Form has been returned to OCGFC. The amount of the lump sum payment will be the greater of $100 or 5% of CGFAA compensatory damages and insurance proceeds recovered by the Claimant for Cerro Grande Fire related losses (not including the lump sum payment or monies reimbursed under the CGFAA for the purchase of flood insurance), but will not exceed $15,000. No more than one lump sum payment will be made to all Claimants in a Household, regardless of whether the Household filed separate or combined Notices of Loss. The following Claimants will not be eligible to receive the lump sum payment: subrogation Claimants and Claimants whose only Cerro Grande Fire related loss is for flood insurance premiums.

§ 295.32 Determination of compensation due to claimant.

(a) *Authorized Official's report.* After OCGFC has evaluated all elements of a claim as stated in the Proof of Loss, the Authorized Official will issue, and provide the Claimant with a copy of, the Authorized Official's Determination.

(b) *Claimant's options upon issuance of the Authorized Official's determination.* Not later than 120 days after the date that appears on the Authorized Official's Determination, the Claimant must either accept the findings by submitting a Release and Certification Form to FEMA or initiate an Administrative Appeal in accordance with § 295.41. The CGFAA requires that Claimants sign the Release and Certification Form to receive payment on their claims (except for partial payments). The Claimant will receive payment of compensation awarded by the Authorized Official after FEMA receives the completed Release and Certification Form. If the Claimant does not either submit a Release and Certification Form to FEMA or initiate an Administrative Appeal no later than 120 Days after the date that appears on the Authorized Official's Determination, he or she will be conclusively presumed to have accepted the Authorized Official's Determination. The Director of OCGFC may modify the deadlines set forth in this subsection at the request of a Claimant for good cause shown.

§ 295.33 Supplementing claims.

A Claimant may amend the Notice of Loss to include additional claims at any time before signing a Proof of Loss. After the Claimant has submitted a Proof of Loss and before submission of the Release and Certification Form, a Claimant may request that the Director of OCGFC consider one or more Losses not addressed in the Proof of Loss. The request must be submitted in writing to the Director of OCGFC and received not later than the deadline for filing an Administrative Appeal under § 295.32 or August 28, 2002, whichever is earlier. It must be supported by the Claimant's explanation of why the Loss was not previously reported. If good cause is found to consider the additional loss, the Director will determine whether compensation is due to the Claimant for the Loss under the Administrative Appeal procedures described in § 295.41.

§ 295.34 Reopening a claim.

(a) The Director of OCGFC may reopen a claim if requested to do so by the Claimant, notwithstanding the submission of the Release and Certification Form, for the limited purpose of considering issues raised by the request to reopen if:

(1) The Claimant desires mitigation compensation and the request to reopen is filed not later than August 28, 2003 in accordance with § 295.21(d) or (h); or

(2) The Claimant closed the sale of real property not later than August 28, 2002 and wishes to present a claim for reduction in the value of the real property under § 295.21(e) and the request to

reopen is filed not later than August 28, 2002; or

(3) The Claimant has incurred Replacement Costs under § 295.21(d) in excess of those previously awarded and is not prohibited by the terms of an agreement pertaining to home replacement with OCGFC from requesting that the case be reopened; or

(4) The Director of OCGFC otherwise determines that Claimant has demonstrated good cause.

(b) The Director of OCGFC may establish a deadline by which requests to reopen under paragraphs (a)(3) or (4) of this section must be submitted. The deadline will be published as a notice in the FEDERAL REGISTER and broadly disseminated throughout the communities, pueblos and Indian reservations in Los Alamos, Rio Arriba, Sandoval, and Santa Fe Counties.

§ 295.35 Access to records.

For purpose of audit and investigation, a Claimant will grant the FEMA DHS Office of the Inspector General and the Comptroller General of the United States access to any property that is the subject of a claim and to any and all books, documents, papers, and records maintained by a Claimant or under the Claimant's control pertaining or relevant to the claim.

§ 295.36 Confidentiality of information.

Confidential information submitted by individual Claimants is protected from disclosure to the extent permitted by the Privacy Act. These protections are described in the Privacy Act Notice provided with the Notice of Loss. Other Claimants should consult with FEMA concerning the availability of confidentiality protection under exemptions to the Freedom of Information Act and other applicable laws before submitting confidential, proprietary or trade secret information.

Subpart E—Dispute Resolution

§ 295.40 Scope.

This subpart describes a Claimant's right to bring an Administrative Appeal in response to the Authorized Official's Determination. It also describes the Claimant's right to pursue arbitration or seek judicial review following an Administrative Appeal.

§ 295.41 Administrative appeal.

(a) *Notice of appeal.* A Claimant may request that the Director of OCGFC review the Authorized Official's Determination by written request to the Appeals Docket, Office of Cerro Grande Claims, P.O. Box 1480, Los Alamos, NM 87544–1480, postmarked or delivered within 120 Days after the date that appears on the Authorized Official's Determination. The Claimant will submit along with the notice of appeal a statement explaining why the Authorized Official's Determination was incorrect.

(b) *Acknowledgement of appeal.* OCGFC will acknowledge the receipt of appeals that are timely filed. Following the receipt of a timely filed appeal, the Director of OCGFC will obtain the Administrative Record from the Authorized Official and transmit a copy to the Claimant.

(c) *Supplemental filings.* The Claimant may supplement the statement of reasons and provide any additional documentary evidence supporting the appeal within 60 Days after the date when the appeal is filed. The Director of OCGFC may extend these timeframes or authorize additional filings either on his or her own initiative or in response to a request by the Claimant for good cause shown.

(d) *Admissible evidence.* The Claimant may rely upon any relevant evidence to support the appeal, regardless of whether the evidence was previously submitted to the Claims Reviewer for consideration by the Authorized Official.

(e) *Obtaining evidence.* The Director of OCGFC may request from the Claimant or from the Authorized Official any additional information that is relevant to the issues posed by the appeal in his or her discretion.

(f) *Conferences.* The Director of OCGFC may schedule a conference to gain a better understanding of the issues or to explore settlement possibilities.

(g) *Hearings.* The Director of OCGFC may exercise the discretion to convene an informal hearing to receive oral testimony from witnesses or experts. The

rules under which hearings will be conducted will be established by the Director of OCGFC. Formal rules of evidence applicable to court proceedings will not be used in hearings under this subsection. Hearings will be transcribed and the transcript will be entered in the Administrative Record.

(h) *Decision on appeal.* After the allotted time for submission of evidence has passed, the Director of OCGFC will close the Administrative Record and render a written decision on the Administrative Appeal. The Director of OCGFC's decision on the Administrative Appeal will constitute the final decision of the Administrator of FEMA under §§ 104(d)(2)(B) and 104(i)(1) of the CGFAA.

(i) *Claimant's options following appeal.* The Claimant's concurrence with the decision in the Administrative Appeal will be conclusively presumed unless the Claimant initiates arbitration in accordance with § 295.42 or seeks judicial review in accordance with § 295.43. If the Claimant concurs with the Director's determination, payment of any additional damages awarded by the Director will be made to the Claimant upon receipt of a properly executed Release and Certification Form.

§ 295.42 Arbitration.

(a) *Initiating arbitration.* A Claimant who is dissatisfied with the outcome of the Administrative Appeal may initiate binding arbitration by submitting a written request for arbitration to the Arbitration Administrator for Cerro Grande Claims, Alternate Dispute Resolution Office, Federal Emergency Management Agency, 500 C Street, SW., room 214, Washington, DC 20472 on a form provided by OCGFC. The written request for arbitration must be received not later than 60 days after the date that appears on the Administrative Appeal decision.

(b) *Permissible claims.* A Claimant may not arbitrate an issue unless it was raised and decided in the Administrative Appeal. Arbitration will be conducted on the evidence in the Administrative Record. Evidence not previously entered into the Administrative Record will not be considered.

(c) *Settlement and mediation alternatives.* At any time after a request for arbitration is filed and before the time a decision is rendered, either party may request in writing that the Alternate Dispute Resolution Office stay further proceedings in the arbitration to facilitate settlement discussions. A mediator may be appointed (if requested by the parties) to facilitate settlement discussions. If both parties concur in the request, the Alternate Dispute Resolution Office will stay the arbitration and appoint a mediator at our expense. The stay may be terminated and the arbitration resumed upon written request of either party to the Alternate Dispute Resolution Office. If the dispute is settled, the Alternate Dispute Resolution Office will issue an order terminating the arbitration and provide the Claimant with a Release and Certification Form.

(d) *Selection of arbitrator.* Arbitrators will be selected from a list of qualified arbitrators who have agreed to serve provided by the Alternate Dispute Resolution Office. If the amount in dispute is $300,000 or less, the arbitration will be decided by one arbitrator selected by the Claimant from the list. If the amount in dispute exceeds $300,000, a panel of three arbitrators selected at random by the Alternate Dispute Resolution Office will decide the arbitration.

(e) *Conduct of arbitration.* The arbitration will be conducted in a manner determined by the arbitrator consistent with guidelines established by the Alternate Dispute Resolution Office. The Alternate Dispute Resolution Office will provide these guidelines upon request.

(f) *Hearings.* The arbitrator may convene a hearing at a location designated by the Alternate Dispute Resolution Office. Whenever possible hearings will be held in Los Alamos, New Mexico unless the parties jointly agree to a different location.

(g) *Decision.* After reviewing the evidence, the arbitrator(s) will render a decision in writing to the Alternate Dispute Resolution Office. The Alternate Dispute Resolution Office will transmit the decision to the Claimant and the Director of OCGFC. If a panel

of three arbitrators conducts the arbitration, at least two of the three arbitrators must sign the decision. The decision will be rendered no later than 10 Days after a hearing is concluded or 60 Days after the arbitration is initiated, whichever is earlier. The Alternate Dispute Resolution Office may extend the time for a decision. The decision will establish the compensation due to the Claimant, if any, and the reasons therefore.

(h) *Action on arbitration decision.* The Alternate Dispute Resolution Office will forward the arbitration decision and a Release and Certification Form to the Claimant. A Claimant who has received or who has been awarded any compensation under the CGFAA must sign and return the Release and Certification Form, regardless of whether any additional compensation is awarded by the arbitration. Additional compensation awarded in the arbitration will be paid to the Claimant after the signed Release and Certification Form is received.

(i) *Final decision.* The decision of the arbitrator will be final and binding on all parties and will not be subject to any administrative or judicial review. The arbitrator may correct clerical, typographical or computational errors as requested by the Alternate Dispute Resolution Office.

(j) *Administration of arbitration.* The Alternate Dispute Resolution Office will serve as arbitration administrator and will conclusively resolve any procedural disputes arising in the course of the arbitration. The Alternate Dispute Resolution Office will pay the fees of the arbitrator and reimburse the arbitrator for arbitration related expenses unless the parties jointly agree otherwise.

§ 295.43 Judicial review.

As an alternative to arbitration, a Claimant dissatisfied with the outcome of an Administrative Appeal may seek judicial review of the decision by bringing a civil lawsuit against FEMA in the United States District Court for the District of New Mexico. This lawsuit must be brought within 60 Days of the date that appears on the Administrative Appeal decision. The court may only consider evidence in the Administrative Record. The court will uphold our decision if it is supported by substantial evidence on the record considered as a whole. If the judge has awarded damages over and above those previously paid, FEMA will cause the damages to be paid to the Claimant upon receipt of the Release and Certification Form or as otherwise specified by order of the court. Claimants who have received any compensation under the CGFAA must return a Release and Certification Form as provided in § 295.30(c), regardless of whether the court awards additional compensation.

Subpart F—Glossary

§ 295.50 Definitions.

Administrative Appeal means an appeal of the Authorized Official's Determination to the Director of OCGFC in accordance with the provisions of Subpart E of these regulations.

Administrative Record means all information submitted by the Claimant and all information collected by FEMA concerning the claim, which is used to evaluate the claim and to formulate the Authorized Official's Determination. It also means all information that is submitted by the Claimant or FEMA in an Administrative Appeal and the decision of the Administrative Appeal. It excludes the opinions, memoranda and work papers of our attorneys and drafts of documents prepared by OCGFC personnel and contractors.

Alternate Dispute Resolution Office means the Office established by FEMA to promote use of Alternative Dispute Resolution as a means of resolving disputes. The address of the Alternate Dispute Resolution Office is Federal Emergency Management Agency, 500 C Street, SW., Washington, DC 20472.

Authorized Official means an employee of the United States who is delegated with authority by the Director of OCGFC to render binding determinations on claims and to determine compensation due to Claimants under the CGFAA.

Authorized Official's Determination means a report signed by an Authorized Official and mailed to the Claimant evaluating each element of the claim as stated in the Proof of Loss

and determining the compensation, if any, due to the Claimant.

Claimant means a person who has filed a Notice of Loss under the CGFAA.

Claims Reviewer means an employee of the United States or an OCGFC contractor or subcontractor who is authorized by the Director of OCGFC to review and evaluate claims submitted under the CGFAA.

Days means calendar days, including weekends and holidays.

Destruction of a Home means destruction or physical damage to a residence or the land upon which it sat, resulting from the Cerro Grande Fire.

Discount to Net Present Value means a reduction of an award for damages arising in the future by making allowance for the fact that such award, if properly invested would earn interest.

Household means a group of people, related or unrelated, who live together on a continuous basis and does not include members of an extended family who do not regularly and continuously cohabit.

Household Including Tribal Members means a Household that existed on May 4, 2000, which included one or more Tribal Members as continuous residents.

Indian tribe means an entity listed on the most recent list of federally recognized tribes published in the FEDERAL REGISTER by the Secretary of the Interior pursuant to the Federally Recognized Indian Tribe List Act, 25 U.S.C. 479a, or successor legislation.

Injured Person means an individual, regardless of citizenship or alien status, an Indian tribe, corporation, tribal corporation, partnership, company, association, cooperative, joint venture, limited liability company, estate, trust, county, city, State, school district, special district or other non-Federal entity that suffered Loss resulting from the Cerro Grande Fire and any entity that provided insurance to an Injured Person. The term Injured Person includes an Indian tribe with respect to any claim relating to property or natural resources held in trust for the Indian tribe by the United States. Lenders holding mortgages or security interests on property affected by the Cerro Grande fire and lien holders are not ''Injured Persons'' for purposes of the CGFAA.

Loss means ''injury or loss of property, or personal injury or death,'' as that phrase appears in the Federal Tort Claims Act, 28 U.S.C. 1346(b)(1), and the several categories of ''property loss,'' ''business loss'' or ''financial loss'' set out in the § 104(d) of the CGFAA.

Mitigation Compensation Plan means a written mitigation plan submitted by a local government with land use regulatory authority or by an Indian tribe that recommends specific mitigation measures to reduce the heightened risks of wildfire, flood or other natural hazards resulting from the Cerro Grande Fire or seeks compensation for the cost of such measures expended before August 28, 2000, or both. The Mitigation Compensation Plan may address property specific mitigation measures and community level mitigation measures.

Notice of Loss means a form supplied by OCGFC through which an Injured Person makes a binding, conclusive and irrevocable election to have all Losses resulting from the Cerro Grande Fire reviewed by FEMA for possible compensation under the CGFAA.

Proof of Loss means a statement, signed by a Claimant under penalty of perjury and subject to the provisions of 18 U.S.C.1001 that the claim is true and correct, attesting to the nature and extent of the Claimant's injuries.

Public Assistance Program means the FEMA program establish under Subchapter IV of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, 42 U.S.C. 5121, *et seq.*, which provides grants to States, local governments, Indian tribes and private nonprofit organizations for emergency measures and repair, restoration and replacement of damaged facilities.

Replacement Cost means the cost of replacing an item that is damaged or destroyed with an item that is comparable in quality and utility.

Release and Certification Form means a document in the manner prescribed by § 104(e) of the CGFAA that all Claimants who have received or are awarded compensatory damages under the CGFAA must execute and return to OCGFC as required by § 295.30(c).

Subsistence Resources means food and other items obtained through hunting, fishing, firewood and other resource gathering, timbering, grazing or agricultural activities undertaken by the Claimant without financial remuneration.

Tribal Member means an enrolled member of an Indian Tribe.

PART 296—HERMIT'S PEAK/CALF CANYON FIRE ASSISTANCE

Subpart A—General

Sec.

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SOURCE: 88 FR 59777, Aug. 29, 2023, unless otherwise noted.

Subpart A—General

§ 296.1 Purpose.

This part implements the Hermit's Peak/Calf Canyon Fire Assistance Act (Act), Division G of Public Law 117–180, 136 Stat. 2114, 2168, which requires the Federal Emergency Management Agency (FEMA) to establish the Office of Hermit's Peak/Calf Canyon Fire Claims (''Claims Office'') to receive, evaluate, process, and pay actual compensatory damages for injuries resulting from the Hermit's Peak/Calf Canyon Fire.

§ 296.2 Policy.

It is our policy to provide for the expeditious resolution of damage claims through a process that is administered with sensitivity to the burdens placed upon claimants by the Hermit's Peak/Calf Canyon Fire.

§ 296.3 Information and assistance.

Information and assistance concerning the Act is available from the Claims Office, Federal Emergency Management Agency online at *https://www.fema.gov/hermits-peak*.

§ 296.4 Definitions.

Administrative Appeal means an appeal of the Authorized Official's Determination to the Director of the Claims Office in accordance with the provisions of Subpart E of this part.

Administrative Record means all information submitted by the claimant and all information collected by FEMA concerning the claim, which is used to evaluate the claim and to formulate the Authorized Official's Determination. It also means all information that is submitted by the claimant or FEMA in an Administrative Appeal and the decision of the Administrative Appeal. It excludes the opinions, memoranda and work papers of FEMA attorneys and drafts of documents prepared by Claims Office personnel and contractors.

Administrator means the Administrator of the Federal Emergency Management Agency.

Arbitration Administrator means the FEMA official responsible for administering arbitration procedures to resolve disputes regarding a claim. Contact information for the Arbitration Administrator can be found online at *https://www.fema.gov/hermits-peak*.

Authorized Official means an employee of the United States who is delegated with authority by the Director of the Claims Office to render binding determinations on claims and to determine compensation due to claimants under the Act.

Authorized Official's Determination means a report signed by an Authorized Official and mailed to the claimant evaluating each element of the claim as stated in the Proof of Loss and determining the compensation, if any, due to the claimant.

Claimant means a person who has filed a Notice of Loss under the Act.

Claims Office means the Office of Hermit's Peak/Calf Canyon Fire Claims.

Claims Reviewer means an employee of the United States or a Claims Office contractor or subcontractor who is authorized by the Director of the Claims Office to review and evaluate claims submitted under the Act.

Days means calendar days, including weekends and holidays.

Director means an Independent Claims Manager appointed by the Administrator who will serve as the Director of the Claims Office.

Good Cause, for purposes of extending the deadline for filing, supplementing a claim, or reopening a claim includes, but is not limited to: instances where a claimant, through no fault of their own, may not be able to access needed documentation in time to submit a claim or transmit relevant information or data; or where damage is found after a claim has been submitted; or other instances in which the Director of the Claims Office, in their discretion, determines that an undue hardship or change in circumstances on the claimant warrants an extension of a deadline or the supplementation or reopening of existing claims.

Hermit's Peak/Calf Canyon Fire means:

(1) The fire resulting from the initiation by the U.S. Forest Service of a prescribed burn in the Santa Fe National Forest in San Miguel County, New Mexico on April 6, 2022;

(2) The pile burn holdover resulting from the prescribed burn by the U.S. Forest Services which reemerged on April 19, 2022; and

(3) The merger of the two fires described in paragraphs (1) and (2) of this definition, reported as the Hermit's Peak Fire or the Hermit's Peak Fire/Calf Canyon Fire.

Household means a group of people, related or unrelated, who live together on a continuous basis and does not include members of an extended family who do not regularly and continuously cohabit.

Household Including Tribal Members means a Household that existed on April 6, 2022, which included one or more Tribal Members as continuous residents.

Indian Tribe means the recognized governing body of any Indian or Alaska Native Tribe, band, nation, pueblo, village, community, component band, or components reservation individually identified (including parenthetically) in the list published most recently as of September 30, 2022, pursuant to section 104 of the Federally Recognized Indian Tribe List Act of 1994.

Individual Assistance means the FEMA program established under subchapter IV of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, 42 U.S.C. 5121, *et seq.*, which provides assistance to individuals and families adversely affected by a major disaster or an emergency.

Injured Person means an individual, regardless of citizenship or alien status; or an Indian Tribe, Tribal corporation, corporation, partnership, company, association, county, township, city, State, school district, or other non-Federal entity that suffered injury resulting from the Hermit's Peak/Calf Canyon Fire. The term Injured Person includes an Indian Tribe with respect to any claim relating to property or natural resources held in trust for the Indian Tribe by the United States. Lenders holding mortgages or security interests on property affected by the Hermit's Peak/Calf Canyon Fire and

lien holders are not an ''Injured Person'' for purposes of the Act.

Injury means ''injury or loss of property, or personal injury or death,'' as used in the Federal Tort Claims Act, 28 U.S.C. 1346(b)(1).

Notice of Loss means a form supplied by the Claims Office through which an Injured Person or Subrogee makes a claim for possible compensation under the Act.

Proof of Loss means a statement attesting to the nature and extent of the claimant's injuries.

Public Assistance Program means the FEMA program established under Subchapter IV of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, 42 U.S.C. 5121, *et seq.*, which provides grants to States, local governments, Indian Tribes and private nonprofit organizations for emergency measures and repair, restoration, and replacement of damaged facilities.

Release and Certification Form means a document in the manner prescribed by section 104(e) of the Act that all claimants who have received or are awarded compensatory damages under the Act must execute and return to the Claims Office as required by § 296.30(c).

Subrogee means an insurer or other third party that has paid to a claimant compensation for Injury and is subrogated to any right that the claimant has to receive payment under the Act.

Subsistence Resources means food and other items obtained through hunting, fishing, firewood and other natural resource gathering, timbering, grazing or agricultural activities undertaken by the claimant without financial remuneration, on land damaged by the Hermit's Peak/Calf Canyon Fire.

Tribal Member means an enrolled member of an Indian Tribe.

§ 296.5 Overview of the claims process.

(a) The Act is intended to provide persons who suffered Injury from the Hermit's Peak/Calf Canyon Fire with a simple, expedited process to seek compensation from the United States. This section provides a brief explanation of the claims process for claims other than subrogation claims. It is not intended to supersede the more specific regulations that follow and explain the claims process in greater detail. To obtain compensation under the Act, an Injured Person must submit all Hermit's Peak/Calf Canyon Fire related claims against the United States or any employee, officer, or agency of the United States to the FEMA Claims Office. An Injured Person who elects to accept an award under the Act is barred from accepting an award pursuant to a claim under the Federal Tort Claims Act or a civil action against the United States or any employee, officer, or agency of the United States arising out of or relating to the same subject matter. Judicial review of FEMA decisions under the Act is available.

(b) The first step in the process is to file a Notice of Loss with the Claims Office. The Claims Office will provide the claimant with a written acknowledgement that the claim has been filed and a claim number.

(c) Shortly thereafter, a Claims Reviewer will contact the claimant to review the claim. Claims Reviewer will help the claimant formulate a strategy for obtaining any necessary documentation or other support. This assistance does not relieve the claimant of their responsibility for establishing all elements of the injuries and the compensatory damages that are sought, including that the Hermit's Peak/Calf Canyon Fire caused the injuries. After the claimant has had an opportunity to discuss the claim with the Claims Reviewer, a Proof of Loss will be presented to the claimant for signature. After any necessary documentation has been obtained and the claim has been fully evaluated, the Claims Reviewer will submit a report to the Authorized Official. The Claims Reviewer is responsible for providing an objective evaluation of the claim to the Authorized Official.

(d) The Authorized Official will review the report and determine whether compensation is due to the claimant. The claimant will be notified in writing of the Authorized Official's determination. If the claimant is satisfied with the decision, payment will be made after the claimant returns a completed Release and Certification Form. If the claimant is dissatisfied with the Authorized Official's determination, an administrative appeal may be filed

with the Director of the Claims Office. If the claimant remains dissatisfied after the appeal is decided, the dispute may be resolved through binding arbitration or heard in the United States District Court for the District of New Mexico.

§§ 296.6–296.9 [Reserved]

Subpart B—Bringing a Claim Under the Hermit's Peak/Calf Canyon Fire Assistance Act

§ 296.10 Filing a claim under the Hermit's Peak/Calf Canyon Fire Assistance Act.

(a) Any Injured Person may bring a claim under the Act by filing a Notice of Loss. A claim submitted on any form other than a Notice of Loss will not be accepted. The claimant must provide a brief description of each injury on the Notice of Loss.

(b) A single Notice of Loss may be submitted on behalf of a household containing Injured Persons provided that all Injured Persons on whose behalf the claim is presented are identified.

(c) The Notice of Loss must be signed by each claimant, if the claimant is an individual, or by a duly authorized legal representative of each claimant, if the claimant is an entity or an individual who lacks the legal capacity to sign the Notice of Loss. If one is signing a Notice of Loss as the legal representative of a claimant, the signer must disclose their relationship to the claimant. FEMA may require a legal representative to submit evidence of their authority to act.

(d) The Claims Office will provide Notice of Loss forms through the mail, electronically, in person at the Claims Office or by telephone request. The Notice of Loss form can also be downloaded from the internet at *https://www.fema.gov/hermits-peak*.

(e) A Notice of Loss may be filed with the Claims Office by mail, electronically, or in person. Details regarding the filing process can be found at *https://www.fema.gov/hermits-peak*.

(f) A Notice of Loss that is completed and properly signed is deemed to be filed on the date it is received and acknowledged by the Claims Office.

§ 296.11 Deadline for notifying FEMA of injuries.

The deadline for filing a Notice of Loss is November 14, 2024. Except as provided in § 296.35 with respect to a request to reopen a claim, an injury that has not been described: on a Notice of Loss, on a supplement to a Notice of Loss or a request to supplement a Notice of Loss under § 296.34 received by the Claims Office on or before November 14, 2024 cannot be compensated under the Act. The Act establishes this deadline and does not provide any extensions of the filing deadline.

§ 296.12 Election of remedies.

(a) An Injured Person who accepts a final award under the Act waives the right to pursue all claims for injuries arising out of or relating to the same subject matter against the United States or any employee, officer, or agency of the United States through the Federal Tort Claims Act or a civil action authorized by any other provision of law.

(b) An Injured Person who accepts a final award through a Federal Tort Claims Act claim or a civil action against the United States or any employee, officer, or agency of the United States relating to the Hermit's Peak/Calf Canyon Fire waives the right to pursue any claim arising out of or relating to the same subject matter under the Act.

§ 296.13 Subrogation.

An insurer or other third party with the rights of a subrogee, who has compensated an injured person for Hermit's Peak/Calf Canyon Fire related injuries, may file a Notice of Loss under the Act for the subrogated claim. A subrogee may file a Notice of Loss without regard to whether the Injured Person who received payment from the subrogee filed a Notice of Loss. A Subrogation Notice of Loss should be filed after the subrogee has made all payments that it believes the Injured Person is entitled to receive for Hermit's Peak/Calf Canyon Fire related injuries under the terms of the insurance policy or other agreement between the subrogee and the Injured Person, but not later than November 14, 2024. By

filing a Notice of Loss for any subrogated claim, the subrogee elects the Act as its exclusive remedy against the United States or any employee, officer, or agency of the United States for all subrogated claims arising out of the Hermit's Peak/Calf Canyon Fire. Subrogation claims must be made on a Notice of Loss form furnished by the Claims Office and such claims will be paid only after paying claims submitted by injured persons that are not insurance companies seeking payment as subrogees.

§ 296.14 Assignments.

Assignment of claims and the right to receive compensation for claims under the Act is prohibited and will not be recognized by FEMA.

§§ 296.15–296.19 [Reserved]

Subpart C—Compensation Available Under the Hermit's Peak/Calf Canyon Fire Assistance Act

§ 296.20 Prerequisite to compensation.

In order to receive compensation under the Act, a claimant must be an Injured Person who suffered an injury as a result of the Hermit's Peak/Calf Canyon Fire and sustained damages.

§ 296.21 Allowable damages.

(a) *Allowable damages.* The Act provides for the payment of actual compensatory damages for injury or loss of property, business loss, and financial loss. The laws of the State of New Mexico will apply to the calculation of damages. Damages must be reasonable in amount.

(b) *Exclusions.* Punitive damages, statutory damages under section 30–32–4 of the New Mexico Statutes Annotated (2019), interest on claims, attorney's fees and agents' fees incurred in prosecuting a claim under the Act or an insurance policy, and adjusting costs incurred by an insurer or other third party with the rights of a subrogee that may be owed by a claimant as a consequence of receiving an award are not recoverable from FEMA. The cost to a claimant of prosecuting a claim under the Act does not constitute compensatory damages and is not recoverable from FEMA, except as provided in § 296.31(b).

(c) *Loss of property.* Compensatory damages may be awarded for an uninsured or underinsured property loss, a decrease in the value of real property, damage to physical infrastructure, cost resulting from lost subsistence, cost of reforestation or revegetation not covered by any other Federal program, and any other loss that the Administrator determines to be appropriate for inclusion as a loss of property.

(1) *Real property and contents.* Compensatory damages for the damage or destruction of real property and its contents may include the reasonable cost of reconstruction of a structure comparable in design, construction materials, size, and improvements, taking into account post-fire construction costs in the community in which the structure existed before the fire and current building codes and standards. Compensatory damages may also include the cost of removing debris and burned trees, including hazardous materials or soils, stabilizing the land, replacing contents, and compensation for any decrease in the value of land on which the structure sat pursuant to paragraph (c)(3) of this section.

(2) *Reforestation and revegetation.* Compensatory damages may be awarded for the cost of replacement of destroyed trees and landscaping.

(3) *Decrease in the value of real property.* Compensatory damages may be awarded for a decrease in the value of real property that a claimant owned before the Hermit's Peak/Calf Canyon Fire if:

(i) The claimant sells the real property in a good faith, arm's length transaction that is closed no later than November 14, 2024 and realizes a loss in the pre-fire value; or

(ii) The claimant can establish that the value of the real property was significantly diminished long-term as a result of the Hermit's Peak/Calf Canyon Fire.

(4) *Subsistence.* Compensatory damages will be awarded for lost Subsistence Resources.

(i) FEMA may reimburse an injured party for the reasonable cost of replacing Subsistence Resources customarily and traditionally used by the claimant

on or before April 6, 2022, but no longer available to the claimant as a result of the Hermit's Peak/Calf Canyon Fire. For each category of Subsistence Resources, the claimant must elect to receive compensatory damages either for the increased cost of obtaining Subsistence Resources from lands not damaged by the Hermit's Peak/Calf Canyon Fire or for the cost of procuring substitute resources in the cash economy.

(ii) FEMA may consider evidence submitted by claimants, Indian Tribes, and other knowledgeable sources in determining the nature and extent of a claimant's subsistence uses.

(iii) Compensatory damages for subsistence losses will be paid for the period between April 6, 2022 and the date when Subsistence Resources can reasonably be expected to return to the level of availability that existed before the Hermit's Peak/Calf Canyon Fire. FEMA may rely upon the advice of experts in making this determination.

(iv) Long-term damage awards for subsistence resources will be made to claimants in the form of lump sum cash payments.

(5) *Physical infrastructure.* Compensatory damages may be awarded for the damage to physical infrastructure, including damages to irrigation infrastructure such as acequia systems.

(d) *Business loss.* Compensatory damages may be awarded for damage to tangible assets or inventory, including timber, crops, and other natural resources; business interruption losses; overhead costs; employee wages for work not performed; loss of business net income; and any other loss that the Administrator determines to be appropriate for inclusion as a business loss.

(e) *Financial loss.* Compensatory damages may be awarded for increased mortgage interest costs, insurance deductibles, temporary living or relocation expenses, lost wages or personal income, emergency staffing expenses, debris removal and other cleanup costs, costs of reasonable heightened risk reduction, premiums for flood insurance, and any other loss that the Administrator determines to be appropriate for inclusion as financial loss.

(1) *Recovery loans.* FEMA will reimburse claimants awarded compensation under the Act for interest paid on loans, including Small Business Administration disaster loans obtained after April 6, 2022 for damages resulting from the Fire. Interest will be reimbursed for the period beginning on the date that the loan was taken out and ending on the date when the claimant receives a compensation award (other than a partial payment). Claimants are required to use the proceeds of their compensation award to repay Small Business Administration disaster loans. FEMA will cooperate with the Small Business Administration to formulate procedures for assuring that claimants repay Small Business Administration disaster loans contemporaneously with the receipt of their compensation award.

(2) *Flood insurance.* FEMA will reimburse claimants for flood insurance premiums to be paid on or before May 31, 2024 if, as a result of the Hermit's Peak/Calf Canyon Fire, a claimant who was not required to purchase flood insurance before the Hermit's Peak/Calf Canyon Fire is required to purchase flood insurance or the claimant did not maintain flood insurance before the Fire but purchased flood insurance after the Fire due to fear of heightened flood risk. Alternatively, FEMA may provide flood insurance to such claimants directly through a group or blanket policy.

(3) *Out of pocket expenses for treatment of mental health conditions.* FEMA may reimburse an individual claimant for reasonable out of pocket expenses incurred for treatment of a mental health condition rendered by a licensed mental health professional, which condition resulted from or was worsened by the Hermit's Peak/Calf Canyon Fire. FEMA will not reimburse for treatment identified after November 14, 2024.

(4) *Donations.* FEMA will compensate claimants for the cost of merchandise, use of equipment or other non-personal services, directly or indirectly donated to survivors of the Hermit's Peak/Calf Canyon Fire not later than November 14, 2022. Donations will be valued at cost.

(5) *Heightened risk reduction.* FEMA will reimburse claimants for the costs incurred to implement reasonable measures necessary to reduce risks

from natural hazards heightened by the Hermit's Peak/Calf Canyon Fire to the level of risk prevailing before the Hermit's Peak/Calf Canyon Fire. Such measures may include, for example, risk reduction projects that reduce an increased risk from flooding, mudslides, and landslides in and around burn scars. Claimants seeking compensation for heightened risk reduction must include the claim in their Notice of Loss by November 14, 2024 or an amended Notice of Loss filed no later than November 14, 2025. Claimants should take into account current building codes and standards and must complete the risk reduction project for which they receive compensation.

(f) *Insurance and other benefits.* The Act allows FEMA to compensate Injured Persons only for damages not paid, and that will not be paid, by insurance or other third-party payments or settlements.

(1) *Insurance.* Claimants who carry insurance will be required to disclose the name of the insurer(s) and the nature of the insurance and provide the Claims Office with such insurance documentation as the Claims Office reasonably requests.

(2) *Coordination with FEMA's Public Assistance Program.* Injured Persons eligible for disaster assistance under FEMA's Public Assistance Program are expected to apply for all available assistance. Pursuant to the Act, the Federal share of the costs for Public Assistance projects is 100 percent. Compensation will not be awarded under the Act for injuries or costs that are eligible under the Public Assistance Program.

(3) *Benefits provided by FEMA's Individual Assistance program.* Compensation under the Act will not be awarded for injuries or costs that have been reimbursed under the Federal Assistance to Individual and Households Program or any other FEMA Individual Assistance Program.

(4) *Worker's compensation claims.* Individuals who have suffered injuries that are compensable under State or Federal worker's compensation laws must apply for all benefits available under such laws.

(5) *Benefits provided by non-governmental organizations and individuals.* Gifts or donations made to a claimant by a non-governmental organization or an individual, other than wages paid by the claimant's employer or insurance payments, will be disregarded in evaluating claims and need not be disclosed to the Claims Office by claimants.

§ 296.22–296.29 [Reserved]

Subpart D—Claims Evaluation

§ 296.30 Establishing injuries and damages.

(a) *Burden of proof.* The burden of proving injuries and damages rests with the claimant. A claimant may submit for the Administrative Record a statement explaining why the claimant believes that the injuries and damages are compensable and any documentary evidence supporting the claim. Claimants will provide documentation, which is reasonably available, including photographs and video, to corroborate the nature, extent, and value of their injuries and/or to execute affidavits in a form established by the Claims Office. FEMA may compensate a claimant for an injury in the absence of supporting documentation, in its discretion, on the strength of an affidavit or Proof of Loss executed by the claimant, if documentary evidence substantiating the injury is not reasonably available. FEMA may also require an inspection of real property. FEMA may request that a business claimant execute an affidavit, which states that the claimant will provide documentary evidence, including but not limited to income tax returns, if requested by the DHS Office of the Inspector General or the Government Accountability Office during an audit of the claim.

(b) *Proof of Loss.* All claimants are required to attest to the nature and extent of each injury for which compensation is sought in the Proof of Loss. The Proof of Loss, which will be in a form specified by the Claims Office, must be signed by the claimant or the claimant's legal representative if the claimant is not an individual or is an individual who lacks the legal capacity to execute the Proof of Loss. The Proof of Loss must be signed under penalty of perjury. Non-subrogation claimants should submit a signed Proof

of Loss to the Claims Office not later than 150 days after the date when the Notice of Loss was submitted. This deadline may be extended at the discretion of the Director of the Claims Office for good cause. If a non-subrogation claimant fails to submit a signed Proof of Loss within the timeframes set forth in this section and does not obtain an extension from the Director of the Claims Office, the Claims Office may administratively close the claim and require the claimant to repay any partial payments made on the claim. Subrogation claimants will submit the Proof of Loss contemporaneously with filing the Notice of Loss.

(c) *Release and Certification Form.* All claimants who receive compensation under the Act are required to sign a Release and Certification Form, including for partial payments under § 296.33. The Release and Certification Form must be executed by the claimant or the claimant's legal representative if the claimant is an entity or lacks the legal capacity to execute the Release and Certification Form. A Release and Certification Form must be received by the Claims Office before the Claims Office provides payment on the claim. The United States will not attempt to recover compensatory damages paid to a claimant who has executed and returned a Release and Certification Form within the periods provided above, except in the case of fraud or misrepresentation by the claimant or the claimant's representative, failure of the claimant to cooperate with an audit as required by § 296.36 or a material mistake by FEMA.

(d) *Authority to settle or compromise claims.* Notwithstanding any other provision of this part, the Director of the Claims Office may extend an offer to settle or compromise a claim or any portion of a claim at any time during the process outlined in this part, which if accepted by the claimant will be binding on the claimant and on the United States, except that the United States may recover funds improperly paid to a claimant due to fraud or misrepresentation on the part of the claimant or the claimant's representative, a material mistake on FEMA's part or the claimant's failure to cooperate in an audit as required by § 296.36.

§ 296.31 Reimbursement of claim expenses.

(a) FEMA will reimburse claimants for the reasonable costs they incur in providing documentation requested by the Claims Office. FEMA will also reimburse claimants for the reasonable costs they incur in providing appraisals, or other third-party opinions that the Claims Office deems necessary to determine the amount of the claim. FEMA will not reimburse claimants for the cost of appraisals or other third-party opinions not deemed necessary by the Claims Office.

(b) FEMA will provide a lump sum payment for incidental expenses incurred in claims preparation to claimants that are awarded compensatory damages under the Act after a properly executed Release and Certification Form has been returned to the Claims Office. The amount of the lump sum payment will be the greater of $150 or 5% of the Act's compensatory damages and insurance proceeds recovered by the claimant for Hermit's Peak/Calf Canyon Fire related injuries (not including the lump sum payment or monies reimbursed under the Act for the purchase of flood insurance) but will not exceed $25,000. Subrogation claimants and claimants whose only Hermit's Peak/Calf Canyon Fire related loss is for flood insurance premiums will not be eligible.

§ 296.32 Determination of compensation due to claimant.

(a) *Authorized Official's report.* After the Claims Office has evaluated all elements of a claim as stated in the Proof of Loss, the Authorized Official will issue, and provide the claimant with a copy of, the Authorized Official's determination.

(b) *Claimant's options upon issuance of the Authorized Official's determination.* Not later than 120 days after the date that appears on the Authorized Official's determination, the claimant must either accept the determination by submitting a Release and Certification Form to FEMA and/or initiate an Administrative Appeal in accordance with § 296.41. Claimants must sign

the Release and Certification Form to receive payment on their claims (including for partial payments). The claimant will receive payment of compensation awarded by the Authorized Official after FEMA receives the completed Release and Certification Form. If the claimant does not either submit a Release and Certification Form to FEMA or initiate an Administrative Appeal no later than 120 days after the date that appears on the Authorized Official's determination, the claimant will be conclusively presumed to have accepted the Authorized Official's determination. The Director of the Claims Office may modify the deadlines set forth in this subsection at the request of a claimant for good cause shown.

§ 296.33 Partial payments.

The Claims Office at the request of a claimant may make one or more partial payments on any aspect of a claim that is severable. Receipt by a claimant of a partial payment is contingent on the claimant signing a Release and Certification Form for the severable part of the claim for which partial payment is being made. Acceptance of a partial payment in no way affects a claimant's ability to pursue an Administrative Appeal of the Authorized Official's determination or to pursue other rights afforded by the Act with respect to any portion of a claim for which a Release and Certification Form has not been executed. The Claims Office decision on whether to provide a partial payment cannot be appealed.

§ 296.34 Supplementing claims.

A claimant may amend the Notice of Loss to include additional claims at any time before signing a Proof of Loss. After the claimant has submitted a Proof of Loss and before submission of a Release and Certification Form, a claimant may request that the Director of the Claims Office consider one or more injuries not addressed in the Proof of Loss. The request must be submitted in writing to the Director of the Claims Office and received not later than the deadline for filing an Administrative Appeal under § 296.32 or November 14, 2024, whichever is earlier. It must be supported by the claimant's explanation of why the injury was not previously reported. If good cause is found to consider the additional injury, the Director will determine whether compensation is due to the claimant for the Loss under the Administrative Appeal procedures described in § 296.41.

§ 296.35 Reopening a claim.

The Director of the Claims Office may reopen a claim if requested to do so by the claimant, notwithstanding the submission of the Release and Certification Form, for the limited purpose of considering issues raised by the request to reopen if, not later than November 14, 2025, the claimant desires heightened risk reduction compensation in accordance with § 296.21(e)(5) or the claimant closed the sale of real property and wishes to present a claim for decrease in the value of the real property under § 296.21(c)(3). Claimants may request to reopen claims where the claimant has incurred additional losses under § 296.21(c)(1) as part of a reconstruction in excess of those previously awarded or the Director of the Claims Office otherwise determines that claimant has demonstrated good cause no later than the deadline established by the Director of the Claims Office as published in the FEDERAL REGISTER and at *https://www.fema.gov/hermits-peak*.

§ 296.36 Access to records.

For purpose of audit and investigation, a claimant will grant the DHS Office of the Inspector General and the Comptroller General of the United States access to any property that is the subject of a claim and to any and all books, documents, papers, and records (including any relevant tax records) maintained by a claimant or under the claimant's control pertaining or relevant to the claim.

§ 296.37 Confidentiality of information.

Confidential information submitted by individual claimants is protected from disclosure to the extent permitted by the Privacy Act. These protections are described in the Privacy Act Notice provided with the Notice of Loss. Other claimants should consult with FEMA concerning the availability of confidentiality protection under exemptions to

the Freedom of Information Act and other applicable laws before submitting confidential, proprietary or trade secret information.

§ 296.38–296.39 [Reserved]

Subpart E—Dispute Resolution

§ 296.40 Scope.

This subpart describes a claimant's right to bring an Administrative Appeal in response to the Authorized Official's Determination. It also describes the claimant's right to pursue arbitration or seek judicial review following an Administrative Appeal.

§ 296.41 Administrative appeal.

(a) *Notice of appeal.* A claimant may request that the Director of the Claims Office review the Authorized Official's determination by written request to the Appeals Docket, Office of Hermit's Peak/Calf Canyon Claims, postmarked or delivered within 120 days after the date that appears on the Authorized Official's determination pursuant to § 296.32. The claimant will submit along with the notice of appeal a statement explaining why the Authorized Official's determination was incorrect. Information regarding where to file can be found at *http://www.fema.gov/hermits-peak*.

(b) *Acknowledgement of appeal.* The Claims Office will acknowledge receipt of an appeal. Following the receipt of a timely filed appeal, the Director of the Claims Office will obtain the Administrative Record from the Authorized Official and transmit a copy to the claimant.

(c) *Supplemental filings.* The claimant may supplement their statement accompanying the appeal and provide any additional documentary evidence supporting the appeal within 60 days after the date when the appeal is filed. The Director of the Claims Office may extend these timeframes or authorize additional filings either on their own initiative or in response to a request by the claimant for good cause shown.

(d) *Admissible evidence.* The claimant may rely upon any relevant evidence to support the appeal, regardless of whether the evidence was previously submitted to the Claims Reviewer for consideration by the Authorized Official.

(e) *Obtaining evidence.* The Director of the Claims Office may request from the claimant or from the Authorized Official any additional information that is relevant to the issues posed by the appeal in their discretion.

(f) *Conferences.* The Director of the Claims Office may schedule a conference to gain a better understanding of the issues or to explore settlement or compromise possibilities. The claimant may also request a conference. Conferences will generally be conducted virtually. In limited circumstances, the Director may convene an in-person conference at a location in New Mexico designated by the Director. A claimant may request that the Director of the Claims Office appoint a mediator at FEMA's expense to facilitate such conferences.

(g) *Hearings.* The Director of the Claims Office may exercise the discretion to convene an informal hearing to receive oral testimony from witnesses or experts. The rules under which hearings will be conducted will be established by the Director of the Claims Office and provided to the claimant. Formal rules of evidence applicable to court proceedings will not be used in hearings under this subsection. Hearings will generally be conducted virtually, be transcribed, and the transcript will be entered in the Administrative Record. In limited circumstances, the Director may convene an in-person hearing at a location in New Mexico designated by the Director.

(h) *Decision on appeal.* After the allotted time for submission of evidence has passed, the Director of the Claims Office will close the Administrative Record and render a written decision on the Administrative Appeal. The Director of the Claims Office's decision on the Administrative Appeal will constitute the final decision of the Administrator of FEMA under sections 104(d)(2)(B) and 104(i)(1) of the Act.

(i) *Claimant's options following appeal.* The claimant's concurrence with the decision in the Administrative Appeal will be conclusively presumed unless the claimant initiates arbitration in

accordance with §296.42 or seeks judicial review in accordance with §296.43. If the claimant concurs with the Director's determination, payment of any additional damages awarded by the Director will be made to the claimant upon receipt of a properly executed Release and Certification Form.

§ 296.42 Arbitration.

(a) *Initiating arbitration*. A claimant who is dissatisfied with the outcome of the Administrative Appeal may elect to submit the dispute to a binding arbitration process. A claimant may initiate arbitration by submitting a written request to the Arbitration Administrator for Hermit's Peak/Calf Canyon Claims. Additional information regarding how to submit a written arbitration request can be found at *http://www.fema.gov/hermits-peak*. The written request for arbitration must be electronically stamped or postmarked no later than 60 days after the date that appears on the Administrative Appeal decision.

(b) *Permissible claims*. A claimant may not arbitrate an issue unless it was raised and decided in the Administrative Appeal. Arbitration will be conducted on the evidence in the Administrative Record. Evidence not previously entered into the Administrative Record will not be considered.

(c) *Selection of arbitrator*. The Arbitration Administrator will maintain a list of qualified arbitrators who have agreed to serve. The arbitration will be decided by one arbitrator if the amount in dispute is $500,000 or less and a panel of three arbitrators if the amount in dispute exceeds $500,000. Arbitrators will be assigned by the Arbitration Administrator through a random drawing.

(d) *Conduct of arbitration*. Pursuant to guidelines from the Arbitration Administrator, which will be provided directly to claimants who have filed a request for arbitration, the arbitration process will include an arbitration hearing with consideration of the claimant's written request for arbitration, the Administrative Record, and oral testimony. Hearings will generally be conducted virtually. In limited circumstances, the arbitrator may convene an in-person hearing at a location in New Mexico designated by the Arbitration Administrator.

(e) *Decision*. After a hearing and reviewing the evidence, the arbitrator(s) will render a written decision and will transmit the decision to the Arbitration Administrator, the claimant, and the Director of the Claims Office. If a panel of three arbitrators conducts the arbitration, at least two of the three arbitrators must sign the decision. The arbitrator(s) should render a decision no later than 10 Days after a hearing is concluded. The Arbitration Administrator may extend the time for a decision with notice to the claimant and the Director of the Claims Office. The decision will establish the compensation due to the claimant, if any, and the reasons therefor.

(f) *Action on arbitration decision*. The Arbitration Administrator will forward the arbitration decision to the claimant and, if additional compensation is awarded to the claimant, a Release and Certification Form. Additional compensation awarded in the arbitration will be paid to the claimant after the signed Release and Certification Form is received by the Arbitration Administrator.

(g) *Final decision*. The decision of the arbitrator(s) will be final and binding on all parties and will not be subject to any administrative or judicial review. The arbitrator(s) may correct clerical, typographical or computational errors as requested by the Arbitration Administrator.

(h) *Administration of arbitration*. The Arbitration Administrator oversees arbitration procedures and will resolve any procedural disputes arising in the course of the arbitration.

(i) *Expenses*. The Arbitration Administrator will pay all fees and expenses of the arbitrator(s). The claimant is responsible for any expenses they incur, including travel costs.

§ 296.43 Judicial review.

As an alternative to arbitration, a claimant dissatisfied with the outcome of an Administrative Appeal may seek judicial review of the decision by bringing a civil lawsuit against FEMA in the United States District Court for the District of New Mexico. This lawsuit must be brought within 60 Days of

the date that appears on the Administrative Appeal decision. Pursuant to section 104(i) of the Act, the court may only consider evidence in the Administrative Record. The court will uphold FEMA's decision if it is supported by substantial evidence on the record considered as a whole.

PARTS 297–299 [RESERVED]

SUBCHAPTER F—PREPAREDNESS

PART 300—DISASTER PREPAREDNESS ASSISTANCE

Sec.
300.1 Definitions.
300.2 Technical assistance.
300.3 Financial assistance.

AUTHORITY: 42 U.S.C. 5121 *et seq.*; Reorganization Plan No. 3 of 1978; E.O. 12148.

SOURCE: 45 FR 13464, Feb. 29, 1980, unless otherwise noted.

§ 300.1 Definitions.

As used in this part:

(a) *The Act* means the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq*.

(b) *Disaster assistance plans* means those plans which identify tasks needed to deliver disaster assistance and to avoid, reduce, or mitigate natural hazards; make assignments to execute those tasks; reflect State authorities for executing disaster assignments; and provide for adequate training of personnel in their disaster or mitigation assignments.

(c) *Mitigation* means the process of systematically evaluating the nature and extent of vulnerability to the effects of natural hazards present in society and planning and carrying out actions to minimize future vulnerability to those hazards to the greatest extent practicable.

(d) *State* means any State of the United States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, American Samoa, Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, the Federated States of Micronesia, or the Republic of the Marshall Islands.

[54 FR 2128, Jan. 19, 1989]

§ 300.2 Technical assistance.

Requests for technical assistance under section 201(b) of the Act shall be made by the Governor or his/her designated representative to the Regional Director.

(a) The request for technical assistance shall indicate as specifically as possible the objectives, nature, and duration of the requested assistance; the recipient agency or organization within the State; the State official responsible for utilizing such assistance; the manner in which such assistance is to be utilized; and any other information needed for a full understanding of the need for such requested assistance.

(b) The request for assistance requires participation by the State in the technical assistance process. As part of its request for such assistance, the State shall agree to facilitate coordination among FEMA, local governments, State agencies and the businesses and industries in need of assistance in the areas of disaster preparedness and mitigation.

[54 FR 2129, Jan. 19, 1989]

§ 300.3 Financial assistance.

(a) The Regional Administrator may provide to States upon written request by the State Governor or an authorized representative, an annual improvement grant up to $50,000, but not to exceed 50 percent of eligible costs, except where separate legislation requires or permits a waiver of the State's matching share, e.g., with respect to ''insular areas'', as that term is defined at 48 U.S.C. 1469a(d). The nonFederal share in all cases may exceed the Federal share.

(b) The improvement grant shall be product-oriented; that is, it must produce something measurable in a way that determines specific results, to substantiate compliance with the grant workplan objectives and to evidence contribution to the State's disaster capability. The following list, *which is neither exhaustive nor ranked in priority order*, offers examples of eligible products under the Disaster Preparedness Improvement Grant Program:

(1) Evaluations of natural hazards and development of the programs and actions required to mitigate such hazards;

(2) Hazard mitigation activities, including development of predisaster natural hazard mitigation plans, policies, programs and strategies for State-level multi-hazard mitigation;

(3) Updates to State disaster assistance plans, including plans for the Individual and Family Grant (IFG) Program, Public Assistance Program, Hazard Mitigation Grant Program, Disaster Application Center operations, damage assessment, etc.;

(4) Handbooks to implement State disaster assistance program activities;

(5) Exercise materials (EXPLAN, scenario, injects, etc.) to test and exercise procedures for State efforts in disaster response, including provision of individual and public assistance;

(6) Standard operating procedures for individual State agencies to execute disaster responsibilities for IFG, crisis counseling, mass care or other functional responsibilities;

(7) Training for State employees in their responsibilities under the State's disaster assistance plan;

(8) Report of formal analysis of State enabling legislation and other authorities to ensure efficient processing by the State of applications by governmental entities and individuals for Federal disaster relief;

(9) An inventory of updated inventory of State/local critical facilities (including State/local emergency operations centers) and their proximity to identified hazard areas;

(10) A tracking system of critical actions (identified in postdisaster critiques) to be executed by State or local governments to improve disaster assistance capabilities or reduce vulnerability to natural hazards.

(11) Plans or procedures for dealing with disasters not receiving supplementary Federal assistance;

(12) Damage assessment plans or procedures;

(13) Procedures for search and rescue operations; and,

(14) Disaster accounting procedures.

(c) The State shall provide quarterly financial and performance reports to the Regional Administrator. Reporting shall be by program quarter unless otherwise agreed to by the Regional Administrator.

[54 FR 2129, Jan. 19, 1989]

PART 301 [RESERVED]

PART 302—CIVIL DEFENSE-STATE AND LOCAL EMERGENCY MANAGEMENT ASSISTANCE PROGRAM (EMA)

Sec.

302.1 Purpose.
302.2 Definitions.
302.3 Documentation of eligibility.
302.4 Merit personnel systems.
302.5 Allocations and reallocations.
302.6 Fiscal year limitation.
302.7 Use of funds, materials, supplies, equipment, and personnel.
302.8 Waiver of ''single'' State agency requirements.

AUTHORITY: 50 U.S.C. app. 2251 *et seq.* Reorganization Plan No. 3 of 1978; E.O. 12148.

SOURCE: 48 FR 44211, Sept. 28, 1983, unless otherwise noted.

§ 302.1 Purpose.

(a) The regulations in this part prescribe the requirements applicable to the Emergency Management Assistance (EMA) program for Federal financial contributions to the States, and through the States to their political subdivisions, for up to one half of the necessary and essential State and local civil defense personnel and administrative expenses, under section 205 of the Federal Civil Defense Act of 1950, as amended, and set forth the conditions under which such contributions will be made.

(b) The intent of this program is to increase civil defense operational capability at the State and local levels of government by providing Federal financial assistance so that personnel and other resources can be made available for essential planning and other administrative functions and activities required in order to accomplish this objective.

§ 302.2 Definitions.

Except as otherwise stated or clearly apparent by context, the definitions ascribed in this section to each of the listed terms shall constitute their meaning when used in the regulations in this part. Terms not defined in this part shall have the meaning set forth in their definition, if any, in the Federal Civil Defense Act of 1950, as amended.

(a) *Act*. The Federal Civil Defense Act of 1950, as amended (50 U.S.C. App. 2251 *et seq*.).

(b) *Administrative expenses*. Necessary and essential expenses, other than personnel expenses as defined in this section, of a grantee and its subgrantees incurred in the administration of their civil defense programs, as detailed in CPG 1–3, Federal Assistance Handbook, and in CPG 1–32, FEMA Financial Assistance Guidelines.

(c) *Annual submission*. The State's annual request for participation in the contributions program authorized by section 205 of the Act. As specified in CPG 1–3, it includes staffing patterns (including job description changes), budget requirements, and any amendments to the State administrative plan, a request for funds covering the State and its subgrantees and program statements of work for the grantee and subgrantees under the Comprehensive Cooperative Agreement.

(d) *Approval*. All approvals by the Federal Emergency Management Agency (FEMA) as grantor agency required under the regulations in this part mean prior approval in writing signed by an authorized FEMA official. When failure to obtain prior approval of an action has not resulted and is not expected to result in any failure of compliance with a substantive requirement, and approval after the fact is not contrary to law (or regulation having the effect of law), written approval after the fact may be granted at the discretion of the authorized official.

(e) *CPG 1–3*. Civil Preparedness Guide entitled ''Federal Assistance Handbook,'' which sets forth detailed guidance on procedures that a State and, where applicable, its political subdivisions must follow in order to request financial assistance from the grantor agency. It also sets forth detailed requirements, terms, and conditions upon which financial assistance is granted under these regulations. Included are amendments by numbered changes. References to CPG 1–3 include provisions of any other volumes of the CPG series specifically referenced in CPG 1–3. Copies of the Civil Preparedness Guides and the Civil Preparedness Circulars may be ordered by FEMA Regional Offices using FEMA Form 60–8 transmitted to FEMA, P.O. Box 8181, Washington, DC, 20024. One or more copies of CPG 1–3 have been distributed to each State and to each local government participating in the program under the regulations in this part. Copies of revisions and amendments are distributed to participating governments (addressed to the Emergency Management Coordinator) upon issuance.

(f) *Comprehensive Cooperative Agreement (CCA)*. Provides for each State a single vehicle for applying for and receiving financial assistance for several discrete FEMA programs and for organizing and reporting on emergency management objectives and accomplishments, particularly under the funded programs.

(g) *Emergency management*. Refers to the activities and measures undertaken by a State, or one of its political subdivisions, to manage a ''civil defense program'' as defined and provided for by the Federal Civil Defense Act of 1950, as amended, including without limitation Title V, added by Public Law 96–342, and section 207, added by Public Law 97–86. Title V calls for an improved civil defense program that includes:

(1) A program structure for the resources to be used for attack-related civil defense; (2) a program structure for the resources to be used for disaster-related civil defense; and (3) criteria and procedures under which those resources planned for attack-related civil defense and those planned for disaster-related civil defense can be used interchangeably. Thus, emergency management includes ''civil defense'' for and operations in either attack-related or disaster-related emergencies. Section 207 allows Federal Civil Defense Act funds to be used for disaster preparedness and response if such use ''is consistent with, contributes to, and does not detract from attack-related civil defense preparedness.'' Also 44 CFR part 312, Use of Civil Defense Personnel, Materials, and Facilities for Natural Disaster Purposes, provides terms and conditions for such use.

(h) *Administrator*. The head of the grantor agency or another official of the Agency authorized in writing by

the Administrator to act officially on behalf of the Administrator.

(i) *Forms prescribed by the grantor agency*. Forms prescribed by the grantor agency are identified in CPG 1–3 and may be ordered by FEMA Regional Offices using FEMA Form 60–8 transmitted to FEMA, P.O. Box 8181, Washington, DC, 20024.

(j) *Grantee*. A State that has received EMA funds as a result of having a State administrative plan, a statement of work, and an annual submission, all approved by the grantor agency as meeting the requirements prescribed in this part and in CPG 1–3 for necessary and essential State and local civil defense personnel and administrative expenses for a current Federal fiscal year.

(k) *Grantor agency*. The Federal Emergency Management Agency (FEMA).

(l) *Interstate civil defense authority*. Any civil defense authority established by interstate compact pursuant to section 201(g) of the Act.

(m) *Necessary and essential civil defense expenses*. Necessary and essential civil defense expenses are those required for the proper and efficient administration of the civil defense program of a grantee or a subgrantee as described in a State administrative plan and statement of work approved by the Regional Administrator as being consistent with the national plan (i.e., program) for civil defense and as meeting other requirements for civil defense prescribed by or under provisions of the Act.

(n) *OMB Circular A–87*. ''Cost Principles Applicable to Grants and Contracts with State and Local Governments,'' promulgated by the Office of Management and Budget, Executive Office of the President, as published in the FEDERAL REGISTER (46 FR 9548) and subsequent amendments or revisions. (See CPG 1–32, Financial Assistance Guidelines).

(o) *OMB Circular A–102*. ''Uniform Administrative Requirements for Grants-in-aid to State and Local Governments,'' promulgated by the Office of Management and Budget, Executive Office of the President (42 FR 45828) including amendments or revisions as published in the FEDERAL REGISTER. (See CPG 1–32, Financial Assistance Guidelines).

(p) *Emergency Operations Plan (EOP)*. State or local government Emergency Operations Plans identify the available personnel, equipment, facilities, supplies, and other resources in the jurisdiction and states the method or scheme for coordinated actions to be taken by individuals and government services in the event of natural, man-made and attack-related disasters.

(q) *Personnel expenses*. Necessary and essential civil defense expenses for personnel on the approved staffing pattern of a grantee or subgrantee (including but not necessarily limited to salaries, wages, and supplementary compensation and fringe benefits) for such employees appointed in accordance with State and local government laws and regulations under a system which meets Federal merit system and other applicable Federal requirements. Such expenses must be supported by job descriptions, payrolls, time distribution records, and other documentation as detailed in CPG 1–3. Personnel compensation and other costs incurred with regard to employees who are not on the civil defense staff but whose work serves the civil defense agency (e.g., State's budget and accounting office) may be charged as civil defense expense to the extent covered therefore in a federally approved indirect cost allocation plan.

(r) *Political subdivisions*. Local governments, including but not limited to cities, towns, incorporated communities, counties or parishes, and townships.

(s) *Regional Administrator*. A FEMA official delegated authority to exercise specified functions as they apply to grantees and subgrantees, within the geographical area of a particular region as identified (including address) in 44 CFR part 2.

(t) *State*. Any of the actual States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, and the territories of American Samoa, Guam, and the Virgin Islands.

(u) *State administrative plan*. A one-time submission with amendments as necessary to keep it current, the plan

is a formal description of each participating State's total civil defense program and of related State and local laws, executive directives, rules, and plans and procedures, including personnel standards administered on a merit basis, updated emergency operations plans, travel regulations, indirect cost allocation plans and other information necessary to reflect the total civil defense program throughout the State. The plan also includes without limitation documentation as to administrative and financial systems to assure compliance with uniform grant-in-aid administrative requirements for States and subgrantees as required under OMB Circular A–102 and with other requirements relevant to the eligibility of the State and its political subdivisions for participation in financial assistance programs for civil defense purposes. Detailed requirements are prescribed in CPG 1–3. (Also see § 302.3.)

(v) *Statement of work.* Formal identification of specific actions to be accomplished by a State and its political subdivisions during the fiscal year for which Federal funds are being requested by the State. Submission is made to the FEMA Regional Administrator as part of the CCA Program Narrative.

(w) *Subgrantee.* A political subdivision of a State listed in the State's annual submission (or amendments thereto) as approved by the grantor agency (including any grantor agency-approved amendments thereto) as eligible to receive a portion of the Federal financial contribution provided for use within the State. The term includes Indian tribes when the State has assumed jurisdiction pursuant to State law and tribal regulations.

[48 FR 44211 Sept. 28, 1983, as amended at 51 FR 12520, Apr. 11, 1986; 74 FR 15354, Apr. 3, 2009]

§ 302.3 Documentation of eligibility.

In order to remain eligible for Federal financial contributions under the regulations in this part, each State must have on file with FEMA a current State administrative plan, an emergency operations plan for civil defense, and an annual submission (including a statement of work) which have been approved by the Regional Administrator as being consistent with the national plan (i.e., program) for civil defense and as meeting the requirements of the regulations in this part and CPG 1–3. A State may allocate a portion of its EMA funds to an Indian tribe as a subgrantee where the State has assumed jurisdiction pursuant to State law and tribal regulations.

(a) *State administrative plans.* Every State has a State administrative plan file with FEMA and is required to keep the plan current through amendments as necessary. Such plans and amendments shall be reviewed by the Regional Administrator, who will advise the State in writing as to the effect, if any, changes will have on the continued eligibility of the State and its subgrantees. The Regional Administrator shall not, however, approve any amendments that would result in failure of the plan to meet these criteria:

(1) Provides for and is, pursuant to State law, in effect in all political subdivision of the State, mandatory on them, and, unless waived by the Administrator under section 204 of the Intergovernmental Cooperation Act of 1968 (42 U.S.C. 4214), administered or supervised by a single State administrative agency. In demonstrating that the State administrative plan for civil defense is in effect in all political subdivisions of the State and mandatory on them, the plan shall contain references to the applicable State statutes and local ordinances, executive orders and directives, and rules and regulations at the State and local level that establish the civil defense authority, structure, plans, and procedures, including those relating to emergency operations, throughout the State.

(2) Provides assurance of nonFederal contributions at least equal to Federal funding for necessary and essential costs eligible under this program from any source consistent with State law, but not from another Federal source unless Federal law specifically authorizes the use of funds from such Federal source as part of the State's share.

(3) Provides for the development of State and local government civil defense emergency operations plans pursuant to the standards approved by the Administrator.

(4) Provides for the employment by the State of full-time civil defense director or deputy director.

(5) Provides for the establishment and maintenance of methods of personnel administration in public agencies administering or supervising the civil defense program, at both the State and local government levels, in conformity with the Standards for a Merit System of Personnel Administration (5 CFR part 900), which incorporate the Intergovernmental Personnel Act Merit Principles (Pub. L. 91–648, section 2, 84 Stat. 1908) prescribed by the Office of Personnel Management pursuant to section 208 of the Intergovernmental Personnel Act of 1970, as amended.

(6) Provides for the establishment of safeguards to prohibit State and local government employees from using their positions for a purpose that is or gives the appearance of being motivated by desire for private gain for themselves or others, particularly those with whom they have family, business, or other ties.

(7) Provides that the State shall make such reports (including without limitation financial reports) in such form and content as the Administrator may require.

(8) Provides that the State and all subgrantees shall retain, in accordance with OMB Circular A–102, and make available to duly authorized representatives of the Administrator and the U.S. Comptroller General all books, records, and papers pertinent to the grant program for the purpose of making audits, examinations, excerpts, and transcripts necessary to conduct audits.

(9) Provides for establishment and maintenance of a financial management system of grant-supported activities of the State and all subgrantees which meets the federally prescribed standards promulgated in ''Standards for Grantee Financial Management Systems,'' Attachment G of OMB Circular A–102.

(10) Provides for establishment and maintenance of procedures for monitoring and reporting grant program and project performance of the State and its subgrantees which meet the federally prescribed standards promulgated in Attachment I of OMB Circular A–102.

(11) Provides for the establishment and maintenance at the State level and by subgrantees of property management systems in accordance with the federally prescribed standards set forth in Attachment N of OMB Circular A–102.

(12) Provides for the establishment and maintenance at the State level and by subgrantees of systems for the procurement of supplies, equipment, construction, and other services, with the assistance of grant funds, in accordance with federally prescribed standards set forth in Attachment O of OMB Circular A–102.

(13) Provides for disbursement of the appropriate share of the Federal grant to the State's subgrantees in accordance with requirements detailed in CPG 1–3.

(14) Provides for the State's supervision and review of the civil defense plans, programs, and operations of its subgrantees to obtain conformity and compliance with Federal requirements and goals set forth or referenced in the regulations in this part and as detailed in CPG 1–3.

(15) Contains a Statement of Compliance with grantor agency regulations relating to nondiscrimination in FEMA programs (see 44 CFR part 7).

(16) Provides for timely submission to the appropriate Regional Administrator of amendments to the administrative plan as necessary to reflect the current laws, regulation, criteria, plans, methods, practices, and procedures for administration of the State's civil defense program and those of its subgrantees.

(17) Conforms to other Federal standards and requirements set forth or referenced in the regulations in this part and as detailed in CPG 1–3.

(18) Provides for performance of independent organizationwide audits by State and local governments that receive EMA funds of their financial operations, including compliance with certain provisions of Federal law and regulation.

(b) *Emergency Operations Plans (EOP's).* (1) Each participating State shall have an EOP approved by the Regional Administrator and conforming

with the requirements for plan content set forth in this part and in CPG 1–3, and in CPG 1–8 ''Guide for the Development of State and Local Emergency Operations Plans'' and in CPG 1–8A, ''Guide for the Review of State and Local Emergency Operations Plans,'' which plan must provide for coordinated actions to be undertaken throughout the State in the event of attack and in the event of other disasters.

(2) Each subgrantee jurisdiction shall have a local EOP which conforms with the requirements for plan content as set forth in CPG 1–3 and CPG 1–8 and CPG 1–8A, and which has been approved by the local chief executive or other authorized official and accepted by the Governor or other authorized State official as being consistent with the State's EOP.

(c) *Annual submission.* Each State should include in its annual CCA application the amount of EMA funding requested (see §302.5(c)). In order to participate for a particular Federal fiscal year, however, each State must also, within 60 days of receipt or notice of a formal allocation made pursuant to the criteria set forth in §302.5 and in accordance with procedures and criteria specified in CPG 1–3, submit to the Regional Administrator an approvable annual submission which includes:

(1) A request or amended request for a financial contribution from FEMA in a specified amount for civil defense personnel and administrative expenses; (see §302.5 (d) through (h)).

(2) Unless previously submitted for the particular Federal fiscal year, a statement of work for the State and proposed subgrantees or amendments to a statement of work previously submitted under the CCA.

(3) Staffing patterns (including new or revised job descriptions not previously submitted) on forms prescribed by FEMA for the civil defense organizations of the State and proposed subgrantees; and

(4) Any amendments to the State administrative plan required to reflect current status.

(d) *Approval of State administrative plan and annual submission.* If the State administrative plan and the annual submission are determined to be approvable, the Regional Administrator will so notify the State in writing. The State administrative plan is a one-time submission. Unless amendments are necessary to meet Federal standards prescribed in the regulations in this part or in CPG 1–3 or to reflect changes in the State's administrative structure, procedures, criteria, or activities, or unless a portion were conditionally approved by the Regional Administrator as provided for in paragraph (e) of this section, no approval regarding the State administrative plan will be required for a State which participated for the preceding Federal fiscal year.

(e) *Agreement for contribution.* Approval pursuant to procedures and criteria described in this part and in CPG 1–3 of an annual submission of a State whose administrative plan is approved and current shall constitute agreement between FEMA and the State as grantee for its participation and that of its subgrantees in this program during the Federal fiscal year covered by the approved annual submission on the basis of the requirements and conditions prescribed in this part, in CPG 1–3, and in other federally promulgated criteria referenced in this part. Refusal or failure to comply with such requirements and conditions may result in the grantor agency cancelling, terminating, or suspending the grant, in whole or in part, and refraining from extending any further assistance to the grantee or subgrantee until satisfactory assurance of future compliance has been received.

(f) *Disapproval or conditional approval.* If a State's administrative plan or annual submission is disapproved, the Regional Administrator will advise the State in writing, including the reasons for such disapproval and the revisions required for approval. The State shall have 30 days from date of such notification in which to submit its revisions. In the event more time is required in which to place the revisions into effect, the Regional Administrator may conditionally approve the State administrative plan or annual submission subject to the specified conditions to be met within a specified time, as agreed by the State and FEMA.

(g) *Appeals.* (1) Appeal from a Regional Administrator's disapproval of a

State administrative plan or an annual submission or other final action as unjustified under the criteria in CPG 1–3 may be made by letter to the Deputy Administrator for the National Preparedness Directorate, signed by an authorized State official and submitted through the Regional Administrator. Such appeal letter shall be mailed or otherwise transmitted so as to reach the Regional Administrator within 30 days after receipt of the notification of disapproval. Failure to file its appeal on time may result in withdrawal of the State's allocation and the proposed funding being reallocated by the Administrator.

(2) A local jurisdiction that regards the final action on its subgrant made by a State as unjustified under the criteria in CPG 1–3 may submit an appeal through the State to the Regional Administrator. Upon receipt of such an appeal, the RegionalAdministrator shall forward the letter, together with all available pertinent documentation from the Regional Administrator's files and any additional documentation submitted by the local jurisdiction in support of its appeal, to the Deputy Administrator for the National Preparedness Directorate, for review and determination. The appeal shall contain all of the exceptions being taken by the State or local jurisdiction, and no exceptions will be determined piecemeal.

(3) No portion of the appellant State's allocation shall be reallocated by FEMA, and no portion of a local jurisdiction's allocation shall be reallocated by the State, pending determination of its appeal by the Administrator. The State and local jurisdiction (if applicable) will be notified in writing of the Administrator's decision, including a statement of the reasons therefor.

[48 FR 44211 Sept. 28, 1983, as amended at 51 FR 12520, Apr. 11, 1986; 74 FR 15354, Apr. 3, 2009]

§ 302.4 Merit personnel systems.

(a) *Background.* Section 208 of the Intergovernmental Personnel Act, as amended (42 U.S.C. 4728) authorizes Federal agencies to require, as a condition of participation in Federal assistance programs, systems of a personnel administration consistent with personnel standards prescribed by the Office of Personnel Management (OPM). OPM has promulgated Standards for a System of Personnel Administration (5 CFR part 900) which prescribe intergovernmental personnel standards on a merit basis as a condition of eligibility in the administration of grant programs. OPM has approved FEMA adoption of these standards by the regulations in this part.

(b) *Standard.* Participation by each grantee and each subgrantee under the program covered in this part is subject to compliance with the following conditions regarding merit personnel systems:

> Methods of personnel administration will be established and maintained in public agencies administering or supervising the administration of the civil defense program in conformity with the Standards for a Merit System of Personnel Administration 5 CFR part 900, which incorporate the Intergovernmental Personnel Act Merit Principles (Pub. L. 91–648, section 2, 84 Stat. 1909) prescribed by the Office of Personnel Management pursuant to section 208 of the Intergovernmental Personnel Act of 1970 as amended.

Section 302.3(a)(5) of this part provides, in part, that State administrative plans that fail to provide for fulfilling this condition are not approvable.

§ 302.5 Allocations and reallocations.

(a) The Administrator shall allocate the entire amount of funds available for the purposes of this program from the appropriation for each fiscal year. The allocation made to each State represents the total amount of funds available to pay the Federal share of necessary and essential civil defense personnel and administrative expenses of the State and its participating subdivisions during the fiscal year.

(b) The first calculation for developing the allocation for each State will be a formula distribution in accordance with section 205(d) of the Act, made by applying the following percentages to the total sum of Emergency Management Assistance in the President's budget request to Congress:

(1) Fifty (50) percent will be allocated on the basis of the prior-year State allocations, in fulfilment of the statutory requirement to give due regard to ''the relative state of development of

civil defense readiness of the State'' (State and local levels).

(2) Thirty-three (33) percent will be allocated on the basis of the ratio of the State's population to the national population (50 States, District of Columbia, and Puerto Rico), in fulfilment of the statutory requirements to give due regard to ''population'' and to ''the criticality of target and support areas and the areas which may be affected by natural disasters with respect to the development of the total civil defense readiness of the Nation.''

(3) Fifteen (15) percent will be divided equally among the 50 States, the District of Columbia, and Puerto Rico.

(4) In consonance with the statutory provision allowing the Administrator to prescribe other factors concerning the State allocations, the remaining two (2) percent will be held temporarily in reserve, to be used first to fund the four territories of the Virgin Islands, American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands. Conditions peculiar to those areas make strict application of the mathematical formula in §302.5(b) inequitable. Therefore, the Administrator will consider prior-year allocations, percentage of total United States population, and the factors set out in §302.5(e) (1), (2), (4), and (5) in determining their allocations. The remaining balance of the reserve fund will then be used to restore any State which would receive less by formula share than its formula share for the previous fiscal year, provided that the reserve balance is sufficient to do this for all such States. Any remaining balance after this has been done will constitute a supplemental fund from which the Administrator will consider State requests for additional funding and the needs of any interstate civil defense authorities.

(c) For initial planning purposes only, each State will then be informed of the figure by the Regional Administrator. The State will base its initial EMA application upon that figure but may request a smaller amount or with appropriate justification a larger amount.

(d) The amount requested by the State shall not exceed 50 percent of its estimate of necessary and essential State and local personnel and administrative expenses for the fiscal year.

(e) The formula distribution shall be reviewed and evaluated, and adjusted as appropriate, by the Administrator, based on the current situation in each State, the requests of all States, and recommendations by the Regional Administrators. The Administrator will consider the following five factors:

(1) The ability of the State and its subgrantees to effectively expend such an amount for necessary and essential civil defense personnel and administrative purposes. Past performance is a factor in this determination.

(2) Special circumstances existing in the State at the time of allocating which require unusual expenditures for civil defense.

(3) Conditions peculiar to the State which make strict application of mathematical formula inequitable either to that State or other States.

(4) The relative cost of civil defense personnel and administrative services in that State; that is, whether such costs are considerably above or below the national average for similar services and expenses.

(5) Substantial changes in the civil defense readiness of the State not reflected by its recent civil defense expenditures.

(f) In September of each year, based on applications received and recommendations by the Regional Administrators, the Administrator will make a tentative allocation to the States. This will include adjustments for States that have indicated they will not be using the total of the formula distribution amount. States can then revise their earlier plans and applications to more nearly reflect the level of funding expected to become available.

(g) A State may provide to the Regional Administrator a preliminary annual submission in an amount not to exceed its tentative allocation.

(h) By September 30 (or as soon thereafter as feasible), the Administrator will make a formal allocation based on, or subject to, appropriation by Congress and allotment of the funds. This allocation for each State may include any additional amounts from the reserve portion of the EMA funds, and shall be in accordance with

the regulations in this part and CPG 1–3.

(i) Upon the appropriation becoming available, and if requested by a State, the Regional Administrator may approve such State's preliminary annual submission (if found to meet all requirements in this part and CPG 1–3) in an appropriate amount which does not exceed the amount of the State's share of the Administrator's formal allocation of the Federal appropriation. An award document obligating Federal funds on the basis of the approved preliminary annual submission may be executed in accordance with the provisions of CPG 1–3.

(j) Based on and within 60 days after notification of its formal allocation, each State must provide to the Regional Administrator a final annual submission which meets all requirements in this part and CPG 1–3. If no changes are necessary, a State and the Regional Administrator may adopt in writing the State's preliminary annual submission as its final annual submission. If no award document was executed based on a State's preliminary annual submission, such document will be executed on the basis of that State's approved final annual submission.

(k) With regard to any State whose award document was executed pursuant to a preliminary annual submission covering only part of its formal allocation, upon approval (by the Regional Administrator) of the final annual submission (including a revised statement of work supporting the additional funding request) the Regional Administrator shall execute an amended award document obligating the balance of such State's formal allocation.

(l) After being advised of its annual formal allocation, if a State fails to submit, within 60 days, an approvable annual submission in the amount of its allocation, the Regional Administrator may reallocate the unused portion to other States in the region in such amounts as in his/her judgment will best assure adequate development of the civil defense capability of the Nation. The exception to this authority is in the event a State, or local jurisdiction, refuses to participate in attack preparedness activities. EMA funds withheld or returned for that reason are to be released to headquarters for reallocation on a national basis. In addition, the Regional Administrator may from time to time reallocate the amounts released by a State from its allocation as no longer being required for utilization in accordance with an approved annual submission and award document.

(m) Immediate notice to the headquarters EMA Program Manager of State reallocations is required in the form of copies of EMA-approved Annual Submission amendment documents, accompanied by copies of assistance award/amendment documents signed by regional and State authorized officials of both the releasing and recipient States.

(n) There is no dollar ceiling on the amount of funds that may be reallocated among States in a region. However, at any time that there are funds surplus to the eligible needs of the States within a region, those funds should be promptly released to headquarters for reallocation to other States with unfunded additional requirements.

(o) On July 1 of each fiscal year, the authority to reallocate EMA funds shall revert to the Administrator. In addition, any excess EMA funds available on that date, or that become available during the remainder of the fiscal year, are to be promptly released to headquarters for reallocation by the Administrator.

[48 FR 44211 Sept. 28, 1983, as amended at 51 FR 12521, Apr. 11, 1986; 51 FR 43924, Dec. 5, 1986; 56 FR 29905, July 1, 1991]

§ 302.6 Fiscal year limitation.

Federal appropriations for the program covered by the regulations in this part are limited for obligation on a Federal fiscal year basis. Each annual submission (or amendment thereto) which results in a change in scope (e.g., an increase in the amount of funds other than a cost overrun) must be approved during the Federal Fiscal year for which the funds to be charged were appropriated. Valid expenses incurred by a State or its subgrantee during the fiscal year but before obligation by FEMA of funds under this program may qualify for payment of a Federal financial contribution out of the funds

subsequently appropriated for that fiscal year.

§ 302.7 Use of funds, materials, supplies, equipment, and personnel.

Financial contributions provided under the authority of section 205 of the Act are provided for necessary and essential State and local civil defense personnel and administrative expenses as prescribed by the regulations in this part and the provisions of CPG 1–3, and are obligated only on the basis of documentation justifying such need.

(a) *Emergencies.* In addition to such civil defense use, Federal funds obligated under a grantee's approved annual submission may be used, to the extent and under such terms and conditions as prescribed by the Administrator in CPG 1–3, for providing emergency assistance, including the use of civil defense personnel, organizational equipment, materials, and facilities, in preparation for and response to actual attack-related events or natural disasters (including manmade catastrophies).

(b) *Limitations.* Section 207 of the Act allows use of funds under the Act, including those for this program, for natural (including manmade) disaster preparedness and response purposes only to the extent that such use is consistent with, contributes to, and does not detract from attack-related preparedness (reference 44 CFR part 312).

§ 302.8 Waiver of "single" State agency requirements.

Section 205 of the Act requires that plans for civil defense of the United States be administered or supervised by a single State agency (50 U.S.C. App. 2286). Notwithstanding such law, section 204 of the Intergovernmental Cooperation Act of 1968 (42 U.S.C. 4214) provides authority for the Administrator as head of the grantor agency, upon the State's request, to waive the single State agency requirement and to approve other State administrative structure or arrangements, upon adequate showing that the requirement prevents the establishment of the most effective and efficient organizational arrangements within the State government. First, however, the Administrator must have found that the objectives of the Act (50 U.S.C. app. 2251 *et seq.*) will not be endangered by the use of such other State structure or arrangements. Attachment D of OMB Circular A–102 requires that such requests be given expeditious handling by the grantor agency and that, whenever possible, an affirmative response be made.

[48 FR 44211 Sept. 28, 1983, as amended at 51 FR 12521, Apr. 11, 1986]

PART 303 [RESERVED]

PART 304—CONSOLIDATED GRANTS TO INSULAR AREAS

Sec.

304.1 Purpose.
304.2 Definitions.
304.3 Conditions for a consolidated grant.
304.4 Allocations.
304.5 Audits and records.

AUTHORITY: 50 U.S.C. app. 2251 *et seq.;* Reorganization Plan No. 3 of 1978; E.O. 12148.

SOURCE: 43 FR 39776, Sept. 7, 1978, unless otherwise noted. Redesignated at 44 FR 56173, Sept. 28, 1979.

§ 304.1 Purpose.

The purpose of the regulations in this part is to prescribe the basis under which the Federal Emergency Management Agency (FEMA) contributes Federal funds to an insular area through a consolidated grant.

§ 304.2 Definitions.

Except as otherwise stated when used in the regulations of this part, the meaning of the listed terms are as follows:

(a) *Insular areas.* The Virgin Islands, Guam, American Samoa, and the Government of the Northern Mariana Islands.

(b) *Consolidated grant.* A grant by FEMA to any insular area through an allocation which combines funds for the State and local management program and the State and local maintenance and services program for a single Federal fiscal year.

(c) *FEMA guidance material.* FEMA regulations (44 CFR chapter I), Civil Preparedness Guide (CPG) 1–3, and Civil Preparedness Circulars (CPC) as

presently providing or hereafter amended or revised.

[43 FR 39776, Sept. 7, 1978. Redesignated at 44 FR 56173, Sept. 28, 1979, as amended at 48 FR 44554, Sept. 29, 1983]

§ 304.3 Conditions for a consolidated grant.

(a) In order to participate, an insular area must submit a (one-time) administrative plan as provided for in FEMA guidance material (to be maintained in current status) and must sign a (one-time) civil rights assurance and a (one-time) grant agreement agreeing to comply with Federal requirements.

(b) An insular area need not submit an application for a consolidated grant, but must submit an annual program paper which meets the requirements prescribed in FEMA guidance material.

(c) Funds made available under a consolidated grant must be expended for State and local management program expenses and/or State and local maintenance and services program expenses as defined and described in FEMA guidance material. Each participating insular area will determine the proportion in which funds granted to it will be allocated between the two programs.

(d) Participating insular areas need not provide matching funds for consolidated grants.

[43 FR 39776, Sept. 7, 1978. Redesignated at 44 FR 56173, Sept. 28, 1979, as amended at 50 FR 40007, Oct. 1, 1985]

§ 304.4 Allocations.

For each Federal fiscal year concerned, the Administrator, FEMA, shall allocate to each participating insular area an amount not less than the sum of grants for the two programs which the Administrator, FEMA, has determined such insular area would otherwise be entitled to receive for such fiscal year.

§ 304.5 Audits and records.

(a) *Audits.* FEMA will maintain adequate auditing, accounting and review procedures as outlined in FEMA guidance material and 2 CFR parts 200 and 3002.

(b) *Records.* Financial records, supporting documents, statistical records, and all other records pertinent to a consolidated grant shall be retained for a period of three years from submission of final billing and shall be available to the Administrator, FEMA, and the Comptroller General of the United States, all as prescribed in FEMA guidance material and in accordance with 2 CFR parts 200 and 3002.

[79 FR 76088, Dec. 19, 2014]

PARTS 305–311 [RESERVED]

PART 312—USE OF CIVIL DEFENSE PERSONNEL, MATERIALS, AND FACILITIES FOR NATURAL DISASTER PURPOSES

Sec.

312.1 Purpose.
312.2 Definitions.
312.3 Policy.
312.4 General.
312.5 Personnel.
312.6 Materials and facilities.

AUTHORITY: Sec. 803(a)(3) Pub. L. 97–86; sec. 401, Federal Civil Defense Act of 1950, as amended, 50 U.S.C. app. 2253; Reorganization Plan No. 3 of 1978; 3 CFR, 1978 Comp., p. 329; and E.O. 12148 of July 20, 1979, 44 FR 43239.

SOURCE: 47 FR 43381, Oct. 1, 1982, unless otherwise noted.

§ 312.1 Purpose.

The purpose of the regulations in this part is to prescribe the terms and conditions under which civil defense personnel, materials, and facilities, supported in whole or in part through contributions under the Federal Civil Defense Act of 1950, as amended, 50 U.S.C. App. 2251, *et seq.*, hereinafter referred to as ''the Act'', may be used for natural disasters, to the extent that such usage is consistent with, contributes to, and does not detract from attack-related civil defense preparedness.

§ 312.2 Definitions.

Except as otherwise stated, when used in the regulations in this part, the meaning of the listed terms are as follows:

(a) The term *attack* means any attack or series of attacks by an enemy of the United States causing, or which may cause, substantial damage or injury to civilian property or persons in the

United States in any manner by sabotage or by use of bombs, shellfire, or atomic-radiological, chemical, bacteriological, or biological means or other weapons or processes;

(b) The term *natural disaster* means any hurricane, tornado, storm, flood, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, drought, fire, or other catastrophe in any part of the United States which causes, or which may cause, substantial damage or injury to civilian property or persons and, for the purposes of the Act, any explosion, civil disturbance, or any other manmade catastrophe shall be deemed to be a natural disaster;

(c) The term *civil defense* means all those activities and measures designed or undertaken (1) to minimize the effects upon the civilian population caused, or which would be caused, by an attack upon the United States, or by natural disaster, (2) to deal with the immediate emergency conditions which would be created by any such attack, or natural disaster, and (3) to effectuate emergency repairs to, or the emergency restoration of vital utilities and facilities destroyed or damaged by any such attack or natural disaster. Such term shall include, but shall not be limited to, (i) measures to be taken in preparation for anticipated attack or natural disaster (including the establishment of appropriate organizations, operational plans, and supporting agreements; the recruitment and training of personnel; the conduct of research; the procurement and stockpiling of necessary materials and supplies; the provision of suitable warning systems; the construction or preparation of shelter areas, and control centers; and, when appropriate, the non-military evacuation of civil population); (ii) measures to be taken during attack or natural disaster (including the enforcement of passive defense regulations prescribed by duly established military or civil authorities; the evacuation of personnel to shelter areas; the control of traffic and panic; and the control and use of lighting and civil communications); and (iii) measures to be taken following attack or natural disaster (including activities for firefighting; rescue, emergency medical, health and sanitation services; monitoring for specific hazards of special weapons; unexploded bomb reconnaissance; essential debris clearance; emergency welfare measures; and immediately essential emergency repair or restoration of damaged vital facilities);

(d) The word *materials* shall include raw materials, supplies, medicines, equipment, component parts and technical information and processes necessary for civil defense;

(e) The word *facilities*, except as otherwise provided herein, shall include buildings, shelters, utilities, and land;

(f) The term *United States* or *States* shall include the several States, the District of Columbia, the Territories, and the possessions of the United States;

(g) The term *political subdivisions* shall include local governments, including but not limited to cities, towns, incorporated communities, counties, parishes, and townships; and

(h) The term *CPG 1–3* refers to FEMA's ''Federal Assistance Handbook'' promulgated as Civil Preparedness Guide (CPG) 1–3, as amended, by numbered changes thereto and by Civil Preparedness Circulars (CPC). CPG 1–3 sets forth detailed guidance on procedures which a State and, where applicable, its political subdivisions must follow in order to request financial assistance from FEMA. It also sets forth detailed requirements, terms, and conditions upon which financial assistance is granted.

(Reorganization Plan No. 3 of 1978, E.O. 12127 and E.O. 12148)

[47 FR 43381, Oct. 1, 1982, as amended at 48 FR 44545, Sept. 29, 1983]

§ 312.3 Policy.

(a) It is the policy of FEMA to provide a means of assistance to States and their political subdivisions in their carrying out responsibilities to alleviate the suffering and damage from attack-related or natural disasters by:

(1) Providing contributions for personnel, equipment, materials and facilities that may be used in preparing for or responding to disasters, provided that the use of such funds for natural

disasters is consistent with, contributes to, and does not detract from attack-related civil defense preparedness.

(2) Encouraging the development of comprehensive disaster preparedness and assistance plans, programs, capabilities, and organizations by the State and its political subdivisions.

(3) Assisting in achieving greater coordination of disaster preparation and response programs.

(4) Providing technical advice and guidance to States and their political subdivisions for organizing and preparing to meet the effects of disasters.

(b) These regulations are not to be interpreted as authorizing States and their political subdivisions to request or receive additional assistance relating to particular disaster incidents.

§ 312.4 General.

(a) The Administrator, FEMA, will provide statements to States and their political subdivisions concerning Agency mission and goals, Annual Program Emphasis, and other directions, instructions, and technical guidance which together specify preparedness and response activities for both attack-related and natural disasters.

(b) States and their political subdivisions may apply to FEMA for financial assistance under the Act in a manner prescribed by Federal Regulations governing grants and cooperative agreements. Such applications must be compatible with FEMA's goals and requirements described in paragraph (a) of this section.

(c) Financial contributions to States and their political subdivisions are made by FEMA based on approval of the activities and projects described in the Annual Program Paper, and/or Comprehensive Cooperative Agreement, and which are in conformance with provisions of CPG 1–3, and applicable FEMA regulations set forth in chapter 1 of this title 44, chapter 1, subchapter E, of the Code of Federal Regulations. Financial contributions will not be made unless substantive activities and projects in preparation for and response to attack-related disasters are identified, and progress is indicated in the submissions, and recorded in program reporting systems. The presence of unavoidable circumstances, and the good faith effort of the applicant, will be considered if certain objectives are not met.

(d) State and local officials may use personnel, equipment, and facilities for natural disasters outside the physical boundaries of the jurisdiction and under the conditions stated within this regulation.

(e) Specific criteria relating to the preparedness and response activities are given in §§ 312.5 and 312.6 of this part.

§ 312.5 Personnel.

FEMA contributes to the development and support of emergency management organizations in the States and their political subdivisions, and to the development, operation, and maintenance of specific programs, through payment of salaries and benefits of State and local civil defense staff, and the payment of administrative expenses and travel, not to exceed 50 percent. FEMA also provides contributions for training and education expenses. The following use of such personnel for natural disaster purposes is allowable provided that such usage is consistent with, contributes to, and does not detract from attack-related civil defense preparedness:

(a) In developing, maintaining, testing and exercising plans, systems, and procedures for the protection of people and property from the effects of attack-related disasters, States and their political subdivisions may include and provide for natural disasters.

(b) Personnel supported in part through contributions under the Act may be assigned responsibilities for preparation for and response to natural disasters in any specific emergency occurring in a State or its political subdivisions as determined by the responsible State or local officials, respectively.

(c) Personnel supported in whole under the Act, may be assigned to emergency response operations for 15 days at the discretion of State officials; approval of the FEMA Regional Administrator is required for the use of these personnel in excess of 15 days. An

assignment to emergency response operations does not preclude the accomplishment of program work and objectives. Failure to accomplish such work may subject the State to the withholding of funds contributed under the Act, or to collection of funds already obligated, not to exceed the estimated cost of the work not performed, as determined by the Regional Administrator.

(d) In the event of an emergency or major disaster declared under the Disaster Relief Act of 1974, as amended, personnel will not be provided overtime compensation and expenses under the Act.

§ 312.6 Materials and facilities.

FEMA also contributes to the development and support of emergency management in the States and their political subdivisions, and to the development, operation, and maintenance of specific programs, through providing certain materials and facilities. The following may be used for natural disaster purposes provided that such usage is consistent with, contributes to, and does not detract from attack-related civil defense preparedness:

(a) Materials provided and maintained through contributions under the Act.

(b) Technical information, guidance through which technical assistance is provided, and training courses, may contain examples, illustrations, discussion, suggested applications and uses of material.

(c) Equipment loaned under provisions of the Contributions Project Loan Program.

(d) Facilities, such as Emergency Operating Centers, provided and maintained through contributions under the Act.

(e) Equipment loaned or granted to the States for civil defense purposes (e.g., radiological instruments, shelter supplies).

PARTS 313–320 [RESERVED]

PART 321—MAINTENANCE OF THE MOBILIZATION BASE (DEPARTMENT OF DEFENSE, DEPARTMENT OF ENERGY, MARITIME ADMINISTRATION)

Sec.

321.1 General.
321.2 Selection of the mobilization base.
321.3 Maintaining the mobilization base.
321.4 Achieving production readiness.
321.5 Retention of industrial facilities.
321.6 Participation of small business.
321.7 [Reserved]
321.8 Reports.

AUTHORITY: National Security Act of 1947, as amended 50 U.S.C. 404; Defense Production Act of 1950, as amended; 50 U.S.C. app. 2061 *et seq.;* Reorganization Plan No. 3 of 1978, 3 CFR, 1978 Comp., p. 329; E.O. 12148 (44 FR 43239).

SOURCE: 45 FR 44576, July 1, 1980, unless otherwise noted.

§ 321.1 General.

A sustained state of mobilization production readiness is necessary to place the United States in a defense posture which will enable the nation to defend itself against aggression in peripheral conflicts or general war involving nuclear attacks on this country. Therefore, the facilities, machine tools, production equipment, and skilled workers necessary to produce the wartime requirements of the Department of Defense, Department of Energy, and the Maritime Administration shall be maintained in a state of readiness which will facilitate their immediate use or conversion in time of emergency, with especial emphasis on measures to maximize the probability of continued post-attack production of those items judged to be vital to survival and victory.

§ 321.2 Selection of the mobilization base.

(a) The Department of Defense shall select, for its mobilization base, facilities which produce or are capable of producing critically important military items or components (military class A components used entirely in the production, maintenance, or repair of military items) which meet one of the following:

(1) Those items which would be so urgent to the defense of this country that utmost effort must be exerted to produce them even in case of general war involving severe damage to the facilities necessary to produce these items and the components thereof.

(2) Those items essential to survival and retaliation, maintenance of health, or combat efficiency required to support peripheral war and which meet one or more of the following criteria:

(i) Items requiring a long lead-time or long manufacturing cycle.

(ii) Items currently not in production or which are required in quantities far in excess of peacetime production.

(iii) Items requiring the conversion of an industry or a number of plants within an industry.

(iv) Items requiring materials or manufacturing processes essentially different from those in current use.

(v) Items for which industry does not have production experience.

Paragraph (a)(2) of this section is inclusive of the Department of Defense Preferential Planning List of End Items.

(b) In selecting facilities for the Department of Defense mobilization base, consideration shall be given to their vulnerability to nuclear attack, with particular attention to the possibility of (1) minimizing vulnerability of facilities producing ''urgent'' items under paragraph (a)(1) of this section, including the need for dispersal, protective construction, and special security measures to safeguard against sabotage of clandestine attack, and (2) reducing concentration of uncommon critical production facilities so that a productive segment of each critical industry would be likely to survive a nuclear attack.

(c) The Department of Energy and the Maritime Administration, in cooperation with the Federal Emergency Management Agency, shall determine the items and facilities which meet the above criteria for their respective programs for maintaining the mobilization base.

§ 321.3 Maintaining the mobilization base.

(a) Facilities selected to produce ''urgent'' items shall be maintained within limits of existing procurement authority and funds available by the Department of Defense, the Department of Energy, and the Maritime Administration in the following manners to the maximum practical degree:

(1) Current procurement shall be placed in these facilities to the extent which will maintain them in a state of readiness compatible with the plans of the procuring agency.

(2) Machine tools and production equipment will be installed in these facilities to the extent found necessary by the procuring agency.

(3) Develop and maintain plans for alternate production capacity in case disaster destroys current facilities, such capacity to be located to the maximum extent possible away from highly concentrated industrial areas and major military installations.

(b) Other facilities selected as part of the mobilization base, shall be maintained to the fullest extent possible.

(1) Procurement agencies shall integrate current procurement with their industrial mobilization plans to the greatest possible extent with the objective of supporting the mobilization base within authorities and funds available.

(2) Data assembled on essential mobilization suppliers by the industrial mobilization planning of these agencies shall be used in planning current procurement. The policy of using contractors and facilities essential to the mobilization base is considered to be in the best interest of the Government.

(3) Planned producers that are deemed to be a part of the mobilization base will be invited to participate in appropriate current procurement.

(4) Upon expiration of current procurement contracts in a facility, the procuring agency shall take such of the following actions as are compatible with its plans for maintaining a state of readiness:

(i) *Government-owned facilities and tools.* Within the limitations that may be imposed by Congressional appropriations, place government-owned facilities and tools in standby status and establish provisions for their adequate maintenance. This does not preclude

the use of government-owned production equipment, on a loan basis, to enable the military departments to meet current production schedules, as provided in DMO–VII–4, Amendment 1.

(ii) *Privately-owned facilities and government-owned tools.* (A) Arrange with management of privately-owned facilities, wherever possible, to place government-owned tools and production equipment in the status provided by DMO–VII–4, as amended, taking into account the desirability of safe location.

(B) Arrange with management, on a voluntary basis, to keep a group of key managers, engineers, and skilled workers familiar with the items planned for mobilization production.

(C) Determine the gaps which exist in government-owned packages of tools and production equipment needed to produce mobilization requirements in privately-owned plants. Within the limit of fund availability, plan the procurement of such tools and equipment with priority being given to long lead-time tools and equipment or those not used in general manufacturing. These tools and equipment, when procured, should be placed in the status provided by DMO–VII–4, as amended, taking into account the desirability of safe locations.

(D) Determine which government-owned tools and equipment have become obsolete, or which would not be used in event of mobilization, and plan for their disposal in accordance with the provisions of DMO–VII–4, as amended.

§ 321.4 Achieving production readiness.

(a) In order to achieve a capability for maximum production of ''urgent'' items during the initial phase of war, the following readiness measures shall be taken where advisable for facilities producing such items:

(1) Establishment of emergency production schedules.

(2) Development of a production capability which would function under widespread disruption and damage imposed by enemy attack, including, where necessary:

(i) Maintenance of an increased inventory of finished components and related production supplies at assembly plants, or arrangements for alternative supply lines where increased inventories are not feasible.

(ii) A capability to carry on urgent production without dependence on additional personnel, external sources of power, fuel, and water, or on long-distance communications; with spare replacements for highly vulnerable or unreliable parts of production equipment.

(iii) Protection of production facilities from enemy sabotage through adequate physical security measures.

(iv) Protection of personnel from widespread radiological fallout through provisions for decontamination and shelter.

§ 321.5 Retention of industrial facilities.

(a) Industrial properties, owned by the Department of Defense, the Department of Energy, and the Maritime Administration, shall be retained in the Industrial reserves (National Industrial Reserve, Departmental Industrial Reserve for the Department of Defense) of the department and agencies to the extent the capacity of said reserves is necessary for the production of defense or defense-supporting end items, materials or components in a mobilization period.

(b) Each idle plant in the reserves shall be reviewed annually by the heads of the respective agencies to determine if the capacity of the plant continues necessary for mobilization purposes.

(c) Upon the determination by the head of the agency that the capacity of a plant is excess to the mobilization requirements of the agency immediate steps will be taken to dispose of the plant through existing government channels for surplus disposal. The Federal Emergency Management Agency shall be informed by General Services Administration of each proposed surplus action prior to final determination.

§ 321.6 Participation of small business.

The agencies concerned with the order shall, in all of their programs for maintaining the mobilization base, be mindful of the national policy to protect the interests of small business,

and to assure the maximum participation of small business in the mobilization base, including current procurement.

§ 321.7 [Reserved]

§ 321.8 Reports.

The Department of Defense, Department of Energy, and Maritime Administration shall furnish the Administrator of the Federal Emergency Management Agency with reports on items and facilities for programs under § 321.2 (a) and (b) of this part, and with such other periodic and special reports as he may require affecting the maintenance of the mobilization base.

PART 322 [RESERVED]

PART 323—GUIDANCE ON PRIORITY USE OF RESOURCES IN IMMEDIATE POST ATTACK PERIOD (DMO–4)

Sec.

323.1 Purpose.
323.2 General policy.
323.3 Responsibilities.
323.4 Priority activities in immediate postattack period.
323.5 Assignment of resources.

APPENDIX 1 TO PART 323—LIST OF ESSENTIAL SURVIVAL ITEMS

AUTHORITY: National Security Act of 1947, as amended, 50 U.S.C. 404; Defense Production Act of 1950, as amended, 50 U.S.C. app. 2061 *et seq.;* Reorganization Plan No. 3 of 1978, 3 CFR, 1978 Comp., p. 329; E.O. 12148 of July 20, 1979, 44 FR 43239.

SOURCE: 45 FR 44579, July 1, 1980, unless otherwise noted.

§ 323.1 Purpose.

This part:

(a) States the policy of the Federal Government on use of resources in the period immediately following a nuclear attack on the United States;

(b) Provides general guidance for Federal, State, and local government officials on activities to be accorded priority in the use of postattack resources; and

(c) Lists those items essential to national survival in the immediate postattack period.

§ 323.2 General policy.

(a) In an immediate postattack period all decisions regarding the use of resources will be directed to the objective of national survival and recovery. In order to achieve this objective, postattack resources will be assigned to activities concerned with the maintenance and saving of lives, immediate military defense and retaliatory operations, economic activities essential to continued survival and recovery.

(b) This guidance is designed to achieve a degree of national equity in the use of resources and to assign and conserve resources effectively in the immediate postattack period. Until more specific instructions are available, these are the general guidelines within which managerial judgment and common sense must be used to achieve national objectives under widely differing emergency conditions.

§ 323.3 Responsibilities.

(a) As stated in The National Plan for Emergency Preparedness, the direction of resources mobilization is a Federal responsibility. However, in the period immediately following an attack, certain geographical areas may be temporarily isolated, and State and local governments will assume responsibility for the use of resources remaining in such areas until effective Federal authority can be restored. State and local governments will not assume responsibility for resources under the jurisdiction of a Federal agency where the Federal agency is able to function.

(b) As soon as possible after an attack and until specific national direction and guidance on the use of resources is provided, Federal, State, and local officials will determine what resources are available, to what needs they can be applied, how they are to be used, and the extent to which resources are deficient or in excess of survival needs. They will base determinations as to the relative urgency for use of resources primarily upon the importance of specific needs of defense, survival, and recovery.

§ 323.4 Priority activities in immediate postattack period.

The following activities are to be accorded priority over all other claims

for resources. There is no significance in the order of the listing—all are important. The order in which and the extent to which they are supported locally may vary with local conditions and circumstances. If local conditions necessitate the establishment of an order of priority among these activities, that order shall be based on determinations of relative urgency among the activities listed, the availability of resources for achieving the actions required, and the feasibility and timeliness of the activities in making the most rapid and effective contribution to national survival.

(a) The immediate defense and retaliatory combat operations of the Armed Forces of the United States and its Allies: This includes support of military personnel and the production and distribution of military and atomic weapons, materials and equipment required to carry out these immediate defense and retaliatory combat operations.

(b) Maintenance or reestablishment of Government authority and control to restore and preserve order and to assure direction of emergency operations essential for the safety and protection of the people. This includes:

(1) Police protection and movement direction;

(2) Fire defense, rescue and debris clearance;

(3) Warnings;

(4) Emergency information and instructions;

(5) Radiological detection, monitoring and decontamination.

(c) Production and distribution of survival items and provision of services essential to continued survival and rapid recovery. (For list of survival items, see appendix 1 to this part.) These include:

(1) Expedient shelter;

(2) Food, including necessary processing and storage;

(3) Feeding, clothing, lodging, and other welfare services;

(4) Emergency housing and community services;

(5) Emergency health services, including medical care, public health and sanitation;

(6) Water, fuel, and power supply;

(7) Emergency repair and restoration of damaged vital facilities.

(d) Essential communications and transportation services needed to carry out the above activities.

(e) Provision of supplies, equipment, and repair parts to produce and distribute goods needed for the above activities.

§ 323.5 Assignment of resources.

Resources required for essential uses, including manpower, will be assigned to meet the emergency requirements of the priority activities indicated above. The principal objectives are to use available resources to serve essential needs promptly and effectively, and to:

(a) Protect and to prevent waste or dissipation of resources prior to their assignment to priority activities;

(b) Support production of essential goods. Other production will be permitted to continue only from inventories on hand and when there is no emergency requirement for the resources vital to this production.

(c) Support construction for emergency repair and restoration, construction of facilities needed for survival, or the conversion of facilities to survival use, where this can be accomplished quickly. Other construction already under way should be stopped, and no new construction started unless it can be used immediately for essential purposes upon completion.

APPENDIX 1 TO PART 323—LIST OF ESSENTIAL SURVIVAL ITEMS

This document contains a list of items considered essential to sustain life at a productive level to assure national survival in an emergency. The list identifies items to which major attention should be given in all phases of preattack planning to insure the availability of basic essentials for a productive economy in the event of a nuclear attack. Supply-requirements studies and assessments for these items will be made to disclose critical deficiencies or other problems that can be anticipated. Revisions will be made as necessary to keep the items as up-to-date as possible.

The items are arranged by seven major groups:

(1) Health Supplies and Equipment,

(2) Food,

(3) Body Protection and Household Operations,

(4) Electric Power and Fuels,

(5) Sanitation and Water Supply,

(6) Emergency Housing and Construction Materials and Equipment, and

(7) General Use Items.

Survival items are defined as ''those items without which large segments of the population would die or have their health so seriously impaired as to render them both burdensome and non-productive.'' The items have been classified into Group A or Group B, with Group A representing end products consumed or used directly by the population, and Group B consisting of those items essential to the effective production and utilization of the Group A items, which are consumed or used directly by the people.

There are no Group B items in the categories of Health Supplies and Equipment, Body Production and Household Operations, and Emergency Housing and Construction Materials and Equipment. All of these items are considered to be consumed directly and any attempt to separate them in to A and B groupings would be too arbitrary to be meaningful.

It is important to keep in mind the fact that while the items listed are the basic essentials necessary for maintaining a viable economy during the first six months following an attack, not all of them would create problems that would require government action preattack to insure adequate supplies. The aforementioned supply-requirements studies will be undertaken to identify the problem areas. In developing supply data, all available production capacity, existing inventories, and possible substitutions will be considered. For example, in analyzing clothing items, all available supplies would be considered from sport to dress shirts, from overalls to dress suits. However, new production would be limited to the simplest form of the basic item which can be produced. The final determination as to which of the items are most critical and which may require preattack actions by the Government, as well as the type of actions which must be taken, can be made only after a comprehensive supply-requirements analysis is completed.

LIST OF ESSENTIAL SURVIVAL ITEMS

I. HEALTH SUPPLIES AND EQUIPMENT

Group A

1. *Pharmaceuticals:*
Alcohol.
Analgesics, non-narcotic.
Antibiotics and antibacterials.
Antidiabetic agents, oral.
Antihistamines.
Antimalarials.
Atropine.
Blood derivatives.
Carbon dioxide absorbent.
Cardiovascular depressants.
Cardiovascular stimulants.
Corticosteriods.
Diuretics.
General anesthetics.
Hypnotics.
Insulin.
Intravenous solutions for replacement therapy.
Local anesthetics.
Lubricant, surgical.
Morphine and substitutes.
Oral electrolytes.
Oxygen.
Surgical antiseptics.
Sulfa drugs.
Synthetic plasma volume expanders.
Vitamin preparations, pediatric.
Water for injection.

2. *Blood Collecting and Dispensing Supplies:*
Blood collecting and dispensing containers.
Blood donor sets.
Blood grouping and typing sera.
Blood recipient sets.
Blood shipping containers.

3. *Biologicals:*
Diphtheria toxoid.
Diphtheria antitoxin.
Diphtheria and tetanus toxoids and pertussis vaccine.
Gas gangrene antitoxin.
Poliomyelitis vaccine, oral.
Rabies vaccine.
Smallpox vaccine.
Tetanus antitoxin.
Tetanus toxoid, absorbed.
Typhoid vaccine.
Typhus vaccine, epidemic.
Yellow fever vaccine.

4. *Surgical Textiles:*
Adhesive plaster.
Bandage, gauze.
Bandage, muslin.
Bandage, plaster of paris.
Cotton, USP.
Surgical pads.
Stockinette, surgical.
Wadding, cotton sheet.

5. *Emergency Surgical Instruments and Supplies:*
Airway, pharyngeal.
Anesthesia apparatus.
Basin, wash, solution.
Blade, surgical knife.
Brush, scrub, surgical.
Catheter, urethral.
Containers for sterilization.
Chisel, bone.
Drain, Penrose.
Dusting powder.
Forceps, dressing.
Forceps, hemostatic.
Forceps, obstetrical.
Forceps, tissue.
Gloves, surgeon's.
Handles, surgical knife.
Holder, suture needle.
Inhaler, anesthesia, Yankauer (ether mask).

Intravenous injection sets.
Knife, cast cutting.
Lamps, for diagnostic instruments.
Lamps, for surgical lights.
Laryngoscope.
Light, surgical, portable.
Litter.
Mallet, bone surgery.
Needles, hypodermic, reusable.
Needles, suture, eyed.
Otoscope and ophthalmoscope set.
Probe, general operating.
Razor and blades (for surgical preparation).
Retractor, rib.
Retractor set, general operating.
Rongeur, bone.
Saw, amputating.
Saw, bone cutting, wire (Gigli).
Scissors, bandage.
Scissors, general surgical.
Sigmoidoscope.
Speculum, vaginal.
Sphygmomanometer.
Splint, leg, Thomas.
Splint, wire, ladder.
Sterilizer, pressure, portable.
Stethoscope.
Sutures, absorbable.
Sutures, absorbable, with attached needle.
Sutures, nonabsorbable.
Sutures, nonabsorbable, with attached needle.
Syringes, Luer, reusable (hypodermic syringes).
Thermometers, clinical.
Tracheotomy tube.
Tube, nasogastric.
Tubing, rubber or plastic, and connectors.
Vascular prostheses.
Webbing, textile, with buckle.

6. *Laboratory Equipment and Supplies:*
Bacteriological culture media and apparatus.
Balance, laboratory with weights.
Blood and urine analysis instruments, equipment and supplies.
Chemical reagents, stains and apparatus.
Glassware cleaning equipment.
Laboratory glassware.
Microscope and slides.
Water purification apparatus.

Group B

None.

II. FOOD

Group A

1. *Milk group.* Milk in all forms, milk products. Important for calcium, riboflavin, protein, and other nutrients.

2. *Meat and meat alternate group.* Meat, poultry, fish, eggs; also dry beans, peas, nuts. Important for protein, iron, and B-vitamins.

3. *Vegetable-fruit group.* Including 1. Dark Green and yellow vegetables. Important for Vitamin A. 2. Citrus fruit or other fruit or vegetables. Important for Vitamin C. 3. Other fruits and vegetables, including potatoes.

4. *Grain products.* Especially enriched, restored, cereal and cereal products, and bread, flours, and meals. Important for energy, protein, iron, and B-vitamins.

5. *Fats and oils.* Including butter, margarine, lard, and other shortening oils. Important for palatability and food energy; some for Vitamin A and essential fatty acids.

6. *Sugars and syrups.* Important for palatability and food energy.

7. *Food adjuncts.* Certain food adjuncts should be provided to make effective use of available foods. These include antioxidants and other food preservatives, yeast, baking powder, salt, soda, seasonings and other condiments. In addition, coffee, tea, and cocoa are important for morale support.

Group B

Food containers.
Nitrogenous fertilizers.
Seed and livestock feed.
Salt for livestock.
Veterinary Medical Items:
Anthrax vaccine.
Black leg vaccine.
Hog cholera vaccine.
Newcastle vaccine.

III. BODY PROTECTION AND HOUSEHOLD OPERATIONS

Group A

1. *Clothing:*
Gloves and mittens.
Headwear.
Hosiery.
Outerwear.
Shoes and other footwear.
Underwear.
Waterproof outer garments.

2. *Personal Hygiene Items:*
Diapers, all types.
Disposable tissues.
First aid items (included on Health Supplies and Equipment List).
Nipples.
Nursing bottles, all types.
Pins.
Sanitary napkins.
Soaps, detergents, and disinfectants.
Toilet tissue.

3. *Household Equipment:*
Bedding.
Canned heat.
Cots.
Hand sewing equipment.
Heating and cooking stoves.
Incandescent hand portable lighting equipment (including flashlights, lamps, batteries).
Kitchen, cooking, and eating utensils.

Lamps (incandescent medium base) and lamp holders.
Matches.
Nonelectric lighting equipment.
Sleeping bags.

Group B

None.

IV. ELECTRIC POWER AND FUELS

1. *Electric Power.*

Group A

Electricity.

Group B

Conductors (copper and/or aluminum), including bare cable for high voltage lines and insulated wire or cable for lower voltage distribution circuits.
Switches and circuit breakers.
Insulators.
Pole line hardware.
Poles and crossarms.
Transformers (distribution, transmission, and mobile).
Tools for live-circuit operations, including rubber protective equipment, and linemen's tools.
Utility repair trucks, fully equipped.
Prime mover generator sets up to 501 kilowatts and 2400 volts, including portable and mobile sets up to 150 kilowatts and 110/220/440 volts, 3-phase, 60-cycle complete with fuel tank and switchgear in self-contained units.

2. *Petroleum Products.*

Group A

Gasoline.
Kerosene.
Distillate fuel oil.
Residual fuel oil.
Liquefied petroleum oil.
Lubricating oil.
Grease.

Group B

Storage tanks.
Pumps for loading and unloading.
Pressure containers and fittings for liquefied petroleum gas.

3. *Gas.*

Group A

Natural gas.
Manufactured gas.

Group B

Various sizes of pipe (mostly steel).
Various sizes of valves, fittings, and pressure regulators.
Specialized repair trucks and equipment.

4. *Solid Fuels.*

Group A

Coal and coke.

Group B

Conveyor belting.
Insulated trail cables.
Trolley feeder wire.
Roof bolts.

V. SANITATION AND WATER SUPPLY

Group A

1. *Water.*

2. *Water Supply Materials:*

a. *Coagulation:*

Ferric chloride.
Ferrous sulfate.
Ferric sulfate.
Chlorinated copperas.
Filter alum.
Hydrated lime.
Pulverized limestone.
Soda ash.

b. *Disinfection Chemicals:*

High-test hypochlorites (70 percent) in drums, cans, ampules.
Iodine tablets.
Liquid chlorine, including containers.
Chlorine compounds (not gas).

c. *Miscellaneous Materials:*

Diatomaceous earth.
Activated carbon.

3. *Chemical Biological, and Radiological CBR Detection, Protection, and Decontamination Items:*

Calibrators.
Chemical agent detection kits, air, food, and water.
Dosimeters and chargers.
Protective masks, clothing, helmets.
Survey meters (Alpha, Beta, Gamma).
Warning signs—biological, chemical, and radiological contamination.

4. *Insect and Rodent Control Items:*

a. *Insecticides:*

DDT, water dispersible powder (75 percent).
Lindane powder, dusting (1 percent).
Malathion, liquid, emulsifiable concentrate (57 percent).
Deet (diethyltoluamide) 75 percent in denatured alcohol.
Pyrethrum.

b. *Rodenticides:*

Anticoagulant type, ready-mixed bait.
''1080'' (sodium monofluoroacetate) (for controlled use only).

5. *General Sanitation:*

Lye.

Group B

1. *General Supplies and Equipment:*

Chemical feeders.
Mobile and portable pressure filters.
Chlorinators (gas and hypochlorites).

Pumps and appurtenances, Hand—Electric—Gasoline—Diesel.
Well-drilling equipment, including well casing, drive pipe and drive points.

2. *Storage and Transport Equipment:*
Lyster bags.
Storage tanks, collapsible and portable.
Storage tanks, rigid, transportable.
Storage tanks, wood stave, knock-down.

3. *Laboratory Equipment and Supplies:*
Membrane filter kits with filters and media.
Chlorine and pH determination equipment.

4. *Sanitation Equipment:*
Hand sprayer, continuous type.
Hand sprayer, compression type.
Hand duster, plunger type.
Spraying equipment for use with helicopter, fixed-wing light aircraft, high-speed fixed-wing attack aircraft, and cargo-type aircraft.

VI. EMERGENCY HOUSING AND CONSTRUCTION MATERIALS AND EQUIPMENT

Group A

Asphalt and tar roofing and siding products.
Builders hardware—hinges, locks, handles, etc.
Building board, including insulating board, laminated fiberboard, hardpressed fiberboard, gypsum board, and asbestos cement (flat sheets and wallboard).
Building papers.
Plastic patching, couplings, clamps, etc. for emergency repairs.
Plumbing fixtures and fittings.
Prefabricated emergency housing.
Rough hardware—nails, bolts, screws, etc.
Sewer pipe and fittings.
Tents and tarpaulins; canvas, plastics, and other similar materials.
Lumber and allied products; Lumber, principally 1-inch and 2-inch, minor quantities of small and large timbers; siding and flooring; plywood; millwork, doors, and windows.
Masonry products—brick, cement, lime, concrete block, hollow tile, etc.
Translucent window coverings.
Water pipe and hose, plus fittings—all types including fire hose.

Group B

None.

VII. GENERAL USE ITEMS

Group A

None.

Group B

Batteries, wet and dry cell.
Bulldozers.
Fire fighting equipment.
Light equipment and hand tools (including electric powered) for carpentry, masonry, plumbing, and excavation.
Pipe installation materials and equipment.
Refrigerators, mechanical.
Rigging tools—cables, ropes, tackles, hoists, etc.
Tank railroad cars.
Tank Trucks and trailers.
Tires.
Trenching equipment.
Truck tractors and trailers, including low bed.
Trucks up to five tons (25 percent equipped with power takeoff).
Welding equipment and supplies (electric and acetylene).

PARTS 324–326 [RESERVED]

PART 327—POLICY ON USE OF GOVERNMENT-OWNED INDUSTRIAL PLANT EQUIPMENT BY PRIVATE INDUSTRY (DMO–10A)

Sec.
327.1 Purpose.
327.2 Scope and applicability.
327.3 Policy.
327.4 Disputes.
327.5 Reports.

AUTHORITY: National Security Act of 1947, as amended, 50 U.S.C. 404; Defense Production Act of 1950, as amended, 50 U.S.C. app. 2061 *et seq.*; Reorganization Plan No. 3 of 1978, 3 CFR, 1978 Comp., p. 329; E.O. 12148 of July 20, 1979, 44 FR 43239.

SOURCE: 45 FR 44583, July 1, 1980, unless otherwise noted.

§ 327.1 Purpose.

This part establishes policy on the use by private industry of Government-owned industrial plant equipment. This policy is necessary to maintain a highly effective and immediately available reserve of such equipment for the emergency preparedness programs of the U.S. Government.

§ 327.2 Scope and applicability.

(a) This part applies to all Federal departments and agencies having, for purposes of mobilization readiness, Government-owned industrial plant equipment under their jurisdiction or control and having emergency preparedness functions assigned by Executive orders concerning use of that equipment.

(b) As used herein, *industrial plant equipment* means those items of equipment, each with an acquisition cost of $1,000 or more, that fall within specified classes of equipment listed in DOD regulations. Classes of equipment may from time to time be added to or deleted from this list.

§ 327.3 Policy.

(a) *General.* (1) Primary reliance for defense production shall be placed upon private industry.

(2) When it is determined by an agency that, because of the lack of specific industrial plant equipment, private industry of the United States cannot be relied upon for needed Government production, that agency may provide to private industry such Government-owned industrial plant equipment as is deemed necessary to ensure required production capability. Requirements for such equipment should be reviewed at least annually to ascertain the continuing need, particularly with a view toward private industry furnishing the equipment for long term requirements.

(3) When it is necessary for Federal agencies to supply Government-owned industrial plant equipment to private industry, these agencies will maintain uniformity and fairness in the arrangements for the use of this equipment by following regulations for the use of such equipment as developed and published by the Secretary of Defense pursuant to section 809 of Public Law 93–155. The regulations to be developed by the Secretary of Defense shall be in consonance with this order. These regulations will attempt to ensure that no Government contractor is afforded an advantage over his competitors and that Government-owned industrial plant equipment is maintained properly and kept immediately available for the emergency preparedness needs of the United States.

(b) *Interagency use of idle equipment.* In any instances in which a Government contractor cannot meet Government production schedules because necessary industrial plant equipment is not available from private industry or from the contracting Federal department or agency, idle industrial plant equipment under the control of other Federal agencies may be made available for this purpose through existing authorities on a transfer, loan, or replacement basis by interagency agreement.

(c) *Availability of equipment for emergency use.* Government-owned industrial plant equipment may be provided by controlling agencies for emergency use by essential Government contractors whose facilities have been damaged or destroyed.

(d) *Uniform rental rates.* All new agreements entered into by any agency of the Federal Government under which private business establishments are provided with Government-owned industrial plant equipment shall be subject to rental rates established by the Secretary of Defense pursuant to section 809 of Public Law 93–155. The rental rates shall ensure a fair and equitable return to the U.S. Government and be generally competitive with commercial rates for like equipment.

(e) *Use of Government-owned industrial plant equipment for commercial (non-Government) purposes.* Subject to adequate controls being established under DOD regulations pursuant to Public Law 93–155, and statutory authority for leasing, Government-owned industrial plant equipment may be authorized for commercial use by contractors performing contracts or subcontracts for the Government agency if it is necessary to keep the equipment in a high state of operational readiness through regular usage to support the emergency preparedness programs of the U.S. Government.

§ 327.4 Disputes.

In the event of an interagency dispute about the regulations developed by the Department of Defense in accordance with this order, the Administrator, Federal Emergency Management Agency, shall adjudicate.

§ 327.5 Reports.

Such reports of operations under this order as may be required by the Federal Emergency Management Agency, shall be submitted to the Administrator.

PART 328 [RESERVED]

PART 329—USE OF PRIORITIES AND ALLOCATION AUTHORITY FOR FEDERAL SUPPLY CLASSIFICATION (FSC) COMMON USE ITEMS (DMO–12)

Sec.
329.1 Purpose.
329.2 Policies.
329.3 Procedures.
329.4 Implementation.

AUTHORITY: Defense Production Act of 1950, as amended, 50 U.S.C. app. 2061 *et seq.;* Reorganization Plan No. 3 of 1978, 3 CFR, 1978 Comp., p. 329; E.O. 12148 of July 20, 1979, 44 FR 43239; E.O. 10480 of Aug. 14, 1953, (18 FR 4939) as amended.

SOURCE: 45 FR 44585, July 1, 1980, unless otherwise noted.

§ 329.1 Purpose.

This part provides policy guidance concerning the use of priorities and allocation authority under title I of the Defense Production Act of 1950, as amended, for the procurement of common use items in the Federal Supply Classification (FSC).

§ 329.2 Policies.

The following guidance is provided pursuant to the Defense Production Act of 1950, as amended; section 201 of Executive Order 10480, and § 322.2 of this chapter (DMO–3).

(a) Priority ratings under title I of the Defense Production Act of 1950, as amended, are not authorized for certain FSC Groups, Classes, and Items:

(1) Which are of the types commonly available in commercial markets for general consumption,

(2) Which do not require major modification when purchased for military or other ratable government use, and

(3) Which are in sufficient supply as to cause no hindrance to the accomplishment of military or other national defense objectives.

Such Groups, Classes, and Items will be as specified from time to time by the Department of Commerce with the approval of the Federal Emergency Management Agency. Procurement in these Groups, Classes, and Items is to be made without priority assistance, including single service procurement that may include defense and defense-supporting needs. In the event procurement difficulties are encountered which threaten timely delivery, application for special assistance may be made for those categories of supply authorized special assistance in existing lists, and must be accompanied by full justification to support the need for such assistance.

(b) Priority ratings may be used for the procurement of other authorized FSC Groups, Classes, and Items only in quantities required to meet the needs of approved programs of ratable agencies. The quantities of current procurement of each Group, Class, and Item shall be based on and shall not exceed the ratio of rated purchases to total purchases for that Group, Class, and Item that was consummated in the 6-month period preceding the first day of January and July in each year. Any other periodic cycle considered suitable and agreed to by the Domestic and International Business Administration, Department of Commerce, and the procuring agency may be substituted.

(c) In the interest of minimizing administrative costs, where rated procurement under paragraph (b)(2) of this section, constitutes 97 percent or more of the total procurement of a Group, Class, or Item, all of the Group, Class, or Item may be bought on ratings.

§ 329.3 Procedures.

Requests for additional authorizations of Classes, Groups, or Items should be presented to General Services Administration (AP), Washington, DC, 20405, accompanied by a statement of justification indicating why the Class, Group, or Item should be regarded as necessary or appropriate to promote the national defense and why defense-related requirements cannot be met without the use of priorities.

§ 329.4 Implementation.

Departments and agencies involved with this program shall issue implementing instructions and directives no later than 30 work days from the effective date of this order. Copies of such instructions, directives, and related documents shall be furnished to the General Services Administration (AP) on a routine basis as issued.

PART 330—POLICY GUIDANCE AND DELEGATION OF AUTHORITIES FOR USE OF PRIORITIES AND ALLOCATIONS TO MAXIMIZE DOMESTIC ENERGY SUPPLIES IN ACCORDANCE WITH SUBSECTION 101(c) OF THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED (DMO–13)

Sec.
330.1 Purpose.
330.2 Policies.
330.3 Delegation of authority.

AUTHORITY: Defense Production Act of 1950, as amended, including amendment to sec. 101(c) by sec. 104 of the Energy Policy and Conservation Act (Pub. L. 94–163) 50 U.S.C. app. 2061 *et seq.;* Reorganization Plan No. 3 of 1978, 3 CFR, 1978 Comp., p. 329; E.O. 12148 of July 20, 1979, 44 FR 43239; E.O. 11912 of April 13, 1976.

SOURCE: 45 FR 44586, July 1, 1980, unless otherwise noted.

§ 330.1 Purpose.

This part:

(a) Establishes policy guidance on determination and use of priorities and allocations for materials and equipment to maximize domestic energy supplies pursuant to section 104 of the Energy Policy and Conservation Act (Pub. L. 94–163, 89 Stat. 878), which added subsection 101(c) to the Defense Production Act of 1950, as amended (the Act); and

(b) Delegates authority and assigns responsibility related thereto pursuant to sections 7 and 8 of Executive Order 11912, dated April 13, 1976.

§ 330.2 Policies.

(a) The authority of subsection 101(c) of the Act to require the allocation of, or priority performance under contracts or orders relating to, supplies of materials and equipment to maximize domestic energy supplies shall be limited to those exceptional circumstances when it is found that:

(1) Such supplies of material and equipment are scarce, critical, and essential; and

(2) The maintenance or furtherance of exploration, production, refining, transportation, or conservation of energy supplies, or the construction and maintenance of energy facilities, cannot reasonably be accomplished without exercising this authority.

(b) The authority contained in subsection 101(c) shall not be used to require priority performance under contracts or orders relating to, or the allocation of, any supplies of materials and equipment except for programs or projects to maximize domestic energy supplies as specifically determined by the Secretary of Energy, after coordination with the Administrator, Federal Emergency Management Agency.

(c) The allocation of, or priority performance under contracts or orders relating to, supplies of materials and equipment in support of authorized programs or projects shall be so undertaken as to ensure that:

(1) Supplies of the specified materials and equipment are available to the extent practicable on time and in proper quantity to authorized programs or projects.

(2) The demands of these authorized programs or projects are distributed among suppliers on a fair and equitable basis.

(3) Allotments of supplies of materials and equipment are not made in excess of actual current requirements of these authorized programs or projects.

(4) Fulfillment of the needs of these authorized programs and projects are achieved in such manner and to such degree as to minimize hardship in the market place.

(d) The authority of subsection 101(c) of the Act will not be used to control the general distribution of any supplies of material and equipment in the civilian market, as that phrase is used in subsection 101(b) of the Act, except after Presidential approval as required by subsection 7(d) of Executive Order 11912.

§ 330.3 Delegation of authority.

(a) The functions of the Administrator of the Federal Management Agency under subsection 101(c) of the Act are hereby delegated to the Secretary of Commerce with respect to the areas of responsibility designated and subject to the limitations prescribed and section 7 of Executive Order 11912. Specifically:

(1) The Secretary of Commerce is delegated the function, provided in subsection 101(c)(1) of the Act, of requiring the allocation of, or priority performance under contracts or orders (other than contracts of employment) relating to, supplies of materials and equipment to maximize domestic energy supplies, if the findings specified in subsection 101(c)(3) of the Act are made.

(2) The Secretary of Commerce is delegated those functions provided in subsection 101(c)(3) of the Act, but shall redelegate to the Secretary of Energy the function of making the findings that supplies of materials and equipment are critical and essential to maximize domestic energy supplies. The Secretary of Commerce shall retain the functions of finding that supplies of materials and equipment are scarce, and that the purposes described in subsection 101(c)(3)(B) of the Act cannot reasonably be accomplished without exercising the authority specified in subsection 101(c)(1). This finding will include, to the extent practicable, an assessment of the effects of using the authority for the project in question on other significantly impacted projects.

(b) The Administrator of the Federal Emergency Management Agency shall be responsible for the overall coordination and direction of the functions provided by subsection 101(c) of the Act in a manner similar to the exercise of functions under subsections 101(a) and 101(b) of the Act. In line with these functions, the Administrator is also responsible for resolving any conflicts between claimant agencies regarding particular supplies of materials and equipment. In addition, the Federal Emergency Management Agency will monitor the impact of the implementation of the authorities of subsection 101(c) and other authorities under section 101 of the Defense Production Act on each other and on the national economy.

(c) The functions assigned, delegated, or required to be redelegated by this order to the Secretary of Commerce and the Secretary of Energy may not be redelegated to other agencies without first being coordinated with the Administrator, Federal Emergency Management Agency.

(d) Procedures to execute the above delegations will be carried out in accordance with guidance provided by the Administrator, Federal Emergency Management Agency, pursuant to this order and Executive Order 11912.

PART 331—PRESERVATION OF THE MOBILIZATION BASE THROUGH THE PLACEMENT OF PROCUREMENT AND FACILITIES IN LABOR SURPLUS AREAS

Sec.

331.1 Purpose.
331.2 Policy.
331.3 Scope and applicability.
331.4 Special consideration.
331.5 Production facilities.

AUTHORITY: Reorganization Plan No. 3 of 1978, E.O. 10480, as amended, E.O. 12148.

SOURCE: 45 FR 34885, May 23, 1980, unless otherwise noted. Redesignated at 45 FR 44575, July 1, 1980.

§ 331.1 Purpose.

Success of the national defense program depends upon efficient use of all of our resources, including the labor force and production facilities, which are preserved through utilizing the skills of both management and labor. A primary aim of Federal manpower policy is to encourage full utilization of existing production facilities and workers in preference to creating new plants or moving workers, thus assisting in the maintenance of economic balance and employment stability. When large numbers of new workers move to labor surplus areas, heavy burdens are placed on community facilities, such as schools, hospitals, housing, transportation, and utilities. On the other hand, when unemployment develops in certain areas, unemployment costs increase the total cost to the Government, and plants, tools, and workers' skills remain idle and unable to contribute to our national defense program. Consequently, it is the purpose of Defense Manpower Policy No. 4B to direct attention to the potential of labor surplus areas when awarding appropriate procurement contracts and when locating new plants or facilities.

§ 331.2 Policy.

(a) It is the policy of the Federal Government to award appropriate contracts to eligible labor surplus area concerns, to place production facilities in labor surplus areas, and to make the best use of our natural, industrial and labor resources in order to achieve the following objectives:

(1) To preserve management and employee skills necessary to the fulfillment of Government contracts and purchases;

(2) To maintain productive facilities;

(3) To improve utilization of the Nation's total economic potential by making use of the labor force resources of each area; and

(4) To help ensure timely delivery of required goods and services and to promote readiness for mobilization by locating procurement where the needed labor force and facilities are fully available.

(b) This policy is consonant with the intent of Public Law 95–89 and Public Law 95–507 as implemented by E.O. 12073. In carrying out this policy, Federal departments and agencies shall be guided by E.O. 12073, the policy direction of the Office of Federal Procurement Policy and implementing regulations.

§ 331.3 Scope and applicability.

The provisions of this policy apply to all Federal departments and agencies, except as otherwise prohibited by law. In addition to these normal duties;

(a) The Secretary of Commerce shall:

(1) In cooperation with State economic development agencies, the Secretary of Defense, the Administrator of General Services, and the Administrator of Small Business Administration, assist concerns which have agreed to perform contracts in labor surplus areas in obtaining Government procurement business by providing such concerns with timely information on proposed Government procurements.

(2) Urge concerns planning new production facilities to consider the advantages of locating in labor surplus areas.

(3) Provide technical advice and counsel to groups and organizations in labor surplus areas on planning industrial parks, industrial development organizations, expanding tourist business, and available Federal aids.

(b) The Administrator of the Small Business Administration shall make available to small business concerns in labor surplus areas all of its services, endeavor to ensure opportunity for maximum participation by such concerns in Government procurement, and give consideration to the needs of these concerns in the making of joint small business set-asides with Government procurement agencies.

(c) OFPP shall coordinate the maintenance by Federal agencies of current information on the manufacturing capabilities of labor surplus area concerns with respect to Government procurement and disseminate such information to Federal departments and agencies.

§ 331.4 Special consideration.

When an entire industry that sells a significant proportion of its production to the Government is generally depressed or has a significant proportion of its production, manufacturing and service facilities located in a labor surplus area, the Administrator, Federal Emergency Management Agency, or successor in function, after notice to and hearing of interested parties, will give consideration to appropriate measures applicable to the entire industry.

§ 331.5 Production facilities.

All Federal departments and agencies shall give consideration to labor surplus areas in the selection of sites for Government-financed production facilities, including expansion, to the extent that such selection is consistent with existing law and essential economic and strategic factors.

PART 332—VOLUNTARY AGREEMENTS UNDER SECTION 708 OF THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Sec.

332.1 General provisions.
332.2 Developing voluntary agreements.
332.3 Carrying out voluntary agreements.
332.4 Termination or modifying voluntary agreements.
332.5 Public access to records and meetings.

AUTHORITY: Sec. 708, Defense Production Act of 1950, as amended (50 U.S.C. app. 2158); E.O. 10480, 3 CFR, 1949–1953 Comp., p. 961, as amended; E.O. 12148, 44 FR 43239.

SOURCE: 46 FR 2350, Jan. 9, 1981, unless otherwise noted.

§ 332.1 General provisions.

(a) Pursuant to section 708 of the Defense Production Act of 1950, as amended (50 U.S.C. App. 2158), the President may consult with representatives of industry, business, financing, agriculture, labor, or other interests, and may approve the making of voluntary agreements to help provide for the defense of the United States by developing preparedness programs and expanding productive capacity and supply beyond levels needed to meet essential civilian demand.

(b) *Sponsor*. (1) As used in this part, ''sponsor'' of a voluntary agreement is an officer of the Government who, pursuant to a delegation or redelegation of the functions given to the President by section 708 of the Defense Production Act (DPA) of 1950, as amended, proposes or otherwise provides for the development or carrying out of a voluntary agreement.

(2) The use of voluntary agreements, as authorized by section 708 of the DPA to help provide for the defense of the United States through the development of preparedness programs, is an activity coordinated by the Administrator of the Federal Emergency Management Agency, as provided by sections 101 and 501(a) of Executive Order 10480, as amended.

(3) The sponsor of a voluntary agreement shall carry out sponsorship functions subject to the direction and control of the Administrator of the Federal Emergency Management Agency.

(c) This part applies to the development and carrying out under section 708 of the DPA, as amended, of all voluntary agreements, and the carrying out of any voluntary agreement which was entered into under former section 708 of the DPA and in effect immediately prior to April 14, 1976, and which is in a period of extension as authorized by subsection 708(f)(2) of the DPA.

(d) The rules in the part void any provision of a voluntary agreement to which they apply, if that provision is contrary to or inconsistent with them. Each voluntary agreement shall be construed as containing every substantive provision that these rules require, whether or not a particular provision is included in the agreement.

(e) Pursuant to subsection 708(d) of the DPA, the sponsor may establish such advisory committees as he deems to be necessary for developing or carrying out voluntary agreements. Such advisory committees shall comply with this part as well as with the requirements and procedures of the Federal Advisory Committee Act (Pub. L. 92–463, as amended).

§ 332.2 Developing voluntary agreements.

(a) *Purpose and scope*. This section establishes the standards and procedures by which voluntary agreements may be developed through consultation, pursuant to subsection 708(c) of the DPA.

(b) *Proposal to develop an agreement*. (1) A sponsor who wishes to develop a voluntary agreement shall submit to the Attorney General and the Administrator of the Federal Emergency Management Agency a document proposing the agreement. The proposal will include statements as to: The purpose of the agreement; the factual basis for making the finding required in subsection 708(c)(1) of the DPA; the proposed participants in the agreement; and any coordination with other Federal agencies accomplished in connection with the proposal.

(2) If the Attorney General, after consultation with the Chairman of the Federal Trade Commission, approves this proposal, the sponsor shall then initiate one or more meetings of interested persons to develop the agreement.

(c) *Conduct of meetings held to develop the agreement*. (1) The sponsor shall give to the Attorney General, the Chairman of the Federal Trade Commission, and the Administrator of the Federal Emergency Management Agency adequate written notice of each meeting to develop a voluntary agreement. The sponsor shall also publish in the FEDERAL REGISTER notice of the time, place, and nature of each meeting at least seven days prior to the meeting.

(2) The sponsor shall chair each meeting held to develop a voluntary agreement. Both the Attorney General and the Chairman of the Federal Trade Commission, or their delegates, shall attend each of these meetings.

(3) Any interested person may attend a meeting held to develop a voluntary agreement, unless the sponsor of the agreement limits attendance pursuant to § 332.5 of this part.

(4) Any interested person may, as set out in the FEDERAL REGISTER meeting notice, submit written data and views concerning the proposed voluntary agreement, and at the discretion of the Chairman of the meeting, may be given the opportunity for oral presentation.

(d) *Maintenance of records.* (1) The sponsor is responsible for the making of a full and verbatim transcript of each meeting. The Chairman shall send this transcript, and any voluntary agreement resulting from the meeting, to the Attorney General, the Chairman of the Federal Trade Commission, the Administrator of the Federal Emergency Management Agency, and any other party or repository required by law.

(2) The sponsor of a voluntary agreement shall maintain each meeting transcript and voluntary agreement, and make them available for public inspection and copying the extent required by § 332.5 of this part.

(e) *Effectiveness of agreements.* The following steps must occur before a new voluntary agreement or an extension of an existing agreement may become effective:

(1) The sponsor must approve the agreement and certify in writing that it is necessary to carry out the purposes of subsection 708(c)(1) of the DPA;

(2) The Administrator of the Federal Emergency Management Agency must approve this certification, and submit it to the Attorney General with a request for a written finding; and

(3) The Attorney General, after consulting with the Chairman of the Federal Trade Commission, must issue a written finding that the purposes of subsection 708(c)(1) can not reasonably be achieved through a voluntary agreement having less anti-competitive effects or without any voluntary agreement.

§ 332.3 Carrying out voluntary agreements.

(a) *Purpose and scope.* This section establishes the standards and procedures by which the participants in each approved voluntary agreement shall carry out the agreement.

(b) *Participants.* The participants in each voluntary agreement shall be reasonably representative of the appropriate industry or segment of that industry.

(c) *Conduct of meetings held to carry out an agreement.* (1) The sponsor of a voluntary agreement shall initiate, or approve in advance, each meeting of the participants in the agreement held to discuss problems, determine policies, recommend actions, and make decisions necessary to carry out the agreement.

(2) The sponsor shall provide to the Attorney General, the Chairman of the Federal Trade Commission, and the Administrator of the Federal Emergency Management Agency adequate prior notice of the time, place, and nature of each meeting, and a proposed agenda of each meeting. The sponsor shall also publish in the FEDERAL REGISTER, reasonably in advance of each meeting, a notice of time, place, and nature of the meeting. If the sponsor has determined, pursuant to § 332.5 of this part, to limit attendance at the meeting, the sponsor shall publish this FEDERAL REGISTER notice within ten days of the meeting.

(3) Any interested person may attend a meeting held to carry out a voluntary agreement unless the sponsor has restricted attendance pursuant to § 332.5 of this part. A person attending a meeting under this section may present oral or written data, views, and arguments to any limitations on the manner of presentation that the sponsor may impose.

(4) No meeting shall be held to carry out any voluntary agreement unless a Federal employee, other than an individual employed pursuant to 5 U.S.C. 3109, is in attendance. Any meeting to carry out a voluntary agreement may be attended by the sponsor of the agreement, the Attorney General, the

Chairman of the Federal Trade Commission, the Administrator of the Federal Emergency Management Agency, or their delegates.

(5) Notwithstanding any other provision of this section, a meeting between a single participant and the sponsor solely to deliver or exchange information is not subject to the requirements and procedures of this section, provided that a copy of the information is promptly delivered to the Attorney General, the Chairman of the Federal Trade Commission, and the Administrator of the Federal Emergency Management Agency.

(d) *Maintenance of records.* (1) The participants in any voluntary agreement shall maintain for five years all minutes of meetings, transcripts, records, documents, and other data, including any communications among themselves or with any other member of their industry, related to the carrying out of the voluntary agreement. The participants shall agree, in writing, to make available to the sponsor, the Attorney General, the Chairman of the Federal Trade Commission and the Administrator of the Federal Emergency Management Agency for inspection and copying at reasonable times and upon reasonable notice any item that this section requires them to maintain.

(2) Any person required by this paragraph to maintain records shall indicate specific portions, if any, that such person believes should not be disclosed to the public pursuant to § 332.5 of this part, and the reasons therefor. Any item made available to a Government official named in this paragraph shall be available from that official for public inspection and copying to the extent set forth in § 332.5 of this part.

§ 332.4 Termination or modifying voluntary agreements.

The Attorney General may terminate or modify a voluntary agreement, in writing, after consultation with the Chairman of the Federal Trade Commission and the sponsor of the agreement. The sponsor of the agreement, with the concurrence of or at the direction of the Administrator of the Federal Emergency Management Agency, may terminate or modify a voluntary agreement, in writing, after consultation with the Attorney General and the Chairman of the Federal Trade Commission. Any person who is a party to a voluntary agreement may terminate his participation in the agreement upon written notice to the sponsor. Any antitrust immunity conferred upon the participants in that agreement by subsection 708(j) of the DPA shall not apply to any act or omission occurring after the termination of the voluntary agreement. Immediately upon modification of a voluntary agreement, no antitrust immunity shall apply to any subsequent act or omission that is beyond the scope of the modified agreement.

§ 332.5 Public access to records and meetings.

(a) Interested persons may, pursuant to 5 U.S.C. 552, inspect or copy any voluntary agreement, minutes of meetings, transcripts, records, or other data maintained pursuant to these rules.

(b) Except as provided by paragraph (c) of this section, interested persons may attend any part of a meeting held to develop or carry out a voluntary agreement pursuant to these rules.

(c) The sponsor of a voluntary agreement may withhold material described in this section from disclosure and restrict attendance at meetings only on the grounds specified in:

(1) Section 552(b)(1) of 5 U.S.C., which applies to matter specifically required by Executive Order to be kept secret in the interest of the national defense or foreign policy. This section shall be interpreted to included matter protected under Executive Order 12065, dated June 28, 1978 (3 CFR 1979–1975 Comp. p. 678), establishing categories and criteria for classification; and

(2) Section 552(b)(3) of 5 U.S.C., which applies to matter specifically exempted from disclosure by statute; and

(3) Section 552(b)(4) of 5 U.S.C., which applies to trade secrets and commercial or financial information obtained from a person as privileged and confidential.

PART 333—EMERGENCY MANAGEMENT PRIORITIES AND ALLOCATIONS SYSTEM

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AUTHORITY: 6 U.S.C. 313, 314; 50 U.S.C. 4511, *et seq.*; E.O. 13603, 77 FR 16651; E.O. 13909, 85 FR 16227; E.O. 13911, 85 FR 18403; DHS Delegation 09052, Rev. 00 (Jan. 3, 2017); DHS Delegation 09052 Rev 00.1 (Apr. 1, 2020).

SOURCE: 85 FR 28510, May 13, 2020, unless otherwise noted.

Subpart A—Purpose

§ 333.1 Purpose of this part.

The Federal Emergency Management Agency (FEMA) refers to this part as the Emergency Management Priorities and Allocations System (EMPAS). The EMPAS implements those priorities and allocations authorities under the Defense Production Act that are the subject of a delegation from the President to the Secretary of DHS and redelegated to the FEMA Administrator, or to the FEMA Administrator directly, as described in § 333.10 of this part. This includes the use of authority to support critical infrastructure restoration and protection, stockpiling, and emergency preparedness activities pursuant to Title VI of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5195 *et seq.*), and related statutes, with respect to health and medical resources needed to respond to the spread of COVID–19 within the United States.

Subpart B—Overview

§ 333.2 Program eligibility.

(a) Certain programs to promote the national defense are eligible for priorities and allocations support. These include programs for military and energy production or construction, military or critical infrastructure assistance to any foreign nation, deployment and sustainment of military forces, homeland security, stockpiling, space, and any directly related activity. Other eligible programs include emergency preparedness activities conducted pursuant to Title VI of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5195 *et seq.*) and critical infrastructure protection and restoration. For a current and complete list reflecting the latest changes to approved programs, please visit FEMA's website at *www.FEMA.gov*.

(b) FEMA may delegate authority to place priority ratings on contracts or orders necessary to promote the national defense to appropriate officials in certain Federal Government agencies that issue such contracts or orders, to the extent consistent with the delegation of Presidential authority under which FEMA is operating. Such delegations may include authority to authorize recipients of rated orders to place ratings on contracts or orders to contractors, subcontractors, and suppliers.

§ 333.3 Priority ratings and rated orders.

(a) Rated orders are identified by a priority rating and a program identification symbol. Rated orders take precedence over all unrated orders as necessary to meet required delivery dates. Among rated orders, DX rated orders take precedence over DO rated orders.

(b) Persons receiving rated orders must give them preferential treatment as required by this part.

(c) All rated orders must be scheduled to the extent possible to ensure delivery by the required delivery date.

(d) Persons who receive rated orders must in turn place rated orders with their suppliers for the items they need to fill the orders. This provision ensures that suppliers will give priority treatment to rated orders from contractor to subcontractor to suppliers throughout the procurement chain.

(e) Persons may place a priority rating on orders only when they are in receipt of a rated order, have been explicitly authorized to do so by FEMA or a Delegate Agency, or are otherwise permitted to do so by this part.

§§ 333.4–333.7 [Reserved]

Subpart C—Definitions

§ 333.8 Definitions.

The definitions in this section apply throughout this part:

Act or DPA means the Defense Production Act of 1950, as amended (50 U.S.C. 4501, *et seq.*).

Administrator means the Administrator of the Federal Emergency Management Agency.

Allocation means the control of the distribution of materials, services or facilities for a purpose deemed necessary or appropriate to promote the national defense.

Allocation order means an official action to control the distribution of materials, services, or facilities for a purpose deemed necessary or appropriate to promote the national defense.

Allotment means an official action that specifies the maximum quantity of a material, service, or facility authorized for a specific use to promote the national defense.

Approved program means a program determined as necessary or appropriate for priorities and allocations support to promote the national defense by the Secretary of Defense, the Secretary of Energy, or the Secretary of Homeland Security, under the authority of the Defense Production Act and Executive Order 13603.

Construction means the erection, addition, extension, or alteration of any building, structure, or project, using materials or products which are to be an integral and permanent part of the building, structure, or project. Construction does not include maintenance and repair.

Critical infrastructure means any systems and assets, whether physical or cyber-based, so vital to the United

States that the degradation or destruction of such systems and assets would have a debilitating impact on national security, including, but not limited to, national economic security and national public health or safety.

Delegate Agency means a Federal Government agency authorized by delegation from FEMA to place priority ratings on contracts or orders needed to support approved programs.

Directive means an official action which requires a person to take or refrain from taking certain actions in accordance with its provisions.

Emergency preparedness means all those activities and measures designed or undertaken to prepare for or minimize the effects of a hazard upon the civilian population, to deal with the immediate emergency conditions which would be created by the hazard, and to effectuate emergency repairs to, or the emergency restoration of, vital utilities and facilities destroyed or damaged by the hazard. ''Emergency preparedness'' includes the following:

(1) Measures to be undertaken in preparation for anticipated hazards (including the establishment of appropriate organizations, operational plans, and supporting agreements, the recruitment and training of personnel, the conduct of research, the procurement and stockpiling of necessary materials and supplies, the provision of suitable warning systems, the construction or preparation of shelters, shelter areas, and control centers, and, when appropriate, the nonmilitary evacuation of the civilian population).

(2) Measures to be undertaken during a hazard (including the enforcement of passive defense regulations prescribed by duly established military or civil authorities, the evacuation of personnel to shelter areas, the control of traffic and panic, and the control and use of lighting and civil communications).

(3) Measures to be undertaken following a hazard (including activities for firefighting, rescue, emergency medical, health and sanitation services, monitoring for specific dangers of special weapons, unexploded bomb reconnaissance, essential debris clearance, emergency welfare measures, and immediately essential emergency repair or restoration of damaged vital facilities).

Facilities includes all types of buildings, structures, or other improvements to real property (but excluding farms, churches or other places of worship, and private dwelling houses), and services related to the use of any such building, structure, or other improvement.

Hazard means an emergency or disaster resulting from:

(1) A natural disaster, or

(2) An accidental or man-caused event.

Health and medical resources means drugs, biological products, medical devices, materials, facilities, health supplies, services, and equipment required to diagnose, mitigate, prevent the impairment of, improve, treat, cure, or restore the physical or mental health conditions of the population.

Homeland security includes efforts:

(1) To prevent terrorist attacks within the United States;

(2) To reduce the vulnerability of the United States to terrorism;

(3) To minimize damage from a terrorist attack in the United States; and

(4) To recover from a terrorist attack in the United States.

Industrial resources means all materials, services, and facilities, including construction materials, but not including: food resources, food resource facilities, and the domestic distribution of farm equipment and commercial fertilizer; all forms of health resources; all forms of civil transportation; and water resources. This term also includes the term ''item'' as defined and used in this part.

Item means any raw, in process, or manufactured material, article, commodity, supply, equipment, component, accessory, part, assembly, or product of any kind, technical information, process, or service.

Maintenance and repair and/or operating supplies (MRO).

(1) *Maintenance* is the upkeep necessary to continue any plant, facility, or equipment in working condition.

(2) *Repair* is the restoration of any plant, facility, or equipment to working condition when it has been rendered unsafe or unfit for service by

wear and tear, damage, or failure of parts.

(3) *Operating supplies* are any items carried as operating supplies according to a person's established accounting practice. Operating supplies may include hand tools and expendable tools, jigs, dies, fixtures used on production equipment, lubricants, cleaners, chemicals, and other expendable items.

(4) MRO does not include items produced or obtained for sale to other persons or for installation upon or attachment to the property of another person, or items required for the production of such items; items needed for the replacement of any plant, facility, or equipment; or items for the improvement of any plant, facility, or equipment by replacing items which are still in working condition with items of a new or different kind, quality, or design.

Materials includes:

(1) Any raw materials (including minerals, metals, and advanced processed materials), commodities, articles, components (including critical components), products, and items of supply; and

(2) Any technical information or services ancillary to the use of any such materials, commodities, articles, components, products, or items.

National defense means programs for military and energy production, or construction, military or critical infrastructure assistance to any foreign nation, homeland security, stockpiling, space, and any directly related activity. Such term includes emergency preparedness activities conducted pursuant to Title VI of The Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5195 *et seq.*) and critical infrastructure protection and restoration.

Official action means an action taken by FEMA under the authority of the Defense Production Act, the Robert T. Stafford Disaster Relief and Emergency Assistance Act and related statutes, or this part. Such actions include the issuance of rating authorizations, directives, letters and memoranda of understanding, demands for information, inspection authorizations, administrative subpoenas, and allocation orders.

Person includes any individual, corporation, partnership, association, or any other organized group of persons, or legal successor or representative thereof; or any State or local government or agency thereof; and for purposes of administration of this part, includes the Federal Government and any authorized foreign government or international organization or agency thereof, delegated authority as provided in this part.

Priorities authority means the authority of FEMA, pursuant to Section 101 of the Defense Production Act, to require acceptance and priority performance of contracts and orders for health and medical resource items and other resources as further delegated by the President to the Secretary of Homeland Security or Administrator for use in approved programs.

Priority rating means an identifying code assigned by a Delegate Agency, FEMA, or authorized person placed on all rated orders and consisting of the rating symbol and the program identification symbol.

Production equipment means any item of capital equipment used in producing materials or furnishing services that has a unit acquisition cost of $2,500 or more, an anticipated service life in excess of one year, and the potential for maintaining its integrity as a capital item.

Program identification symbols means abbreviations used to indicate which approved program is supported by a rated order.

Rated order means a prime contract, a subcontract, or a purchase order in support of an approved program issued in accordance with the provisions of this part.

Services includes any effort that is needed for or incidental to:

(1) The development, production, processing, distribution, delivery, or use of an industrial resource or a critical technology item;

(2) The construction of facilities;

(3) The movement of individuals and property by all modes of civil transportation; or

(4) Other national defense programs and activities.

Set-aside means an official action that requires a person to reserve materials, services, or facilities capacity in anticipation of the receipt of rated orders.

Written and *in writing* mean documented via printing, typewriting, handwriting, or similar means, whether in tangible or electronic form.

Written electronic means written and in electronic form, except that when electronic form is impracticable under the circumstances, FEMA may construe this term to allow for a tangible format.

Subpart D—Priorities and Placement of Rated Orders

§ 333.10 Authority.

(a) The priorities and allocations authorities of the President under Title I of the Act that have been delegated to the Secretary of Homeland Security have been redelegated to the Administrator. These rules are issued pursuant to Title I of the Act, and implementing authorities, including such authorities as are contained in subchapter III of chapter 55 of title 50, United States Code (50 U.S.C. 4554, 4555, 4556, and 4560), which have been delegated to FEMA.

(b) *Delegations by FEMA.* FEMA may authorize Delegate Agencies to assign priority ratings to orders under these regulations as authorized.

(c) *Jurisdictional limitations.* Unless delegated by the President to DHS or FEMA, the provisions of this part are not applicable to the following resource categories, as defined in Executive Order 13603, a successor executive order, or implementing regulations issued thereunder:

(1) Food resources, food resource facilities, and the domestic distribution of farm equipment and commercial fertilizer (Resource department with jurisdiction—Department of Agriculture);

(2) Energy supplies (Resources agency with jurisdiction—Department of Energy);

(3) All forms of civil transportation (Resource department with jurisdiction—Department of Transportation);

(4) Health resources (Resource department with jurisdiction—Department of Health and Human Services), except that pursuant to Executive Order 13911, the provisions of this part are applicable to health and medical resources needed to respond to the spread of COVID–19;

(5) Water resources (Resource department with jurisdiction—Department of Defense); and

(6) All other materials, services, and facilities, including construction materials (''industrial resources'') (Resource department with jurisdiction—Department of Commerce).

§ 333.11 Priority ratings.

(a) *Levels of priority.* (1) There are two levels of priority established by Federal Priorities and Allocations System regulations, identified by the rating symbols ''DO'' and ''DX.''

(2) All DO rated orders have equal priority with each other and take preference over unrated orders. All DX rated orders have equal priority with each other and take preference over DO rated orders and unrated orders. (For resolution of conflicts among rated orders of equal priority, see § 333.14(c)).

(3) In addition, a Directive issued by FEMA regarding priority treatment for a given item takes preference over any DX rated order, DO rated order, or unrated order, as stipulated in the Directive. (For a full discussion of Directives, see § 333.52).

(b) *Program identification symbols.* Program identification symbols indicate which approved program is being supported by a rated order. Program identification symbols, in themselves, do not connote any priority.

(c) *Priority ratings.* A priority rating consists of the rating symbol—DO or DX—and the program identification symbol.

§ 333.12 Elements of a rated order.

(a) *Elements required for all rated orders.* (1) The appropriate priority rating and program identification symbol;

(2) A required delivery date or dates. The words ''immediately'' or ''as soon as possible'' do not constitute a delivery date. When a ''requirements contract,'' ''basic ordering agreement,'' ''prime vendor contract,'' or similar

procurement document bearing a priority rating contains no specific delivery date or dates, but provides for the furnishing of items from time-to-time or within a stated period against specific purchase orders, such as ''calls,'' ''requisitions,'' and ''delivery orders,'' the purchase orders under such contracts or agreements must specify a required delivery date or dates and are to be considered as rated as of the date of their receipt by the supplier and not as of the date of the original procurement document.

(3) The written signature on a manually placed order, or the digital signature or name on an electronically placed order, of an individual authorized to sign rated orders for the person placing the order. The signature, manual or digital, certifies that the rated order is authorized under this part and that the requirements of this part are being followed; and

(4) A statement that reads in substance: ''This is a rated order certified for national defense use and you are required to follow all the provisions of the Emergency Management Priorities and Allocations System regulations (44 CFR part 333).''

(b) *Additional element required for certain emergency preparedness rated orders.* If a rated order is placed for the purpose of emergency preparedness requirements and expedited action is necessary or appropriate to meet these requirements, the following statement must be included in the order: ''This rated order is placed for the purpose of emergency preparedness. It must be accepted or rejected pursuant to the mandatory acceptance and mandatory rejection requirements found in 44 CFR 333.13 within [Insert a time limit no less than the minimum applicable time limit specified in §333.13(d)(2)].''

(c) *Additional elements required for rated orders issued by FEMA or a Delegate Agency to facilitate sales to third parties.* If a rated order is placed by FEMA or the Delegate Agency to facilitate a sale to a third party who desires to order the materials, the following statement must also be included in the order: ''This rated order is placed for the purpose of facilitating a sale to [Insert third party] to promote the national defense. It must be accepted or rejected pursuant to the mandatory acceptance and mandatory rejection requirements found in 44 CFR 333.13 within [Insert the applicable time limit consistent with §333.13(d)], and it is subject to the additional requirements of 44 CFR 333.19. [Third party] is responsible for satisfying the applicable terms of sale and payment. The Federal Government is not be liable for any failure to meet the terms of sale or payment. For purposes of these and any other notification requirements set forth in FEMA's Emergency Management Priorities and Allocations System regulations (44 CFR part 333), both [Insert FEMA or Delegate Agency] and [Insert third party] are the 'customer.'''

§333.13 Acceptance and rejection of rated orders.

(a) *Mandatory acceptance.* (1) Except as otherwise specified in this section, a person must accept every rated order received and must fill such orders regardless of any other rated or unrated orders that have been accepted.

(2) A person must not discriminate against rated orders in any manner such as by charging higher prices or by imposing different terms and conditions than for comparable unrated orders.

(b) *Mandatory rejection.* Unless otherwise directed by FEMA:

(1) A person must not accept a rated order for delivery on a specific date if unable to fill the order by that date. However, the person must inform the customer of the earliest date on which delivery can be made and offer to accept the order on the basis of that date. Scheduling conflicts with previously accepted lower rated or unrated orders are not sufficient reason for rejection under this section.

(2) A person must not accept a DO rated order for delivery on a date which would interfere with delivery of any previously accepted DO or DX rated orders. However, the person must offer to accept the order based on the earliest delivery date otherwise possible.

(3) A person must not accept a DX rated order for delivery on a date which would interfere with delivery of

any previously accepted DX rated orders, but must offer to accept the order based on the earliest delivery date otherwise possible.

(4) If a person is unable to fill all the rated orders of equal priority status received on the same day, the person must accept, based upon the earliest delivery dates, only those orders which can be filled, and reject the other orders. For example, a person must accept order A requiring delivery on December 15 before accepting order B requiring delivery on December 31. However, the person must offer to accept the rejected orders based on the earliest delivery dates otherwise possible.

(c) *Optional rejection.* Unless otherwise directed by FEMA, rated orders may be rejected in any of the following cases as long as a supplier does not discriminate among customers:

(1) If the person placing the order is unwilling or unable to meet regularly established terms of sale or payment;

(2) If the order is for an item not supplied or for a service not performed;

(3) If the order is for an item produced, acquired, or provided only for the supplier's own use for which no orders have been filled for two years prior to the date of receipt of the rated order. If, however, a supplier has sold some of these items, the supplier is obligated to accept rated orders up to that quantity or portion of production, whichever is greater, sold within the past two years;

(4) If the person placing the rated order, other than the Federal Government, makes the item or performs the service being ordered;

(5) If acceptance of a rated order or performance against a rated order would violate any other regulation, official action, or order of FEMA issued under the authority of the Defense Production Act or another relevant statute.

(d) *Customer notification requirements.* (1) Except as provided in paragraph (d)(2) of this section, a person must accept or reject a rated order in written electronic format within 15 working days after receipt of a DO rated order and within 10 working days after receipt of a DX rated order. If the order is rejected, the person must give reasons in written electronic format for the rejection.

(2) If a rated order is placed for the purpose of emergency preparedness requirements and expedited action is necessary or appropriate to meet these requirements and the order includes the statement set forth in § 333.12(b), a person must accept or reject the rated order and transmit the acceptance or rejection in written electronic format within the time specified in the rated order. The minimum times for acceptance or rejection that such orders may specify are 6 hours after receipt of the order if the order is issued by an authorized person in response to a hazard that has occurred, or 12 hours after receipt if the order is issued by an authorized person to prepare for an imminent hazard.

(3) If a person has accepted a rated order and subsequently finds that shipment or performance will be delayed, the person must notify the customer immediately, give the reasons for the delay, and advise of a new shipment or performance date. If notification is given verbally, written electronic confirmation must be provided within 24 hours of the verbal notice.

§ 333.14 Preferential scheduling.

(a) A person must schedule operations, including the acquisition of all needed production items, in a timely manner to satisfy the delivery requirements of each rated order. Modifying production or delivery schedules is necessary only when required delivery dates for rated orders cannot otherwise be met.

(b) DO rated orders must be given production preference over unrated orders, if necessary, to meet required delivery dates, even if this requires the diversion of items being processed or ready for delivery against unrated orders. Similarly, DX rated orders must be given preference over DO rated orders and unrated orders.

(1) *Examples:* If a person receives a DO rated order with a delivery date of June 3 and if meeting that date would mean delaying production or delivery of an item for an unrated order, the unrated order must be delayed. If a DX rated order is received calling for delivery on July 15 and a person has a DO

rated order requiring delivery on June 2 and operations can be scheduled to meet both deliveries, there is no need to alter production schedules to give any additional preference to the DX rated order. However, if business operations cannot be altered to meet both the June 3 and July 15 delivery dates, then the DX rated order must be given priority over the DO rated order.

(2) [Reserved]

(c) *Conflicting rated orders.* (1) If a person finds that delivery or performance against any accepted rated orders conflicts with the delivery or performance against other accepted rated orders of equal priority status, the person must give preference to the conflicting orders in the sequence in which they are to be delivered or performed (not to the receipt dates). If the conflicting rated orders are scheduled to be delivered or performed on the same day, the person must give preference to those orders which have the earliest receipt dates.

(2) If a person is unable to resolve rated order delivery or performance conflicts under this section, the person should promptly seek special priorities assistance as provided in subpart E of this part. If the person's customer objects to the rescheduling of delivery or performance of a rated order, the customer should promptly seek special priorities assistance as provided in subpart E of this part. For any rated order against which delivery or performance will be delayed, the person must notify the customer as provided in § 333.13(d)(3).

(d) If a person is unable to purchase needed production items in time to fill a rated order by its required delivery date, the person must fill the rated order by using inventoried production items. A person who uses inventoried items to fill a rated order may replace those items with the use of a rated order as provided in § 333.17(b).

§ 333.15 Extension of priority ratings.

(a) A person must use rated orders with suppliers to obtain items needed to fill a rated order. The person must use the priority rating indicated on the customer's rated order, except as otherwise provided in this part or as directed by FEMA.

(b) The priority rating must be included on each successive order placed to obtain items needed to fill a customer's rated order. Therefore, the inclusion of the rating will continue from contractor to subcontractor to supplier throughout the entire supply chain.

(c) A person must use rated orders with suppliers to obtain items needed to fill an emergency preparedness rated order. That person must require acceptance or rejection, and transmission of that acceptance or rejection by the supplier within the time limit stated in the rated order that is being filled.

§ 333.16 Changes or cancellations of priority ratings and rated orders.

(a) The priority rating on a rated order may be changed or cancelled by:

(1) An official action of FEMA; or

(2) Written electronic notification from the person who placed the rated order (including a Delegate Agency).

(b) If an unrated order is amended so as to make it a rated order, or a DO rating is changed to a DX rating, the supplier must give the appropriate preferential treatment to the order as of the date the change is received by the supplier.

(c) An amendment to a rated order that significantly alters a supplier's original production or delivery schedule shall constitute a new rated order as of the date of its receipt. The supplier must accept or reject the amended order according to the provisions of § 333.13.

(d) The following amendments do not constitute a new rated order: A change in shipping destination; A reduction in the total amount of the order; an increase in the total amount of the order which has negligible impact upon deliveries; a minor variation in size or design (prior to the start of production); or a change which is agreed upon between the supplier and the customer.

(e) A person must cancel any rated orders that the person (or a predecessor in interest) has placed with suppliers or cancel the priority ratings on those orders if the person no longer needs the items in those orders to fill a rated order.

(f) A person adding a rating to an unrated order, or changing or cancelling a priority rating must promptly

provide written electronic notification to all suppliers to whom the order was sent of the addition, change, or cancellation.

§ 333.17 Use of rated orders.

(a) A person must use rated orders to obtain:

(1) Items which will be physically incorporated into other items to fill rated orders, including that portion of such items normally consumed, or converted into scrap or by-products, in the course of processing;

(2) Containers or other packaging materials required to make delivery of the finished items against rated orders;

(3) Services, other than contracts of employment, needed to fill rated orders; and

(4) MRO needed to produce the finished items to fill rated orders.

(b) A person may use a rated order to replace inventoried items (including finished items) if such items were used to fill rated orders, as follows:

(1) The order must be placed within 90 days of the date of use of the inventory.

(2) A DO rating symbol and the program identification symbol indicated on the customer's rated order must be used on the order. A DX rating symbol may not be used even if the inventory was used to fill a DX rated order.

(3) If the priority ratings on rated orders from one customer or several customers contain different program identification symbols, the rated orders may be combined.

(c) A person may combine DX and DO rated orders from one customer or several customers if the items covered by each level of priority are identified separately and clearly.

(d) *Combining rated and unrated orders.* (1) A person may combine rated and unrated order quantities on one purchase order provided that:

(i) The rated quantities are separately and clearly identified; and

(ii) The elements of a rated order, as required by § 333.12, are included on the order with the statement required in § 333.12(d) modified to read in substance: ''This purchase order contains rated order quantities certified for national defense use, and you are required to follow all the provisions of the Emergency Management Priorities and Allocations System regulations (44 CFR part 333) as it pertains to the rated quantities.''

(2) A supplier must accept or reject the rated portion of the purchase order as provided in § 333.13 and give preferential treatment only to the rated quantities as required by this part. This part may not be used to give preferential treatment to the unrated portion of the order.

(3) Any supplier who believes that rated and unrated orders are being combined in a manner contrary to the intent of this part or in a fashion that causes undue or exceptional hardship may submit a request for adjustment or exception under § 333.70.

(e) A person may place a rated order for the minimum commercially procurable quantity even if the quantity needed to fill a rated order is less than that minimum. However, a person must combine rated orders as provided in paragraph (c) of this section, if possible, to obtain minimum procurable quantities.

(f) A person is not required to place a priority rating on an order for less than one half of the Simplified Acquisition Threshold (as established in the Federal Acquisition Regulation (FAR)) (see 48 CFR 2.101) or in other authorized acquisition regulatory or management systems, provided that delivery can be obtained in a timely fashion without the use of the priority rating.

§ 333.18 Limitations on placing rated orders.

(a) *General limitations on placing rated orders.* A person may not place a DO or DX rated order pursuant to this part unless the person is in receipt of a rated order, has been explicitly authorized to do so by FEMA or a Delegate Agency or is otherwise permitted to do so by this part.

(b) *Specific limitations on placing rated orders.* Rated orders may not be used to obtain:

(1) Delivery on a date earlier than needed;

(2) A greater quantity of the item than needed, except to obtain a minimum procurable quantity. Separate rated orders may not be placed solely for the purpose of obtaining minimum

procurable quantities on each order if the minimum procurable quantity would be sufficient to cover more than one rated order;

(3) Items in advance of the receipt of a rated order, except as specifically authorized by FEMA (see § 333.21(c) for information on obtaining authorization for a priority rating in advance of a rated order); or

(4) Any of the following items unless specific priority rating authority has been obtained from FEMA, a Delegate Agency, or the Department of Commerce:

(i) Items for plant improvement, expansion, or construction, unless they will be physically incorporated into a construction project covered by a rated order; or

(ii) Production or construction equipment or items to be used for the manufacture of production equipment (for information on requesting priority rating authority, see § 333.21).

(5) Any items related to the development of chemical or biological warfare capabilities or the production of chemical or biological weapons, unless such development or production has been authorized by the President or the Secretary of Defense.

§ 333.19 Special provisions applicable to rated orders for third parties.

(a) The provisions of this part apply to rated orders placed by FEMA or a Delegate Agency to facilitate sales to third parties, regardless of the nature of their relationship to the Federal Government, unless otherwise specified.

(b) Where FEMA or a Delegate Agency has placed a rated order to facilitate a sale to a third party, the third party is responsible for satisfying the applicable terms of sale and payment. The Federal Government shall not be liable for any failure to meet the terms of sale or payment.

(c) If a third party is unable to satisfy the applicable terms of sale or payment, FEMA or the Delegate Agency may amend or cancel the rated order pursuant to § 333.16 of this part. If FEMA or the Delegate Agency amend the rated order to provide that delivery shall be made to FEMA, the Delegate Agency, or another third party instead of the original third party, and the amendment shall not constitute a new rated order.

Subpart E—Special Priorities Assistance

§ 333.20 General provisions.

(a) EMPAS is designed to be largely self-executing. However, if production or delivery problems arise, a person should immediately contact FEMA (or the Delegate Agency, as appropriate) for special priorities assistance pursuant to §§ 333.20 through 333.24 and as directed by § 333.83. If FEMA (or the Delegate Agency, as appropriate) is unable to resolve the problem or to authorize the use of a priority rating and believes additional assistance is warranted, FEMA (or the Delegate Agency, as appropriate) may forward the request to another resource agency, as appropriate, for action. Special priorities assistance is a service provided to alleviate problems.

(b) Special priorities assistance can be provided for any reason consistent with this part, such as assisting in obtaining timely deliveries of items needed to satisfy rated orders or authorizing the use of priority ratings on orders to obtain items not otherwise ratable under this part. Special priorities assistance may also be used to request rating authority for items that are not normally eligible for priority treatment.

(c) A request for special priorities assistance or priority rating authority may be submitted on FEMA Form 009–0–142 (OMB control number 1660–0149) to FEMA. Form 009–0–142 may be obtained from the Delegate Agency or from FEMA.

[85 FR 28510, May 13, 2020, as amended at 86 FR 1292, Jan. 8, 2021]

§ 333.21 Requests for priority rating authority.

(a) If a rated order is likely to be delayed because a person is unable to obtain items not normally rated under this part, the person may request the authority to use a priority rating in ordering the needed items.

(b) *Rating authority for production or construction equipment.* (1) A request for

priority rating authority for production or construction equipment, if needed, must be submitted to the U.S. Department of Commerce on Form BIS–999.

(2) When the use of a priority rating is authorized for the procurement of production or construction equipment, a rated order may be used either to purchase or to lease such equipment. However, in the latter case, the equipment may be leased only from a person engaged in the business of leasing such equipment or from a person willing to lease rather than sell.

(c) *Rating authority in advance of a rated prime contract.* (1) In certain cases, and upon specific request, FEMA, in order to promote the national defense, may authorize a person to place a priority rating on an order to a supplier in advance of the issuance of a rated prime contract. In these instances, the person requesting advance rating authority must obtain sponsorship of the request from FEMA or the appropriate Delegate Agency. The person shall also assume any business risk associated with the placing of rated orders if these orders have to be cancelled in the event the rated prime contract is not issued.

(2) The person must state the following in the request: ''It is understood that the authorization of a priority rating in advance of our receiving a rated prime contract from FEMA (or a Delegate Agency) and our use of that priority rating with our suppliers in no way commits the Delegate Agency, FEMA, or any other Federal Government agency to enter into a contract or order or to expend funds. Further, we understand that the Federal Government shall not be liable for any cancellation charges, termination costs, or other damages that may accrue if a rated prime contract is not eventually placed and, as a result, we must subsequently cancel orders placed with the use of the priority rating authorized as a result of this request.''

(3) In reviewing requests for rating authority in advance of a rated prime contract, FEMA will consider, among other things, the following criteria:

(i) The probability that the prime contract will be awarded;

(ii) The impact of the resulting rated orders on suppliers and on other authorized programs;

(iii) Whether the contractor is the sole source;

(iv) Whether the item being produced has a long lead time; and

(v) The time period for which the rating is being requested.

(4) FEMA may require periodic reports on the use of the rating authority granted under paragraph (c) of this section.

(5) If a rated prime contract is not issued, the person must promptly notify all suppliers who have received rated orders pursuant to the advance rating authority that the priority rating on those orders is cancelled.

§ 333.22 Examples of assistance.

(a) While special priorities assistance may be provided for any reason in support of this part, it is usually provided in situations where:

(1) A person is experiencing difficulty in obtaining delivery against a rated order by the required delivery date; or

(2) A person cannot locate a supplier for an item needed to fill a rated order.

(b) Other examples of special priorities assistance include:

(1) Ensuring that rated orders receive preferential treatment by suppliers;

(2) Resolving production or delivery conflicts between various rated orders;

(3) Assisting in placing rated orders with suppliers;

(4) Verifying the urgency of rated orders; and

(5) Determining the validity of rated orders.

§ 333.23 Criteria for assistance.

Requests for special priorities assistance should be timely, *i.e.*, the request must be submitted promptly and in enough time for FEMA or the Delegate Agency to effect a meaningful resolution to the problem, and must establish that:

(a) There is an urgent need for the item; and

(b) The applicant has made a reasonable effort to resolve the problem.

§ 333.24 Instances where assistance will not be provided.

Special priorities assistance is provided at the discretion of FEMA or the Delegate Agency when it is determined that such assistance is warranted to meet the objectives of this part. Examples where assistance may not be provided include situations when a person is attempting to:

(a) Secure a price advantage;

(b) Obtain delivery prior to the time required to fill a rated order;

(c) Gain competitive advantage;

(d) Disrupt an industry apportionment program in a manner designed to provide a person with an unwarranted share of scarce items; or

(e) Overcome a supplier's regularly established terms of sale or conditions of doing business.

Subpart F—Allocation Actions

§ 333.30 Policy.

(a) Allocation orders will:

(1) Be used only when there is insufficient supply of a material, service, or facility to satisfy national defense requirements through the use of the priorities authority or when the use of the priorities authority would cause a severe and prolonged disruption in the supply of materials, services, or facilities available to support normal U.S. economic activities; and

(2) Not be used to ration materials or services at the retail level.

(b) Allocation orders, when used, will be distributed equitably among the suppliers of the materials, services, or facilities being allocated and not require any person to relinquish a disproportionate share of the civilian market.

(c) When a hazard has occurred or is imminent, an allocation order may be used without regard to paragraphs (a) and (b) of this section whenever it is deemed by the Administrator to be necessary or appropriate to promote the national defense.

§ 333.31 General procedures.

Before FEMA uses its allocations authority to address a supply problem within its resource jurisdiction, it will develop a plan that includes:

(a) A copy of the written determination that the program or programs that would be supported by the allocation action are necessary or appropriate to promote the national defense;

(b) A detailed description of the situation to include any unusual events or circumstances that have created the requirement for an allocation action;

(c) A statement of the specific objective(s) of the allocation action;

(d) A list of the materials, services, or facilities to be allocated;

(e) A list or description of the sources of the materials, services, or facilities that will be subject to the allocation action;

(f) A detailed description of the provisions that will be included in the allocation orders, including the type(s) of allocation orders, the percentages or quantity of capacity or output to be allocated for each purpose, and the duration of the allocation action (*e.g.*, anticipated start and end dates);

(g) An evaluation of the impact of the proposed allocation action on the civilian market; and

(h) Proposed actions, if any, to mitigate disruptions to civilian market operations.

§ 333.32 Controlling the general distribution of a material in the civilian market.

No allocation action by FEMA may be used to control the general distribution of a material in the civilian market unless the President, the Administrator, or another official with lawful authority under section 101(b) of the Act has made a written finding that:

(a) Such material is a scarce and critical material essential to the national defense, and

(b) The requirements of the national defense for such material cannot otherwise be met without creating a significant dislocation of the normal distribution of such material in the civilian market to such a degree as to create appreciable hardship.

§ 333.33 Types of allocation orders.

There are three types of allocation orders available for communicating allocation actions.

(a) *Set-aside.* A set-aside is an official action that requires a person to reserve

materials, services, or facilities capacity in anticipation of the receipt of rated orders.

(b) *Directive.* A directive is an official action that requires a person to take or refrain from taking certain actions in accordance with its provisions. For example, a directive can require a person to: Stop or reduce production of an item; prohibit the use of selected materials, services, or facilities; or divert the use of materials, services, or facilities from one purpose to another.

(c) *Allotment.* An allotment is an official action that specifies the maximum quantity of a material, service, or facility authorized for a specific use to promote the national defense.

§ 333.34 Elements of an allocation order.

Allocation orders may be issued directly to the affected persons or by constructive notice through publication in the FEDERAL REGISTER. This section describes the elements that each order must include.

(a) *Elements to be included in all allocation orders.* (1) A detailed description of the required allocation action(s), including its relationship to previously or subsequently received DX rated orders, DO rated orders, and unrated orders.

(2) Specific start and end calendar dates for each required allocation action.

(b) *Elements to be included in orders issued directly to affected persons.* (1) A statement that reads in substance: ''This is an allocation order certified for national defense use. [Insert the name of the person receiving the order] is required to comply with this order, in accordance with the provisions of the Emergency Management Priorities and Allocations System regulations (44 CFR part 333), which is part of the Federal Priorities and Allocations System.''

(2) The written signature on a manually placed order, or the digital signature or name on an electronically placed order, of the FEMA Administrator.

(c) *Elements to be included in an allocation order that gives constructive notice through publication in the* FEDERAL REGISTER. (1) A statement that reads in substance: ''This is an allocation order certified for national defense use. [Insert the name(s) of the person(s) to whom the order applies or a description of the class of persons to whom the order applies] is (are) required to comply with this order, in accordance with the provisions of the Emergency Management Priorities and Allocations System regulations (44 CFR part 333), which is part of the Federal Priorities and Allocations System.''

(2) The order must be signed by the FEMA Administrator.

§ 333.35 Mandatory acceptance of an allocation order.

(a) Except as otherwise specified in this section, a person must accept and comply with every allocation order received.

(b) A person must not discriminate against an allocation order in any manner such as by charging higher prices for materials, services, or facilities covered by the order or by imposing terms and conditions for contracts and orders involving allocated materials, services, or facilities that differ from the person's terms and conditions for contracts and orders for the materials, services, or facilities prior to receiving the allocation order.

(c) If a person is unable to comply fully with the required action(s) specified in an allocation order, the person must notify FEMA immediately, explain the extent to which compliance is possible, and give the reasons why full compliance is not possible. If notification is given verbally, written, electronic confirmation must be provided within 24 hours. Such notification does not release the person from complying with the order to the fullest extent possible, until the person is notified by FEMA that the order has been changed or cancelled.

§ 333.36 Changes or cancellations of allocation orders.

An allocation order may be changed or cancelled by an official action from FEMA. Notice of such changes or cancellations may be provided directly to persons to whom the order being cancelled or modified applies or constructive notice may be provided by publication in the FEDERAL REGISTER.

Subpart G [Reserved]

Subpart H—Official Actions

§ 333.50 General provisions.

(a) FEMA may, from time-to-time, take specific official actions to implement or enforce the provisions of this part.

(b) Some of these official actions (rating authorizations and letters and memoranda of understanding) are discussed in this subpart. Official actions that pertain to compliance (administrative subpoenas, demands for information, and inspection authorizations) are discussed in § 333.61(c). Directives are discussed in § 333.52.

§ 333.51 Rating authorizations.

(a) A rating authorization is an official action granting specific priority rating authority that:

(1) Permits a person to place a priority rating on an order for an item not normally ratable under this part; or

(2) Authorizes a person to modify a priority rating on a specific order or series of contracts or orders.

(b) To request priority rating authority, see § 333.21.

§ 333.52 Directives.

(a) A directive is an official action which requires a person to take or refrain from taking certain actions in accordance with its provisions.

(b) A person must comply with each directive issued. However, a person may not use or extend a directive to obtain any items from a supplier, unless expressly authorized to do so in the directive.

(c) A priorities directive takes precedence over all DX-rated orders, DO-rated orders, and unrated orders previously or subsequently received, unless a contrary instruction appears in the directive.

(d) An allocations directive takes precedence over all priorities directives, DX-rated orders, DO-rated orders, and unrated orders previously or subsequently received, unless a contrary instruction appears in the directive.

§ 333.53 Letters and memoranda of understanding.

(a) A letter or memorandum of understanding is an official action, which may be issued electronically, to resolve special priorities assistance cases to reflect an agreement reached by all parties (FEMA, the Department of Commerce (if applicable), a Delegate Agency (if applicable), the supplier, and the customer).

(b) A letter or memorandum of understanding is not used to alter scheduling between rated orders, to authorize the use of priority ratings, to impose restrictions under this part, or to take other official actions. Rather, letters or memoranda of understanding are used to confirm production or shipping schedules which do not require modifications to other rated orders.

Subpart I—Compliance

§ 333.60 General provisions.

(a) Compliance actions may be taken for any reason necessary or appropriate to the enforcement or the administration of the Defense Production Act and related statutes, this part, or an official action. Compliance actions include audits, investigations, or other inquiries and FEMA may utilize other official actions, such as administrative subpoenas, demands for information, and inspection authorizations as part of the compliance actions under this part.

(b) Any person who places or receives a rated order or an allocation order must comply with the provisions of this part.

(c) Willful violation of any of the provisions of Title I or section 705 of the Defense Production Act and other applicable statutes, this part, or an official action of FEMA, is a criminal act, punishable as provided in the Defense Production Act and other applicable statutes, and as set forth in § 333.64 of this part.

§ 333.61 Audits and investigations.

(a) Audits and investigations are official actions involving the examination of books, records, documents, other writings and information to ensure

that the provisions of the Defense Production Act and other applicable statutes, this part, and official actions have been properly followed. An audit or investigation may also include interviews and a systems evaluation to detect problems or failures in the implementation of this part.

(b) When undertaking an audit, investigation, or other inquiry, FEMA must:

(1) Define the scope and purpose in the official action given to the person under investigation, and

(2) Have ascertained that the information sought, or other adequate and authoritative data are not available from any Federal or other responsible agency.

(c) In administering this part, FEMA may issue the following documents, which constitute official actions:

(1) *Administrative subpoenas.* An administrative subpoena requires a person to appear as a witness before an official designated by FEMA to testify under oath on matters of which that person has knowledge relating to the enforcement or the administration of the Defense Production Act and other applicable statutes, this part, or official actions. An administrative subpoena may also require the production of books, papers, records, documents and physical objects or property.

(2) *Demand for information.* A demand for information requires a person to furnish to a duly authorized representative of FEMA any information necessary or appropriate to the enforcement or the administration of the Defense Production Act and other applicable statutes, this part, or official actions.

(3) *Inspection authorizations.* An inspection authorization requires a person to permit a duly authorized representative of FEMA to interview the person's employees or agents; to inspect books, records, documents, other writings and information, including electronically-stored information, in the person's possession or control at the place where that person usually keeps them or otherwise; and to inspect a person's property when such interviews and inspections are necessary or appropriate to the enforcement or the administration of the Defense Production Act and related statutes, this part, or official actions.

(d) The production of books, records, documents, other writings and information will not be required at any place other than where they are usually kept if, prior to the return date specified in the administrative subpoena or demand for information, a duly authorized official of FEMA is furnished with copies of such material that are certified under oath to be true copies. As an alternative, a person may enter into a stipulation with a duly authorized official of FEMA as to the content of the material.

(e) An administrative subpoena, demand for information, or inspection authorization must include the name, title, or official position of the person to be served, the evidence sought to be adduced, and its general relevance to the scope and purpose of the audit, investigation, or other inquiry. If employees or agents are to be interviewed; if books, records, documents, other writings, or information are to be produced; or if property is to be inspected; the administrative subpoena, demand for information, or inspection authorization will describe them with particularity.

(f) Service of documents must be made in the following manner:

(1) Service of a demand for information or inspection authorization must be made personally, or by certified mail—return receipt requested at the person's last known address. Service of an administrative subpoena must be made personally. Personal service may also be made by leaving a copy of the document with someone at least 18 years of age at the person's last known dwelling or place of business. When a hazard has occurred or is imminent, service of a demand for information or inspection authorization may additionally be made by written electronic communication.

(2) Service upon other than an individual may be made by serving a partner, corporate officer, or a managing or general agent authorized by appointment or by law to accept service of process. If an agent is served, a copy of the document must be mailed to the person named in the document.

(3) Any individual 18 years of age or older may serve an administrative subpoena, demand for information, or inspection authorization. When personal service is made, the individual making the service shall prepare an affidavit as to the manner in which service was made and the identity of the person served, and return the affidavit, and in the case of subpoenas, the original document, to the issuing officer. In case of failure to make service, the reasons for the failure must be stated on the original document.

§ 333.62 Compulsory process.

(a) If a person refuses to permit a duly authorized representative of FEMA to have access to any premises or source of information necessary to the administration or enforcement of the Defense Production Act and other applicable statutes, this part, or official actions, FEMA may seek compulsory process. Compulsory process means the institution of appropriate legal action, including *ex parte* application for an inspection warrant or its equivalent, in any forum of appropriate jurisdiction.

(b) Compulsory process may be sought in advance of an audit, investigation, or other inquiry, if, in the judgment of the Administrator, in consultation with the FEMA Chief Counsel, there is reason to believe that a person will refuse to permit an audit, investigation, or other inquiry, or that other circumstances exist which make such process desirable or necessary.

§ 333.63 Notification of failure to comply.

(a) At the conclusion of an audit, investigation, or other inquiry, or at any other time, FEMA may inform the person in writing where compliance with the requirements of the Defense Production Act and other applicable statutes, this part, or an official action were not met.

(b) In cases where FEMA determines that a person, either willingly or inadvertently, has failed to comply with the provisions of the Defense Production Act and other applicable statutes, this part, or an official action, the person may be informed in writing of the particulars involved and the corrective action to be taken. Failure to take corrective action may then be construed as a willful violation of the Defense Production Act and other applicable statutes, this part, or an official action.

§ 333.64 Violations, penalties, and remedies.

(a) Willful violation of the provisions of Title I or Sections 705 or 707 of the Defense Production Act, this part, or an official action, is a crime and upon conviction, a person may be punished by fine or imprisonment, or both. The maximum penalty provided by the Defense Production Act is a $10,000 fine, or one year in prison, or both.

(b) The government may also seek an injunction from a court of appropriate jurisdiction to prohibit the continuance of any violation of, or to enforce compliance with, the Defense Production Act and other applicable statutes, this part, or an official action.

(c) In order to secure the effective enforcement of the Defense Production Act and other applicable statutes, this part, and official actions, the following are prohibited (see section 705 of the Defense Production Act; see also, for example, sections 2 and 371 of Title 18 United States Code):

(1) No person may solicit, influence, or permit another person to perform any act prohibited by, or to omit any act required by, the Defense Production Act and other applicable statutes, this part, or an official action.

(2) No person may conspire or act in concert with any other person to perform any act prohibited by, or to omit any act required by, the Defense Production Act and other applicable statutes, this part, or an official action.

(3) No person shall deliver any item if the person knows or has reason to believe that the item will be accepted, redelivered, held, or used in violation of the Defense Production Act and other applicable statutes, this part, or an official action. In such instances, the person must immediately notify FEMA that, in accordance with this section, delivery has not been made.

§ 333.65 Compliance conflicts.

If compliance with any provision of the Defense Production Act and other

applicable statutes, this part, or an official action would prevent a person from filling a rated order or from complying with another provision of the Defense Production Act, this part, or an official action, the person must immediately notify FEMA for resolution of the conflict.

Subpart J—Adjustments, Exceptions, and Appeals

§ 333.70 Adjustments or exceptions.

(a) A person may submit a request to FEMA for an adjustment or exception on the ground that:

(1) A provision of this part or an official action results in an undue or exceptional hardship on that person not suffered generally by others in similar situations and circumstances; or

(2) The consequence of following a provision of this part or an official action is contrary to the intent of the Defense Production Act, other applicable statutes, or this part.

(b) Each request for adjustment or exception must be in writing and contain a complete statement of all the facts and circumstances related to the provision of this part or official action from which adjustment is sought and a full and precise statement of the reasons why relief should be provided.

(c) The submission of a request for adjustment or exception shall not relieve any person from the obligation of complying with the provisions of this part or official action in question while the request is being considered unless such interim relief is granted in writing by FEMA.

(d) A decision of FEMA under this section may be appealed to the Administrator. (For information on the appeal procedure, see § 333.71.)

§ 333.71 Appeals.

(a) Any person who has had a request for adjustment or exception denied by FEMA under § 333.70 may appeal to the Administrator, who shall review and reconsider the denial. Such appeals should be submitted to the Office of Policy and Programs at *FEMA-DPA@fema.dhs.gov*, Ref: EMPAS Appeals.

(b)(1) Appeals of denied requests for exceptions from or adjustments to compliance with the provisions of this part or an official action must be received by FEMA no later than 45 days after receipt of a written notice of denial from FEMA. After this 45-day period, an appeal may be accepted at the discretion of the Administrator.

(2) For requests for adjustment or exception involving rated orders placed for the purpose of emergency preparedness in response to a hazard that has occurred or is imminent, an appeal must be received by FEMA no later than 15 days after receipt of a written notice of denial.

(c) Each appeal must be in writing and contain a complete statement of all the facts and circumstances related to the action appealed from and a full and precise statement of the reasons the decision should be modified or reversed.

(d) In addition to the written materials submitted in support of an appeal, an appellant may request, in writing, an opportunity for an informal hearing. This request may be granted or denied at the discretion of the Administrator.

(e) When a hearing is granted, the Administrator may designate an employee of FEMA to conduct the hearing and to prepare a report. The hearing officer shall determine all procedural questions and impose such time or other limitations deemed reasonable. In the event that the hearing officer decides that a printed transcript is necessary, all expenses shall be borne by the appellant.

(f) When determining an appeal, the Administrator may consider all information submitted during the appeal as well as any recommendations, reports, or other relevant information and documents available to FEMA, or consult with any other persons or groups.

(g) The submission of an appeal under this section shall not relieve any person from the obligation of complying with the provisions of this part or official action in question while the appeal is being considered, unless such relief is granted in writing by the Administrator.

(h) The decision of the Administrator shall be made within a reasonable time after receipt of the appeal and shall be the final administrative action. It shall

be issued to the appellant in writing with a statement of the reasons for the decision.

Subpart K—Miscellaneous Provisions

§ 333.80 Protection against claims.

A person shall not be held liable for damages or penalties for any act or failure to act resulting directly or indirectly from compliance with any provision of this part, or an official action, notwithstanding that such provision or action shall subsequently be declared invalid by judicial or other competent authority.

§ 333.81 Records and reports.

(a) Persons are required to make and preserve for at least three years, accurate and complete records of any transaction covered by this part or an official action.

(b) Records must be maintained in sufficient detail to permit the determination, upon examination, of whether each transaction complies with the provisions of this part or any official action. However, this part does not specify any particular method or system to be used.

(c) Records required to be maintained by this part must be made available for examination on demand by duly authorized representatives of FEMA as provided in § 333.61.

(d) In addition, persons must develop, maintain, and submit any other records and reports to FEMA that may be required for the administration of the Defense Production Act and other applicable statutes, and this part.

(e) Under section 705(d) of the Act and the ultimate delegation of that authority to the FEMA Administrator, information obtained under section 705 of the Act which the Administrator deems confidential, or with reference to which a request for confidential treatment is made by the person furnishing such information, shall not be published or disclosed unless the Administrator determines that the withholding of this information is contrary to the interest of the national defense. Information required to be submitted to FEMA in connection with the enforcement or administration of the Act, this part, or an official action, is deemed to be confidential under section 705(d) of the Act and shall not be published or disclosed except as required by applicable Federal law.

§ 333.82 Applicability of this part and official actions.

(a) This part and all official actions, unless specifically stated otherwise, apply to transactions in any state, territory, or possession of the United States and the District of Columbia.

(b) This part and all official actions apply not only to deliveries to other persons but also include deliveries to affiliates and subsidiaries of a person and deliveries from one branch, division, or section of a single entity to another branch, division, or section under common ownership or control.

(c) This part shall not be construed to affect any administrative actions taken by FEMA, or any outstanding contracts or orders placed pursuant to any of the regulations, orders, schedules, or delegations of authority issued by FEMA prior to May 13, 2020. Such actions, contracts, or orders shall continue in full force and effect under this part unless modified or terminated by proper authority.

§ 333.83 Communications.

General communications concerning this part, including how to obtain copies of this part and explanatory information, requests for guidance or clarification, may be addressed to FEMA's Office of Policy and Program Analysis at *FEMA-DPA@fema.dhs.gov*.

§ 333.84 Severability.

FEMA intends the various provisions of this part to be severable from each other to the extent practicable, such that if a court of competent jurisdiction were to vacate or enjoin any one provision, the other provisions are intended to remain in effect unless they are dependent upon the vacated or enjoined provision.

PART 334—GRADUATED MOBILIZATION RESPONSE

Sec.
334.1 Purpose.
334.2 Policy.

334.3 Background.
334.4 Definitions.
334.5 GMR system description.
334.6 Department and agency responsibilities.
334.7 Reporting.

AUTHORITY: National Security Act of 1947, as amended, 50 U.S.C. 404; Defense Production Act of 1950, as amended, 50 U.S.C. app. 2061 *et seq;* E.O. 12148 of July 20, 1979, 3 CFR, 1979 Comp., p. 412; E.O. 10480 of Aug. 14, 1953, 3 CFR, 1949–53 Comp., p. 962; E.O. 12472 of Apr. 3, 1984; 3 CFR, 1984 Comp., p. 193; E.O. 12656 of Nov. 18, 1988, 53 FR 47491.

SOURCE: 55 FR 1821, Jan. 19, 1990, unless otherwise noted.

§ 334.1 Purpose.

(a) Provides policy guidance pursuant to the Defense Production Act of 1950, as amended; section 1–103 of Executive Order 12148, as amended, which includes functions continued from E.O. 11051; section 104(f) of Executive Order 12656; and part 2 of Executive Order 10480.

(b) Establishes a Graduated Mobilization Response (GMR) system for developing and implementing mobilization actions that are responsive to a wide range of national security threats and ambiguous or specific warning indicators. GMR provides for a coherent decision making process with which to proceed with specific responses to an identified crisis or emergency.

(c) Provides guidance to the Federal departments and agencies for developing plans that are responsive to a GMR system and for preparing costed option packages, as appropriate, to implement the plans.

§ 334.2 Policy.

(a) As established in Executive Order 12656, the policy of the United States is to have sufficient emergency response capabilities at all levels of government to meet essential defense and civilian needs during any national security emergency. Accordingly, each Federal department and agency shall prepare its national security emergency preparedness plans and programs to respond adequately and in a timely manner to all national security emergencies.

(b) As part of emergency response, the GMR system should be incorporated in each department's and agency's emergency preparedness plans and programs to provide appropriate and effective response options for consideration in reacting to ambiguous and specific warnings.

(c) Departments and agencies will be provided early warning information developed by the intelligence community and policy statements of the President.

(d) Emergency resource preparedness planning is essential to ensure that the nation is adequately prepared to respond to potential national emergencies. Such emergency resource preparedness planning requires an exchange of information and planning factors among the various departments and agencies responsible for different resource preparedness actitivities.

(e) To carry out their emergency planning activities, civilian departments and agencies require the Department of Defense's (DOD) assessment of potential military demands that would be made on the economy in a full range of possible national security emergencies. Similarly, DOD planning should be conducted using planning regimes consistent with the policies and plans of the civilian resource departments and agencies.

(f) Under section 104(c) of Executive Order 12656, FEMA is responsible for coordinating the implementation of national emergency preparedness policy with Federal departments and agencies and with state and local governments and, therefore, is responsible for developing a system of planning procedures for integrating the emergency preparedness actions of federal, state and local governments.

(g) Federal departments and agencies shall design their preparedness measures to permit a rapid and effective transition from routine to emergency operations, and to make effective use of the period following initial indication of a probable national security emergency. This will include:

(1) Development of a system of emergency actions that defines alternatives, processes, and issues to be considered during various stages of national security emergencies; and

(2) Identification of actions that could be taken at the Federal and local levels of government in the early

stages of a national security emergency or pending national security emergency to mitigate the impact of or reduce significantly the leadtime associated with full emergency action implementation.

§ 334.3 Background.

(a) The GMR system is designed to take into account the need to mobilize the Nation's resources in response to a wide range of crisis or emergency situations. GMR is a flexible decision making process of preparedness and response actions which are appropriate to warning indicators or an event. Thus, GMR allows the government, as a whole, to take small or large, often reversible, steps to increase its national security emergency preparedness posture.

(b) Crises, especially those resulting in major military activities, always have some political or economic context. As the risks of military action increase, nations undertake more extensive preparations over a longer period of time to increase their military power. Such preparations by potential adversaries shape the nature and gravity of the threat as well as its likelihood and timing of occurrence. These measures permit the development of reliable indicators of threat at an early time in the evolution of a crisis. Depending on the nature of the situation or event and the nation involved, these early warning indicators may emanate from the political, socio-economic and/or industrial sectors.

(c) The GMR system enables the nation to approach mobilization planning and actions as part of the deterrent response capability and to use it to reduce the probability of conflict. Alternatively, if deterrence should fail, the GMR system would enable the nation to undertake a series of phased actions intended to increase its ability to meet defense and essential civilian requirements. The GMR system integrates the potential strength of the national economy into U.S. national security strategy.

§ 334.4 Definitions.

(a) *Graduated Mobilization Response* (GMR) is a system for integrating mobilization actions designed to respond to ambiguous and/or specific warnings. These actions are designed to mitigate the impact of an event or crisis and reduce significantly the lead time associated with a full national emergency action implementation.

(b) *National security emergency* is any occurrence, including natural disaster, military attack, technological emergency, or other emergency, that seriously degrades or threatens the national security of the United States.

(c) *Mobilization* is the process of marshalling resources, both civil and military, to respond to and manage a national security emergency.

(d) *GMR Plans* are those agency documents that describe, in general, the actions that an agency could take in the early stages of a national security emergency, or upon receipt of warning information about a possible national security emergency. These actions would be designed to mitigate the impact of, or reduce significantly, the lead times associated with full emergency action implementation. Such plans are required by section 201(4)(b) of Executive Order 12656.

(e) *A Costed Option Package* is a document that describes in detail a particular action that an agency could take in the early stages of a national security emergency. The general content of a GMR costed option package includes alternative response options; the resource implications of each option; shortfalls, costs, timeframes and political feasibility.

§ 334.5 GMR system description.

The GMR system contains three stages of mobilization activity (additional intermediate GMR stages may be developed). For example, a Federal department or agency might divide ''Crisis Management'' into two, three, or more levels as suits its needs.

(a) *Stage 3, Planning and Preparation.* During the planning and preparation stage, Federal departments and agencies develop their GMR plans and maintain capability to carry out their mobilization-related responsibilities in accordance with section 201 of Executive Order 12656. General types of problems likely to arise in a crisis situation are identified along with possible

methods for dealing with them. Investment programs can be undertaken to overcome identified problems.

(b) *Stage 2, Crisis Management.* During the crisis management stage, GMR plans are reviewed and capabilities will be re-examined in light of an actual event or crisis perceived to be emerging.

(1) Federal departments and agencies may need to gather additional data on selected resources or increase their preparedness activities. Costed Option Packages may need to be updated or new ones prepared for the response option measures in each of the department's and agency's area of responsibility. For example, when it appears likely that increased national resources may be required, resource readiness could be improved through the procurement of essential long lead time items, especially those that can be used even if the situation does not escalate. In general, long lead time preparedness actions would be considered for implementation at this time.

(2) Many preparedness actions at this stage would be handled through reprogramming, but the Costed Option Packages may also require new funding.

(3) If the crisis worsens, and prior to the declaration of national emergency, it may be necessary to surge certain production and stockpile items for future use.

(c) *Stage 1, National Emergency/War.* During a national emergency or declaration of war, mobilization of all national resources escalates and GMR will be subsumed into the overall mobilization effort. As military requirements increase, the national resources would increasingly be focused on the national security emergency. This would involve diverting non-essential demand for scarce resources from peacetime to defense uses, and converting industry from commercial to military production. Both surge production and expansion of the nation's productive capacity may also be necessary. Supplemental appropriations may be required for most Federal departments and agencies having national security emergency responsibilities.

§ 334.6 Department and agency responsibilities.

(a) During Stage 3, each Federal department and agency with mobilization responsibilities will develop GMR plans as part of its emergency preparedness planning process in order to meet possible future crisis. Costed Option Packages will be developed for actions that may be necessary in the early warning period. Option packages will be reviewed, focused and refined during Stage 2 to meet the particular emergency.

(b) Each department and agency should identify response actions appropriate for the early stage of any crisis or emergency situation, which then will be reviewed, focused and refined in Stage 2 for execution, as appropriate. GMR plans should contain a menu of costed option packages that provide details of alternative measures that may be used in an emergency situation.

(c) FEMA will provide guidance pursuant to Executive Order 12656 and will coordinate GMR plans and option packages of DOD and the civilian departments and agencies to ensure consistency and to identify areas where additional planning or investment is needed.

(d) During State 2, FEMA will coordinate department and agency recommendations for action and forward them to the National Security Advisor to make certain that consistency with the overall national strategy planning is achieved.

(e) Departments and agencies will refine their GMR plans to focus on the specific crisis situation. Costed option packages should be refined to identify the resources necessary for the current crisis, action taken to obtain those resources, and GMR plans implemented consistent with the seriousness of the crisis.

(f) At Stage 1, declaration of national emergency or war, the crisis is under the control of NSC or other central authority, with GMR being integrated into partial, full or total mobilization. At this point the more traditional mechanisms of resource mobilization are pursued, focusing on resource allocation and adjudication with cognizance of the essential civilian demand.

(g) Programs and plans developed by the departments and agencies under this guidance should be shared, as appropriate, with States, local governments and the private sector to provide a baseline for their development of supporting programs and plans.

§ 334.7 Reporting.

The Administrator of FEMA shall provide the President with periodic assessments of the Federal departments and agencies capabilities to respond to national security emergencies and periodic reports to the National Security Council on the implementation of the national security emergency preparedness policy. Pursuant to section 201(15) of Executive Order 12656, departments and agencies, as appropriate, shall consult and coordinate with the Administrator of FEMA to ensure that their activities and plans are consistent with current National Security Council guidelines and policies. An evaluation of the Federal departments and agencies participation in the graduated mobilization response program may be included in these reports.

PARTS 335–349 [RESERVED]

PART 350—REVIEW AND APPROVAL OF STATE AND LOCAL RADIOLOGICAL EMERGENCY PLANS AND PREPAREDNESS

Sec.

350.1 Purpose.
350.2 Definitions.
350.3 Background.
350.4 Exclusions.
350.5 Criteria for review and approval of State and local radiological emergency plans and preparedness.
350.6 Assistance in development of State and local plans.
350.7 Application by State for review and approval.
350.8 Initial FEMA action on State plan.
350.9 Exercises.
350.10 Public meeting in advance of FEMA approval.
350.11 Action by FEMA Regional Administrator.
350.12 FEMA Headquarters review and approval.
350.13 Withdrawal of approval.
350.14 Amendments to State plans.
350.15 Appeal procedures.

AUTHORITY: 42 U.S.C. 5131, 5201, 50 U.S.C. app. 2253(g); Sec. 109 Pub. L. 96–295; Reorganization Plan No. 3 of 1978; E.O. 12127; E.O. 12148.

SOURCE: 48 FR 44335, Sept. 28, 1983, unless otherwise noted.

§ 350.1 Purpose.

The purpose of the regulation in this part is to establish policy and procedures for review and approval by the Federal Emergency Management Agency (FEMA) of State and local emergency plans and preparedness for the offsite effects of a radiological emergency which may occur at a commercial nuclear power facility. Review and approval of these plans and preparedness involves preparation of findings and determinations of the adequacy of the plans and capabilities of State and local governments to effectively implement the plans.

§ 350.2 Definitions.

As used in this part, the following terms are defined:

(a) *Administrator* means the Administrator, FEMA, or designee;

(b) *Regional Administrator* means a Regional Administrator of FEMA, or designee;

(c) *Deputy Administrator* means the , National Preparedness Directorate, FEMA, or designee;

(d) *FEMA* means the Federal Emergency Management Agency;

(e) *NRC* means the Nuclear Regulatory Commission;

(f) *EPZ* means Emergency Planning Zone.

(g) *Emergency Planning Zone (EPZ)* is a generic area around a commercial nuclear facility used to assist in offsite emergency planning and the development of a significant response base. For commercial nuclear power plants, EPZs of about 10 and 50 miles are delineated for the plume and ingestion exposure pathways respectively.

(h) *Plume Exposure Pathway* refers to whole body external exposure to gamma radiation from the plume and from deposited materials and inhalation exposure from the passing radioactive plume. The duration of primary exposures could range in length from hours to days.

(i) *Ingestion Exposure Pathway* refers to exposure primarily from ingestion of water or foods such as milk and fresh vegetables that have been contaminated with radiation. The duration of primary exposure could range from hours to months.

(j) *Full participation* refers to an exercise in which: (1) State and local government emergency personnel are engaged in sufficient numbers to verify the capability to respond to the actions required by the accident scenario; (2) the integrated capability to adequately assess and respond to an accident at a commercial nuclear power plant is tested; and (3) the implementation of the observable portions of State and/or local plans is tested.

(k) *Partial participation* refers to the engagement of State and local government emergency personnel in an exercise sufficient to adequately test direction and control functions for protective action decisionmaking related to emergency action levels and communication capabilities among affected State and local governments and the licensee.

(l) *Remedial exercise* is one that tests deficiencies of previous joint exercise that are considered significant enough to impact on the public health and safety.

(m) *Local government* refers to boroughs, cities, counties, municipalities, parishes, towns, townships and other local jurisdictions within the plume exposure pathway EPZ when any of these entities has specific roles in emergency planning and preparedness in the EPZ.

(n) *Site* refers to the location at which there is one or more commercial nuclear power plants. A nuclear power plant is synonymous with a nuclear power facility.

§ 350.3 Background.

(a) On December 7, 1979, the President directed the Administrator of FEMA to take the lead in State and local emergency planning and preparedness activities with respect to nuclear power facilities. This included a review of the existing emergency plans both in States with operating reactors and those with plants scheduled for operation in the near future.

(b) This assignment was given to FEMA because of its responsibilities under Executive Order 12148 to establish Federal policies for and coordinate civil emergency planning, management and assistance functions and to represent the President in working with State and local governments and the private sector to stimulate vigorous participation in civil emergency preparedness programs. Under section 201 of the Disaster Relief Act of 1974 (42 U.S.C. 5131), and other statutory functions, the Administrator of FEMA is charged with the responsibility to develop and implement plans and programs of disaster preparedness.

(c) There are two sections in the NRC's fiscal year 1982/1983 Appropriation Authorization (Pub. L. 97–415) that pertain to the scope of this rule.

(1) Section 5 provides for the issuance of an operating license for a commercial nuclear power plant by the NRC if it is determined that there exists a State, local or utility plan which provides assurance that public health and safety is not endangered by the operation of the facility. This section would allow the NRC to issue an operating license for such plants without FEMA-approved State and local government plans.

(2) Section 11 provides for the issuance of temporary licenses for operating a utilization facility at a specific power level to be determined by the Commission, pending final action by the Commission on the application. Also, this section authorizes the NRC to issue temporary operating licenses for these facilities without the completion of the required (NRC) Commission hearing process. A petition for such a temporary license may not be filed until certain actions are completed including the submission of a State, local or utility emergency response plan for the facility.

(d) To carry out these responsibilities, FEMA is engaged in a cooperative effort with State and local governments and other Federal agencies in the development of State and local plans and preparedness to cope with the offsite effects resulting from radiological emergencies at commercial nuclear power facilities. FEMA developed and published the Federal Radiological

Emergency Response Plan 50 FR 46542 Nov. 8, 1985, to provide the overall support to State and local governments, for all types of radiological incidents including those occurring at nuclear power plants.

(e) FEMA has entered into a Memorandum of Understanding (MOU) with the NRC to which it will furnish assessments, findings and determinations as to whether State and local emergency plans and preparedness are adequate and continue to be capable of implementation (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualification and equipment adequacy). These findings and determinations will be used by NRC under its own rules in connection with its licensing and regulatory requirements and FEMA will support its findings in the NRC licensing process and related court proceedings.

(f) Notwithstanding the procedures set forth in these rules for requesting and reaching a FEMA administrative approval of State and local plans, findings and determinations on the current status of emergency preparedness around particular sites may be requested by the NRC and provided by FEMA for use as needed in the NRC licensing process. These findings and determinations may be based upon plans currently available to FEMA or furnished to FEMA by the NRC through the NRC/FEMA Steering Committee.

(g) An environmental assessment has been prepared on which FEMA has determined that this rule will not have a significant impact on the quality of the human environment.

[48 FR 44335, Sept. 28, 1983, as amended at 51 FR 34606, Sept. 30, 1986]

§ 350.4 Exclusions.

The regulation in this part does not apply to, nor will FEMA apply any criteria with respect to, any evaluation, assessment or determination regarding the NRC licensee's emergency plans or preparedness, nor shall FEMA make any similar determination with respect to the integration of offsite and NRC licensee emergency preparedness except as these assessments and determinations affect the emergency preparedness of State and local governments. The regulation in this part applies only to State and local planning and preparedness with respect to emergencies at commercial nuclear power facilities and does not apply to other facilities which may be licensed by NRC, nor to United States Government-owned, non-licensed facilities nor the jurisdictions surrounding them.

§ 350.5 Criteria for review and approval of State and local radiological emergency plans and preparedness.

(a) Section 50.47 of NRC's Emergency Planning Rule (10 CFR parts 50 (appendix E) and 70 as amended) and the joint FEMA–NRC *Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants* (NUREG–0654/FEMA–REP–1, Rev. 1, November 1980) which apply insofar as FEMA is concerned to State and local governments, are to be used in reviewing, evaluating and approving State and local radiological emergency plans and preparedness and in making any findings and determinations with respect to the adequacy of the plans and the capabilities of State and local governments to implement them. Both the planning and preparedness standards and related criteria contained in NUREG–0654/ FEMA–REP–1, Rev. 1 are to be used by FEMA and the NRC in reviewing and evaluating State and local government radiological emergency plans and preparedness. For brevity, only the planning standards contained in NUREG–0654/ FEMA–REP–1, Rev. 1 are presented below.

(1) Primary responsibilities for emergency response by the nuclear facility licensee, and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established and each principal response organization has staff to respond to and augment its initial response on a continuous basis.

(2) On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is

maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified. (This standard applies only to NRC licensees but is included here for completeness.)

(3) Arrangements for requesting and effectively using assistance resources have been made, arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made and other organizations capable of augmenting the planned response have been identified.

(4) A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

(5) Procedures have been established for notification, by the licensee, of State and local response organizations and for the notification of emergency personnel by all response organizations; the content of initial and followup messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.

(6) Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.

(7) Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance and procedures for coordinated dissemination of information to the public are established.

(8) Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

(9) Adequate methods, systems and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.

(10) A range of protective actions has been developed for the plume exposure pathway EPZ for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.

(11) Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides.

(12) Arrangements are made for medical services for contaminated injured individuals.

(13) General plans for recovery and reentry are developed.

(14) Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills and deficiencies identified as a result of exercises or drills are (will be) corrected.

(15) Radiological emergency response training is provided to those who may be called upon to assist in an emergency.

(16) Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.

(b) In order for State of local plans and preparedness to be approved, such plans and preparedness must be determined to adequately protect the public health and safety by providing reasonable assurance that appropriate protective measures can be taken offsite in the event of a radiological emergency.

§ 350.6 Assistance in development of State and local plans.

(a) An integrated approach to the development of offsite radiological emergency plans by States, localities and the licensees of NRC with the assistance of the Federal Government is the

approach most likely to provide the best protection to the public. Hence, Federal agencies, including FEMA Regional staff, will be made available upon request to assist States and localities in the development of plans.

(b) There now exists in each of the ten standard Federal Regions a Regional Assistance Committee (RAC) (formerly the Regional Advisory Committee) chaired by a FEMA Regional official and having members from the Nuclear Regulatory Commission, Department of Health and Human Services, Department of Energy, Department of Transportation, Environmental Protection Agency, the United States Department of Agriculture and Department of Commerce. Whereas in 44 CFR part 351, the Department of Defense is listed as a potential member of the RACs, it is not listed in this rule because military nuclear facilities are not the subject of concern. The RACs will assist State and local government officials in the development of their radiological emergency response plans, and will review plans and observe exercises to evaluate the adequacy of these plans and related preparedness. This assistance does not include the actual writing of State and local government plans by RAC members.

(c) In accomplishing the foregoing, the RACs will use the standards and criteria in NUREG–0654/FEMA–REP–1, Rev. 1, and will render such technical assistance as may be required, appropriate to their agency mission and expertise. In observing and evaluating exercises, the RACs will identify, soon after an exercise, any deficiencies observed in the planning and preparedness effort including deficiencies in resources, training of staff, equipment, staffing levels and deficiencies in the qualifications of personnel.

§ 350.7 Application by State for review and approval.

(a) A State which seeks formal review and approval by FEMA of the State's radiological emergency plan shall submit an application for such review and approval to the FEMA Regional Administrator of the Region in which the State is located. The application, in the form of a letter from the Governor or from such other State official as the Governor may designate, shall contain one copy of the completed State plan, including coverage of response in the ingestion exposure pathway EPZ. The application will also include plans of all appropriate local governments. The application shall specify the site or sites for which plan approval is sought. For guidance on the local government plans that should be included with an application, refer to Part I.E. NUREG–0654/FEMA–REP–1, Rev. 1, entitled Contiguous Jurisdiction Governmental Emergency Planning (see (e)). Only a State may request formal review of State or local radiological emergency plans.

(b) Generally, the plume exposure pathway EPZ for nuclear power facilities shall consist of an area about 10 miles (16 Km) in radius and the ingestion exposure pathway EPZ shall consist of an area about 50 miles (80 Km) in radius. The exact size and configuration of the EPZs surrounding a particular nuclear power facility shall be determined by State and local governments in consultation with FEMA and NRC taking into account such local conditions as demography, topography, land characteristics, access routes and local jurisdiction boundaries. The size of the EPZs may be determined by NRC in consultation with FEMA on a case-by-case basis for gas cooled reactors and for reactors with an authorized power level less than 250 Mw thermal. The plans for the ingestion exposure pathway shall focus on such actions as are appropriate to protect the public from ingesting contaminated food and water.

(c) A State may submit separately its plans for the EPZs and the local government plans related to individual nuclear power facilities. The purpose of separate submissions is to allow approval of a State plan, and of the plans necessary for specific nuclear power facilities in a multiple-facility State, while not approving or acting on the plans necessary for other nuclear power facilities within the State. If separate submissions are made, appropriate adjustments in the State plan may be necessary. In any event, FEMA approval of State plans and appropriate local government plans shall be site specific.

(d) The applications shall contain a statement that the State plan, together with the appropriate local plans, is, in the opinion of the State, adequate to protect the public health and safety of its citizens living within the emergency planning zones for the nuclear power facilities included in the submission by providing reasonable assurance that State and local governments can and intend to effect appropriate protective measures offsite in the event of a radiological emergency.

(e) FEMA and the States will make suitable arrangements in the case of overlapping or adjacent jurisdictions to permit an orderly assessment and approval of interstate or interregional plans.

§ 350.8 Initial FEMA action on State plan.

(a) The Regional Administrator shall acknowledge in writing within ten days the receipt of the State application.

(b) FEMA shall publish a notice signed by the Regional Administrator or designee in the FEDERAL REGISTER within 30 days after receipt of the application, that an application from a State has been received and that copies are available at the Regional Office for review and copying in accordance with 44 CFR 5.26.

(c) The Regional Administrator shall furnish copies of the plan to members of the RAC for their analysis and evaluation.

(d) The Regional Administrator shall make a detailed review of the State plan, including those of local governments, and assess the capability of State and local governments to effectively implement the plan (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualification and equipment adequacy). Evaluation and comments of the RAC members will be used as part of the review process.

(e) In connection with the review, the Regional Administrator may make suggestions to States concerning perceived gaps or deficiencies in the plans, and the State may amend the plan at any time prior to forwarding to the Deputy Administrator for the National Preparedness Directorate.

(f) Two conditions for FEMA approval of State plans (including local government plans) are the requirements for an exercise (see § 350.9), and for public participation (see §§ 350.9 and 350.10.). These activities occur during the Regional review and prior to the forwarding of the plan to the Deputy Administrator for the National Preparedness Directorate.

§ 350.9 Exercises.

(a) Before a Regional Administrator can forward a State plan to the Deputy Administrator for the National Preparedness Directorate for approval, the State, together with all appropriate local governments, must conduct a joint exercise of that State plan, involving full participation[1] of appropriate local government entities, the State and the appropriate licensee of the NRC. To the extent achievable, this exercise shall include participation by appropriate Federal agencies. This exercise shall be observed and evaluated by FEMA and by representatives of other Federal agencies with membership on the RACs and by NRC with respect to licensee response. Within 48 hours of the completion of the exercise, a briefing involving the exercise participants and Federal observers shall be conducted by the Regional Administrator to discuss the preliminary results of the exercise. If the exercise discloses any deficiencies in the State and local plans, or the ability of the State and local governments to implement the plans, the FEMA representatives shall make them known promptly in writing to appropriate State officials. To the extent necessary, the State shall amend the plan to incorporate recommended changes or improvements or take other corrective measures, such as remedial exercises,[1] to demonstrate to the Regional Administrator that identified weaknesses have been corrected.

(b) The Regional Administrator shall be the FEMA official responsible for certifying to the Deputy Administrator for the National Preparedness Directorate that an exercise of the State plan has been conducted, and that

[1] See § 350.2 for definitions of ''full participation'' and ''remedial exercises''.

changes and corrective measures in accordance with paragraph (a) of this section have been made.

(c) State and local governments that have fully participated in a joint exercise within one year prior to the effective date of this final rule will have continuing approval of their radiological emergency plans and preparedness by following the frequency indicated in paragraphs (c) (1) through (4) of this section. State and local governments that have not fully participated in a joint exercise within one year prior to the effective date of this final rule will follow the frequency indicated in paragraphs (c) (1) through (4) of this section after completion of a joint exercise in which they have fully participated. If, in developing exercise schedules with State and local governments to implement the requirements in paragraphs (c) (1) through (4) of this section, the Regional Administrator finds that unusual hardships would result, he may seek relief from the Deputy Administrator for the National Preparedness Directorate.

(1) Each State which has a commercial nuclear power site within its boundaries or is within the 10-mile plume exposure pathway Emergency Planning Zone of such site shall fully participate in an exercise jointly with the nuclear power plant licensee and appropriate local governments at least every two years.

(2) Each State with multiple sites within its boundaries shall fully participate in a joint exercise at some site on a rotational basis at least every 2 years. When not fully participating in an exercise at a site, the State shall partially participate[2] at that site to support the full participation of appropriate local governments. Priority shall be given to new facilities seeking an operating license from the NRC and which have not fully participated in a joint exercise involving the State, local governments and the licensee at that site. State and local governments will coordinate the scheduling of these exercises with the appropriate FEMA and NRC Regional Offices and the affected licensees.

[2] See §350.2 for definition of ''partial exercise''.

(3) Each appropriate local government which has a site within its boundaries or is within the 10-mile emergency planning zone shall fully participate in a joint exercise with the licensee and the State at least every two years. For those local governments that have planning and preparedness responsibilities for more than one facility, the Regional Administrator may seek an exemption from this requirement by recommending alternative arrangements for approval by the Deputy Administrator for the National Preparedness Directorate.

(4) States within the 50-mile emergency planning zone of a site shall exercise their plans and preparedness related to ingestion exposure pathway measures at least once every five years in conjunction with a plume exposure pathway exercise for that site.

(5) Remedial exercises may be required to correct deficiencies observed in exercises conducted for continued FEMA approval. Should this occur, the FEMA Regional Administrator will determine the participation required from the States and/or local governments.

(d) Within 48 hours of the completion of an exercise conducted for continued FEMA approval, a briefing involving the exercise participants and Federal observers shall be conducted by the Regional Administrator to discuss the preliminary results of the exercise. If the exercise discloses any deficiencies in the State and local plans, or the ability of the State and local governments to implement the plans, the FEMA representatives shall make them known promptly in writing to appropriate State officials. To the extent necessary, the State shall amend the plan to incorporate recommended changes or improvements or take other corrective measures, such as remedial exercises, to demonstrate to the Regional Administrator that identified weaknesses have been corrected. The Regional Administrator shall forward his or her evaluation of the exercise conducted for continued FEMA approval to the Deputy Administrator for the National Preparedness Directorate including the certification that changes and corrective measures have been made.

(e) Following the exercise conducted for continued FEMA approval, the Regional Administrator shall conduct a meeting in the vicinity of the nuclear power facility which will include the exercise participants, representatives from the NRC and other appropriate Federal agencies and the public and media as observers. The purpose of this meeting is to discuss the evaluation of the exercise. At the discretion of the Regional Administrator, written comments from the public and media may be submitted at or after the meeting. These comments will be taken into consideration by the Regional Administrator in his or her evaluation.

(f) After FEMA approval of a State and local plan has been granted, failure to exercise the State and local plans at the frequency and participation described in this section shall be grounds for withdrawing FEMA approval. (See § 350.13.)

§ 350.10 Public meeting in advance of FEMA approval.

(a) During the FEMA Regional Office review of a State plan and prior to the submission by the Regional Administrator of the evaluation of the plan and exercise to the Deputy Administrator for the National Preparedness Directorate, the FEMA Regional Administrator shall assure that there is at least one public meeting conducted in the vicinity of the nuclear power facility. The purpose of such a meeting, which may be conducted by the State or by the Regional Administrator, shall be to:

(1) Acquaint the members of the public in the vicinity of each facility with the content of the State and related local plans, and with the conduct of the joint exercise which tested the plans;

(2) Answer any questions about FEMA review of the plan and the exercise;

(3) Receive suggestions from the public concerning improvements or changes that may be necessary; and

(4) Describe to the public the way in which the plan is expected to function in the event of an actual emergency.

(b) The Regional Administrator should assure that representatives from appropriate State and local government agencies, and the affected utility appear at such meetings to make presentations and to answer questions from the public. The public meeting should be held after the first joint (utility, State and local governments) exercise at a time mutually agreed to by State and local authorities, licensee and FEMA and NRC Regional officials. This meeting shall be noticed in the local newspaper with the largest circulation in the area, or other such media as the Regional Administrator may select, on at least two occasions, one of which is at least two weeks before the meeting takes place and the other is within a few days of the meeting date. Local radio and television stations should be notified of the scheduled meeting at least one week in advance. Representatives from NRC and other appropriate Federal agencies should also be invited to participate in these meetings. If, in the judgment of the FEMA Regional Administrator, the public meeting or meetings reveal deficiencies in the State plan and/or the joint exercise, the Regional Administrator shall inform the State of the fact together with recommendations for improvement. No FEMA approval of State and local plans and preparedness shall be made until a meeting described in this paragraph shall have been held at or near the nuclear power facility site for which the State is seeking approval.

§ 350.11 Action by FEMA Regional Administrator.

(a) Upon completion of his or her review, including conduct of the exercise required by § 350.9 and after the public meeting required by § 350.10, the Regional Administrator shall prepare an evaluation of the State plan, including plans for local governments. Such evaluation shall be specific with respect to the plans applicable to each nuclear facility so that findings and determinations can be made by the Deputy Administrator for the National Preparedness Directorate on a site-specific basis.

(b) The Regional Administrator shall evaluate the adequacy of State and local plans and preparedness on the basis of the criteria set forth in § 350.5, and shall report the evaluation with respect to each of the planning standards

mentioned therein as such apply to State and local plans and preparedness.

(c) The Regional Administrator shall forward the State plan together with his or her evaluation and other relevant record material to the Deputy Administrator for the National Preparedness Directorate. Relevant record material will include the results of the exercise (i.e., deficiencies noted and corrections made), a summary of the deficiencies identified during the public meeting, recommendations made to the State and commitments made by the State for effecting improvements in its plans and preparedness and actions taken by the State.

§ 350.12 FEMA Headquarters review and approval.

(a) Upon receipt from a Regional Administrator of a State plan, the Deputy Administrator for the National Preparedness Directorate shall conduct such review of the State plan as he or she shall deem necessary. The Deputy Administrator for the National Preparedness Directorate shall arrange for copies of the plan, together with the Regional Administrator's evaluation, to be made available to the members of the Federal Radiological Preparedness Coordinating Committee (FRPCC) and to other offices of FEMA with appropriate guidance relative to any assistance that may be needed in the FEMA review and approval process.

(b) If, after formal submission of the State plan and the Regional Administrator's evaluation, the Deputy Administrator for the National Preparedness Directorate determines that the State plans and preparedness:

(1) Are adequate to protect the health and safety of the public living in the vicinity of the nuclear power facility by providing reasonable assurance that appropriate protective measures can be taken offsite in the event of a radiological emergency; and

(2) Are capable of being implemented (e.g. adequacy and maintenance of procedures, training, resources, staffing levels and qualification and equipment adequacy); the Deputy Administrator for the National Preparedness Directorate shall approve in writing the State plan. The Deputy Administrator for the National Preparedness Directorate shall concurrently communicate this FEMA approval to the Governor of the State(s) in question, the NRC and the pertinent Regional Administrator(s) and immediately shall publish in the FEDERAL REGISTER a notice of this effect.

(c) If, after formal submission of the State plan, the Deputy Administrator for the National Preparedness Directorate is not satisfied with the adequacy of the plan or preparedness with respect to a particular site, he or she shall concurrently communicate that decision to the Governor(s) of the State(s), the NRC and the pertinent Regional Administrator(s), together with a statement in writing explaining the reasons for the decision and requesting appropriate plan or preparedness revision. Such statement shall be transmitted to the Governor(s) through the appropriate Regional Administrator(s). The Deputy Administrator for the National Preparedness Directorate shall immediately publish a notice to this effect in the FEDERAL REGISTER.

(d) The approval shall be of the State plan together with the local plans for each nuclear power facility (including out-of-State facilities) for which approval has been requested. FEMA may withhold approval of plans applicable to a specific nuclear power facility in a multi-facility State, but nevertheless approve the State plan and associated local plans applicable to other facilities in a State. Approval may be withheld for a specific site until plans for all jurisdictions within the emergency planning zones of that site have been reviewed and found adequate.

(e) Within 30 days after the date of notification of approval for a particular nuclear power facility or within 30 days of any statement of disapproval of a State plan, any interested person may appeal the decision of the Deputy Administrator for the National Preparedness Directorate to the Administrator; however, such an appeal must be made solely upon the ground that the Deputy Administrator for the National Preparedness Directorate's decision, based on the available record, was unsupported by substantial evidence. (See § 350.15 for appeal procedures.)

§ 350.13 Withdrawal of approval.

(a) If, at any time after granting approval of a State plan, the Deputy Administrator for the National Preparedness Directorate determines, on his or her own initiative, motion or on the basis of information another person supplied, that the State or local plan is no longer adequate to protect public health and safety by providing reasonable assurance that appropriate protective measures can be taken, or is no longer capable of being implemented, he or she shall immediately advise the Governor of the affected State, through the appropriate Regional Administrator and the NRC of that initial determination in writing. FEMA shall spell out in detail the reasons for its initial determination, and shall describe the deficiencies in the plan or the preparedness of the State. If, after four months from the date of such an initial determination, the State in question has not either:

(1) Corrected the deficiencies noted, or (2) submitted an acceptable plan for correcting those deficiencies, the Deputy Administrator for the National Preparedness Directorate shall withdraw approval and shall immediately inform the NRC and the Governor of the affected State, of the determination to withdraw approval and shall publish in the FEDERAL REGISTER and the local newspaper having the largest daily circulation in the affected State notice of its withdrawal or approval. The basis upon which the Deputy Administrator for the National Preparedness Directorate makes the determination for withdrawal of approval is the same basis used for reviewing plans and exercises, i.e., the planning standards and related criteria in NUREG0654/FEMA/REP–1, Rev. 1.

(b) In the event that the State in question shall submit a plan for correcting the deficiencies, the Deputy Administrator for the National Preparedness Directorate shall negotiate a schedule and a timetable under which the State shall correct the deficiencies. If, on the agreed upon date, the deficiencies have been corrected, the Deputy Administrator for the National Preparedness Directorate shall withdraw the initial determination and the approval previously granted shall remain valid. He or she shall inform the Governor(s), the NRC, the pertinent Regional Administrator(s) and notify the public as stated in paragraph (a) of this section. If, however, on the agreed upon date, the deficiencies are not corrected, FEMA shall withdraw its approval and shall communicate its decision to the Governor of the State whose plan is in question, the NRC, the appropriate Federal agencies and notify the public as indicated above.

(c) Within 30 days after the date of notification of withdrawal of approval of a State or local plan, any interested person may appeal the decision of the Deputy Administrator for the National Preparedness Directorate to the Administrator; however, such an appeal must be made solely upon the ground that the Deputy Administrator for the National Preparedness Directorate's decision, based on the available record, was unsupported by substantial evidence. (See § 350.15 for appeal procedures.)

§ 350.14 Amendments to State plans.

(a) The State may amend a plan submitted to FEMA for review and approval under § 350.7 at any time during the review process or may amend a plan at any time after FEMA approval has been granted under § 350.12. A State must amend its plan in order to extend the coverage of the plan to any new nuclear power facility which becomes operational after a FEMA approval or in case of any other significant change. The State plan shall remain in effect as approved while any significant change is under review.

(b) A significant change is one which involves the evaluation and assessment of a planning standard or which involves a matter which, if presented with the plan, would need to have been considered by the Deputy Administrator for the National Preparedness Directorate in making a decision that State or local plans and preparedness are:

(1) Adequate to protect the health and safety of the public living in the vicinity of the nuclear power facility by providing reasonable assurance that appropriate protective measures can be taken offsite in the event of a radiological emergency; and

(2) Capable of being implemented.

(c) A significant change will be processed in the same manner as if it were an initial plan submission. However, the Regional Administrator may determine that certain procedures, such as holding a public meeting or a complete exercise, would be unnecessary. The existing FEMA approval shall remain in effect while any significant changes are under review.

(d) Changes, such as a change in a telephone number, that are not significant as defined in paragraphs (b) and (c) of this section, but are necessary to maintain currency of the plan, should be forwarded to the Regional Administrator.

§ 350.15 Appeal procedures.

(a) Any interested person may appeal a decision made under §§ 350.12 and 350.13 of this part, by submitting to the Administrator, FEMA, a written notice of appeal, within 30 days after the appearance in the FEDERAL REGISTER, of the notice of decision relating to the matter being appealed. The appeal must be addressed to the Administrator, Federal Emergency Management Agency, 500 C Street, SW., Washington, DC, 20472. The appeal letter shall state specific reasons for the appeal and include an offer to provide documentation supporting appellate arguments.

(b) Upon receipt of an appeal, the Administrator or the Administrator's designee shall review the file, as submitted to the Deputy Administrator for the National Preparedness Directorate, by the Regional Administrator of the FEMA Region concerned, based on the information contained in the file and the appeal letter, with supporting documentation. The Administrator or the Administrator's designee shall decide whether or not the Associate Director's initial decision was supported by substantial evidence in the file and is consistent with FEMA policy.

(c) The decision of the Administrator or the Administrator's designee shall be published in the FEDERAL REGISTER as the final agency decision on the matter and shall not be reviewable within FEMA, except upon a showing that it was procured by fraud or misrepresentation. In addition to publication in the FEDERAL REGISTER, copies of the decision shall be forwarded to the appellant, the Governor(s) of the State(s) affected, the NRC and the affected licensee of the involved power facility.

PART 351—RADIOLOGICAL EMERGENCY PLANNING AND PREPAREDNESS

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AUTHORITY: 5 U.S.C. 552, Reorganization Plan No. 3 of 1978, E.O. 12127, E.O. 12148, E.O. 12241; Presidential Directive of Dec. 7, 1979.

SOURCE: 47 FR 10759, Mar. 11, 1982, unless otherwise noted.

Subpart A—General

§ 351.1 Purpose.

This part sets out Federal agency roles and assigns tasks regarding Federal assistance to State and local governments in their radiological emergency planning and preparedness activities. Assignments in this part are applicable to radiological accidents at fixed nuclear facilities and transportation accidents involving radioactive materials.

§ 351.2 Scope.

The emergency planning and preparedness responsibilities covered by this part relate to consequences and activities which extend beyond the boundaries of any fixed nuclear facility with a potential for serious consequences and the area affected by a transportation accident involving radioactive materials.

§ 351.3 Limitation of scope.

(a) This part covers Federal agency assignments and responsibilities in connection with State and local emergency plans and preparedness measures. It does not set forth criteria used in the review and approval of these plans and does not include any of the requirements associated with FEMA findings and determinations on the adequacy of State and local government radiological emergency preparedness. FEMA has published a separate rule on procedures and criteria for reviewing and approving these plans and preparedness capabilities. Furthermore, this part does not set forth Federal agency responsibilities or capabilities for *responding to an accident* at a fixed nuclear facility or a transportation accident involving radioactive materials. These responsibilities are addressed in the ''Federal Radiological Emergency Response Plan'' (50 FR 46542, November 8, 1985).

(b) Nothing in this part authorizes access to or disclosure of classified information required to be protected in accordance with Federal law or regulation in the interest of national security.

[47 FR 10759, Mar. 11, 1982, as amended at 51 FR 34606, Sept. 30, 1986]

Subpart B—Federal Radiological Preparedness Coordinating Committee and Regional Assistance Committees

§ 351.10 Establishment of committees.

(a) The Federal Radiological Preparedness Coordinating Committee (FRPCC) consists of the Federal Emergency Management Agency, which chairs the Committee, Nuclear Regulatory Commission, Environmental Protection Agency, Department of Health and Human Services, Department of Energy, Department of Transportation, Department of Defense, United States Department of Agriculture, Department of Commerce and, where appropriate and on an ad hoc basis, other Federal departments and agencies. In chairing the committee, FEMA will be responsible for assuring that all agency assignments described in this rule are coordinated through the Committee and carried out with or on behalf of State and local governments.

(b) The Regional Assistance Committees (RACs), one in each of 10 standard Federal regions,[1] consist of a FEMA Regional Representative who chairs the Committee and representatives from the Nuclear Regulatory Commission, Environmental Protection Agency, Department of Health and Human Services, Department of Energy, Department of Transportation, United States Department of Agriculture, Department of Commerce and other Federal departments and agencies such as the Department of Defense, as appropriate. The FEMA Chairperson of the RACs will provide guidance and orientation to other agency members to assist them in carrying out their functions.

§ 351.11 Functions of committees.

(a) The FRPCC shall assist FEMA in providing policy direction for the program of Federal assistance to State and local governments in their radiological emergency planning and preparedness activities. The FRPCC will establish subcommittees to aid in carrying out its functions; e.g., research, training, emergency instrumentation, transportation, information, education and Federal response. The FRPCC will assist FEMA in resolving issues relating to granting of final FEMA approval of a State plan. The FRPCC will coordinate research and study efforts of its member agencies related to State and local government radiological

[1] I (Boston); II (New York); III (Philadelphia); IV (Atlanta); V (Chicago); VI (Dallas); VII (Kansas City); VIII (Denver); IX (San Francisco) and X (Seattle).

emergency preparedness to assure minimum duplication and maximum benefits to State and local governments. The FRPCC will also assure that the research efforts of its member agencies are coordinated with the Interagency Radiation Research Committee.

(b) The RACs will assist State and local government officials in the development of their radiological emergency plans and will review these plans and observe exercises to evaluate adequacy of the plans. Each Federal agency member of the RACs will support the functions of these committees by becoming knowledgeable of Federal planning and guidance related to State and local radiological emergency plans, of their counterpart State organizations and personnel, where their agency can assist in improving the preparedness and by participating in RAC meetings.

Subpart C—Interagency Assignments

§ 351.20 The Federal Emergency Management Agency.

(a) Establish policy and provide leadership via the FRPCC in the coordination of all Federal assistance and guidance to State and local governments for developing, reviewing, assessing and testing the State and local radiological emergency plans.

(b) Issue guidance in cooperation with other Federal agencies concerning their responsibilities for providing radiological emergency planning and preparedness assistance to State and local governments.

(c) Foster cooperation of industry, technical societies, Federal agencies and other constituencies in the radiological emergency planning and preparedness of State and local governments.

(d) Develop and promulgate preparedness criteria and guidance to State and local governments, in coordination with other Federal agencies, for the preparation, review and testing of State and local radiological emergency plans.

(e) Provide assistance to State and local governments in the preparation, review and testing of radiological emergency plans.

(f) Assess, with the assistance of other Federal agencies, the adequacy of State and local government emergency plans and the capability of the State and local government officials to implement them (e.g., adequacy and maintenance of equipment, procedures, training, resources, staffing levels and qualifications) and report the findings and determinations to NRC.

(g) Review and approve State radiological emergency plans and preparedness in accordance with FEMA procedures in 44 CFR part 350.

(h) Develop, implement and maintain a program of public education and information to support State and local radiological emergency plans and preparedness.

(i) Develop and manage a radiological emergency response training program to meet State and local needs, using technical expertise and resources of other involved agencies. Develop and field test exercise materials and coordinate the Federal assistance required by States and localities in conducting exercises, including guidance for Federal observers.

(j) Develop, with NRC and other Federal Agencies, representative scenarios from which NRC licensed facility operators and State and local governments may select for use in testing and exercising radiological emergency plans.

(k) Issue guidance for establishment of State and local emergency instrumentation systems for radiation detection and measurement.

(l) Provide guidance and assistance, in coordination with NRC and HHS, to State and local governments concerning the storage and distribution of radioprotective substances and prophylactic use of drugs (e.g., potassium iodide) to reduce the radiation dose to specific organs as a result of radiological emergencies.

§ 351.21 The Nuclear Regulatory Commission.

(a) Assess NRC nuclear facility (e.g., commercial power plants, fuel processing centers and research reactors) licensee emergency plans for adequacy to protect the health and safety of the public.

(b) Verify that nuclear facility licensee emergency plans can be adequately implemented (e.g., adequacy and maintenance of equipment, procedures, training, resources, staffing levels and qualifications).

(c) Review FEMA's findings and determinations of State and local radiological emergency plans for areas surrounding NRC licensed nuclear facilities.

(d) Take into account the overall state of emergency preparedness in making decisions to issue operating licenses or shut down licensed operating reactors, including the integration of assessments of emergency preparedness onsite by the NRC and offsite by FEMA.

(e) Where not already established, determine, in cooperation with other Federal agencies, the appropriate planning bases for NRC licensed nuclear facilities including distances, times and radiological characteristics.

(f) Assist FEMA in developing and promulgating guidance to State and local governments for the preparation of radiological emergency plans.

(g) Participate with FEMA in assisting State and local governments in developing their radiological emergency plans, evaluating exercises to test plans and evaluating the plans and preparedness.

(h) Assist FEMA and DOT in the preparation and promulgation of guidance to State and local governments for their use in developing the transportation portions of radiological emergency plans.

(i) Provide representation to and support for the FRPCC and the RACs.

(j) Assist FEMA in the development, implementation and maintenance of public information and education programs.

(k) Assist FEMA with other Federal agencies in the development of representative scenarios from which nuclear facility operators and State and local governments may select for use in testing and exercising radiological emergency plans.

(l) Assist FEMA in the development of guidance for State and local governments on emergency instrumentation systems for radiation detection and measurement.

(m) Assist FEMA with the development, implementation and presentation to the extent that resources permit of training programs for Federal, State and local radiological emergency preparedness personnel.

(n) Assist FEMA in providing guidance and assistance to State and local governments concerning the storage and distribution of radioprotective substances and prophylactic use of drugs (e.g., potassium iodide) to reduce the radiation dose to specific organs as a result of radiological emergencies.

§ 351.22 The Environmental Protection Agency.

(a) Establish Protective Action Guides (PAGs) for all aspects of radiological emergency planning in coordination with appropriate Federal agencies.

(b) Prepare guidance for State and local governments on implementing PAGs, including recommendations on protective actions which can be taken to mitigate the potential radiation dose to the population. This guidance will be presented in the Environmental Protection Agency (EPA) ''Manual of Protective Action Guides and Protective Actions for Nuclear Incidents.'' (The preparation of PAGs related to human food and animal feed will be done in coordination with the Department of Health and Human Services (HHS)/Food and Drug Administration.)

(c) Assist FEMA in developing and promulgating guidance to State and local governments for the preparation of radiological emergency plans.

(d) Assist FEMA with the development, implementation and presentation to the extent that resources permit of technical training for State and local officials regarding PAGs and protective actions, radiation dose assessment and decisionmaking.

(e) Participate with FEMA in assisting State and local governments in developing their radiological emergency plans, evaluating exercises to test plans and evaluating the plans and preparedness.

(f) Assist FEMA in the development of guidance for State and local governments on emergency instrumentation systems for radiation detection and measurement.

(g) Provide representation to and support for the FRPCC and the RACs.

(h) Assist FEMA in developing representative scenarios from which nuclear facility operators and State and local governments may select for use in testing and exercising radiological emergency plans.

(i) Assist FEMA in the development, implementation and maintenance of public information and education programs.

§ 351.23 The Department of Health and Human Services.

(a) Develop and specify protective actions and associated guidance to State and local governments for human food and animal feed (in cooperation with the Environmental Protection Agency).

(b) Provide guidance and assistance to State and local governments in preparing programs related to mental health, behavioral disturbances and epidemiology associated with radiological emergencies.

(c) Assist FEMA in the development, implementation and maintenance of public information and education programs to support State and local government radiological emergency plans and preparedness.

(d) Assist FEMA with the development, implementation and presentation to the extent that resources permit of a radiological emergency training program to support State and local government personnel in accident assessment, protective actions and decisionmaking.

(e) Develop and assist in providing the requisite training programs for State and local health, mental health and social service agencies.

(f) Provide guidance to State and local governments on the use of radioprotective substances and prophylactic use of drugs (e.g., potassium iodide) to reduce the radiation dose to specific organs including dosage and projected radiation exposures at which such drugs should be used.

(g) Assist FEMA in developing and promulgating guidance to State and local governments for the preparation of radiological emergency plans.

(h) Participate with FEMA in assisting State and local governments in developing their radiological emergency plans, evaluating exercises to test plans and evaluating the plans and preparedness.

(i) Provide representation to and support for the FRPCC and the RACs.

(j) Assist FEMA in developing representative scenarios from which nuclear facility operators and State and local governments may select for use in testing and exercising radiological emergency plans.

(k) Assist FEMA in the development of guidance for State and local governments on emergency instrumentation systems for radiation detection and measurement.

(l) Assist, in cooperation with the United States Department of Agriculture (USDA), the State and local governments in the planning for the safe production, during radiological emergencies, of human food and animal feed in the emergency planning zones around fixed nuclear facilities.

(m) Assist FEMA, through the Interagency Radiation Research Committee, chaired by the Department of Health and Human Services, in the coordination of Federal research efforts, primarily in areas related to the bioeffects of radiation, applicable to State and local plans and preparedness.

§ 351.24 The Department of Energy.

(a) Determine the appropriate planning bases for the Department of Energy (DOE) owned and contractor operated nuclear facilities (e.g., research and weapon production facilities) including distances, time and radiological characteristics.

(b) Assess DOE nuclear facility emergency plans for adequacy in contributing to the health and safety of the public.

(c) Verify that DOE nuclear facility emergency plans can be adequately implemented (e.g., adequacy and maintenance of equipment, procedures, training, resources, staffing levels and qualifications).

(d) Assist State and local governments, within the constraints of national security and in coordination with FEMA, in the preparation of those portions of their radiological emergency plans related to DOE owned and

contractor operated nuclear facilities and radioactive materials in transit.

(e) Review and assess FEMA's findings and determinations on the adequacy of and capability to implement State and local radiological emergency plans for areas surrounding DOE nuclear facilities. Make independent assessments of the overall State of plans and preparedness.

(f) Serve as the lead agency for coordinating the development and issuance of interagency instructions and guidance to implement the Federal Radiological Monitoring and Assessment Plan (FRMAP), which will replace the Interagency Radiological Assistance Plan. The FRMAP provides the framework through which participating Federal agencies will coordinate their emergency radiological monitoring and assessment activities with those of State and local governments.

(g) Develop, maintain and improve capability to detect and assess hazardous levels of radiation.

(h) Assist FEMA in developing and promulgating guidance to State and local governments for the preparation of radiological emergency plans.

(i) Assist FEMA with the development, implementation and presentation to the extent that resources permit of training programs for Federal, State and local radiological emergency response personnel.

(j) Participate with FEMA in assisting State and local governments in developing their radiological emergency plans, evaluating exercises to test plans and evaluating the plans and preparedness.

(k) Develop, with FEMA, representative scenarios from which DOE facility operators and State and local governments may select for use in testing and exercising radiological emergency plans.

(l) Provide representation to and support for the FRPCC and the RACs.

(m) Assist FEMA in the development of guidance for State and local governments on emergency instrumentation systems for radiation detection and measurement.

§ 351.25 The Department of Transportation.

(a) Assist FEMA, along with NRC, in the preparation and promulgation of guidance to State and local governments for their use in developing the transportation portions of radiological emergency plans.

(b) Assist FEMA in its review and approval of State and local radiological emergency plans and in the evaluation of exercises to test such plans.

(c) Provide guidance and materials for use in training emergency services and other response personnel for transportation accidents involving radioactive materials and participate in interagency planning for such training.

(d) Provide representation to and support for the FRPCC and the RACs.

§ 351.26 The United States Department of Agriculture.

(a) Assist FEMA in developing and promulgating guidance to State and local governments for the preparation of radiological emergency plans.

(b) Participate with FEMA in assisting State and local governments in developing their radiological emergency plans, evaluating exercises to test plans and reviewing and evaluating the plans and preparedness.

(c) Assist State and local governments in preparing to implement protective actions in food ingestion pathway emergency planning zones around fixed nuclear facilities.

(d) Develop, in coordination with FEMA, the HHS and other Federal agencies, guidance for assisting State and local governments in the production, processing and distribution of food resources under radiological emergency conditions.

(e) Assist FEMA with the development, implementation and presentation to the extent that resources permit of training programs of Federal, State and local radiological emergency personnel.

(f) Provide representation to and support for the FRPCC and the RACs.

§ 351.27 The Department of Defense.

(a) Determine appropriate planning bases for Department of Defense (DOD) nuclear facilities and installations (e.g., missile bases, nuclear submarine

facilities and weapon storage sites) including distances, time and radiological characteristics.

(b) Develop, with FEMA, representative scenarios from which DOD nuclear facility commanders and State and local governments may select for use in testing and exercising radiological emergency plans.

(c) Assist State and local governments, within the constraints of national security and in coordination with FEMA, in the development, review and assessment of those portions of their radiological emergency plans related to DOD nuclear facilities and assist State officials with planning for response to accidents involving DOD controlled radioactive materials in transit.

(d) Provide representation to and support for the FRPCC and the RACs when appropriate.

§ 351.28 The Department of Commerce.

(a) Assist State and local governments in determining their requirements for meteorological and hydrological services for radiological emergencies and assist State and local governments in preparing to meet these requirements within the limits of available resources.

(b) Assist FEMA in developing and promulgating guidance to State and local governments for the preparation of radiological emergency plans.

(c) Participate with FEMA in assisting State and local governments in developing their radiological emergency plans, evaluating exercises to test plans and evaluating the plans and preparedness.

(d) Assist FEMA with the development, implementation and presentation to the extent that resources permit of technical training for State and local officials in the use of meterological information in responding to radiological emergencies.

(e) Provide representation to and support for the FRPCC and the RACs.

(f) Assist FEMA in the development of guidance for State and local governments on the exposure and location of emergency instrumentation systems for radiation detection and measurement.

(g) The Federal Coordinator for Meteorological Services and Supporting Research will, consistent with the provisions of the Office of Management and Budget Circular A–62, serve as the coordinating agent for any multiagency meteorological aspects of assisting State and local governments in their radiological emergency planning and preparedness.

PART 352—COMMERCIAL NUCLEAR POWER PLANTS: EMERGENCY PREPAREDNESS PLANNING

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AUTHORITY: Federal Civil Defense Act of 1950, as amended (50 U.S.C. app. 2251 *et seq.*;) Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq.;* 31 U.S.C. 9701; Executive Order 12657; Executive Order 12148; Executive Order 12127 and Executive Order 12241.

SOURCE: 54 FR 31925, Aug. 2, 1989, unless otherwise noted.

§ 352.1 Definitions.

As used in this part, the following terms and concepts are defined:

(a) *Deputy Administrator* means the Deputy Administrator, National Preparedness Directorate, FEMA or designee.

(b) *Administrator* means the Administrator, FEMA or designee.

(c) *EPZ* means Emergency Planning Zone.

(d) *FEMA* means the Federal Emergency Management Agency.

(e) *NRC* means the Nuclear Regulatory Commission.

(f) *Regional Administrator* means the Regional Administrator of FEMA or designee.

(g) *Local government* means boroughs, cities, counties, municipalities, parishes, towns, townships or other local jurisdictions within the plume and ingestion exposure pathway EPZs that have specific roles in emergency planning and preparedness.

(h) *Decline or fail* means a situation where State or local governments do not participate in preparing offsite emergency plans or have significant planning or preparedness inadequacies and have not demonstrated the commitment or capabilities to correct those inadequacies in a timely manner so as to satisfy NRC licensing requirements.

(i) *Governor* means the Governor of a State or his/her designee.

(j) *Certification* means the written justification by a licensee of the need for Federal compensatory assistance. This certification is required to activate the Federal assistance under this part.

(k) *Responsible local official* means the highest elected official of an appropriate local government.

(l) *Technical assistance* means services provided by FEMA and other Federal agencies to facilitate offsite radiological emergency planning and preparedness such as: Provision of support for the preparation off site radiological emergency response plans and procedures; FEMA coordination of services from other Federal agencies; provision and interpretation of Federal guidance; provision of Federal and contract personnel to offer advice and recommendations for specific aspects of preparedness such as alert and notification and emergency public information.

(m) *Federal facilities and resources* means personnel, property (land, buildings, vehicles, equipment), and operational capabilities controlled by the Federal government related to establishing and maintaining radiological emergency response preparedness.

(n) *Licensee* means the utility which has applied for or has received a license from the NRC to operate a commercial nuclear power plant.

(o) *Reimbursement* means the payment to FEMA/Federal agencies, jointly or severally, by a licensee and State and local governments for assistance and services provided in processing certifications and implementing Federal compensatory assistance under this part 352.

(p) *Host FEMA Regional Office* means the FEMA Regional Office that has primary jurisdiction by virtue of the nuclear power plant being located within its geographic boundaries.

(q) *Command and control* means making and issuing protective action decisions and directing offsite emergency response resources, agencies, and activities.

§ 352.2 Scope, purpose and applicability.

(a) This part applies whenever State or local governments, either individually or together, decline or fail to prepare commercial nuclear power plant offsite radiological emergency preparedness plans that are sufficient to satisfy NRC licensing requirements or to participate adequately in the preparation, demonstration, testing, exercise, or use of such plans. In order to request the assistance provided for in this part, an affected nuclear power plant applicant or licensee shall certify in writing to FEMA that the above situation exists.

(b) The purposes of this part are as follows: (1) To establish policies and procedures for the submission of a licensee certification for Federal assistance under Executive Order 12657; (2) set forth policies and procedures for FEMA's determination to accept, accept with modification, or reject the licensee certification; (3) establish a

framework for providing Federal assistance to licensees; and (4) provide procedures for the review and evaluation of the adequacy of offsite radiological emergency planning and preparedness. Findings and determinations on offsite planning and preparedness made under this part are provided to the NRC for its use in the licensing process.

(c) This part applies only in instances where Executive Order 12657 is used by a licensee and its provisions do not affect the validity of the emergency preparedness developed by the licensee independent of or prior to Executive Order 12657.

Subpart A—Certifications and Determinations

§ 352.3 Purpose and scope.

This subpart establishes policies and procedures for submission by a commercial nuclear power plant licensee of a certification for Federal assistance under Executive Order 12657. It contains policies and procedures for FEMA's determinations, with respect to a certification. It establishes a framework for providing Federal assistance to licensees. It also provides procedures for review and evaluation of the adequacy of licensee offsite radiological emergency planning and preparedness.

§ 352.4 Licensee certification.

(a) A licensee which seeks Federal assistance under this part shall submit a certification to the host FEMA Regional Administrator that a decline or fail situation exists. The certification shall be in the form of a letter from the chief executive officer of the licensee. The contents of this letter shall address the provisions set forth in paragraphs (b) and (c) of this section.

(b) The licensee certification shall delineate why such assistance is needed based on the criteria of decline or fail for the relevant State or local governments.

(c) The licensee certification shall document requests to and responses from the Governor(s) or responsible local official(s) with respect to the efforts taken by the licensee to secure their participation, cooperation, commitment of resources or timely correction of planning and preparedness failures.

[54 FR 31925, Aug. 2, 1989, as amended at 74 FR 15357, Apr. 3, 2008]

§ 352.5 FEMA action on licensee certification.

(a) Upon receiving a licensee certification, the host Regional Administrator shall immediately notify FEMA Headquarters of the licensee certification. Within 5 days the host Regional Administrator shall notify the Governor of an affected State and the chief executive officer of any local government that a certification has been received, and make a copy of the certification available to such persons. Within 10 days, the host Regional Administrator shall acknowledge in writing the receipt of the certification to the licensee.

(b) Within 15 days of receipt of the certification, the Regional Administrator shall publish a notice in the FEDERAL REGISTER that a certification from the licensee has been received, and that copies are available at the Regional Office for review and copying in accordance with 44 CFR 5.26.

(c) FEMA Headquarters shall notify the NRC of receipt of the certification and shall request advice from the NRC on whether a decline or fail situation exists.

(d) State and local governments may submit written statements to the host Regional Administrator outlining their position as to the facts stated in the letter of certification. Such statements shall be submitted to FEMA within 10 days of the date of notification provided to State and local government under §352.5(a). Any such statements shall be a part of the record and will be considered in arriving at recommendations or determinations made under the provisions of this part.

(e) The host FEMA Regional Office shall provide, after consulting with State and responsible local officials, a recommended determination on whether a decline or fail situation exists to the FEMA Deputy Administrator for the National Preparedness Directorate within 30 days of receipt of the licensee certification.

(f) The FEMA Deputy Administrator for the National Preparedness Directorate shall make a determination on whether a decline or fail situation exists within 45 days of receipt of the licensee certification and shall advise the licensee, NRC, and State and local officials.

(g) The times for actions set out above may be extended up to an aggregate of 30 days by the host Regional Administrator or Deputy Administrator for the National Preparedness Directorate, as appropriate.

§ 352.6 FEMA determination on the commitment of Federal facilities and resources.

(a) A licensee request for Federal facilities and resources shall document the licensee's maximum feasible use of its resources and its efforts to secure the use of State and local government and volunteer resources.

(b) Upon a licensee request for Federal facilities and resources, FEMA headquarters shall notify NRC and request advice from the NRC as to whether the licensee has made maximum use of its resources and the extent to which the licensee has complied with 10 CFR 50.47(c)(1). The host FEMA Regional Administratorshall make a recommendation to the FEMA Deputy Administrator for the National Preparedness Directorate on whether the provision of these facilities and resources is warranted. The FEMA Deputy Administrator for the National Preparedness Directorate shall make a final determination as to whether Federal facilities and resources are needed.

(c) In making the determination under paragraph (b) of this section, FEMA:

(1) Shall work actively with the licensee, and before relying upon any Federal resources, shall make maximum feasible use of the licensee's own resources, which may include agreements with volunteer organizations and other government entities and agencies; and

(2) Shall assume that, in the event of an actual radiological emergency or disaster, State and local authorities would contribute their full resources and exercise their authorities in accordance with their duties to protect the public and would act generally in conformity with the licensee's radiological emergency preparedness plan.

(d) The FEMA Deputy Administrator for the National Preparedness Directorate shall make a determination on the need for and commitment of Federal facilities and resources. The FEMA determination shall be made in consultation with affected Federal agencies and in accordance with 44 CFR 352.21. FEMA shall inform the licensee, the States and affected local governments in writing of the Federal support which will be provided. This information shall identify Federal agencies that are to provide Federal support, the extent and purpose of the support to be provided, the Federal facilities and resources to be committed and the limitations on their use. The provision of the identified Federal support shall be made under the policies and procedures of subpart B of this part.

§ 352.7 Review and evaluation.

FEMA shall conduct its activities and make findings under this part in a manner consistent with 44 CFR part 350 to the extent that those procedures are appropriate and not inconsistent with the intent and procedures required by E.O. 12657. This Order shall take precedence, and any inconsistencies shall be resolved under the procedures in the NRC/FEMA Memorandum of Understanding (MOU) on planning and preparedness. (50 FR 15485, April 18, 1985)

Subpart B—Federal Participation

§ 352.20 Purpose and scope.

This subpart establishes policy and procedures for providing support for offsite radiological emergency planning and preparedness in a situation where Federal support under Executive Order 12657 (E.O. 12657) has been requested. This subpart:

(a) Describes the process for providing Federal technical assistance to the licensee for developing its offsite emergency response plan after an affirmative determination on the licensee certification under subpart A (44 CFR 352.5(f));

(b) Describes the process for providing Federal facilities and resources to the licensee after a determination

under subpart A (44 CFR 352.6(d)) that Federal resources are required;

(c) Describes the principal response functions which Federal agencies may be called upon to provide;

(d) Describes the process for allocating responsibilities among Federal agencies for planning site-specific emergency response functions; and

(e) Provides for the participation of Federal agencies, including the members of the FRPCC and the RACs.

§ 352.21 Participating Federal agencies.

(a) FEMA may call upon any Federal agency to participate in planning for the use of Federal facilities and resources in the licensee offsite emergency response plan.

(b) FEMA may call upon the following agencies, and others as needed, to provide Federal technical assistance and Federal facilities and resources:

(1) Department of Commerce;

(2) Department of Defense;

(3) Department of Energy;

(4) Department of Health and Human Services;

(5) Department of Housing and Urban Development;

(6) Department of the Interior;

(7) Department of Transportation;

(8) Environmental Protection Agency;

(9) Federal Communications Commission;

(10) General Services Administration;

(11) National Communications System;

(12) Nuclear Regulatory Commission;

(13) United States Department of Agriculture; and

(14) Department of Veterans Affairs.

(c) FEMA is the Federal agency primarily responsible for coordinating Federal assistance. FEMA may enter into Memorandums of Understanding (MOU) and other instruments with Federal agencies to provide technical assistance and to arrange for the commitment and utilization of Federal facilities and resources as necessary. FEMA also may use a MOU to delegate to another Federal agency, with the consent of that agency, any of the functions and duties assigned to FEMA. Following review and approval by OMB, FEMA will publish such documents in the FEDERAL REGISTER.

§ 352.22 Functions of the Federal Radiological Preparedness Coordinating Committee (FRPCC).

Under 44 CFR part 351, the role of the FRPCC is to assist FEMA in providing policy direction for the program of technical assistance to State and local governments in their radiological emergency planning and preparedness activities. Under this subpart, the role of the FRPCC is to provide advice to FEMA regarding Federal assistance and Federal facilities and resources for implementing subparts A and B of this part. This assistance activity is extended to licensees. The FRPCC will assist FEMA in revising the Federal Radiological Emergency Response Plan (FRERP).

§ 352.23 Functions of a Regional Assistance Committee (RAC).

(a) Under 44 CFR part 351, the role of a RAC is to assist State and local government officials to develop their radiological emergency plans, to review the plans, and to observe exercises to evaluate the plans. Under subparts A and B of this part, these technical assistance activities are extended to the licensee.

(b) Prior to a determination under subpart A (44 CFR 352.6(d)) that Federal facilities and resources are needed, the designated RAC for the specific site will assist the licensee, as necessary, in evaluating the need for Federal facilities and resources, in addition to providing technical assistance under § 352.23(a).

(c) In accomplishing the foregoing, the RAC will use the standards and evaluation criteria in NUREG–0654/FEMA–REP–1, Rev. 1 and Supp. 1.[1] or approved alternative approaches, and RAC members shall render such technical assistance as appropriate to their agency mission and expertise.

(d) Following determination under subpart A (44 CFR 352.6(d)) that Federal facilities and resources are needed,

[1] Copy available from FEMA Distribution Center, P.O. Box 70274 Washington, DC 20024

the RAC will assist FEMA in identifying agencies and specifying the Federal facilities and resources which the agencies are to provide.

§ 352.24 Provision of technical assistance and Federal facilities and resources.

(a) Under a determination under subpart A (44 CFR 352.5(f) and 352.4(e)) that a decline or fail situation exists, FEMA and other Federal agencies will provide technical assistance to the licensee. Such assistance may be provided during the pendency of an appeal under § 352.29.

(b) The applicable criteria for the use of Federal facilities and resources are set forth in subpart A (44 CFR 352.6(c)(1)(2)). Upon a determination under subpart A (44 CFR 352.6(d)) that Federal resources or facilities will be required, FEMA will consult with the FRPCC, the RAC, the individual Federal agencies, and the licensee, to determine the extent of Federal facilities and resources that the government could provide, and the most effective way to do so. After such consultation, FEMA will specifically request Federal agencies to provide those Federal facilities and resources. The Federal agencies, in turn, will respond to confirm the availability of such facilities and resources and provide estimates of their costs.

(c) FEMA will inform the licensee in writing of the Federal support which will be provided. This information will identify Federal agencies which are to be included in the plan, the extent and purpose of technical assistance to be provided and the Federal facilities and resources to be committed, and the limitations of their use. The information will also describe the requirements for reimbursement to the Federal Government for this support.

(d) FEMA will coordinate the Federal effort in implementing the determinations made under subpart A (44 CFR 352.5(f) and 352.6(d)) so that each Federal agency maintains the committed technical assistance, facilities, and resources after the licensee offsite emergency response plan is completed. FEMA and other Federal agencies will participate in training, exercises, and drills, in support of the licensee offsite emergency response plan.

(e) In carrying out paragraphs (a) through (c) of this section, FEMA will keep affected State and local governments informed of actions taken.

[54 FR 31925, Aug. 2, 1989, as amended at 74 FR 15357, Apr. 3, 2009]

§ 352.25 Limitation on committing Federal facilities and resources for emergency preparedness.

(a) The commitment of Federal facilities and resources will be made through the authority of the affected Federal agencies.

(b) In implementing a determination under subpart A (44 CFR 352.6(d)), that Federal facilities and resources are necessary for emergency preparedness, FEMA shall take care not to supplant State and local resources. Federal facilities and resources shall be substituted for those of the State and local governments in the licensee offsite emergency response plan only to the extent necessary to compensate for the nonparticipation or inadequate participation of those governments, and only as a last resort after consultation with the Governor(s) and responsible local officials in the affected area(s) regarding State and local participation.

(c) All Federal planning activities described in this subpart will be conducted under the assumption that, in the event of an actual radiological emergency or disaster, State and local authorities would contribute their full resources and exercise their authorities in accordance with their duties to protect the public from harm and would act, generally, in conformity with the licensee's offsite emergency response plan.

§ 352.26 Arrangements for Federal response in the licensee offsite emergency response plan.

Federal agencies may be called upon to assist the licensee in developing a licensee offsite emergency response plan in areas such as:

(a) Arrangements for use of Federal facilities and resources for response functions such as:

(1) Prompt notification of the emergency to the public;

(2) Assisting in any necessary evacuation;

(3) Providing reception centers or shelters and related facilities and services for evacuees;

(4) Providing emergency medical services at Federal hospitals; and

(5) Ensuring the creation and maintenance of channels of communication from commercial nuclear power plant licensees to State and local governments and to surrounding members of the public.

(b) Arrangements for transferring response functions to State and local governments during the response in an actual emergency; and

(c) Arrangements which may be necessary for FEMA coordination of the response of other Federal agencies.

§ 352.27 Federal role in the emergency response.

In addition to the Federal component of the licensee offsite emergency response plan described in subpart B (§ 352.26), and after complying with E.O. 12657, Section 2(b)(2), which states that FEMA:

> (2) Shall take care not to supplant State and local resources and that FEMA shall substitute its own resources for those of State and local governments only to the extent necessary to compensate for the nonparticipation or inadequate participation of those governments, and only as a last resort after appropriate consultation with the Governors and responsible local officials in the affected area regarding State and local participation;

FEMA shall provide for initial Federal response activities, including command and control of the offsite response, as may be needed. Any Federal response role, undertaken pursuant to this section, shall be transferred to State and local governments as soon as feasible after the onset of an actual emergency.

§ 352.28 Reimbursement.

In accordance with Executive Order 12657, Section 6(d), and to the extent permitted by law, FEMA will coordinate full reimbursement, either jointly or severally, to the agencies performing services or furnishing resources, from any affected licensee and from any affected nonparticipating or inadequately participating State or local government.

§ 352.29 Appeal process.

(a) Any interested party may appeal a determination made by the Deputy Administrator for the National Preparedness Directorate, under §§ 352.5 and 352.6 of this part, by submitting to the Administrator, FEMA, a written notice of appeal, within 30 days after issuance. The appeal is to be addressed to the Administrator, Federal Emergency Management Agency, 500 C Street SW., Washington, DC 20472. The appeal letter shall state the specific reasons for the appeal and include documentation to support appellant arguments. The appeal is limited to matters of record under §§ 352.5 and 352.6.

(b) Within 30 days of receipt of this letter, the FEMA Administrator or designee will review the record and make a final determination on the matter.

(c) Copies of this determination shall be furnished to the Appellant, the State(s), affected local governments, and the NRC.

(d) For purposes of this section, the term *interested party* means only a licensee, a State or a local government, as defined in § 352.1(g).

PART 353—FEE FOR SERVICES IN SUPPORT, REVIEW AND APPROVAL OF STATE AND LOCAL GOVERNMENT OR LICENSEE RADIOLOGICAL EMERGENCY PLANS AND PREPAREDNESS

Sec.

353.1 Purpose.
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353.7 Failure to pay.
APPENDIX A TO PART 353—MEMORANDUM OF UNDERSTANDING BETWEEN FEDERAL EMERGENCY MANAGEMENT AGENCY AND NUCLEAR REGULATORY COMMISSION

AUTHORITY: 31 U.S.C. 9701; E.O. 12657 of Nov. 18, 1988; 3 CFR, 1988 Comp., p. 611; 50 U.S.C. app. 2251 note; E.O. 12148 of July 20, 1979; 3 CFR, 1979 Comp., p. 412, 50 U.S.C. app. 2251 note.

SOURCE: 56 FR 9455, Mar. 6, 1991, unless otherwise noted.

§ 353.1 Purpose.

This part sets out fees charged for site-specific radiological emergency planning and preparedness services rendered by the Federal Emergency Management Agency, as authorized by 31 U.S.C. 9701.

§ 353.2 Scope.

The regulation in this part applies to all licensees who have applied for or have received a license from the Nuclear Regulatory Commission to operate a commercial nuclear power plant.

§ 353.3 Definitions.

As used in this part, the following terms and concepts are defined:

(a) *FEMA* means the Federal Emergency Management Agency.

(b) *NRC* means the Nuclear Regulatory Commission.

(c) *Certification* means the written justification by a licensee of the need for Federal compensatory assistance, as authorized in 44 CFR part 352 and E.O. 12657.

(d) *Technical assistance* means services provided by FEMA to facilitate offsite radiological emergency planning and preparedness such as provision of support for the preparation of offsite radiological emergency response plans and procedures; provision of advice and recommendations for specific aspects of preparedness such as alert and notification and emergency public information.

(e) *Licensee* means the utility which has applied for or has received a license from the NRC to operate a commercial nuclear power plant.

(f) *Governor* means the Governor of a State or his/her designee.

(g) *RAC* means Regional Assistance Committee chaired by FEMA with representatives from the Nuclear Regulatory Commission, Environmental Protection Agency, Department of Health and Human Services, Department of Energy, Department of Agriculture, Department of Transportation, Department of Commerce and other Federal Departments and agencies as appropriate.

(h) *REP* means FEMA's Radiological Emergency Preparedness Program.

(i) *Fiscal Year* means Federal fiscal year commencing on the first day of October through the thirtieth day of September.

(j) *Federal Radiological Preparedness Coordinating Committee* is the national level committee chaired by FEMA with representatives from the Nuclear Regulatory Commission, Environmental Protection Agency, Department of Health and Human Services, Department of Interior, Department of Energy, Department of Transportation, United States Department of Agriculture, Department of Commerce and other Federal Departments and agencies as appropriate.

§ 353.4 Payment of fees.

Fees for site-specific offsite radiological emergency plans and preparedness services and related site-specific legal services are payable upon notification by FEMA. FEMA services will be billed at 6-month intervals for all accumulated costs on a site-specific basis. Each bill will identify the costs related to services for each nuclear power plant site.

§ 353.5 Average cost per FEMA professional staff-hour.

Fees for FEMA services rendered will be calculated based upon the costs for such services using a professional staff rate per hour equivalent to the sum of the average cost to the agency of maintaining a professional staff member performing site-specific services related to the Radiological Emergency Preparedness Program, including salary, benefits, administrative support, travel and overhead. This rate will be charged when FEMA performs such services as: Development of exercise objectives and scenarios, pre-exercise logistics, exercise conduct and participation, evaluation, meetings and reports; review and approval of Plan revisions that are utility-requested or exercise inadequacy related; remedial exercise, medical drill or any other exercise or drill upon which a license is predicated, with regard to preparation, review, conduct, participation, evaluation, meetings and reports; the issuance of interim findings pursuant

to the FEMA/NRC Memorandum of Understanding (MOU) (App. A of this part); review of utility plan submissions through the NRC under the MOU; utility certification submission review under 44 CFR part 352 and follow-on activities; site-specific adjudicatory proceedings and any other site-specific legal costs and technical assistance that is utility requested or exercise inadequacy related. The professional staff rate for FY 91 is $39.00 per hour. The referenced FEMA/NRC MOU is provided in this rule as appendix A. The professional staff rate for the REP Program and related legal services will be revised on a fiscal year basis using the most current fiscal data available and the revised hourly rate will be published as a notice in the FEDERAL REGISTER for each fiscal year if the rate increases or decreases.

§ 353.6 Schedule of services.

Recipients shall be charged the full cost of site-specific services based upon the appropriate professional hourly staff rate for the FEMA services described in this Section and for related contractual services which will be charged to the licensee by FEMA, at the rate and cost incurred.

(a) When a State seeks formal review and approval by FEMA of the State's radiological emergency response plan pursuant to 44 CFR part 350 (Review and Approval Process of State and Local Radiological Emergency Plans and Preparedness), FEMA shall provide the services as described in 44 CFR part 350 in regard to that request and fees will be charged for such services to the licensee, which is the ultimate beneficiary of FEMA services. This provision does not apply where an operating license has been granted or the application denied or withdrawn, except as necessary to support biennial exercises and related activities. Fees will be charged for all FEMA, but not other Federal agency activities related to such services, including but not limited to the following:

(1) Development of exercise objectives and scenarios, preexercise logistics, exercise conduct and participation, evaluation, meetings and reports.

(2) Review of plan revisions that are exercise-inadequacy related;

(3) Technical assistance that is exercise-inadequacy related;

(4) Remedial exercise, medical drill, or any other exercise or drill upon which maintenance of a license is predicated, with regard to preparation, review, conduct, participation, evaluation, meetings and reports.

(b) Interim findings. Where the NRC seeks from FEMA under the FEMA/NRC MOU an interim finding of the status of radiological emergency planning and preparedness at a particular time for a nuclear power plant, FEMA shall assess a fee to the licensee for providing this service. The provision of this service consists of making a determination whether the plans are adequate to protect the health and safety of the public living in the vicinity of the nuclear power facility by providing reasonable assurance that appropriate protective measures can be taken offsite in the event of a radiological emergency and that such plans are capable of being implemented.

(c) NRC utility plan submissions. Fees will be charged for all FEMA but not other Federal agency activities related to such services, including but not limited to the following:

(1) Development of exercise objectives and scenarios, preexercise logistics, exercise conduct and participation, evaluation and post-exercise meetings and reports.

(2) Notice and conduct of public meeting.

(3) Regional finding and determination of adequacy of plans and preparedness followed by review by FEMA Headquarters resulting in final FEMA determination of adequacy of plans and preparedness,

(4) Remedial exercise, medical drill, or any other exercise or drill upon which maintenance of a license is predicated, with regard to preparation, review, conduct, participation, evaluation, meetings and reports.

(d) Utility certification submission review. When a licensee seeks Federal assistance within the framework of 44 CFR part 352 due to the decline or failure of a State or local government to adequately prepare an emergency plan, FEMA shall process the licensee's certification and make the determination

whether a decline or fail situation exists. Fees will be charged for services rendered in making the determination. Upon the determination that a decline or fail situation does exist, any services provided or secured by FEMA consisting of assistance to the licensee, as described in 44 CFR part 352, will have a fee charged for such services.

(e) FEMA participation in site-specific NRC adjudicatory proceedings and any other site-specific legal costs. Where FEMA participates in NRC licensing proceedings and any related court actions to support FEMA findings as a result of its review and approval of offsite emergency plans and preparedness, or provides legal support for any other site specific FEMA activities comprised in this rule, fees will be charged to the licensee for such participation.

(f) Rendering technical assistance. Where FEMA is requested by a licensee to provide any technical assistance, or where a State or local government requests technical assistance in order to correct an inadequacy identified as a result of a biennial exercise or any other drill or exercise upon which maintenance of a license is predicated, FEMA will charge such assistance to the licensee for the provision of such service.

§ 353.7 Failure to pay.

In any case where there is a dispute over the FEMA bill or where FEMA finds that a licensee has failed to pay a prescribed fee required under this part, procedures will be implemented in accordance with 44 CFR part 11 subpart C to effectuate collections under the Debt Collection Act of 1982 (31 U.S.C. 3711 *et seq.*).

APPENDIX A TO PART 353—MEMORANDUM OF UNDERSTANDING BETWEEN FEDERAL EMERGENCY MANAGEMENT AGENCY AND NUCLEAR REGULATORY COMMISSION

The Federal Emergency Management Agency (FEMA) and the Nuclear Regulatory Commission (NRC) have entered into a new Memorandum of Understanding (MOU) Relating to Radiological Emergency Planning and Preparedness. This supersedes a memorandum entered into on November 1, 1980 (published December 16, 1980, 45 FR 82713), revised April 9, 1985 (published April 18, 1985, 50 FR 15485), and published as Appendix A to 44 CFR part 353. The substantive changes in the new MOU are: (1) Self-initiated review by the NRC; (2) Early Site Permit process; (3) adoption of FEMA exercise time-frames; (4) incorporation of FEMA definition of exercise deficiency; (5) NRC commitment to work with licensees in support of State and local governments to correct exercise deficiencies; (6) correlation of FEMA actions on withdrawal of approvals under 44 CFR part 350 and NRC enforcement actions; and (7) disaster-initiated reviews in situations that affect offsite emergency infrastructures. The text of the MOU follows.

MEMORANDUM OF UNDERSTANDING BETWEEN NRC AND FEMA RELATING TO RADIOLOGICAL EMERGENCY PLANNING AND PREPAREDNESS

I. Background and Purposes

This Memorandum of Understanding (MOU) establishes a framework of cooperation between the Federal Emergency Management Agency (FEMA) and the U.S. Nuclear Regulatory Commission (NRC) in radiological emergency response planning matters so that their mutual efforts will be directed toward more effective plans and related preparedness measures at and in the vicinity of nuclear reactors and fuel cycle facilities which are subject to 10 CFR part 50, appendix E, and certain other fuel cycle and materials licensees which have potential for significant accidental offsite radiological releases. The memorandum is responsive to the President's decision of December 7, 1979, that FEMA will take the lead in offsite planning and response, his request that NRC assist FEMA in carrying out this role, and the NRC's continuing statutory responsibility for the radiological health and safety of the public.

On January 14, 1980, the two agencies entered into a ''Memorandum of Understanding Between NRC and FEMA to Accomplish a Prompt Improvement in Radiological Emergency Preparedness,'' that was responsive to the President's December 7, 1979, statement. A revised and updated Memorandum of Understanding became effective November 1, 1980. The MOU was further revised and updated on April 9, 1985. This MOU is a further revision to reflect the evolving relationship between NRC and FEMA and the experience gained in carrying out the provisions of the previous MOU's. This MOU supersedes these two earlier versions of the MOU.

The general principles agreed to in the previous MOU's and reaffirmed in this MOU, are as follows: FEMA coordinates all Federal planning for the offsite impact of radiological emergencies and takes the lead for

assessing offsite radiological emergency response plans[1] and preparedness, makes findings and determinations as to the adequacy and capability of implementing offsite plans, and communicates those findings and determinations to the NRC. The NRC reviews those FEMA findings and determinations in conjunction with the NRC onsite findings for the purpose of making determinations on the overall state of emergency preparedness. These overall findings and determinations are used by NRC to make radiological health and safety decisions in the issuance of licenses and the continued operation of licensed plants to include taking enforcement actions as notices of violations, civil penalties, orders, or shutdown of operating reactors. This delineation of responsibilities avoids duplicative efforts by the NRC staff in offsite preparedness matters. However, if FEMA informs the NRC that an emergency, unforeseen contingency, or other reason would prevent FEMA from providing a requested finding in a reasonable time, then, in consultation with FEMA, the NRC might initiate its own review of offsite emergency preparedness.

A separate MOU dated October 22, 1980, deals with NRC/FEMA cooperation and responsibilities in response to an actual or potential radiological emergency. Operations Response Procedures have been developed that implement the provisions of the Incident Response MOU. These documents are intended to be consistent with the Federal Radiological Emergency Response Plan which describes the relationships, roles, and responsibilities of Federal Agencies for responding to accidents involving peacetime nuclear emergencies. On December 1, 1991, the NRC and FEMA also concluded a separate MOU in support of Executive Order 12657 (FEMA Assistance in Emergency Preparedness Planning at Commercial Nuclear Power Plants).

II. Authorities and Responsibilities

FEMA-Executive Order 12148 charges the Director, FEMA, with the responsibility to ''* * * establish Federal policies for, and coordinate, all civil defense and civil emergency planning, management, mitigation, and assistance functions of Executive agencies'' (Section 2–101) and ''* * * represent the President in working with State and local governments and the private sector to stimulate vigorous participation in civil emergency preparedness, mitigation, response, and recovery programs'' (Section 2–104.).

On December 7, 1979, the President, in response to the recommendations of the Kemeny Commission on the Accident at Three Mile Island, directed that FEMA assume lead responsibility for all offsite nuclear emergency planning and response.

Specifically, the FEMA responsibilities with respect to radiological emergency preparedness as they relate to NRC are:

1. To take the lead in offsite emergency planning and to review and assess offsite emergency plans and preparedness for adequacy.

2. To make findings and determinations as to whether offsite emergency plans are adequate and can be implemented (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualifications, and equipment). Notwithstanding the procedures which are set forth in 44 CFR part 350 for requesting and reaching a FEMA administrative approval of State and local plans, findings, and determinations on the current status of emergency planning and preparedness around particular sites, referred to as interim findings, will be provided by FEMA for use as needed in the NRC licensing process. Such findings will be provided by FEMA on mutually agreed to schedules or on specific NRC request. The request and findings will normally be by written communications between the co-chairs of the NRC/FEMA Steering Committee. An interim finding provided under this arrangement will be an extension of FEMA's procedures for review and approval of offsite radiological emergency plans and preparedness set forth in 44 CFR part 350. It will be based on the review of currently available plans and, if appropriate, joint exercise results related to a specific nuclear power plant site.

If the review involves an application under 10 CFR part 52 for an early site permit, the NRC will forward to FEMA pertinent information provided by the applicant and consult with FEMA as to whether there is any significant impediment to the development of offsite emergency plans. As appropriate, depending upon the nature of information provided by the applicant, the NRC will also request that FEMA determine whether major features of offsite emergency plans submitted by the applicant are acceptable, or whether offsite emergency plans submitted by the applicant are adequate, as discussed below.

An interim finding based only on the review of currently available offsite plans will include an assessment as to whether these plans are adequate when measured against the standards and criteria of NUREG–0654/FEMA–REP–1, and, pending a demonstration through an exercise, whether there is reasonable assurance that the plans can be implemented. The finding will indicate one of the

[1] Assessments of offsite plans may be based on State and local government plans submitted to FEMA under its rule (44 CFR Part 350), and as noted in 44 CFR 350.3(f), may also be based on plans currently available to FEMA or furnished to FEMA through the NRC/FEMA Steering Committee.

following conditions: (1) Plans are adequate and there is reasonable assurance that they can be implemented with only limited or no corrections needed; (2) plans are adequate, but before a determination can be made as to whether they can be implemented, corrections must be made to the plans or supporting measures must be demonstrated (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualifications, and equipment) or (3) plans are inadequate and cannot be implemented until they are revised to correct deficiencies noted in the Federal review.

If, in FEMA's view, the plans that are available are not completed or are not ready for review, FEMA will provide NRC with a status report delineating milestones for preparation of the plan by the offsite authorities as well as FEMA's actions to assist in timely development and review of the plans.

An interim finding on preparedness will be based on review of currently available plans and joint exercise results and will include an assessment as to (1) whether offsite emergency plans are adequate as measured against the standards and criteria of NUREG–0654/FEMA–REP–1 and (2) whether the exercise(s) demonstrated that there is reasonable assurance that the plans can be implemented.

An interim finding on preparedness will indicate one of the following conditions: (1) There is reasonable assurance that the plans are adequate and can be implemented as demonstrated in an exercise; (2) there are deficiencies that must be corrected; or (3) FEMA is undecided and will provide a schedule of actions leading to a decision.

3. To assume responsibility, as a supplement to State, local, and utility efforts, for radiological emergency preparedness training of State and local officials.

4. To develop and issue an updated series of interagency assignments which delineate respective agency capabilities and responsibilities and define procedures for coordination and direction for emergency planning and response. [Current assignments are in 44 CFR part 351, March 11, 1982. (47 FR 10758)]

NRC-The Atomic Energy Act of 1954, as amended, requires that the NRC grant licenses only if the health and safety of the public is adequately protected. While the Atomic Energy Act does not specifically require emergency plans and related preparedness measures, the NRC requires consideration of overall emergency preparedness as a part of the licensing process. The NRC rules (10 CFR 50.33, 50.34, 50.47, 50.54, and appendix E to 10 CFR part 50, and 10 CFR part 52) include requirements for the licensee's emergency plans.

Specifically, the NRC responsibilities for radiological emergency preparedness are:

1. To assess licensee emergency plans for adequacy. This review will include organizations with whom licensees have written agreements to provide onsite support services under emergency conditions.

2. To verify that licensee emergency plans are adequately implemented (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualifications, and equipment).

3. To review the FEMA findings and determinations as to whether offsite plans are adequate and can be implemented.

4. To make radiological health and safety decisions with regard to the overall state of emergency preparedness (i.e., integration of emergency preparedness onsite as determined by the NRC and offsite as determined by FEMA and reviewed by NRC) such as assurance for continued operation, for issuance of operating licenses, or for taking enforcement actions, such as notices of violations, civil penalties, orders, or shutdown of operating reactors.

III. Areas of Cooperation

A. NRC Licensing Reviews

FEMA will provide support to the NRC for licensing reviews related to reactors, fuel facilities, and materials licensees with regard to the assessment of the adequacy of offsite radiological emergency response plans and preparedness. This will include timely submittal of an evaluation suitable for inclusion in NRC safety evaluation reports.

Substantially prior to the time that a FEMA evaluation is required with regard to fuel facility or materials license review, NRC will identify those fuel and materials licensees with potential for significant accidental offsite radiological releases and transmit a request for review to FEMA as the emergency plans are completed.

FEMA routine support will include providing assessments, findings and determinations (interim and final) on offsite plans and preparedness related to reactor license reviews. To support its findings and determinations, FEMA will make expert witnesses available before the Commission, the NRC Advisory Committee on Reactor Safeguards, NRC hearing boards and administrative law judges, for any court actions, and during any related discovery proceedings.

FEMA will appear in NRC licensing proceedings as part of the presentation of the NRC staff. FEMA counsel will normally present FEMA witnesses and be permitted, at the discretion of the NRC licensing board, to cross-examine the witnesses of parties, other than the NRC witnesses, on matters involving FEMA findings and determinations, policies, or operations; however, FEMA will not be asked to testify on status reports. FEMA is not a party to NRC proceedings

and, therefore, is not subject to formal discovery requirements placed upon parties to NRC proceedings. Consistent with available resources, however, FEMA will respond informally to discovery requests by parties. Specific assignment of professional responsibilities between NRC and FEMA counsel will be primarily the responsibility of the attorneys assigned to a particular case. In situations where questions of professional responsibility cannot be resolved by the attorneys assigned, resolution of any differences will be made by the General Counsel of FEMA and the General Counsel of the NRC or their designees. NRC will request the presiding Board to place FEMA on the service list for all litigation in which it is expected to participate.

Nothing in this MOU shall be construed in any way to diminish NRC's responsibility for protecting the radiological health and safety of the public.

B. FEMA Review of Offsite Plans and Preparedness

NRC will assist in the development and review of offsite plans and preparedness through its membership on the Regional Assistance Committees (RAC). FEMA will chair the Regional Assistance Committees. Consistent with NRC's statutory responsibility, NRC will recognize FEMA as the interface with State and local governments for interpreting offsite radiological emergency planning and preparedness criteria as they affect those governments and for reporting to those governments the results of any evaluation of their radiological emergency plans and preparedness.

Where questions arise concerning the interpretation of the criteria, such questions will continue to be referred to FEMA Headquarters, and when appropriate, to the NRC/FEMA Steering Committee to assure uniform interpretation.

C. Preparation for and Evaluation of Joint Exercises

FEMA and NRC will cooperate in determining exercise requirements for licensees, and State and local governments. They will also jointly observe and evaluate exercises. NRC and FEMA will institute procedures to enhance the review of objectives and scenarios for joint exercises. This review is to assure that both the onsite considerations of NRC and the offsite considerations of FEMA are adequately addressed and integrated in a manner that will provide for a technically sound exercise upon which an assessment of preparedness capabilities can be based. The NRC/FEMA procedures will provide for the availability of exercise objectives and scenarios sufficiently in advance of scheduled exercises to allow enough time for adequate review by NRC and FEMA and correction of any deficiencies by the licensee. The failure of a licensee to develop a scenario that adequately addresses both onsite and offsite considerations may result in NRC taking enforcement actions.

The FEMA reports will be a part of an interim finding on emergency preparedness; or will be the result of an exercise conducted pursuant to FEMA's review and approval procedures under 44 CFR part 350 and NRC's requirement under 10 CFR part 50, appendix E, Section IV.F. Exercise evaluations will identify one of the following conditions: (1) There is reasonable assurance that the plans are adequate and can be implemented as demonstrated in the exercise; (2) there are deficiencies that must be corrected; or (3) FEMA is undecided and will provide a schedule of actions leading to a decision. The schedule for issuance of the draft and final exercise reports will be as shown in FEMA-REP–14 (Radiological Emergency Preparedness Exercise Manual).

The deficiency referred to in (2) above is defined as an observed or identified inadequacy of organizational performance in an exercise that could cause a finding that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant. Because of the potential impact of deficiencies on emergency preparedness, they should be corrected within 120 days through appropriate remedial actions, including remedial exercises, drills, or other actions.

Where there are deficiencies of the types noted above, and when there is a potential for remedial actions, FEMA Headquarters will promptly (1–2 days) discuss these with NRC Headquarters. Within 10 days of the exercise, official notification of identified deficiencies will be made by FEMA to the State, NRC Headquarters, and the RAC with an information copy to the licensee. NRC will formally notify the licensee of the deficiencies and monitor the licensee's efforts to work with State and local authorities to correct the deficiencies. Approximately 60 days after official notification of the deficiency, the NRC, in consultation with FEMA, will assess the progress being made toward resolution of the deficiencies.

D. Withdrawal of Reasonable Assurance Finding

If FEMA determines under 44 CFR 350.13 of its regulations that offsite emergency plans or preparedness are not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of radiological emergency to protect the health and safety of the public, FEMA shall, as described in its rule, withdraw approval.

Upon receiving notification of such action from FEMA, the NRC will promptly review FEMA's findings and determinations and formally document the NRC's position. When, as described in 10 CFR 50.54(s)(2)(ii) and 50.54(s)(3) of its regulations, the NRC finds the state of emergency preparedness does not provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency, the NRC will notify the affected licensee accordingly and start the ''120-day clock.'' [2]

E. Emergency Planning and Preparedness Guidance

NRC has lead responsibility for the development of emergency planning and preparedness guidance for licensees. FEMA has lead responsibility for the development of radiological emergency planning and preparedness guidance for State and local agencies. NRC and FEMA recognize the need for an integrated, coordinated approach to radiological emergency planning and preparedness by NRC licensees and State and local governments. NRC and FEMA will each, therefore, provide opportunity for the other agency to review and comment on such guidance (including interpretations of agreed joint guidance) prior to adoption as formal agency guidance.

F. Support for Document Management System

FEMA and NRC will each provide the other with continued access to those automatic data processing support systems which contain relevant emergency preparedness data.

G. Ongoing NRC Research and Development Programs

Ongoing NRC and FEMA research and development programs that are related to State and local radiological emergency planning and preparedness will be coordinated. NRC and FEMA will each provide opportunity for the other agency to review and comment on relevant research and development programs prior to implementing them.

[2] Per 10 CFR 50.54(s)(2)(ii), the Commission will determine whether the reactor shall be shut down or other appropriate enforcement actions if such conditions are not corrected within four months. The NRC is not limited by this provision of the rule, for, as stated in 10 CFR 50.54(s)(3), ''Nothing in this paragraph shall be construed as limiting the authority of the Commission to take action under any other regulation or authority of the Commission *or at any time other than that specified in this paragraph*'' (emphasis added).

H. Public Information and Education Programs

FEMA will take the lead in developing public information and educational programs. NRC will assist FEMA by reviewing for accuracy educational materials concerning radiation, and its hazards and information regarding appropriate actions to be taken by the general public in the event of an accident involving radioactive materials.

I. Recovery from Disasters Affecting Offsite Emergency Preparedness

Disasters that destroy roads, buildings, communications, transportation resources or other offsite infrastructure in the vicinity of a nuclear power plant can degrade the capabilities of offsite response organizations in the 10-mile plume emergency planning zone. Examples of events that could cause such devastation are hurricanes, tornadoes, earthquakes, tsunamis, volcanic eruptions, major fires, large explosions, and riots.

If a disaster damages the area around a licensed operating nuclear power plant to an extent that FEMA seriously questions the continued adequacy of offsite emergency preparedness, FEMA will inform the NRC promptly. Likewise, the NRC will inform FEMA promptly of any information it receives from licensees, its inspectors, or others, that raises serious questions about the continued adequacy of offsite emergency preparedness. If FEMA concludes that a disaster-initiated review of offsite radiological emergency preparedness is necessary to determine if offsite emergency preparedness is still adequate, it will inform the NRC in writing, as soon as practicable, including a schedule for conduct of the review. FEMA will also give the NRC (1) interim written reports of its findings, as appropriate, and (2) a final written report on the results of its review.

The disaster-initiated review is performed to reaffirm the radiological emergency preparedness capabilities of affected offsite jurisdictions located in the 10-mile emergency planning zone and is not intended to be a comprehensive review of offsite plans and preparedness.

The NRC will consider information provided by FEMA Headquarters and pertinent findings from FEMA's disaster-initiated review in making decisions regarding the restart or continued operation of an affected operating nuclear power reactor. The NRC will notify FEMA Headquarters, in writing, of the schedule for restart of an affected reactor and keep FEMA Headquarters informed of changes in that schedule.

IV. NRC/FEMA Steering Committee

The NRC/FEMA Steering Committee on Emergency Preparedness will continue to be

the focal point for coordination of emergency planning and preparedness. As discussed in Section I of this agreement, response activities between these two agencies are addressed in a separate MOU. The Steering Committee will consist of an equal number of members to represent each agency with one vote per agency. When the Steering Committee cannot agree on the resolution of an issue, the issue will be referred to NRC and FEMA management. The NRC members will have lead responsibility for licensee planning and preparedness and the FEMA members will have lead responsibility for offsite planning and preparedness. The Steering Committee will assure coordination of plans and preparedness evaluation activities and revise, as necessary, acceptance criteria for licensee, State and local radiological emergency planning and preparedness. NRC and FEMA will then consider and adopt criteria, as appropriate, in their respective jurisdictions. (See Attachment 1).

V. Working Arrangements

A. The normal point of contact for implementation of the points in this MOU will be the NRC/FEMA Steering Committee.

B. The Steering Committee will establish the day-to-day procedures for assuring that the arrangements of this MOU are carried out.

VI. Memorandum of Understanding

A. This MOU shall be effective as of date of signature and shall continue in effect unless terminated by either party upon 30 days notice in writing.

B. Amendments or modifications to this MOU may be made upon written agreement by both parties.

Approved for the U.S. Nuclear Regulatory Commission.

Dated: June 17, 1993.

James M. Taylor,

Executive Director for Operations.

Dated: June 17, 1993.

Approved for the Federal Emergency Management Agency.

Richard W. Krimm,

Acting Associate Director, State and Local Programs and Support.

ATTACHMENT 1—FEMA/NRC STEERING COMMITTEE

Purpose

Assure coordination of efforts to maintain and improve emergency planning and preparedness for nuclear power reactors as described in the NRC and FEMA rules and the NRC/FEMA MOU on Radiological Emergency Planning and Preparedness. Coordinate consistent criteria for licensee, State and local emergency plans and preparedness.

Membership

The NRC and FEMA consignees of this MOU will designate respective co-chairs for the Steering Committee. The designated co-chairs will, in turn, appoint their respective members to the Committee.

Membership Changes

Changes to the membership of the NRC/FEMA Steering Committee may be made by the co-chairs representing the agency whose member is being changed.

Operating Procedures

The Steering Committee will maintain a record of each meeting to include identification of issues discussed and conclusions reached. No meeting will be held without the attendance and participation of at least the co-chairs or two assigned members of each agency.

Coordination

When items involving responsibilities of other NRC or FEMA offices are discussed, the affected offices will be contacted as appropriate.

[58 FR 47997, Sept. 14, 1993]

PART 354—FEE FOR SERVICES TO SUPPORT FEMA'S OFFSITE RADIOLOGICAL EMERGENCY PREPAREDNESS PROGRAM

Sec.

354.1 Purpose.
354.2 Scope of this regulation.
354.3 Definitions.
354.4 Assessment of fees.
354.5 Description of site-specific, plume pathway EPZ biennial exercise-related component services and other services.
354.6 Billing and payment of fees.
354.7 Failure to pay.

AUTHORITY: Reorganization Plan No. 3 of 1978, 43 FR 41943, 3 CFR, 1978 Comp., p. 329; Sec. 109, Pub. L. 96–295, 94 Stat. 780; Sec. 2901, Pub. L. 98–369, 98 Stat. 494; Title III, Pub. L. 103–327, 108 Stat. 2323–2325; Pub. L. 105–276, 112 Stat. 2502; EO 12148, 44 FR 43239, 3 CFR, 1979 Comp., p. 412; EO 12657, 53 FR 47513, 3 CFR, 1988 Comp., p. 611.

SOURCE: 66 FR 32577, June 15, 2001, unless otherwise noted.

§ 354.1 Purpose.

This part establishes the methodology for FEMA to assess and collect user fees from Nuclear Regulatory

Commission (NRC) licensees of commercial nuclear power plants to recover at least 100 percent of the amounts that we anticipate to obligate for our Radiological Emergency Preparedness (REP) Program as authorized under Title III, Public Law 105–276, 112 Stat. 2461, 2502. Public Law 105–276 established in the Treasury a Radiological Emergency Preparedness Fund, to be available under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et. seq.), and under Executive Order 12657 (3 CFR, 1988 Comp., p. 611), for offsite radiological emergency planning, preparedness, and response. Beginning in fiscal year 1999 and thereafter, the Administrator of FEMA must publish fees to be assessed and collected, applicable to persons subject to FEMA's radiological emergency preparedness regulations. The methodology for assessment and collection of fees must be fair and equitable and must reflect the full amount of costs of providing radiological emergency planning, preparedness, response and associated services. Our assessment of fees include our costs for use of agency resources for classes of regulated persons and our administrative costs to collect the fees. Licensees deposit fees by electronic transfer into the Radiological Emergency Preparedness Fund in the U.S. Treasury as offsetting collections.

§ 354.2 Scope of this regulation.

The regulation in this part applies to all persons or licensees who have applied for or have received from the NRC:

(a) A license to construct or operate a commercial nuclear power plant;

(b) A possession-only license for a commercial nuclear power plant, with the exception of licensees that have received an NRC-approved exemption to 10 CFR 50.54(q) requirements;

(c) An early site permit for a commercial nuclear power plant;

(d) A combined construction permit and operating license for a commercial nuclear power plant; or

(e) Any other NRC licensee that is now or may become subject to requirements for offsite radiological emergency planning and preparedness.

§ 354.3 Definitions.

The following definitions of terms and concepts apply to this part:

Biennial exercise means the joint licensee/State and local government exercise, evaluated by FEMA, conducted around a commercial nuclear power plant site once every two years in conformance with 44 CFR part 350.

EPZ means emergency planning zone.

Federal Radiological Preparedness Coordinating Committee (FRPCC) means a committee chaired by FEMA with representatives from the Nuclear Regulatory Commission, Environmental Protection Agency, Department of Health and Human Services, Department of Interior, Department of Energy, Department of Transportation, Department of Agriculture, Department of Commerce, Department of State, Department of Veterans Affairs, General Services Administration, National Communications System, the National Aeronautics and Space Administration and other Federal departments and agencies as appropriate.

FEMA means the Federal Emergency Management Agency.

Fiscal Year means the Federal fiscal year, which begins on the first day of October and ends on the thirtieth day of September.

NRC means the U. S. Nuclear Regulatory Commission.

Obligate or *obligation* means a legal reservation of appropriated funds for expenditure.

Persons or *Licensee* means the utility or organization that has applied for or has received from the NRC:

(1) A license to construct or operate a commercial nuclear power plant;

(2) A possession-only license for a commercial nuclear power plant, with the exception of licensees that have received an NRC-approved exemption to 10 CFR 50.54(q) requirements;

(3) An early site permit for a commercial nuclear power plant;

(4) A combined construction permit and operating license for a commercial nuclear power plant; or

(5) Any other NRC license that is now or may become subject to requirements for offsite radiological emergency planning and preparedness activities.

Plume pathway EPZ means for planning purposes, the area within approximately a 10-mile radius of a nuclear plant site.

RAC means Regional Assistance Committee chaired by FEMA with representatives from the Nuclear Regulatory Commission, Environmental Protection Agency, Department of Health and Human Services, Department of Energy, Department of Agriculture, Department of Transportation, Department of Commerce, Department of Interior, and other Federal departments and agencies as appropriate.

REP means Radiological Emergency Preparedness, as in FEMA's REP Program.

Site means the location at which one or more commercial nuclear power plants (reactor units) have been, or are planned to be built.

Site-specific services mean offsite radiological emergency planning, preparedness and response services provided by FEMA personnel and by FEMA contractors that pertain to a specific commercial nuclear power plant site.

Technical assistance means services provided by FEMA to accomplish offsite radiological emergency planning, preparedness and response, including provision of support for the preparation of offsite radiological emergency response plans and procedures, and provision of advice and recommendations for specific aspects of radiological emergency planning, preparedness and response, such as alert and notification and emergency public information.

We, our, us, means and refers to FEMA.

§ 354.4 Assessment of fees.

(a)(1) We assess user fees from licensees using a methodology that includes charges for REP Program services provided by both our personnel and our contractors. Beginning in FY 1995, we established a four-year cycle from FY 1995–1998 with predetermined user fee assessments that were collected each year of the cycle. The following six-year cycle will run from FY 1999 through FY 2004. The fee for each site consists of two distinct components:

(i) A *site-specific, biennial exercise-related component* to recover the portion of the REP program budget associated only with plume pathway emergency planning zone (EPZ) biennial exercise-related activities. We determine this component by reviewing average biennial exercise-related activities/hours that we use in exercises conducted since the inception of our REP user fee program in 1991. We completed an analysis of REP Program activities/hours used during the FY 1991–1995 cycle at the end of that four-year cycle. We will make adjustments to the site-specific user fees for the next proposed FY 1999–2004 six-year cycle.

(ii) A *flat fee component* that is the same for each site and recovers the remaining portion of the REP Program budgeted funding that does not include biennial exercise-related activities.

(2) We will assess fees only for REP Program services provided by our personnel and by our contractors, and we will not assess fees for those services that other Federal agencies involved in the FRPCC or the RAC's provide.

(b) *Determination of site-specific, biennial exercise-related component for our personnel.* We will determine an average biennial exercise-related cost for our personnel for each commercial nuclear power plant site in the REP Program. We base this annualized cost (dividing the average biennial exercise-related cost by two) on the average number of hours spent by our personnel in REP exercise-related activities for each site. We will determine the average number of hours using an analysis of site-specific exercise activity spent since the beginning of our user fee program (1991). We determine the actual user fee assessment for this component by multiplying the average number of REP exercise-related hours that we determine and annualize for each site by the average hourly rate in effect for the fiscal year for a REP Program employee. We will revise the hourly rate annually to reflect actual budget and cost of living factors, but the number of annualized, site-specific exercise hours will remain constant for user fee calculations and assessments throughout the six-year cycle. We will continue to track and monitor exercise activity during the six-year cycle, FY

1999–2004. We will make appropriate adjustments to this component to calculate user fee assessments for later six-year cycles.

(c) *Determination of site-specific, biennial exercise-related component for FEMA contract personnel.* We have determined an average biennial exercise-related cost for REP contractors for each commercial nuclear power plant site in the REP Program. We base this annualized cost (dividing the average biennial exercise-related cost by two) on the average costs of contract personnel in REP site-specific exercise-related activities since the beginning of our user fee program (1991). We will continue to track and monitor activity during the initial six-year cycle, FY 1999–2004, and we will make appropriate adjustments to this component for calculation of user fee assessments during subsequent six-year cycles.

(d) *Determination of flat fee component.* For each year of the six-year cycle, we recover the remainder of REP Program budgeted funds as a flat fee component. Specifically, we determine the flat fee component by subtracting the total of our personnel and contractor site-specific, biennial exercise-related components, as outlined in paragraphs (a) and (b) of this section, from the total REP budget for that fiscal year. We then divide the resulting amount equally among the total number of licensed commercial nuclear power plant sites (defined under 354.2) to arrive at each site's flat fee component for that fiscal year.

(e) *Discontinuation of charges.* When we receive a copy from the NRC of their approved exemption to 10 CFR 50.54(q) requirements stating that offsite radiological emergency planning and preparedness are no longer required at a particular commercial nuclear power plant site, we will discontinue REP Program services at that site. We will no longer assess a user fee for that site from the beginning of the next fiscal year.

§ 354.5 Description of site-specific, plume pathway EPZ biennial exercise-related component services and other services.

Site-specific and other REP Program services provided by FEMA and FEMA contractors for which FEMA will assess fees on licensees include the following:

(a) *Site-specific, plume pathway EPZ biennial exercise-related component services.* (1) Schedule plume pathway EPZ biennial exercises.

(2) Review plume pathway EPZ biennial exercise objectives and scenarios.

(3) Provide pre-plume pathway EPZ biennial exercise logistics.

(4) Conduct plume pathway EPZ biennial exercises, evaluations, and post exercise briefings.

(5) Prepare, review and finalize plume pathway EPZ biennial exercise reports, give notice and conduct public meetings.

(6) Activities related to Medical Services and other drills conducted in support of a biennial, plume pathway exercise.

(b) *Flat fee component services.* (1) Evaluate State and local offsite radiological emergency plans and preparedness.

(2) Schedule other than plume pathway EPZ biennial exercises.

(3) Develop other than plume pathway EPZ biennial exercise objectives and scenarios.

(4) Pre-exercise logistics for other than the plume pathway EPZ.

(5) Conduct other than plume pathway EPZ biennial exercises and evaluations.

(6) Prepare, review and finalize other than plume pathway EPZ biennial exercise reports, notice and conduct of public meetings.

(7) Prepare findings and determinations on the adequacy or approval of plans and preparedness.

(8) Conduct the formal 44 CFR part 350 review process.

(9) Provide technical assistance to States and local governments.

(10) Review licensee submissions pursuant to 44 CFR part 352.

(11) Review NRC licensee offsite plan submissions under the NRC/FEMA Memorandum of Understanding on Planning and Preparedness, and NUREG–0654/FEMA–REP–1, Revision 1, Supplement 1. You may obtain copies of the NUREG–0654 from the Superintendent of Documents, U.S. Government Printing Office.

(12) Participate in NRC adjudication proceedings and any other site-specific legal forums.

(13) Alert and notification system reviews.

(14) Responses to petitions filed under 10 CFR 2.206.

(15) Congressionally-initiated reviews and evaluations.

(16) Responses to licensee's challenges to FEMA's administration of the fee program.

(17) Respond to actual radiological emergencies.

(18) Develop regulations, guidance, planning standards and policy.

(19) Coordinate with other Federal agencies to enhance the preparedness of State and local governments for radiological emergencies.

(20) Coordinate REP Program issues with constituent organizations such as the National Emergency Management Association, Conference of Radiation Control Program Directors, and the Nuclear Energy Institute.

(21) Implement and coordinate REP Program training with FEMA's Emergency Management Institute (EMI) to assure effective development and implementation of REP training courses and conferences.

(22) Participation of REP personnel as lecturers or to perform other functions at EMI, conferences and workshops.

(23) Any other costs that we incur resulting from our REP Program Strategic Review implementation and oversight working group activities.

(24) Costs associated with a transition phase should we decide to advertise and award a contract for technical support to the REP Program. Transition phase activities may include training new contractor personnel in the REP Exercise Evaluation and Planning courses, and on-the-job training for new evaluators at a select number of REP exercises.

(25) Services associated with the assessment of fees, billing, and administration of this part.

(26) Disaster-initiated reviews and evaluations.

§ 354.6 Billing and payment of fees.

(a) *Electronic billing and payment.* We will deposit all funds collected under this part to the Radiological Emergency Preparedness Fund as offsetting collections, which will be available for our REP Program. The Department of the Treasury revisions to section 8025.30 of publication I–TFM 6–8000 require Federal agencies to collect funds by electronic funds transfer when such collection is cost-effective, practicable, and consistent with current statutory authority. Working with the Department of the Treasury we now provide for payment of bills by electronic transfers through Automated Clearing House (ACH) credit payments.

(b) We will send bills that are based on the assessment methodology set out in § 354.4 to licensees to recover the full amount of the funds that we budget to provide REP Program services. Licensees that have more than one site will receive consolidated bills. We will forward one bill to each licensee during the first quarter of the fiscal year, with payment due within 30 days. If we exceed our original budget for the fiscal year and need to make minor adjustments, the adjustment will appear in the bill for the next fiscal year.

§ 354.7 Failure to pay.

Where a licensee fails to pay a prescribed fee required under this part, we will implement procedures under 44 CFR part 11, subpart C, to collect the fees under the Debt Collection Act of 1982 (31 U.S.C. 3711 *et seq.*).

PARTS 355–359 [RESERVED]

PART 360—STATE ASSISTANCE PROGRAMS FOR TRAINING AND EDUCATION IN COMPREHENSIVE EMERGENCY MANAGEMENT

Sec.

360.1 Purpose.
360.2 Description of program.
360.3 Eligible applicants.
360.4 Administrative procedures.
360.5 General provisions for State Cooperative Agreement.

AUTHORITY: Reorganization Plan No. 3 (3 CFR, 1978 Comp., p. 329); E.O. 12127 (44 FR 19367); E.O. 12148 (44 FR 43239).

SOURCE: 46 FR 1271, Jan. 6, 1981, unless otherwise noted.

§ 360.1 Purpose.

The Emergency Management Training Program is designed to enhance the States' emergency management training program to increase State capabilities and those of local governments in this field, as well as to give States the opportunity to develop new capabilities and techniques. The Program is an ongoing intergovernmental endeavor which combines financial and human resources to fill the unique training needs of local government, State emergency staffs and State agencies, as well as the general public. States will have the opportunity to develop, implement and evaluate various approaches to accomplish FEMA emergency objectives as well as goals and objectives of their own. The intended result is an enhanced capability to protect lives and property through planning, mitigation, operational skill, and rapid response in case of disaster or attack on this country.

§ 360.2 Description of program.

(a) The program is designed for all States regardless of their present level of involvement in training or their degree of expertise in originating and presenting training courses in the past. The needs of individual States, difference in numbers to be trained, and levels of sophistication in any previous training program have been recognized. It is thus believed that all States are best able to meet their own unique situations and those of local government by being given this opportunity and flexibility.

(b) Each State is asked to submit an acceptable application, to be accompanied by a Training and Education (T&E) plan for a total of three years, only the first year of which will be required to be detailed. The remaining two year program should be presented in terms of ongoing training objectives and programs. In the first year plan applicants shall delineate their objectives in training and education, including a description of the programs to be offered, and identify the audiences and numbers to be trained. Additionally, the State is asked to note the month in which the activity is to be presented, the location, and cost estimates including instructional costs and participant's travel and per diem. These specifics of date, place, and costs will be required for the first year of any three year plan. A three year plan will be submitted each year with an application. Each negotiated agreement will include a section of required training (Radiological Defense), and a section including optional courses to be conducted in response to State and local needs.

(c) FEMA support to the States in their training program for State and local officials, has been designed around three Program elements. Each activity listed in the State Training and Education (T&E) Plan will be derived from the following three elements:

(1) *Government Conducted Courses:* Such courses require the least capability on the part of the State. They are usually conducted through provisions in a FEMA Regional Support Contract and/or FEMA or other Federal agency staff. The State's responsibilities fall primarily into administrative areas of recruiting participants, making all arrangements for the facilities needed for presentation of the course, and the handling of the cost reimbursement to participants, though State staff may participate as instructors. These courses for example include:

(i) Career Development Courses: Phases I, II, and III,

(ii) Radiological Officer and Instructor Courses,

(iii) Technical Workshops on Disaster Recovery or Hazard Mitigation.

(2) *Government and recipient conducted courses:* Responsibilities in these courses fall jointly upon Federal and State government as agreed in the planning for the course. Courses in this category might include:

(i) Emergency Management Workshops,

(ii) Multijurisdictional Emergency Operations Simulation Training.

In this category also, it is expected that the State will be responsible for administrative and logistical requirements, plus any instructional activity as agreed upon prior to the conduct of the course.

(3) *Recipient conducted courses:* This element requires the greatest degree of

sophistication in program planning and delivery on the part of the State. Training events proposed by the State must be justified as addressing Emergency Management Training Program objectives. Additionally, they must address State or community needs and indicate the State's ability to present and carry out the Program of Instruction. Courses in this category could include:

(i) Radiological Monitoring,

(ii) Emergency Operations Simulating Training,

(iii) Shelter Management.

(d) In order that this three year comprehensive Training and Education Program planning can proceed in a timely and logical manner, each State will be provided three target appropriation figures, one for each of the three program years. States will develop their proposals, using the target figure to develop their scope of work. Adjustments in funding and the scope of work will be subject to negotiation before finalization. Both the funding and the scope of work will be reviewed each year and adjustments in the out years will reflect increased sophistication and expertise of the States as well as changing training needs within each State.

(e)(1) FEMA funding through the State Cooperative Agreement for the training activities is to be used for travel and per diem expenses of students selected by the States for courses reflecting individually needed or required training. Additionally funds may be expended for course materials and instructor expenses. The funding provided in the State Cooperative Agreement is not for the purpose of conducting ongoing State activities or for funding staff positions to accomplish work to be performed under this Agreement. Nor is the Agreement for the purpose of purchasing equipment which may be obtained with the help of Personnel and Administrative funds. In cases where equipment has been identified as needed in the scope of work submitted with the application, and where it serves as an outreach to a new audience or methodology, equipment purchase may be approved at the time of initial application approval.

(2) Allowable cost will be funded at 100%.

[46 FR 1271, Jan. 6, 1981, as amended at 48 FR 9646, Mar. 8, 1983]

§ 360.3 Eligible applicants.

Each of the 50 States, independent commonwealths, and territories is eligible to participate in a State Cooperative Agreement with FEMA. The department, division, or agency of the State government assigned the responsibility for State training in comprehensive emergency management should file the application.

§ 360.4 Administrative procedures.

(a) *Award.* Each State desiring to participate will negotiate the amount of financial support for the training and education program. Deciding factors will be the scope of the program, a prudent budget, the number of individuals to be trained, and variety of audiences included which are in need of training. All these factors are part of the required application as discussed in § 360.2.

(b) *Period of agreement.* Agreements will be negotiated annually and will be in effect for a period of 12 months. Each agreement, however, will include a scope of work for three years as reflected in § 360.2(b) to give continuity to the total training and education program.

(c) *Submission procedure.* Each State applicant shall comply with the following procedures:

(1) *Issuance of a request for application:* Each State emergency management agency will receive a Request for Application Package from the State's respective FEMA Regional Administrator.

(2) *How to submit:* Each State shall submit the completed application package to the Regional Administrator of the Appropriate Region.

(3) *Application package:* The Application Package should include:

(i) A transmittal letter signed by the State Director of the agency tasked with emergency management responsibilities for that State.

(ii) A three year projected training and education scope of work including

both ''required'' training and ''optional'' courses. The first of the projected three year program is to be detailed as to list of courses, description of training to be offered, audiences to be reached and numbers to be trained. Dates and locations of training as well as costs of delivery and student travel and per diem are to be estimated. Special instructions for this portion of the submittal will be included in the Application Package.

(iii) Standard Form 270 ''Request for Advance or Reimbursement'' as required by 2 CFR parts 200 and 3002 and FEMA General Provisions for Cooperative Agreements.

(d) *Reporting agreements.* Recipients of State Agreement benefits will report quarterly during the Federal Fiscal year, directly to the Regional Administrator of their respective Regions. The report should include a narrative of the training programs conducted accompanied by rosters for each event, agenda, and a summary financial statement on the status of the Agreement funds. Any course or training activity included in the Scope of Work and not presented as scheduled should be explained in detail as to the reason for cancellation in the quarterly report. The costs allocated to this cancelled activity should be reprogrammed to another training activity approved by the Regional Administrator no later than the last day of the 3rd quarter, or released to the Region. An evaluation of the degree to which objectives were met, the effectiveness of the methodology, and the appropriateness of the resources and references used should also be included in the quarterly report. The report is due in the Regional Office no later than the 15th day of January, April, and July. A final report for the year is due the 15th of October.

[46 FR 1271, Jan. 6, 1981, as amended at 79 FR 76088, Dec. 19, 2014]

§ 360.5 General provisions for State Cooperative Agreement.

The legal funding instrument for the State Assistance Program for Training and Education FEMA is the State Cooperative Agreement. All States will be required to comply with FEMA General Provisions for the State Cooperative Agreement. The General Provisions for the State Cooperative Agreement will be provided to the States as part of the Request for Application package. The General Provisions will become part of the Cooperative Agreement.

PART 361—NATIONAL EARTHQUAKE HAZARDS REDUCTION ASSISTANCE TO STATE AND LOCAL GOVERNMENTS

Subpart A—Earthquake Hazards Reduction Assistance Program

Sec.

361.1 Purpose.
361.2 Definitions.
361.3 Project description.
361.4 Matching contributions.
361.5 Criteria for program assistance, matching contributions, and return of program assistance funds.
361.6 Documentation of matching contributions.
361.7 General eligible expenditures.
361.8 Ineligible expenditures.

Subpart B [Reserved]

AUTHORITY: Reorganization Plan No. 3 of 1978, 43 FR 41943, 3 CFR, 1978 Comp., p. 329; Earthquake Hazards Reduction Act of 1977, as amended, 42 U.S.C. 7701 *et seq.;* E.O. 12148, 44 FR 43239, 3 CFR, 1979 Comp., p. 412; and E.O. 12381, 47 FR 39795, 3 CFR, 1982 Comp., p. 207.

SOURCE: 57 FR 34869, Aug. 7, 1992, unless otherwise noted.

Subpart A—Earthquake Hazards Reduction Assistance Program

§ 361.1 Purpose.

This part prescribes the policies to be followed by the Federal Emergency Management Agency (FEMA) and States in the administration of FEMA's earthquake hazards reduction assistance program, and establishes the criteria for cost-sharing.

§ 361.2 Definitions.

Cash Contribution means the State cash outlay (expenditure), including the outlay of money contributed to the State by other public agencies and institutions, and private organizations and individuals. All expenditures must

be listed in the project's approved budget.

Certification represents the Governor's written assurance describing the steps State agencies will take toward meeting the 50 percent cash contribution required following the third year of program funding. The letter of certification is intended to assist the State maintain a commitment to and plan for securing the future cash match with the long-range goal of developing an ongoing, rather than a short-term, State program.

Cost Sharing and *Matching* represent that portion of project costs not borne by the Federal Government.

Eligible Activities are activities for which FEMA may provide funding to States under this section. They include specific activities or projects related to earthquake hazards reduction which fall into one or more of the following categories: Preparedness and response planning; mitigation planning and implementation, including inventories preparation, seismic safety inspections of critical structures and lifelines, updating building and zoning codes and ordinances to enhance seismic safety; and public awareness and education. The activities that will actually be funded shall be determined through individual negotiations between FEMA and the States (see criteria in §361.3(3)).

In-kind contributions represent the value of non-cash contributions provided by the States and other non-Federal parties. In-kind contributions may be in the form of charges for real property and non-expendable personal property and the value of goods and services directly benefiting and specifically identifiable to the States' earthquake hazards reduction projects.

Project means the complete set of approved earthquake hazards reduction activities undertaken by a State, or other jurisdiction, on a cost-shared basis with FEMA in a given Federal fiscal year.

Project Period is the duration of time over which an earthquake hazards reduction project is implemented.

State refers to the States of the United States of America, individually or collectively, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Mariana Islands, and any other territory or possession of the United States. It also means local units of government or substate areas that include a number of local government jurisdictions.

State Assistance means the funding provided under this subpart by FEMA through the National Earthquake Hazards Reduction Program (NEHRP) to States to develop State programs specifically related to earthquake hazards reduction. The term also includes assistance to local units of government or substate areas, such as a group of several counties.

Target Allocation is the maximum amount of FEMA earthquake program funds presumably available to an eligible State in a fiscal year. It is based primarily upon the total amount of State assistance funds available to FEMA annually, the number of eligible States, and a nationally standardized comparison of these States' seismic hazard and population-at-risk. The target allocation is not necessarily the amount of funding that a State will actually receive from FEMA. Rather, it represents a planning basis of negotiations between the State and its FEMA Regional Office which will ultimately determine the actual amount of earthquake State assistance to be provided by FEMA.

§361.3 Project description.

(a) An objective of the Earthquake Hazards Reduction Act is to develop, in areas of seismic risk, improved understanding of and capability with respect to earthquake-related issues, including methods of mitigating earthquake damage, planning to prevent or minimize earthquake damage, disseminating warnings of earthquakes, organizing emergency services, and planning for post-earthquake recovery. To achieve this objective, FEMA has implemented an earthquake hazards reduction assistance program for State and local governments in seismic risk areas.

(b) This assistance program provides funding for earthquake hazards reduction activities which are eligible according to the definition in §361.2. The categories, or program elements, listed

therein comprise a comprehensive earthquake hazards reduction project for any given seismic hazard area. Key aspects of each of these elements are as follows:

(1) *Mitigation* involves developing and implementing strategies for reducing losses from earthquakes by incorporating principles of seismic safety into public and private decisions regarding the siting, design, and construction of structures (i.e., updating building and zoning codes and ordinances to enhance seismic safety), and regarding buildings' nonstructural elements, contents and furnishings. Mitigation includes preparing inventories of and conducting seismic safety inspections of critical structures and lifelines, and developing plans for identifying and retrofitting existing structures that pose threats to life or would suffer major damage in the event of a serious earthquake.

(2) *Preparedness/response planning* are closely related and usually considered as one comprehensive activity. They do differ, however, in that preparedness planning involves those efforts undertaken before an earthquake to prepare for or improve capability to respond to the event, while response planning can be defined as the planning necessary to implement an effective response once the earthquake has occurred. Preparedness/response planning usually considers functions related to the following:

(i) Rescue and fire services;

(ii) Medical services;

(iii) Damage assessments;

(iv) Communications;

(v) Security;

(vi) Restoration of lifeline and utility services;

(vii) Transportation;

(viii) Sheltering, food and water supplies;

(ix) Public health and information services;

(x) Post-disaster recovery and the return of economic stability;

(xi) Secondary impacts, such as dam failures, toxic releases, etc.; and

(xii) Organization and management.

(3) *Public awareness/earthquake education* activities are designed to increase public awareness of earthquakes and their associated risks, and to stimulate behavioral changes to foster a self-help approach to earthquake preparedness, response, and mitigation. Audiences that may be targeted for such efforts include:

(i) The general public;

(ii) School populations (administrators, teachers, students, and parents);

(iii) Special needs groups (e.g., elderly, disabled, non-English speaking);

(iv) Business and industry;

(v) Engineers, architects, builders;

(vi) The media; and

(vii) Public officials.

(4) *Other Activities* in support of those listed in §361.3(b)(1), (b)(2), and (b)(3) may include, but are not limited to, State seismic advisory boards which provide State and local officials responsible for implementing earthquake hazards reduction projects with expert advice in a variety of fields; hazard identification which defines the potential for earthquakes and their related geological hazards in a particular area; and vulnerability assessments, also known as loss estimation studies, which provide information on the impacts and consequences of an earthquake on an area's resources, as well as opportunities for earthquake hazards mitigation.

(c) State eligibility for financial assistance to States under this section is determined by FEMA based on a combination of the following criteria:

(1) Seismic hazard, including the historic occurrence of damaging earthquakes, as well as probable seismic activity;

(2) Total population and major urban concentrations exposed to such risk; and

(3) Other factors, the loss, damage, or disruption of which by a severe earthquake would have serious national impacts upon national security, such as industrial concentrations, concentrations or occurrences of natural resources, financial/economic centers and national defense facilities.

(d) Each fiscal year, FEMA will establish a target allocation of earthquake program funds for each eligible State.

(e) The specific activities, and the distribution of funds among them, that will be undertaken with this assistance will be determined during the annual

Comprehensive Cooperative Agreement (CCA) negotiations between FEMA and the State, and will be based upon the following:

(1) The availability of information regarding identification of seismic hazards and vulnerability to those hazards;

(2) Earthquake hazards reduction accomplishments of the State to date;

(3) State and Federal priorities for needed earthquake hazards reduction activities; and

(4) State and local capabilities with respect to staffing, professional expertise, and funding.

(f) As a condition of receiving FEMA funding, a percentage of the amount of the total State project (FEMA State assistance, combined with the State match) must be spent for activities under the Mitigation Planning element. The percentage, to be determined by FEMA, may be increased by no more than 5 percent annually, beginning at 15 percent in fiscal year 1991 with a limit of 50 percent of the total State project. The increase will take into account the amount of time a State has been participating in the program. States may expend more than the required percentage of funding on eligible mitigation activities.

(g) The State match may be distributed among the eligible activities in any manner that is mutually agreed upon by FEMA and the State in the CCA negotiations.

(h) Negotiations between FEMA and the State regarding the scope of work and the determination of the amount of State assistance to be awarded shall consider earthquake hazards reduction activities previously accomplished by the State, as well as the quality of their performance.

§ 361.4 Matching contributions.

(a) All State assistance will be cost shared after the first year of funding. States which received a grant before October 1, 1990, which included the 50 percent non-Federal contribution to the State program, will continue to match the Federal funds on a 50 percent cash match basis.

(b) States which did not receive a grant before October 1, 1990, will assume cost sharing on a phased-in basis over a period of four years with the full cost sharing requirements being implemented in the fourth year. The sequence is as follows:

(1) For the first fiscal year, cost sharing will be voluntary. FEMA will provide State assistance without requiring a State match. Those States that are able to cost-share are encouraged to do so (on either a cash or in-kind basis).

(2) For the second fiscal year, the minimum acceptable non-Federal contribution is 25 percent of the total project cost, which may be satisfied through an in-kind contribution. Those States that are able to cost-share on a cash-contribution basis are encouraged to do so.

(3) For the third fiscal year, the minimum acceptable non-Federal contribution is 35 percent of the total project cost, which may be satisfied through an in-kind contribution. Those States that are able to cost-share on a cash-contribution basis are encouraged to do so.

(4) For the fourth and subsequent fiscal years, full cost sharing will be implemented, requiring a minimum of a 50 percent non-Federal contribution to a State program, with this share required to be cash. In-kind matching will no longer be acceptable. Thus, every dollar FEMA provides to a State must be matched by one dollar from the State. States that can contribute an amount greater than that required by the match are permitted and encouraged to do so. However, State assistance will not exceed the established target allocation.

(c) The State contribution need not be applied at the exact time of the obligation of the Federal funds. However, the State full matching share must be obligated by the end of the project period for which the State assistance has been made available for obligation under an approved program or budget.

(d) In the event a State interrupts its participation in this program, if it later elects to participate again, the nature and amount of that State's cost sharing shall be determined by the regulations then in effect, taking into account the number of years in which the State previously participated.

§ 361.5 Criteria for program assistance, matching contributions, and return of program assistance funds.

(a) In order to qualify for assistance, a State must:

(1) Demonstrate that the assistance will result in enhanced seismic safety in the State;

(2) Provide a share of the costs of the activities for which assistance is being given, in accordance with § 361.4; and

(3) Demonstrate that it is taking actions to ensure its ability to meet the 50 percent cash contribution commitment either on an ongoing basis or for new States, by the fourth year of funding.

(i) The Governor of newly participating State must certify to the FEMA Regional Administrator the State will take steps to meet the 50 percent cash contribution requirement after the third year of funding. The specific steps to be taken will be outlined in the certification which must be submitted prior to the State receiving program funds.

(ii) The Governor must certify the State's continued commitment in the second and third years of funding. The certification will describe the progress made on the steps contained in the previous year's certification and steps to be taken in the future. The certification must be submitted to the Regional Administrator before the State will receive program funds.

(iii) If a State encounters difficulties meeting the 50 percent cash contribution requirement for the target allocation following the fourth year of funding, the Regional Administrator may require the Governor to continue certifying the State is working to resolve the difficulty.

(iv) A State will not receive Federal funds if it cannot provide the required cash contribution.

(b) The value of any resources accepted as a matching share under one Federal agreement or program cannot be counted again as a contribution under another.

(c) The State seeking the match shall submit documentation sufficient for FEMA to determine that the contribution meets the following requirements. The match shall be:

(1) Necessary and reasonable for proper, cost-effective and efficient administration of the project, allocable solely thereto, and except as specifically provided herein, not be a general expense required to carry out the overall responsibilities of State and local governments;

(2) Verifiable from the recipient State's records;

(3) Not allocable to or included as a cost of any other Federally financed program in either the current or a prior period;

(4) Authorized under State law;

(5) Consistent with any limitations or exclusions set forth in these regulations, Federal laws or other governing limitations as to types of cost items;

(6) Accorded consistent treatment through application of generally accepted accounting principles appropriate to the circumstances;

(7) Provided for in the approved budget/workplan of the State; and

(8) Consistent with 2 CFR parts 200 and 3002.

(d) A State must submit and FEMA must approve a statement of work before the State receives any grant funds. The statement of work and target allocation of funds are based on a 12-month performance period. Except under extenuating circumstances, the funds initially obligated to the State will be based on the amount of time remaining in the performance period at the time the statement of work is approved.

(e) States are expected to perform activities and therefore expend funds on a quarterly basis in accordance with the approved statement of work. At the end of the third quarter, State and FEMA regional office staff will review the State's accomplishments to date. Funds not expended in accordance with the approved statement of work by the end of the third quarter of the performance period will not be made available to the State unless the State can demonstrate, and FEMA approves, its ability to perform activities adequately resulting in the expenditure of the funds by the end of the performance period.

(Approved by the Office of Management and Budget under OMB control number 3067–0170)

[57 FR 34869, Aug. 7, 1992, as amended at 79 FR 76088, Dec. 19, 2014]

§ 361.6 Documentation of matching contributions.

(a) The statement of work provided by the State to FEMA describing the specific activities comprising its earthquake hazards reduction project, including the project budget, shall reflect a level of effort commensurate with the total of the State and FEMA contributions.

(b) The basis by which the State determines the value of an in-kind match must be documented and a copy retained as part of the official record.

(c) The State shall maintain all records pertaining to matching contributions for a three-year period after the date of submission of the final financial report required by the CCA, or date of audit, whichever date comes first.

§ 361.7 General eligible expenditures.

(a) Expenditures must be for activities described in the statement of work mutually agreed to by FEMA and the State during the annual negotiation process, or for activities that the State agrees to perform as a result of subsequent modifications to that statement of work. These activities shall be consistent with the definition of eligible activities in § 361.2.

(b) The following is a list of eligible expenditures. When items do not appear on the list they will be considered on a case-by-case basis for policy determinations, based on criteria set forth in § 361.5. All costs must be reasonable, and consistent with OMB Circular A–87.

(1) Direct and indirect salaries or wages (including overtime) of employees hired specifically for carrying out earthquake hazards reduction activities are eligible when engaged in the performance of eligible work.

(2) Reasonable costs for work performed by private contractors on eligible projects contracted for by the State.

(3) Travel costs and per diem costs of State employees not to exceed the actual subsistence expense basis for the permanent or temporary activity, as determined by the State's cost principles governing travel.

(4) Non-expendable personal property, office supplies, and supplies for workshops; exhibits.

(5) A maximum of $8,000 or 10 percent of the total project allocation, whichever is less, may be expended for personal computer equipment in the first year of program funding. A full-time earthquake staff person must be employed and the equipment must be dedicated entirely to the earthquake project.

(6) Meetings and conferences, when the primary purpose is dissemination of information relating to the earthquake hazards reduction project.

(7) Training which directly benefits the conduct of earthquake hazards reduction activities.

§ 361.8 Ineligible expenditures.

(a) Expenditures for anything defined as an unallowable cost by OMB Circular A–87.

(b) Federal funds may not be used for the purchase or rental of any equipment such as radio/telephone communications equipment, warning systems, and computers and other related information processing equipment, except as stated in § 361.7(b)(5). If a State wishes to use its matching funds for this purpose, it must:

(1) Document during the annual negotiation process with FEMA how this equipment will support the earthquake hazards reduction activities in its scope of work (see § 361.7(a)); and

(2) Claim as credit for its match, if the equipment is to be used for purposes in addition to support of earthquake hazards reduction activities, only that proportion of costs directly related to its earthquake hazards reduction project.

Subpart B [Reserved]

PART 362—CRITERIA FOR ACCEPTANCE OF GIFTS, BEQUESTS, OR SERVICES

Sec.

362.1 Purpose.
362.2 Definitions.
362.3 Criteria for determining acceptance.

AUTHORITY: 42 U.S.C. 7701, 7705c.

SOURCE: 59 FR 35631, July 13, 1994, unless otherwise noted.

§ 362.1 Purpose.

This part establishes criteria for determining whether the Administrator may accept gifts, bequests, or donations of services, money or property for the National Earthquake Hazards Reduction Program (NEHRP), under section 9 of the National Earthquake Hazards Reduction Program Reauthorization Act, 42 U.S.C. 7705c.

§ 362.2 Definitions.

As used in this part—

Gifts of property means a gratuitous, voluntary transfer or conveyance of ownership in property by one person to another without any consideration, including transfer by donation, devise or bequest.

Gifts of services means a gratuitous, voluntary offer of labor or professional work by one person to another without any compensation for that labor or professional work.

Program Agencies means the Federal Emergency Management Agency, the United States Geological Survey, the National Science Foundation, and the National Institute of Standards and Technology.

Property means real or personal property, tangible or intangible, including money, certificates of stocks, bonds, or other evidence of value.

Services means labor or professional work performed for the benefit of another or at another's command.

Solicit means to endeavor to obtain by asking or pleading.

§ 362.3 Criteria for determining acceptance.

The following criteria shall be applied whenever a gift of property or gift of services is offered to the Administrator for the benefit of the National Earthquake Hazards Reduction Program.

(a) The gift of property or gift of services must clearly and directly further the objectives of the National Earthquake Hazards Reduction Program, as defined in 42 U.S.C. 7702.

(b) All gifts of property must be offered unconditionally, with sole discretion of use, administration and disposition of such property to be determined by the Administrator or his designee.

(c) The Administrator may accept and use gifts of services of voluntary and uncompensated personnel, and may provide transportation and subsistence as authorized by 5 U.S.C. 5703 for persons serving without compensation.

(d) Employees of FEMA or the Program agencies may not solicit gifts of property, or gifts of services.

(e) Acceptance of gifts of property, or gifts of services must first be approved by the Office of the Chief Counsel, FEMA, for conformance with all applicable laws and regulations.

(f) In all cases where it is determined that the acceptance of a gift may create a conflict of interest, or the appearance of a conflict of interest, the gift will be declined.

PARTS 363–399 [RESERVED]

CHAPTER IV—DEPARTMENT OF COMMERCE AND DEPARTMENT OF TRANSPORTATION

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PART 400 [RESERVED]

PART 401—SHIPPING RESTRICTIONS (T–1)

Sec.
401.1 Prohibited transportation and discharge.
401.2 Application for adjustment or exceptions.
401.3 Reports.
401.4 Records.
401.5 Defense against claims for damages.
401.6 Violations.

AUTHORITY: Sec. 704, 64 Stat. 816, as amended; 50 U.S.C. app. 2154, as amended; Interpret or apply secs. 101, 705, 64 Stat. 799, as amended; 50 U.S.C. app. 2071; E.O. 10480, 3 CFR, 1949–1953 Comp., p. 962.

SOURCE: Transportation Order T–1, 30 FR 9092, July 21, 1965; 32 FR 15831, Nov. 17, 1967, unless otherwise noted. Redesignated at 45 FR 44574, July 1, 1980.

§ 401.1 Prohibited transportation and discharge.

No person shall transport in any ship documented under the laws of the United States or in any aircraft registered under the laws of the United States any commodity at the time not identified by the Symbol B in the last column of the Commodity Control List (339.1 of the Comprehensive Export Schedule, issued by the Bureau of International Commerce, Department of Commerce (15 CFR parts 368 through 399), any article designated as arms, ammunition, and implements of war in the United States Munitions List (22 CFR parts 121 through 128), or any commodity, including fissionable, materials controlled for export under the Atomic Energy Act of 1954, as amended, to any destination at the time in country groups X, Y, or Z as set forth in the Comprehensive Export Schedule (15 CFR 370.1(g)(2)), and no person shall discharge from any such ship or any such aircraft any such commodity or article at any such port or place or at any other port or place in transit to any such destination, unless a validated export license under the Export Control Act of 1949, as amended, under section 414 of the Mutual Security Act of 1954, as amended, or under the Atomic Energy Act of 1954, as amended, has been obtained for the shipment, or unless authorization for the shipment has been obtained from the Assistant Secretary for Domestic and International Business. This prohibition applies to the owner of the ship or aircraft, the master of the ship or aircraft, or any other officer, employee or agent of the owner of the ship or aircraft who participates in the transportation. The consular officers of the United States are furnished with current copies of the Commodity Control List.

§ 401.2 Application for adjustment or exceptions.

Any person affected by any provisions of this order may file an application for an adjustment or exception upon the ground that such provision works an exceptional hardship upon him, not suffered by others, or that its enforcement against him would not be in the interest of the national defense program. Such an application may be made by letter or telegram addressed to the Assistant Secretary for Domestic and International Business, Department of Commerce, Washington, DC, 20230, reference T–1. If authorization is requested, any such application should specify in detail the material to be shipped, the name and address of the shipper and of the recipient of the shipment, the ports or places from which and to which the shipment is being made and the use to which the material shipped will be put. The application should also specify in detail the facts which support the applicant's claim for an exception.

§ 401.3 Reports.

Persons subject to this order shall submit such reports to the Assistant Secretary for Domestic and International Business as he shall require, subject to the terms of the Federal Reports Act.

§ 401.4 Records.

Each person participating in any transaction covered by this order shall retain in his possession, for at least 2 years, records of shipments in sufficient detail to permit an audit that determines for each transaction that the provisions of this order have been met. This does not specify any particular accounting method and does not require

alteration of the system of records customarily maintained, provided such records supply an adequate basis for audit. Records may be retained in the form of microfilm or other photographic copies instead of the originals.

§ 401.5 Defense against claims for damages.

No person shall be held liable for damages or penalties for any default under any contract or order which shall result directly or indirectly from compliance with this order or any provision thereof, notwithstanding that this order or such provision shall thereafter be declared by judicial or other competent authority to be invalid.

§ 401.6 Violations.

Any person who wilfully violates any provisions of this order or wilfully conceals a material fact or furnishes false information in the course of operation under this order is guilty of a crime and upon conviction may be punished by fine or imprisonment or both. In addition, administrative action may be taken against any such person, denying him the privileges generally accorded under this order.

PART 402—SHIPMENTS ON AMERICAN FLAG SHIPS AND AIRCRAFT (T–1, INT. 1)

Sec.

402.1 Shipments from the United States.
402.2 Restricted commodities.
402.3 Addition of commodities to the Positive List.
402.4 Calls at restricted ports en route to an unrestricted port with restricted cargo.
402.5 Forwarding commodities previously shipped.
402.6 Relation to Transportation Order T–2.

AUTHORITY: Sec. 704, 64 Stat. 816, as amended; 50 U.S.C. app. 2154. Interpret or apply sec. 101, 64 Stat. 799, as amended; 50 U.S.C. app. 2071, E.O. 10480, 3 CFR, 1949–1953 Comp., p. 962.

SOURCE: Transportation Order T–1, Interpretation 1, 15 FR 9145, Dec. 21, 1950; 32 FR 15831, Nov. 17, 1967, unless otherwise noted. Redesignated at 45 FR 44574, July 1, 1980.

§ 402.1 Shipments from the United States.

Transportation Order T–1 applies to shipments from the United States, as well as to shipments from foreign ports, on American flag ships and aircraft.

§ 402.2 Restricted commodities.

The restrictions of Transportation Order T–1 apply to the transportation or discharge of (a) commodities on the Positive List (15 CFR part 399) (as amended from time to time) of the Comprehensive Export Schedule of the Office of International Trade, Department of Commerce, (b) articles on the list of arms, ammunition and implements of war coming within the meaning of Proclamation No. 2776 of March 26, 1948, and (c) commodities, including fissionable materials, controlled for export under the Atomic Energy Act of 1946. The restrictions imposed by Transportation Order T–1 do not apply to other commodities, not within these restricted classes at the time of transportation or discharge, even though authorization for the export of the commodity from the United States to the particular destination is required under regulations of the Office of International Trade or under other Federal law or regulation. In this respect, Order T–1 is different from Order T–2 which applies to all commodities destined to Communist China. Order T–1 does not relax or modify any of the requirements of any other regulation or law.

§ 402.3 Addition of commodities to the Positive List.

Order T–1 applies to the transportation or discharge of commodities which are restricted at the time of transportation or discharge. Accordingly, if a commodity is added to the Positive List while the commodity is being transported on an American flag ship or aircraft, the restrictions of Order T–1 immediately apply and the commodity may not be transported to or discharged at any of the restricted ports or discharged in transit to one of the restricted ports, unless authorization under Order T–1 is obtained.

§ 402.4 Calls at restricted ports en route to an unrestricted port with restricted cargo.

Order T–1 does not prohibit an American flag ship or aircraft from going to or calling at one of the restricted ports, even though it has on board a commodity which could not be discharged at that port. (Note, however, that Order T–2 prohibits American flag ships and aircraft from calling at any port or other place in Communist China.) For example, an American flag ship may call at one of the restricted ports (except one in Communist China), even though it has on board the following classes of commodities:

(a) A Positive List commodity manifested to a destination outside the restricted area, with an export license and an export declaration showing the unrestricted destination at the ultimate destination, (b) a Positive List commodity destined for the restricted port of call which cannot be discharged there because there is no export license or authorization from the Assistant Secretary for Domestic and International Business permitting discharge at the restricted port of call, (c) a commodity of any kind destined for Communist China (the transportation and discharge of which is covered by Order T–2). None of these commodities may be discharged at the restricted port of call. Discharge of any of these commodities at the port covered by the restrictions of Order T–1 is prohibited and subject to penalty, regardless of the circumstances under which the discharge of the cargo at the restricted port occurs, unless appropriate authorization is obtained.

§ 402.5 Forwarding commodities previously shipped.

Order T–1 applies to transportation on or discharge from ships documented under the laws of the United States and aircraft registered under the laws of the United States. These restrictions apply either in the case of a discharge at one of the restricted ports or to discharge at any other port in transit to a restricted destination. The restrictions of Order T–1 do not apply to transportation by foreign carriers, as long as there is no prohibited transportation or discharge by or from a United States flag ship or aircraft after the issuance of Order T–1. Accordingly, if an American flag ship or aircraft, before the issuance of Order T–1, had transported restricted commodities manifested to restricted destinations, and had completed the transportation to a foreign intermediate point and had completed the discharge from the American flag ship or aircraft before the issuance of Order T–1, no violation of that order would have occurred, but Order T–1 would prohibit further shipment on an American flag ship or aircraft unless authorization under Order T–1 is obtained.

§ 402.6 Relation to Transportation Order T–2.

Transportation Order T–1 applies to the transportation of commodities to, or in transit to, destinations in Sub-Group A, Hong Kong or Macao. It applies, however, only to commodities on the Positive List of the Office of International Trade, arms and ammunition, and commodities controlled under the Atomic Energy Act (see section 2 of this interpretation). Transportation Order T–2 applies to the transportation of commodities of any kind which are destined to Communist China (Order T–2 also prohibits American ships and aircraft from calling at any port or place in Communist China). Since Communist China is in Sub-Group A, the restrictions of both orders apply to the transportation of commodities to Communist China or to any other point in transit to Communist China.

PARTS 403–499 [RESERVED]

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For changes to this volume of the CFR prior to this listing, consult the annual edition of the monthly List of CFR Sections Affected (LSA). The LSA is available at *www.govinfo.gov*. For changes to this volume of the CFR prior to 2001, see the ''List of CFR Sections Affected, 1949–1963, 1964–1972, 1973–1985, and 1986–2000'' published in 11 separate volumes. The ''List of CFR Sections Affected 1986–2000'' is available at *www.govinfo.gov*.

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67.11 Tables amended 13138
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61.10 Added; eff. 10-1-21 43958
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61 Appendix A(1) revised; eff. 10-1-21 43959
61 Appendix A(2) revised; eff. 10-1-21 43968
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64.6 Tables amended 3549, 9676, 11296, 18130, 21784, 23921, 28500, 36507, 37020, 41196, 43709, 47674, 52053, 55197, 58295, 81143, 84263
64.6 Revised 68790
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67.11 Tables amended 16271, 35009
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61 Correction: Appendix A(1) amended 31177
61 Correction: Appendices A(2) and (3) amended 31178
61 Correction: Appendix A(1), Appendix A(2), and Appendix A(3) amended 10029, 48511
61 Correction: Appendix A(2) amended 47395
62.6 Correction: amended 10029
62.24 (d) amended 67659
64.6 Tables amended 2559, 7510, 9024, 10838, 12118, 14546, 17079, 19581, 22358, 24740, 28291
77 Redesignated from 79 and revised; eff. 10-12-21 50667
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78 Removed 50667
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79 Redesignated as 77; eff. 10-12-21 50667
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80 Authority citation revised 50670
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296 Added; interim 68097
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9.8 (a), (c)(1), (3) introductory text, (v), (4), and (5) revised; (c)(2) amended 57042
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206.114 Revised; interim 4120

206.115 (a) introductory text and (d) amended; (e) removed; (f) redesignated as new (e); (b), (c), and new (e) revised; interim 4121

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44 CFR—Continued

89 FR Page

Chapter I—Continued

206.118 Revised; interim 4123

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206.131 Removed; interim 4124

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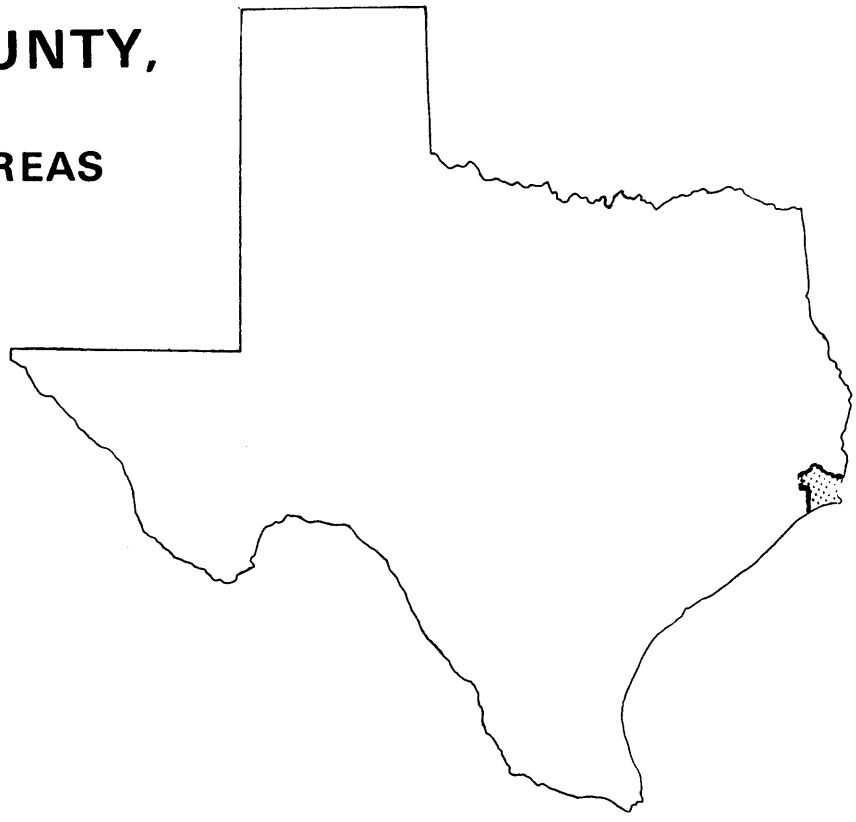
FLOOD INSURANCE STUDY



JEFFERSON COUNTY, TEXAS
UNINCORPORATED AREAS



REVISED: AUGUST 6, 2002

Federal Emergency Management Agency

COMMUNITY NUMBER - 480385**V000**

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program (NFIP) have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study (FIS) may not contain all data available within the repository. It is advisable to contact the community repository for any additional data.

Part or all of this FIS may be revised and republished at any time. In addition, part of this FIS may be revised by the Letter of Map Revision (LOMR) process, which does not involve republication or redistribution of the FIS. It is, therefore, the responsibility of the user to consult with community officials and to check the community repository to obtain the most current FIS components.

Users should refer to the Revision Description section (Section 9.0) of this text for further information.

Initial FIS Effective Date: June 1, 1983

Revised FIS Date: FIS report - December 1, 1982/
Flood Insurance Rate Map - October 1, 1983
November 20, 1991

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Exhibit 2 - Flood Boundary and Floodway Map Index
Flood Boundary and Floodway Map

PUBLISHED SEPARATELY:

Flood Insurance Rate Map Index
Flood Insurance Rate Map

FLOOD INSURANCE STUDY
UNINCORPORATED AREAS OF JEFFERSON COUNTY, TEXAS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study investigates the existence and severity of flood hazards in the unincorporated areas of Jefferson County, Texas, and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study will be used to convert the unincorporated areas of Jefferson County to the regular program of flood insurance by the Federal Emergency Management Agency (FEMA). Local and regional planners will use this study in their efforts to promote sound flood plain management.

In some states or communities, flood plain management criteria or regulations may exist that are more restrictive or comprehensive than those on which these Federally-supported studies are based. These criteria take precedence over the minimum Federal criteria for purposes of regulating development in the flood plain, as set forth in the Code of Federal Regulations at 44 CFR, 60.3 (d&e). In such cases, however, it shall be understood that the state (or other jurisdictional agency) shall be able to explain these requirements and criteria.

1.2 Authority and Acknowledgments

The source of authority for this Flood Insurance Study is the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

The hydrologic and hydraulic analyses for this study were performed by Tetra Tech, Inc., for the Federal Emergency Management Agency, under Contract No. H-4788. This study was completed in July 1980.

1.3 Coordination

The following organizations were contacted for coordination in the development of this study:

Beaumont Chamber of Commerce
County of Jefferson, Engineer's Office
Jefferson County Water Drainage District No. 6
Jefferson County Water Drainage District No. 7
Greater Port Arthur Chamber of Commerce

National Oceanic and Atmospheric Administration
Southeast Texas Regional Planning Commission
Texas State Department of Highways and Public Transportation
Texas State Department of Water Resources
U.S. Army Corps of Engineers, Galveston District (COE)
U.S. Geological Survey (USGS)
U.S. Soil Conservation Service (SCS)

The State Coordinator was involved with this study through the Denton Regional Office of the Federal Emergency Management Agency.

On June 7, 1982, the results of this study were reviewed at a final coordination meeting. All changes resulting from that meeting have been included in this report. This study was acceptable to the community.

2.0 AREA STUDIED

2.1 Scope of Study

This Flood Insurance Study covers the unincorporated areas of Jefferson County, Texas. Not included in the study are the incorporated cities of Beaumont, Bevil Oaks, Groves, Nederland, Nome, Port Arthur, Port Neches, and the Town of Griffing Park. Each of these communities was studied separately. The area of study is shown on the Vicinity Map (Figure 1).

The study analysis includes coastline flooding due to hurricane-induced storm surge. Both the open coast surge and its inland propagation were studied; in addition, the added effects of wave heights were also considered.

The following sources of flooding in the county were studied in detail:

Gulf of Mexico
Sabine Lake
Cotton Creek
Bayou Din
Bayou Din Tributary
Hillebrandt Bayou
Kidd Gully
Mayhaw Bayou
Neches River
Pine Island Bayou
Rhodair Gully
Taylor Bayou
Walker Branch
Walker Branch Tributary
Willow Marsh Bayou (Willow Slough)

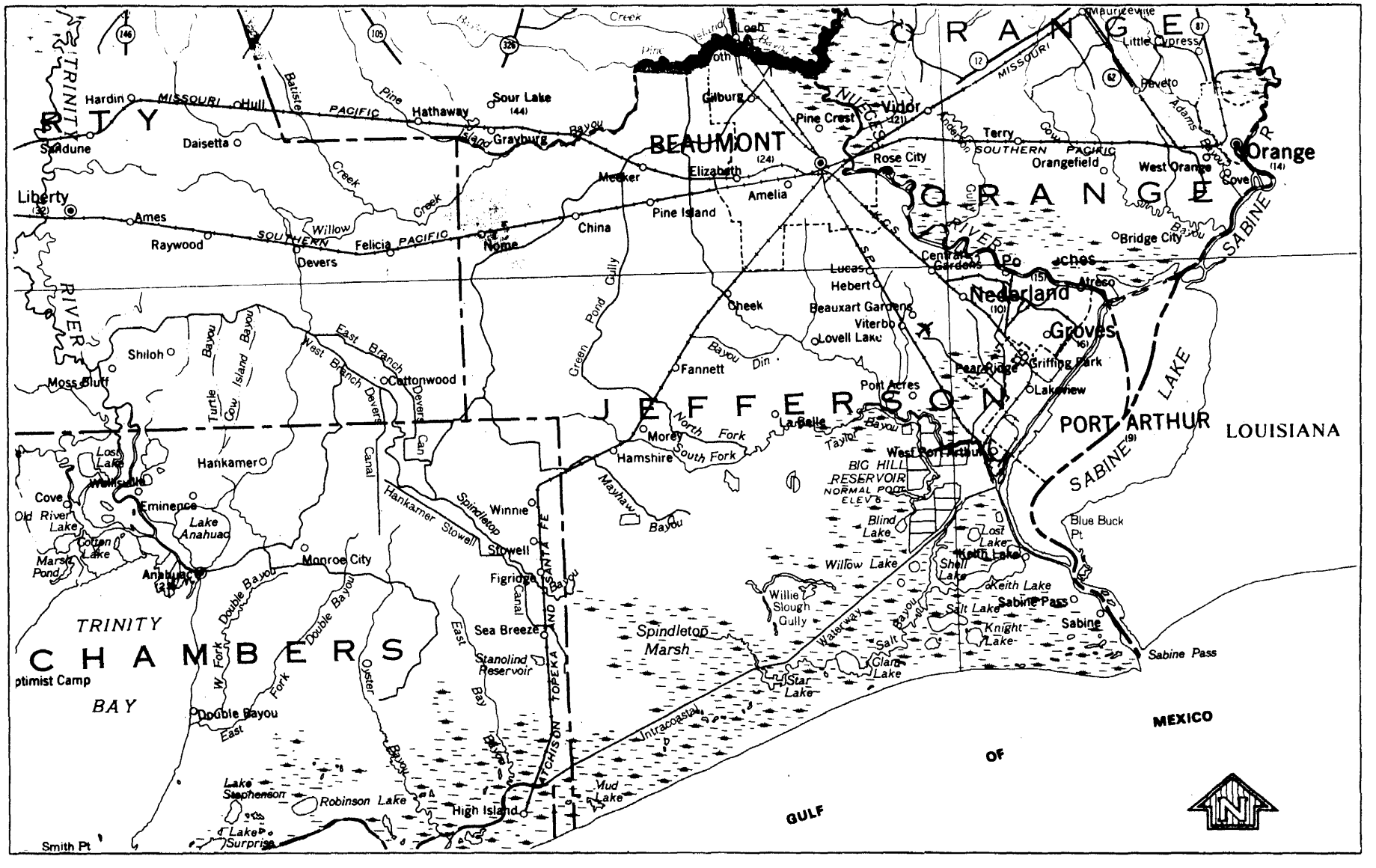


FIGURE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

APPROXIMATE SCALE

8 0 8 16 24 MILES

VICINITY MAP

The watershed areas of the Lakeside and Crane Bayous which are affected by flooding due to rainfall ponding and shallow sheet flow were studied also.

Those areas studied by detailed methods were selected with priority given to all known flood hazard areas and areas of projected development or proposed construction for the next five years, through 1985.

Approximate analyses were used to study those areas having a low development potential or minimal flood hazards. The scope and methods of study were proposed to and agreed upon by FEMA and the County of Jefferson.

2.2 Community Description

Jefferson County occupies an area of approximately 951 square miles in the extreme southeastern part of Texas. The study area is bounded on the north by the Neches River and Pine Island Bayou, which form the border with Hardin and Orange Counties; on the east by Sabine Lake, which forms the border with Cameron Parish, Louisiana; on the south by the Gulf of Mexico; and on the west by Liberty and Chambers Counties. The City of Beaumont, the county seat and largest city, is located approximately 85 miles east of Houston and 70 miles northeast of Galveston.

The U.S. Bureau of the Census recorded the 1970 population of Jefferson County at 246,402, which represented a slight increase over the 1960 census of 245,659. The 1975 population was estimated at 241,246 (Reference 1). The current population is estimated to be about 266,552, and represents an increase of approximately 8 percent over the 1970 level. It is estimated that the population of Jefferson County will grow moderately and will reach 278,248 by 1985 (Reference 2).

The majority of developed land in the county is primarily agricultural, although many parts are highly industrialized. Commercial, residential, and recreational areas are generally located in the eastern portion of the county. The Gulf of Mexico shore is mostly undeveloped and is used extensively for public recreation. Leading industries in the area produce petroleum and natural gas, sulfur, petrochemicals, and petroleum and natural gas, products.

Much of the prairie land is used for production of rice, soy beans, and cattle. Rice processing is a major industry. The ports of Beaumont, Port Arthur, and Sabine Pass in the southern part of the county serve shippers from throughout the world and are a major industry.

Jefferson County is located in a humid subtropical climatic zone, which is characterized by moderate winters and warm summers. Rainfall is abundant and, on the average, is evenly distributed throughout the year. The heaviest rains normally occur during the hurricane season, which extends usually from about June through October. The average annual precipitation in the county is approximately 55 inches and the average annual temperature is approximately 68.5 degrees F (Reference 3).

The subtropical climate allows for the growth of many varieties of vegetation. Belts of hardwood and pine are found in the upland parts of the county. Swamps exist in the flood plains of the Neches River and the major bayous. The swamps subsist in low, flat or depressed areas that are frequently flooded by fresh water. The swamps support vegetation such as cypress trees, and water tolerant grass and sedges in a few cleared areas. Most open land is prairie land that is used for grazing and rice production. Large areas of tidal marsh along the Gulf of Mexico/Sabine Lake support a dense growth of salt-water vegetation, principally cord grass and marsh cane.

Physiographically, Jefferson County lies within the Gulf Coastal Plain and is characterized by flat, featureless terrain that slopes gently to the Gulf of Mexico. The coastline is characterized by a narrow, wave-cut beach and low ridges commonly called cheniers. A large portion of the area near the Gulf is coastal marshland.

Soils in Jefferson County are clayey and silty and have low infiltration rates and high runoff potential (Reference 4). The soils are classified as Group C or D for hydrologic purposes.

The elevations in the study area range from sea level along the Gulf Coast to approximately 46 feet above the National Geodetic Vertical Datum (NGVD) in the northwestern part of the county. Natural drainage is generally poor -- the streams are generally just above sea level and have sluggish flow through shallow meandering channels.

The following are the major streams within the county: the Neches River, Pine Island Bayou and its tributaries, Walker Branch and Walker Branch Tributary, Taylor Bayou and its tributaries, Rhodair Gully, Mayhaw Bayou; Hillebrandt Bayou (a major tributary of Talyor Bayou) with its tributaries, Willow Marsh Bayou, Bayou Din and its tributaries, Bayou Din Tributary, Kidd Gully and Cotton Creek. The Neches River, which forms the county's northeastern border, flows in a southeasterly direction into Sabine Lake at Port Arthur. It has a total drainage area of about 10,000 square miles, but drains very little of Jefferson County. Pine Island Bayou, a tributary of the Neches River, forms the northern border of the county and drains only a small part of the county lying to the south. Taylor Bayou (and its tributaries) with a drainage area of 445 square miles, drains the greater part of the county. Taylor Bayou empties into the Sabine-Neches Waterway west of Port Arthur. This part of the Gulf Intracoastal Waterway is cut off from Sabine Lake by spoil deposits. These spoil banks along the Sabine-Neches Canal range in elevation between 5 and 30 feet above Mean Sea Level (MSL) and provide a continuous barrier for 18 miles from the mouth of the Neches River to Sabine Pass. Sabine Lake, which has a maximum natural depth of 9 feet, receives drainage from the basin of the Sabine River as well as the Neches River.

There is a hurricane protection system surrounding the northern Port Arthur area. Incorporated into the system are other areas which lie in the county. The system consists of over 29 miles of earth levee and 7 miles of floodwall with top elevations varying from 14 to 19 feet. There are gated gravity drainage structures that convey normal drainage from behind the flood protection system at various locations. In addition, five pumping plants provide interior drainage when gated drainage structures are closed during periods of high lake stage and high runoff. Behind the Hurricane Protection System is the Crane Bayou watershed which consists of 44.6 square miles with approximately 50 percent of its land developed. The area near Highway 73 between the Southern Pacific Railroad and the Hurricane Protection System is called the Lakeside watershed, and has a drainage area of 4.9 square miles.

In addition to the major rivers, an extensive network of freshwater canals traverses the study area for irrigation and industrial water supply. The principal canals are owned and maintained by the Lower Neches Valley Authority. Flow in most drainage ditches is routed under the canals by siphons. In some locations, however, drainage water is carried over canals in flumes.

2.3 Principal Flood Problems

Flooding in Jefferson County results primarily from stream overflow (caused by rainfall-runoff, ponding and sheet flow), and from tidal surges and associated waves (caused by hurricanes and tropical storms) in the coastal areas of the county. Because of the flatness of the terrain, many inland areas are susceptible to shallow flooding during heavy rainfalls. Not all storms that pass close to the study area produce extremely high tides. Similary, storms that produce extreme conditions in one area may not necessarily produce critical conditions in other locations. The Neches River and Taylor Bayou are broad estuaries and, under certain conditions, tides generated at their mouths in Sabine Lake can intrude far upstream. Rainfall which usually accompanies hurricanes can aggravate the tidal flood situation.

Storms passing Texas in the vicinity of Jefferson County have produced severe floods as well as structural damage. Brief descriptions of several significant tropical storms are presented below to provide historic information to which coastal and riverine flood hazards and flood depths can be compared (References 5, 6, 7, 8, 9, 10, 11, and 12).

Storms of 1886

On June 15, 1886, the eye of a tropical storm passed less than 50 miles south of Sabine before making landfall near Cameron, Louisiana. This storm generated surges in excess of 7 feet at Sabine Pass and caused inundation which extended several miles inland. In October of that year, a storm that developed in the Caribbean Sea made landfall in the Sabine Pass area. Sabine

Pass took the full force of the hurricane, which generated a surge of 11 feet above NGVD at Sabine Pass. Water covered the area to depths of 9 to 12 feet. The combination of high water, large waves, and gale-force winds drove a large schooner 2 miles inland. The Sabine lighthouse, located about one-half mile from the Gulf, received structural damage; the stone building at its base was destroyed. Nearly every house was moved from its foundation, and an estimated 100 persons perished during the storm when flooding extended 20 miles inland.

August 16 to 17, 1915

The center of this storm made landfall about 83 miles southwest of Sabine Pass and produced surges of about 11 feet above MSL in the Gulf at Sabine Pass and 7.3 feet at Port Arthur. Winds at Sabine Pass and Port Arthur were reported at 65 mph and 45 mph, resepectively. Water in Port Arthur streets was reported to 4 feet, and many homes and businesses in the area were damaged.

July 27 to 30, 1943

This storm brought a reported 17.67 inches of rain in 24 hours in the Port Arthur area and caused extensive damage. Water covered about two-thirds of the city. Houses in the lower residential sections were flooded. Residential streets in Beaumont were also reported under water. About 1,000 people were reported homeless in Jefferson County. This storm also caused serious damage to rice crops in the area.

October 3 to 5, 1949

This storm brought almost 9 inches of rain to Jefferson County and damaged an estimated 20 percent of the county's uncut rice crop.

June 27 to 28, 1957 (Hurricane Audrey)

This first hurricane of the season hit the Louisiana coast near Cameron and passed inland with its center about 25 miles east of Sabine Pass. It was accompanied by 4 to 8-inch rains. Tide records at Sabine Pass indicated a maximum water level of about 9.2 feet above MSL; at Port Arthur the surge reached 4.8 feet above MSL, and a peak of 4.5 feet was recorded on the Neches River near Beaumont.

September 9 to 12, 1961 (Hurricane Carla)

This hurricane, which made landfall near Port O'Connor, flooded more than 1.5 million acres of land in Texas. Tide levels reached 9.4 feet above MSL along the northern shore of Sabine Pass, and 7.1 feet above MSL at Port Arthur. Tide levels reached 7.9 feet above MSL near Port Neches, and 8.5 feet above MSL at the mouth of the Neches River. Taylor Bayou crested at

7.2 feet above MSL during this storm, and overtopped and breached the existing levees in the Port Acres area. Flooding elevations in the northern part of Port Acres measured up to 6.6 feet, but were only 5 feet in the southern part due to protection from the levees along Taylor Bayou and Rhodair Gully. About 25 percent of Groves was reported flooded. New homes in the Highland Heights subdivision were flooded by tide water from the ship channel and the Neches River, which rushed over State Highway 87. "Carla" flooded 376 square miles of Jefferson County (40 percent of its total land area). Of the total $30.6 million damages estimated for Jefferson County, $17 millon damages were attributed to tidal inundation.

September 16 to 20, 1963 (Hurricane Cindy)

This hurricane crossed the Texas coast between Galveston and Port Arthur near High Island and produced surge levels of 4.6 feet above MSL in the Gulf at Sabine Pass, 3.8 feet at Sabine Pass, and 3.3 feet at Port Arthur. This storm was small in size and low in intensity, but was accompanined by torrential rainfall which caused extensive flooding in Jefferson County.

April 19 to 26, 1979

Rainfall reported in amounts between 9.6 to 10.7 inches in the Beaumont area, and 11.5 inches in the Bevil Oaks area, flooded many communities along the Neches River and Taylor, Pine Island and Hillebrandt Bayous. Pine Island Bayou crested at 34.29 feet at Sour Lake, surpassing a record 31 feet set in 1917, and the Neches River creasted at 11 feet (7 feet above flood stage), surpassing its record crest of 9.9 feet in May 1969. Many homes, businesses and roads in Jefferson County were damaged by the floods.

July 25, 1979 (Tropical Storm Claudette)

"Claudette," an upper air low pressure cell, originated in the Atlantic near Puerto Rico and moved westward into the Gulf of Mexico. It brought gale-force winds and heavy rainfall to many parts of southeastern Texas, causing flooding along streams and coastal areas. Recorded rainfall at the Jefferson County Airport was 11.57 inches in 48 hours. Wind gusts were estimated at 60 mph. Flooding was reported in some low-lying areas of Beaumont and many areas of Port Arthur. Parts of Texas Highway 87 from Sabine Pass to High Island were flooded and many Sabine Pass residents were evacuated. Pine Island Bayou crested at 31.1 feet at Sour Lake. There was severe wind damage to utilities in the Beaumont vicinity.

2.4 Flood Protection Measures

There are many existing and planned structural flood protection measures in the county. The hurricane protection system near Port Arthur protects areas from hurricane surges up to 14 feet above MSL. The spoil banks along Sabine Lake also provide some flood protection to the area.

Along Taylor Bayou, improvements are being planned by the COE. These include rectification and enlargement of the existing channel, a diversion channel on Taylor Bayou to the Taylor Bayou Outfall Canal, a gate across the diversion channel to prevent intrusion of salt water, and enlargement of the Gulf Intracoastal Waterway from the outfall canal to Port Arthur Canal. Preconstruction planning has been completed. Construction is being delayed pending assesment of the environmental impact of the project. Completion of the project is indefinite.

No structural flood protection exist in the Gulf coastal areas of Jefferson County.

Nonstructural flood protection measures in the county consist of the Jefferson County Flood Hazard Preventive Ordinance. The ordinance places controls on the types of development and activities which are permissible in the flood plain. The National Weather Service provides forecasting and community flash flood warning services.

3.0 ENGINEERING METHODS

For the flooding sources studied in detail in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude which are expected to be equalled or exceeded once on the average during any 10-, 50-, 100-, and 500-year period (recurrence intervals), have been selected as having special significance for flood plain management and for flood insurance premium rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10, 2, 1, and 0.2 percent chance, respectively, of being equalled or exceeded during any year. Although the recurrence interval represents the long term, average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than one year are considered. For example, the risk of having a flood which equals or exceeds the 100-year flood (one percent chance of annual occurrence) in any 50 year period is about 40 percent (four in 10), and for any 90 year period, the risk increases to about 60 percent (six in 10). The analyses reported here reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak elevation- and discharge-frequency relationships for floods of the selected recurrence intervals for each flooding source studied in detail affecting the unincorporated areas of Jefferson County.

The determination of coastal inundation caused by passage of a hurricane was approached by the Joint Probability Method (Reference 13). The storm population was described by probability distributions of 5 parameters that influence surge heights. These 5 parameters were the central pressure depression (which measures the intensity of the storm), radius to maximum winds, forward speed of the storm, shoreline crossing point, and crossing angle. These parameters, or storm characteristices, were described statistically based on an analysis of observed storms in the vicinity of Jefferson County. Primary sources of data were the National Weather Service (References 14, 15, and 16), the National Hurricane Research Project (Reference 17), and the Monthly Weather Review (Reference 18). A summary of the parameters used for the Jefferson County area is presented in Table 1.

The determination of maximum wave crest elevations associated with the 10- and 100-year events was approached by the method recommended by the National Academy of Sciences (Reference 19). Further details are included in Section 3.3 of this study.

Flood magnitude and frequency for areas subject to runoff flooding in Rhodair Gully were estimated using the COE's HEC-1 Flood Hydrograph Package (Reference 20). Regionalized unit hydrography and rainfall loss rate parameters were developed by hydrograph reconstitution studies using 30 storms in 6 gaged basins. The transposition of the HEC-1 model parameters from gaged to ungaged basins was based on hydrologic similarity as assessed from soil maps (Reference 4), USGS topographic maps (Reference 21), re-cent aerial photos (Reference 22) and field reconnaissance. Urbanized watersheds were studied using methodology developed by Beard (References 23 and 24). Rainfall data were developed from hourly rainfall records from the National Climatic Center (Reference 25) and from TP-40 (Reference 26). The resulting "synthetic" storms used to generate peak discharges of selected frequency have depth-area-duration characteristics consistent with the Texas Gulf Coast area.

The Lakeside and Crane Bayou watersheds lie within the Hurricane Protection System. During storms, the pumping stations within the watersheds are unable to divert water adequately, and a ponding condition occurs at that time. The ponding elevations in these areas were adopted from the COE report (Reference 27).

All major proposed and current projects that affect the study area have been taken into account in this anlysis. The resulting estimated peak discharges for the selected frequencies for each stream studied in Jefferson County are shown in Table 2, "Summary of Discharges". Also indicated are the drainage areas.

CENTRAL PRESSURE DEPRESSION (Millibars)	5	15	25	35	45	55	65	75	85	95	105
PROBABILITY:											
ENTERING	0.17	0.17	0.17	0.09	0.13	0.07	0.08	0.07	0.02	0.02	0.01
EXITING											
PARALLEL											

STORM RADIUS (Nautical Miles)	20	35
PROBABILITY	0.70	0.30

FORWARD SPEED (Knots)	8	14	20
PROBABILITY:			
ENTERING			
EXITING	0.63	0.28	0.09
PARALLEL			

CROSSING ANGLE (Degrees)	21	-24	-69
PROBABILITY	0.32	0.29	0.39

FREQUENCY OF OCCURRENCE	2.03×10^{-3} storms/nautical mile/year

TABLE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

PARAMETER VALUES FOR SURGE ELEVATION COMPUTATIONS

Table 2. Summary of Discharges

Flooding Source and Location	Drainage Area (Square Miles)	Peak Discharges (Cubic Feet per Second) 10-Year	50-Year	100-Year	500-Year
Bayou Din					
Upstream of confluence with Kidd Gully	7.2	1,688	2,342	2,603	3,282
At Interstate Highway 10	3.8	956	1,381	1,539	1,943
Bayou Din Tributary					
At confluence with Bayou Din	1.9	761	1,023	1,130	1,460
Cotton Creek					
At County Road 326	8.3	1,450	1,850	2,000	2,350
Ditch 505					
At State Highway 124	10.9	2,291	3,196	3,529	4,415
At Interstate Highway 10	4.1	972	1,298	1,421	1,749
Upstream of Ditch 505 Tributary	2.7	654	883	970	1,198
Ditch 505 Tributary					
At mouth	1.4	345	487	539	677
Ditch 607					
At Sour Lake Road	6.0	1,215	1,584	1,732	2,118
At U.S. Highway 90	3.7	866	1,216	1,347	1,679
At South Pine Island Road	2.1	398	611	741	1,161
Hillebrandt Bayou					
Downstream of Rhodair Gully	165.0	7,800	11,100	13,000	15,900
Upstream of Rhodair Gully	149.0	7,390	10,500	12,300	15,000
Downstream of John's Gully	142.0	7,200	10,200	12,000	14,700
Upstream of John's Gully	134.0	6,960	9,900	11,600	14,300
Downstream of Bayou Din	128.0	6,800	9,700	11,400	13,900
Upstream of Bayou Din	86.0	5,500	7,700	9,170	11,200
Downstream of Willow Marsh Bayou	67.0	4,790	6,780	8,000	9,700
Upstream of Willow Marsh Bayou	47.0	4,000	5,600	6,600	8,000

Table 2. Summary of Discharges (Continued)

Flooding Source and Location	Drainage Area (Square Miles)	Peak Discharges (Cubic Feet per Second) 10-Year	50-Year	100-Year	500-Year
Kidd Gully					
At confluence with Bayou Din	7.0	2,000	2,700	2,930	3,500
Mayhaw Bayou					
At mouth	65.8	6,761	10,217	11,710	16,324
At State Highway 73	22.5	2,879	4,823	5,576	7,876
At Interstate Highway 10	1.4	680	990	1,112	1,409
Mayhaw Bayou Tributary					
At mouth	6.5	1,567	2,330	2,604	3,332
At Brush Island Road	0.9	427	627	698	885
Neches River					
At Beaumont	10,000.0	60,000	107,000	136,000	240,000
North Fork Taylor Bayou					
At downstream confluence with Burrell Gully	148.5	8,082	10,545	11,091	12,533
At Jap Road	135.4	8,340	10,652	11,159	12,776
Pine Island Bayou					
At confluence of Walker Branch	567.0	18,597	26,671	31,206	39,228
Quinn Ditch					
At mouth	2.9	1,402	2,037	2,301	2,926
Rhodair Gully					
At confluence with Hillebrandt Bayou	16.0	2,620	3,460	3,930	4,790
At Southern Pacific Railroad	6.0	1,920	2,530	2,640	3,150
South Fork Taylor Bayou					
At mouth	101.7	11,215	13,778	15,231	19,406
At State Highway 124	18.8	3,296	5,010	5,577	7,187
At Interstate Highway 10	12.3	3,067	4,495	5,037	6,456

Table 2. Summary of Discharges (Continued)

Flooding Source and Location	Drainage Area (Square Miles)	Peak Discharges (Cubic Feet per Second) 10-Year	50-Year	100-Year	500-Year
Taylor Bayou					
Upstream of confluence with Hillebrandt Bayou	280.0	10,300	14,800	17,400	21,500
Downstream of La Belle Road	273.2	9,261	12,209	13,527	17,036
Walker Branch					
At confluence with Pine Island Bayou	12.0	5,047	7,098	7,870	9,222
Walker Branch Tributary					
At confluence with Walker Branch	7.8	3,541	5,008	5,538	6,489
Willow Marsh Bayou					
At confluence with Hillebrandt Bayou	22.0	7,190	8,923	9,518	10,809

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied in detail in Jefferson County were carried out to provide estimates of the elevations of floods of the selected recurrence intervals along each of the flood sources. Users should be aware that flood elevations shown on the FIRM represent rounded whole-foot elevations and may not exactly reflect the elevations shown on the Flood Profiles or in the Floodway Data tables in the FIS report. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS in conjunction with the data shown on the FIRM.

For areas subject to flooding directly from the Gulf of Mexico/Sabine Lake, the FEMA standard coastal surge model was used to simulate the coastal surge generated by any chosen storm (that is, any combination of the five storm parameters defined previously). Performing such simulations for a large number of storms, each of known total probability, permits one to establish the frequency distribution of surge height as a function to coastal location. These distributions incorporate the large-scale surge behavior but do not include analysis of the added effects associated with much finer scale wave phenomena such as wave height, setup, or runup. The astronomic tide for the region is then statistically combined with the computed storm surge to yield recurrence intervals of total water level. The entire procedure is detailed in Reference 28.

The surge model uses a grid pattern approximating the geographical features of the study area and the adjoining areas. Surges were computed using grids of 5 nautical miles for the open coast computations, 1 nautical mile for the Sabine Lake computations and 1.5 miles for overland computations. The effects of the Sabine and Neches Rivers were included in the model.

Data for the model grid systems and the wave height calculations were obtained from USGS topographic maps (Reference 21), National Oceanic and Atmospheric Administration nautical charts (References 29 through 33), and aerial photographs (Reference 22). The results of this study are considered accurate until local topography, vegetation, or cultural development undergo any major changes.

For areas subject to stream overflow, water-surface elevations for floods of the selected recurrence intervals were developed using the COE HEC-2 water-surface profile computer model (References 34 and 35). Starting water-surface elevations for the Neches River, Hillebrandt and Taylor Bayous, and Rhodair Gully were set equal to the mean high tide. Starting water-surface elevations for Bayou Din, Kidd Gully, Mayhaw and Pine Island Bayous were set equal to normal depth. Starting water-surface elevations for Bayou Din Tributary, Walker Branch, and Walker Branch Tributary were set equal to the elevation of the major streams at their respective confluences. All elevations are referenced from the National Geodetic Vertical Datum (NGVD), formerly Mean Sea Level of 1929; Elevation Reference Marks (ERMs) used in this study are shown and described on the maps.

ERMs shown on the FIRM represent those used during the preparation of this and previous FIS. The elevations associated with each ERM were obtained and/or developed during FIS production to establish vertical control for determination of flood elevations and floodplain boundaries shown on the FIRM. Users should be aware that these ERM elevations may have changed since the publication of this FIS. To obtain up-to-date elevation information on National Geodetic Survey (NGS) ERMs shown on this map, please contact the Information Services Branch of the NGS at (301) 713-3242, or visit their website at www.ngs.noaa.gov. Map users should seek verification of non-NGS ERM monument elevations when using these elevations for construction or floodplain management purposes.

Cross sectional data for the Neches River, Hillebrandt Bayou and Willow Marsh Bayou were available from the COE, Galveston District, and were supplemented with field survey data. Cross sections for the backwater analysis of the remaining streams were obtained from field surveys and USGS 7.5-minute topographic maps (Reference 21). All bridges, dams, and culverts were field checked to obtain elevation data and structural geometry necessary for backwater analysis.

Channel roughness factors (Manning's "n" values) used in the hydraulic computations were chosen based on field observations, aerial photos of the streams and floodplain areas, and USGS Water Supply Paper 1849 (Reference 36). Roughness values used for the main channels and their tributaries ranged from 0.02 to 0.05, with floodplain roughness values ranging from 0.05 to 0.10 for all floods.

Computations for flood levels along the rivers resulting from either coastal surges or rainfall were independently performed. The results of each were combined statistically to obtain flood levels for each return period (Reference 28).

Locations of selected cross sections used in the hydraulic analyses are shown on the flood profiles. For stream segments for which a floodway was computed, selected cross section locations are also shown on the Flood Boundary and Floodway Map.

The hydraulic analyses for this study, however, are based only on the effect of unobstructed flow. The flood elevations as shown on the profiles are thus considered valid only if hydraulic structures in general remain unobstructed and do not fail.

The computed stillwater flood elevations of Jefferson County are tabulated in the Coastal Flood Insurance Zone Data Table (See Section 5.3).

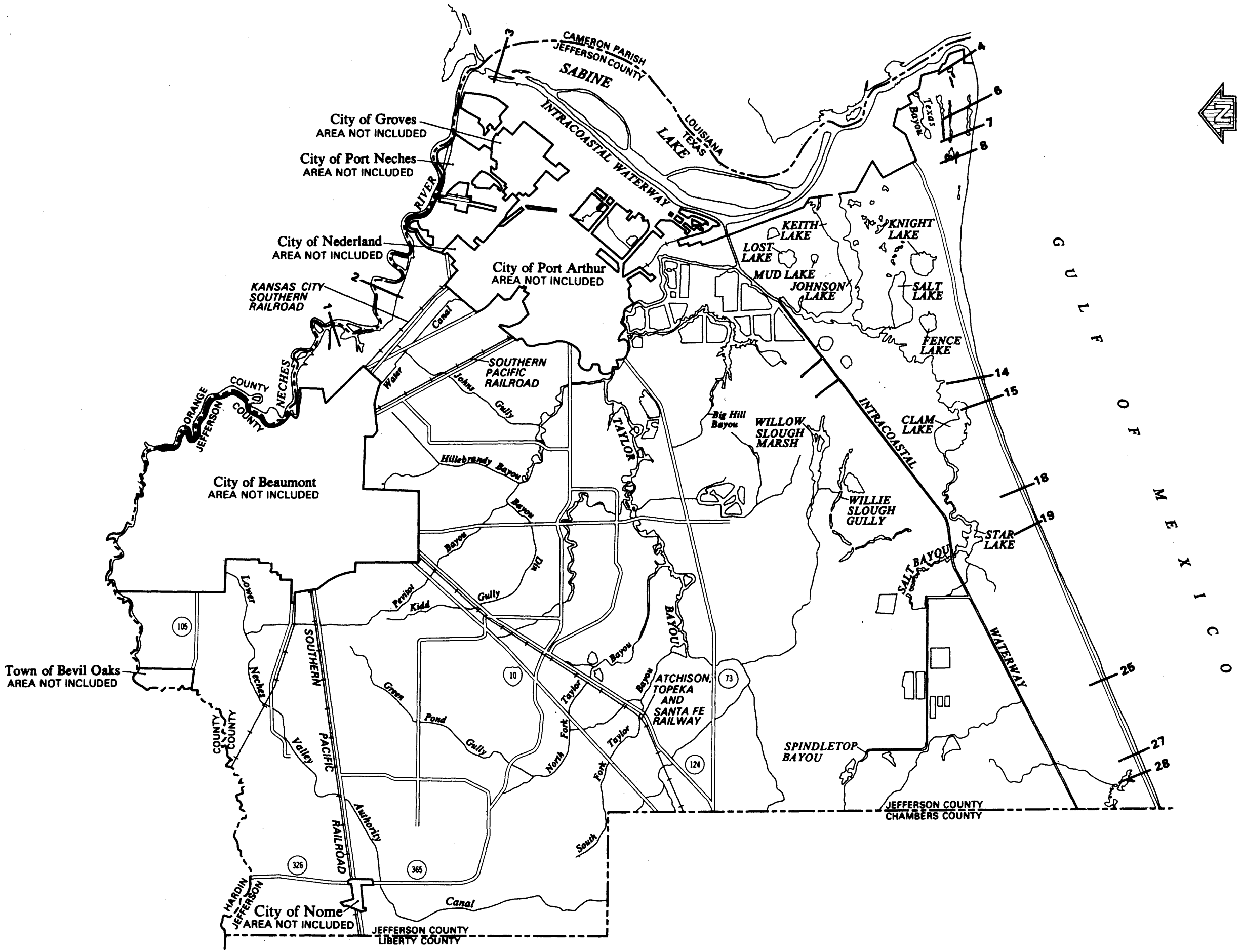
3.3 Wave Height Analysis

The methodology for analyzing the effects of wave heights associated with coastal storm surge flooding is described in the National Academy of Sciences report (Reference 19). This method is based on the following major concepts. First, depth-limited waves in shallow water reach a maximum breaking height that is equal to 0.78 times the stillwater depth. The wave crest elevation is 70 percent of the total wave height plus the stillwater level. The second major concept is that wave height may be diminished by dissipation of energy due to the presence of obstructions such as sand dunes, dikes and seawalls, buildings, and vegetation. The amount of energy dissipation is a function of the physical characteristics of the obstruction and is determined by procedures prescribed in Reference 19. The third major concept is that wave height can be regenerated in open fetch areas due to the transfer of wind energy to the water. This added energy is related to fetch length and depth.

Wave heights were computed along transects (cross section lines) that were located along the coastal areas, as illustrated in Figure 2, "Transect Locations Maps" in accordance with the Users Manual for Wave Height Analysis (Reference 37). In this study, the coastline is defined as a locus of points where maximum surge height would occur along fetches normal to the coast. This synthetic coastline has been designated as the Surge Reference Line and is shown on the transect location map. The transects were located with consideration given to the physical and cultural characteristics, they were spaced at larger intervals. It was also necessary to locate transects in areas where unique flooding existed and in areas where computed wave heights varied significantly between adjacent transects.

1675

TRANSECT LOCATION MAP



FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)

FIGURE 2

The transects were continued inland until the wave dissipated or until flooding from another source with equal or greater elevation was reached. Along each transect, wave heights and elevations were computed considering the combined effects of changes in ground elevation, vegetation, and physical features. The stillwater elevations for the 100-year flood were used as the starting elevations for these computations. Wave heights were calculated to the nearest 0.1 foot, and wave elevations were determined at whole-foot increments along the transects. Areas with a wave component 3-feet or greater were designated as velocity zones. Other areas subject to wave action were designated as A Zones with base flood elevations adjusted to include wave crest elevations.

Figure 3 is a profile for a hypothetical transect showing the effects of energy dissipation and regeneration of a wave as it moves inland. This figure shows the wave elevations being decreased by obstructions, such as buildings, vegetation, and rising ground elevations and being increased by open, unobstructed wind fetches. Actual wave conditions in Jefferson County may not necessarily include all the situations illustrated in Figure 3. Figure 4 is a sample transect reflecting actual conditions in Jefferson County.

Computed wave elevations are based upon existing topography, vegetation and current development patterns and will require re-computation if significant changes occur in any of the above factors.

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The NFIP encourages State and local governments to adopt sound floodplain management programs. To assist in this endeavor, each FIS provides 100-year floodplain data, which may include a combination of the following: 10-, 50-, 100-, and 500-year flood elevations; delineations of the 100-year and 500-year floodplains; and 100-year floodway. This information is presented on the FIRM and in many components of the FIS, including Flood Profiles, Floodway Data tables and Summary of Stillwater Elevation tables. Users should reference the data presented in the FIS as well as additional information that may be available at the local community map repository before making flood elevation and/or floodplain boundary determinations.

4.1 Flood Boundaries

In order to provide a national standard without regional discrimination, the 100-year flood has been adopted by FEMA as the base flood for purposes of floodplain management measures. The 500-year flood is employed to indicate additional areas of flood risk in the community.

The boundaries of the 100-year and 500-year flood have been delineated using the computed flood elevations on topographic maps at a scale of 1:24,000, some with contour intervals of five feet and others of one foot (References 21 and 38). Aerial photographs at a scale of 1:9,600 were used as aids (Reference 39).

Flood boundaries are indicated on the Flood Insurance Rate Map. On this map, the 100-year flood boundary corresponds to the boundary of the areas of special flood hazards (Zones AH, AI, A2, A3, A4, A7, A8, A11, A12, A14, A15, and V19), and the 500-year flood boundary corresponds to the boundary of the areas of moderate flood hazards (Zone B). In cases where the 100- and 500-year flood boundaries are close together, only the 100-year flood boundary has been shown.

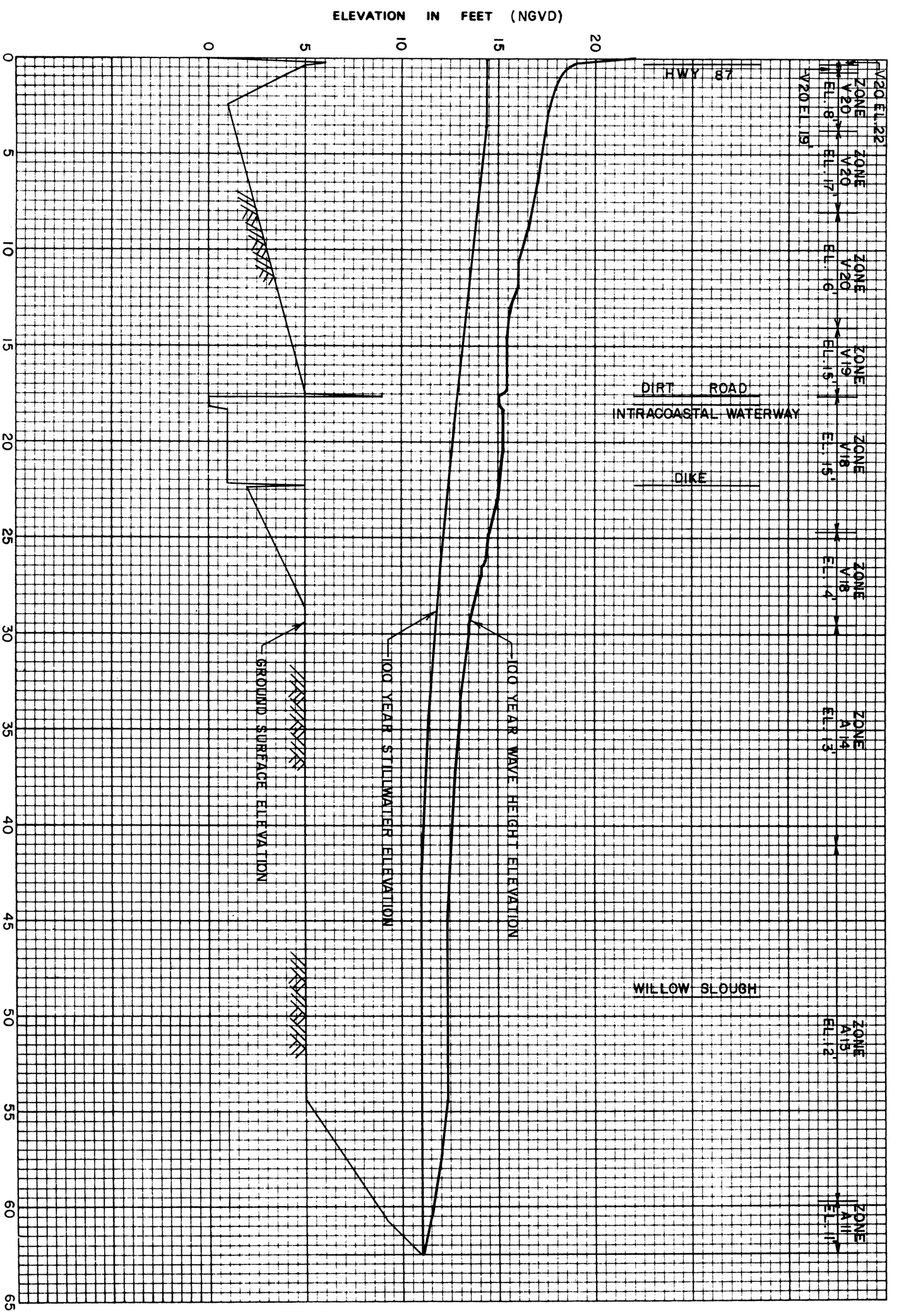


FIGURE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

SAMPLE TRANSECT

TRANSECT 18

1677

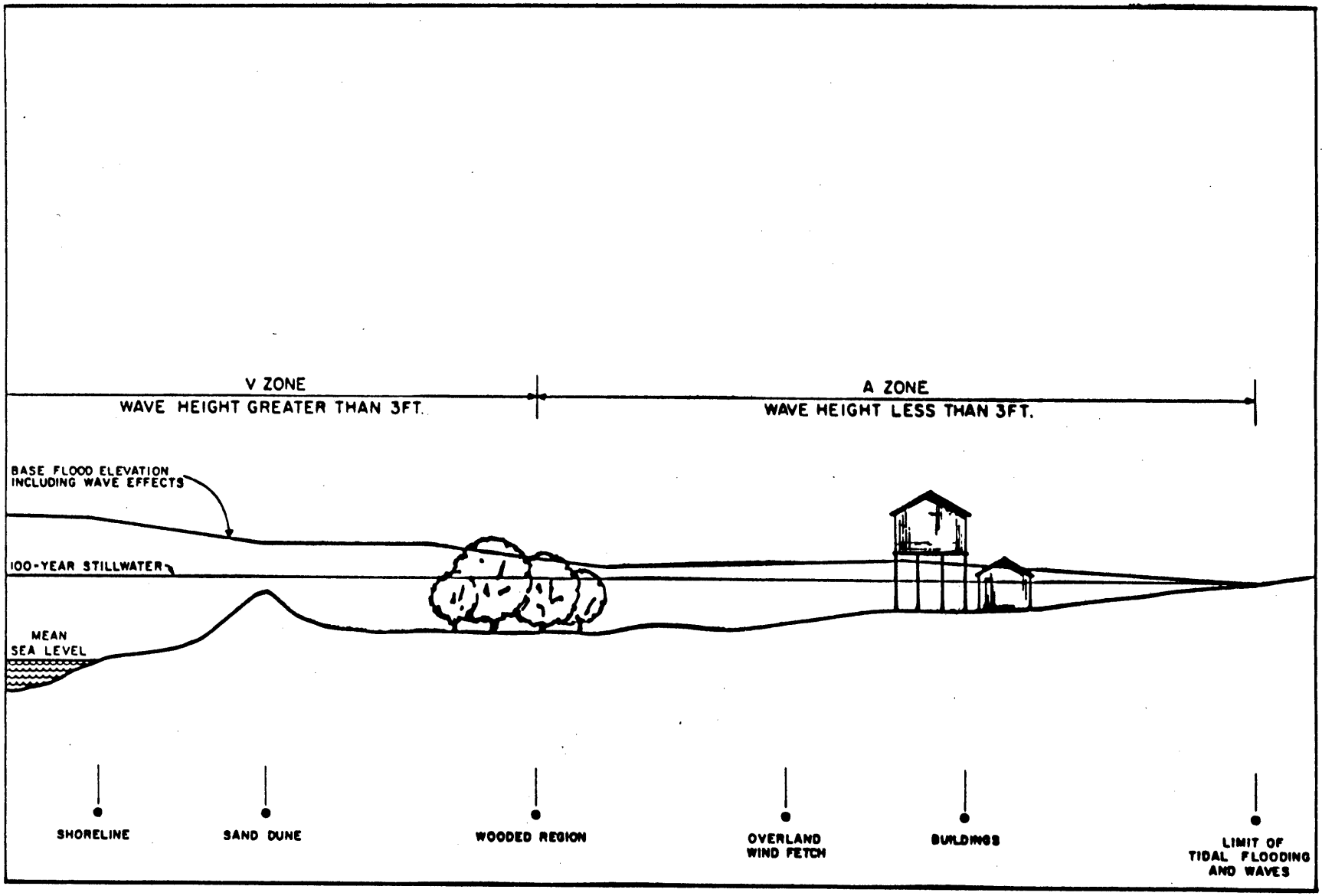
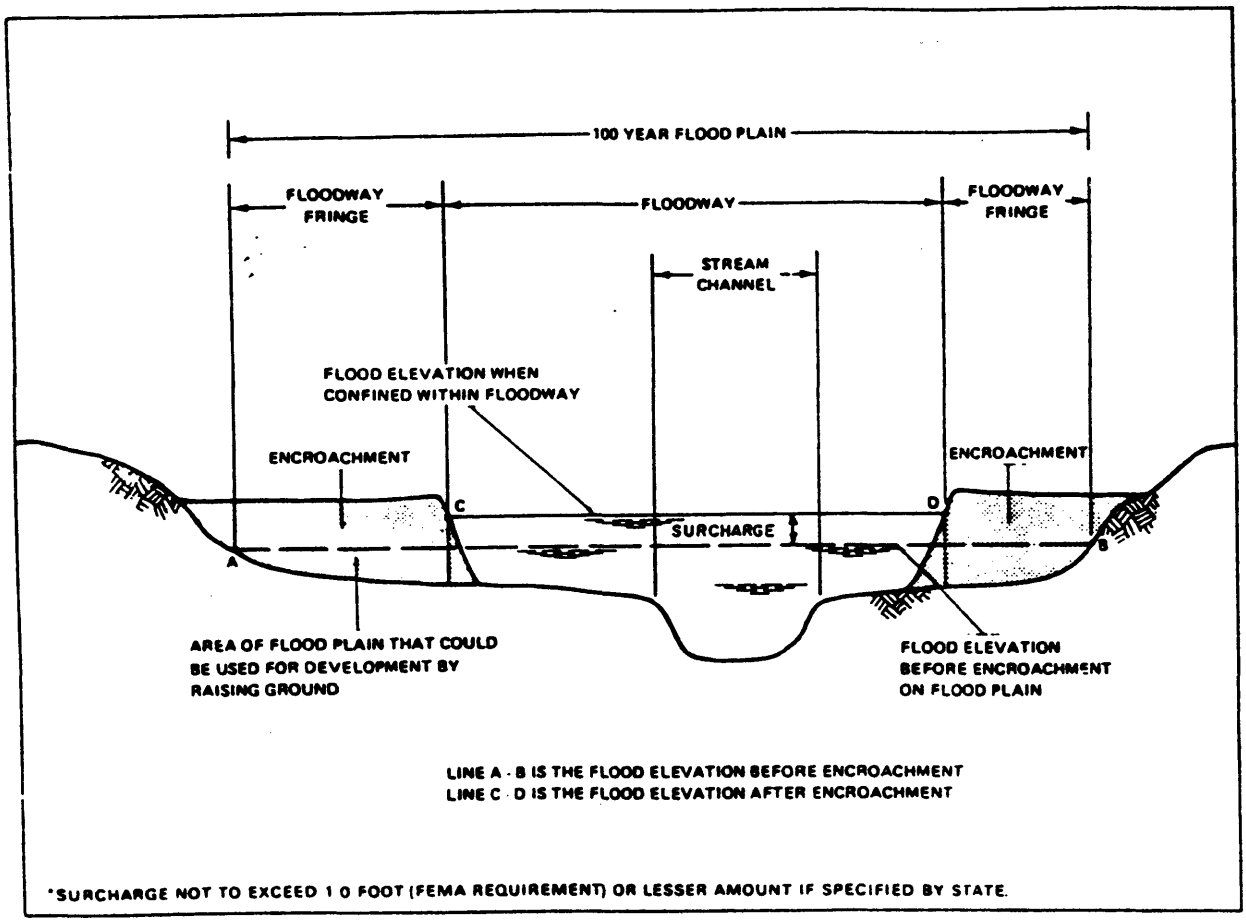


FIGURE 3
HYPOTHETICAL TRANSECT SCHEMATIC

The area between the floodway and the boundary of the 100-year flood is termed the floodway fringe. The floodway fringe thus encompasses the portion of the flood plain that could be completely obstructed without increasing the water-surface elevation of the 100-year flood more than 1.0 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to flood plain development are shown in Figure 5. 1679



FLOODWAY SCHEMATIC Figure 5

Small areas within the flood boundaries may lie above the flood elevations and, therefore, are not subject to flooding. Owing to the limitations of the map scale, such areas are not shown.

For the streams studied by approximate methods, the boundary of the 100-year flood (Zone A) was adopted from the Flood Hazard Boundary Map (Reference 40).

4.2 Floodways

Encroachment on flood plains, such as artificial fill, reduces the flood-carrying capacity, increases the flood heights of streams, and increases flood hazards in areas beyond the encroachment itself. One aspect of flood plain management involves balancing the economic gain from flood plain development against the resulting increase in flood hazard. For purposes of the National Flood Insurance Program, the concept of a floodway is used as a tool to assist local communities in this aspect of flood plain management. Under this concept, the area of the 100-year flood is divided into a floodway and a floodway fringe. The floodway is the channel of a stream plus any adjacent flood plain areas that must be kept free of encroachment in order that the 100-year flood may be carried without substantial increases in flood heights. Minimum standards of FEMA limit such increases in flood heights to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this report are presented to local agencies as minimum standards that can be adopted or that can be used as a basis for additional studies. Floodways were not computed along reaches of streams dominated by coastal flooding.

The floodway presented in this study were computed on the basis of equal conveyance reduction from each side of the flood plain. Floodway analyses were based on increasing the computed 100-year rainfall flooding level.

The surcharge identified in Figure 4 represents the maximum 100-year water level increase that is permitted with encroachment. The tabulated values are the maximum increase in water level for the reaches studied such that the maximum water level increase in areas considered anywhere upstream does not exceed one foot.

As shown on the Flood Boundary and Floodway Map, the floodway boundaries were determined at cross sections; between cross sections, the boundaries were interpolated. In cases where the boundaries of the floodway and the 100-year flood are either close together or collinear, only the floodway boundary has been shown.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NGVD)			
Bayou Din								
A	11,736[1]	2,256	7,440	0.9	08.6	08.6	09.5	0.9
B	19,136[1]	2,623	10,750	0.6	09.7	09.7	10.6	0.9
C	25,236[1]	2,017	8,077	0.9	11.0	11.0	12.0	1.0
D	34,401[1]	1,494	6,111	0.4	13.5	13.5	14.5	1.0
E	36,601[1]	103	527	2.9	15.3	15.3	16.1	0.8
F	42,319[1]	272	1,053	1.4	21.2	21.2	21.9	0.7
G	42,649[1]	812	5,405	0.3	25.3	25.3	26.0	0.7
H	44,849[1]	827	4,890	0.3	25.4	25.4	26.1	0.7
I	46,536[1]	633	3,085	0.5	25.6	25.6	26.4	0.8
J	48,536[1]	445	2,512	0.6	25.7	25.7	26.5	0.8
K	50,534[1]	1,532	3,152	0.2	25.9	25.9	26.7	0.8
L	51,934[1]	4,033	5,504	0.1	25.9	25.9	26.7	0.8
M	55,102[1]	446	1,763	0.3	26.1	26.1	26.8	0.7
N	59,415[1]	300	620	1.1	29.5	29.5	30.0	0.5
O	63,791[1]	140	1,171	0.6	31.0	31.0	31.5	0.5
P	71,068[1]	100	663	1.0	31.0	31.0	31.8	0.8
Q	77,199[1]	271	1,519	0.3	31.0	31.0	32.0	1.0
Bayou Din Tributary								
A	753[2]	50	300	3.8	16.8	16.8	17.8	1.0
B	4,290[2]	66	413	2.7	19.9	19.9	20.8	0.9
C	7,023[2]	46	446	2.4	22.0	22.0	22.7	0.7
D	10,037[2]	120	786	0.7	22.6	22.6	23.6	1.0

[1]Feet above mouth at Hillebrandt [2]Feet above mouth

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX (UNINCORPORATED AREAS)

FLOODWAY DATA

BAYOU DIN - BAYOU DIN TRIBUTARY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NGVD)			
Taylor Bayou/ North Fork Taylor Bayou								
A	24,000[1]	2,932	21,593	0.8	09.8	09.8	10.8	1.0
B	26,200[1]	1,507	17,092	1.0	10.9	10.9	11.9	1.0
C	31,000[1]	1,714	15,941	1.1	10.9	10.9	11.9	1.0
D	35,000[1]	318	5,368	2.5	10.5	10.5	11.4	0.9
E	48,696[2]	6,950	56,116	0.3	11.1	11.1	12.1	1.0
F	57,283[2]	3,381	25,522	0.4	11.2	11.2	12.2	1.0
G	63,203[2]	1,465	11,405	1.0	11.5	11.5	12.5	1.0
South Fork Taylor Bayou								
A	34,700[3]	1,732	6,249	0.9	12.4	12.4	13.4	1.0
B	40,229[3]	4,670	20,986	0.3	13.5	13.5	14.1	0.6
C	43,723[3]	3,343	21,015	0.3	14.4	14.4	15.0	0.6
D	50,868[3]	2,463	6,666	0.8	14.6	14.6	15.4	0.8
E	56,981[3]	813	2,806	1.9	17.8	17.8	17.9	0.1
Mayhaw Bayou								
A	33,259[1]	10,000	21,375	0.3	11.2	11.2	12.1	0.9
B	46,244[1]	6,528	20,754	0.3	13.7	13.7	13.8	0.1
C	48,900[1]	2,000	4,458	1.1	15.4	15.4	15.8	0.4
D	61,774[1]	145	735	1.5	22.1	22.1	22.8	0.7
Mayhaw Bayou Tributary								
A	2,025[1]	150	911	2.5	17.9	17.9	18.6	0.7

[1]Feet above mouth [2]Feet above confluence with Hillebrandt Bayou [3]Feet above confluence with Taylor Bayou

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX (UNINCORPORATED AREAS)

FLOODWAY DATA

TAYLOR BAYOU/NORTH FORK TAYLOR BAYOU – SOUTH FORK TAYLOR BAYOU – MAYHAW BAYOU – MAYHAW BAYOU TRIBUTARY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NGVD)			
Walker Branch								
A	3,586	457	2,622	3.0	21.6	16.9[2]	17.4[2]	0.5
B	6,170	241	1,512	4.7	21.6	18.6[2]	18.9[2]	0.3
Walker Branch Tributary								
A	1,375	400	1,207	4.6	21.6	21.2[2]	22.0[2]	0.8
Quinn Ditch								
A	1,865	442	1,299	1.6	11.4	11.4	11.7	0.3
B	3,565	92	373	4.8	13.4	13.4	13.4	0.0
C	4,965	70	266	5.8	16.2	16.2	16.2	0.0
D	6,255	54	226	5.9	19.5	19.5	19.5	0.0
Neches River								
A	108,600	700/320[3]	67,481	2.0	10.8	10.8	11.2	0.4
B	116,100	9,664/260[3]	112,933	1.2	11.9	11.9	12.5	0.6
C	120,600	13,926/200[3]	156,204	0.9	12.4	12.4	13.0	0.6
D	128,500	9,045/260[3]	104,945	1.3	13.2	13.2	14.0	0.8
E	139,000	14,711/290[3]	194,385	0.7	14.0	14.0	14.9	0.9
F	146,200	7,898/200[3]	92,964	1.5	14.7	14.7	15.6	0.9

[1]Feet above mouth [2]Elevations computed without consideration of backwater from Pine Island Bayou [3]Total width/width within community

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX (UNINCORPORATED AREAS)

FLOODWAY DATA

WALKER BRANCH – WALKER BRANCH TRIBUTARY – QUINN DITCH – NECHES RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT[2] FLOODWAY	WITH[2] FLOODWAY	INCREASE
					(FEET NGVD)			
Hillebrandt Bayou								
A	8,190	769	8,102	1.5	8.7	3.8	4.6	0.8
B	11,004	934	5,684	2.2	8.8	4.4	5.2	0.8
C	15,190	2,058	9,953	1.2	8.8	4.8	5.6	0.8
D	20,490	1,902	10,013	1.2	8.8	5.4	6.2	0.8
E	21,790	1,931	7,908	1.5	8.8	5.5	6.3	0.8
F	24,660	420	5,018	2.3	8.8	5.7	6.5	0.8
G	28,640	640	5,004	2.3	8.8	6.0	6.8	0.8
H	31,080	1,000	6,549	1.8	8.8	6.4	7.2	0.8
I	33,680	1,109	7,160	1.6	8.8	6.6	7.5	0.9
J	35,480	1,028	7,315	1.6	8.8	6.6	7.5	0.9
K	37,560	700	4,609	2.0	8.8	6.9	7.7	0.8
L	43,590	485	4,231	2.2	8.8	7.2	8.1	0.9
M	48,240	1,464	7,675	1.2	8.8	7.6	8.5	0.9
N	54,100	3,669	17,285	0.5	8.9	7.9	8.8	0.9
O	55,670	213	2,438	2.7	8.9	7.9	8.8	0.9
P	61,250	218	3,012	2.2	9.0	8.4	9.2	0.8
Q	65,280	229	2,280	2.7	9.4	9.0	9.7	0.7
R	67,480	203	2,128	2.7	9.6	9.2	9.8	0.6
Willow Marsh Bayou								
A	2,100	1,286	2,362	1.8	8.9	7.4	8.4	1.0
B	3,960	447	1,778	2.4	10.2	10.2	10.8	0.6
C	7,380	736	2,893	1.4	11.4	11.4	12.3	0.9

[1]Feet above mouth.
[2]Water-Surface elevation computed without the consideration of coastal surges from the Gulf of Mexico

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

FLOODWAY DATA

HILLEBRANDT BAYOU, WILLOW MARSH BAYOU

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NGVD)			
Willow Marsh Bayou (Cont.)								
D	10,064	3,896	12,065	0.8	13.6	13.6	14.6	1.0
E	24,179	1,306	3,556	1.5	17.8	17.8	18.4	0.6
F	32,118	3,096	5,432	0.7	23.3	23.3	23.8	0.5
G	34,080	2,827	6,620	0.7	23.7	23.7	24.4	0.7
Pine Island Bayou								
A	66,210	2,977/300[2]	32,672	1.0	21.1	21.1	22.0	0.9
B	75,610	2,650/950[2]	35,011	0.9	21.5	21.5	22.4	0.9
C	77,510	1,585/650[2]	23,325	1.3	21.8	21.8	22.6	0.8
D	82,560	1,880/450[2]	26,153	1.9	22.2	22.2	23.1	0.9
E	89,160	2,228/1,650[2]	28,635	1.1	22.9	22.9	23.7	0.8
Rhodair Gully								
A	14,330	570/300[2]	2,525	1.1	08.8	05.0[3]	06.0[3]	1.0
B	24,600	100/120[2]	797	3.3	08.8	07.3[3]	07.7[3]	0.4
C	31,260	114	973	2.7	09.5	09.3[3]	09.7[3]	0.4
D	32,400	87	831	3.2	10.1	09.7[3]	10.7[3]	1.0
E	35,560	99	818	3.2	12.2	12.2	12.7	0.5
F	39,160	243	918	2.9	13.1	13.1	13.8	0.7
G	42,210	939	2,384	1.1	13.9	13.9	14.8	0.9
H	42,740	1,258	4,094	0.6	14.9	14.9	15.7	0.8

[1]Feet above mouth [2]Total width/width within county limits [3]Water-surface elevation computed without consideration of backwater effects

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)

FLOODWAY DATA

WILLOW MARSH BAYOU – PINE ISLAND BAYOU – RHODAIR GULLY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NGVD)			
Kidd Gully								
A	4,000	2,107	6,265	0.5	14.5	14.5	15.5	1.0
B	7,000	1,100	2,691	1.1	15.8	15.8	16.7	0.9
C	8,640	1,100	4,885	0.6	19.2	19.1	19.5	0.4
D	10,320	2,150	6,371	0.5	19.4	19.4	19.8	0.4
E	12,040	900	3,318	0.9	20.0	20.0	20.8	0.8
F	15,860	1,100	2,307	1.3	23.2	23.2	24.0	0.8
G	17,960	1,150	4,411	0.7	23.9	23.9	24.9	1.0
Cotton Creek								
A	410	563	2,105	1.0	40.7	40.7	40.8	0.1
B	6,510	1,161	5,158	0.4	41.4	41.4	41.9	0.5
C	8,980	1,491	6,056	0.2	41.6	41.6	42.2	0.6
D	12,600	2,566	8,363	0.2	42.2	42.2	42.2	0.0
E	14,400	2,246	6,932	0.2	42.2	42.2	42.2	0.0

[1] Feet above mouth for Kidd Gully; feet above State Highway 326 for Cotton Creek.

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

FLOODWAY DATA

KIDD GULLY-COTTON CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NGVD)			
Ditch 505								
A	4,400	1,380	4,526	0.8	13.4	13.4	14.2	0.8
B	7,863	1,610	13,998	0.1	14.1	14.1	14.9	0.8
C	12,663	100	550	3.4	15.0	15.0	15.6	0.6
D	17,806	716	2,869	0.5	17.6	17.6	18.3	0.7
E	23,335	436	1,738	0.5	18.6	18.6	19.4	0.8
Ditch 505 Tributary								
A	1,460	596	2,043	0.3	17.7	17.7	18.3	0.6
B	3,900	150	307	2.4	17.4	17.4	18.2	0.8
C	6,130	310	923	0.8	18.8	18.8	19.6	0.8
Green Pond Gully (Ditch 607)								
A	50,880	636	2,088	0.6	27.4	27.4	28.4	1.0
B	52,668	63	447	2.7	28.1	28.1	28.8	0.7
C	57,131	1,554	3,501	0.4	30.7	30.7	31.0	0.3
D	61,248	167	609	2.2	32.2	32.2	32.9	0.7
E	65,798	2,397	7,587	0.2	33.1	33.1	33.8	0.7
F	70,077	50	328	2.3	34.1	34.1	34.7	0.6
G	73,364	63	377	2.0	34.8	34.8	35.5	0.7
H	78,018	1,598	4,001	0.2	35.3	35.3	36.2	0.9
I	80,922	57	401	1.8	36.1	36.1	36.9	0.8
J	83,815	490	2,970	0.2	40.2	40.2	40.7	0.5

[1]Feet above mouth

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX (UNINCORPORATED AREAS)

FLOODWAY DATA

DITCH 505 – DITCH 505 TRIBUTARY – GREEN POND GULLY (DITCH 607)

4.3 Base Flood Elevations

Areas within the community studied by detailed engineering methods have base flood elevations established in A and V Zones. These are the elevations of the base (100-year) flood relative to NGVD. In coastal areas affected by wave actions, base flood elevations are generally maximum at the normal open shoreline. These elevations generally decrease in landward direction at a rate dependent on the presence of obstructions capable of dissipating the wave energy. Where possible, changes in base flood elevations have been shown in 1-foot increments on the FIRMs. However, where the scale did not permit, 2- or 3-foot increments were sometimes used. Base flood elevations shown in the wave action areas represent the average elevation within the zone. These elevations vary from 7 to 22 feet above NGVD in Jefferson County and are shown on the Flood Insurance Rate Map. Current program regulations generally require that all new construction be elevated such that the first floor, including basement, is above the base flood elevation in A and V Zones.

4.4 Velocity Zones

The U.S. Army Corps of Engineers (Reference 41) has established the 3-foot wave as the criterion for identifying coastal high hazard zones. This was based on a study of wave action effects on structures. This criterion has been adopted by FEMA for the determination of V Zones. Because of the additional hazards associated with high-energy waves, the National Flood Insurance Program regulations require much more stringent flood plain management measures in the areas, such as elevating structures on piles or piers. In addition, insurance rates in V Zones are higher than those in A Zones with similar numerical designations.

The location of the V Zone is determined by the 3-foot wave as discussed previously. The detailed analysis of wave heights performed in this study allowed a much more accurate location of the V Zone to be established. The V Zone generally extends inland to the point where the 100-year flood depth is insufficient to support a 3-foot wave.

5.0 INSURANCE APPLICATION

In order to establish actuarial insurance rates, FEMA has developed a process to transform the data from the engineering study into flood insurance criteria. This process includes the determination of reaches, Flood Hazard Factors (FHFs), and flood insurance zone designations for each significant flooding source affecting the unincorporated areas of Jefferson County.

5.1 Reach Determinations

Reaches are defined as lengths of watercourses having relatively the same flood hazard, based on the average weighted difference in water-surface elevations between the 10- and 100-year floods. This difference does not have a variation greater than that indicated in the following table for more than 20 percent of the reach.

Average Difference Between 10- and 100-Year Floods	Variation
Less than 2 feet	0.5 foot
2 to 7 feet	1.0 foot
7.1 to 12 feet	2.0 feet
More than 12 feet	3.0 feet

The location of reaches determined for the flooding soruces of the unincorporated areas of Jefferson County are shown on the Flood Profiles (Exhibit 1), and summarized in the Flood Insurance Zone Data Table (See Section 5.3).

Coastal flood plains are divided into areas having relatively the same flood hazard based upon the 100-year wave height, and the average weighted difference in water-surface elevations between the 10-year and 100-year floods. These flood hazard areas are shown on the Flood Insurance Rate Map.

5.2 Flood Hazard Factors (FHFs)

The Flood Hazard Factor is used to correlate flood information with insurance rate tables. Correlations between property damages from floods and their assigned FHFs are used to set actuarial insurance premium rate tables based on FHFs from 005 to 200.

The FHF for a reach is the average weighted difference between the 10- and 100-year flood water-surface elevations expressed to the nearest one-half foot, and shown as a three-digit code. For example, if the difference between the water-surface elevations of the 10- and 100-year floods is 0.7 foot, the FHF is 005; if the difference is 1.4 feet, the FHF is 015; if the difference is 5.0 feet, the FHF is 050. When the difference between the 10- and 100-year flood water-surface elevations is greater than 10.0 feet, the accuracy for the FHF is to the nearest foot.

In coastal areas subject to wave action (wave heights greater than 3 feet), the FHF is determined using the difference between the 10-year and 100-year wave crest elevations. This difference is estimated as the difference between the 10- and 100-year stillwater elevations multiplied by 1.55. For areas where wave heights are less than three feet, the FHF is determined using the difference between the 10-year stillwater elevation and the 100-year wave crest elevation. For areas protected wave action, the FHF is determined using the difference between the 10- and 100-year stillwater elevations.

5.3 Flood Insurance Zones

After determination of reaches and their respective Flood Hazard Factors, the entire unincorporated area of Jefferson County was divided into zones, each having a specific flood potential or hazard. The zone numbers are determined by multiplying the FHF by 2.0. Each zone was assigned one of the following flood insurance zone designations.

Zones V19:	Special Flood Hazard Areas along coasts inundated by the 100-year flood, as determined by detailed methods, and that have additional hazards due to velocity (3 feet or more of wave action); base flood elevations shown, and zones subdivided according to Flood Hazard Factors.
Zones A1, A2, A3, A4, A7, A8, A11, A12, A14, and A15	Special Flood Hazard Areas inundated by the 100-year flood, determined by detailed methods; base flood elevations shown, and zones subdivided according to FHFs.
Zones AH:	Special Flood Hazard Areas inundated by types of 100-year shallow flooding where depths are between one and 3.0 feet; base flood elevations are shown, but no Flood Hazard Factors are determined.
Zone A:	Special Flood Hazard Areas inundated by the 100-year flood, determined by approximate methods; no base flood elevations shown or FHFs determined.
Zone B:	Areas between the Special Flood Hazard Area and the limits of the 500-year flood, including areas of the 500-year flood plain that are protected from the 100-year flood by dike, levee, or other water control struc-

ture; areas subject to certain types of 100-year shallow flooding where depths are less than 1.0 foot; or areas subject to 100-year flooding from sources with drainage areas less than 1 square mile. Zone B is not subdivided.

Zone C: Areas of minimal flooding.

5.4 Flood Insurance Rate Map Description

The Flood Insurance Rate Map for the unincorporated areas of Jefferson County is, for insurance purposes, the principal result of the Flood Insurance Study. This map (published separately) contains the official delineation of flood insurance zones and base flood elevation lines. Base flood elevation lines show the locations of the expected whole-foot water-surface elevations of the base (100-year) flood. This map is developed in accordance with the lastest flood insurance map preparation guidelines published by the FEMA.

6.0 OTHER STUDIES

A Flood Insurance Study was prepared for the Department of Housing and Urban Development, Federal Insurance Administration for Jefferson County in March 1972 (Reference 5). A Flood Hazard Boundary Map was also prepared for Jefferson County in August 1977 (Reference 40). Other studies which concentrate on portions of the study area include the preliminary Flood Insurance Study for the area from Sabine Lake to Matagorda Bay (Reference 42), Texas Coast Hurricane Study (Reference 11), 100-year hurricane surge elevations for Sabine Pass and Port Arthur as published in the Port Arthur and Vicinity Hurricane Flood Protection Studies (Reference 6), and similar information published by the Coastal Engineering Research Center in 1969 (Reference 43).

The previously published 100-year elevations in both references are higher than those in this report. Discrepancies are the result of differences in the hydrodynamic models and in the statistical analyses. The estimates provided herein follow the present FEMA methodology.

This study is authoritative for the purposes of the National Flood Insurance Program and data presented in this report either supersede, or are compatible with all previous determinations.

7.0 LOCATION OF DATA

Information concerning the pertinent data used in preparation of this study can be obtained by contacting the Natural and Technological Hazards Division, Federal Emergency Management Agency, Federal Center, Denton, Texas 76201.

8.0 REFERENCES

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TEXT REVISIONS
UNINCORPORATED AREAS OF JEFFERSON COUNTY, TEXAS

9.0 REVISION DESCRIPTION

9.1 Purpose

The purpose of this revision is to incorporate revised data into the effective Flood Insurance Study for the unincorporated areas of Jefferson County, Texas. This revision is intended to provide updated information that aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

9.2 Acknowledgments

This revision was prepared by Dewberry and Davis using updated hydrologic and hydraulic analyses of Walker Branch and Walker Branch Tributary performed by Bernard Johnson Inc., during the preparation of the Flood Insurance Study for the City of Beaumont under the direction of FEMA. This revision also incorporates updated topographic information for Willow Marsh Bayou.

9.3 Scope

This revision was prepared to incorporate updated corporate limits for the City of Beaumont and updated hydraulic and hydrologic analyses for the following streams: Walker Branch, from a point approximately 0.63 mile upstream of its confluence with Pine Island Bayou to the downstream corporate limits of the City of Beaumont; and Walker Branch Tributary, for its entire length within the county.

9.4 Hydrologic Analyses

The updated hydrologic analyses in this revision were conducted during the preparation of the Flood Insurance Study for the City of Beaumont (Reference 1). In this revision, flood frequency-discharge values were determined using the U. S. Army Corps of Engineers (COE) HEC-1 Flood Hydrograph Package (Reference 2).

A summary of the drainage area-peak discharge relationships for the streams studied by detailed methods in this revision is shown in Table 2A, "Summary of Discharges Addendum." The values shown in Table 2A for Walker Branch and Walker Branch Tributary supersede those shown in Table 2 of the original text.

TABLE 2A - SUMMARY OF DISCHARGES ADDENDUM

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs) 10-YEAR	50-YEAR	100-YEAR	500-YEAR
WALKER BRANCH At confluence with Pine Island Bayou	11.2	902	1,022	1,083	1,206
WALKER BRANCH TRIBUTARY At confluence with Walker Branch	9.9	2,575	3,298	3,703	4,407

9.5 Hydraulic Analyses

The updated hydraulic analyses in this revision were performed during the preparation of the Flood Insurance Study for the City of Beaumont using the COE HEC-2 step-backwater computer program (Reference 1 and 3).

9.6 Floodplain Boundaries

In this revision, the 100- and 500-year floodplain boundaries on Walker Branch, Walker Branch Tributary, and Willow Marsh Bayou have been revised based on topographic maps at a scale of 1:9,600 with a contour interval of 1 foot (Reference 4).

9.7 Revision Bibliography

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10.0 REVISION DESCRIPTIONS

This section has been added to provide information regarding significant revisions made since the original FIS was printed. Future revisions may be made that do not result in the republishing of the FIS report. To assure that any user is aware of all revisions, it is advisable to contact the community repository of flood-hazard data located at the Federal Emergency Management Agency (FEMA), Mitigation Division, Federal Regional Center, Room 206, 800 North Loop 288, Denton, Texas 76201-3698.

10.1 Purpose

The purpose of this revision is to incorporate revised data into the effective FIS for the unincorporated areas of Jefferson County, Texas. This revision is intended to provide updated information that aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

10.2 Authority and Acknowledgments

This revision was prepared by Turner Collie and Braden, Inc., for FEMA, under Contract No. EMT-97-CO-0034. This study was completed in August 1998.

10.3 Coordination

The initial Consultation Coordination Officer (CCO) meeting was held on February 19, 1997, and attended by representatives of Carroll and Blackman, Inc., the City of Beaumont, the City of Beaumont Planning Department, the District Attorney's Office, FEMA, Howell and Davis Consulting Engineers, Inc., Jefferson County Drainage District No. 3 (DD3), Jefferson County Drainage District No. 6 (DD6), Jefferson County Engineering Department (JCED), the Jefferson County Judge's Office, Lower Neches Valley Authority, Texas Aerial Surveys, the Trinity Bay Conservation District, and Turner Collie and Braden, Inc.

10.4 Scope of Study

This revision covers the unincorporated areas of Jefferson County, Texas. Detailed studies were performed exclusively for riverine flooding sources; coastal flooding zones were not included.

A total of 13 different flooding sources, covering approximately 45 stream miles, were selected for detailed study by the local community. These 13 study reaches are located within three different watersheds: Hillebrandt Bayou, Taylor Bayou, and Pine Island Bayou. A brief description of each detailed study reach is listed below, according to watershed location.

Hillebrandt Bayou Watershed Study Reaches:

(1) Upper Bayou Din

Upper Bayou Din was studied from Martin Luther King Road upstream to a point approximately 6,200 feet upstream of Lawhorn Road, for a total distance of 3.4 miles.

(2) Bayou Din

Bayou Din was studied from La Belle Road upstream to Interstate Highway 10 (I-10), for a total distance of 5.9 miles.

(3) Bayou Din Tributary

Bayou Din Tributary was studied from its confluence with Bayou Din to a point 3,000 feet upstream of the Gallier Canal Bridge, for a total distance of 1.9 miles.

(4) Willow Marsh Bayou

Willow Marsh Bayou was studied from its confluence with Hildebrandt Bayou upstream approximately 6 miles to Walden Road.

Taylor Bayou Watershed Study Reaches:

(5) Taylor Bayou/North Fork Taylor Bayou

Taylor Bayou was studied from La Belle Road to its upstream limit at the confluence of North Fork Taylor Bayou and South Fork Taylor Bayou, for approximately 2.9 miles. The detailed study continued upstream along North Fork Taylor Bayou to Jap Road, for an additional 2.5 miles, or a total distance of 5.4 miles.

(6) South Fork Taylor Bayou

South Fork Taylor Bayou was studied from a point approximately 3,300 feet downstream of Wilbur Road to a point just downstream of its crossing of I-10, for a total distance of 4.4 miles.

(7) Mayhaw Bayou

Mayhaw Bayou was studied from State Highway 73 upstream to I-10, for a total distance of 5.4 miles.

(8) Mayhaw Bayou Tributary

Mayhaw Bayou Tributary was studied from its confluence with Mayhaw Bayou upstream to I-10 for a total distance of 1.1 miles.

(9) Ditch 505

Ditch 505 was studied from a point approximately 4,400 feet upstream of its confluence with North Fork Taylor Bayou to a point approximately 4,800 feet upstream of West Clubb Road, for a total distance of 4.3 miles.

(10) Ditch 505 Tributary

Ditch 505 Tributary was studied from its confluence with Ditch 505 to a point 2,200 feet upstream of West Clubb Road, for a total distance of 1.2 miles.

(11) Ditch 607

Ditch 607 was studied from South Pine Island Road to a point 1,600 feet upstream of the BI Canal Crossing, for a total distance of 6.3 miles.

Pine Island Bayou Watershed Study Reaches:

(12) Walker Branch

Walker Branch was studied from its confluence with Pine Island Bayou to Tram Road, for a total distance of 2.2 miles.

(13) Walker Branch Tributary

Walker Branch Tributary was studied from its confluence with Walker Branch to approximately 1,200 feet upstream of Spurlock Road, for a total distance of 2.5 miles.

(14) Quinn Ditch

Quinn Ditch was studied from its confluence with Pine Island Bayou to Tram Road, for a total distance of 1.1 miles.

10.5 Community Description Update

The 1998 census recorded a population of 241,901 for Jefferson County of which approximately 109,841 individuals lived in the City of Beaumont (Reference 1).

10.6 Principal Flood Problems

Recent Storms

According to DD6 rainfall gage data, during the storm of October 17 and 18, 1994, rainfall depths reached as much as 12.1 inches in the Hillebrandt Bayou watershed, 14.6 inches in the Taylor Bayou watershed, and 19.5 inches in the Pine Island Bayou watershed, in a 48-hour period.

During the storm of September 27, 1996, rainfall depths reached as high as 10.6 inches in the Hillebrandt Bayou watershed, 7.6 inches in the Taylor Bayou watershed, and 4.8 inches in the Pine Island Bayou watershed, in a 24-hour period (Reference 2).

A U.S. Geological Survey (USGS) stream gage exists downstream of the detailed study streams at Taylor Bayou near La Belle, Texas (USGS Gage Station No. 08042000). This gage has a total of 33 annual maximum discharge records available from the year 1952 to 1984. After the year 1984, only gage heights are available (no discharges).

Other stream gage data in the watersheds is very limited. DD6 has a growing system of gages, but currently has a short period of record.

10.7 Hydrologic Analyses

Hydrologic analyses were performed to determine peak discharges, total runoff volumes, and time distributions of flood hydrographs for floods of the selected recurrence intervals for each flooding source studied in detail affecting Jefferson County. The USACE "HEC-1 Flood Hydrograph Package" was used for these analyses (Reference 3).

ARCVIEW GIS software was used to overlay all of the information related to hydrology and to generate digital work maps. ARCVIEW coverages that were either developed for this project or incorporated to assist in the hydrologic analysis include:

1. Jefferson County boundary
2. Planimetric base map data (roads, railroads, streams, etc.)
3. Drainage areas
4. Digital USGS Quad Maps with 5-foot contours
5. USGS Land Use/Land Cover (LULC)
6. Digital Orthophotographic Quarter Quads (DOQQs)
7. HEC-1 routing reaches
8. HEC-1 analysis points
9. Location of detention ponds
10. Location of pertinent rainfall and stream gages
11. Existing floodplains (DFIRMs)
12. Elevation Reference Marks (ERMs)

Drainage areas were delineated using watershed maps from previous studies (References 4 and 5) and digital USGS topographic maps (Reference 6), and then digitized using ARCVIEW GIS software. Land use was obtained from USGS LULC GIS coverages (Reference 7) and verified/updated using DOQQs from USGS, dated February 2, 1989 (Reference 8).

Runoff volumes and time distributions were determined using the Soil Conservation Service (SCS) "Curve Number" (CN) technique (Reference 9). CNs were developed using LULC data and soil maps from the Natural Resources Conservation Service Jefferson County, Texas, Soil Survey (References 7 and 10). A CN value of 100 was used for water features, and a CN of 95 for wetlands.

Rainfall frequency data were obtained from the U.S. Weather Bureau Technical Paper No. 40 (TP-40) and Hydro-35 (References 11 and 12). The 500-year point rainfall was extrapolated using log-probability paper. Area correction was applied

to the point rainfall to take into account larger drainage areas according to the area-depth relationship developed in TP-40.

The Clark Unit Hydrograph method was used; parameters were developed using criteria from local drainage studies (References 4 and 13) and for models obtained from the local community that had been calibrated against historical storms.

The Modified Puls routing method was used for study stream reaches; Muskingum routing was used for non-study stream reaches within the watershed models.

Gage data in the study watersheds is very limited. DD6 has a growing system of gages, but currently has a short period of record. Historical storms were run on the hydrologic models for Taylor Bayou and Quinn Ditch. For each of these watersheds, it was only possible to check the water-surface elevations versus gage heights at one location in the watershed. The computed hydrograph for Quinn Ditch matched closely with the gage data. For Taylor Bayou, the computed water-surface elevation, which was interpolated using a downstream rating curve, matched closely with measured gage heights

The computed discharges for the reaches studied have been incorporated into Table 2, "Summary of Discharges."

10.8 Hydraulic Analyses

Channel cross section information of the study reaches was obtained from various sources, including as-built construction record drawings, other construction plans, field surveys conducted in support of this study, and field surveys done for past projects in Jefferson County (References 14 through 21). Sources for overbank elevation data include 4-foot contour topography generated by Analytical Surveys, Inc., (ASI), developed for this project from aerial photography provided by Jefferson County Appraisal District (Reference 22). USGS Quadrangle maps were also used in some cases where the other sources were insufficient.

The table below shows the sources of the cross-sections for each of the study streams.

Source of Cross-Sections for Study Streams

Study Stream	Source(s)
Upper Bayou Din	1,4,5,7
Bayou Din	1,4,5,7
Bayou Din Tributary	2,4,5,6,7
North Fork Taylor/Taylor Bayou	4,5,7,8
South Fork Taylor Bayou	4,5,7
Mayhaw Bayou	1,4,5,7
Mayhaw Bayou Tributary	4,5,7
Ditch 505	1,4,5,7
Ditch 505 Tributary	1,4,5,7
Ditch 607	4,5,6,7
Walker Branch	4,5,6,7
Walker Branch Tributary	1,4,5,6,7
Quinn Ditch	4,5,6

Key to Sources:
1 – Previous HEC-2 or HEC-RAS Model Developed by Others
2 – HEC-2 Model from Previous Flood Insurance Study
3 – ASI Topography (4-foot Contours)
4 – USGS Quadrangle Map Topography (5-foot Contours)
5 – As-Built Construction Plans
6 – New Field Surveys for FIS
7 – Previous Field Surveys by Others

Information on structures, such as culverts and bridges, were obtained from the Texas Department of Transportation (TxDOT) as-built drawings, other as-built plans from local government agencies, field surveys performed for this project, and/or existing hydraulic computer models.

All public road crossing structures were photographed during site visits in order to verify information obtained from as-built plans and existing hydraulic models. DOQQs were used to identify any private road crossing structures which were not readily accessible from public roads. Field crews were then sent to survey these private road crossings.

Coefficients of roughness (Manning's "n" Values) were assigned on the basis of field inspection and photographs of the study stream reaches. For study streams with existing HEC-2 models, the "n" values were only modified if warranted by the field inspection and photographs.

The following table describes the range of Manning's "n" values that were used for each study stream.

Manning's "n" Value Range for Study Streams

Study Stream	Main Channel	Overbanks
Upper Bayou Din	0.025 – 0.040	0.060 – 0.080
Bayou Din	0.025 – 0.040	0.060 – 0.080
Bayou Din Tributary	0.014* - 0.040	0.060 – 0.090
North Fork Taylor/ Taylor Bayou	0.040	0.080 – 0.100
South Fork Taylor Bayou	0.018* - 0.040	0.090 – 0.100
Mayhaw Bayou	0.018* - 0.040	0.090 – 0.100
Mayhaw Bayou Tributary	0.018* - 0.040	0.090 – 0.100
Ditch 505	0.050	0.080 – 0.100
Ditch 505 Tributary	0.050	0.080 – 0.100
Ditch 607	0.018* - 0.040	0.090 – 0.100
Walker Branch	0.018* - 0.040	0.090 – 0.100
Walker Branch Tributary	0.018* - 0.040	0.090 – 0.100
Quinn Ditch	0.018* - 0.040	0.090 – 0.100

*Denotes "n" value used for concrete-lined segment

The USACE HEC-2 (Reference 23) and HEC-RAS (Reference 24) backwater analysis programs were used to determine the floodwater surface elevations produced by the flood discharges described in Table 2.

In general, HEC-2 was used for study streams with existing HEC-2 models and HEC-RAS was used for study streams with no previous models. The table below shows the hydraulic models that were used for each study stream.

Hydraulic Models Used for Study Streams

Study Stream	Model Used
Upper Bayou Din	HEC-2
Bayou Din	HEC-2
Bayou Din Tributary	HEC-2
North Fork Taylor/Taylor Bayou	HEC-RAS
South Fork Taylor Bayou	HEC-RAS
Mayhaw Bayou	HEC-2
Mayhaw Bayou Tributary	HEC-2
Ditch 505	HEC-RAS
Ditch 505 Tributary	HEC-RAS
Ditch 607	HEC-RAS
Walker Branch	HEC-2
Walker Branch Tributary	HEC-2
Quinn Ditch	HEC-RAS

Water-surface elevations of the 10-, 50-, 100-, and 500-year flood events were computed.

The hydraulic analyses for the reaches are based on existing conditions. The calculated water-surface elevations are valid only if the waterway structures, channels, and overbank area characteristics remain unchanged for the period covered under the scope of this study.

Starting water-surface elevations for each study stream were determined by normal depth.

Elevations were referenced to the 1929 NGVD datum with elevations tied to a NGS or USGS benchmark.

10.9 Flood Boundaries

In cases where the floodplain was not contained within the channel banks, two map sources were used to delineate flood boundaries, as described below.

ASI performed stereocompilation of existing aerial photography supplied by the Jefferson County Appraisal District. ASI compiled 4-foot contour topography for all study stream reaches within a 1,000-foot buffer on either side of the stream centerline. The aerial photography used was from February and March 1990, and was flown at a scale of 1:24,000 (Reference 22).

USGS 1:24,000 5-foot contour topographic quadrangle maps were used to supplement the sources listed above. Most of the quadrangle maps used had been photorevised in either 1993 or 1994 (Reference 6).

10.10 Floodways

The floodways presented in this study were computed on the basis of equal conveyance reduction from each side of the floodplains. The results of these computations are tabulated at selected cross-sections for each stream segment for which a floodway is computed and have been incorporated into Table 3, "Floodway Data."

The floodway widths were determined at cross-sections; between cross-sections, the boundaries were interpolated. In cases where the boundaries of the floodway and the 100-year flood are either close together or collinear, only the floodway boundary has been shown.

Floodways were delineated for all detailed study stream reaches.

Study stream reaches affected by backwater are shown in the following table.

Study Stream Reaches Affected by Backwater

Study Stream	Source of Backwater
Ditch 505 Tributary	Ditch 505
Walker Branch	Pine Island Bayou
Walker Branch Tributary	Pine Island Bayou
Quinn Ditch	Pine Island Bayou

10.11 Other Studies

This present study is authoritative for the purpose of the National Flood Insurance Program, and supersedes previous determinations. The previous FIS for the unincorporated areas of Jefferson County, Texas, was last revised on November 20, 1991 (Reference 25).

Other Flood Insurance Studies for communities within Jefferson County include (most recent revision date in parentheses):

City of Port Neches, Texas (July 6, 1982)
City of Nome, Texas (August 2, 1982)
City of Bevil Oaks, Texas (September 4, 1987)
City of Beaumont, Texas (March 16, 1992)
City of Nederland, Texas (June 3, 1991)
City of Groves, Texas (July 6, 1982)
City of Port Arthur, Texas (May 4, 1992)

Of these previous FISs, only the City of Beaumont FIS is related to the stream reaches studied in this current FIS. A revision to the effective FIS for the City of Beaumont is in process. Also, there are no other FIS in adjacent counties or states which are directly related to these study stream reaches (References 26 through 33).

Other reports and studies regarding flooding problems in the study area are described below, and are more fully documented in the Bibliography and References section.

The USACE published a series of reports and design memorandums beginning in 1963, related to the construction of channel improvements on the lower reaches of Taylor Bayou, Hillebrandt Bayou, Bayou Din, Willow Marsh Bayou, and Pevitot Gully. These channel improvements were completed by 1989, but did not extend upstream into any of the study stream reaches, except Willow Marsh Bayou (References 34 through 41).

Kohler and Kohler Engineers, Inc., completed a 14-month study for the City of Beaumont in 1981, to assist with long-range planning in drainage and flood control. The study used the rational method for hydrologic analysis. One particularly useful product of this study was 1-foot contour topography within the city limits of Beaumont (Reference 5).

Bernard Johnson, Inc. (BJI) completed a series of reports during 1984 through 1986, detailing a drainage master plan for DD6. DD6 has jurisdiction over the City of Beaumont and much of the northern portion of Jefferson County (References 42 through 44). As part of this study, HEC-1 and HEC-2 models were developed for streams within the Hillebrandt Bayou watershed. Since its original development in 1985, the model has been updated by consultants to DD6, to include drainage improvements as they are constructed.

In the BJI study, streams in the Taylor Bayou watershed were analyzed using the Rational method. Pine Island Bayou was analyzed using a HEC-1 model developed by the USACE. This model did not include any of the study stream reaches analyzed in this current FIS, and, therefore, did not supply pertinent information. For flooding sources in all three watersheds, only the 10- and 25-year frequency rainfall events were analyzed.

Wright Water Engineers (WWE) developed a "Drainage Plan of Action" for the City of Beaumont (December 1988). This study identified urban drainage problems for Beaumont and presented flood control solutions. The study also developed HEC-1 and HEC-2 models for several streams in Beaumont, and compared results to the master plan conducted by BJI. The results of the WWE models were similar to the BJI models, providing further verification of their applicability (Reference 45).

10.12 Revision Bibliography

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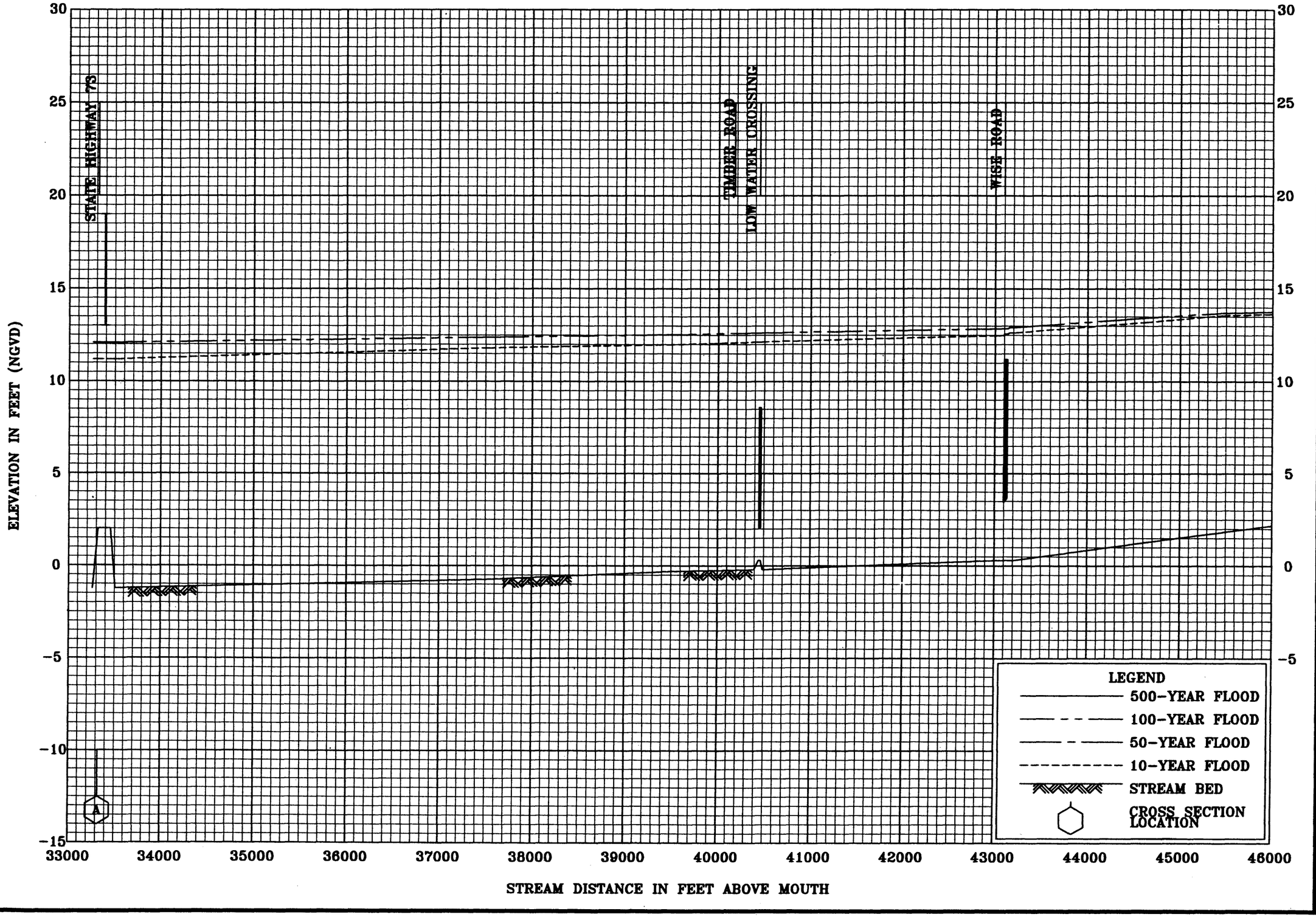
As part of this revision, the format of the map panels has changed. Previously, flood-hazard information was shown on both the Flood Insurance Rate Map and Flood Boundary and Floodway Map. In the new format, all base flood elevations, cross sections, zone designations, and floodplain and floodway boundary delineations are shown on the Flood Insurance Rate Map and the Flood Boundary and Floodway Map has been eliminated. Some of the flood insurance zone designations were changed to reflect the new format. Areas previously shown as numbered Zone A were changed to Zone AE. Areas previously shown as Zone B were changed to Zone X (shaded). Areas previously shown as Zone C were changed to Zone X (unshaded). In addition, all Flood Insurance Zone Data Tables were removed from the FIS report and all zone designations and reach determinations were removed from the profile panels.



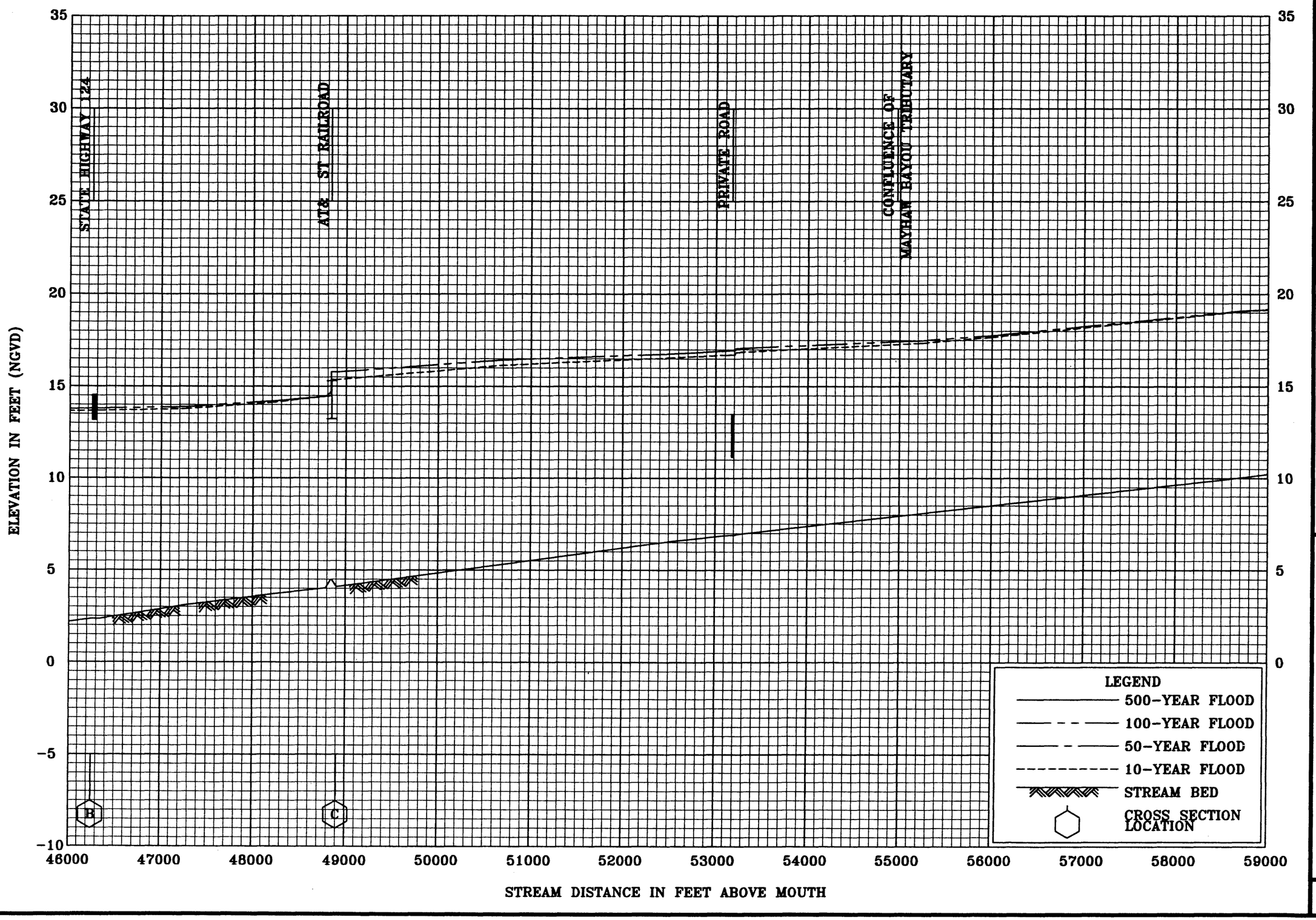
FLOOD PROFILES

MAYHAW BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)

01P



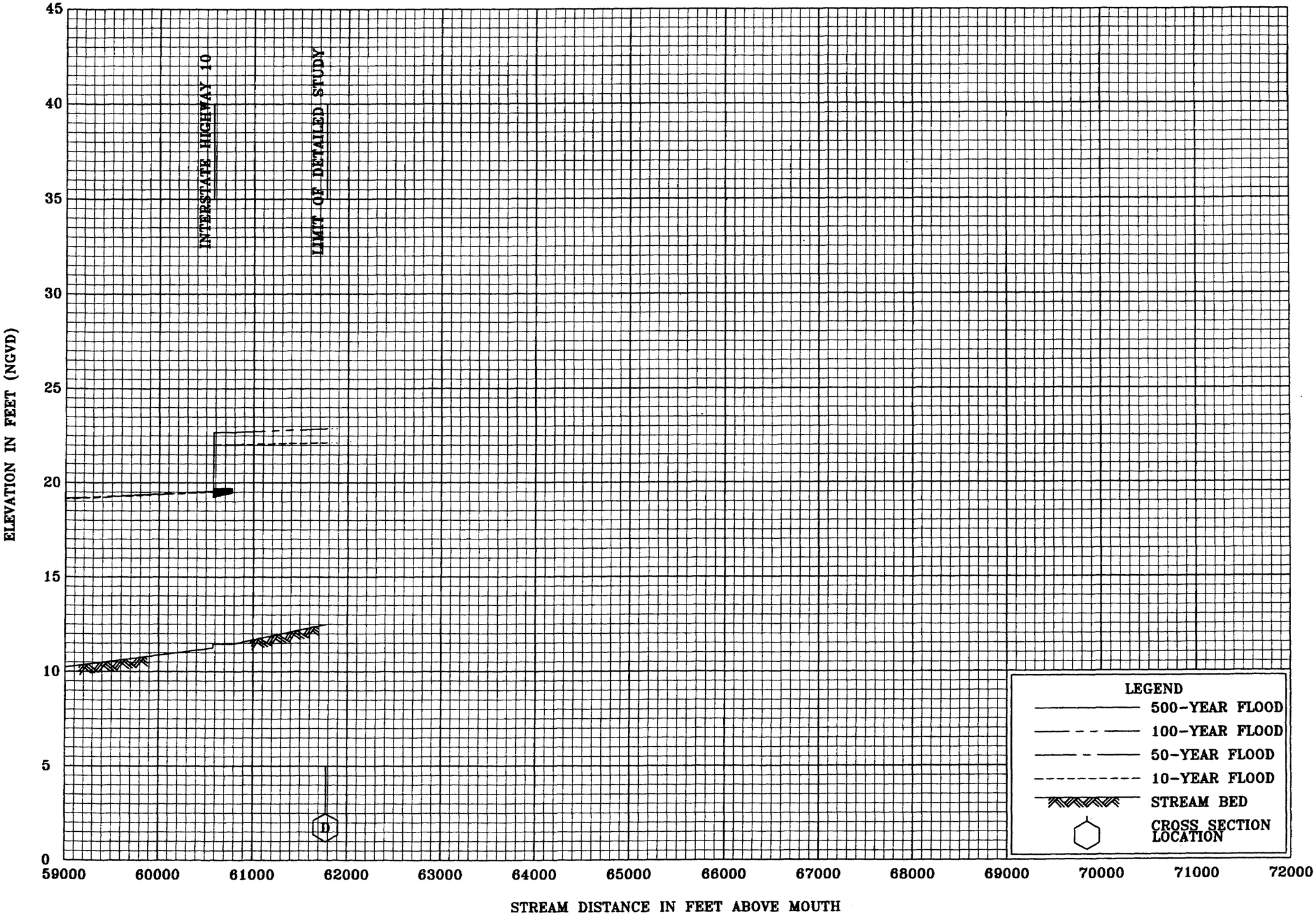
FLOOD PROFILES

MAYHAW BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)

02P



FLOOD PROFILES

MAYHAW BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)

03P

ELEVATION IN FEET (NGVD)

35
30
25
20
15
10
5
0

CONFLUENCE WITH MAYHAW BAYOU

BRUSH ISLAND ROAD

CORPORATE LIMITS

A

B

LEGEND

500 YEAR FLOOD
100 YEAR FLOOD
50 YEAR FLOOD
10 YEAR FLOOD
STREAM BED
CROSS SECTION LOCATION

0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 6500

STREAM DISTANCE IN FEET ABOVE MOUTH

FLOOD PROFILES

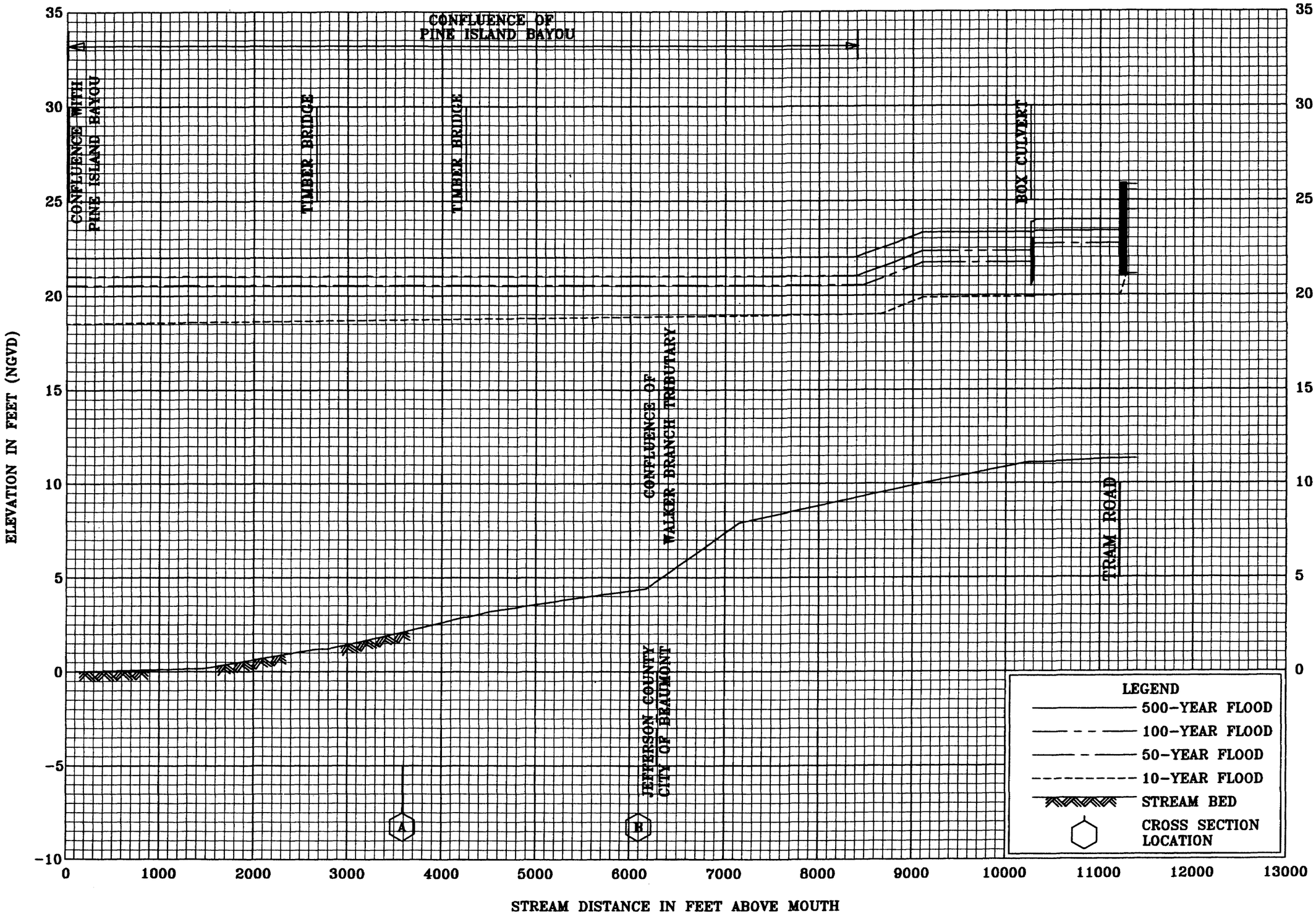
MAYHAW BAYOU TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

04P



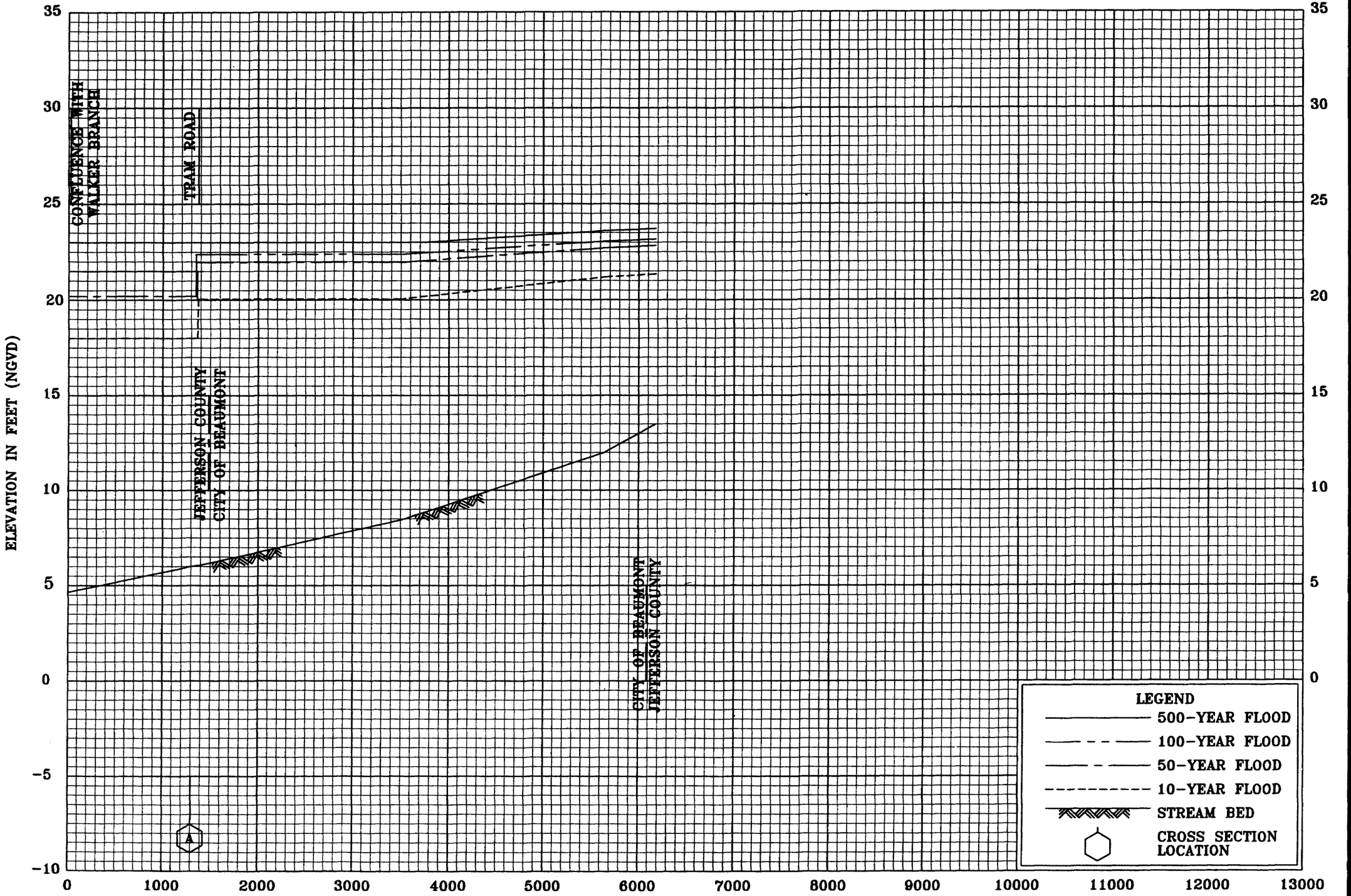
FLOOD PROFILES

WALKER BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)

05P



FLOOD PROFILES

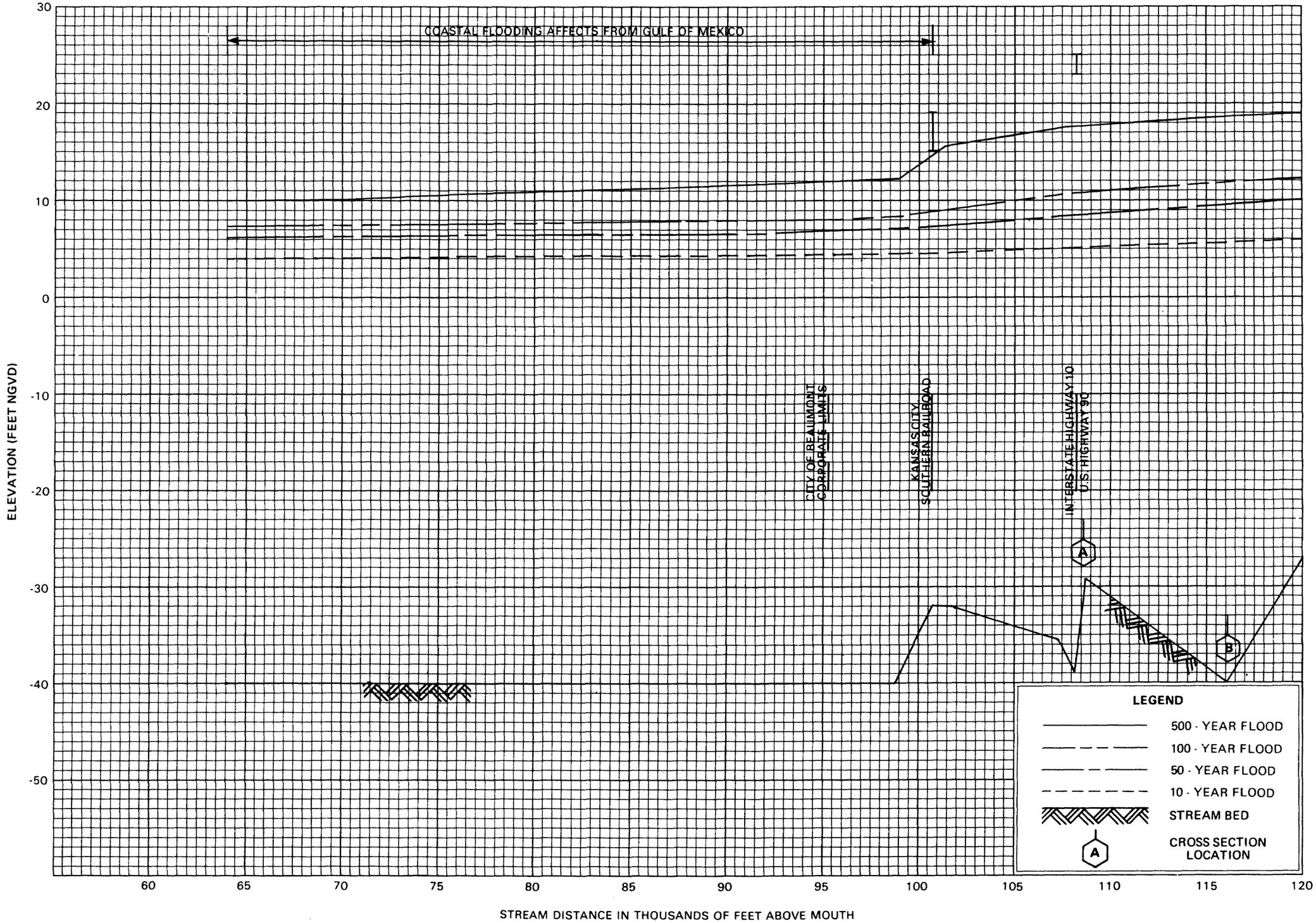
WALKER BRANCH TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

06P



FLOOD PROFILES

NECHES RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)

07P

ELEVATION (FEET NGVD)

30
20
10
0
-10
-20
30

CONFLUENCE OF PINE ISLAND BAYOU
CITY OF BEAUMONT CORPORATE LIMITS

C D E F

120 125 130 135 140 145 150

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

LEGEND

- 500 - YEAR FLOOD
- 100 - YEAR FLOOD
- 50 - YEAR FLOOD
- 10 - YEAR FLOOD
- STREAM BED
- A — CROSS SECTION LOCATION

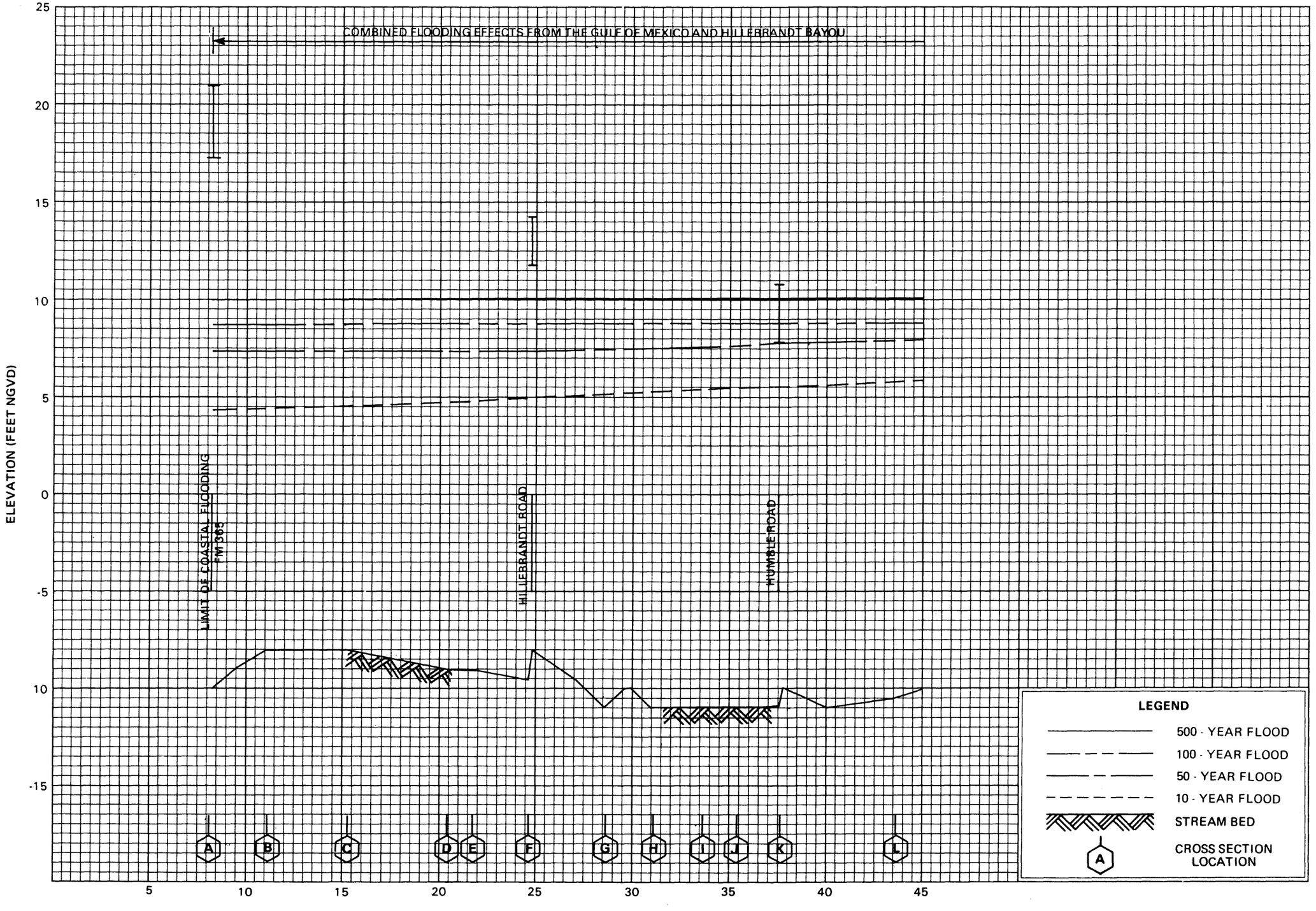
FLOOD PROFILES

NECHES RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)

08P



FLOOD PROFILES

HILLEBRANDT BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

COMBINED FLOODING EFFECTS FROM THE GULF OF MEXICO AND HILLEBRANDT BAYOU

CORPORATE LIMITS

ELEVATION (FEET NGVD)

15
10
5
0
-5
-10
-15

45 50 55 60 65 70 75

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

M

LEGEND

- 500 - YEAR FLOOD
- 100 - YEAR FLOOD
- 50 - YEAR FLOOD
- 10 - YEAR FLOOD
- STREAM BED
- A — CROSS SECTION LOCATION

FLOOD PROFILES

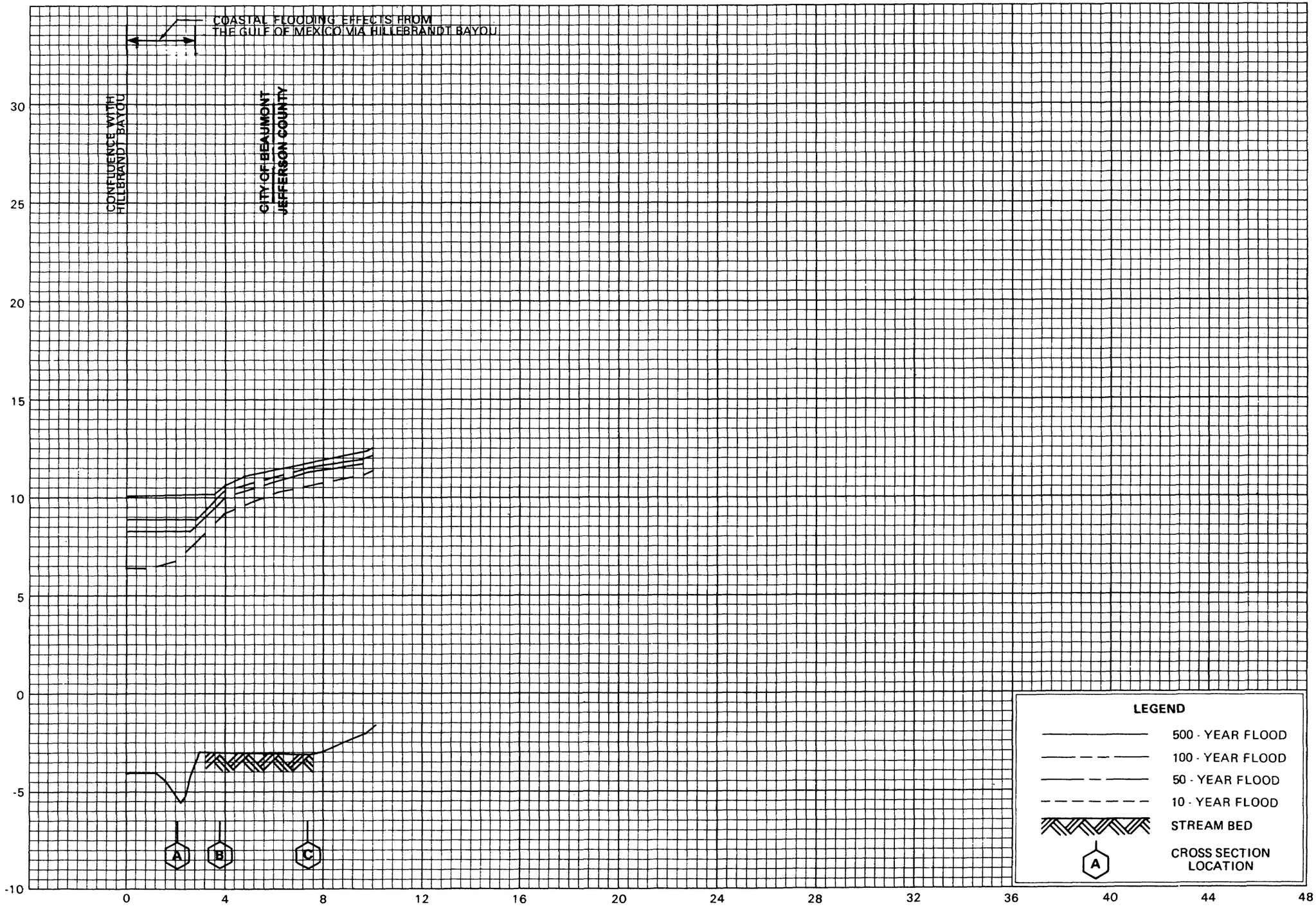
HILLEBRANDT BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

10P



FLOOD PROFILES

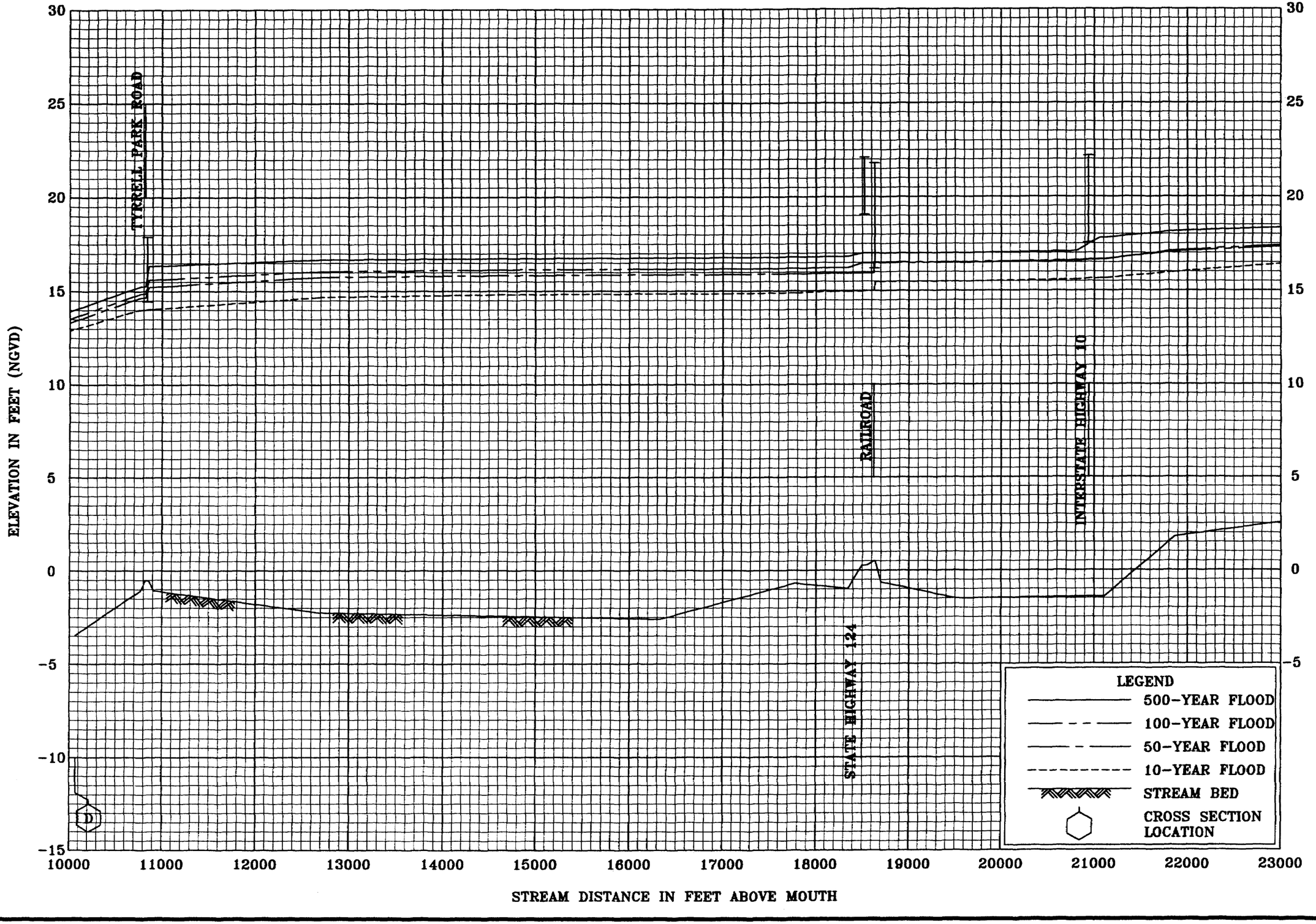
WILLOW MARSH BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

11P



FLOOD PROFILES

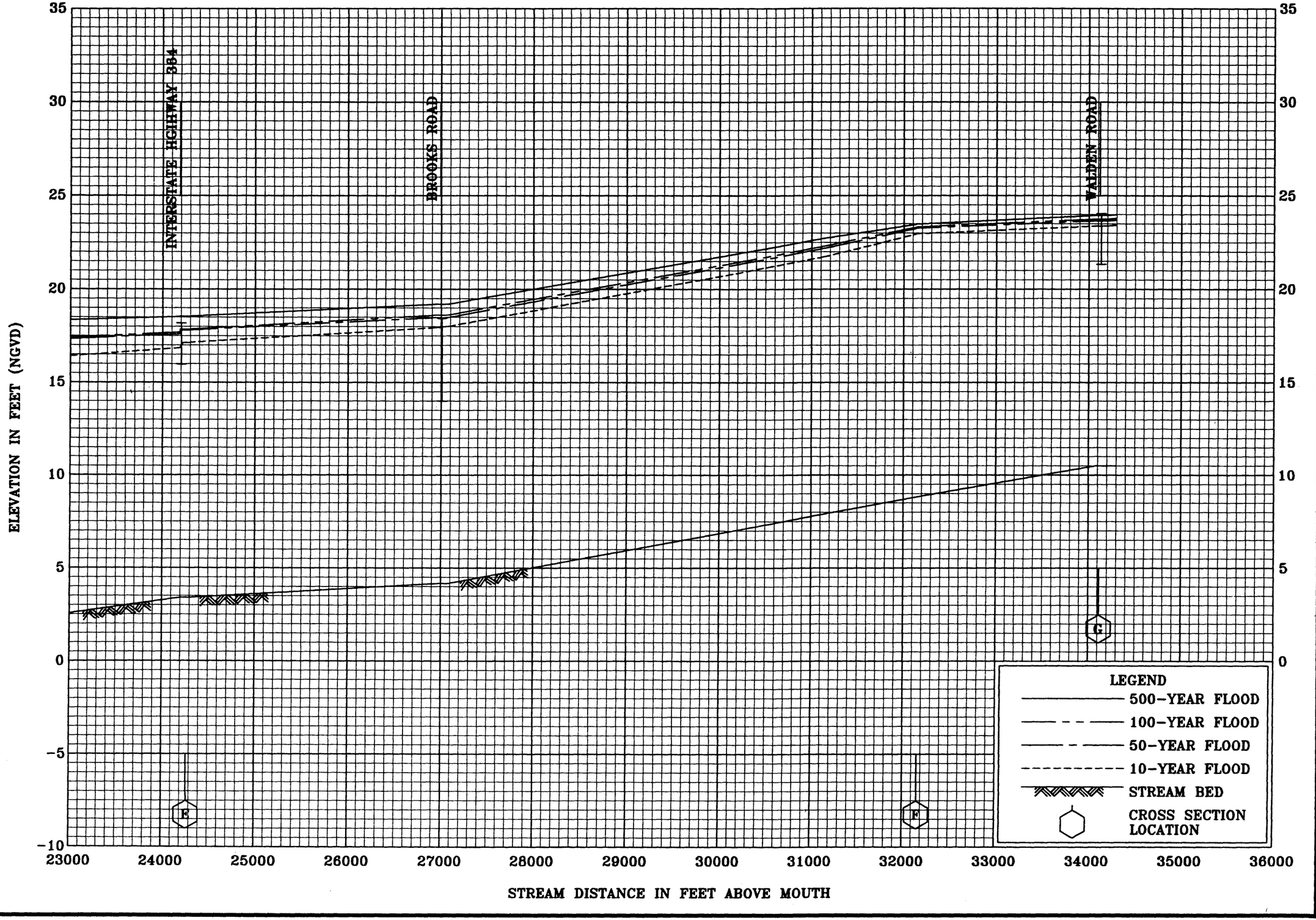
WILLOW MARSH BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

12P



FLOOD PROFILES

WILLOW MARSH BAYUO

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

13P

CITY OF BEAUMONT CORPORATE LIMITS

CONFLUENCE OF WALKER BRANCH

CONFLUENCE OF QUINN DITCH

CONFLUENCE OF HUGHES GULLY

TOWN OF BEVIL OAKS CORPORATE LIMITS

ELEVATION (FEET NGVD)

30
20
10
0
-10
-20

60 65 70 75 80 85 90 95

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

A B C D E

LEGEND

- 500 - YEAR FLOOD
- 100 - YEAR FLOOD
- 50 - YEAR FLOOD
- 10 - YEAR FLOOD
- STREAM BED
- A — CROSS SECTION LOCATION

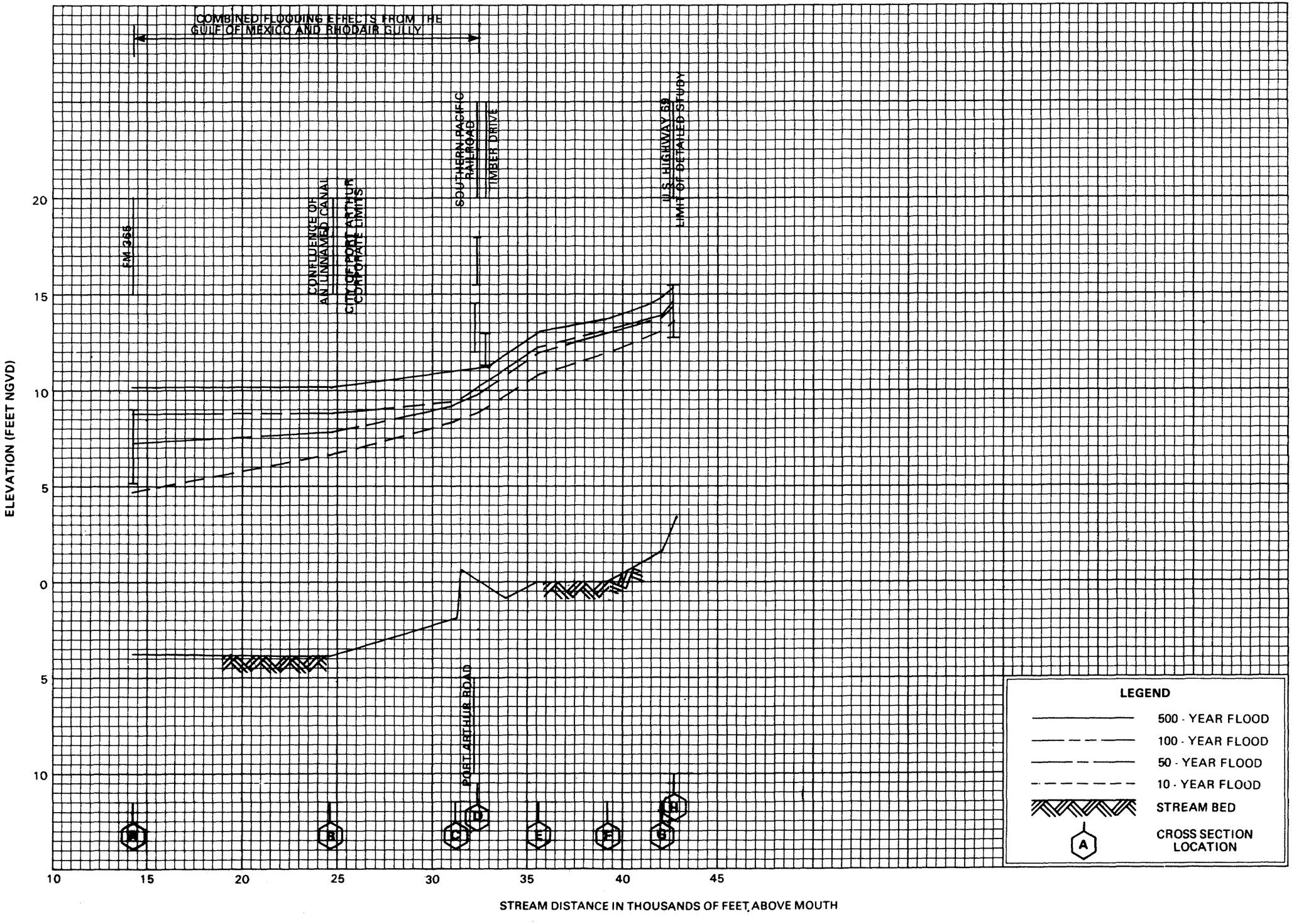
FLOOD PROFILES

PINE ISLAND BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

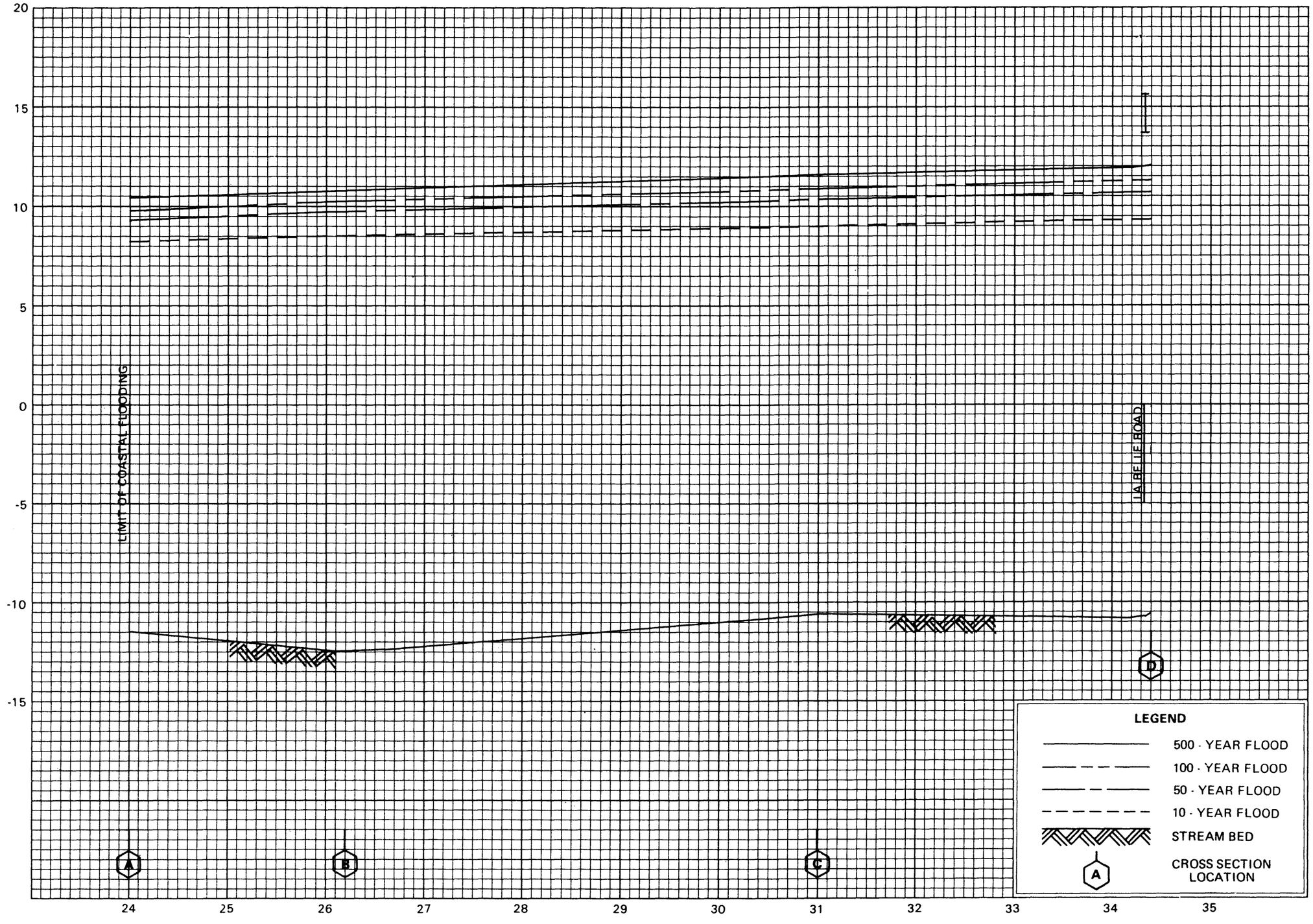


FLOOD PROFILES

RHODAIR GULLY

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)



FLOOD PROFILES

TAYLOR BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

ELEVATION IN FEET (NGVD)

20
15
10
5
0
-5
-10
-15
-20
-25

0 1500 3500 5500 7500 9500 11500 13500 15500 17500 19500 21500 23500 25500

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH HILLEBRANDT BAYOU

LEGEND
- 500-YEAR FLOOD
- 100-YEAR FLOOD
- 50-YEAR FLOOD
- 10-YEAR FLOOD
- STREAM BED
- CROSS SECTION LOCATION

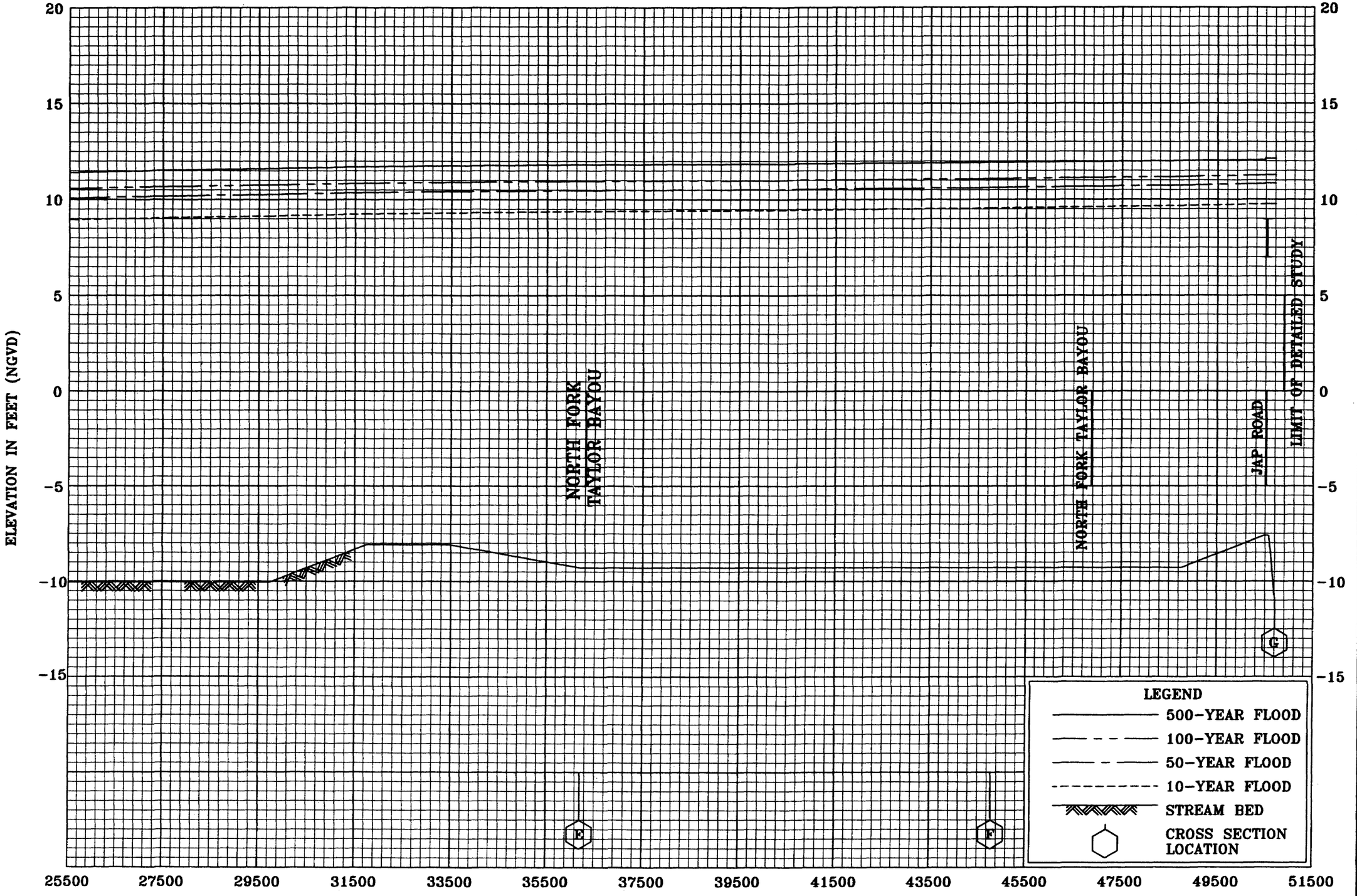
FLOOD PROFILES

TAYLOR BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)

17P



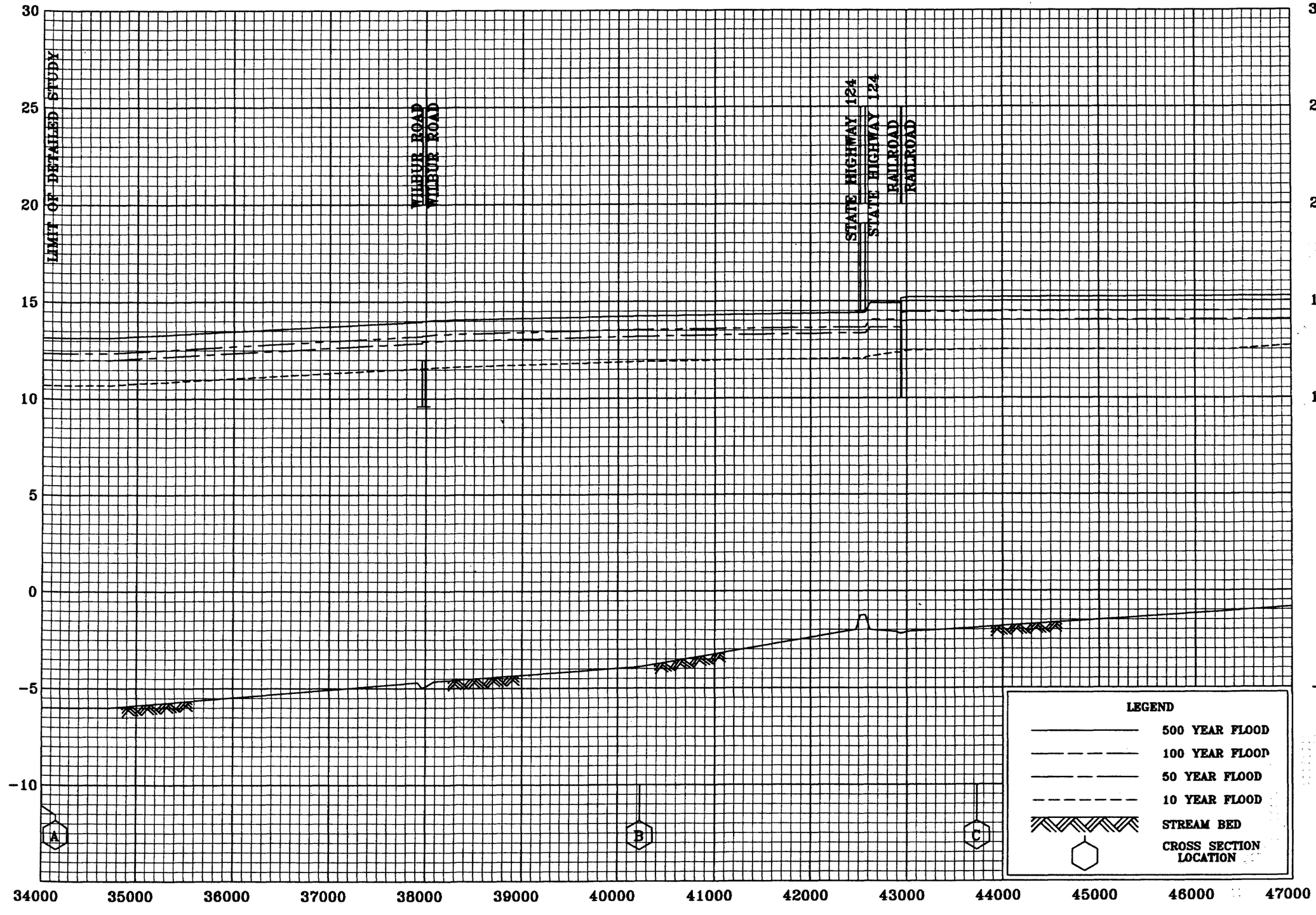
FLOOD PROFILES

TAYLOR BAYOU/NORTH FORK TAYLOR BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)

18P



FLOOD PROFILES

SOUTH FORK TAYLOR BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)

19P

ELEVATION IN FEET (NGVD)

35
30
25
20
15
10
5
0
−5

INTERSTATE HIGHWAY 10
INTERSTATE HIGHWAY 10
LIMIT OF DETAILED STUDY

D
E

LEGEND
500 YEAR FLOOD
100 YEAR FLOOD
50 YEAR FLOOD
10 YEAR FLOOD
STREAM BED
CROSS SECTION LOCATION

47000 48000 49000 50000 51000 52000 53000 54000 55000 56000 57000 58000

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH TAYLOR BAYOU

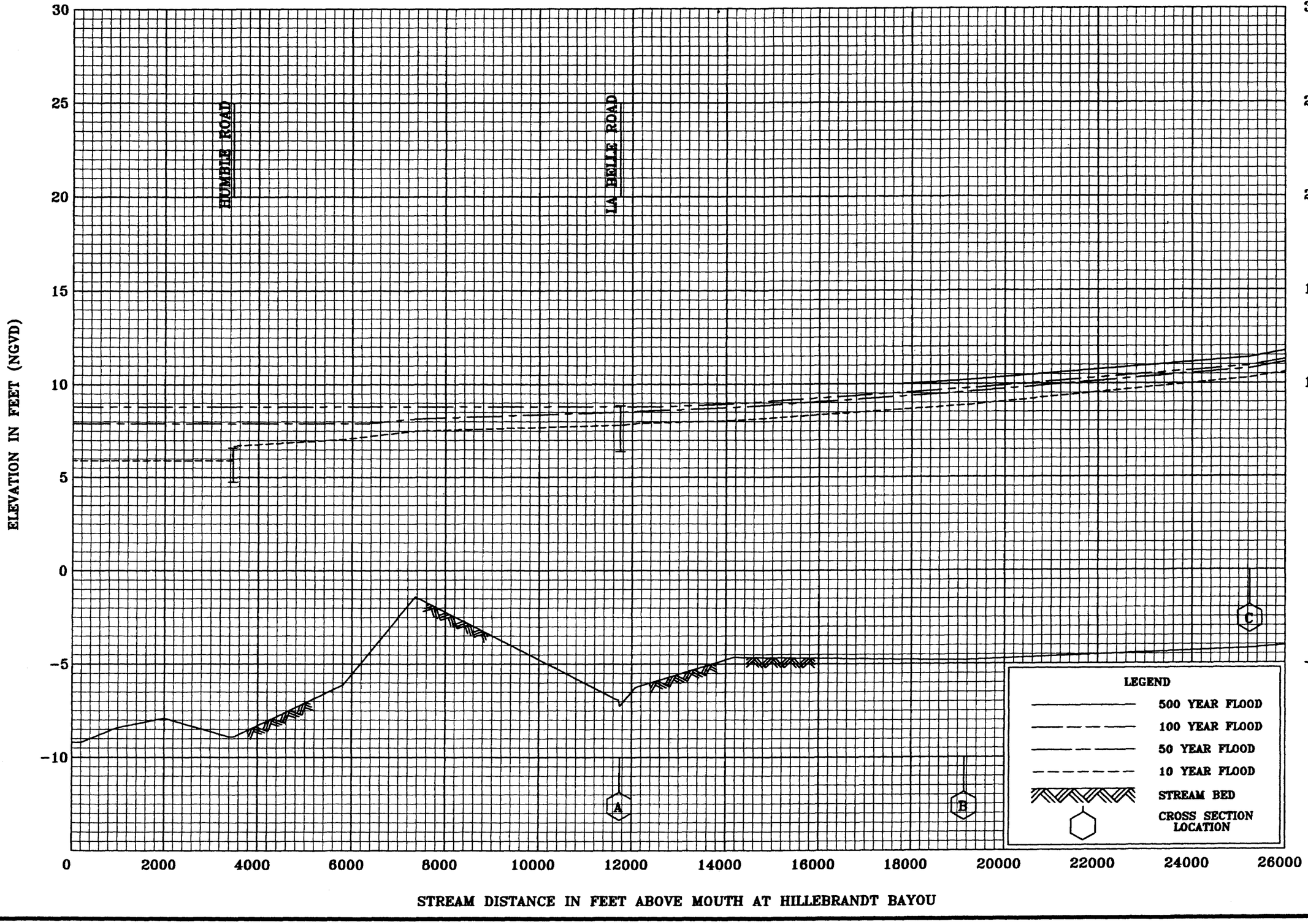
FLOOD PROFILES

SOUTH FORK TAYLOR BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)

20P



FLOOD PROFILES

BAYOU DIN

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

21P

ELEVATION IN FEET (NGVD)

35
30
25
20
15
10
5
0
-5

WOODEN BRIDGE
CONFLUENCE OF KIDD GULLY
GAULDING ROAD
STATE HIGHWAY 124
RAILROAD
INTERSTATE HIGHWAY - 10
CLUB WEST ROAD
MACK ROAD
DIRT ROAD
DIRT ROAD

D E F G H I J K L

LEGEND
500 YEAR FLOOD
100 YEAR FLOOD
50 YEAR FLOOD
10 YEAR FLOOD
STREAM BED
CROSS SECTION LOCATION

26000 28000 30000 32000 34000 36000 38000 40000 42000 44000 46000 48000 50000 52000

STREAM DISTANCE IN FEET ABOVE MOUTH AT HILLEBRANDT BAYOU

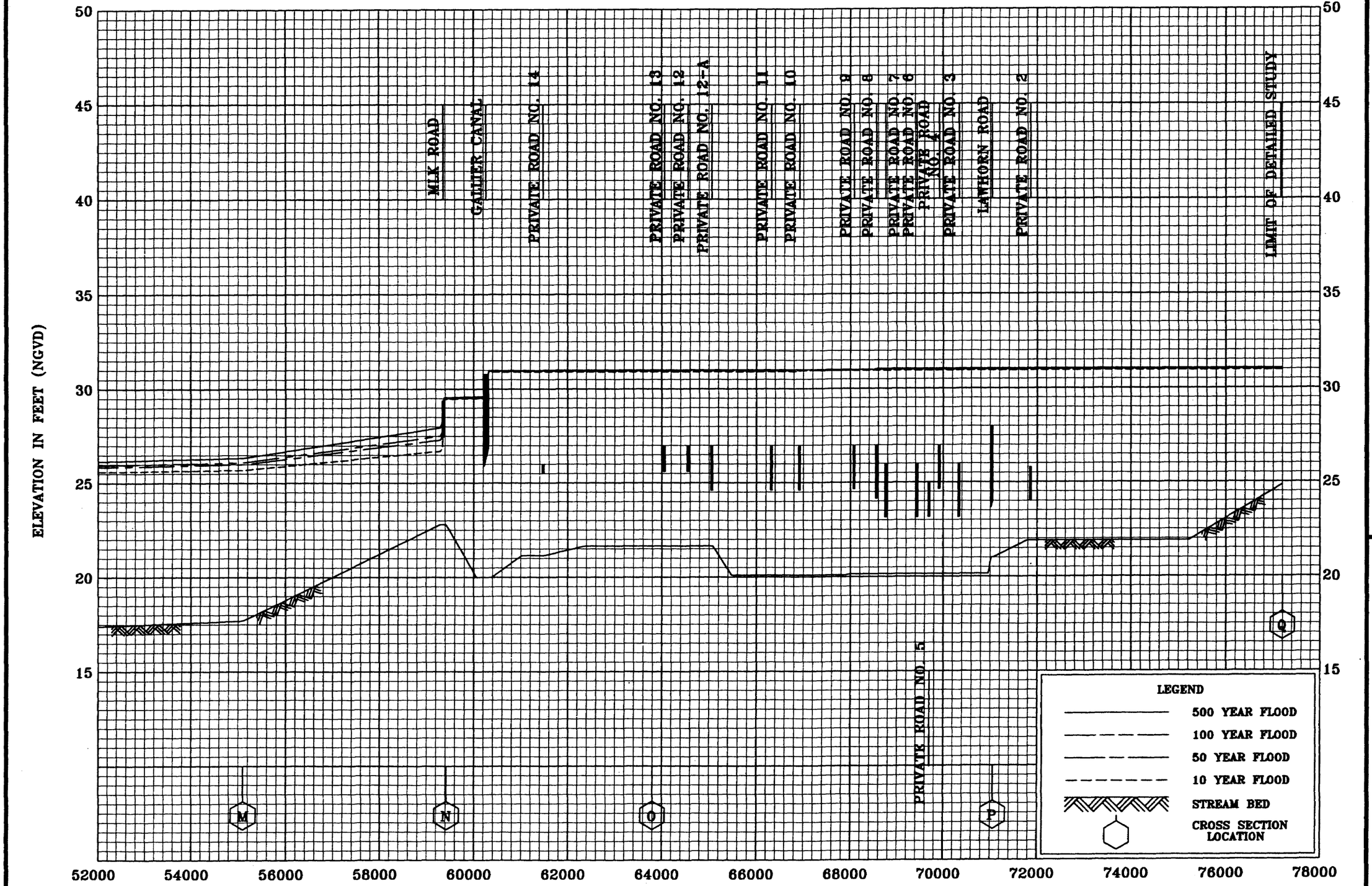
FLOOD PROFILES

BAYOU DIN

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)

22P



FLOOD PROFILES

BAYOU DIN

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

23P



FLOOD PROFILES

BAYOU DIN TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)

BACKWATER EFFECTS FROM BAYOU DIN

CONFLUENCE OF BAYOU DIN

STATE HIGHWAY 124

ATCHISON, TOPEKA AND SANTA FE RAILWAY

INTERSTATE HIGHWAY 10

DIRT ROAD

UNNAMED ROAD

LIMIT OF DETAILED STUDY

ELEVATION (FEET NGVD)

25
20
15
10
5
0

2 4 6 8 10 12 14 16 18 20

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

A B C D E F G

LEGEND

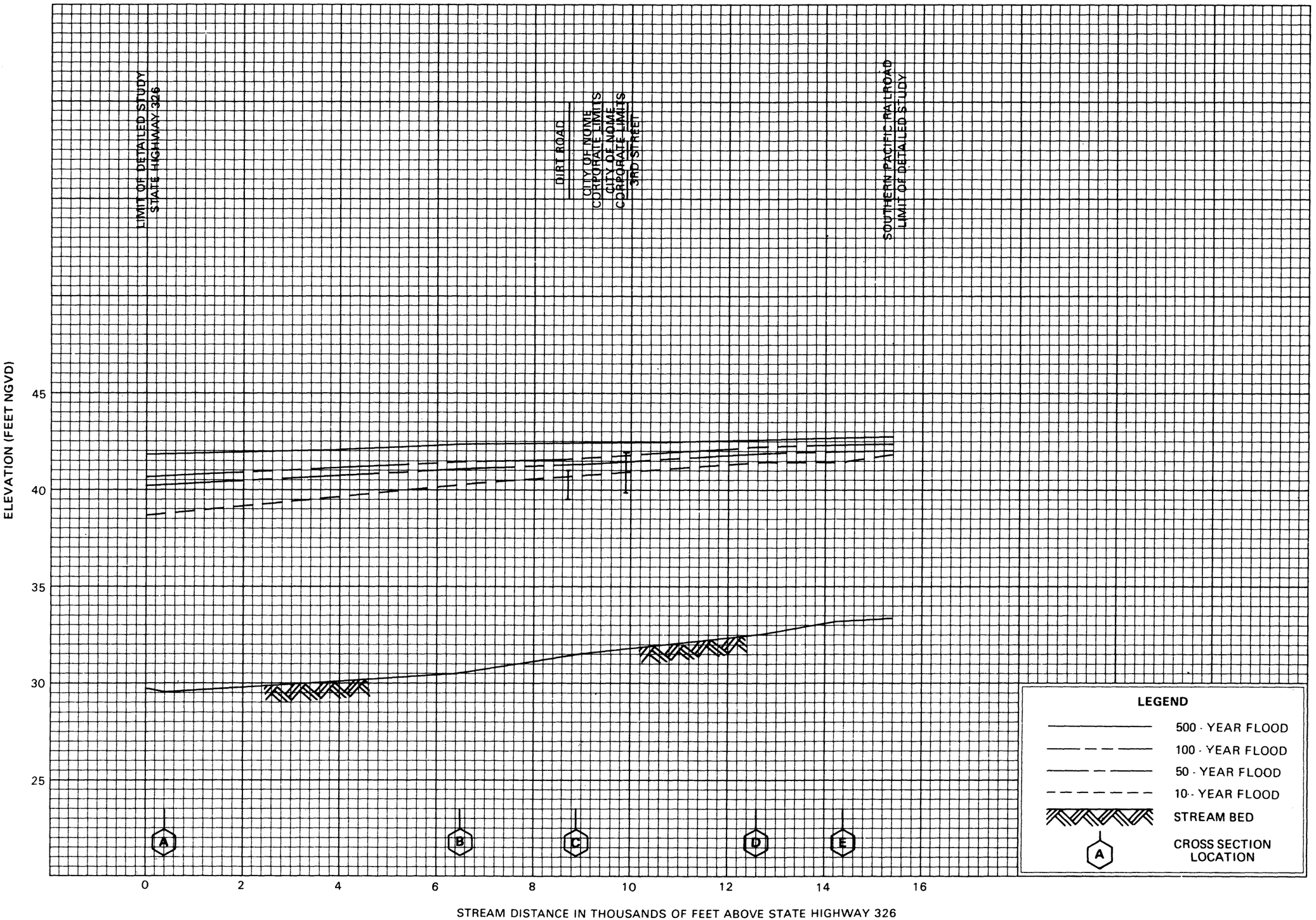
- 500 - YEAR FLOOD
- 100 - YEAR FLOOD
- 50 - YEAR FLOOD
- 10 - YEAR FLOOD
- STREAM BED
- CROSS SECTION LOCATION (A)

FLOOD PROFILES

KIDD GULLY

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)



FLOOD PROFILES

COTTON CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)

26P

ELEVATION IN FEET (NGVD)

40
35
30
25
20
15
10
5

CLUB WEST ROAD

LIMIT OF DETAILED STUDY

A
B
C

0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 6500

STREAM DISTANCE IN FEET ABOVE MOUTH AT DITCH 505

LEGEND

- 500 YEAR FLOOD
- 100 YEAR FLOOD
- 50 YEAR FLOOD
- 10 YEAR FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

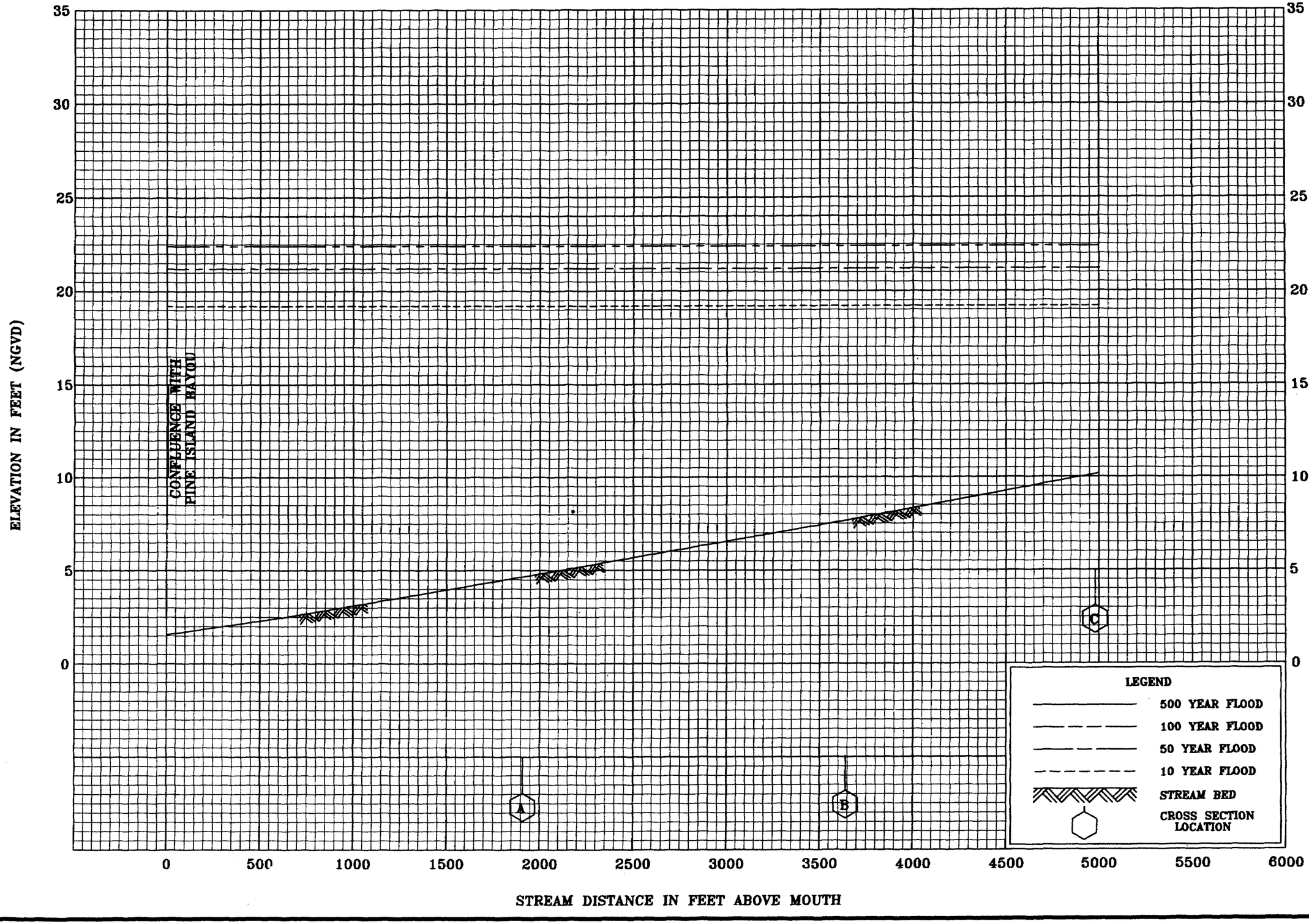
DITCH 505 TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

27P



FLOOD PROFILES

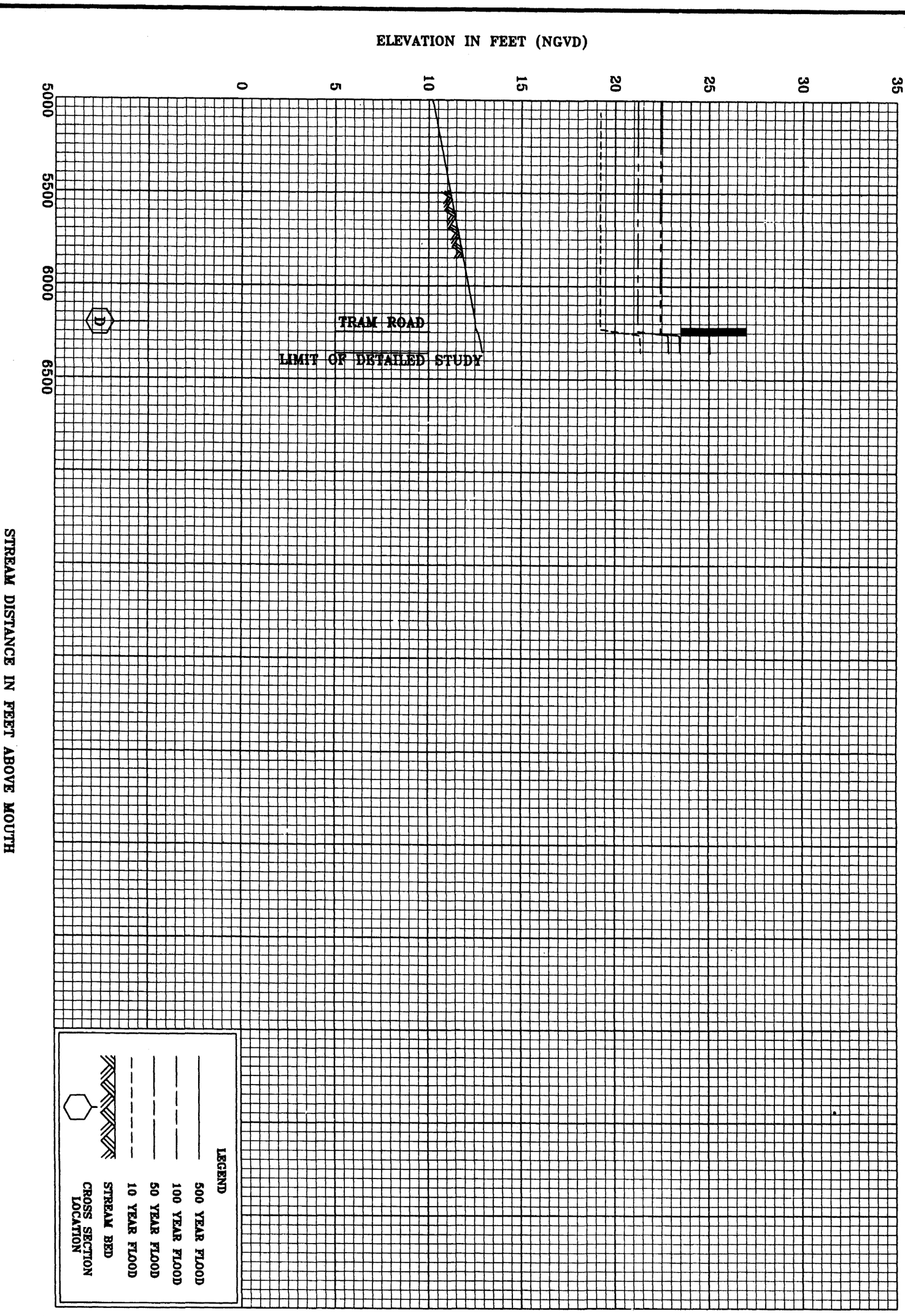
QUINN DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

28P



29P

FEDERAL EMERGENCY MANAGEMENT AGENCY

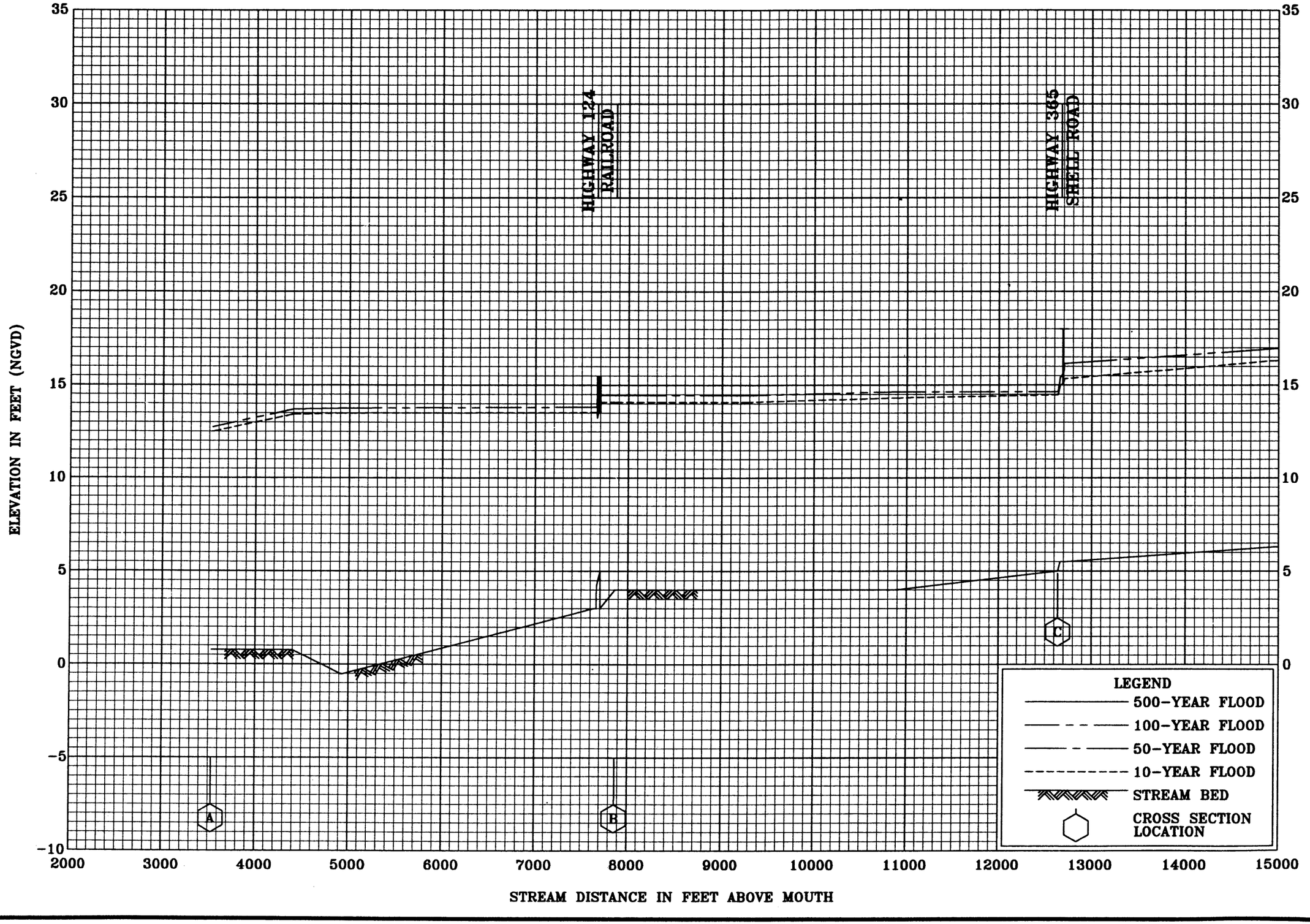
JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

FLOOD PROFILES

QUINN DITCH

1742



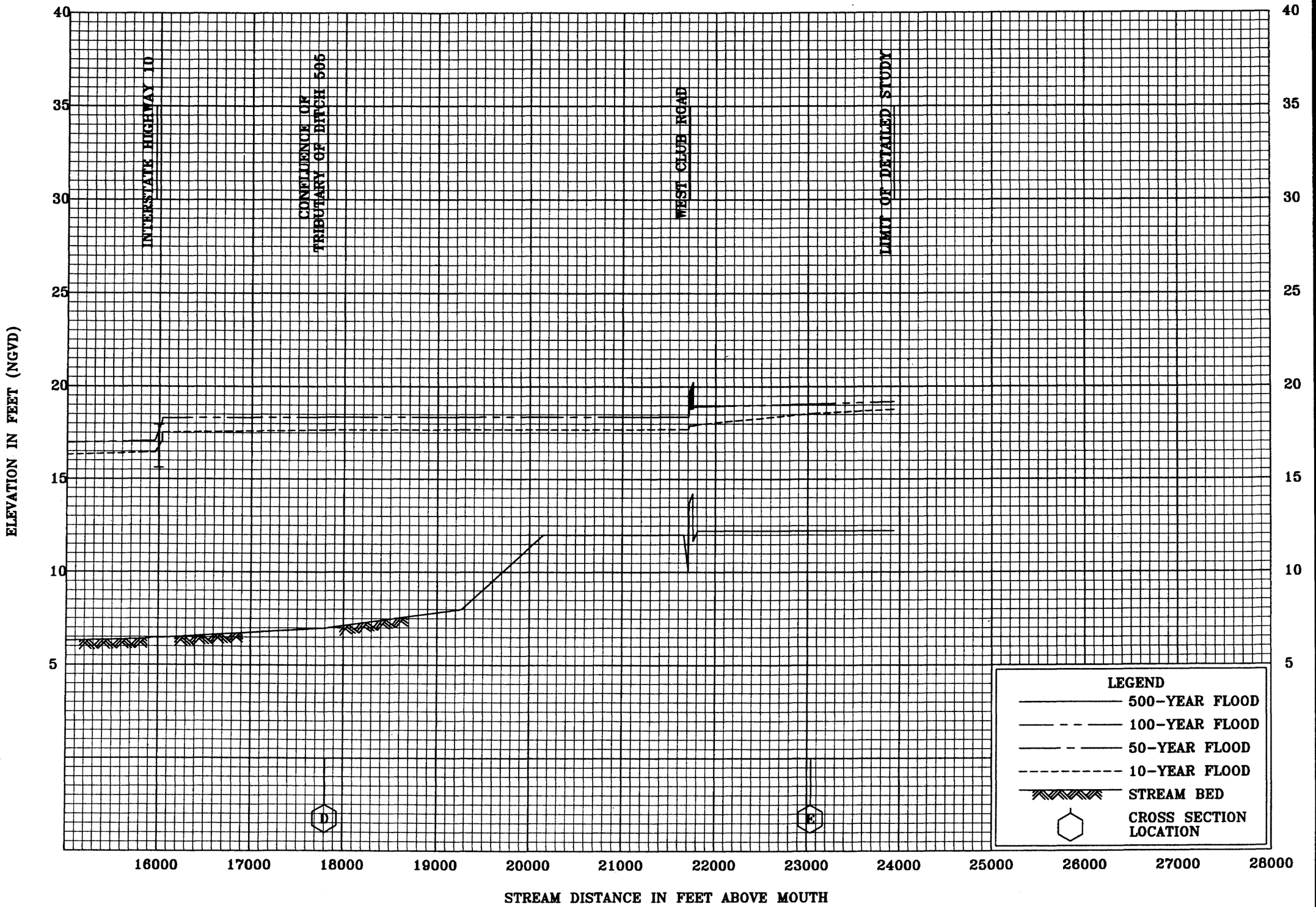
FLOOD PROFILES

DITCH 505

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
(UNINCORPORATED AREAS)

30P



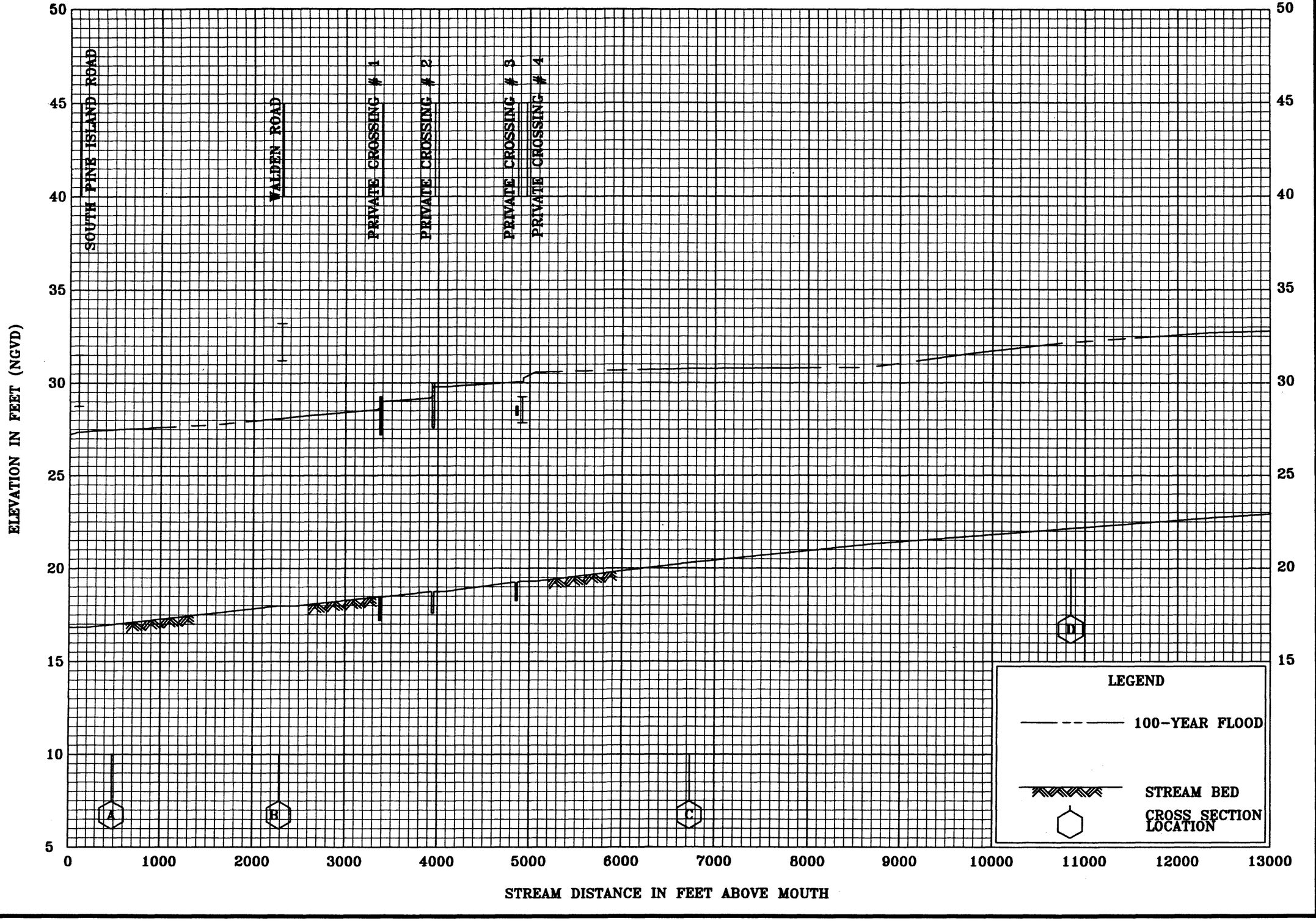
FLOOD PROFILES

DITCH 505

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)



FLOOD PROFILES

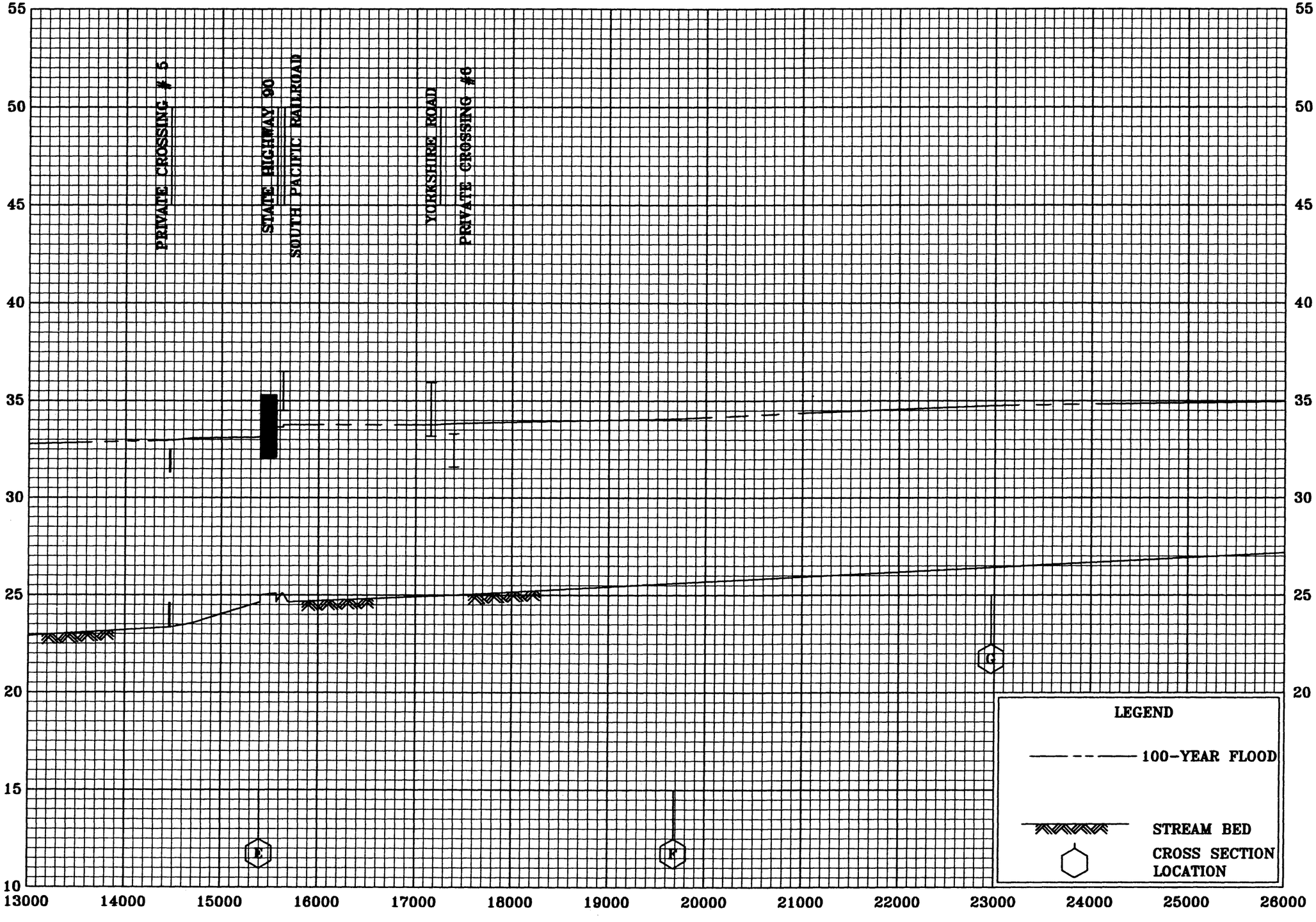
GREEN POND GULLY (DITCH 607)

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

32P



FLOOD PROFILES

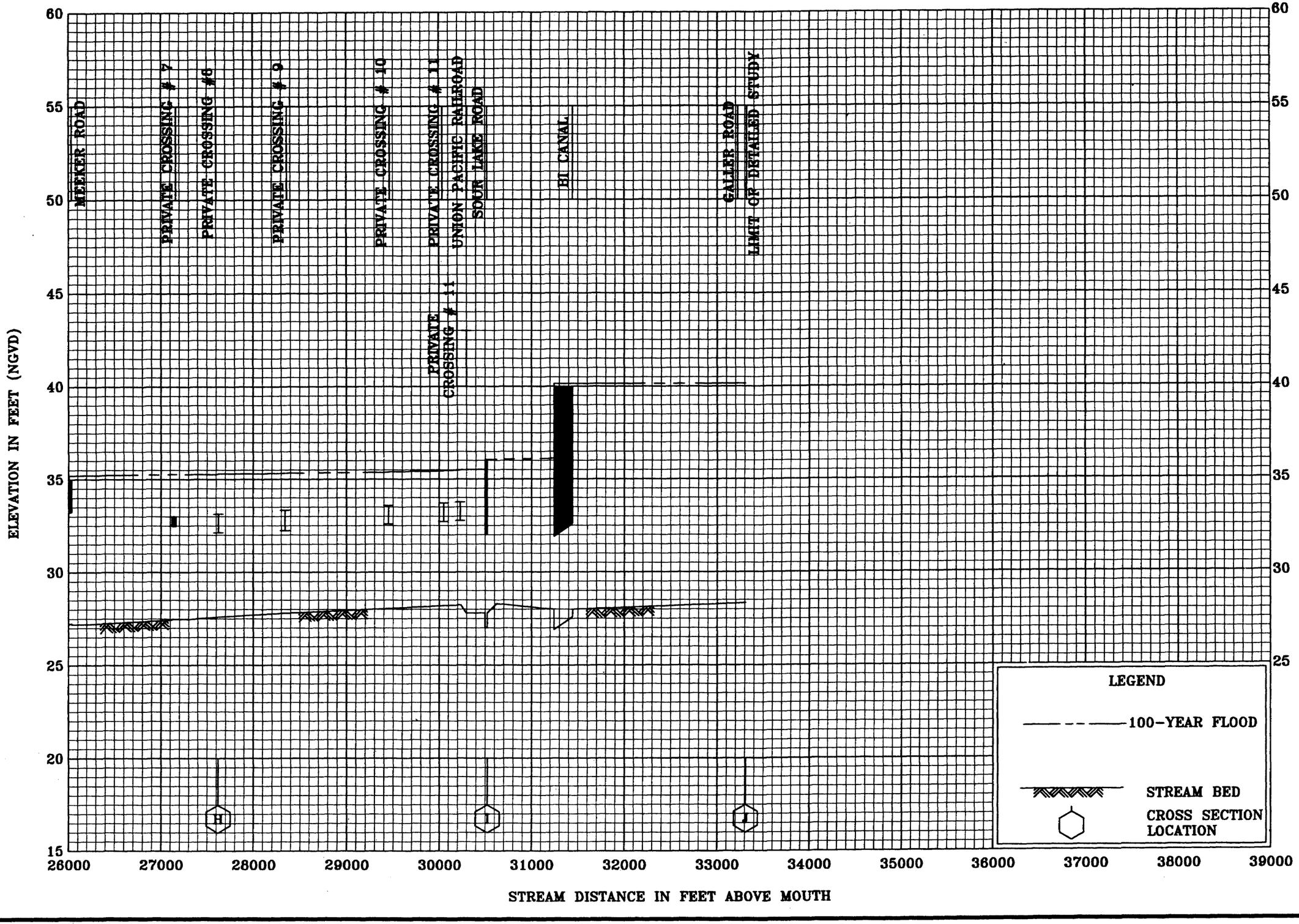
GREEN POND GULLY (DITCH 607)

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

33P



FLOOD PROFILES

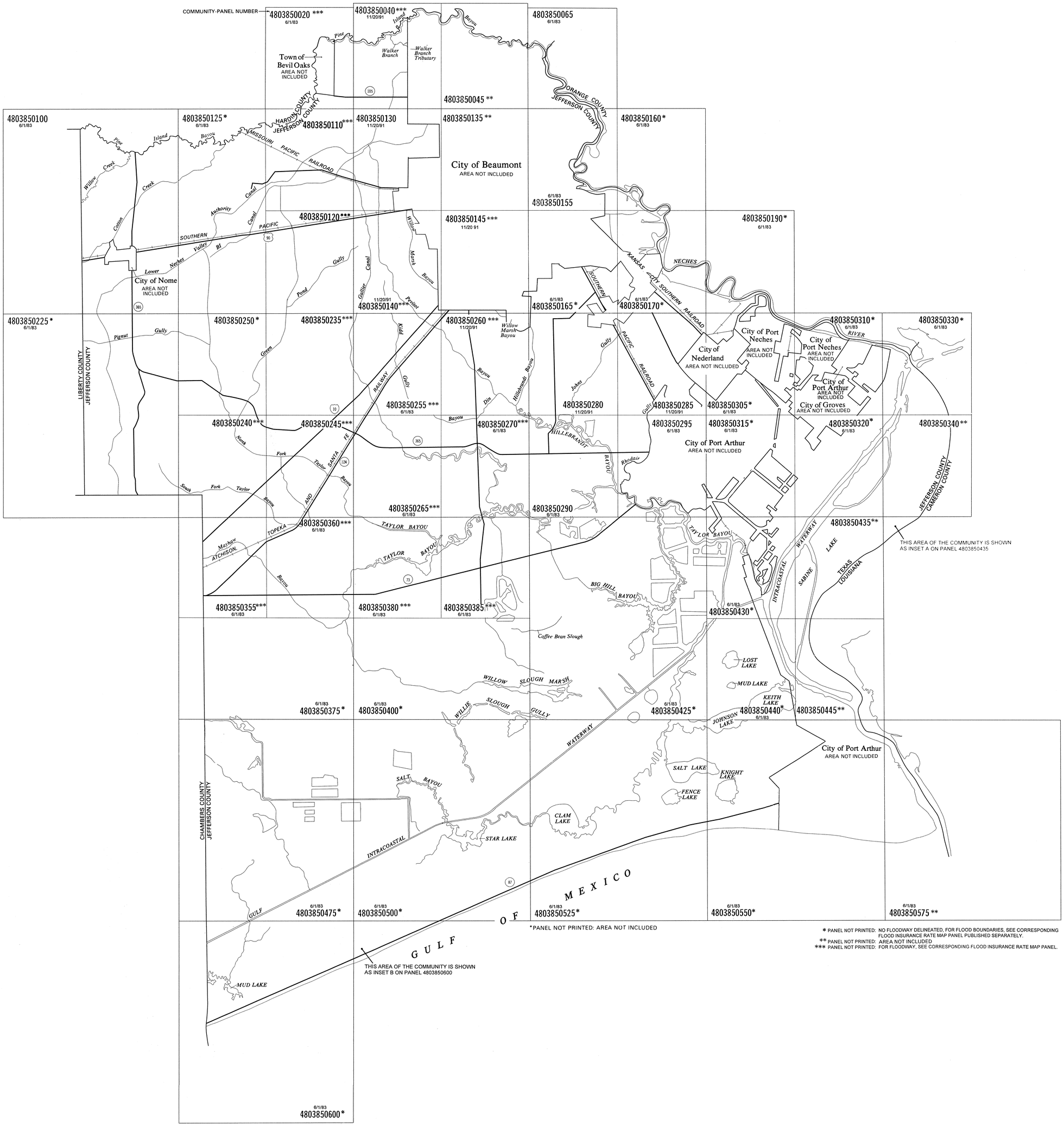
GREEN POND GULLY (DITCH 607)

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

(UNINCORPORATED AREAS)

34P



*PANEL NOT PRINTED: AREA NOT INCLUDED

* PANEL NOT PRINTED: NO FLOODWAY DELINEATED, FOR FLOOD BOUNDARIES, SEE CORRESPONDING FLOOD INSURANCE RATE MAP PANEL PUBLISHED SEPARATELY.
** PANEL NOT PRINTED: AREA NOT INCLUDED
*** PANEL NOT PRINTED: FOR FLOODWAY, SEE CORRESPONDING FLOOD INSURANCE RATE MAP PANEL.

NATIONAL FLOOD INSURANCE PROGRAM

FLOODWAY
FLOOD BOUNDARY AND FLOODWAY MAP

JEFFERSON COUNTY, TEXAS
(UNINCORPORATED AREAS)

MAP INDEX

PANELS PRINTED: 65, 100, 130, 155, 280, 285, 290, 295

COMMUNITY-PANEL NUMBER
480385FND0

MAP REVISED:
AUGUST 6, 2002

Federal Emergency Management Agency

COMMUNITY-PANEL NUMBER

4803850020 C | 4803850040 D | 4803850065 B

4803850045 B*

4803850100 B | 4803850125 C | 4803850110 C | 4803850130 C | 4803850135 B* | 4803850160 B

4803850120 C | 4803850145 D | 4803850155 B | 4803850190 B

4803850140 D | 4803850165 C | 4803850170 C

4803850225 B | 4803850250 C | 4803850235 C | 4803850260 D | 4803850310 B | 4803850330 B

4803850255 C | 4803850280 C | 4803850285 C | 4803850305 B

4803850240 C | 4803850245 C | 4803850270 C | 4803850295 B | 4803850315 B | 4803850320 B | 4803850340 B*

4803850265 C | 4803850290 B | 4803850435 B*

4803850355 C | 4803850380 C | 4803850385 C | 4803850430 B

4803850375 B | 4803850400 B | 4803850425 C | 4803850440 D | 4803850445 B*

4803850475 D | 4803850500 C | 4803850525 D | 4803850550 D | 4803850575 B*

4803850600 D

Town of Bevil Oaks
AREA NOT INCLUDED

City of Beaumont
AREA NOT INCLUDED

City of Nome
AREA NOT INCLUDED

City of Nederland
AREA NOT INCLUDED

City of Port Neches
AREA NOT INCLUDED

City of Port Arthur
AREA NOT INCLUDED

City of Groves
AREA NOT INCLUDED

City of Port Arthur
AREA NOT INCLUDED

City of Port Arthur
AREA NOT INCLUDED

HARDIN COUNTY
JEFFERSON COUNTY

ORANGE COUNTY
JEFFERSON COUNTY

LIBERTY COUNTY
JEFFERSON COUNTY

CHAMBERS COUNTY
JEFFERSON COUNTY

JEFFERSON COUNTY
CAMERON COUNTY

TEXAS
LOUISIANA

THIS AREA OF THE COMMUNITY IS SHOWN AS INSET A ON PANEL 4803850435

THIS AREA OF THE COMMUNITY IS SHOWN AS INSET B ON PANEL 4803850600

*PANEL NOT PRINTED - AREA NOT INCLUDED

MAP REPOSITORY

Jefferson County Courthouse
1149 Pearl Street
Beaumont, Texas 77701
(Maps available for reference only, not for distribution.)

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

JEFFERSON COUNTY, TEXAS
(UNINCORPORATED AREAS)

MAP INDEX

PANELS PRINTED: 20, 40, 65, 100, 110, 120, 125, 130, 140, 145, 155, 160, 165, 170, 190, 225, 235, 240, 245, 250, 255, 260, 265, 270, 280, 285, 290, 295, 305, 310, 315, 320, 330, 355, 360, 375, 380, 385, 400, 425, 430, 440, 475, 500, 525, 550, 600

COMMUNITY-PANEL NUMBER
480385IND0

MAP REVISED:
AUGUST 6, 2002

Federal Emergency Management Agency

JOINS PANEL 315

JOINS PANEL 425

JOINS PANEL 435

JOINS PANEL 440

City of Port Arthur
AREA NOT INCLUDED

ZONE B

SOUTHERN PACIFIC RAILROAD

OUTFALL CANAL

MAIN RAILROAD

Levee

TAYLOR BAYOU

OIL REFINERY

SOUTHERN PACIFIC RAILROAD

West Port Arthur

ZONE A15 (EL 12)

ZONE A15 (EL 11)

ZONE A11 (EL 10)

COASTAL FLOODING EFFECTS FROM GULF OF MEXICO

KANSAS CITY SOUTHERN RAILROAD

Turning Basin

UNNAMED ROAD

PIPELINE

Light

East Basin

West Basin

BIG HILL RESERVOIR

COASTAL FLOODING EFFECTS FROM GULF OF MEXICO /NORTH OF KEITH LAKE

WATERWAY

INTRACOASTAL

LEVEE

RM11

ELEVATION REFERENCE MARKS

REFERENCE MARK	ELEVATION (FT. NGVD)	DESCRIPTION OF LOCATION
RM 11*	4.90	A U.S. Engineering Department disk. About 2.0 miles southeast along State Highway 87 from the Southern Pacific Railroad stations at West Port Arthur, 17 feet northeast of the centerline of the highway, in the top of the northeast end of the northwest concrete abutment of a drawbridge over the Intracoastal Canal, and about 3 feet below the floor of the bridge.

*Located In Area Not Included

KEY TO MAP

1750

500-Year Flood Boundary
100-Year Flood Boundary
Zone Designations*
100-Year Flood Boundary
500-Year Flood Boundary

ZONE B
ZONE A1 / ZONE A5
ZONE B

Base Flood Elevation Line With Elevation In Feet** — 513
Base Flood Elevation in Feet Where Uniform Within Zone** — (EL 987)
Elevation Reference Mark — RM7×
Zone D Boundary
River Mile — •M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:
AUGUST 30, 1977

FLOOD INSURANCE RATE MAP EFFECTIVE:
JUNE 1, 1983

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE
1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

JEFFERSON COUNTY, TEXAS
(UNINCORPORATED AREAS)

PANEL 430 OF 600
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
480385 0430 B

EFFECTIVE DATE:
JUNE 1, 1983

Federal Emergency Management Agency

JOINS PANEL 430

JOINS PANEL 425

JOINS PANEL 445

JOINS PANEL 550



KEY TO MAP

500-Year Flood Boundary	1751
100-Year Flood Boundary	ZONE B
Zone Designations*	ZONE A1 / ZONE A5
100-Year Flood Boundary	ZONE B
500-Year Flood Boundary	
Base Flood Elevation Line With Elevation In Feet**	513
Base Flood Elevation in Feet Where Uniform Within Zone**	(EL 987)
Elevation Reference Mark	RM7X
Zone D Boundary	
River Mile	•M1.5

UNDEVELOPED COASTAL BARRIERS†

Identified 1983 | Identified 1990 | Otherwise Protected Areas

†Coastal barrier areas are normally located within or adjacent to special flood hazard areas.

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The community map repository should be consulted for possible updated flood hazard information prior to use of this map for property purchase or construction purposes.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of special flood hazard (100-year flood) include Zones A, A1-A30, AH, AO, A99, V, and V1-V30.

Certain areas not in the special Flood Hazard Areas may be protected by flood control structures.

For adjoining map panels see separately printed Map Index.

INITIAL IDENTIFICATION:
AUGUST 30 1977

FLOOD HAZARD BOUNDARY MAP REVISION:
NONE

FLOOD INSURANCE RATE MAP EFFECTIVE:
JUNE 1, 1983

FLOOD INSURANCE RATE MAP REVISIONS:
October 1, 1983 - to add undeveloped coastal barriers.
April 2, 1992 - to remove undeveloped coastal barriers and to add otherwise protected areas.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.

APPROXIMATE SCALE
2000 0 2000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

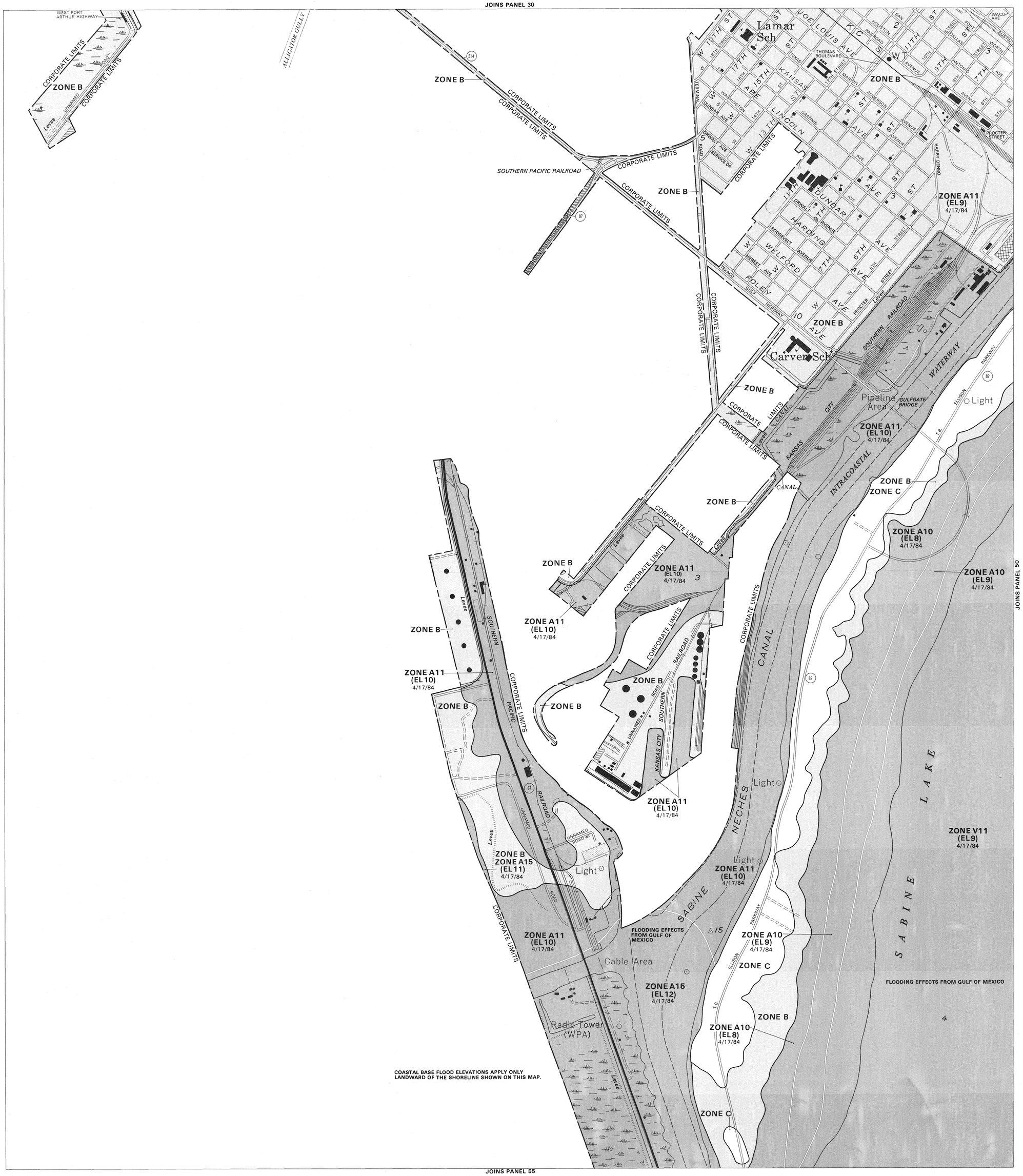
JEFFERSON COUNTY, TEXAS
(UNINCORPORATED AREAS)

PANEL 440 OF 600
SEE MAP INDEX FOR PANELS NOT PRINTED

COMMUNITY-PANEL NUMBER
480385 0440 D
MAP REVISED:
APRIL 2, 1992

Federal Emergency Management Agency

JOINS PANEL 30



JOINS PANEL 50

JOINS PANEL 55

KEY TO MAP

500-Year Flood Boundary	ZONE B
100-Year Flood Boundary	ZONE A1 DATE / ZONE A5 DATE
Zone Designations* With Date of Identification e.g., 12/2/74	
100-Year Flood Boundary	
500-Year Flood Boundary	ZONE B
Base Flood Elevation Line With Elevation In Feet**	513
Base Flood Elevation in Feet Where Uniform Within Zone**	(EL 987)
Elevation Reference Mark	RM7X
Zone D Boundary	
River Mile	•M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

Coastal Base Flood Elevations shown on this map include the effects of wave action.

Coastal Base Flood Elevations apply only landward of the shoreline shown on this map.

INITIAL IDENTIFICATION:
MAY 26, 1970

FLOOD INSURANCE RATE MAP EFFECTIVE:
MAY 26, 1970

FLOOD INSURANCE RATE MAP REVISIONS:
Interim Map revision effective July 1, 1974 to change Zone Designations.

Interim Map revision effective January 3, 1975 by letter.

Map revised October 8, 1976 to reflect Curvilinear Flood Boundary and to add Special Flood Hazard Areas.

Map revised March 20, 1981 to add decrease and increase Base Flood Elevations, to revise Zone Designations, and to revise Special Flood Hazard Areas.

Map revised October 1, 1983 to incorporate approximate boundaries of Coastal Barriers established under the Coastal Barrier Resources Act (PL 97-348).

Map revised April 17, 1984 to change Zone Designations and Base Flood Elevation reflecting wave action effects.

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE
1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
PORT ARTHUR, TEXAS
JEFFERSON COUNTY

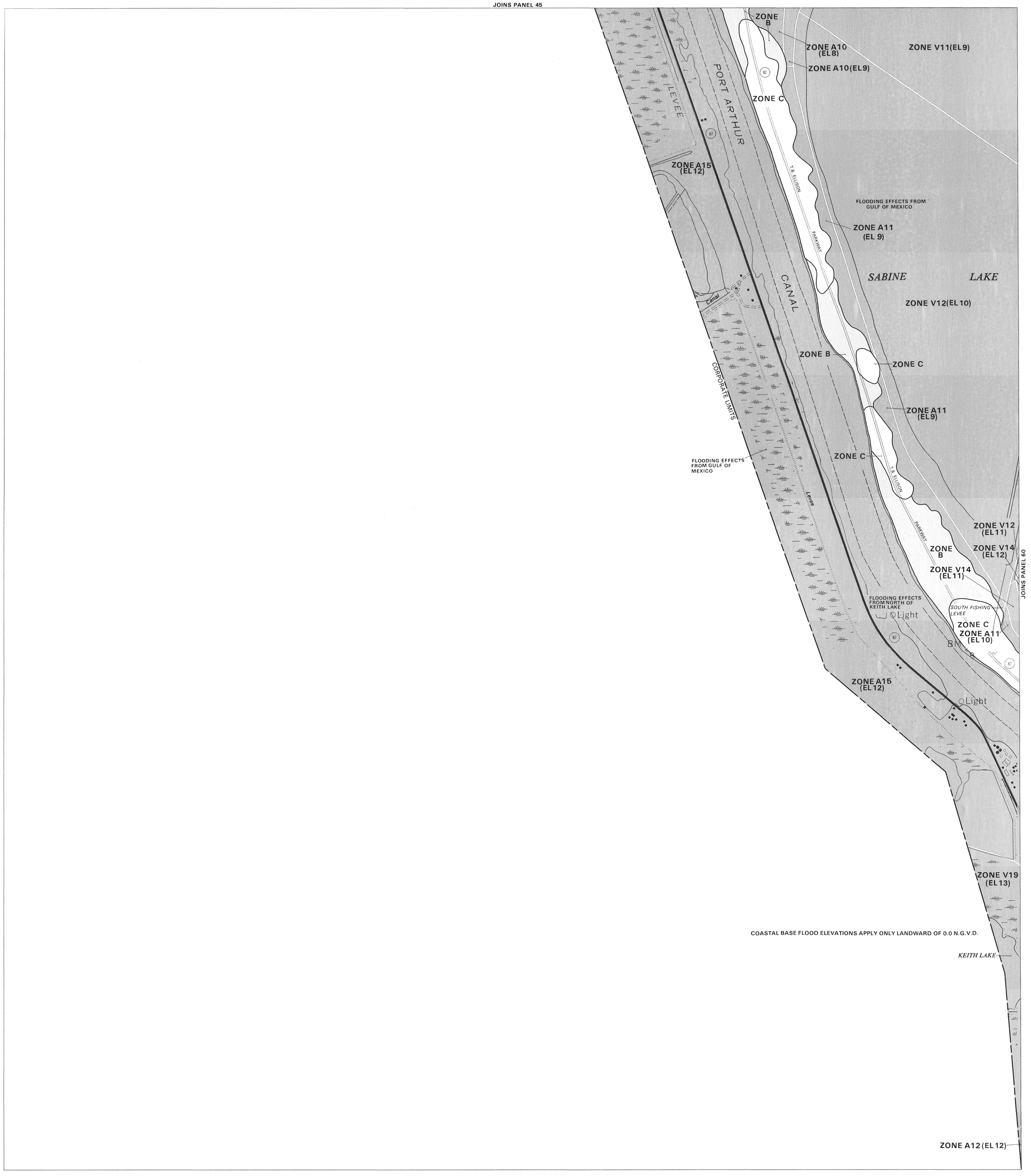
PANEL 45 OF 80

COMMUNITY-PANEL NUMBER
485499 0045 E

MAP REVISED:
APRIL 17, 1984

Federal Emergency Management Agency

JOINS PANEL 45



KEY TO MAP

1753

500-Year Flood Boundary
100-Year Flood Boundary
Zone Designations*
100-Year Flood Boundary
500-Year Flood Boundary
ZONE B
ZONE A1
ZONE A5
ZONE B

Base Flood Elevation Line With Elevation In Feet** — 513

Base Flood Elevation in Feet Where Uniform Within Zone** (EL 987)

Elevation Reference Mark RM7×

Zone D Boundary

River Mile •M1.5

UNDEVELOPED COASTAL BARRIERS†

Identified 1983 | Identified 1990 | Otherwise Protected Areas

†Coastal barrier areas are normally located within or adjacent to special flood hazard areas.

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The community map repository should be consulted for possible updated flood hazard information prior to use of this map for property purchase or construction purposes.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of special flood hazard (100-year flood) include Zones A, A1-A30, AH, AO, A99, V, and V1-V30.

Certain areas not in the special Flood Hazard Areas may be protected by flood control structures.

For adjoining map panels see separately printed Map Index.

INITIAL IDENTIFICATION:
MAY 26, 1970

FLOOD HAZARD BOUNDARY MAP REVISION:
NONE

FLOOD INSURANCE RATE MAP EFFECTIVE:
MAY 26, 1970

FLOOD INSURANCE RATE MAP REVISIONS:

Interim Map revision effective July 1, 1974 to change Zone Designations

Interim Map revision effective January 3, 1975 by letter

Map revised October 8, 1976 to reflect Curvilinear Flood Boundary and to add Special Flood Hazard Areas

Map revised March 20, 1981 to add, decrease and increase Base Flood Elevations, to revise Zone Designations, and to revise Special Flood Hazard Areas

Map revised October 1, 1983 to incorporate approximate boundaries of Coastal Barriers established under the Coastal Barrier Resources Act (PL97-348)

Map revised April 17, 1984 to change Zone Designations and Base Flood Elevations reflecting wave action effects

May 4, 1992 - to remove undeveloped coastal barriers and to add otherwise protected areas

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.

APPROXIMATE SCALE
1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
PORT ARTHUR,
TEXAS
JEFFERSON COUNTY

PANEL 55 OF 80
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
485499 0055 F

MAP REVISED:
MAY 4, 1992

Federal Emergency Management Agency



MAP DATES

This FIRM Index displays the map date for each FIRM panel at the time that this Index was printed. Because this Index may not be distributed to unaffected communities in subsequent revisions, users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center (MSC) website at http://msc.fema.gov, or by calling the FEMA Map Information eXchange (FMIX) at 1-877-336-2627.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index.These may be ordered directly from the Map Service Center at the number listed above.

MAP REPOSITORIES

(Maps available for reference only, not for distribution.)

BEAUMONT, CITY OF:
Planning and Community Development
801 Main Street, Suite 201
Beaumont, Texas 77701

BEVIL OAKS, CITY OF:
Bevil Oaks City Hall
7525 Sweetgum Road
Beaumont, Texas 77713

CHINA, CITY OF:
City Hall
717 North Broadway
China, Texas 77613

GROVES, CITY OF:
Public Works Building
4925 McKinley
Groves, Texas 77619

JEFFERSON COUNTY
(UNINCORPORATED AREAS):
Jefferson County Courthouse
1149 Pearl Street, 5th Floor
Beaumont, Texas 77701

NEDERLAND, CITY OF:
Inspections Department
1903 Atlanta Avenue
Nederland, Texas 77627

NOME, CITY OF:
City Hall
1586 2nd Street
Nome, Texas 77629

PORT ARTHUR, CITY OF:
Planning and Zoning Department
444 4th Street, 3rd Floor
Port Arthur, Texas 77640

PORT NECHES, CITY OF:
Public Works Department
1005 Merriman Street
Port Neches, Texas 77651

TAYLOR LANDING, CITY OF:
Taylor Landing Building Permits Department
324 North Memorial Freeway
Nederland, Texas 77627

NOTE TO USER

Future revisions to this FIRM Index will only be issued to communities that are located on FIRM panels being revised. This FIRM Index therefore remains valid for FIRM panels dated or earlier. Please refer to the "MOST RECENT FIRM PANEL DATE" column in the Listing of Communities table to determine the most recent FIRM Index date for each community.

BASE MAP SOURCE

Base map information for this study was provided by Jefferson County Appraisal District (JCAD). This data was created in State Plane NAD 83 coordinates, U.S. Survey Feet and was produced at scales 1:2,200 (1"=100'); 1:4,800 (1"400'). Aerial photography of the area was captured in 2006.

ELEVATION DATUM

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282
(301) 713-3242

FIRM Panel Dates for Printed Panels of Jefferson County, Texas (And Incorporated Areas)					
Panel	Effective Date	Panel	Effective Date	Panel	Effective Date
48245C0025G		48245C0170G		48245C0245G	
48245C0040G		48245C0200G		48245C0450G	
48245C0045G		48245C0250G		48245C0455G	
48245C0050G		48245C0275G		48245C0460G	
48245C0075G		48245C0300G		48245C0475G	
48245C0100G		48245C0305G		48245C0500G	
48245C0125G		48245C0310G		48245C0525G	
48245C0130G		48245C0325G		48245C0550G	
48245C0135G		48245C0330G		48245C0575G	
48245C0140G		48245C0335G		48245C0600G	
48245C0145G		48245C0340G		48245C0625G	
48245C0155G		48245C0345G		48245C0650G	
48245C0160G		48245C0375G		48245C0675G	
48245C0165G		48245C4005G			

- NOTE-

Designated coastal barriers are located on panels 0450, 0525, 0550, 0575, 0600, 0625, 0650, and 0675

N

LISTING OF COMMUNITIES

COMMUNITY NAME	COMMUNITY NUMBER	LOCATED ON PANEL(S)	INITIAL NFIP MAP DATE	INITIAL FIRM DATE	MOST RECENT FIRM PANEL DATE
BEAUMONT, CITY OF	485457	0040, 0045, 0050, 0075, 0130, 0135, 0140, 0145, 0155, 0165, 0170, 0300, 0305, 0310	SEPTEMBER 2, 1970	AUGUST 6, 2002	
BEVIL OAKS, CITY OF	480878	0025	MAY 13, 1977	SEPTEMBER 4, 1987	
*CHINA, CITY OF	481298	0125	AUGUST 6, 2002	AUGUST 6, 2002	
*GROVES, CITY OF	485475	0330, 0335, 0345	MARCH 26, 1970	JANUARY 6, 1983	
JEFFERSON COUNTY	480385	0025, 0040, 0045, 0075, 0100, 0125, 0130, 0140, 0145, 0155, 0160, 0165, 0170, 0200, 0250, 0275, 0300, 0305, 0310, 0325, 0330, 0335, 0340, 0345, 0375, 0400, 0425, 0450, 0455, 0475, 0500, 0525, 0550, 0575, 0600, 0625, 0650, 0675	AUGUST 30, 1977	JUNE 1, 1983	
NEDERLAND, CITY OF	485492	0310, 0330	NOVEMBER 17, 1970	JUNE 3, 1991	
NOME, CITY OF	481297	0100	JULY 12, 1977	FEBRUARY 2, 1983	
PORT ARTHUR, CITY OF	485499	0310, 0325, 0330, 0335, 0340, 0345, 0375, 0450, 0455, 0460, 0475, 0500, 0600, 0625	MAY 26, 1970	MAY 26, 1970	
PORT NECHES, CITY OF	485500	0200, 0330, 0335	NOVEMBER 17, 1970	JANUARY 6, 1983	
TAYLOR LANDING, CITY OF	481698	0300, 0425, 0450	NOVEMBER 14, 2008	AUGUST 6, 2002	

*NO SPECIAL FLOOD HAZARD AREAS IDENTIFIED

NFIP NATIONAL FLOOD INSURANCE PROGRAM

MAP INDEX

FIRM

FLOOD INSURANCE RATE MAP

JEFFERSON COUNTY, TEXAS AND INCORPORATED AREAS

MAP INDEX

PANELS PRINTED: 25, 40, 45, 50, 75, 100, 125, 130, 135, 140, 145, 155, 160, 165, 170, 200, 250, 275, 300, 305, 310, 325, 330, 335, 340, 345, 375, 400, 425, 450, 455, 460, 475, 500, 525, 550, 575, 600, 625, 675

REVISED PRELIMINARY DECEMBER 11, 2015

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
48245CIND0A

EFFECTIVE DATE

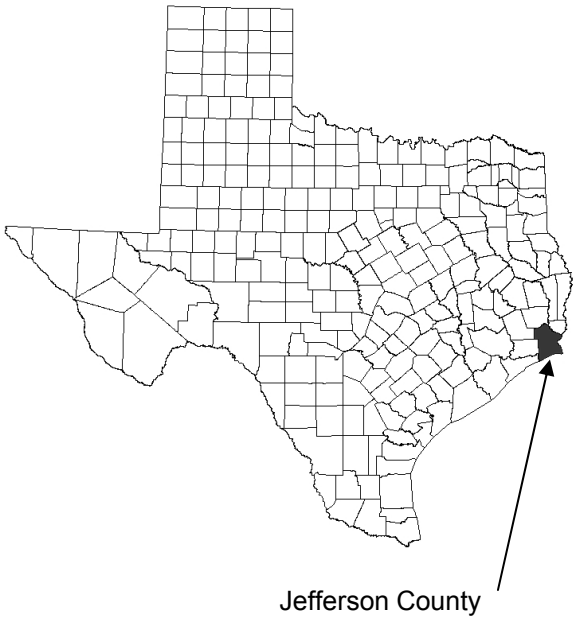
Federal Emergency Management Agency

FLOOD INSURANCE STUDY



JEFFERSON COUNTY, TEXAS
AND INCORPORATED AREAS

Community Name	Community Number
Beaumont, City of	485457
Bevil Oaks, City of	480878
China, City of	481298
Groves, City of	485475
Jefferson County Unincorporated Areas	480385
Nederland, City of	485492
Nome, City of	481297
Port Arthur, City of	485499
Port Neches, City of	485500
Taylor Landing, City of	481698



Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
48245CV000A

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study may not contain all data available within the repository. It is advisable to contact the community repository for any additional data.

Selected Flood Insurance Rate Map panels for the community contain information that was previously shown separately on the corresponding Flood Boundary and Floodway Map panels (e.g., floodways, cross sections). In addition, former flood hazard zone designations have been changed as follows:

Old Zone	New Zone
A1 through A30	AE
V1 through V30	VE
B	X
C	X

This preliminary revised Flood Insurance Study contains profiles presented at a reduced scale to minimize reproduction costs. All profiles will be included and printed at full scale in the final published report.

Part or all of this Flood Insurance Study may be revised and republished at any time. In addition, part of this Flood Insurance Study may be revised by the Letter of Map Revision process, which does not involve republication or redistribution of the Flood Insurance Study. It is, therefore, the responsibility of the user to consult with community officials and to check the community repository to obtain the most current Flood Insurance Study components.

Initial Countywide FIS Effective Date:

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Channel to Janes Gully	Panel 09P
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Ditch 505	Panels 12P-13P
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Green Pond Gully (Ditch 607)	Panels 15P-17P
Hillebrandt Bayou/Hillebrandt Bayou (Caldwood Cut-Off)	Panels 18P-20P
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Janes Gully	Panel 22P
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Kidd Gully	Panel 26P
Mayhaw Bayou	Panels 27P-29P
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Neches River	Panels 31P-32P
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Quinn Ditch	Panel 35P
Rhodair Gully	Panels 36P-38P
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Walker Branch	Panels 44P-45P
Walker Branch Relief Ditch	Panel 46P

EXHIBIT 1 – FLOOD PROFILES (Continued)

Walker Branch Tributary	Panels 47P-48P
Willow Marsh Bayou	Panels 49P-52P

EXHIBIT 2 – 0.2-PERCENT-ANNUAL-CHANCE WAVE ENVELOPES

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Transect 2	Panel 02P
Transect 3	Panel 03P
Transect 4	Panel 04P
Transect 5	Panels 05P-06P
Transect 6	Panels 07P-08P
Transect 7	Panels 09P-10P
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Transect 9	Panels 13P-14P
Transect 10	Panels 15P-16P
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Transect 11	Panels 17P-18P
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Transect 18	Panel 29P
Transect 19	Panel 30P
Transect 20	Panel 31P
Transect 21	Panel 32P
Transect 22	Panel 33P
Transect 23	Panel 34P
Transect 24	Panel 35P
Transect 25	Panel 36P
Transect 26	Panel 37P
Transect 27	Panel 38P
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Transect 32	Panels 46P-47P
Transect 33	Panel 48P
Transect 34	Panel 49P
Transect 35	Panel 50P
Transect 36	Panel 51P
Transect 37	Panel 52P
Transect 38	Panel 53P

EXHIBIT 2 – 0.2-PERCENT-ANNUAL-CHANCE WAVE ENVELOPES (Continued)

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Transect 45	Panel 63P
Transect 46	Panel 64P
Transect 47	Panel 65P
Transect 48	Panel 66P
Transect 49	Panel 67P
Transect 50	Panel 68P
Transect 51	Panel 69P
Transect 52	Panel 70P
Transect 53	Panel 71P
Transect 54	Panel 72P
Transect 55	Panel 73P
Transect 56	Panel 74P
Transect 57	Panel 75P
Transect 58	Panel 76P
Transect 59	Panel 77P
Transect 60	Panel 78P

EXHIBIT 3 - Flood Insurance Rate Map Index
Flood Insurance Rate Maps

FLOOD INSURANCE STUDY
JEFFERSON COUNTY, TEXAS AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study (FIS) revises and updates information on the existence and severity of flood hazards in the geographic area of Jefferson County, including the Cities of Beaumont, Bevil Oaks, China, Groves, Nederland, Nome, Port Arthur, Port Neches, Taylor Landing; and the unincorporated areas of Jefferson County (referred to collectively herein as Jefferson County), and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study has developed flood-risk data for various areas of the community that will be used to establish actuarial flood insurance rates and to assist the community in its efforts to promote sound floodplain management. Minimum floodplain management requirements for participation in the National Flood Insurance Program (NFIP) are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

In some States or communities, floodplain management criteria or regulations may exist that are more restrictive or comprehensive than the minimum Federal requirements. In such cases, the more restrictive criteria take precedence, and the State (or other jurisdictional agency) will be able to explain them.

1.2 Authority and Acknowledgments

The sources of authority for this FIS report are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

This FIS was prepared to include the unincorporated areas of, and incorporated communities within, Jefferson County in a countywide format. Information on the authority and acknowledgments for each jurisdiction included in this countywide FIS, as compiled from their previously printed FIS reports, is shown below:

Beaumont, City of	The hydrologic and hydraulic analyses for the City of Beaumont were performed by Tetra Tech, Inc., for the Federal Emergency Management Agency (FEMA), under Contract No. H-4788. This study was completed in July 1980 (Reference 1). Hydrologic and hydraulic analyses of Walker Branch and Walker Branch Tributary performed by Bernard Johnson Inc., during the preparation of the Flood Insurance Study for the City of Beaumont under the direction of FEMA, were revised by Dewberry and Davis in December 1982 (Reference 2). Hydrologic and hydraulic analyses for the City of Beaumont (Hillebrandt Bayou watershed) were revised in August 1998. That revision was prepared by Turner Collie and Braden, Inc., for FEMA under Contract No. EMT-97-CO-0034 (Reference 1).

Bevil Oaks, City of	The hydrologic and hydraulic analyses for the City of Bevil Oaks were performed by Tetra Tech, Inc., for FEMA, under Contract No. H-4788. This study was completed in June 1980 (Reference 3). Hydrologic and hydraulic analyses for the City of Bevil Oaks were revised in September 1987. That revision was prepared by the Galveston District of the U.S. Army Corps of Engineers (USACE) during the preparation of a feasibility study for the Pine Island Bayou watershed (Reference 3).
Groves, City of	The hydrologic and hydraulic analyses for the City of Groves were performed by Tetra Tech, Inc., for FEMA, under Contract No. H-4788. This study was completed in June 1980 (Reference 4).
Jefferson County, Unincorporated Areas	The hydrologic and hydraulic analyses for Jefferson County Unincorporated Areas were performed by Tetra Tech, Inc., for FEMA, under Contract No. H-4788. This study was completed in July 1980 (Reference 2). Hydrologic and hydraulic analyses for Jefferson County Unincorporated Areas (Hillebrandt Bayou, Taylor Bayou and Pine Island Bayou watersheds) were revised in August 1998. That revision was prepared by Turner Collie and Braden, Inc., for FEMA under Contract No. EMT-97-CO-0034 (Reference 2).
Nome, City of	The hydrologic and hydraulic analyses for the City of Nome were performed by Tetra Tech, Inc., for FEMA, under Contract No. H-4788. This study was completed in August 1981 (Reference 5).
Port Arthur, City of	The hydrologic and hydraulic analyses for the City of Port Arthur were performed by Tetra Tech, Inc., for FEMA, under Contract No. H-4788. This study was completed in June 1980 (Reference 6).
Port Neches, City of	The hydrologic and hydraulic analyses for the City of Port Neches were performed by Tetra Tech, Inc., for FEMA, under Contract No. H-4788. This study was completed in June 1980 (Reference 7).

There was no effective FIS found for the City of Nederland. The Cities of China and Taylor Landing were previously part of the unincorporated areas of Jefferson County, so study information for these communities is as applies from the FIS performed for the unincorporated areas.

For this revision, redelineation of Special Flood Hazard Areas (SFHAs) was performed by Comprehensive Flood Risk Resources and Response Joint Venture (CF3R), for FEMA under contract number EMT-2002-CO-0049. This work was completed in December 2011.

The coordinate system used for the production of this FIRM is North American Datum (NAD) 83, Texas State Plane South Central, FIPS 4204. Differences in the datum and spheroid used in the production of FIRMs for adjacent counties may result in slight positional differences in map features at the county boundaries. These differences do not affect the accuracy of information shown on the FIRM.

1.3 Coordination

The initial Consultation Coordination Officer (CCO) meeting is attended by representatives of FEMA, the communities, and the study contractor for purposes of discussing and acquiring information related to the study.

The results of the study are reviewed at the final CCO meeting, which is attended by representatives of FEMA, the communities and the study contractor.

TABLE 1 – HISTORIC CONSULTATION COORDINATION OFFICER MEETINGS

Community Name	Initial CCO Date	Final CCO Date
Beaumont, City of	**	January 25, 1982
	February 19, 1997	**
Bevil Oaks, City of	**	September, 4, 1986
China, City of	*	*
Groves, City of	**	January 28, 1982
Jefferson County, Unincorporated Areas	**	June 7, 1982
	February 19, 1997	**
Nederland, City of	*	*
Nome, City of	**	March 2, 1982
Port Arthur, City of	**	March 17, 1982
Port Neches, City of	**	January 25, 1982
Taylor Landing, City of	**	January 25, 1982
	February 19,1997	**

* No previous meeting held
** The date for the CCO meeting was not available.

For this first time countywide revision, an initial CCO meeting was held on May 29, 2007, and was attended by representatives of FEMA, CF3R and the community.

The results of this study were reviewed at the final CCO meeting held on _____and attended by representatives of _____. All problems raised at that meeting have been addressed in this study.

2.0 AREA STUDIED

2.1 Scope of Study

This FIS report covers the geographic area of Jefferson County, Texas, including the incorporated communities listed in Section 1.1.

The areas studied by detailed methods were selected with priority given to all known flood hazards and areas of projected development or proposed construction.

The following streams, or portions of the following streams, were studied by detailed methods:

TABLE 2 – DETAILED STUDY STREAMS

Flooding Source	Limits of Detailed Study
Amelia Cut-Off	From the confluence with Willow Marsh Bayou approximately 2,240 feet downstream of Brooks Road to the confluence with Janes Gully approximately 1,528 feet upstream of Washington Boulevard
Bayou Din	From the confluence with Hillebrandt Bayou approximately 12,197 feet downstream of La Belle Road to approximately 6,593 feet upstream of Boyt Road
Bayou Din Tributary	From the confluence with Bayou Din to just downstream of Koelemay Drive
Channel Connector	From the confluence with Janes Gully to the confluence with Channel to Janes Gully
Channel to Janes Gully	From the confluence with Janes Gully to just upstream of McLean Street
Cotton Creek	From just upstream of State Highway 326 to just downstream of Southern Pacific Railroad
Ditch 505	From approximately 4,122 feet downstream of State Highway 124 to approximately 4,767 feet upstream of Clubb Road
Ditch 505 Tributary	From the confluence with Ditch 505 to approximately 2,124 feet upstream of Clubb Road
Green Pond Gully (Ditch 607)	From just downstream of South Pine Island Road to just upstream of Galler Road
Hillebrandt Bayou	From the confluence with Taylor Bayou to approximately 4,700 feet downstream of State Highway 124
Hillebrandt Bayou (Caldwood Cut-Off)	From approximately 4,700 feet downstream of State Highway 124 to approximately 2,270 feet upstream of Folsom Road

Flooding Source	Limits of Detailed Study
Hillebrandt Oxbow	From the confluence with Hillebrandt Bayou to approximately 1,396 feet upstream of Sparrow Way
Janes Gully	From the confluence with Hillebrandt Bayou to just downstream of McLean Street
Janes Gully Diversion	From the confluence with Janes Gully to the confluence with Janes Gully
Keith Ditch	From the confluence with Hillebrandt Bayou to just downstream of Delaware Extension Street
Kidd Gully	From the confluence with Bayou Din to just downstream of Kidd Road
Mayhaw Bayou	From just downstream of State Highway 73 to approximately 1200 ft upstream of Interstate Highway 10
Mayhaw Bayou Tributary	From the confluence with Mayhaw Bayou to the corporate limits of Jefferson County
Neches River	From the mouth at the Gulf of Mexico to the confluence with Pine Island Bayou
Pine Island Bayou	From the confluence with Neches River to the corporate limits of the City of Bevil Oaks
Quinn Ditch	From the confluence with Pine Island Bayou to approximately 450 feet upstream of Tram Road
Rhodair Gully	From the confluence with Taylor Bayou to U.S. Highway 69
South Fork Taylor Bayou	From the confluence with Taylor Bayou to just upstream of Interstate Highway 10
Taylor Bayou/North Fork Taylor Bayou	From the confluence with Intracoastal Waterway to just upstream of Boondocks Road
Walker Branch	From the confluence with Pine Island Bayou to B1 Canal
Walker Branch Relief Ditch	From the confluence with Walker Branch to the confluence with Walker Branch Tributary
Walker Branch Tributary	From the confluence with Walker Branch to approximately 1,107 feet upstream of Spurlock Road
Willow Marsh Bayou	From the confluence with Hillebrandt Bayou to U. S. Highway 90 and Southern Pacific Railroad

For this countywide study, all detailed study streams were re-delineated.

This countywide FIS also incorporates the determination of letters issued by FEMA resulting in map changes (Letter of Map Revision [LOMR], Letter of Map Revision – based on Fill [LOMR-F], and Letter of Map Amendment [LOMA]) as shown in Table 3, "Letters of Map Change."

TABLE 3 – LETTERS OF MAP CHANGE

Community Name	LOMC Type	Case Number	Effective Date	Project Identifier	New Panel No.	New Zone
Beaumont, City of	LOMR	02-06-2312P	11/19/2003	Keith Ditch – from approximately 100 feet downstream of Dowlen Road to approximately 1,320 feet upstream of Major Drive	0130 0135	AE
Beaumont, City of	LOMR	09-06-2516P	10/15/2010	Janes Gully Watershed	0130 0135 0140 0145	AE
Jefferson County, Unincorporated Areas	LOMR	10-06-1909P	11/4/2011	Walker Branch and Walker Branch Relief Ditch	0040	AE

Approximate analyses were used to study those areas having a low development potential or minimal flood hazards. The scope and methods of study were proposed to, and agreed upon, by FEMA and Jefferson County.

The following streams were studied by approximate analyses: Alligator Gully, Atlantic Canal, Aubey Gully, B1 Canal, Barnes Slough, Big Hill Bayou, Big Hill Reservoir, Blind Bayou, Block Bayou, Brakes Bayou, Burrell Gully, Byrd Gully, Coffee Bean Slough, Crane Bayou, Derring Gully, Devers East Canal, Fish Box Gully, Gallier Canal, Garner Canal, Grays Bayou, Ground Bridge Gully, Intracoastal Waterway, Jefferson Canal, Johns Gully, Lawson Canal, Left Prong Molasses Bayou, Lower Neches Valley Authority Canal, Main "B" Canal, Main "C" Canal, Main Outfall Canal, Molasses Bayou, Mud Bayou, North Fork Taylor Bayou, Pevitot Gully, Port Arthur Canal, Port Authority Fresh Water Canal, Red Haw Gully, Right Prong Molasses Bayou, Sabine Neches Canal, Sabine Pass, Salt Bayou, Salt Bayou (Fivemile Cut), Salt Bayou (Tenmile Cut), Spindletop Bayou, Spindletop Ditch, Taylor Bayou Outfall Canal, Texas Bayou, Tiger Bayou, Uncle Charlie Slough, Union Canal, West Crane Bayou, Willie Slough Gully, Willow Creek, and Willow Slough.

2011 Coastal Study:

The coastal wave height analysis for this countywide study was prepared by CF3R. This new analysis resulted in revisions to the FIRM for the City of Beaumont, City of Groves, City of Port Arthur, City of Port Neches, City of Taylor Landing and Jefferson County, Unincorporated Areas.

2.2 Community Description

Jefferson County is approximately 937 square miles in area and is located in the southeast region of Texas. The City of Beaumont is the county seat. Jefferson County is bordered by Hardin County to the north, Orange County to the northeast, Cameron Parish (Louisiana) to the southeast, Chambers County to the southwest, the Gulf of Mexico to the south and Liberty County to the northwest. In 2010, Jefferson County's population was estimated at 252,273 (Reference 8). The county has an agricultural and petrochemical economy (Reference 9).

The elevations of Jefferson County range from sea level along the Gulf Coast to approximately 50 feet above sea level, North American Vertical Datum of 1988 (NAVD88) in the northwestern part of the county. Natural drainage is generally poor – the streams are generally just above sea level and have sluggish flow through shallow meandering channels.

The county is comprised mainly of grassy plains, with a dense forest belt crossing the northwestern part of the county. The southern portion of the county consists of marshy saltgrass terrain good for cattle raising, the central part of the county is coastal prairie used for grazing and rice culture, and the northern part of the county is heavily forested with hardwoods and southern yellow pine. Beach sands and ocean sediments make up soils along the coast. The northern border is surfaced by light-colored, loamy soils over deep, reddish clayey or loamy subsoils with hardened calcium deposits, and the remainder of the county has light to dark loamy surfaces over clayey subsoils or gray to black, clayey soils. Geologically, the county is noted for its Beaumont Clay formation and the Spindletop and Big Hill salt domes, which contain sulfur and petroleum. The mean annual temperature is 69° F, and the average annual rainfall is fifty-three inches. The subtropical, humid climate features warm, moist summers tempered by Gulf breezes (Reference 9).

The County naturally drains north to south; Bayou Din and its tributaries, Cotton Creek, Hillebrandt Bayou with its tributaries, Kidd Gully, Mayhaw Bayou, Neches River, Pine Island Bayou and its tributaries, Rhodair Gully, Taylor Bayou and its tributaries, Walker Branch and Walker Branch Tributary, and Willow Marsh Bayou are the largest streams. Sabine Lake is the County's largest body of water, with an approximate 24 square mile area within Jefferson County.

2.3 Principal Flood Problems

Flooding in Jefferson County results primarily from stream overflow caused by rainfall-runoff, ponding and sheet flow, and from tidal surges and associated waves caused by hurricanes and tropical storms in the coastal areas of the county. Because of the flatness of the terrain, many inland areas are susceptible to shallow flooding during heavy rainfall events. According to Drainage District #6 (DD6) rainfall gage data, during a storm event from October 17 and 18, 1994, rainfall depths reached as much as 12.1 inches in the Hillebrandt Bayou watershed, 14.6 inches in the Taylor Bayou watershed, and 19.5 inches in the Pine Island Bayou watershed in a 48-hour period.

During another storm event on September 27, 1996, rainfall depths reached as high as 10.6 inches in the Hillebrandt Bayou watershed, 7.6 inches in the Taylor Bayou watershed and 4.8 inches in the Pine Island Bayou watershed in a 24-hour period (Reference 10).

Not all coastal storms that pass close to the study area produce extremely high tides. Similarly, storms that produce extreme conditions in one area may not necessarily produce critical conditions in other locations. The Neches River and Taylor Bayou are broad estuaries and, under certain conditions, tides generated at their mouths in Sabine Lake can intrude far upstream. The rainfall which usually accompanies hurricanes can aggravate the tidal flood situation.

Coastal storms passing Texas in the vicinity of Jefferson County have produced severe floods as well as structural damage. Tropical storms and hurricanes recorded as impacting this area, and reaching as far back as 1886 have caused severe inundation that extended several miles inland, highlighting that the Sabine Pass and Port Arthur areas are most vulnerable to storm surge. Hurricane Carla, which occurred from September 9 to 12, 1961, caused some of the most severe damages recorded. Hurricane Carla inundated 40 percent of the county's total land area and caused $30.6 million in damages.

More recently, Hurricanes Rita (2005), Ike and Gustav (2008) caused some damage because of storm surge, but caused much more structural damage due to high wind speeds.

2.4 Flood Protection Measures

The Hurricane Flood Protection Project in the northern part of Port Arthur protects areas from hurricane surges up to 14 feet above Mean Sea Level (MSL). Incorporated into the system are other areas which lie in the county. The system consists of more than 29 miles of earthen levee and 7 miles of floodwall with top elevation varying from 14 to 19 feet. The ability of the system to withstand a 1-percent-annual chance flood event is currently being evaluated by FEMA (Reference 11). There are gated gravity drainage structures that convey normal drainage from behind the flood protection system at various locations. In addition, five pumping plants provide interior drainage when gated drainage structures are closed during periods of high lake stage and high runoff. There have been modifications to the spoil banks along Sabine Lake, as well as Taylor Bayou and the Gulf Intracoastal Waterway to provide additional protection measures to the area (Reference 2).

Non-structural flood protection measures include ordinances which place controls on the construction and types of activities permissible in floodplains.

In 2005, FEMA funded $1.35 million to the State of Texas to fund flood protection measures in Jefferson County. The project will remove 48 repetitively flooded homes from the 1-percent-annual-chance floodplain and will protect more than 2,000 homes. The project, known as the Caldwood Cut-Off and Hillebrandt Bayou Flood Mitigation Project, includes the construction of two detention basins and a collector channel. The project will also increase flood carrying capacity by widening the Caldwood Cut-Off and raising a bridge. Jefferson County Drainage District No. 6 is the project sponsor (Reference 12).

3.0 ENGINEERING METHODS

For the flooding sources studied by detailed methods in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that is expected to be equaled or exceeded once on the average during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10-, 2-, 1-, and 0.2-percent chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long-term, average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 1-percent-annual-chance in any 50-year period is approximately 40 percent (4 in 10); for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish peak discharge-frequency relationships for each flooding source studied by detailed methods affecting the community.

Pre-Countywide

Flood magnitude and frequency for areas subject to runoff flooding in Rhodair Gully were estimated using the USACE's HEC-1 Flood Hydrograph Package (Reference 13). Regionalized unit hydrography and rainfall loss rate parameters were developed by hydrograph reconstitution studies using 30 storms in 6 gaged basins. The transposition of the HEC-1 model parameters from gaged to ungaged basins was based on hydrologic similarity as assessed from soil maps (Reference 14), USGS topographic maps (Reference 15), aerial photos (Reference 16) and field reconnaissance. Urbanized watersheds were studied using methodology developed by Beard (References 17 and 18). Rainfall data were developed from hourly rainfall records from the National Climatic Center (Reference 19) and from TP-40 (Reference 20). The resulting "synthetic" storms used to generate peak discharges of selected frequency have depth-area-duration characteristics consistent with the Texas Gulf Coast Area.

The Lakeside, Port Acres and Crane Bayou watersheds lie within the Hurricane Protection System. During storms, the pumping stations within the watersheds are unable to divert water adequately, and a ponding condition occurs at that time. The ponding elevations in these areas were adopted from the USACE report (Reference 21).

The hydrologic analysis for Pine Island Bayou was obtained from the USACE feasibility report on the Pine Island Bayou watershed (Reference 22). In that study, the Pine Island Bayou watershed was modeled using the generalized storm network computation capability of the HEC-1 computer program (Reference 13). The watershed was divided into sub-basin areas and routing reaches. Snyder's unit hydrograph coefficients were selected based on the results of storm studies completed in June 1973 and June 1975.

Flood magnitude and related frequencies for areas subject to flooding from Cotton Creek, Janes Gully, Hillebrandt Bayou, Hillebrandt Oxbow, Walker Branch, Walker Branch

Tributary, Neches River, Keith Ditch and Amelia Cut-Off were estimated using the USACE HEC-1 Flood Hydrograph Package (Reference 13). Regionalized unit hydrograph and rainfall loss rate parameters were developed by hydrograph reconstitution studies using thirty storms in six gaged basins. The transportation of the HEC-1 model parameters from gaged to ungaged basin is based on hydrologic similarity as assessed from soil maps (Reference 14), USGS topographic maps (Reference 15), aerial photos (Reference 16) and field reconnaissance. Urbanized watersheds were studied using a methodology developed by Beard (References 17 and 18). Rainfall data were developed from hourly rainfall records from the National Climatic Center (Reference 19) and from TP-40 (Reference 20). The resulting "synthetic" storms used to generate peak discharges of selected frequency have depth-area-duration characteristics consistent with the Texas Gulf Coast area.

The determination of inundation from the Neches River caused by passage of a hurricane was approached by the Joint Probability Method (Reference 23). The storm population was described by probability distributions of 5 parameters that influence surge heights. These were (1) central pressure depression (which measures the intensity of the storm), (2) radius to maximum winds, (3) forward speed of the storm, (4) shoreline crossing point and (5) crossing angle. These characteristics were described statistically based on any analysis of observed storms in the vicinity of Jefferson County. Primary sources of data were the National Weather Service (References 24 to 26); the National Hurricane Research Project (Reference 27); and the Monthly Weather Review (Reference 28). The determination of maximum wave crest elevations associated with the 10- and 1-percent-annual chance events was approached by the method recommended by the National Academy of Sciences (Reference 29).

The updated flood frequency-discharge values for Walker Branch and Walker Branch Tributary within the unincorporated areas of Jefferson County were determined using the USACE HEC-1 Flood Hydrograph Package (Reference 13).

Hydrologic analyses were performed to determine peak discharges, total runoff volumes, and time distributions of flood hydrographs for floods of the selected recurrence intervals for each flooding source studied in detail within the Hillebrandt Bayou, Taylor Bayou and Pine Island Bayou watersheds affecting Jefferson County unincorporated areas and the City of Beaumont. The USACE HEC-1 Flood Hydrograph Package was used for these analyses (Reference 30).

For the 2002 revision to unincorporated areas of Jefferson County, ARCVIEW GIS software was used to overlay all of the information related to hydrology and to generate digital work maps. ARCVIEW coverages that were either developed for that project or incorporated to assist in the hydrologic analysis included the county boundary, planimetric base map data, drainage areas, digital USGS Quad maps with 5-foot contours, USGS Land Use/Land Cover (LULC), Digital Orthophotgraphic Quarter Quads (DOQQs), HEC-1 routing reaches and analysis points, locations of detention ponds and pertinent rainfall and stream gages, DFIRMs and elevation reference marks (ERMs) (Reference 2).

Drainage areas were delineated using watershed maps from previous studies (References 31 and 32) and digital USGS topographic maps (Reference 33), and then digitized using ARCVIEW GIS software. Land use was obtained from USGS LULC GIS coverages (Reference 34) and verified/updated using DOQQs from the USGS, dated February 2, 1989 (Reference 35).

Runoff volumes and time distributions were determined using the Soil Conservation Service (SCS) "Curve Number" (CN) technique (Reference 36). CNs were developed using LULC data and soil maps from the Natural Resources Conservation Service Jefferson County, Texas, Soil Survey (References 34 and 14). A CN value of 100 was used for water features, and a CN of 95 for wetlands.

Rainfall frequency data were obtained from the U.S. Weather Bureau Technical Paper No. 40 (TP-40) and Hydro-35 (References 20 and 37). The 0.2-percent-annual-chance point rainfall was extrapolated using log-probability paper. Area correction was applied to the point rainfall to take into account larger drainage areas according to the area-depth relationship developed in TP-40.

The Clark Unit Hydrograph method was used; parameters were developed using criteria from local drainage studies (References 31 and 38) and for models obtained from the local community that had been calibrated against historical storms.

The Modified Puls routing method was used for study stream reaches; Muskingum routing was used for non-study stream reaches within the watershed models.

Gage data in the study watersheds was very limited. DD6 had a growing system of gages, but a short period of record. Historical storms were run on the hydrologic models for Taylor Bayou, Quinn Ditch and Hillebrandt Bayou. For each of these watersheds, it was only possible to check the water-surface elevations versus gage heights at one location in the watershed. The computed hydrograph for Quinn Ditch matched closely with the gage data. For Taylor Bayou, the computed water-surface elevation, which was interpolated using a downstream rating curve, matched closely with measured gage heights.

Countywide

Peak discharge-drainage area relationships for the selected recurrence intervals developed in pre-countywide studies are shown in Table 4, "Summary of Discharges". There were no new hydrologic analyses performed for riverine flooding sources for this study.

TABLE 4 – SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs) 10-PERCENT-ANNUAL-CHANCE	2-PERCENT-ANNUAL-CHANCE	1-PERCENT-ANNUAL-CHANCE	0.2-PERCENT-ANNUAL-CHANCE
Amelia Cut-Off					
At confluence with Willow Marsh Bayou	5.2	2,808	3,207	3,441	3,841
Upstream of junction with Janes Gully	2.0	1,366	1,629	1,788	2,232
Bayou Din					
Upstream of confluence with Kidd Gully	7.2	1,688	2,342	2,603	3,282
At Interstate Highway 10	3.8	956	1,381	1,539	1,943
Bayou Din Tributary					
At confluence with Bayou Din	1.9	761	1,023	1,130	1,460
Cotton Creek					
At State Highway 326	8.3	1,450	1,850	2,000	2,350
Ditch 505					
At State Highway 124	10.9	2,291	3,196	3,529	4,415
At Interstate Highway 10	4.1	972	1,298	1,421	1,749
Upstream of Ditch 505 Tributary	2.7	654	883	970	1,198
Ditch 505 Tributary					
At mouth	1.4	345	487	539	677
Greenpond Gully/ Ditch 607					
At Old Sour Lake Road	6.0	1,215	1,584	1,732	2,118
At U.S. Highway 90	3.7	866	1,216	1,347	1,679
At South Pine Island Road	2.1	398	611	741	1,161

TABLE 4 – SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs) 10-PERCENT-ANNUAL-CHANCE	2-PERCENT-ANNUAL-CHANCE	1-PERCENT-ANNUAL-CHANCE	0.2-PERCENT-ANNUAL-CHANCE
Hillebrandt Bayou					
Downstream of Rhodair Gully	165.0	7,800	11,100	13,000	15,900
Upstream of Rhodair Gully	149.0	7,390	10,500	12,300	15,000
Downstream of John's Gully	142.0	7,200	10,200	12,000	14,700
Upstream of John's Gully	134.0	6,960	9,900	11,600	14,300
Downstream of Bayou Din	128.0	6,800	9,700	11,400	13,900
Upstream of Bayou Din	86.0	5,500	7,700	9,170	11,200
Downstream of Willow Marsh Bayou	70.2	21,143	27,558	30,138	36,694
Upstream of Willow Marsh Bayou	47.0	4,000	5,600	6,600	8,000
Hillebrandt Bayou (Caldwood Cut-Off)					
At Atchison, Topeka and Santa Fe Railway	28.9	12,032	16,245	18,145	21,788
At Interstate Highway 10	26.1	11,577	15,928	17,636	20,559
At Washington Boulevard Bridge	17.1	5,530	7,665	8,383	9,757
At Southern Pacific Railroad Bridge	12.3	3,866	5,179	5,463	5,988
Downstream of Keith Ditch	11.6	3,595	4,944	5,293	6,215
Upstream of Keith Ditch	7.0	2,823	3,596	3,999	4,715
At Gladys Avenue	6.4	2,447	3,567	4,163	5,450
Downstream of Folsom Street	0.9	620	859	955	1,190
Hillebrandt Oxbow					
At confluence with Hillebrandt Bayou	7.9	2,250	2,950	3,330	4,000
Janes Gully					
At confluence with Hillebrandt Bayou	3.3	1,431	2,038	2,279	2,707

TABLE 4 – SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs) 10-PERCENT-ANNUAL-CHANCE	2-PERCENT-ANNUAL-CHANCE	1-PERCENT-ANNUAL-CHANCE	0.2-PERCENT-ANNUAL-CHANCE
Keith Ditch					
At confluence with Hillebrandt Bayou	4.6	1,317	1,826	2,039	2,565
At Westgate Road	4.1	872	1,235	1,389	1,794
Downstream of Diversion to Amelia Cut-Off	3.7	108	220	273	470
Upstream of Diversion to Amelia Cut-Off	3.7	948	1,213	1,326	1,650
At North Major Road	3.0	616	956	1,144	1,665
Kidd Gully					
At confluence with Bayou Din	7.0	2,000	2,700	2,930	3,500
Mayhaw Bayou					
At mouth	65.8	6,761	10,217	11,710	16,324
At State Highway 73	22.5	2,879	4,823	5,576	7,876
At Interstate Highway 10	1.4	680	990	1,112	1,409
Mayhaw Bayou Tributary					
At mouth	6.5	1,567	2,330	2,604	3,332
At Brush Island Road	0.9	427	627	698	885
Neches River					
At Beaumont	10,000	60,000	107,000	136,000	240,000
North Fork Taylor Bayou					
At downstream confluence with Burrell Gully	148.5	8,082	10,545	11,091	12,533
At Boondocks Road	135.4	8,340	10,652	11,159	12,776
Pine Island Bayou					
At confluence with Neches River	657	17,300	33,600	41,400	61,200
At confluence with Walker Branch	567	18,597	26,671	31,206	39,228

TABLE 4 – SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs) 10-PERCENT-ANNUAL-CHANCE	2-PERCENT-ANNUAL-CHANCE	1-PERCENT-ANNUAL-CHANCE	0.2-PERCENT-ANNUAL-CHANCE
Pine Island Bayou (Continue)					
Below confluence with Little Pine Island Bayou	487	15,400	29,200	36,000	55,000
Above confluence with Little Pine Island Bayou	354	11,400	21,400	26,300	40,700
Quinn Ditch					
At mouth	2.9	1,402	2,037	2,301	2,926
Rhodair Gully					
At confluence with Hillebrandt Bayou	16.0	2,620	3,460	3,930	4,790
At Southern Pacific Railroad	6.0	1,920	2,530	2,640	3,150
South Fork Taylor Bayou					
At mouth	101.7	11,215	13,778	15,231	19,406
At State Highway 124	18.8	3,296	5,010	5,577	7,187
At Interstate Highway 10	12.3	3,067	4,495	5,037	6,456
Taylor Bayou					
Upstream of the confluence with Hillebrandt Bayou	280.0	10,300	14,800	17,400	21,500
Downstream of La Belle Road	273.2	9,261	12,209	13,527	17,036
Walker Branch					
At confluence with Pine Island Bayou	11.99	6,593	9,098	10,078	11,951
At confluence with Walker Branch Tributary	2.9	1,214	1,712	1,896	2,247
Walker Branch Tributary					
At confluence with Walker Branch	9.9	2,575	3,298	3,703	4,407

TABLE 4 – SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs) 10-PERCENT-ANNUAL-CHANCE	2-PERCENT-ANNUAL-CHANCE	1-PERCENT-ANNUAL-CHANCE	0.2-PERCENT-ANNUAL-CHANCE
Willow Marsh Bayou At confluence with Hillebrandt Bayou	22.0	7,190	8,923	9,518	10,809

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals. Users should be aware that flood elevations shown on the FIRM represent rounded whole-foot elevations and may not exactly reflect the elevations shown on the Flood Profiles or in the Floodway Data tables in the FIS report. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS in conjunction with the data shown on the FIRM.

Pre-Countywide

Cross sectional data for Hillebrandt Bayou, Neches River and Willow Marsh Bayou were available from the USACE, Galveston District, and were supplemented with field survey data. Cross section data for the hydraulic computation performed in the City of Bevil Oaks were based on field surveys dated May 1981. Cross sections for the backwater analysis of the remaining streams were obtained from field surveys and USGS 7.5-minute topographic maps (Reference 15). All bridges, dams and culverts were field checked to obtain elevation data and structural geometry necessary for backwater analysis.

Channel cross section information for the 2002 revision (Reference 2) of the study reaches of the Hillebrandt Bayou, Taylor Bayou and Pine Island Bayou watersheds was obtained from various sources, including as built construction record drawings, other construction plans, field surveys conducted in support of the study, and field surveys done for past projects in Jefferson County (References 39 through 46). Sources for overbank elevation data include 4-foot contour topography generated by Analytical Surveys, Inc., (ASI) developed for the study from aerial photography provided by Jefferson County Appraisal District (Reference 47). USGS Quadrangle maps were also used in some cases where the other sources were insufficient.

Information on structures, such as culverts and bridges, for the revision of the study were obtained from the Texas Department of Transportation (TxDOT), as-built drawings, other as-built plans from local government agencies, field surveys performed for the study and/or existing hydraulic computer models. All public road crossing structures were photographed during site visits in order to verify information obtained from as-built plans and existing hydraulic models. DOQQs were used to identify any private road crossing structures which were not readily accessible from public roads. Field crews were then sent to survey these private road crossings.

For areas subject to stream overflow, water-surface elevations for floods of the selected recurrence intervals were developed using the USACE HEC-2 water-surface profile computer model (References 48 and 49). Starting water-surface elevations for the Neches River at its confluence with Sabine Lake, Hillebrandt Bayou at its confluence with Taylor Bayou, and Rhodair Gully were set equal to the mean high tide. Starting water-surface elevations for Bayou Din, Kidd Gully and Mayhaw Bayou were set equal to normal depth. The starting water surface elevations for Pine Island Bayou were obtained using an estimated water surface elevation on the Neches River at the confluence with Pine Island Bayou. Starting water-surface elevations for Bayou Din Tributary, Walker Branch, and Walker Branch Tributary were set equal to the elevation of the major streams at their respective confluences. Critical depth was used as the starting water-surface elevation for Cotton Creek at State Route 326 and Janes Gully due to a weir at the outfall.

For the 2002 revision to unincorporated areas of the county, the USACE HEC-2 backwater analysis program (Reference 50) was used for Bayou Din, Bayou Din Tributary, Mayhaw Bayou, Mayhaw Bayou Tributary, Walker Branch and Walker Branch Tributary. HEC-RAS (Reference 51) was used for Ditch 505, Ditch 505 Tributary, Greenpond Gully (Ditch 607), Quinn Ditch, South Fork Taylor Bayou and Taylor Bayou/North Fork Taylor Bayou. Starting water-surface elevations for each study stream were determined by normal depth.

In the City of Groves, ponding water elevations for the Crane Bayou area were adopted from USACE report (Reference 21).

In the City of Port Arthur, flood profiles were drawn for Rhodair Gully showing computed water-surface elevations to an accuracy of 0.5-foot for floods of the selected recurrence intervals. Flood profiles were not plotted for Taylor Bayou and Neches River because the flooding in the rivers was predominated by surge. Locations of selected cross sections used in the hydraulic analyses are shown on the flood profiles (Exhibit 1).

In the City of Beaumont, hydraulic modeling was complicated by the presence of several divided flow situations. In the northern section of Beaumont, part of the flow is diverted from Walker Branch to Walker Branch Relief Ditch which flows into the Walker Branch Tributary. A channel improvement project was performed on Amelia Cut-off which flows in a north/south direction west of Interstate Highway 10 and empties into Willow Marsh Bayou. A divided flow occurs at the upper end of Amelia Cut-Off where part of the Keith Ditch flow is diverted into Amelia Cut-Off. The next divided flow occurs downstream where Amelia Cut-Off intersects Janes Gully at a skewed angle. The method for handling these divided flow problems is described by Chow (Reference 52).

Computations for flood levels along the rivers resulting from either coastal surges or rainfall were independently performed. The results of each were combined statistically to obtain flood levels for each return period.

Channel roughness factors (Mannings “n”) used in hydraulic computations, were chosen based on field observations, aerial photos of the streams and floodplain areas, USACE feasibility study for the Pine Island Bayou watershed (Reference 22) and USGS Water Supply Paper 1849 (Reference 53). Roughness values for streams studied by detailed methods are shown in Table 5 “Manning’s “n” Values”.

TABLE 5 – MANNING'S "N" VALUES

Flooding Source	Roughness Coefficients	
	Channel	Overbank
Amelia Cut-Off	0.020 – 0.050	0.050 – 0.100
Upper Bayou Din	0.025 – 0.040	0.060 – 0.080
Bayou Din	0.025 – 0.040	0.060 – 0.080
Bayou Din Tributary	0.014* - 0.040	0.060 – 0.090
Channel Connector	**	**
Channel to Janes Gully	**	**
Cotton Creek	0.035	0.150
Ditch 505	0.050	0.080 – 0.100
Ditch 505 Tributary	0.050	0.080 – 0.100
Greenpond Gully (Ditch 607)	0.018* - 0.040	0.090 – 0.100
Hillebrandt Bayou	0.020 – 0.050	0.050 – 0.100
Hillebrandt Bayou (Caldwood Cut-Off)	0.020 – 0.050	0.050 – 0.100
Keith Ditch	0.013* - 0.050	0.070 – 0.100
Hillebrandt Oxbow	0.020 – 0.050	0.050 – 0.100
Janes Gully	0.020 – 0.050	0.050 – 0.100
Janes Gully Diversion	**	**
Keith Ditch	0.020 – 0.050	0.050 – 0.100
Kidd Gully	0.020 – 0.050	0.050 – 0.100
Mayhaw Bayou	0.018* - 0.040	0.090 – 0.100
Mayhaw Bayou Tributary	0.018* - 0.040	0.900 – 0.100
Neches River	0.020 – 0.050	0.050 – 0.100
Pine Island Bayou	0.050	0.120
Quinn Ditch	0.018* - 0.040	0.090 – 0.100
Rhodair Gully	0.014 – 0.030	0.060
South Fork Taylor Bayou	0.018* - 0.040	0.090 – 0.100
Taylor Bayou/North Fork Taylor Bayou	0.040	0.080 – 0.100
Walker Branch	0.018* - 0.040	0.090 – 0.100
Walker Branch Relief Ditch	0.020 – 0.050	0.050 – 0.100
Walker Branch Tributary	0.018* - 0.040	0.090 – 0.100
Willow Marsh Bayou	0.018* - 0.040	0.090 – 0.100

*Denotes "n" value used for concrete-lined segment
**Roughness values were not available

Countywide

The hydraulic analyses for the riverine flooding sources in this study were not revised from the pre-countywide conditions and are based on unobstructed flow. The flood elevations as shown on the profiles are thus considered valid only if hydraulic structures in general remain unobstructed and do not fail.

3.3 Coastal Analysis

The hydraulic characteristics of coastal flood sources were analyzed to provide estimates of flood elevations for selected recurrence intervals. Users should be aware that flood elevations shown on the FIRM represent rounded whole-foot elevations and may not exactly reflect the elevations shown in the coastal data tables and flood profiles provided in the FIS Report.

3.3.1 Storm Surge Analysis and Modeling

Pre-Countywide

The determination of coastal inundation caused by passage of a hurricane was approached by the joint probability method (Reference 23). The storm populations were described by probability distribution of five parameters that influence surge heights. These were (1) central pressure depression (which indicates the intensity of the storm), (2) radius to maximum winds, (3) forward speed of the storm, (4) shoreline crossing point and (5) crossing angle. These characteristics were described statistically based on an analysis of observed storms in the vicinity of Jefferson County. Primary sources of data for this analysis were the National Weather Service (References 24 to 26), the National Hurricane Research Project (Reference 27) and the Monthly Weather Review (Reference 28).

For areas subject to flooding directly from the Gulf of Mexico/Sabine Lake/Neches River, FEMA's standard coastal surge model was used to simulate the coastal surge generated by any chosen storm (that is, any combination of the five storm parameters defined previously). Performing such simulations for a large number of storms, each of known total probability, permitted the establishment of a frequency distribution of surge height as a function of coastal location. The distribution incorporated the large-scale surge behavior but did not include the analysis if the added effects associated with much finer scale wave phenomena such as wave height, setup, or runup. The astronomic tide for the region was then statistically combined with the computed storm surge to yield recurrence intervals of total water level. The precountywide model used a grid pattern approximating the geographical features of the study area and the adjoining areas. Surges were computed using grids of 5 nautical miles for open coast computation, 1 nautical mile for Sabine Lake computations and 1.5 miles for overland computations.. The effects of the Sabine Lake and Neches River were included in the model.

The methodology for analyzing the effects of wave heights associated with coastal storm surge flooding is described in the National Academy of Sciences report (Reference 29). The method is based on 3 major concepts. First, depth-limited waves in shallow water reach a maximum breaking height that is equal to 0.78 times the stillwater depth. The wave crest elevation is 70 percent of the total wave height plus the Stillwater elevation.

Second, the wave height may be diminished due to the presence of obstructions such as sand dunes, dikes and seawalls, building and vegetation. The amount of energy dissipation is a function of the physical characteristics of the obstruction and is determined by procedures prescribed in Reference 54. Third is that the wave height can be regenerated in open fetch areas due to the transfer of wind energy to the water. This added energy is related to fetch length and depth.

Wave heights for Jefferson County Unincorporated Areas, the City of Port Arthur and the City of Port Neches were computed along transects (cross section lines) that were located along the coastal areas in accordance with the Users Manual for Wave Height Analysis (Reference 54). The transects were located with consideration given to the physical and cultural characteristics of the land so that they would closely represent condition in their locality. Transects were spaced close together in areas of complex topography and dense development. In areas having more uniform characteristics, they were spaced at larger intervals. It was necessary to locate transects in areas where unique flooding existed and in areas where computed wave heights varied significantly between adjacent transects.

The transects were continued inland until the wave dissipated or until flooding from another source with equal or greater elevation was reached. Along each transect wave heights and elevations were computed considering the combined effects of changes in ground elevation, vegetation and physical features. The Stillwater elevations for the 1-percent annual chance flood were used as the starting elevations for these computations. Wave heights were calculated to the nearest 0.1 foot, and wave elevations were determined at whole-foot increments along the transects. Areas with a wave component 3-feet or greater were designated as velocity zones. Other areas subject to wave action were designated as A zones with base flood elevation adjusted to include wave crest elevations.

Countywide

For areas subject to coastal flood effects, the 10-, 2-, 1-, and 0.2-percent-annual-chance stillwater elevations were taken directly from a detailed storm surge study documented in *Flood Insurance Study: Coastal Counties, Texas Intermediate Submission 2 – Scoping and Data Review* prepared by the U.S. Army Corps of Engineers (Reference 55). This storm surge study was completed in November 2011.

The Advanced Circulation (ADCIRC) model for coastal ocean hydrodynamics developed by the USACE was applied to calculate stillwater elevations for coastal Texas. The ADCIRC model uses an unstructured grid and is a finite element long wave model. It has the capability to simulate tidal circulation and storm surge propagation over large areas and is able to provide highly detailed resolution in areas of interest along shorelines, open coasts and inland bays. It solves three dimensional equations of motion, including tidal potential, Coriolis, and non-linear terms of the governing equations. The model is formulated from the depth-averaged shallow water equations for conservation of mass and momentum which result in the generalized wave continuity equation.

In performing the coastal analyses, nearshore waves were required as inputs to wave runup and overland wave propagation calculations, and wave momentum (radiation stress) was considered as contribution to elevated water levels (wave setup). The Steady State Spectral Wave (STWAVE) model was used to generate and transform waves to the

shore for the Texas Joint Storm Surge (JSS) Study. STWAVE is a finite difference model that calculates wave spectra on a rectangular grid. The model outputs zero-moment wave height, peak wave period (Tp), and mean wave direction at all grid points and two-dimensional spectra at selected grid points. STWAVE includes an option to input spatially variable wind and storm surge field. Storm surge significantly alters wave transformation and generation for the hurricane simulations in shallow-flooded areas.
STWAVE was applied on five grids for the Texas JSS: NE, CE, SW, NEn, and CEn. Three large grids (NE, CE, SW) with offshore boundaries at depths near 100 feet (30 meters) encompassed the entire coast of Texas and applied the efficient half-plane version of STWAVE (which must approximately align with the shoreline). Two nested grids (NEn and CEn) covered Galveston Bay and Corpus Christi Bay and applied the fullplane version of STWAVE to allow generation of wind waves in all directions. Notably, memory requirements for the full-plane model precluded its use for the large grids with offshore boundaries. The input for each grid includes the bathymetry (interpolated from the ADCIRC domain), surge fields (interpolated from ADCIRC surge fields), and wind fields (interpolated from the ADCIRC wind fields, which apply land effects to the base wind fields). The wind and surge applied in STWAVE are spatially and temporally variable for all domains. STWAVE was run at 30-minute intervals for 93 quasi-time steps (46.5 hours).

The ADCIRC model computational domain and the geometric/topographic representation developed for the Joint Coastal Surge effort was designated as the TX2008 mesh. This provided a common domain and mesh from the Texas-Mexico border to western Louisiana, extends inland across the floodplains of Coastal Texas (to the 30- to 75-foot contour NAVD88), and extends over the entire Gulf of Mexico to the deep Atlantic Ocean. The TX2008 domain boundaries were selected to ensure the correct development, propagation, and attenuation of storm surge without necessitating nesting solutions or specifying ad hoc boundary conditions for tides or storm surge. The TX2008 computational mesh contains more than 2.8 million nodes and nodal spacing varies significantly throughout the mesh. Grid resolution varies from approximately 12 to15 miles in the deep Atlantic Ocean to about 100 ft. in Texas. Further details about the terrain data as well as the ADCIRC mesh creation and grid development process can be found in *Flood Insurance Study: Coastal Counties, Texas Intermediate Submission 2 – Scoping and Data Review* (Reference 55).

3.3.2 Statistical Analysis

The Joint Probability Method (JPM) is a simulation methodology that relies on the development of statistical distributions of key hurricane input variables such as central pressure, radius to maximum wind speed, maximum wind speed, translation speed, track heading, etc., and sampling from these distributions to develop model hurricanes. The resulting simulation results in a family of modeled storms that preserve the relationships between the various input model components, but provides a means to model the effects and probabilities of storms that historically have not occurred.

Due to the excessive number of simulations required for the traditional JPM method, the JPM-Optimum Sampling (JPM-OS) was utilized to determine the stillwater elevations associated with tropical events. JPM-OS is a modification of the JPM method and is intended to minimize the number of synthetic storms that are needed as input to the ADCIRC model. The methodology entails sampling from a distribution of model storm

parameters (e.g., central pressure, radius to maximum wind speed, maximum wind speed, translation speed, and track heading) whose statistical properties are consistent with historical storms impacting the region, but whose detailed tracks differ. The methodology inherently assumes that the hurricane climatology over the past 60 to 65 years (back to 1940) is representative of the past and future hurricanes likely to occur along the Texas coast.

A set of 446 storms (two sets of 152 low frequency storms + two sets of 71 higher frequency storms) was developed by combining the "probable" combinations of central pressure, radius to maximum winds, forward speed, angle of track relative to coastline, and track. Tracks were defined by five primary tracks and four secondary tracks. Storm parameters for synthetic storms are provided in Table 11 of *Flood Insurance Study: Coastal Counties, Texas Intermediate Submission 2 – Scoping and Data Review* (Reference 55). The estimated range of storm frequencies using the selected parameters was between the 10-percent- and 0.2-percent-annual-chance storm events. The ADCIRC-STWAVE modeling system was validated using five historic storms: Hurricanes Carla (1961), Allen (1980), Bret (1999), Rita (2005), and Ike (2008).

3.3.3 Stillwater Elevations

The results of the ADCIRC model and JPM-OS provided 10-, 2-, 1-, and 0.2-percent-annual-chance stillwater elevations which include wave setup effects. Stillwater elevations are assigned at individual ADCIRC mesh nodes throughout the Texas coast. Triangular Irregular Networks (TINs) and raster datasets were built from these nodes for use in wave analysis and floodplain mapping.

An Independent Technical Review (ITR) was performed on the overall storm surge study process. This review process was performed in accordance with USACE regulations. The ITR team was composed of experts in the fields of coastal engineering and science, and was engaged throughout the study. Appendix K of *Flood Insurance Study: Coastal Counties, Texas Intermediate Submission 2 – Scoping and Data Review* includes all comments received from the ITR panel, as well as responses to those comments (Reference 55).

3.3.4 Wave Height Analysis

Using storm surge study results, wave height analysis was performed to identify areas of the coastline subject to overland wave propagation or wave runup hazards. Wave heights were computed along transects (cross section lines) that were located along the coastal areas, as illustrated in Figure 1 "Transect Location Map".

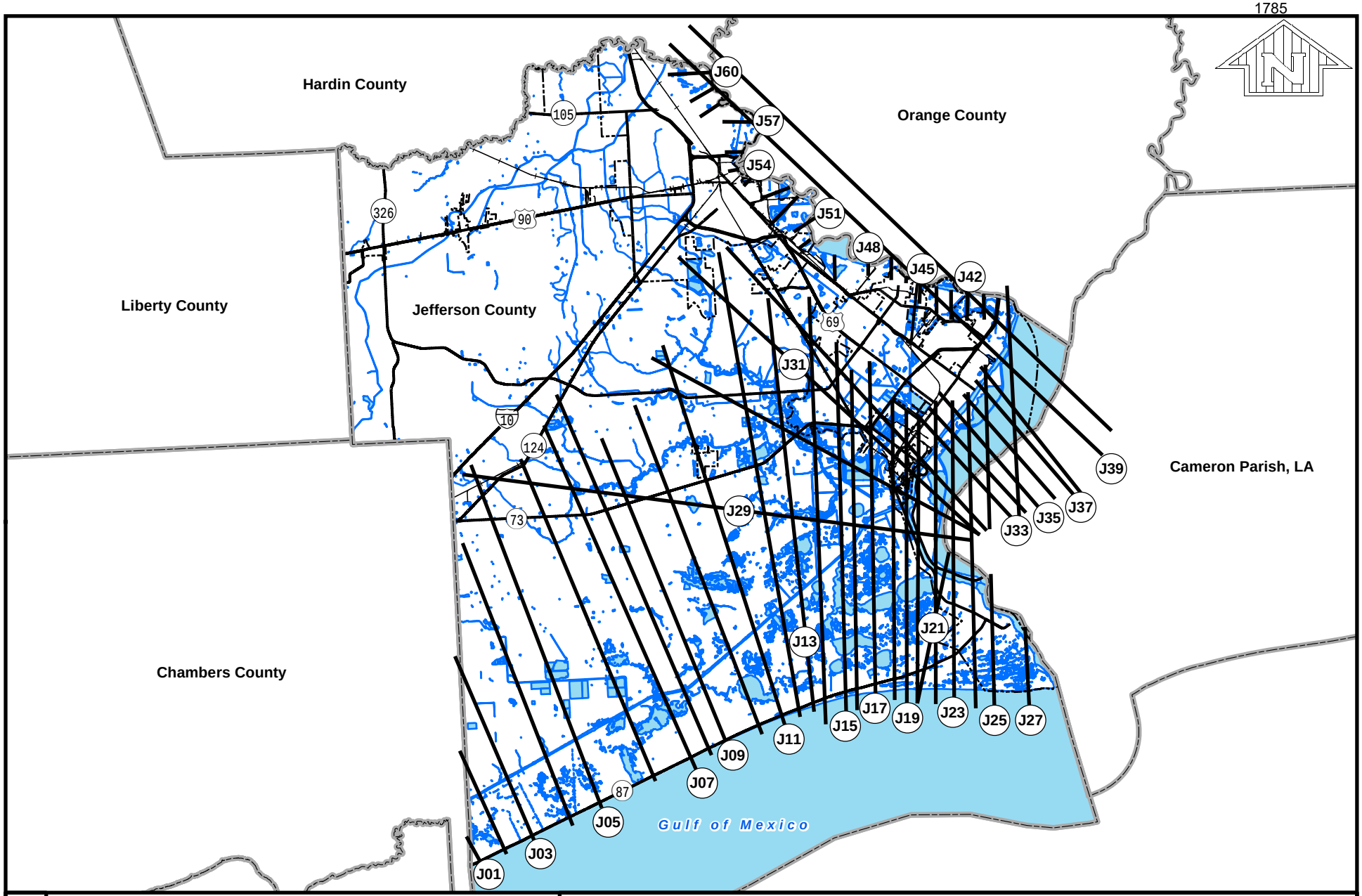

FIGURE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS

APPROXIMATE SCALE

0 37,500 75,000 112,500 150,000 Feet

TRANSECT LOCATION MAP

Figure 2 shows a cross-section for a typical coastal analysis transect, illustrating the effects of energy dissipation and regeneration of wave action over inland areas. This figure shows the wave crest elevations being decreased by obstructions, such as buildings, vegetation, and rising ground elevations, and being increased by open, unobstructed wind fetches. Figure 2 also illustrates the relationship between the local stillwater elevations, the ground profile, and the location of the VE/AE Zone boundary at the limit of 3 ft. breaking waves. This inland limit of the coastal high hazard area is delineated to ensure that adequate insurance rates apply and appropriate construction standards are imposed, should local agencies permit building in this coastal high hazard area.

Coastal BFEs are calculated as the total stillwater elevation (stillwater elevation including storm surge plus wave setup) for the 1-percent-annual chance storm plus the additional flood hazard from overland wave effects (storm-induced erosion, overland wave propagation, wave runup and wave overtopping).

Where they apply, coastal BFEs are calculated along transects extending from offshore to the limit of coastal flooding onshore. Results of these analyses are accurate until local topography, vegetation, or development type and density within the community undergoe major changes.

It has been shown in laboratory tests and observed in field investigations that wave heights as little as 1.5 feet can cause damage to and failure of typical Zone AE construction. Therefore, for advisory purposes only, a Limit of Moderate Wave Action (LiMWA) boundary has been added in coastal areas subject to wave action. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave.

The effects of wave hazards in the Zone AE between the Zone VE (or shoreline in areas where VE Zones are not identified) and the limit of the LiMWA boundary are similar to, but less severe than, those in Zone VE where 3-foot breaking waves are projected during a 1-percent-annualchance flooding event.

In areas where wave runup elevations dominate over wave heights, such as areas with steeply sloped beaches, bluffs, and/or shore-parallel flood protection structures, there is no evidence to date of significant damage to residential structures by runup depths less than 3 feet. However, to simplify representation, the LiMWA was continued immediately landward of the VE/AE boundary in areas where wave runup elevations dominate. Similarly, in areas where the Zone VE designation is based on the presence of a primary frontal dune or wave overtopping, the LiMWA was also delineated immediately landward of the Zone VE/AE boundary.

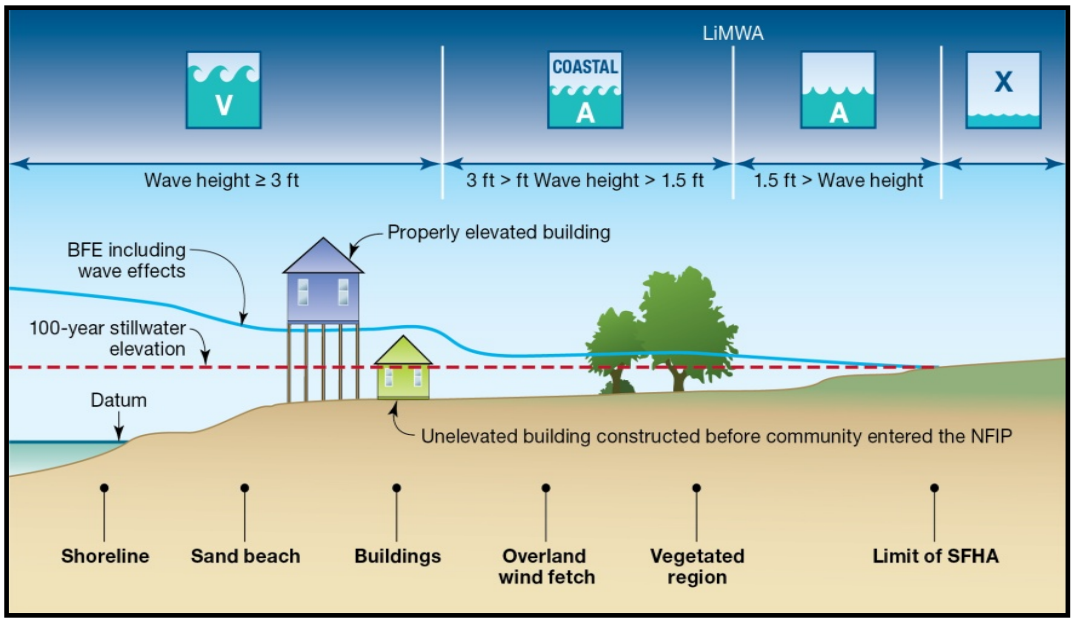

FIGURE 2 - TRANSECT SCHEMATIC

A summary of the results from the coastal analyses, which reflects the stillwater elevation determined along each transect at the 10-, 2-, 1-, and 0.2-percent-annual-chance recurrence intervals is shown in Table 6, “Coastal Data Table.”

Table 6. COASTAL DATA TABLE

Community Name	Transect	Description	Latitude & Longitude at Start of WHAFIS Transect (NAD83)	Starting Stillwater Elevations (feet NAVD 88) Range of Stillwater Elevations (feet NAVD 88)				Zone Designation and BFE (feet NAVD88)
				10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance	
Jefferson County	J01	Located at west end of County, traversing south to north from Gulf Coast to northern County Line	29.5648 94.3452	7.9 5.8 7.9	10.7 10.4 11.1	13.7 13.2 13.9	18.5 17.5 18.9	AE 15-16 VE 15-21
Jefferson County	J02	Located to the east of transect J01, traversing south to north	29.5731 94.3235	7.8 4.5 7.9	10.9 9 11	13.8 11.5 13.9	17.9 15.9 18.6	AE 13-16 VE 14-21
Jefferson County	J03	Located to the east of transect J02, traversing south to north	29.5826 94.2988	7.7 3.4 7.8	11.1 8 11.1	13.9 11 14.1	18.2 15.6 18.9	AE 11-16 VE 13-21
Jefferson County	J04	Located to the east of transect J03, traversing south to north	29.5959 94.2657	7.7 3.3 7.8	11.0 6.7 11.2	13.9 9.2 14.0	18.4 11.1 18.6	AE 1-16 VE 12-21
Jefferson County	J05	Located to the east of transect J04, traversing south to north	29.6064 94.2389	7.7 3.4 7.7	10.9 6.9 11.2	13.7 7 13.9	18.1 11.1 18.7	AE 1-16 VE 12-21
Jefferson County	J06	Located to the east of transect J05, traversing south to north	29.6250 94.1911	7.6 3.5 7.6	10.8 6.6 10.8	13.6 7 13.6	18.1 9.6 18.5	AE 7-16 VE 16-21
Jefferson County	J07	Located to the east of transect J06, traversing south to north	29.6380 94.1579	7.5 3.6 7.5	10.7 4.3 10.7	13.5 5.4 13.5	18.1 9.5 18.4	AE 5-16 VE 13-21
Jefferson County	J08	Located to the east of transect J07, traversing south to north	29.6441 94.1417	7.4 3.5 7.5	10.6 4 10.6	13.4 5.4 13.4	18.0 9.6 18.1	AE 5-15 VE 13-21
Jefferson County	J09	Located to the east of transect J08, traversing south to north	29.6496 94.1269	7.2 3.5 7.5	10.7 4 10.7	13.7 5.4 13.7	18.6 9.7 18.6	AE 5-16 VE 12-20
Jefferson County	J10	Located to the east of transect J09, traversing south to north	29.6596 94.0970	7.4 3.4 7.4	10.2 4.1 10.4	13.3 5.9 13.3	18.1 10 19.0	AE 6-15 VE 13-20
Jefferson County	J11	Located to the east of transect J10, traversing south to north	29.6656 94.0762	7.4 2.5 7.4	10.5 5.3 10.5	13.3 7.3 13.3	17.9 9.6 18.4	AE 7-15 VE 12-20
Jefferson County	J12	Located to the east of transect J11, traversing south to north	29.6696 94.0613	7.3 2.9 7.3	10.4 4.6 10.4	13.2 5.2 13.2	17.7 9.2 18.6	AE 5-15 VE 11-20
Jefferson County	J13	Located to the east of transect J12, traversing south to north	29.6727 94.0486	7.4 3 7.4	10.4 5.9 10.5	13.1 6.3 13.3	17.7 11.4 18.6	AE 8-15 VE 11-20

Table 6. COASTAL DATA TABLE

Community Name	Transect	Description	Latitude & Longitude at Start of WHAFIS Transect (NAD83)	Starting Stillwater Elevations (feet NAVD 88) Range of Stillwater Elevations (feet NAVD 88)				Zone Designation and BFE (feet NAVD88)
				10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance	
Jefferson County	J14	Located to the east of transect J13, traversing south to north	29.6749 94.0385	7.4 3 7.4	10.4 5.9 10.4	13.1 7.5 13.2	17.7 11.7 18.0	AE 1-15 VE 11-20
Jefferson County	J15	Located to the east of transect J14, traversing south to north	29.6784 94.0201	7.2 3.2 7.2	10.2 5.4 10.2	12.9 8.6 12.9	17.4 13.1 17.4	AE 9-15 VE 11-20
Jefferson County	J16	Located to the east of transect J15, traversing south to north	29.6797 94.0102	7.1 3.5 7.2	10.2 6.1 10.3	12.9 8.5 13.1	17.6 13.2 18.0	AE 9-15 VE 11-20
Jefferson County	J17	Located to the east of transect J16, traversing south to north	29.6811 93.9939	7.2 4.1 7.2	10 5.9 10.1	12.7 8.4 12.9	17.2 10.8 17.6	AE 9-15 VE 11-19
Jefferson County	J18	Located to the east of transect J17, traversing south to north	29.6821 93.9771	7.0 4 7.1	10.0 6.9 10.1	12.7 8.8 12.9	17.5 13.3 18.1	AE 9-15 VE 12-19
Jefferson County	J19	Located to the east of transect J18, traversing south to north	29.6826 93.9664	6.6 3.8 7.2	10.0 7.2 10.1	12.7 8.9 12.8	17.3 13.5 17.7	AE 9-15 VE 12-19
Jefferson County	J20	Located to the east of transect J19, traversing south to north	29.6822 93.9572	7.15 3.8 7.3	9.95 7.0 10	12.7 8.7 12.7	17.1 13.1 17.3	AE 9-15 VE 12-19
Jefferson County	J21	Located to the east of transect J20, traversing south to north	29.6823 93.9547	7.1 3.8 7.3	9.95 7.3 10	12.6 8.9 12.6	17.0 13.5 17.9	AE 9-15 VE 12-19
Jefferson County	J22	Located to the east of transect J21, traversing south to north	29.6825 93.9411	7.1 4.4 7.3	9.95 6.8 10.1	12.6 8.7 12.7	17.0 13.2 17.6	AE 9-15 VE 11-19
Jefferson County	J23	Located to the east of transect J22, traversing south to north	29.6820 93.9252	7.1 5.1 7.3	9.96 7.1 10.0	12.5 8.8 12.5	16.9 13.1 16.9	AE 9-15 VE 11-19
Jefferson County	J24	Located to the east of transect J23, traversing south to north	29.6809 93.9067	7.05 3.5 7.1	11.3 6.97 11.4	13.5 8.7 13.5	17.9 13.3 18	AE 9-16 VE 11-21
Jefferson County	J25	Located to the east of transect J24, traversing south to north	29.6798 93.8904	6.97 6.4 7	11.6 9.2 11.6	13.6 11.1 13.6	18.1 15.2 18.1	AE 12-16 VE 13-21
Jefferson County	J26	Located to the east of transect J25, traversing south to north	29.8022 93.8880	3.5 3.5 5.5	6.7 6.7 7.3	8.5 8.5 9.2	12.8 12.8 13.7	AE 9-11 VE 11-15

Table 6. COASTAL DATA TABLE

Community Name	Transect	Description	Latitude & Longitude at Start of WHAFIS Transect (NAD83)	Starting Stillwater Elevations (feet NAVD 88) Range of Stillwater Elevations (feet NAVD 88)				Zone Designation and BFE (feet NAVD88)
				10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance	
Jefferson County	J27	Located to the east of transect J26, traversing south to north	29.6783 93.8603	6.9 5.9 6.9	11.7 11.4 11.9	13.8 13.4 13.8	18.2 17.6 18.3	AE 15-16 VE 16-21
Jefferson County	J28	Located to the east of transect J27, traversing south to north	29.8101 93.8616	3.4 3.4 5.5	6.7 6.7 7.6	8.3 8.3 9.4	12.5 12.5 14.3	AE 1-11 VE 10-16
Jefferson County	J29	Located at southwest of Sabine Lake, traversing east to west	29.7943 93.9040	3.6 3.4 6	6.9 3.9 8.5	8.9 5.4 10.6	13.1 9.6 15.6	AE 5-13 VE 11-15
Jefferson County	J30	Located to the east of transect J29, traversing east to west	29.7984 93.8967	3.5 2.5 6	6.8 5.3 8.3	8.6 6.9 10.4	12.9 9.8 15.6	AE 1-12 VE 11-15
Jefferson County	J31	Located to the east of transect J30, traversing east to west	29.7981 93.8972	3.5 2.6 5.9	6.8 2.1 8.3	8.6 2.5 10.4	12.9 3.8 14.9	AE 1-12 VE 11-15
Jefferson County	J32	Located to the east of transect J31, traversing east to west	29.8011 93.8906	3.5 3.5 5.8	6.8 4.6 7.9	8.5 5.2 9.9	12.8 9.3 15	AE 1-11 VE 11-15
Jefferson County	J33	Located to the east of transect J32, traversing east to west	29.8109 93.8689	3.1 3.1 5.7	6.7 6.7 7.75	8.2 8.2 9.6	12.7 12.7 13.9	AE 9-11 VE 10-16
Jefferson County	J34	Located to the east of transect J33, traversing east to west	29.8136 93.8556	3.4 3.4 5.6	6.7 6.7 7.7	8.3 8.3 9.6	12.5 12.5 13.9	AE 9-11 VE 10-16
Jefferson County	J35	Located to the east of transect J34, traversing east to west	29.8175 93.8447	3.4 3.4 5.6	6.7 6.7 7.5	8.2 8.2 9.2	12.5 12.5 13.6	AE 9-11 VE 10-16
Jefferson County	J36	Located to the east of transect J35, traversing east to west	29.8232 93.8296	3.3 3.3 5.5	6.6 6.6 7.4	8.1 8.1 9.2	12.4 12.4 13.5	AE 9-11 VE 10-16
Jefferson County	J37	Located to the east of transect J36, traversing east to west	29.8262 93.8136	3.3 3.3 5.5	6.6 6.6 7.4	8.1 8.1 9.3	12.3 12.3 13.8	AE 9-11 VE 10-16
Jefferson County	J38	Located to the east of transect J37, traversing east to west	29.8270 93.8070	3.2 3.2 5.5	6.8 6.8 7.3	8.2 8.1 9.2	12.4 12.3 13.8	AE 9-11 VE 10-16
Jefferson County	J39	Located to the east of transect J38, traversing east to west	29.8549 93.7864	3.1 3.1 5.8	6.7 4.8 7.7	8.0 5.6 9.3	12.7 6.5 13.7	AE 6-11 VE 10-17

Table 6. COASTAL DATA TABLE

Community Name	Transect	Description	Latitude & Longitude at Start of WHAFIS Transect (NAD83)	Starting Stillwater Elevations (feet NAVD 88) Range of Stillwater Elevations (feet NAVD 88)				Zone Designation and BFE (feet NAVD88)
				10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance	
Jefferson County	J40	Located to the east of transect J39, traversing east to west	29.8731 93.7775	3.2 3.2 5.9	7.4 4.8 7.7	9.3 5.7 9.4	14.9 7.3 13.9	AE 6-11 VE 11-17
Jefferson County	J41	Located at mouth of Neches River at Sabine Lake, traversing east to west	29.9806 93.8843	5.27 4.3 5.3	7.5 7.1 7.5	9.2 8.9 9.2	13.5 13.3 13.8	AE 9-11 VE 11-13
Jefferson County	J42	Located to the east of transect J41, traversing east to west	29.9827 93.8982	5.3 4.4 5.3	7.4 7.15 7.5	9.1 8.9 9.2	13.4 13 13.8	AE 10-11 VE 11-13
Jefferson County	J43	Located to the east of transect J42, traversing east to west	29.9854 93.9126	5.35 4.2 5.4	7.4 6.7 7.4	9.1 8.7 9.1	13.2 12.6 13.7	AE 9-11 VE 11-13
Jefferson County	J44	Located to the east of transect J43, traversing east to west	29.9885 93.9253	5.38 4.5 5.4	7.4 5.95 7.4	8.8 8.5 9.0	13.2 12.5 13.5	AE 9-11
Jefferson County	J45	Located to the east of transect J44, traversing east to west	29.9924 93.9394	5.4 5.2 5.4	7.4 7.3 7.4	9 9.0 9.0	12.8 12.2 13.5	AE 9-10
Jefferson County	J46	Located to the east of transect J45, traversing east to west	29.9971 93.9514	5.4 5.37 5.4	7.3 7.27 7.3	9 9.0 9.0	12.6 12.0 12.7	AE 9-11
Jefferson County	J47	Located to the east of transect J46, traversing east to west	30.0123 93.9639	5.47 4.8 5.5	7.4 6.1 7.4	8.9 8.7 9.2	12.5 11.8 13.6	AE 9-10
Jefferson County	J48	Located to the east of transect J47, traversing east to west	30.0071 93.9842	5.5 5.46 5.5	7.28 7.2 7.3	8.8 8.8 8.9	12.3 11.7 12.3	AE 9-11
Jefferson County	J49	Located to the east of transect J48, traversing east to west	30.0161 94.0134	5.5 4.7 5.5	7.3 5.4 7.3	8.7 8.0 9.0	11.8 11.4 12.7	AE 8-11 VE 11-12
Jefferson County	J50	Located to the east of transect J49, traversing east to west	30.0293 94.0340	5.5 5.2 5.6	7.1 6.5 7.4	8.8 8.5 8.9	12.0 11.7 12.7	AE 9-10
Jefferson County	J51	Located to the east of transect J50, traversing east to west	30.0452 94.0300	5.5 4.9 5.6	7.4 7.0 7.5	8.9 8.6 9.0	12.0 11.6 12.3	AE 9-11 VE 11
Jefferson County	J52	Located to the east of transect J51, traversing east to west	30.0626 94.0433	5.5 4.8 5.6	7.25 6.3 7.5	8.8 8.0 9.2	11.7 11.5 13.1	AE 8-10

Table 6. COASTAL DATA TABLE

Community Name	Transect	Description	Latitude & Longitude at Start of WHAFIS Transect (NAD83)	Starting Stillwater Elevations (feet NAVD 88) Range of Stillwater Elevations (feet NAVD 88)				Zone Designation and BFE (feet NAVD88)
				10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance	
Jefferson County	J53	Located to the east of transect J52, traversing east to west	30.0690 94.0525	5.5 4.8 5.6	7.4 6.1 7.4	8.8 7.4 8.9	11.6 10.2 12.4	AE 8-11
Jefferson County	J54	Located to the east of transect J53, traversing east to west	30.0760 94.0862	5.58 5.5 5.6	7.3 7.3 7.3	8.8 8.7 8.8	11.4 10.9 11.4	AE 9-11
Jefferson County	J55	Located to the east of transect J54, traversing east to west	30.0852 94.0951	5.5 5.5 5.6	7.3 7.29 7.3	8.6 8.6 8.6	11.0 10.8 11.0	AE 10
Jefferson County	J56	Located to the east of transect J55, traversing east to west	30.0985 94.0902	5.5 5.2 5.5	7.1 6.8 7.2	8.3 8.3 8.5	10.4 10.3 10.7	AE 8-9
Jefferson County	J57	Located to the east of transect J56, traversing east to west	30.1209 94.0785	5.5 5.2 5.5	6.9 6.6 7.1	8 7.7 8.3	9.9 9.9 10.5	AE 8-9
Jefferson County	J58	Located to the east of transect J57, traversing east to west	30.1358 94.1090	5.1 5.1 5.3	5.3 4.8 5.35	6.7 5.9 6.8	8.8 8.7 8.8	AE 6-7
Jefferson County	J59	Located to the east of transect J58, traversing east to west	30.1479 94.1136	5.0 5 5.1	5.25 5.2 5.3	6.6 6.6 6.8	8.5 8.5 8.5	AE 7
Jefferson County	J60	Located to the east of transect J59, traversing east to west	30.1602 94.1157	4.8 4.8 5.1	5.05 5 5.1	6.6 5.6 6.7	9.3 8.6 9.7	AE 6-7

3.3.5 Combined Probability Analysis

The combined probability analysis was performed by developing tables for the rate of occurrence versus the flood levels along several riverine and the coastal flooding sources, in accordance with FEMA's Atlantic Ocean and Gulf of Mexico Coastal Guidelines Update (Reference 56). This data was used to develop the graph used to construct the 1-percent annual chance composite profiles representing the combined probability for the riverine flooding sources detailed below and the coastal SWEL.

Flooding Source	Combined Coastal and Riverine Base Flood Water-Surface Elevation (feet NAVD88)	
	1% Annual Chance	0.2% Annual Chance
Bayou Din	9.7	13.0
Hillebrandt Bayou	9.7	13.0
Taylor Bayou / North Fork Taylor Bayou	10.0	12.1
Rhodair Gully	9.6	13.1
Willow Marsh Bayou	9.7	13.0

3.4 Vertical Datum

All FIS reports and FIRMs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. Until recently, the standard vertical datum used for newly created or revised FIS reports and FIRMs was the National Geodetic Vertical Datum of 1929 (NGVD). With the completion of the North American Vertical Datum of 1988 (NAVD), many FIS reports and FIRMs are now prepared using NAVD as the referenced vertical datum.

Flood elevations shown in this FIS report and on the FIRM are referenced to the NAVD. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. Some of the data used in this revision were taken from the prior effective FIS reports and FIRMs and adjusted to NAVD88. The datum conversion factor from NGVD29 to NAVD88 in Jefferson County is -0.004 feet.

For information regarding conversion between the NGVD and NAVD, visit the National Geodetic Survey website at www.ngs.noaa.gov, or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
SSMC-3, #9202
National Geodetic Survey
1315 East-West Highway
Silver Spring, Maryland 20910-3282

Temporary vertical monuments are often established during the preparation of a flood hazard analysis for the purpose of establishing local vertical control. Although these monuments are not shown on the FIRM, they may be found in the Technical Support Data Notebook associated with the FIS report and FIRM for this community. Interested individuals may contact FEMA to access these data.

To obtain current elevation, description and/or location information for benchmarks shown on this map, please contact the Information Services Branch of the NGS at (301) 713-3242, or at their website at www.ngs.noaa.gov.

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The NFIP encourages State and local governments to adopt sound floodplain management programs. To assist in this endeavor, each FIS report provides 1-percent-annual-chance floodplain data, which may include a combination of the following: 10-, 2-, 1-, and 0.2-percent-annual-chance flood elevations; delineations of the 1- and 0.2-percent-annual-chance floodplains; and a 1-percent-annual-chance floodway. This information is presented on the FIRM and in many components of the FIS report, including Flood Profiles, Floodway Data tables, and Summary of Stillwater Elevation tables. Users should reference the data presented in the FIS report as well as additional information that may be available at the local community map repository before making flood elevation and/or floodplain boundary determinations.

4.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent-annual-chance flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent-annual-chance flood is employed to indicate additional areas of flood risk in the community. For each stream studied by detailed methods, the 1- and 0.2-percent-annual-chance floodplain boundaries have been re-delineated using the flood elevations determined at each cross section. Between cross sections, the boundaries were interpolated using contour data developed from LiDAR data, with a contour interval of 2 feet (Reference 57).

The 1- and 0.2-percent-annual-chance floodplain boundaries are shown on the FIRM. On this map, the 1-percent-annual-chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zones A, AE, AH, and VE), and the 0.2-percent-annual-chance floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 1- and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-annual-chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations, but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

For the streams studied by approximate methods, only the 1-percent-annual-chance floodplain boundary is shown on the FIRM.

4.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard. For purposes of the NFIP, a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 1-percent-annual-chance floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the base flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1 foot, provided that hazardous velocities are not produced. The floodways in this study are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway studies.

The floodways presented in this study were computed on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were determined at cross sections; between cross sections, the boundaries were interpolated. The results of the floodway computations are tabulated for selected cross sections (see Table 7, "Floodway Data"). In cases where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary is shown.

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
AMELIA CUT-OFF								
A	1,200	105	1,047	3.3	16.5	14.3[2]	14.3[2]	0.0
B	2,288	103	1,038	3.3	16.5	14.7[2]	14.7[2]	0.0
C	3,688	109	1,072	3.2	16.5	15.1[2]	15.1[2]	0.0
D	5,688	102	1,027	2.9	16.5	15.7[2]	15.7[2]	0.0
E	7,738	104	1,027	2.9	16.5	16.2[2]	16.2[2]	0.0
F	8,976	108	1,043	2.3	16.5	16.4[2]	16.4[2]	0.0
G	10,736	112	1,196	2.6	18.0	18.0	18.1	0.1
H	12,456	112	1,177	2.6	18.1	18.1	18.2	0.1
I	13,955	62	434	5.3	19.3	19.3	19.4	0.1
J	15,565	57	386	5.3	19.9	19.9	20.0	0.1
K	16,951	61	412	3.0	21.5	21.5	21.5	0.0
L	18,851	54	355	3.4	21.6	21.6	21.6	0.0
M	19,911	52	325	3.2	21.7	21.7	21.7	0.0
N	20,639	48	275	3.8	21.7	21.7	21.7	0.0
O	21,884	51	299	3.0	24.0	24.0	24.0	0.0
P	23,064	50	305	2.9	24.0	24.0	24.0	0.0

[1] Feet above mouth [2] Elevations computed without consideration of backwater effects

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

AMELIA CUT-OFF

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
BAYOU DIN								
A	11,736[1]	2,256	7,440	0.9	9.7[2]	8.6	9.5	0.9
B	19,136[1]	2,623	10,750	0.6	9.7[2]	9.7	10.6	0.9
C	25,236[1]	2,017	8,077	0.9	11.0	11.0	12.0	1.0
D	34,401[1]	1,494	6,111	0.4	13.5	13.5	14.5	1.0
E	36,601[1]	103	527	2.9	15.3	15.3	16.1	0.8
F	42,319[1]	272	1,053	1.4	21.2	21.2	21.9	0.7
G	42,649[1]	812	5,405	0.3	25.3	25.3	26.0	0.7
H	44,849[1]	827	4,890	0.3	25.4	25.4	26.1	0.7
I	46,536[1]	633	3,085	0.5	25.6	25.6	26.4	0.8
J	48,536[1]	445	2,512	0.6	25.7	25.7	26.5	0.8

[1] Feet above mouth at Hillebrandt Bayou [2] Combined Coastal and Riverine Backwater via Hillebrandt Bayou

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

BAYOU DIN

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
BAYOU DIN								
K	50,534[1]	1,532	3,152	0.2	25.9	25.9	26.7	0.8
L	51,934[1]	4,033	5,504	0.1	25.9	25.9	26.7	0.8
M	55,102[1]	446	1,763	0.3	26.1	26.1	26.8	0.7
N	59,415[1]	300	620	0.1	29.5	29.5	30.0	0.5
O	63,791[1]	140	1,171	0.6	31.0	31.0	31.5	0.5
P	71,068[1]	100	663	1.0	31.0	31.0	31.8	0.8
Q	77,199[1]	271	1,519	0.3	31.0	31.0	32.0	1.0
BAYOU DIN TRIBUTARY								
A	753[2]	50	300	3.8	16.8	16.8	17.8	1.0
B	4,290[2]	66	413	2.7	19.9	19.9	20.8	0.9
C	7,023[2]	46	446	2.4	22.0	22.0	22.7	0.7
D	10,037[2]	120	786	0.7	22.6	22.6	23.6	1.0

[1] Feet above mouth [2] Feet above mouth at Hillebrandt Bayou

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

BAYOU DIN – BAYOU DIN TRIBUTARY

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
CHANNEL CONNECTOR								
A	50	22	61	3.0	23.6	23.6	23.6	0.0
B	1,295	25	81	2.3	24.6	24.6	24.6	0.0
CHANNEL TO JANES GULLY								
A	80	26	66	1.9	22.5	22.5	22.5	0.0
B	930	26	67	1.9	22.6	22.6	22.6	0.0
C	2,054	89	157	1.6	23.1	23.1	23.1	0.0
D	3,005	30	90	4.9	24.8	24.8	24.8	0.0
E	3,759	32	108	2.0	25.6	25.6	25.6	0.0
F	4,043	30	100	2.2	25.6	25.6	25.7	0.1
G	4,461	46	80	2.7	26.7	26.7	26.7	0.0
H	4,857	17	33	1.5	27.2	27.2	27.2	0.0
I	5,209	56	65	0.8	27.6	27.6	27.6	0.0
J	5,459	56	81	0.3	28.0	28.0	28.0	0.0
K	5,872	30	52	0.5	28.1	28.1	28.1	0.0

[1] Feet above confluence with Janes Gully

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

CHANNEL CONNECTOR – CHANNEL TO JANES GULLY

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
COTTON CREEK								
A	410	563	2,105	1.0	40.7	40.7	40.8	0.1
B	6,510	1,161	5,158	0.4	41.4	41.4	41.9	0.5
C	9,780	1,262	3,643	0.4	41.7	41.7	42.3	0.6
D	9,980	1,491	6,056	0.2	41.6	41.6	42.2	0.6
E	12,600	2,566	8,363	0.2	42.2	42.2	42.2	0.0
F	14,400	2,246	6,932	0.2	42.2	42.2	42.2	0.0
DITCH 505								
A	4,400	1,380	4,526	0.8	13.4	13.4	14.2	0.8
B	7,863	1,610	13,998	0.1	14.1	14.1	14.9	0.8
C	12,663	100	550	3.4	15.0	15.0	15.6	0.6
D	17,806	716	2,869	0.5	17.6	17.6	18.3	0.7
E	23,335	436	1,738	0.5	18.6	18.6	19.4	0.8

[1] Feet above mouth

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

COTTON CREEK – DITCH 505

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
DITCH 505 TRIBUTARY								
A	1,460	596	2,043	0.3	17.7	17.7	18.3	0.6
B	3,900	150	307	2.4	17.4	17.4	18.2	0.8
C	6,130	310	923	0.8	18.8	18.8	19.6	0.8
GREEN POND GULLY (DITCH 607)								
A	50,880	636	2,088	0.6	27.4	27.4	28.4	1.0
B	52,668	63	447	2.7	28.1	28.1	28.8	0.7
C	57,131	1,554	3,501	0.4	30.7	30.7	31.0	0.3
D	61,248	167	609	2.2	32.2	32.2	32.9	0.7
E	65,798	2,397	7,587	0.2	33.1	33.1	33.8	0.7
F	70,077	50	328	2.3	34.1	34.1	34.7	0.6
G	73,364	63	377	2.0	34.8	34.8	35.5	0.7
H	78,018	1,598	4,001	0.2	35.3	35.3	36.2	0.9
I	80,922	57	401	1.8	36.1	36.1	36.9	0.8
J	83,815	490	2,970	0.2	40.2	40.2	40.7	0.5

[1] Feet above mouth

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

DITCH 505 TRIBUTARY – GREEN POND GULLY (DITCH 607)

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
HILLEBRANDT BAYOU								
A	8,190	769	8,102	1.5	9.7[2]	3.8	4.6	0.8
B	11,004	934	5,684	2.2	9.7[2]	4.4	5.2	0.8
C	15,190	2,058	9,953	1.2	9.7[2]	4.8	5.6	0.8
D	20,490	1,902	10,013	1.2	9.7[2]	5.4	6.2	0.8
E	21,790	1,931	7,908	1.5	9.7[2]	5.5	6.3	0.8
F	24,660	420	5,018	2.3	9.7[2]	5.7	6.5	0.8
G	28,640	640	5,004	2.3	9.7[2]	6.0	6.8	0.8
H	31,080	1,000	6,549	1.8	9.7[2]	6.4	7.2	0.8
I	33,680	1,109	7,160	1.6	9.7[2]	6.6	7.5	0.9
J	35,480	1,028	7,315	1.6	9.7[2]	6.6	7.5	0.9
K	37,560	700	4,609	2.0	9.7[2]	6.9	7.7	0.8
L	43,590	485	4,231	2.2	9.7[2]	7.2	8.1	0.9
M	48,240	1,464	7,675	1.2	9.7[2]	7.6	8.5	0.9
N	54,100	3,669	17,285	0.5	9.7[2]	7.9	8.8	0.9

[1] Feet above mouth [2] Combined Coastal and Riverine Backwater

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

HILLEBRANDT BAYOU

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
HILLEBRANDT BAYOU								
O	55,670	213	2,438	2.7	9.7[2]	7.9	8.8	0.9
P	61,250	218	3,012	2.2	9.7[2]	8.4	9.2	0.8
Q	65,280	229	2,280	2.7	9.7[2]	9.0	9.7	0.7
R	67,480	203	2,128	2.7	9.7[2]	9.2	9.8	0.6
HILLEBRANDT BAYOU (CALDWOOD CUT-OFF)								
S	72,380	195	2,602	4.1	13.0	13.0	13.1	0.1
T	75,510	222	3,081	3.5	13.6	13.6	13.7	0.1
U	76,100	206	3,095	3.5	13.9	13.9	14.0	0.1
V	79,050	262	3,022	3.0	14.0	14.0	14.0	0.0
W	81,090	303	3,429	2.7	14.1	14.1	14.2	0.1
X	82,970	116	1,423	4.5	14.3	14.3	14.4	0.1
Y	85,210	118	1,111	5.8	15.3	15.3	15.4	0.1
Z	89,760	108	1,041	4.3	17.9	17.9	18.1	0.2

[1] Feet above mouth [2] Combined Coastal and Riverine Backwater

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

HILLEBRANDT BAYOU / HILLEBRANDT BAYOU (CALDWOOD CUT-OFF)

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
HILLEBRANDT BAYOU (CALDWOOD CUT-OFF)								
AA	91,410	90	839	5.4	18.4	18.4	19.0	0.6
AB	95,010	100	1,358	3.3	20.4	20.4	20.8	0.4
AC	98,430	75	773	3.6	20.8	20.8	21.2	0.4
AD	99,810	90	884	3.3	21.3	21.3	21.7	0.4
AE	104,340	51	566	4.9	22.2	22.2	22.5	0.3
AF	108,500	54	422	6.5	26.6	26.6	26.6	0.0
AG	110,880	118	429	6.4	27.3	27.3	27.6	0.3
HILLEBRANDT OXBOW								
A	360	86	616	5.3	14.1	7.5[2]	8.5[2]	1.0
B	2,560	88	654	5.0	14.1	8.2[2]	9.0[2]	0.8
C	5,190	73	587	5.6	14.1	8.7[2]	9.6[2]	0.9
D	8,110	81	516	5.3	14.1	9.7[2]	10.3[2]	0.6
E	10,560	70	433	6.4	14.1	10.7[2]	11.7[2]	1.0

[1] Feet above mouth [2] Elevations computed without consideration of backwater effects

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

HILLEBRANDT BAYOU (CALDWOOD CUT-OFF) – HILLEBRANDT OXBOW

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
HILLEBRANDT OXBOW								
F	12,090	97	683	3.2	14.1	11.7[2]	12.4[2]	0.7
G	13,200	68	768	2.8	16.2	16.2	16.2	0.0
H	14,100	71	358	3.0	16.3	16.3	16.3	0.0
I	16,460	79	380	2.8	16.7	16.7	16.8	0.1
JANES GULLY								
A	780	56	321	6.3	15.3	14.9[2]	14.9[2]	0.0
B	2,280	71	341	5.9	15.5	15.5	15.5	0.0
C	3,019	91	643	2.1	17.2	17.2	17.8	0.6
D	4,063	87	586	2.3	17.4	17.4	17.9	0.5
E	5,470	87	567	2.4	18.1	18.1	18.5	0.4
F	7,218	79	406	3.3	18.6	18.6	18.9	0.3
G	8,213	51	318	0.4	20.6	20.6	20.7	0.1
H	8,951	47	264	0.5	20.6	20.6	20.7	0.1
I	9,936	37	203	0.6	20.7	20.7	20.8	0.1
J	10,627	34	172	0.7	20.8	20.8	20.9	0.1

[1] Feet above mouth [2] Elevations computed without consideration of backwater effects

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

HILLEBRANDT OXBOW – JANES GULLY

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
JANES GULLY								
K	11,441[1]	45	152	0.8	20.9	20.9	20.9	0.0
L	14,043[1]	48	227	2.7	22.1	22.1	22.1	0.0
M	15,633[1]	44	176	2.4	22.5	22.5	22.6	0.1
N	16,329[1]	32	119	2.3	24.3	24.3	24.3	0.0
O	17,443[1]	29	96	1.4	24.4	24.4	24.4	0.0
P	19,136[1]	26	75	1.3	25.0	25.0	25.0	0.0
JANES GULLY DIVERSION								
A	167[2]	83	560	1.3	20.5	20.5	20.6	0.1
B	775[2]	77	496	1.4	20.7	20.7	20.8	0.1
C	1,587[2]	71	402	1.8	20.8	20.8	20.8	0.0
D	2,275[2]	61	342	2.1	21.0	21.0	21.1	0.1
E	3,256[2]	164	831	0.9	21.3	21.3	21.4	0.1

[1] Feet above mouth [2] Feet above confluence with Janes Gully

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

JANES GULLY – JANES GULLY DIVERSION

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
KEITH DITCH								
A	3,320	200	700	2.0	22.9	22.6[2]	23.5[2]	0.9
B	7,564	115	505	2.5	26.1	26.1	26.7	0.6
C	10,242	65	334	2.5	26.9	26.9	27.1	0.2
D	12,500	56	238	1.8	27.3	27.3	27.5	0.2
KIDD GULLY								
A	4,000	2,107	6,265	0.5	14.5	14.5	15.5	1.0
B	7,000	1,100	2,691	1.1	15.8	15.8	16.7	0.9
C	8,640	1,100	4,885	0.6	19.2	19.1	19.5	0.4
D	10,320	2,150	6,371	0.5	19.4	19.4	19.8	0.4
E	12,040	900	3,318	0.9	20.0	20.0	20.8	0.8
F	15,860	1,100	2,307	1.3	23.2	23.2	24.0	0.8

[1] Feet above mouth [2] Elevations computed without consideration of backwater effects

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

KEITH DITCH – KIDD GULLY

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
MAYHAW BAYOU								
A	33,259	10,000	21,375	0.3	11.2	11.2	12.1	0.9
B	46,244	6,528	20,754	0.3	13.7	13.7	13.8	0.1
C	48,900	2,000	4,458	1.1	15.4	15.4	15.8	0.4
D	61,774	145	735	1.5	22.1	22.1	22.8	0.7
MAYHAW BAYOU TRIBUTARY								
A	2,025	150	911	2.5	17.9	17.9	18.6	0.7
NECHES RIVER								
A	108,600	7,000	67,481	2.0	10.8	10.8	11.2	0.4
B	116,100	9,664	112,933	1.2	11.9	11.9	12.5	0.6
C	120,600	13,926	156,204	0.9	12.4	12.4	13.0	0.6
D	124,100	15,458	179,937	0.8	12.8	12.8	13.6	0.8
E	128,500	9,045	104,945	1.3	13.2	13.2	14.0	0.8

[1] Feet above mouth

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

MAYHAW BAYOU – MAYHAW BAYOU TRIBUTARY – NECHES RIVER

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
NECHES RIVER								
F	139,000	14,711	194,385	0.7	14.0	14.0	14.9	0.9
G	146,200	7,898	92,964	1.5	14.7	14.7	15.6	0.9
PINE ISLAND BAYOU								
A	16,150	6,668	36,901	1.1	15.0	9.6[2]	10.5[2]	0.9
B	17,610	6,547	40,332	1.0	15.0	10.0[2]	10.9[2]	0.9
C	23,910	4,047	28,310	1.4	15.0	11.4[2]	12.3[2]	0.9
D	30,010	2,154	11,131	3.6	15.0	13.5[2]	14.3[2]	0.8
E	33,110	4,197	31,175	1.3	15.0	14.8[2]	15.5[2]	0.7
F	36,210	2,340	21,939	1.8	15.3	15.3	16.0	0.7
G	38,610	859	10,786	3.7	15.7	15.7	16.4	0.7
H	40,660	300	7,078	5.7	16.4	16.4	17.2	0.8
I	42,810	557	9,293	4.3	17.5	17.5	18.3	0.8
J	45,960	1,598	19,294	2.1	18.3	18.3	19.1	0.8

[1] Feet above mouth [2] Elevations computed without consideration of backwater effects

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

NECHES RIVER - PINE ISLAND BAYOU

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
PINE ISLAND BAYOU								
K	48,460	2,977	23,675	1.7	18.9	18.9	19.7	0.8
L	53,910	2,939	25,592	1.6	20.0	20.0	20.9	0.9
M	58,660	2,804	33,895	1.2	20.5	20.5	21.4	0.9
N	66,210	2,977	37,672	1.0	21.1	21.1	22.0	0.9
O	75,610	2,650	35,011	0.9	21.5	21.5	22.4	0.9
P	77,510	1,585	23,325	1.3	21.8	21.8	22.6	0.8
Q	82,560	1,880	26,153	1.9	22.2	22.2	23.1	0.9
R	89,160	2,228	28,635	1.1	22.9	22.9	23.7	0.8
S-W*								
QUINN DITCH								
A	1,865	442	1,299	1.6	11.4	11.4	11.7	0.3
B	3,565	92	373	4.8	13.4	13.4	13.4	0.0
C	4,965	70	266	5.8	16.2	16.2	16.2	0.0
D	6,255	54	226	5.9	19.5	19.5	19.5	0.0

[1] Feet above mouth *No floodway data computed

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

PINE ISLAND BAYOU – QUINN DITCH

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
RHODAIR GULLY								
A	14,330[1]	570	2,525	1.1	9.6[2]	5.0[3]	6.0[3]	1.0
B	24,600[1]	100	797	3.3	9.6[2]	7.3[3]	7.7[3]	0.4
C	31,260[1]	114	973	2.7	9.6[2]	9.3[3]	9.7[3]	0.4
D	32,400[1]	87	831	3.2	10.1	9.7[3]	10.7[3]	1.0
E	35,560[1]	99	818	3.2	12.2	12.2	12.7	0.5
F	39,160[1]	243	918	2.9	13.1	13.1	13.8	0.7
G	42,210[1]	939	2,384	1.1	13.9	13.9	14.8	0.9
H	42,740[1]	1,258	4,094	0.6	14.9	14.9	15.7	0.8
SOUTH FORK TAYLOR BAYOU								
A	34,700[4]	1,732	6,249	0.9	12.4	12.4	13.4	1.0
B	40,229[4]	4,670	20,986	0.3	13.5	13.5	14.1	0.6
C	43,723[4]	3,343	21,015	0.3	14.4	14.4	15.0	0.6
D	50,868[4]	2,463	6,666	0.8	14.6	14.6	15.4	0.8
E	56,981[4]	813	2,806	1.9	17.8	17.8	17.9	0.1

[1] Feet above mouth [2] Combined Coastal and Riverine Backwater
[3] Elevations computed without consideration of coastal flooding effects from Gulf of Mexico [4] Feet above confluence with Taylor Bayou

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

RHODAIR GULLY – SOUTH FORK TAYLOR BAYOU

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
TAYLOR BAYOU/NORTH FORK TAYLOR BAYOU								
A	24,000	2,932	21,593	0.8	10.0[2]	9.8	10.8	1.0
B	26,200	1,507	17,092	1.0	10.9	10.9	11.9	1.0
C	31,000	1,714	15,941	1.1	10.9	10.9	11.9	1.0
D	35,000	318	5,368	2.5	10.5	10.5	11.4	0.9
E	48,696	6,950	56,116	0.3	11.1	11.1	12.1	1.0
F	57,283	3,381	25,522	0.4	11.2	11.2	12.2	1.0
G	63,203	1,465	11,405	1.0	11.5	11.5	12.5	1.0
WALKER BRANCH								
A	2,840	620	2,015	8.0	21.0	14.7[3]	14.7[3]	0.0
B	4,200	618	2,155	7.8	21.0	15.9[3]	15.9[3]	0.0
C	10,403	78	471	6.4	21.7	21.7	21.7	0.0
D	11,526	82	707	4.2	22.7	22.7	22.7	0.0
E	15,125	84	451	4.4	23.7	23.7	23.7	0.0

[1] Feet above mouth [2] Combined Coastal and Riverine Backwater

[3] Elevations computed without consideration of backwater effects

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

TAYLOR BAYOU/NORTH FORK TAYLOR BAYOU – WALKER BRANCH

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
WALKER BRANCH								
F	16,600	86	476	4.3	24.2	24.2	24.2	0.0
G	19,250	53	250	5.5	25.8	25.8	25.8	0.0
H	20,600	53	226	5.2	26.5	26.5	26.5	0.0
I	22,990	49	209	3.0	28.2	28.2	28.2	0.0
WALKER BRANCH RELIEF DITCH								
A	100	80	651	0.3	23.0	23.0[2]	23.6[2]	0.6
B	3,050	79	313	0.7	23.0	23.0[2]	23.6[2]	0.6
C	3,300	80	336	0.6	23.6	23.6	24.2	0.8
D	4,300	73	339	0.6	23.6	23.6	24.2	0.8
WALKER BRANCH TRIBUTARY								
A	1,375	400	1,207	4.6	21.9	21.2[2]	22.0[2]	0.8
B	6,180	300	1,403	1.9	23.2	23.2	23.9	0.7
C	8,575	90	583	4.6	25.3	25.3	25.8	0.5

[1] Feet above mouth [2] Elevations computed without consideration of backwater effects

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

WALKER BRANCH - WALKER BRANCH RELIEF DITCH – WALKER BRANCH TRIBUTARY

FLOODING SOURCE	FLOODWAY				BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION (SQUARE FEET)	MEAN VELOCITY (FEET/ SECOND)	REGULATORY	WITHOUT FLOODWAY (FEET)	WITH FLOODWAY (FEET)	INCREASE
WALKER BRANCH TRIBUTARY								
D	11,045	88	690	1.7	29.4	29.4	29.9	0.5
E	13,070	75	587	2.0	30.8	30.8	31.2	0.4
WILLOW MARSH BAYOU								
A	2,100	1,286	2,362	1.8	9.7[2]	7.4[3]	8.4[3]	1.0
B	3,960	447	1,778	2.4	10.2	10.2	10.8	0.6
C	7,380	736	2,893	1.4	11.4	11.4	12.3	0.9
D	10,064	3,896	12,065	0.8	13.6	13.6	14.6	1.0
E	16,330	5,167	35,876	0.3	16.2	16.2	17.1	0.9
F	18,703	592	3,173	2.9	16.3	16.3	16.5	0.2
G	21,072	130	1,834	5.1	16.5	16.5	16.6	0.1
H	24,179	1,306	3,556	1.5	17.8	17.8	18.4	0.6
I	32,118	3,096	5,432	0.7	23.3	23.3	23.8	0.5
J	34,080	2,827	6,620	0.7	23.7	23.7	24.4	0.7

[1] Feet above mouth [2] Combined Coastal and Riverine Backwater via Hillebrandt Bayou [3] Elevations computed without consideration of backwater effects

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

FLOODWAY DATA

WALKER BRANCH TRIBUTARY - WILLOW MARSH BAYOU

The area between the floodway and 1-percent-annual-chance floodplain boundaries is termed the floodway fringe. The floodway fringe encompasses the portion of the floodplain that could be completely obstructed without increasing the water-surface elevation (WSEL) of the base flood more than 1 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 3, Floodway Schematic.

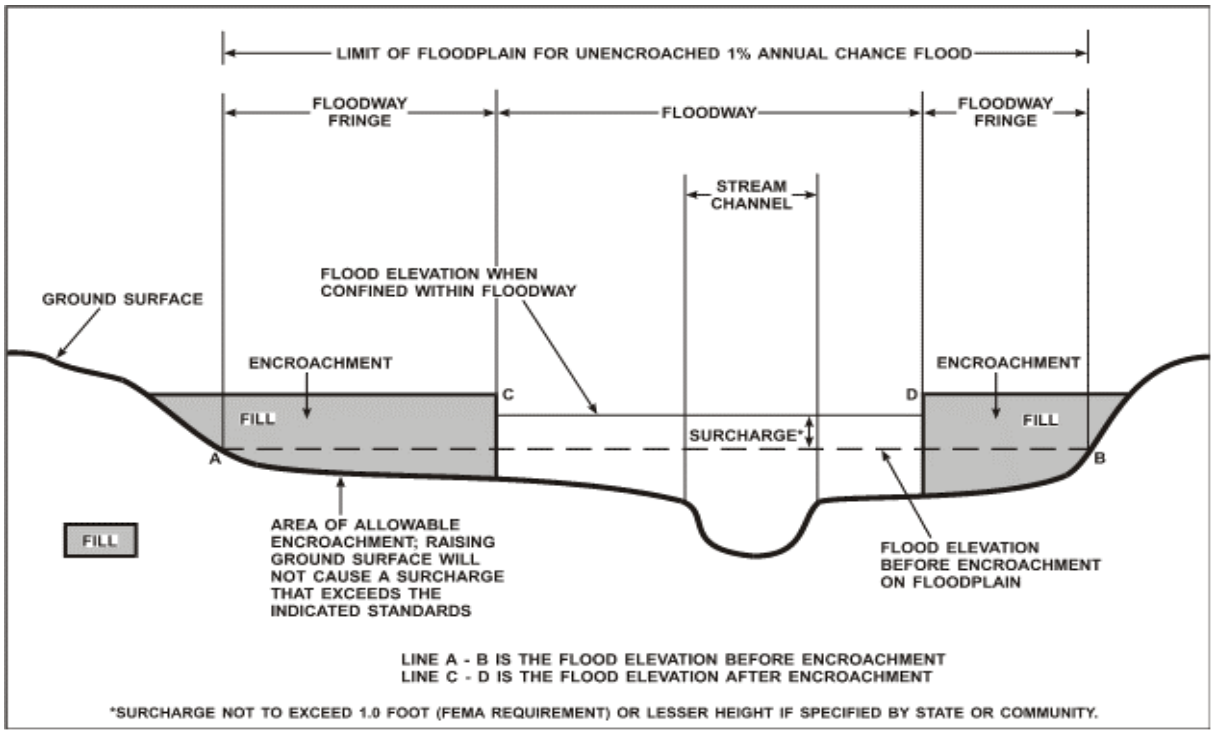

FIGURE 3 – FLOODWAY SCHEMATIC

5.0 INSURANCE APPLICATIONS

For flood insurance rating purposes, flood insurance zone designations are assigned to a community based on the results of the engineering analyses. The zones are as follows:

Zone A

Zone A is the flood insurance rate zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS report by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no base (1-percent-annual-chance) flood elevations (BFEs) or depths are shown within this zone.

Zone AE

Zone AE is the flood insurance rate zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS report by detailed methods. Whole-foot BFEs derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone AH

Zone AH is the flood insurance rate zone that corresponds to the 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot BFEs derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone VE

Zone VE is the flood insurance rate zone that corresponds to the 1-percent-annual-chance coastal floodplains that have additional hazards associated with storm waves. Whole-foot base flood elevations derived from the detailed hydraulics analyses are shown at selected intervals within this zone.

Zone X

Zone X is the flood insurance rate zone that corresponds to areas outside the 0.2-percent-annual-chance floodplain, areas within the 0.2-percent-annual-chance floodplain, areas of 1-percent-annual-chance flooding where average depths are less than 1 foot, areas of 1-percent-annual-chance flooding where the contributing drainage area is less than 1 square mile (sq. mi.), and areas protected from the base flood by levees. No BFEs or depths are shown within this zone.

Boundaries of the John H. Chafee Coastal Barrier Resources System (CBRS) shown on the FIRM were transferred from the official CBRS source maps and depicted on the FIRM for informational purposes only. The official CBRS maps are enacted by Congress via the Coastal Barrier Resources Act, as amended, and maintained by the U.S. Fish and Wildlife Service (FWS). The official CBRS maps used to determine whether or not an area is located within CBRS are available for download at http://www.fws.gov. For an official determination of whether or not an area is located within the CBRS, or for any questions regarding the CBRS, please contact with the FWS field office at 281-286-8282.

6.0 FLOOD INSURANCE RATE MAP

The FIRM is designed for flood insurance and floodplain management applications.

For flood insurance applications, the map designates flood insurance rate zones as described in Section 5.0 and, in the 1-percent-annual-chance floodplains that were studied by detailed methods, shows selected whole-foot BFEs or average depths. Insurance agents use zones and BFEs in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

For floodplain management applications, the map shows by tints, screens, and symbols, the 1- and 0.2-percent-annual-chance floodplains, floodways, and the locations of selected cross sections used in the hydraulic analyses and floodway computations.

The county-wide FIRM presents flooding information for the entire geographic area of Jefferson County. Previously, FIRMs were prepared for each incorporated community and the unincorporated areas of the county identified as flood-prone. This county-wide FIRM also includes flood-hazard information that was presented separately on Flood Boundary and Floodway Maps (FBFMs), where applicable. Historical data relating to the maps prepared for each community are presented in Table 8, "Community Map History."

7.0 OTHER STUDIES

Studies are currently being performed in Chambers, Harris and Orange Counties, Texas. The flood insurance study for Cameron Parish, Louisiana was issued November 16, 2012, and the flood insurance study for Hardin, TX was issued April 6, 2010.

This FIS report either supersedes or is compatible with all previous studies published on streams studied in this report and should be considered authoritative for the purposes of the NFIP.

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting FEMA Region VI, Federal Insurance and Mitigation Division, 800 North Loop 288, Denton, Texas 76209.

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISION DATE(S)	FIRM EFFECTIVE DATE	FIRM REVISIONS (DATES)
Beaumont, City of	September 2, 1970	None	August 6, 2002	August 6, 2002
Bevil Oaks, City of	May 13, 1977	None	September 4, 1987	
China, City of	August 6, 2002	None	August 6,2002	
Groves, City of	March 26, 1970	None	January 6, 1983	
Jefferson County Unincorporated Areas	August 30, 1977	None	June 1, 1983	November 20, 1991 August 6, 2002
Nederland, City of	November 17, 1970	None	June 3, 1991	
Nome, City of	July 12, 1977	None	February 2, 1983	
Port Arthur, City of	May 26, 1970	None	May 26, 1970	July 1, 1974 January 3, 1975 October 8, 1976 March 20, 1981 October 1, 1983 April 17, 1984 May 4, 1992
Port Neches, City of	November 17, 1970	None	January 6, 1983	January 6, 1983
Taylor Landing, City of	November 14, 2008	None	August 6, 2002	

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

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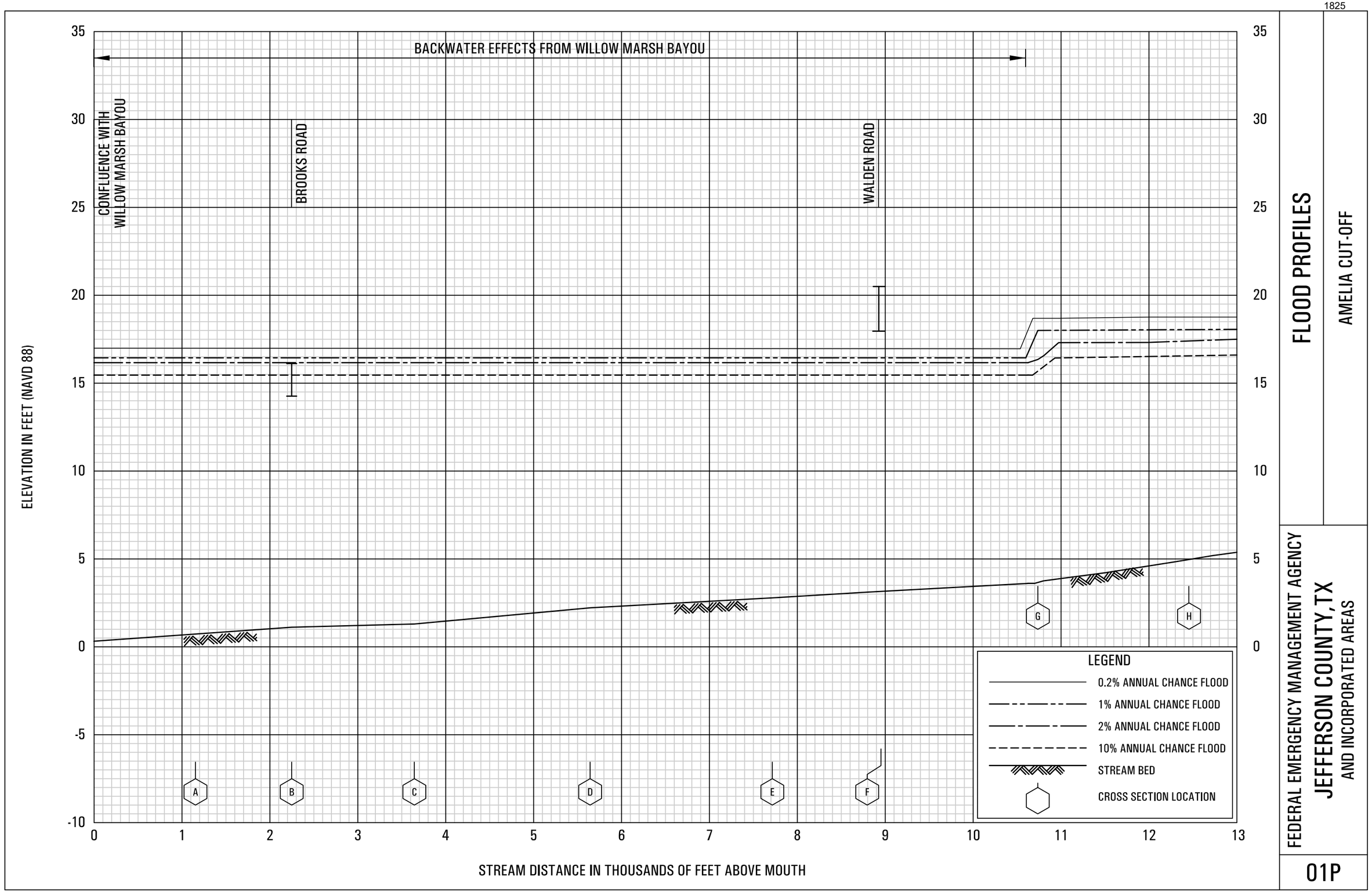


FLOOD PROFILES

AMELIA CUT-OFF

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

01P

ELEVATION IN FEET (NAVD 88)

PORT FRESH WATER CANAL
PEVITOT DRIVE
UNNAMED ROAD
WASHINGTON BOULEVARD
GUINN AVENUE
BRIGHTON AVENUE
CONFLUENCE OF AND DIVERGENCE FROM JANES GULLY
U.S. HIGHWAY 90 COLLEGE STREET
SOUTHERN PACIFIC RAILROAD
MISSOURI PACIFIC RAILROAD
CALDER AVENUE
PHELAN BOULEVARD
PRUTZMAN ROAD
DIVERGENCE FROM KEITH DITCH

45
40
35
30
25
20
15
10
5
0

13 14 15 16 17 18 19 20 21 22 23 24

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

I J K L M N O P

LEGEND
- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

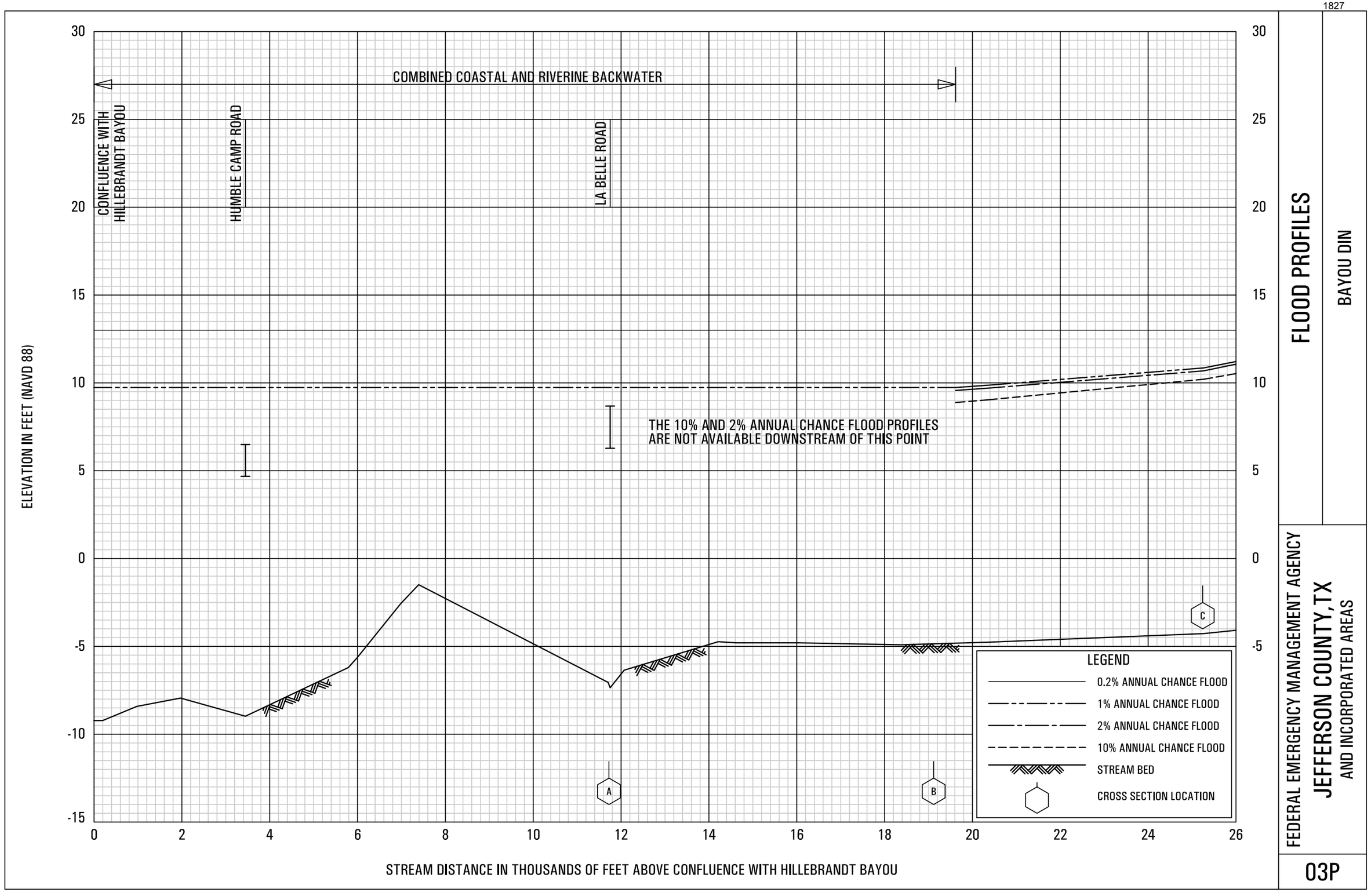
FLOOD PROFILES

AMELIA CUT-OFF

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

02P



FLOOD PROFILES

BAYOU DIN

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

03P

ELEVATION IN FEET (NAVD 88)

35
30
25
20
15
10
5
0
-5
-10

26
28
30
32
34
36
38
40
42
44
46
48
50

WOODEN BRIDGE
CONFLUENCE OF KIDD GULLY
GAULDING ROAD
CONFLUENCE OF BAYOU DIN TRIBUTARY
STATE HIGHWAY 124
RAILROAD
INTERSTATE HIGHWAY - 10 WEST CLUBB ROAD
MACK ROAD

D
E
F
G
H
I
J

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE CONFLUENCE WITH HILLEBRANDT BAYOU

FLOOD PROFILES

BAYOU DIN

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD 88)

50
45
40
35
30
25
20
15
10
5

DIRT ROAD
DIRT ROAD
MARTIN LUTHER KING ROAD
GALLIER CANAL
PRIVATE ROAD NO. 14
PRIVATE ROAD NO. 13
PRIVATE ROAD NO. 12
PRIVATE ROAD NO. 12-A
PRIVATE ROAD NO. 11
PRIVATE ROAD NO. 10
PRIVATE ROAD NO. 9
PRIVATE ROAD NO. 7
PRIVATE ROAD NO. 4
PRIVATE ROAD NO. 8
PRIVATE ROAD NO. 6
PRIVATE ROAD NO. 5

THE 2% AND 0.2% ANNUAL CHANCE FLOOD PROFILES ARE TOO CLOSE TO THE 1% ANNUAL CHANCE FLOOD ELEVATION TO BE SHOWN SEPARATELY

K
L
M
N
O

LEGEND
- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

50 52 54 56 58 60 62 64 66 68 70

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE CONFLUENCE WITH HILLEBRANDT BAYOU

FLOOD PROFILES

BAYOU DIN

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

05P

ELEVATION IN FEET (NAVD 88)

60
55
50
45
40
35
30
25
20
15

PRIVATE ROAD NO. 3
LAWHON ROAD
PRIVATE ROAD NO. 2
LIMIT OF DETAILED STUDY

THE 2% ANNUAL CHANCE FLOOD PROFILE IS TOO CLOSE TO THE 1% ANNUAL CHANCE FLOOD ELEVATION TO BE SHOWN SEPARATELY

P
Q

LEGEND
- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

70
72
74
76
78

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE CONFLUENCE WITH HILLEBRANDT BAYOU

FLOOD PROFILES

BAYOU DIN

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

06P

ELEVATION IN FEET (NAVD 88)

CONFLUENCE WITH BAYOU DIN
WOODEN BRIDGE
EAST GLENBROOK DRIVE CULVERT A
EAST GLENBROOK DRIVE CULVERT A
GALLIER CANAL
LIMIT DETAILED STUDY

A
B
C
D

LEGEND
*0.2% ANNUAL CHANCE FLOOD
1% ANNUAL CHANCE FLOOD
*2% ANNUAL CHANCE FLOOD
*10% ANNUAL CHANCE FLOOD
STREAM BED
CROSS SECTION LOCATION

* NOT COMPUTED

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE CONFLUENCE WITH BAYOU DIN

FLOOD PROFILES

BAYOU DIN TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

07P

ELEVATION IN FEET (NAVD 88)

50
45
40
35
30
25
20
15
10
5

CONFLUENCE WITH JANES GULLY

DIVERGENCE FROM CHANNEL TO JANES GULLY

A

B

0
400
800
1200
1600

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH JANES GULLY

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

CHANNEL CONNECTOR

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS

08P

FLOOD PROFILES

CHANNEL TO JANES GULLY

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS

09P

ELEVATION IN FEET (NAVD 88)

60
55
50
45
40
35
30
25
20
15

LIMIT OF DETAILED STUDY
STATE HIGHWAY 326

DIRT ROAD

UNNAMED ROAD

CITY OF NOME
3RD STREET
JEFFERSON COUNTY

JEFFERSON COUNTY
CITY OF NOME

A
B
C
D

LEGEND
0.2% ANNUAL CHANCE FLOOD
1% ANNUAL CHANCE FLOOD
2% ANNUAL CHANCE FLOOD
10% ANNUAL CHANCE FLOOD
STREAM BED
CROSS SECTION LOCATION

0 1 2 3 4 5 6 7 8 9 10 11 12

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE STATE HIGHWAY 326

FLOOD PROFILES

COTTON CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

10P

1835

ELEVATION IN FEET (NAVD 88)

60
55
50
45
40
35
30
25
20
15

12
13
14
15

SOUTHERN PACIFIC RAILROAD
LIMIT OF DETAILED STUDY

E
F

LEGEND
0.2% ANNUAL CHANCE FLOOD
1% ANNUAL CHANCE FLOOD
2% ANNUAL CHANCE FLOOD
10% ANNUAL CHANCE FLOOD
STREAM BED
CROSS SECTION LOCATION

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE STATE HIGHWAY 326

FLOOD PROFILES

COTTON CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

11P

FLOOD PROFILES

DITCH 505

ELEVATION IN FEET (NAVD 88)

35
30
25
20
15
10
5
0
-5
-10

LIMIT OF DETAILED STUDY

RAILROAD

HIGHWAY 365
SHELL ROAD

A
B
C

LEGEND

- *0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- *2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

3 4 5 6 7 8 9 10 11 12 13 14 15

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

*NOT COMPUTED

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

12P

ELEVATION IN FEET (NAVD 88)

40
35
30
25
20
15
10
5
0
-5

INTERSTATE HIGHWAY 10
CONFLUENCE OF TRIBUTARY OF DITCH 505
WEST CLUBB ROAD
LIMIT OF DETAILED STUDY

D
E

LEGEND
*0.2% ANNUAL CHANCE FLOOD
1% ANNUAL CHANCE FLOOD
*2% ANNUAL CHANCE FLOOD
10% ANNUAL CHANCE FLOOD
STREAM BED
CROSS SECTION LOCATION

15 16 17 18 19 20 21 22 23 24

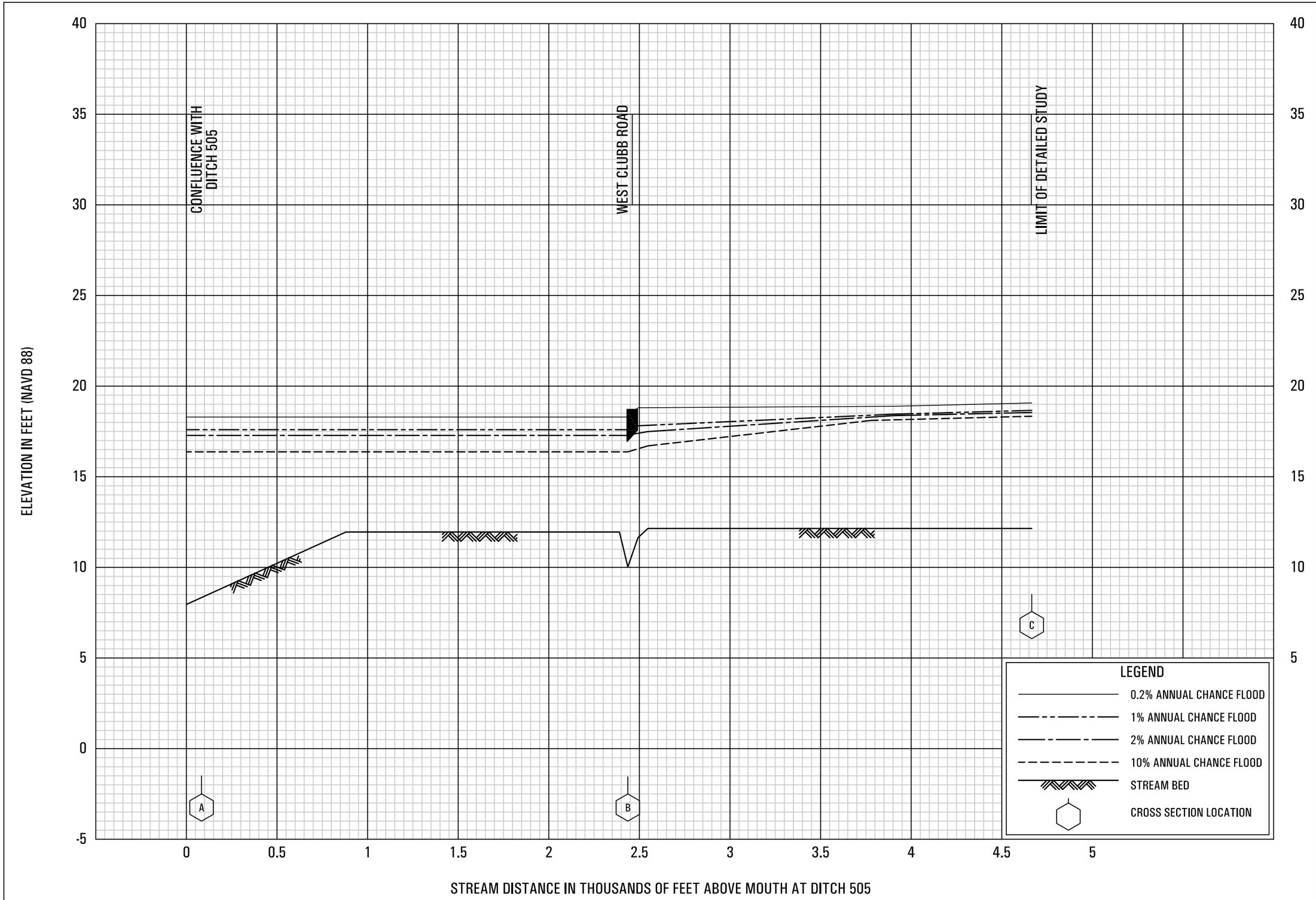
STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

*NOT COMPUTED

FLOOD PROFILES

DITCH 505

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, TX
AND INCORPORATED AREAS



FLOOD PROFILES

DITCH 505 TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS

14P

ELEVATION IN FEET (NAVD 88)

50
45
40
35
30
25
20
15
10
5

SOUTH PINE ISLAND ROAD
WALDEN ROAD
PRIVATE CROSSING # 1
PRIVATE CROSSING # 2
PRIVATE CROSSING # 3
PRIVATE CROSSING # 4

A
B
C
D

LEGEND
*0.2% ANNUAL CHANCE FLOOD
1% ANNUAL CHANCE FLOOD
*2% ANNUAL CHANCE FLOOD
*10% ANNUAL CHANCE FLOOD
STREAM BED
CROSS SECTION LOCATION

0 1 2 3 4 5 6 7 8 9 10 11 12 13

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

* NOT COMPUTED

FLOOD PROFILES

GREEN POND GULLY (DITCH 607)

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

PRIVATE CROSSING # 5

U.S. HIGHWAY 90

SOUTH PACIFIC RAILROAD

YORKSHIRE DRIVE

PRIVATE CROSSING # 6

ELEVATION IN FEET (NAVD 88)

55
50
45
40
35
30
25
20
15
10

13 14 15 16 17 18 19 20 21 22 23 24 25 26

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

E F G

LEGEND

- *0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- *2% ANNUAL CHANCE FLOOD
- *10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

* NOT COMPUTED

FLOOD PROFILES

GREEN POND GULLY (DITCH 607)

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS

16P

ELEVATION IN FEET (NAVD 88)

60
55
50
45
40
35
30
25
20
15

MEEKER ROAD
PRIVATE CROSSING # 7
PRIVATE CROSSING # 8
PRIVATE CROSSING # 9
PRIVATE CROSSING # 10
PRIVATE CROSSING # 11
UNION PACIFIC RAILROAD
OLD SOUR LAKE ROAD
PRIVATE CROSSING # 11
BI CANAL LEVEE
GALLER ROAD
LIMIT OF DETAILED STUDY

H
I
J

LEGEND

- *0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- *2% ANNUAL CHANCE FLOOD
- *10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

* NOT COMPUTED

26 27 28 29 30 31 32 33 34

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

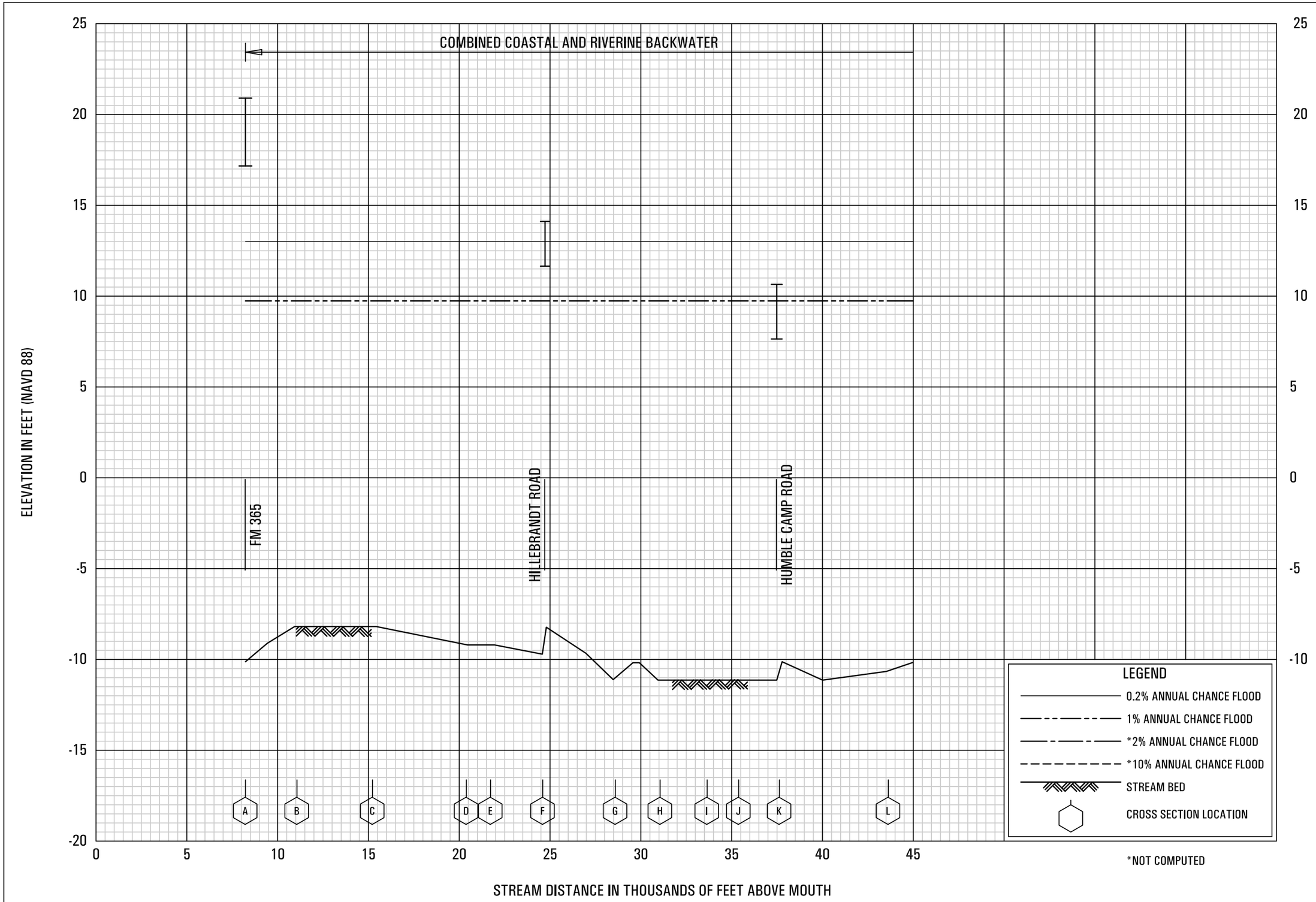
FLOOD PROFILES

GREEN POND GULLY (DITCH 607)

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

17P



FLOOD PROFILES

HILLEBRANDT BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS

COMBINED COASTAL AND RIVERINE BACKWATER

HILLEBRANDT BAYOU

HILLEBRANDT BAYOU
(CALDWOOD CUT-OFF)

JEFFERSON COUNTY
CITY OF BEAUMONT

CONFLUENCE OF
WILLOW MARSH BAYOU

THE 10% AND 2% ANNUAL CHANCE FLOOD PROFILES
ARE NOT AVAILABLE DOWNSTREAM OF THIS POINT

STATE HIGHWAY 124
(FANNETT ROAD)

ATCHISON TOPEKA
AND SANTA FE RAILROAD

INTERSTATE HIGHWAY 10

CONFLUENCE OF
HILLEBRANDT OXBOW

TIMBER BRIDGE

WASHINGTON BOULEVARD

CONFLUENCE OF JANES GULLY

U.S. HIGHWAY 90
(COLLEGE STREET)

UNNAMED ROAD

SOUTHERN PACIFIC RAILROAD

CALDER AVENUE

PHELAN BOULEVARD

ELEVATION IN FEET (NAVD 88)

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

25
20
15
10
5
0
-5
-10
-15
-20

45 50 55 60 65 70 75 80 85 90 95 100 105 110

M N O P Q R S T U V W X Y Z AA AB

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

HILLEBRANDT BAYOU AND HILLEBRANDT BAYOU (CALDWOOD CUT-OFF)

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD 88)

40
35
30
25
20
15
10
5
0
-5

95
100
105
110
115

CONFLUENCE OF KEITH DITCH
NORTH CIRCUIT DRIVE
GLADYS AVENUE
WEST BEND
WEST PARK
DELAWARE STREET
LIMIT OF DETAILED STUDY
FOLSOM ROAD

AC
AD
AE
AF
AG

LEGEND
0.2% ANNUAL CHANCE FLOOD
1% ANNUAL CHANCE FLOOD
2% ANNUAL CHANCE FLOOD
10% ANNUAL CHANCE FLOOD
STREAM BED
CROSS SECTION LOCATION

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

FLOOD PROFILES

HILLEBRANDT BAYOU (CALDWOOD CUT-OFF)

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

BACKWATER EFFECTS FROM HILLEBRANDT BAYOU (CALDWOOD CUT-OFF)

CONFLUENCE WITH HILLEBRANDT BAYOU (CALDWOOD CUT-OFF)
WASHINGTON BOULEVARD
U.S. HIGHWAY 90
COLLEGE STREET
SOUTHERN PACIFIC RAILROAD
23RD STREET
SPARROW WAY
LIMIT OF DETAILED STUDY

ELEVATION IN FEET (NAVD 88)

35
30
25
20
15
10
5
0
-5
-10

0
2
4
6
8
10
12
14
16
18

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE CONFLUENCE WITH HILLEBRANDT BAYOU (CALDWOOD CUT-OFF)

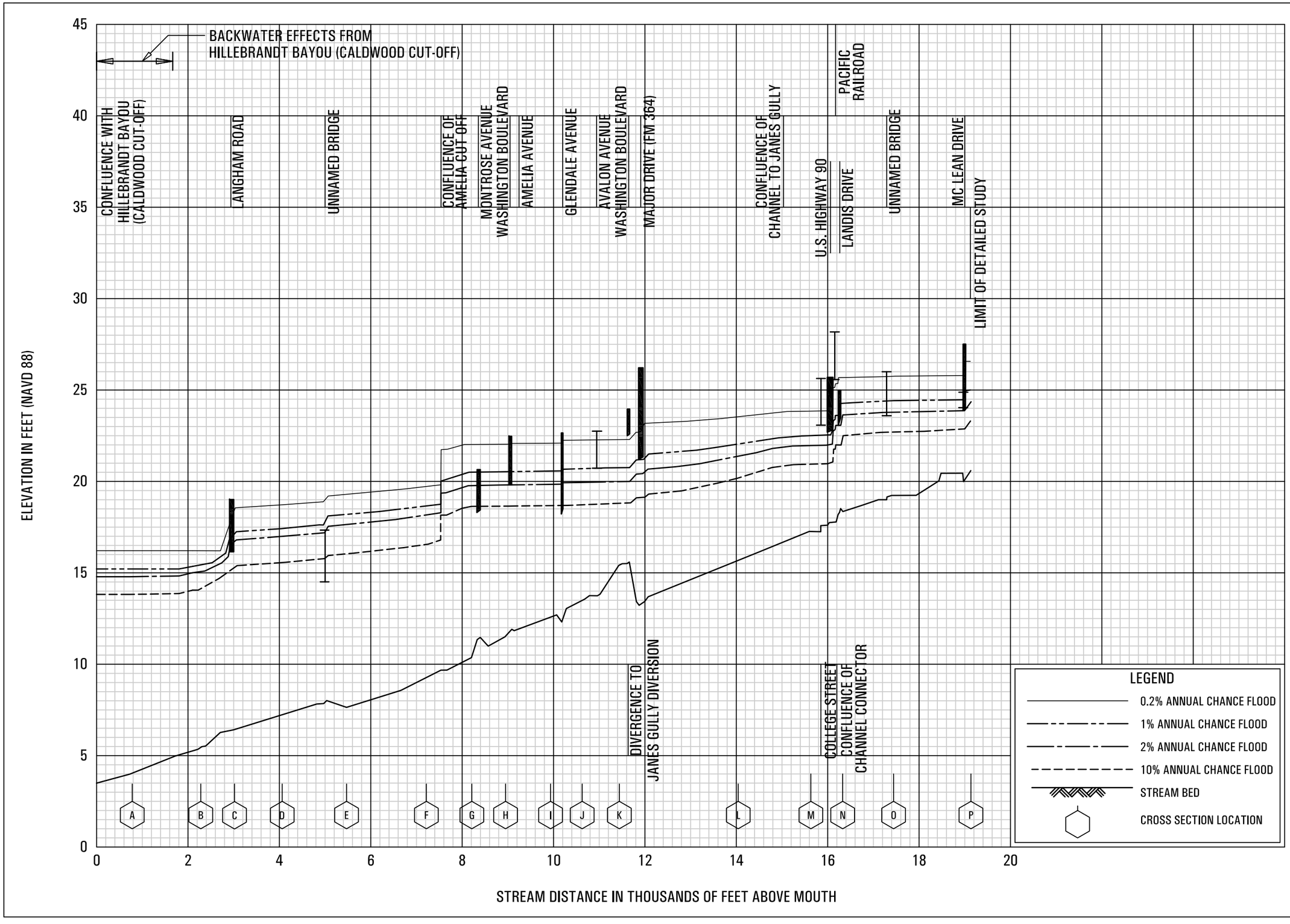
A
B
C
D
E
F
G
H
I

LEGEND
- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

HILLEBRANDT OXBOW

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, TX
AND INCORPORATED AREAS



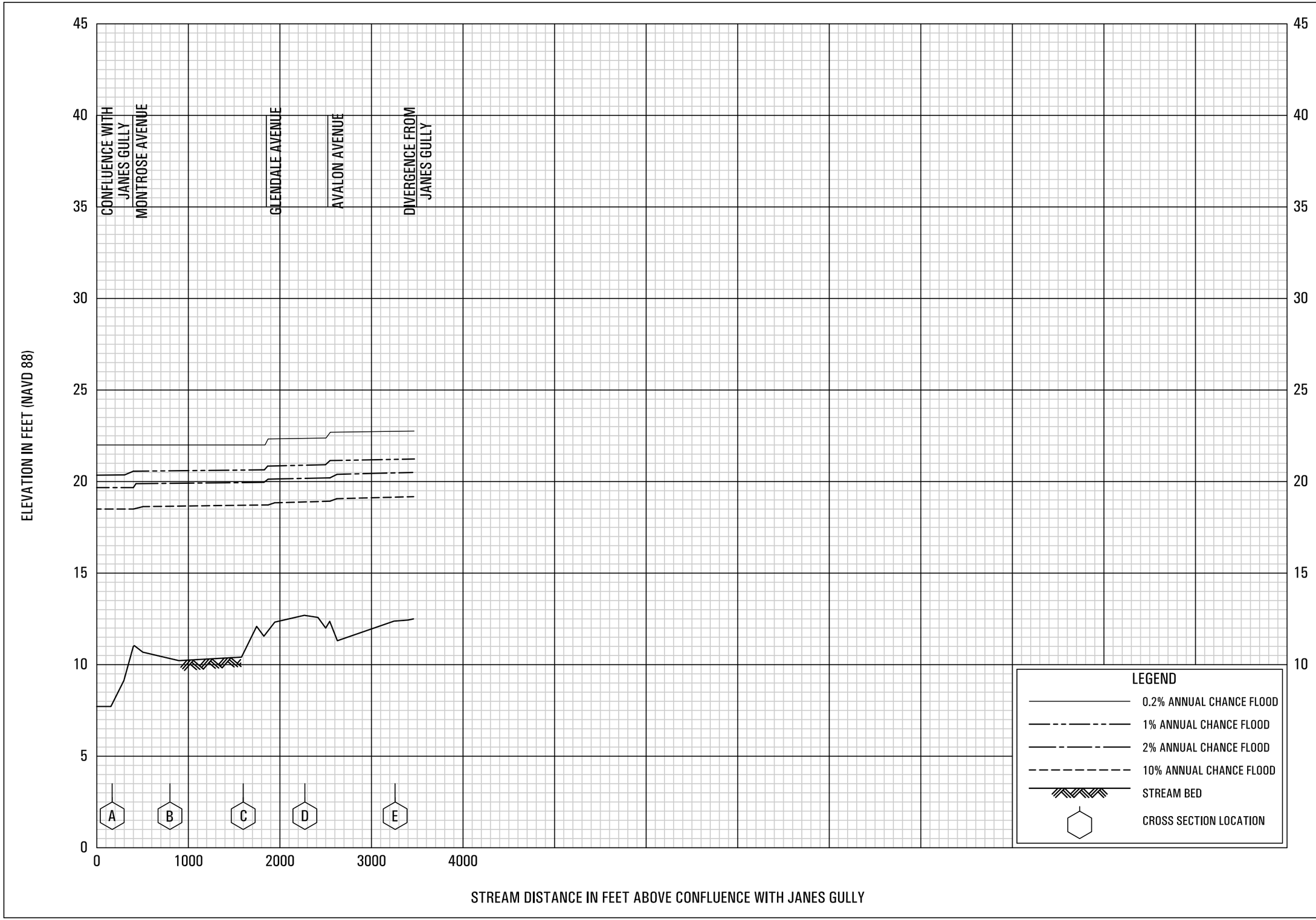
FLOOD PROFILES

JANES GULLY

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

22P



FLOOD PROFILES

JANES GULLY DIVERSION

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS

23P

BACKWATER FROM HILLEBRANDT BAYOU (CALDWOOD CUT-OFF)

CONFLUENCE WITH HILLERBRANDT BAYOU (CALDWOOD CUT-OFF)

PEYTON DRIVE

DOWLEN ROAD

DIVERGENCE OF AMELIA CUT-OFF

COLLIER ROAD

EVANGELINE LANE

THE 2% ANNUAL CHANCE FLOOD PROFILE IS TOO CLOSE TO THE 1% ANNUAL CHANCE FLOOD ELEVATION TO BE SHOWN SEPARATELY

ELEVATION IN FEET (NAVD 88)

40
35
30
25
20
15
10
5
0
-5

0 1 2 3 4 5 6 7 8 9 10

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

A

B

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

KEITH DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD 88)

55
50
45
40
35
30
25
20
15
10

GLADYS AVENUE
MAJOR DRIVE (FM 364)
CITY OF BEAUMONT
JEFFERSON COUNTY
LIMIT OF DETAILED STUDY

THE 2% ANNUAL CHANCE FLOOD PROFILE IS TOO CLOSE TO THE 1% ANNUAL CHANCE FLOOD ELEVATION TO BE SHOWN SEPARATELY

C
D

10 11 12 13 14

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

LEGEND
- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

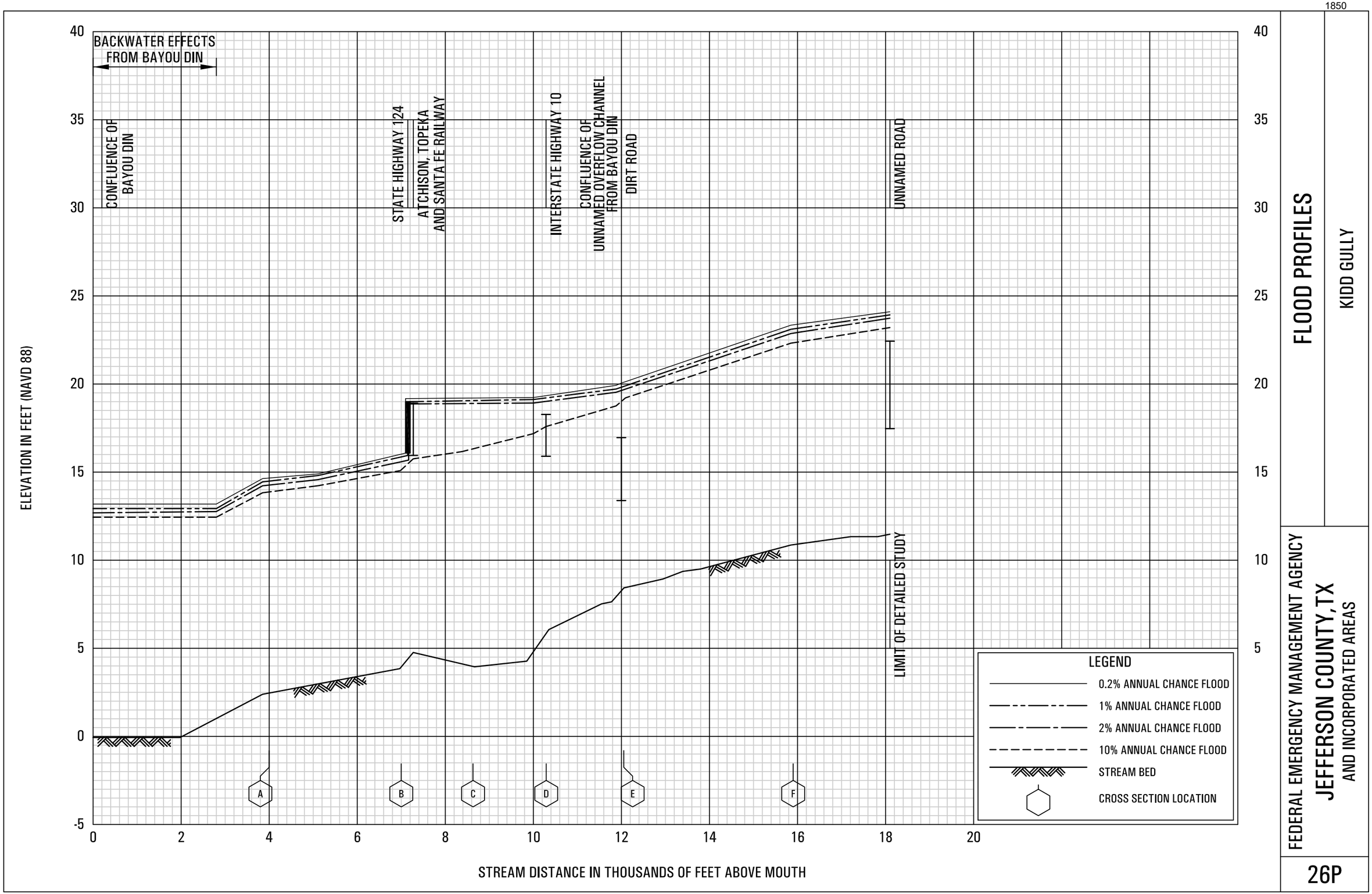
FLOOD PROFILES

KEITH DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

25P



FLOOD PROFILES

KIDD GULLY

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS

1851

ELEVATION IN FEET (NAVD 88)

30
25
20
15
10
5
0
-5
-10
-15

STATE HIGHWAY 73
TIMDER ROAD
LOW WATER CROSSING
WISE ROAD

A

33 34 35 36 37 38 39 40 41 42 43 44 45 46

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

LEGEND
- *0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- *2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

* NOT COMPUTED

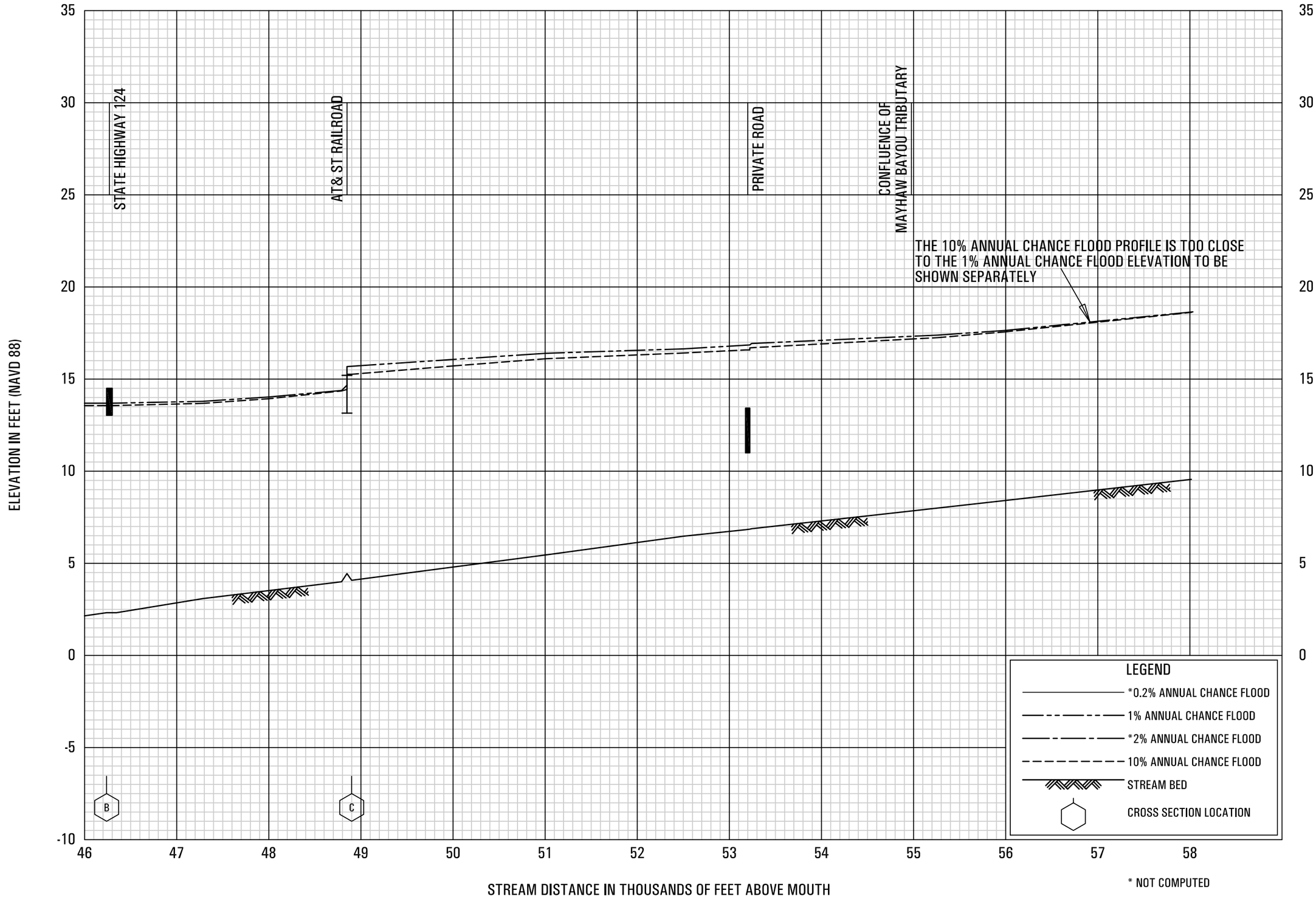
FLOOD PROFILES

MAYHAW BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

27P



FLOOD PROFILES

MAYHAW BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS

1853

ELEVATION IN FEET (NAVD 88)

45
40
35
30
25
20
15
10
5
0

INTERSTATE HIGHWAY 10

LIMIT OF DETAILED STUDY

THE 10% ANNUAL CHANCE FLOOD PROFILE IS TOO CLOSE TO THE 1% ANNUAL CHANCE FLOOD ELEVATION TO BE SHOWN SEPARATELY

D

58 59 60 61 62

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

LEGEND

- *0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- *2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

* NOT COMPUTED

FLOOD PROFILES

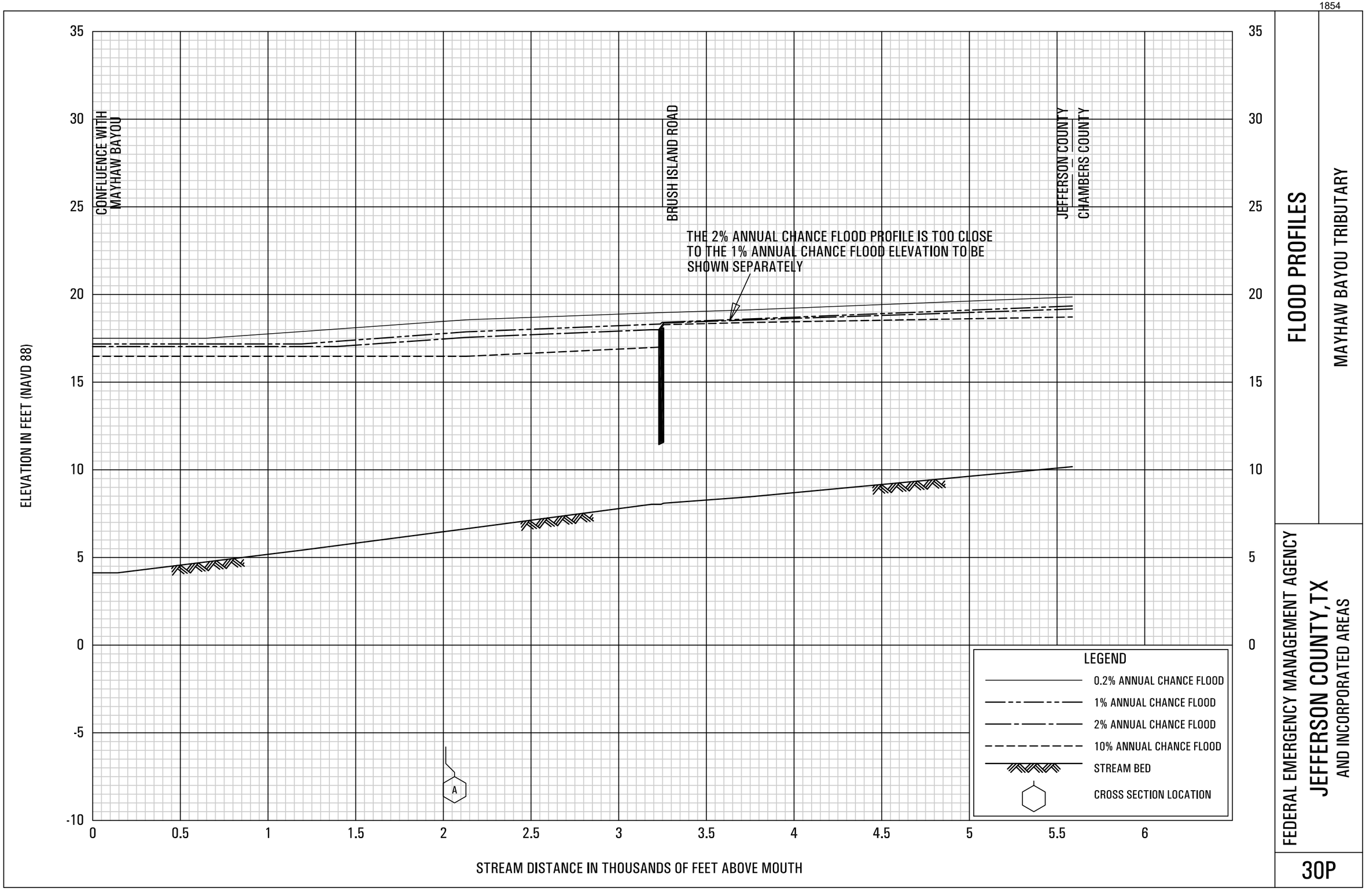
MAYHAW BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

29P

1854



FLOOD PROFILES

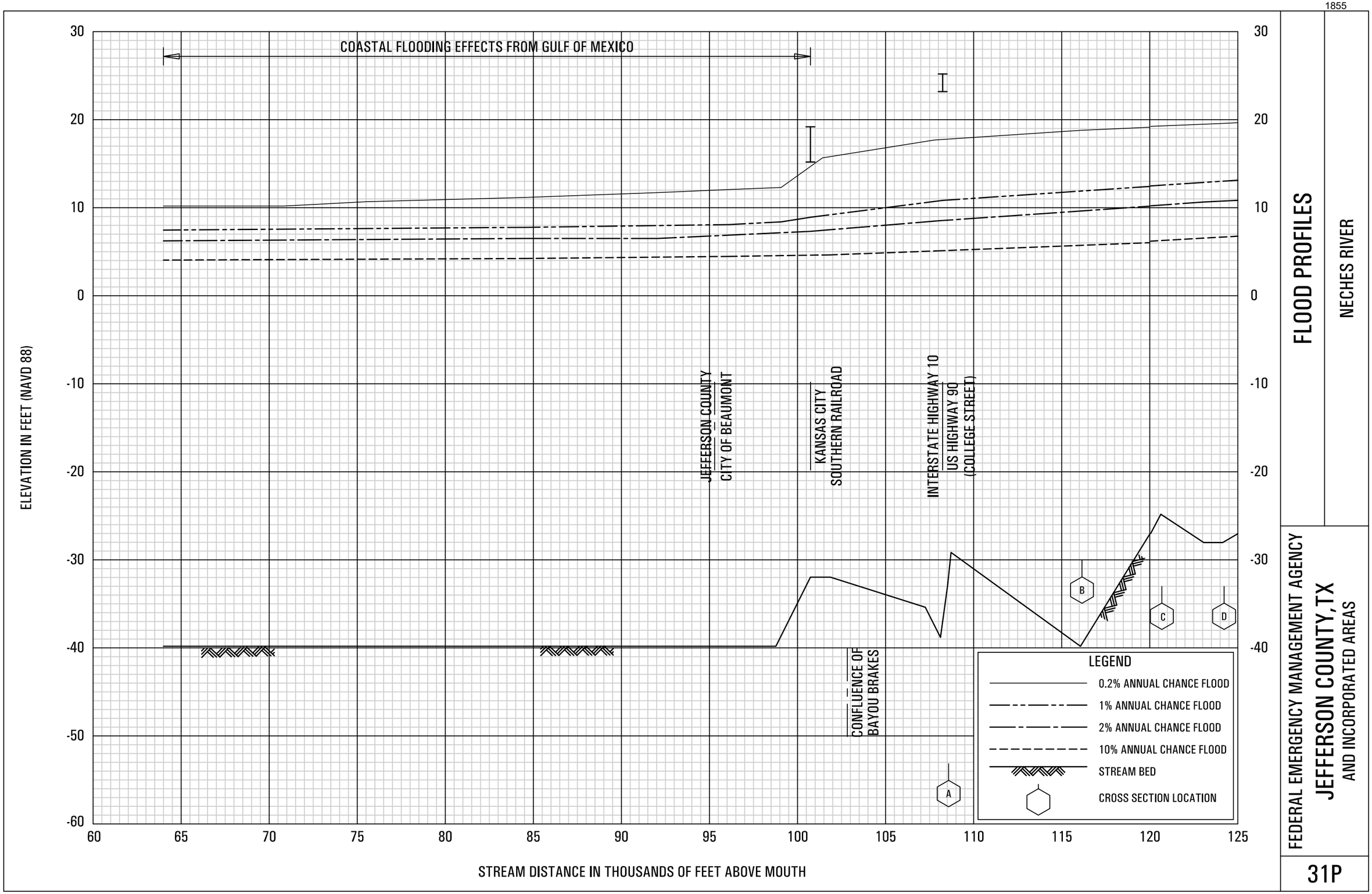
MAYHAW BAYOU TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS

30P



FLOOD PROFILES

NECHES RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS

1856

ELEVATION IN FEET (NAVD 88)

30
20
10
0
-10
-20
-30
-40
-50
-60

CONFLUENCE OF PINE ISLAND BAYOU

E
F
G

125
130
135
140
145
150

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

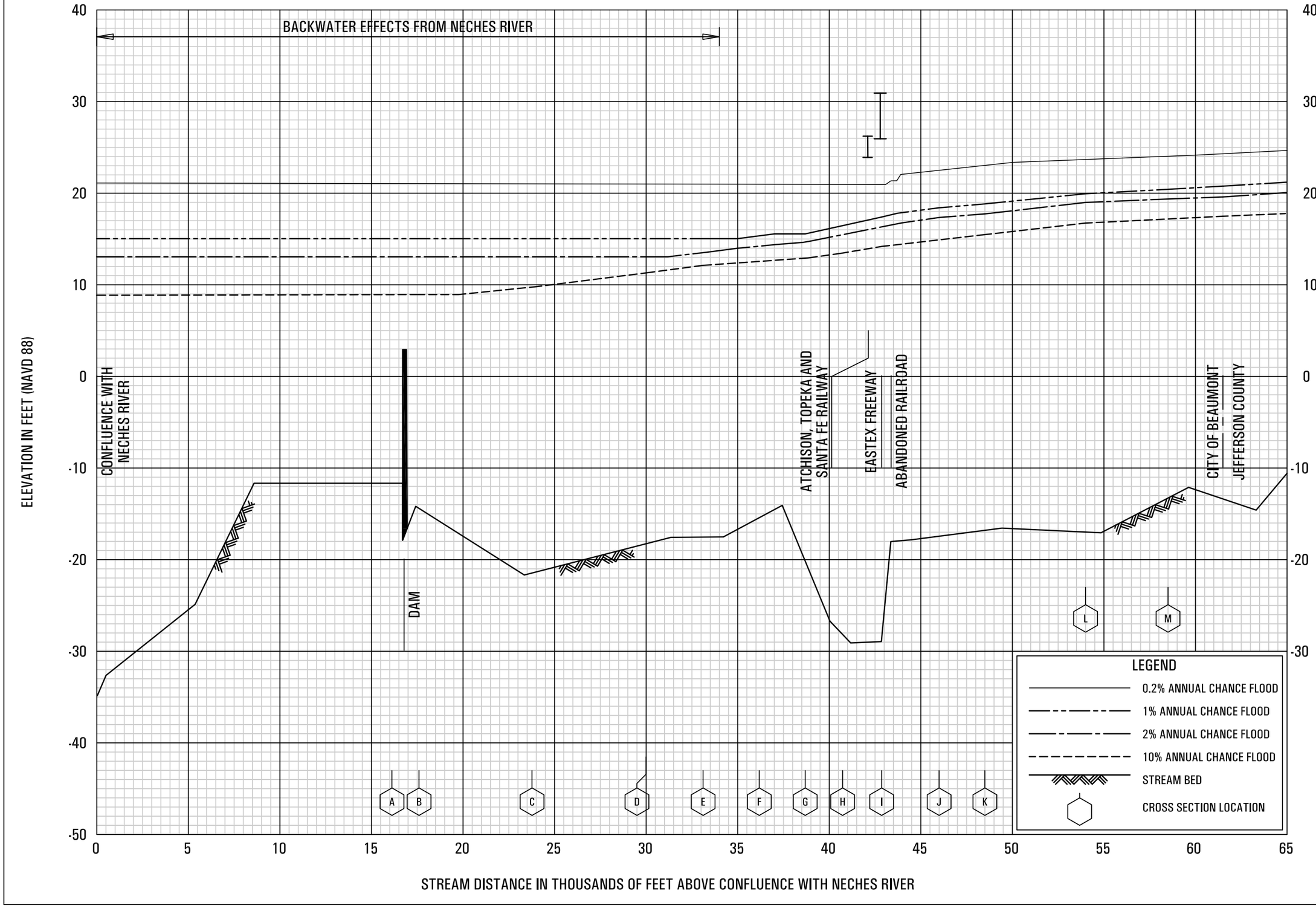
NECHES RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

FLOOD PROFILES

PINE ISLAND BAYOU



FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

33P

ELEVATION IN FEET (NAVD 88)

60
50
40
30
20
10
0
-10
-20
-30

65 70 75 80 85 90 95 100 105 110 115 120 125

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE CONFLUENCE WITH NECHES RIVER

CONFLUENCE OF WALKER BRANCH

CONFLUENCE OF QUINN DITCH

CONFLUENCE OF HUGHES GULLY

JEFFERSON COUNTY
TOWN OF BEVIL OAKS

STATE ROUTE 105

TOWN OF BEVIL OAKS
JEFFERSON COUNTY

LIMIT OF DETAILED STUDY

N O P Q R S T U V W

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

PINE ISLAND BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD 88)

35
30
25
20
15
10
5
0
-5
-10

CONFLUENCE WITH PINE ISLAND BAYOU

TRAM ROAD

LIMIT OF DETAILED STUDY

A
B
C
D

LEGEND
- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6 6.5

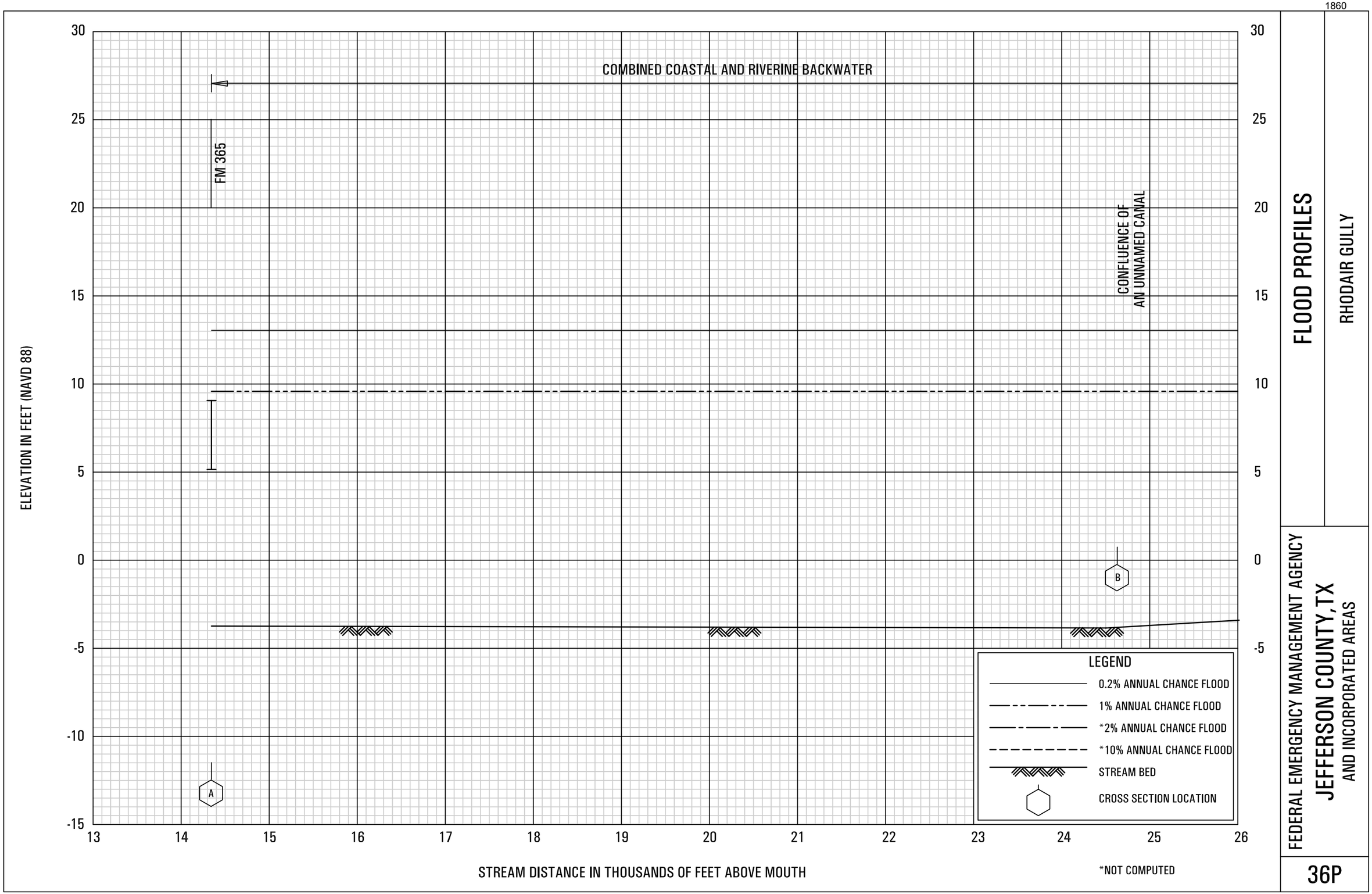
STREAM DISTANCE IN THOUSANDS OF FEET ABOVE CONFLUENCE WITH PINE ISLAND BAYOU

FLOOD PROFILES

QUINN DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS



*NOT COMPUTED

FLOOD PROFILES

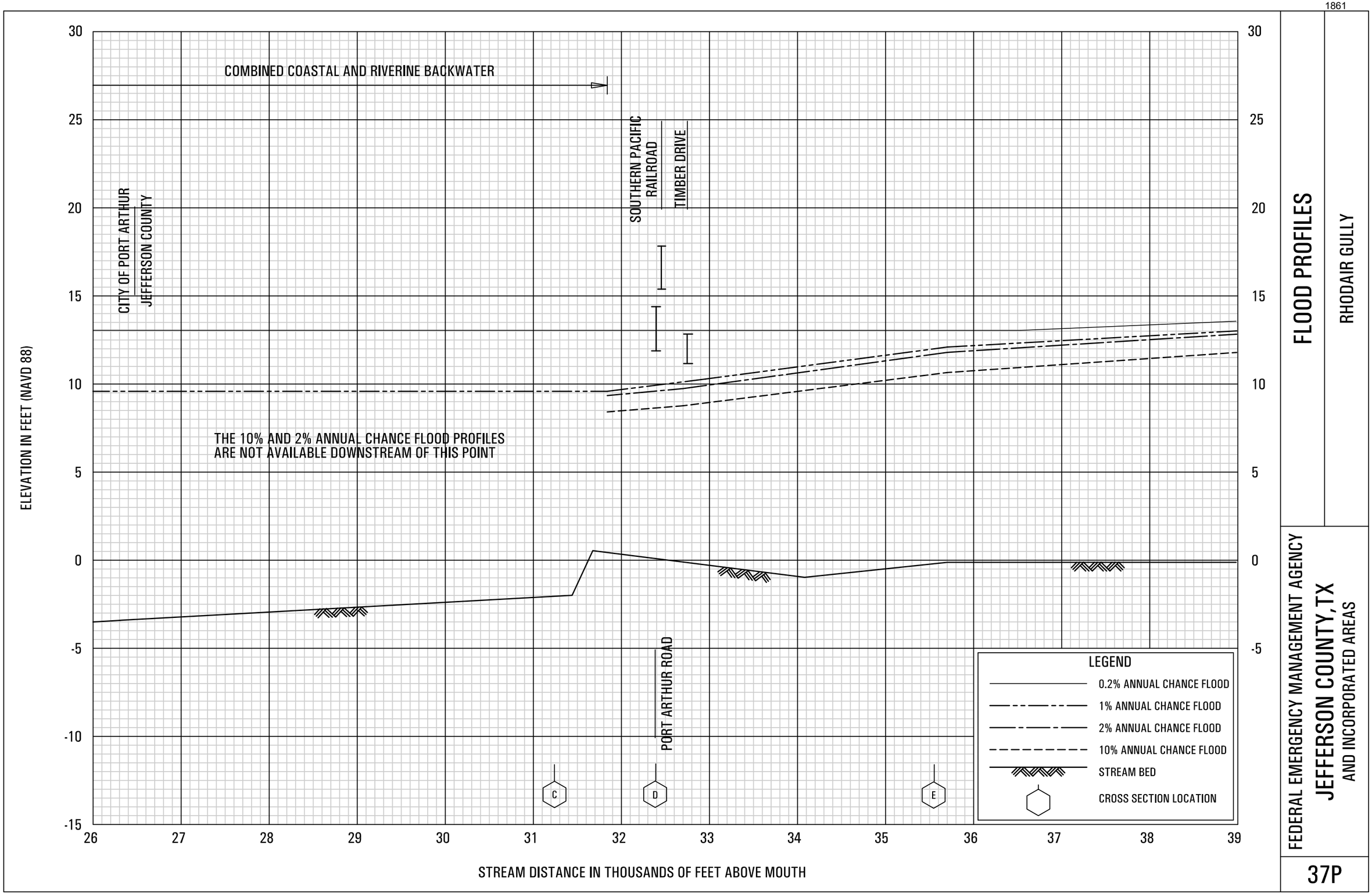
RHODAIR GULLY

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS

36P



FLOOD PROFILES

RHODAIR GULLY

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

37P

ELEVATION IN FEET (NAVD 88)

30
25
20
15
10
5
0
-5
-10
-15

US HIGHWAY 69
LIMIT OF DETAILED STUDY

F
G
H

39
40
41
42
43

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

LEGEND
- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

RHODAIR GULLY

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

38P

ELEVATION IN FEET (NAVD 88)

30
25
20
15
10
5
0
-5
-10
-15

LIMIT OF DETAILED STUDY
WILBER ROAD NORTHBOUND
WILBER ROAD SOUTHBOUND
STATE HIGHWAY 124 NORTHBOUND
STATE HIGHWAY 124 SOUTHBOUND
RAILROAD
RAILROAD

A
B
C

LEGEND
- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

34 35 36 37 38 39 40 41 42 43 44 45 46 47

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE CONFLUENCE WITH TAYLOR BAYOU

FLOOD PROFILES

SOUTH FORK TAYLOR BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

39P

ELEVATION IN FEET (NAVD 88)

35
30
25
20
15
10
5
0
-5
-10

47 48 49 50 51 52 53 54 55 56 57 58

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE CONFLUENCE WITH TAYLOR BAYOU

INTERSTATE HIGHWAY 10 EASTBOUND

INTERSTATE HIGHWAY 10 WESTBOUND

LIMIT OF DETAILED STUDY

THE 10% AND 2% ANNUAL CHANCE FLOOD PROFILES ARE TOO CLOSE TO BE SHOWN SEPARATELY

D

E

LEGEND

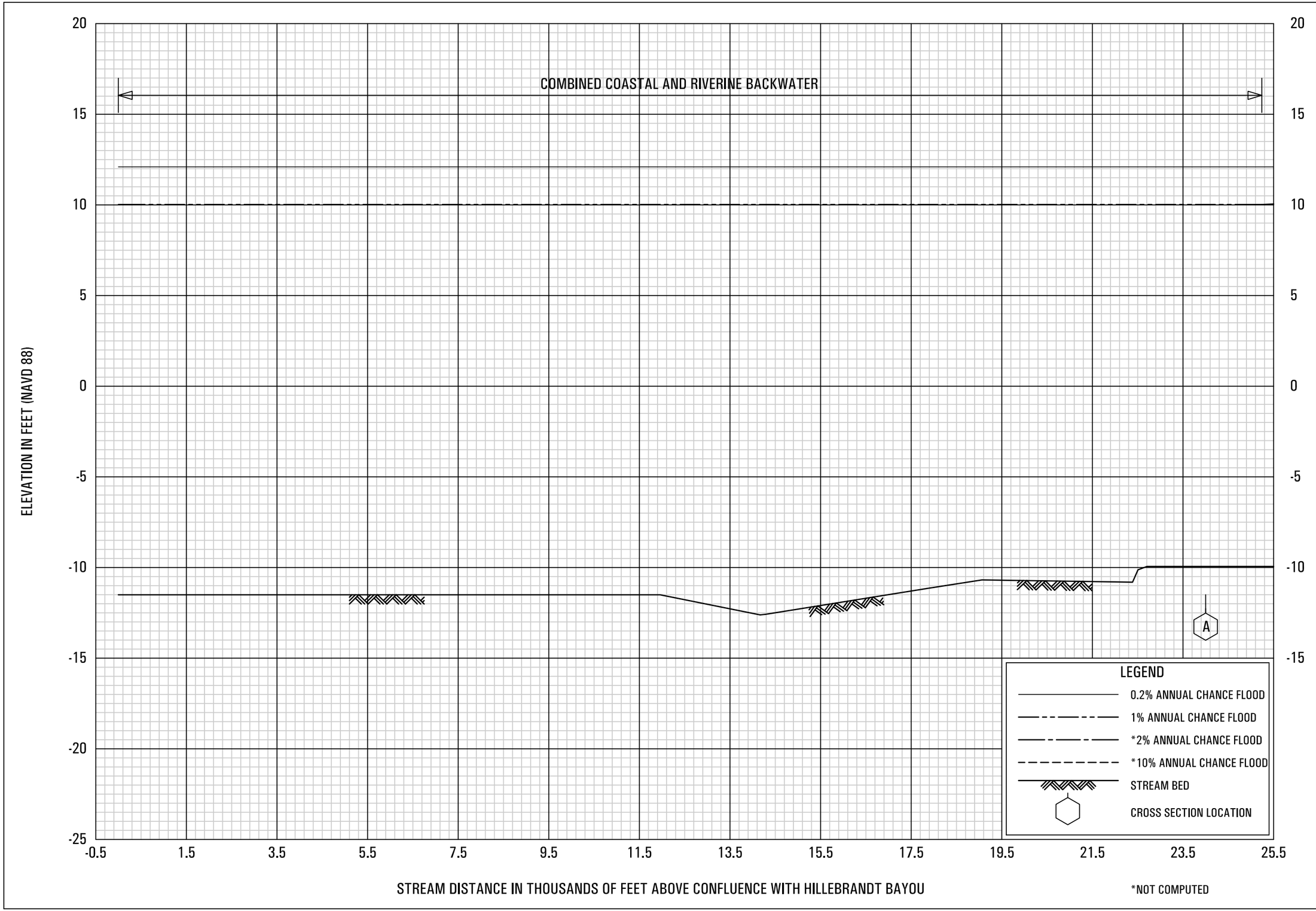
- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

SOUTH FORK TAYLOR BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS



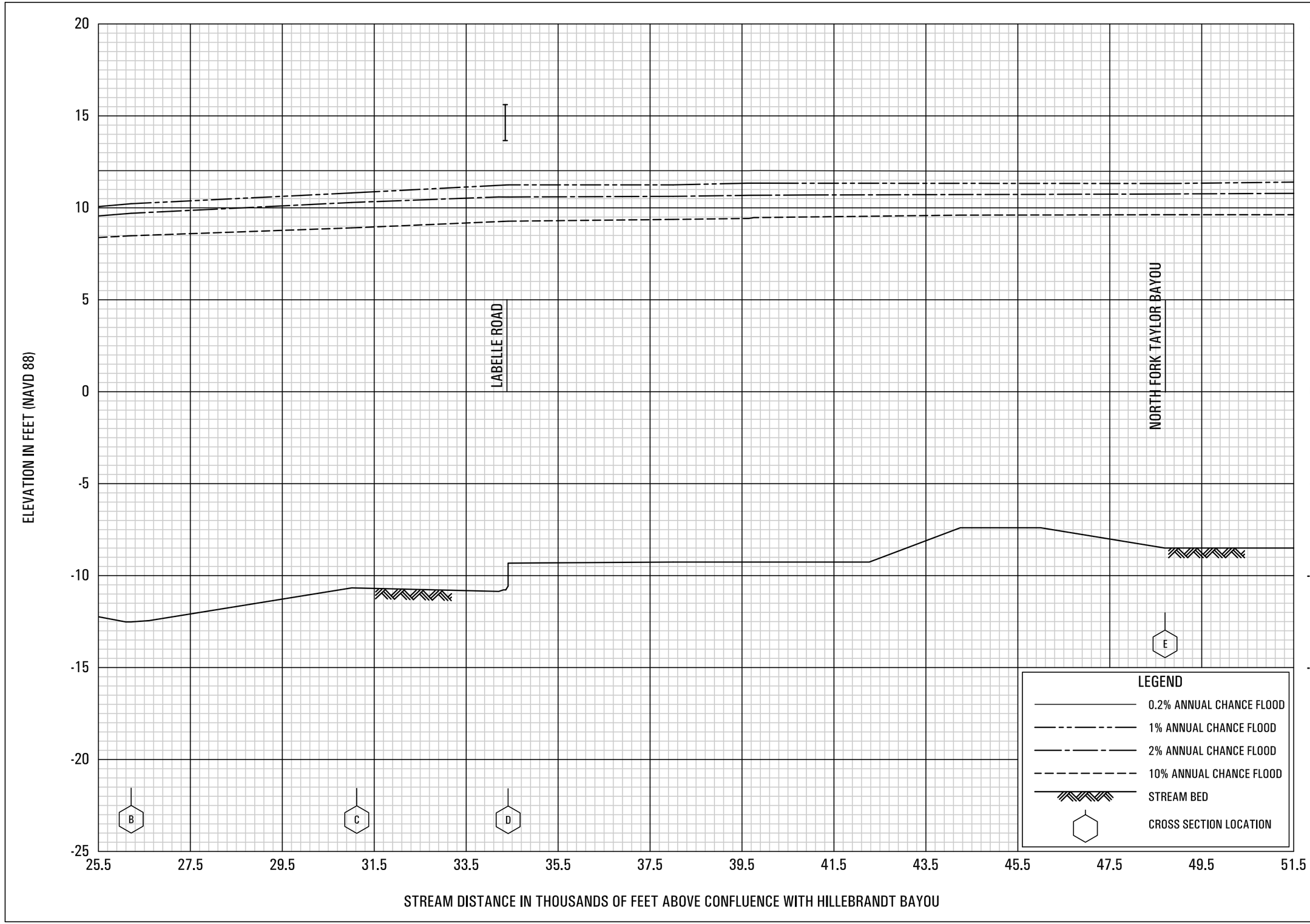
FLOOD PROFILES

TAYLOR BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS



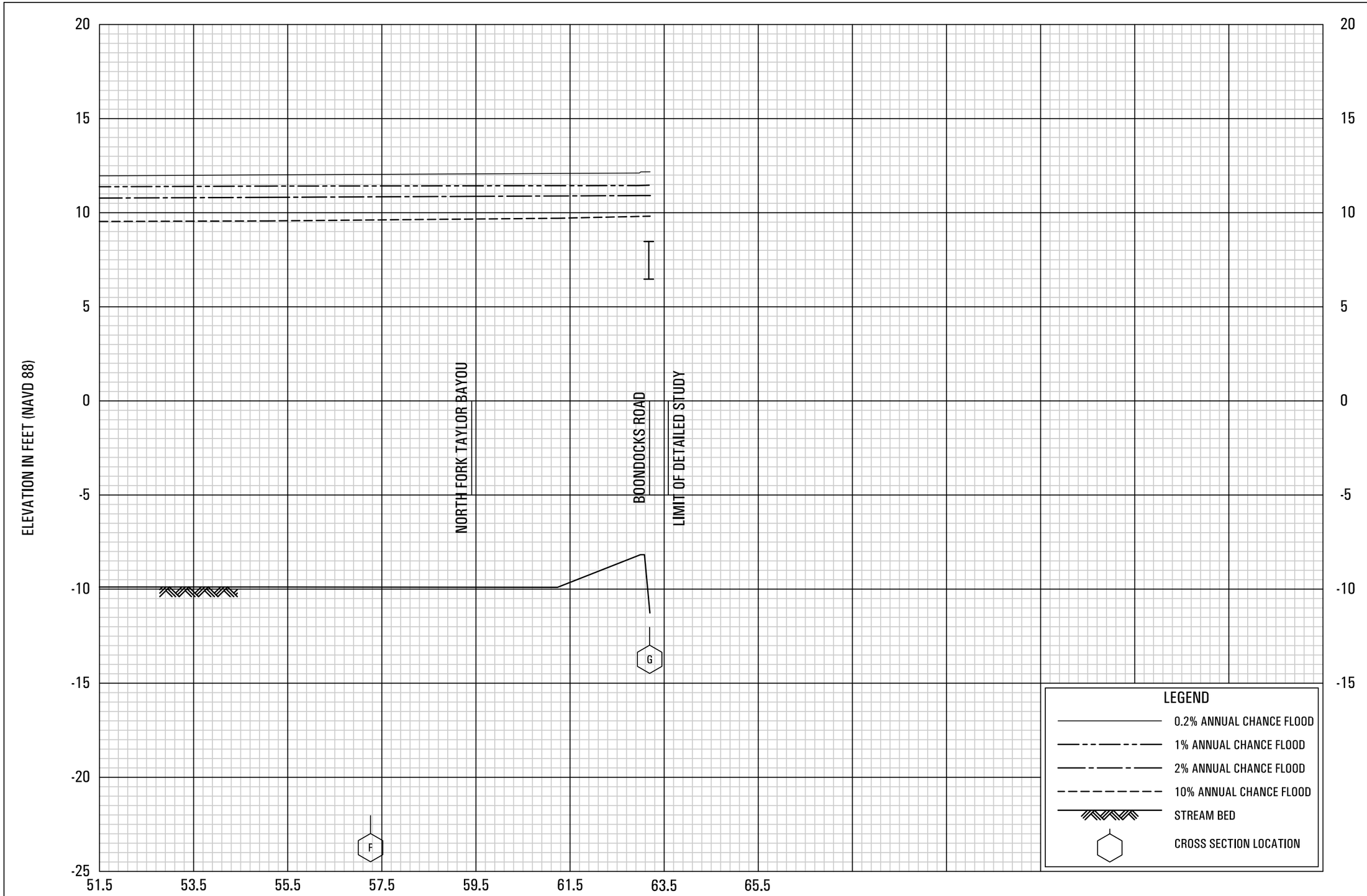
FLOOD PROFILES

TAYLOR BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS



FLOOD PROFILES

TAYLOR BAYOU / NORTH FORK TAYLOR BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS

BACKWATER FROM PINE ISLAND BAYOU

CONFLUENCE WITH PINE ISLAND BAYOU

TIMBER BRIDGE

TIMBER BRIDGE

FIELD CROSSING

JEFFERSON COUNTY CITY OF BEAUMONT

FIELD CROSSING

TRAM ROAD

CONFLUENCE OF WALKER BRANCH TRIBUTARY

A

B

C

D

LEGEND

0.2% ANNUAL CHANCE FLOOD

1% ANNUAL CHANCE FLOOD

2% ANNUAL CHANCE FLOOD

10% ANNUAL CHANCE FLOOD

STREAM BED

CROSS SECTION LOCATION

ELEVATION IN FEET (NAVD 88)

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE CONFLUENCE WITH PINE ISLAND BAYOU

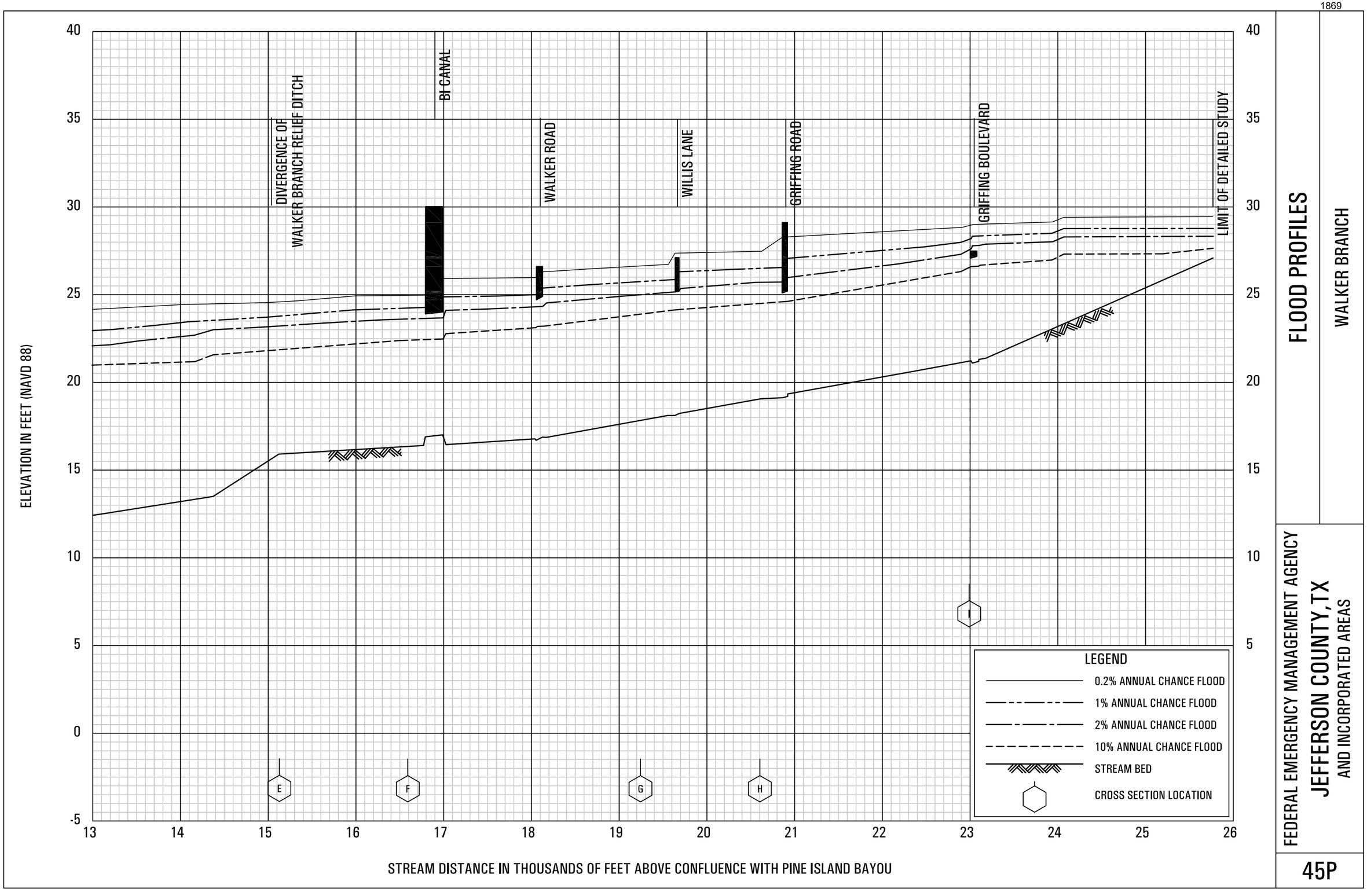
FLOOD PROFILES

WALKER BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS



FLOOD PROFILES

WALKER BRANCH

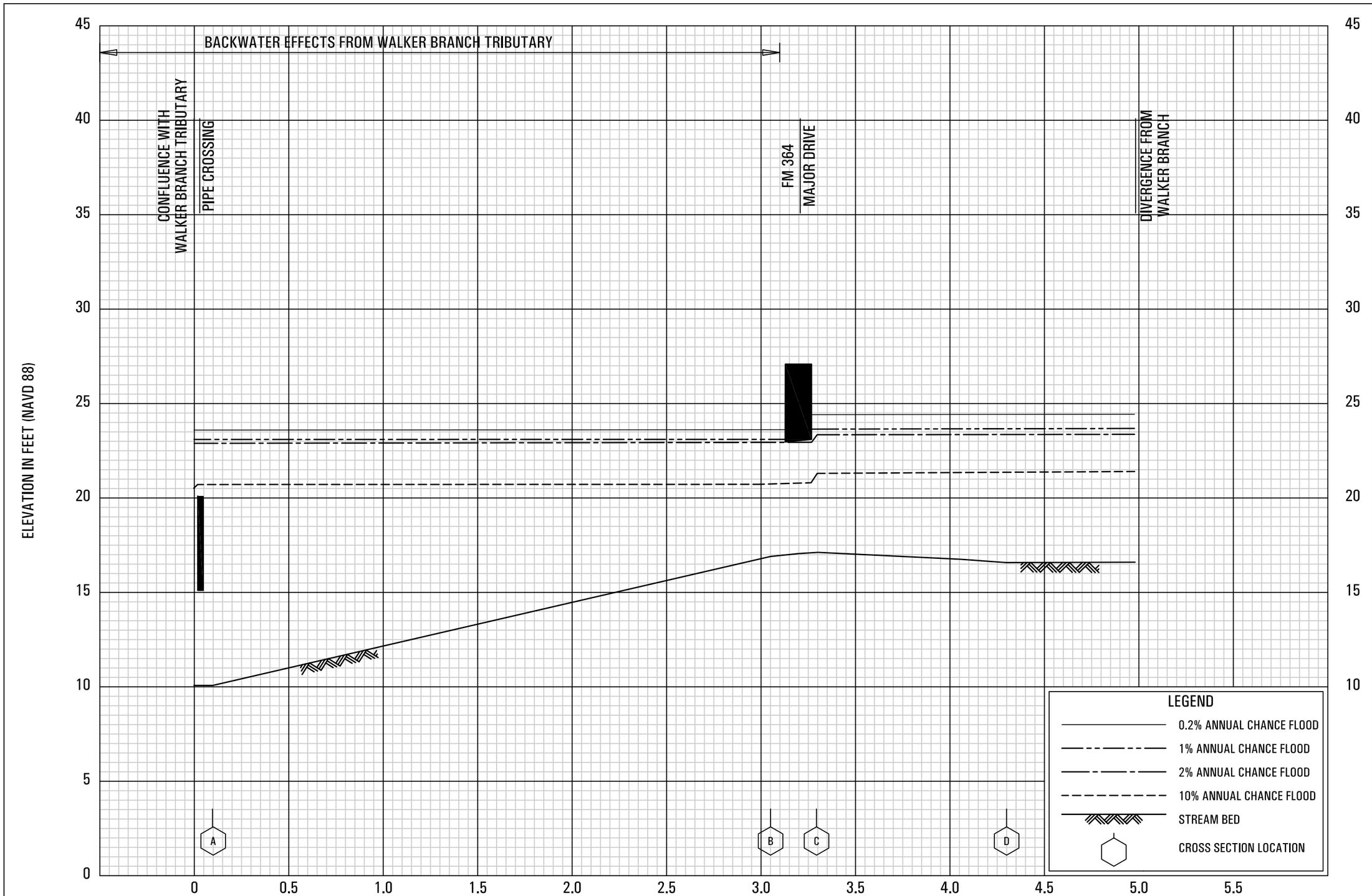
FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

45P

FLOOD PROFILES

WALKER BRANCH RELIEF DITCH



FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS

46P

ELEVATION IN FEET (NAVD 88)

40
35
30
25
20
15
10
5
0
-5

CONFLUENCE WITH WALKER BRANCH
JEFFERSON COUNTY
CITY OF BEAUMONT
TRAM ROAD
CONFLUENCE OF WALKER BRANCH RELIEF DITCH
CANAL

A
B
C

0 1 2 3 4 5 6 7 8 9 10

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE CONFLUENCE WITH WALKER BRANCH

LEGEND
- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

WALKER BRANCH TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

47P

ELEVATION IN FEET (NAVD 88)

50
45
40
35
30
25
20
15
10
5

PERL ROAD
SPURLOCK ROAD
LIMIT OF DETAILED STUDY

D
E

10
11
12
13
14

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE CONFLUENCE WITH WALKER BRANCH

LEGEND

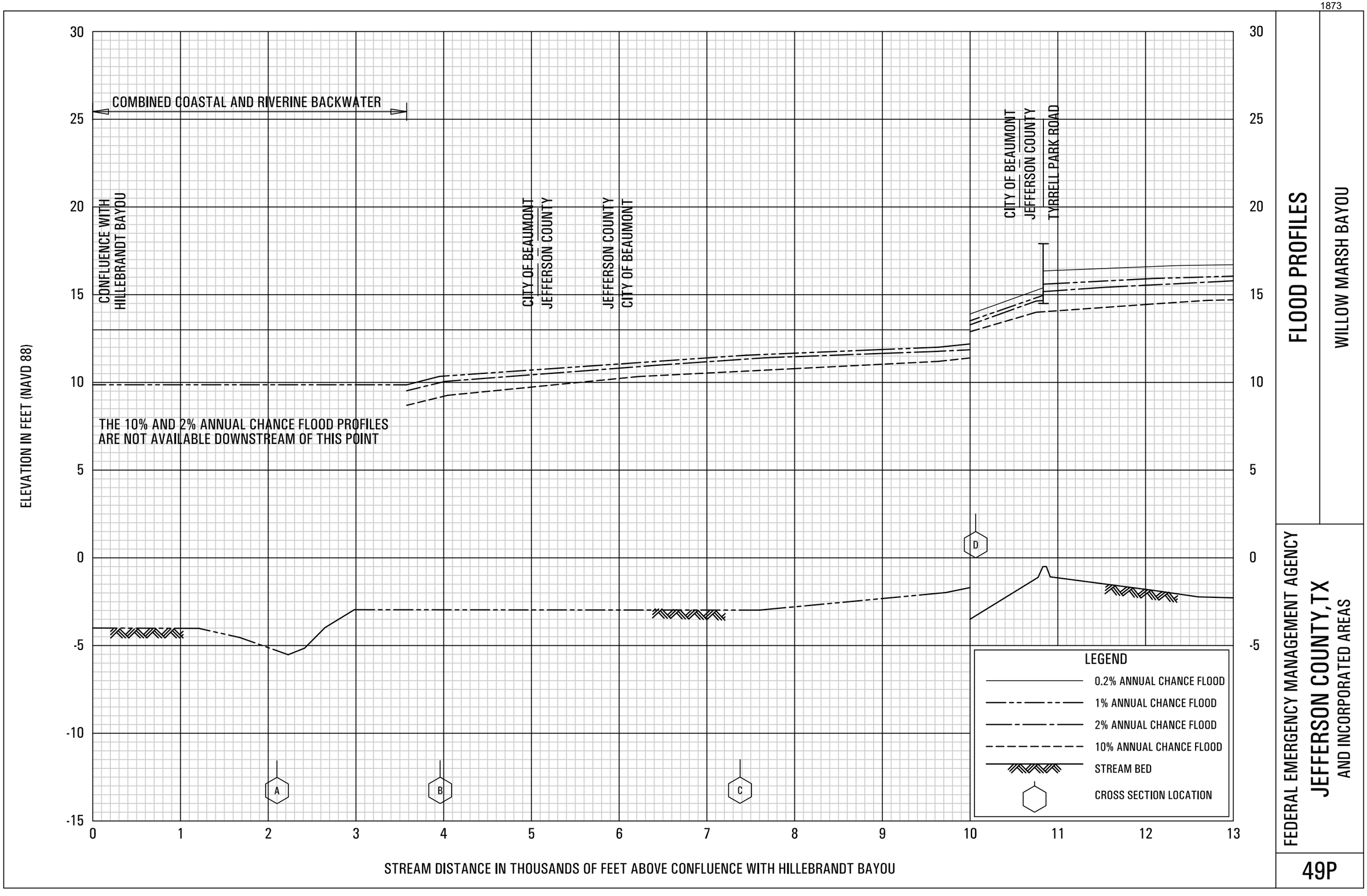
- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

WALKER BRANCH TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS



FLOOD PROFILES

WILLOW MARSH BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD 88)

30
25
20
15
10
5
0
-5
-10
-15

13 14 15 16 17 18 19 20 21 22 23 24 25 26

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE CONFLUENCE WITH HILLEBRANDT BAYOU

STATE HIGHWAY 124
ATCHINSON AND TOPEKA RAILROAD
INTERSTATE HIGHWAY 10
CONFLUENCE OF AMELIA CUT-OFF
CITY OF BEAUMONT
JEFFERSON COUNTY
MAJOR DRIVE (FM 364)

THE 2% ANNUAL CHANCE FLOOD PROFILE IS TOO CLOSE TO THE 1% ANNUAL CHANCE FLOOD ELEVATION TO BE SHOWN SEPARATELY

E
F
G
H

LEGEND

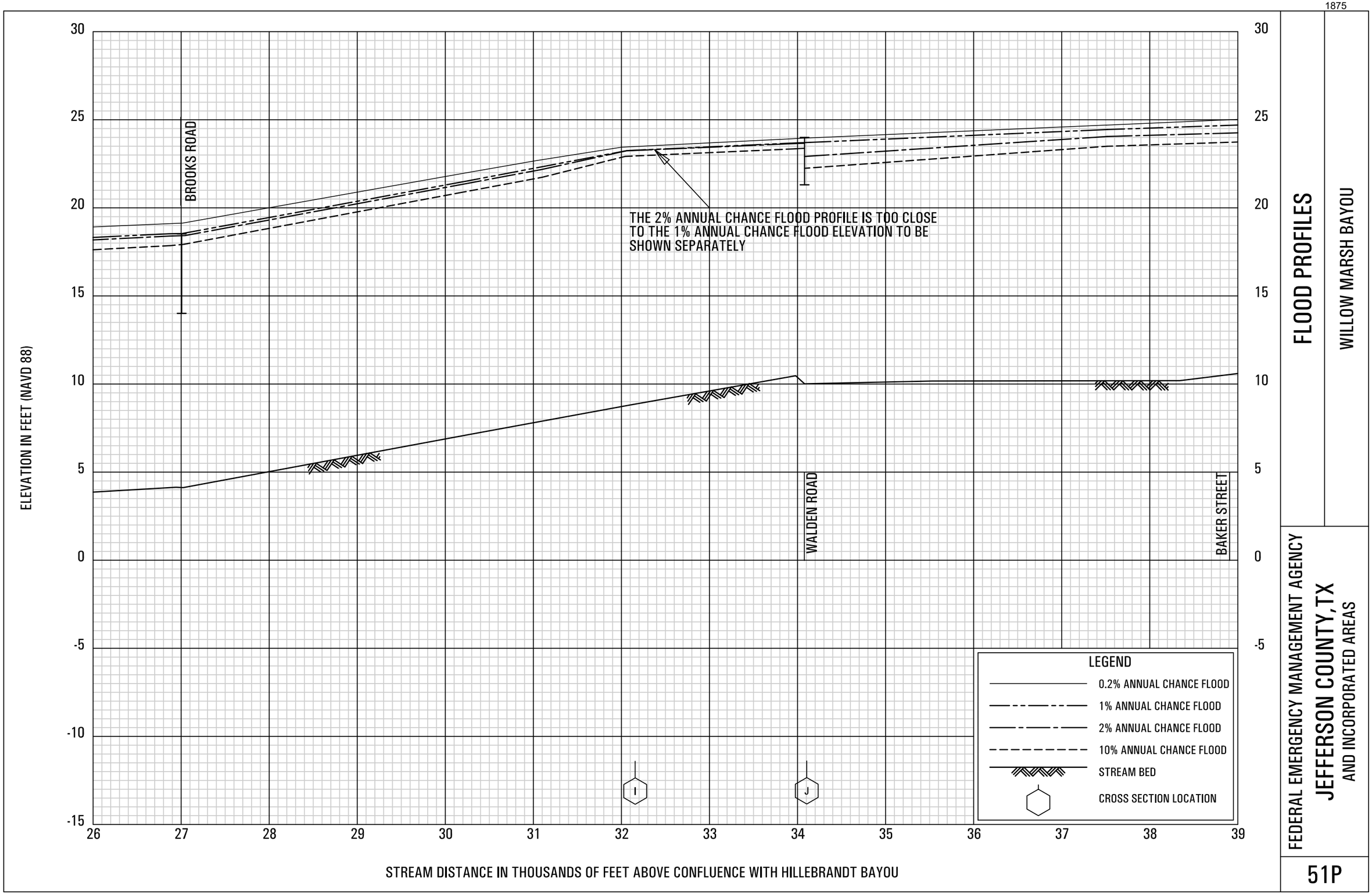
- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

WILLOW MARSH BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS



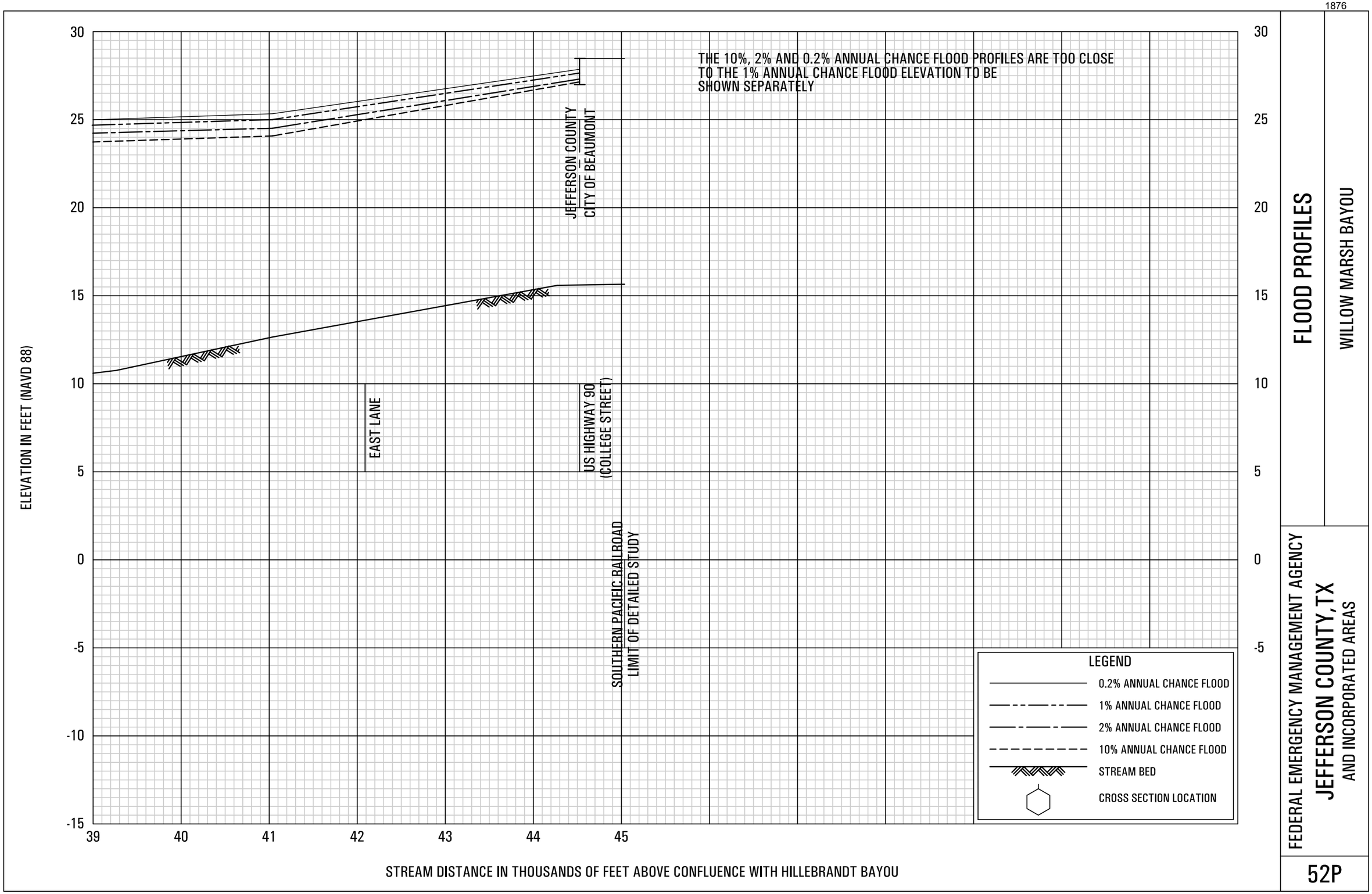
FLOOD PROFILES

WILLOW MARSH BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

51P



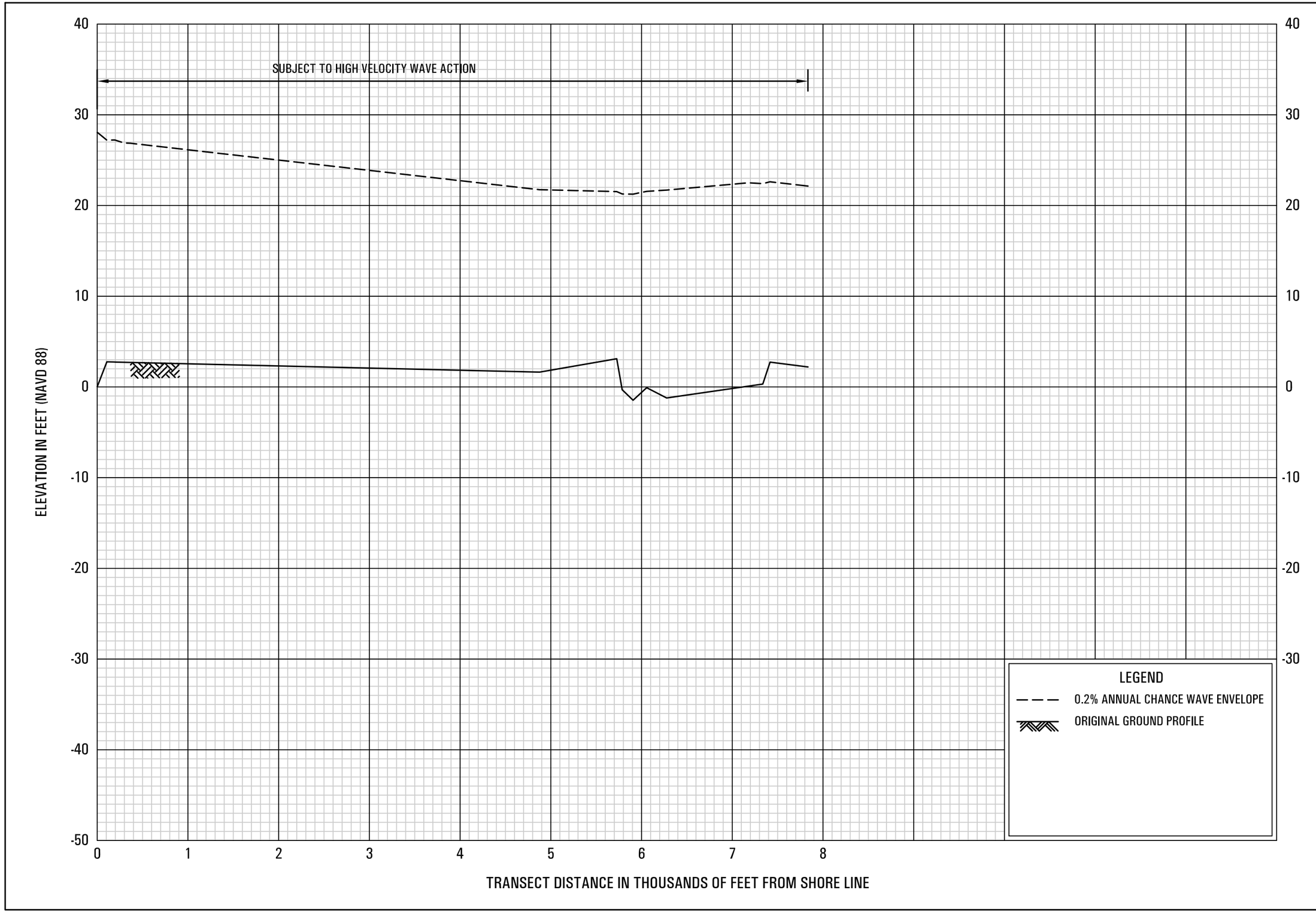
FLOOD PROFILES

WILLOW MARSH BAYOU

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS



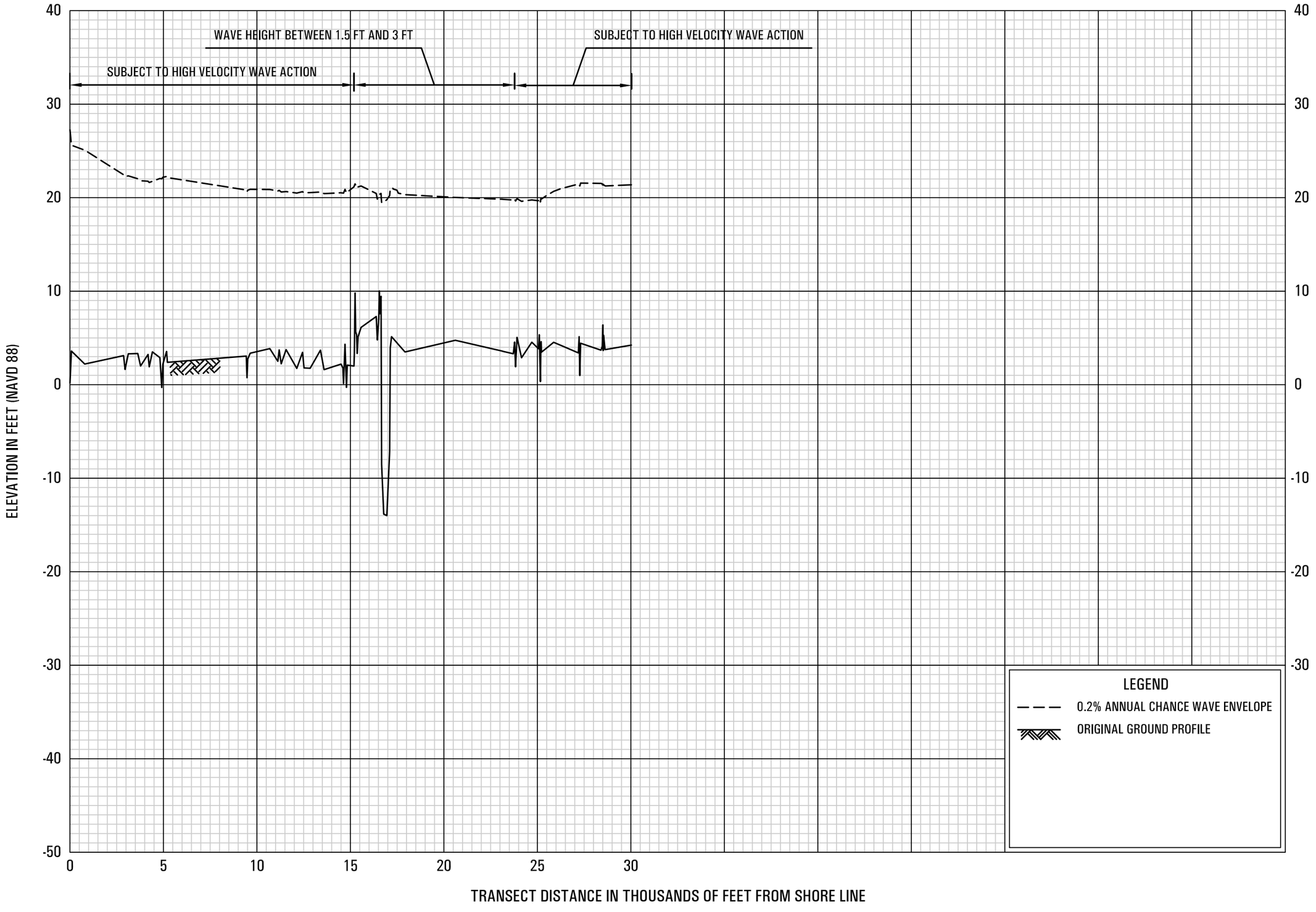
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

01P



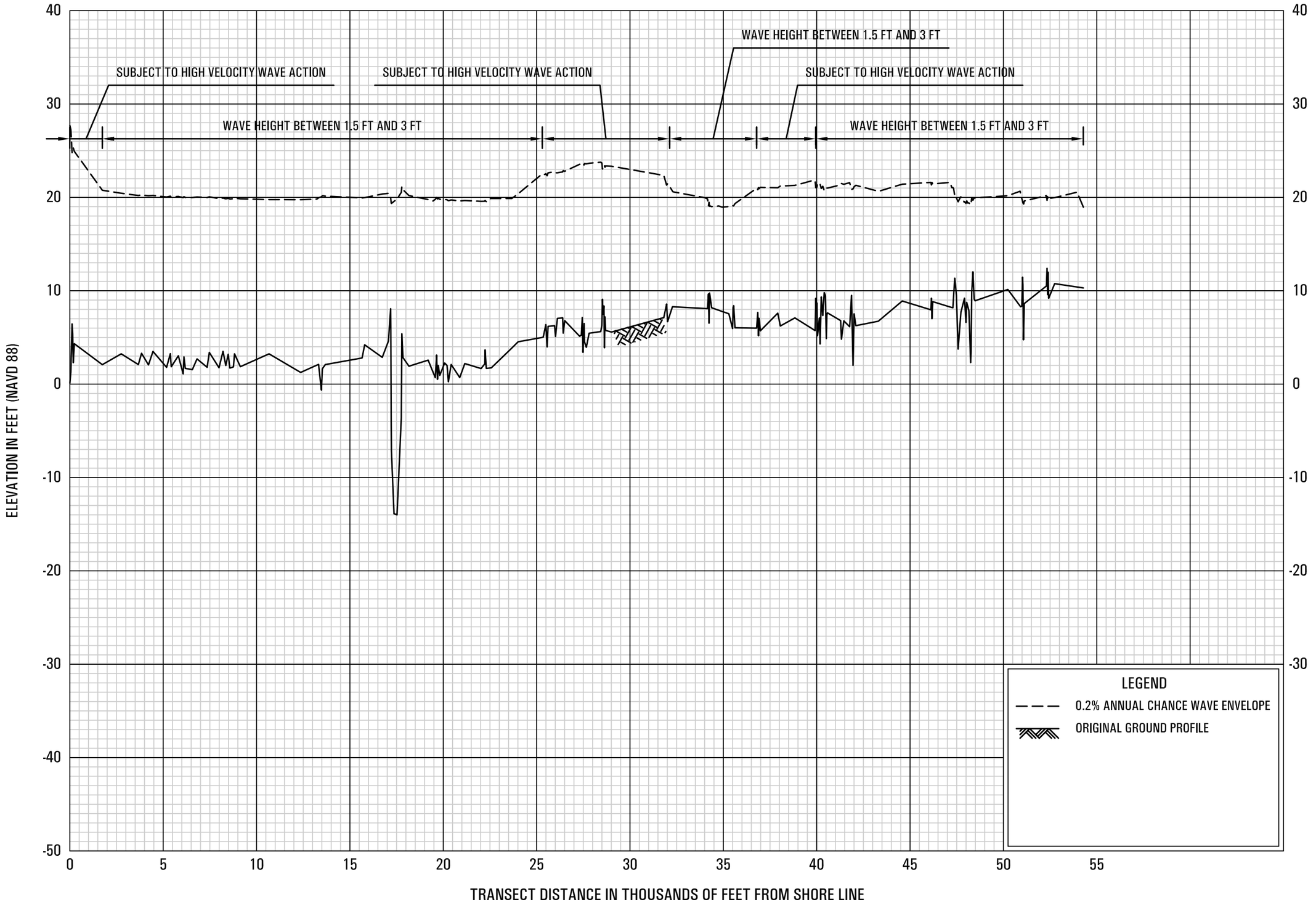
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

02P



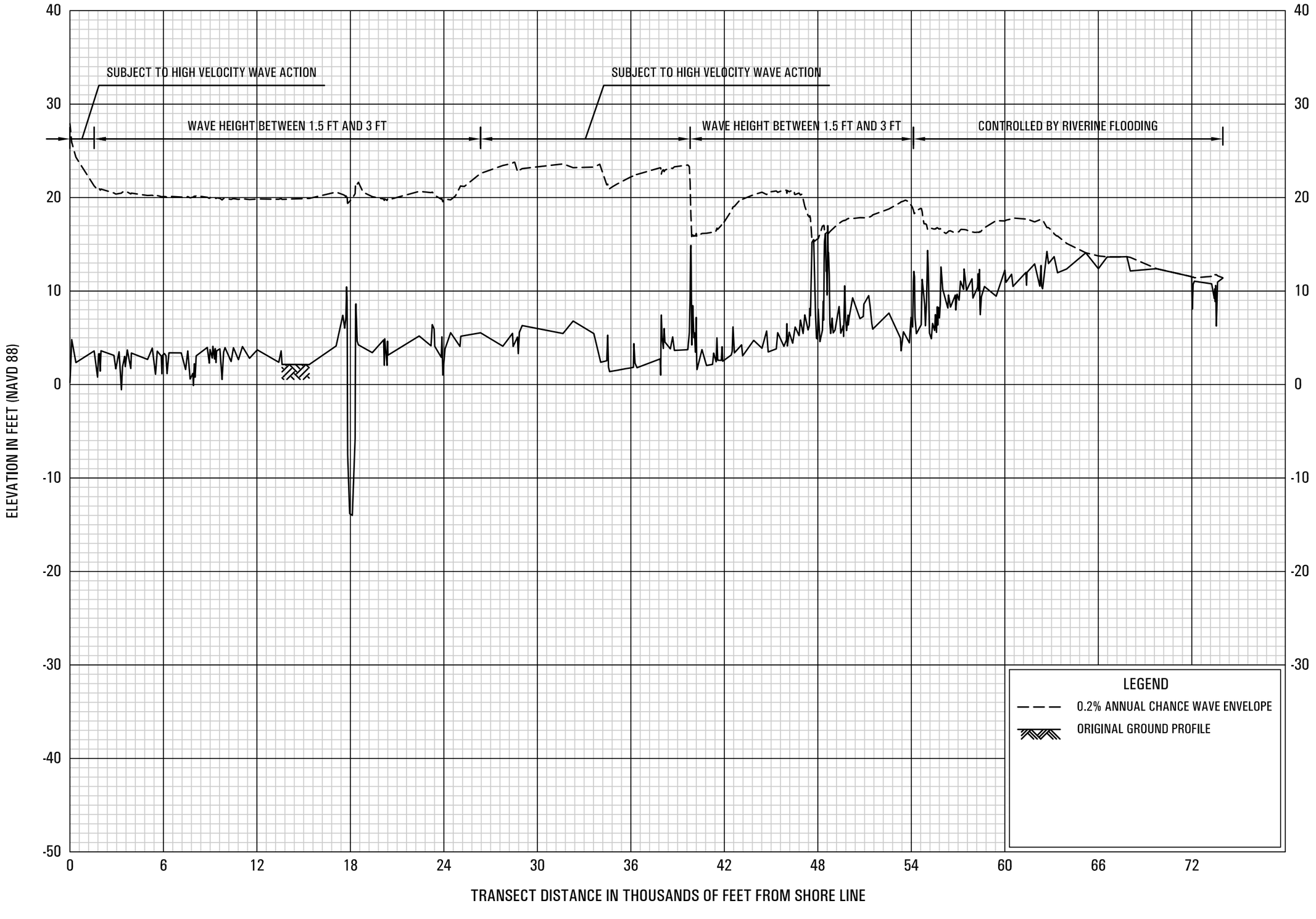
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

03P



0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

04P

SUBJECT TO HIGH VELOCITY WAVE ACTION
WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT
SUBJECT TO HIGH VELOCITY WAVE ACTION
WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT
SUBJECT TO HIGH VELOCITY WAVE ACTION
WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT
CONTROLLED BY RIVERINE FLOODING
SUBJECT TO HIGH VELOCITY WAVE ACTION
WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT

ELEVATION IN FEET (NAVD 88)

40
30
20
10
0
-10
-20
-30
-40
-50

0 5 10 15 20 25 30 35 40 45 50 55 60 65

TRANSECT DISTANCE IN THOUSANDS OF FEET FROM SHORE LINE

LEGEND
0.2% ANNUAL CHANCE WAVE ENVELOPE
ORIGINAL GROUND PROFILE

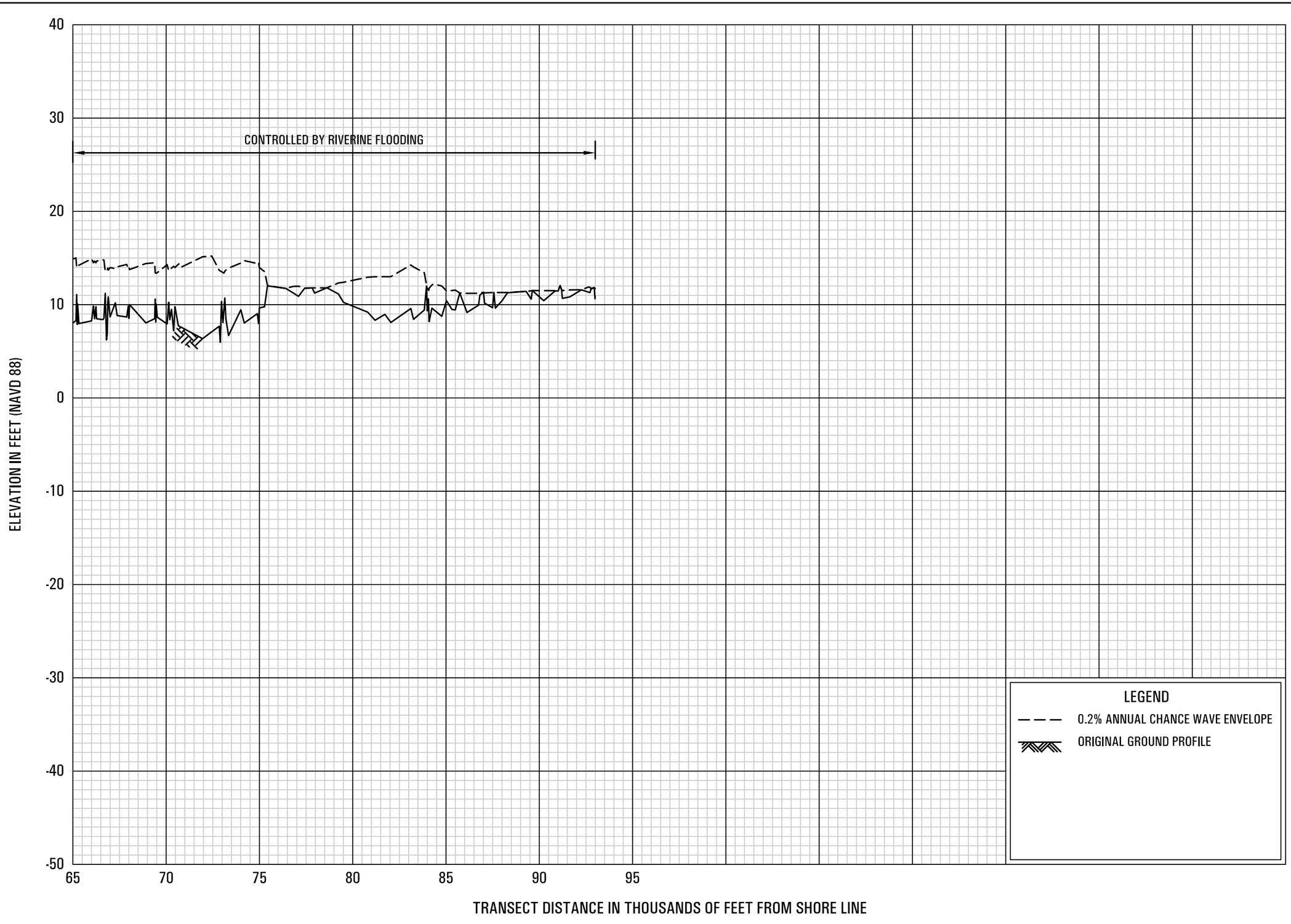
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

05P

1882



0.2% ANNUAL CHANCE WAVE ENVELOPE

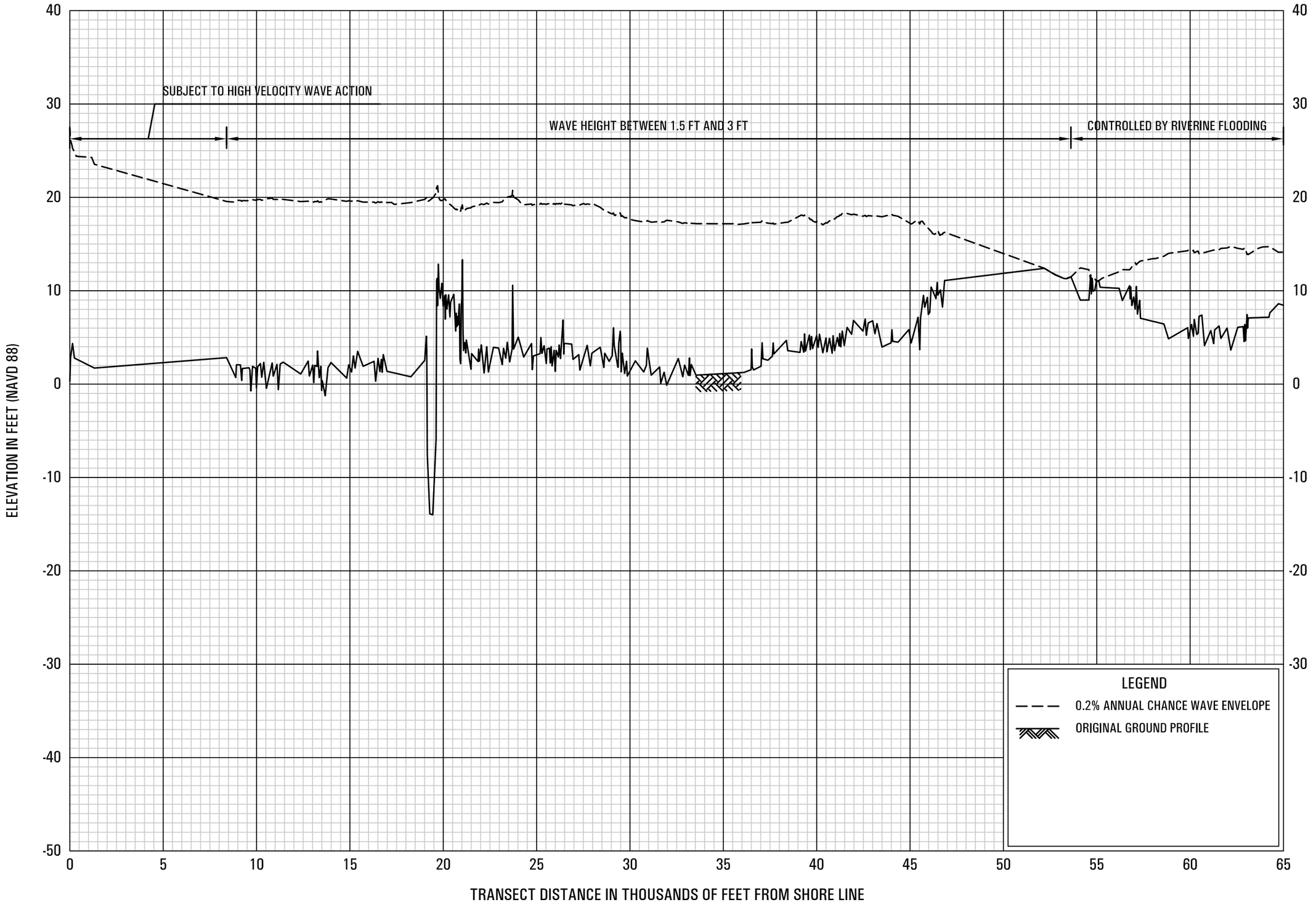
TRANSECT 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

06P

1883



0.2% ANNUAL CHANCE WAVE ENVELOPE

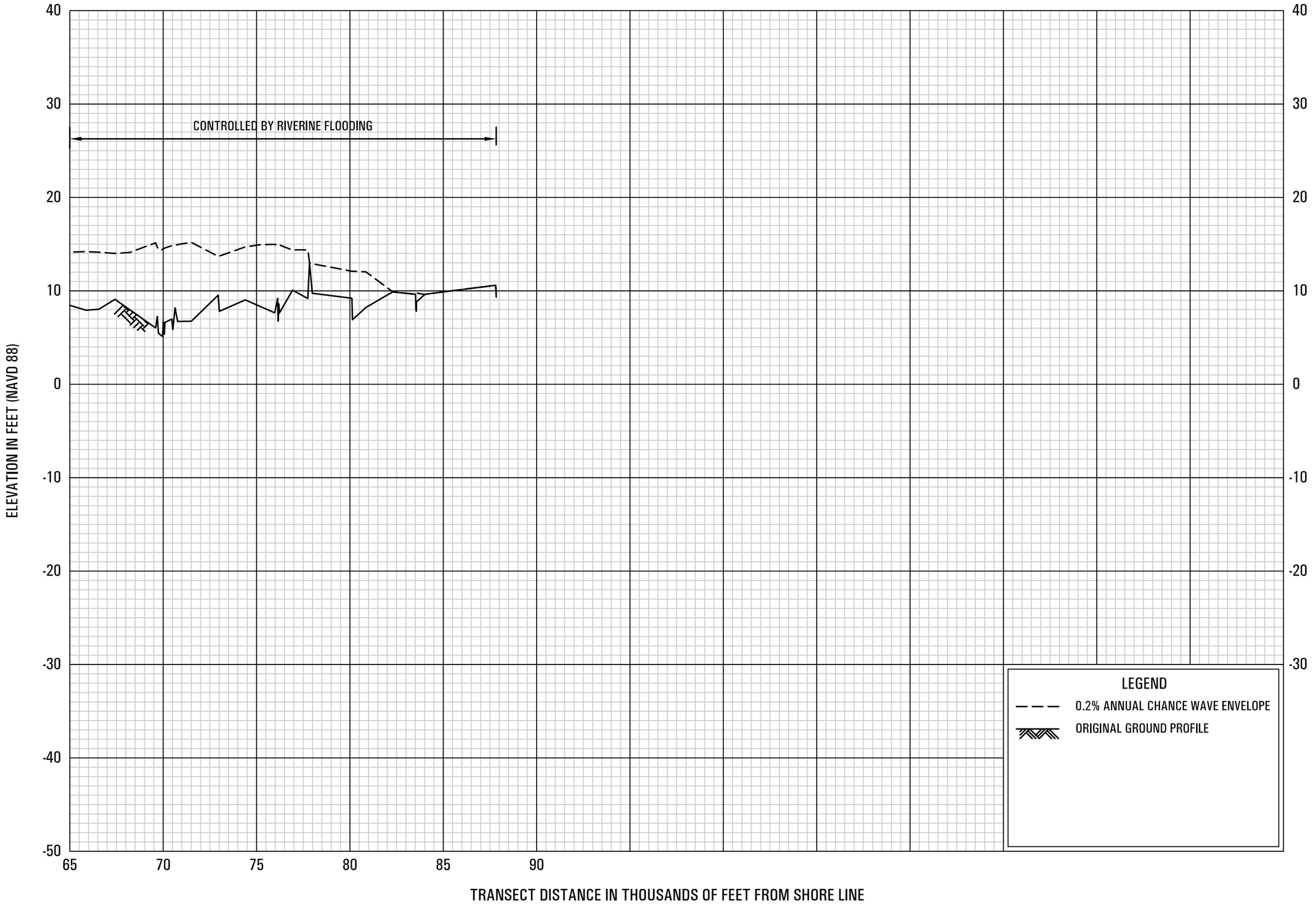
TRANSECT 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

07P

1884



0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

08P

1885

SUBJECT TO HIGH VELOCITY WAVE ACTION

WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT

SUBJECT TO HIGH VELOCITY WAVE ACTION

WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT

SUBJECT TO HIGH VELOCITY WAVE ACTION

WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT

CONTROLLED BY RIVERINE FLOODING

ELEVATION IN FEET (NAVD 88)

40 30 20 10 0 -10 -20 -30 -40 -50

0 5 10 15 20 25 30 35 40 45 50 55 60 65

TRANSECT DISTANCE IN THOUSANDS OF FEET FROM SHORE LINE

LEGEND

0.2% ANNUAL CHANCE WAVE ENVELOPE

ORIGINAL GROUND PROFILE

0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 7

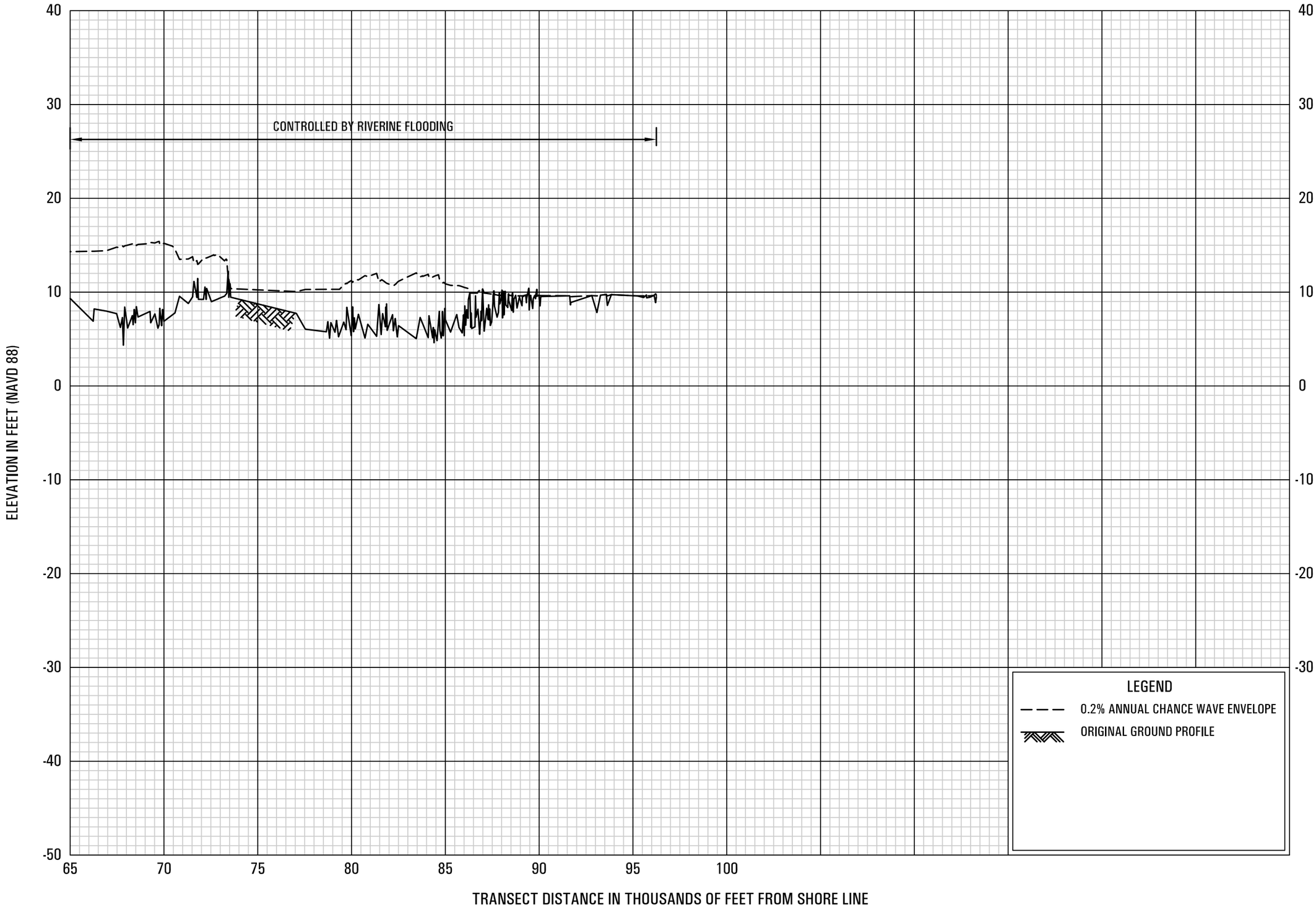
FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX

AND INCORPORATED AREAS

09P

1886



0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

10P

1887

SUBJECT TO HIGH VELOCITY WAVE ACTION
WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT
SUBJECT TO HIGH VELOCITY WAVE ACTION
WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT
SUBJECT TO HIGH VELOCITY WAVE ACTION
WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT
WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT
CONTROLLED BY RIVERINE FLOODING

ELEVATION IN FEET (NAVD 88)

40 30 20 10 0 -10 -20 -30 -40 -50

0 5 10 15 20 25 30 35 40 45 50 55 60 65

TRANSECT DISTANCE IN THOUSANDS OF FEET FROM SHORE LINE

LEGEND
0.2% ANNUAL CHANCE WAVE ENVELOPE
ORIGINAL GROUND PROFILE

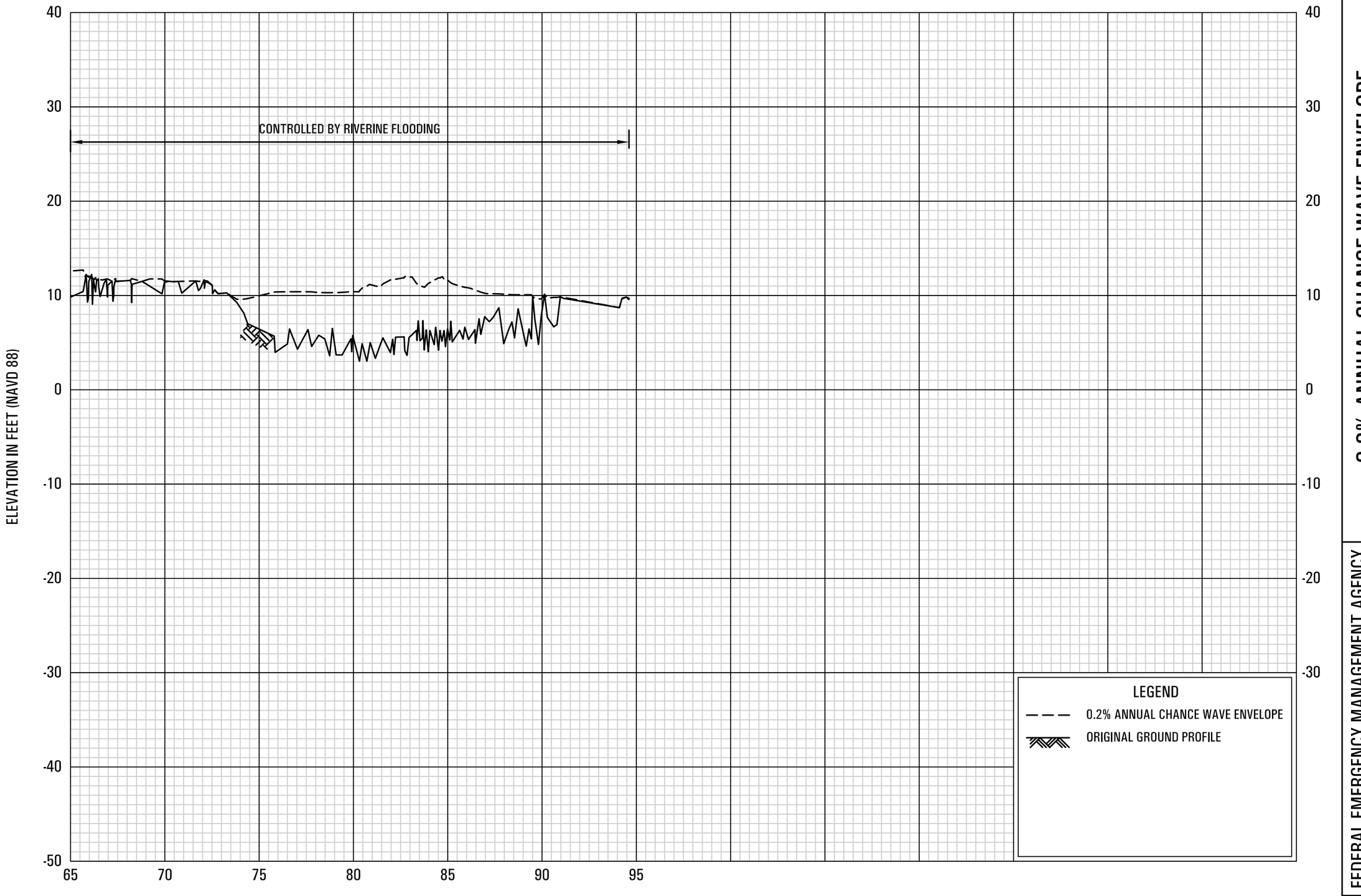
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 8

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

11P

1888



0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

12P

SUBJECT TO HIGH VELOCITY WAVE ACTION

WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT

SUBJECT TO HIGH VELOCITY WAVE ACTION

WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT

SUBJECT TO HIGH VELOCITY WAVE ACTION

WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT

CONTROLLED BY RIVERINE FLOODING

ELEVATION IN FEET (NAVD 88)

40
30
20
10
0
-10
-20
-30
-40
-50

0 5 10 15 20 25 30 35 40 45 50 55 60 65

TRANSECT DISTANCE IN THOUSANDS OF FEET FROM SHORE LINE

LEGEND

0.2% ANNUAL CHANCE WAVE ENVELOPE

ORIGINAL GROUND PROFILE

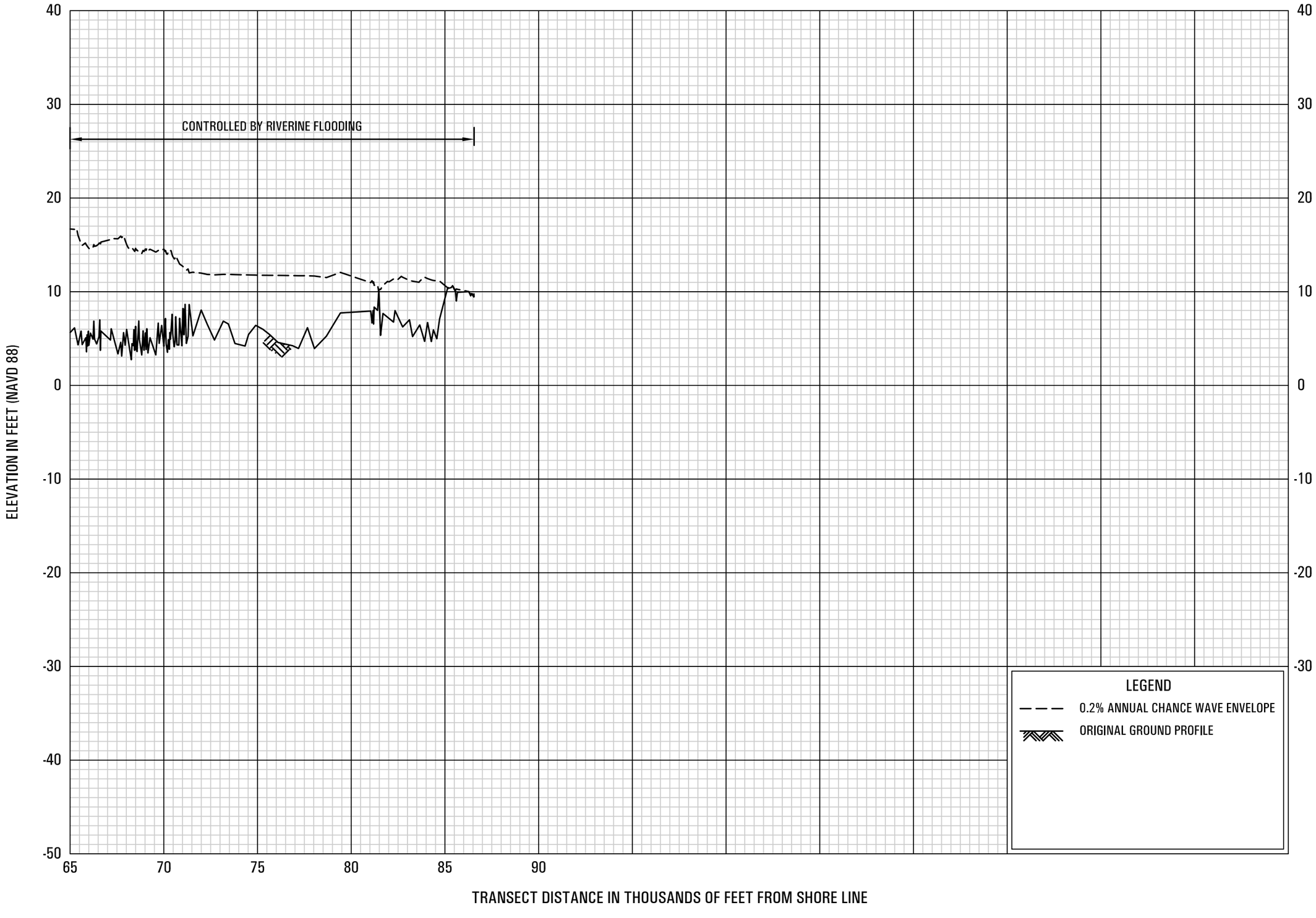
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 9

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

13P

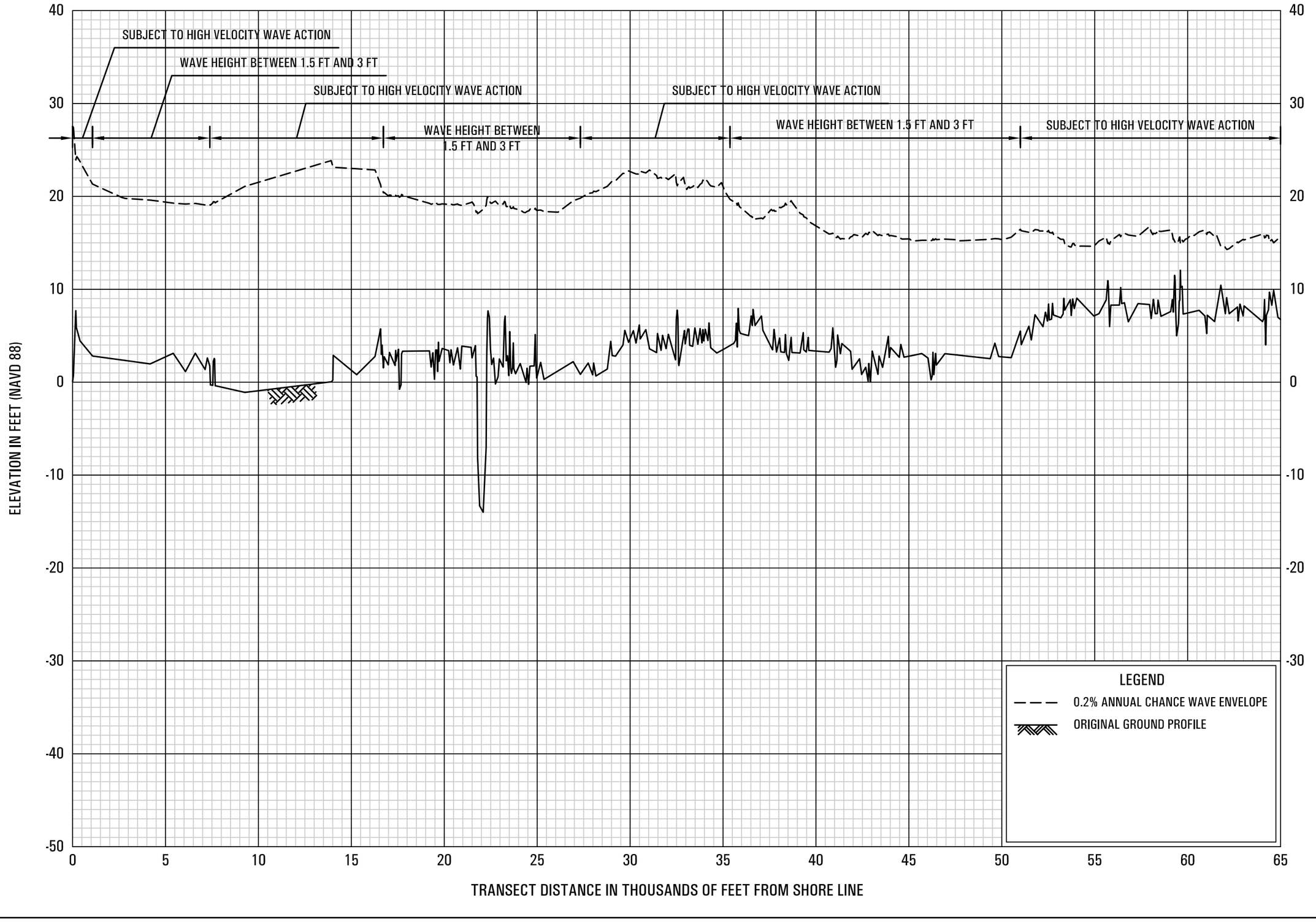


0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 9

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS



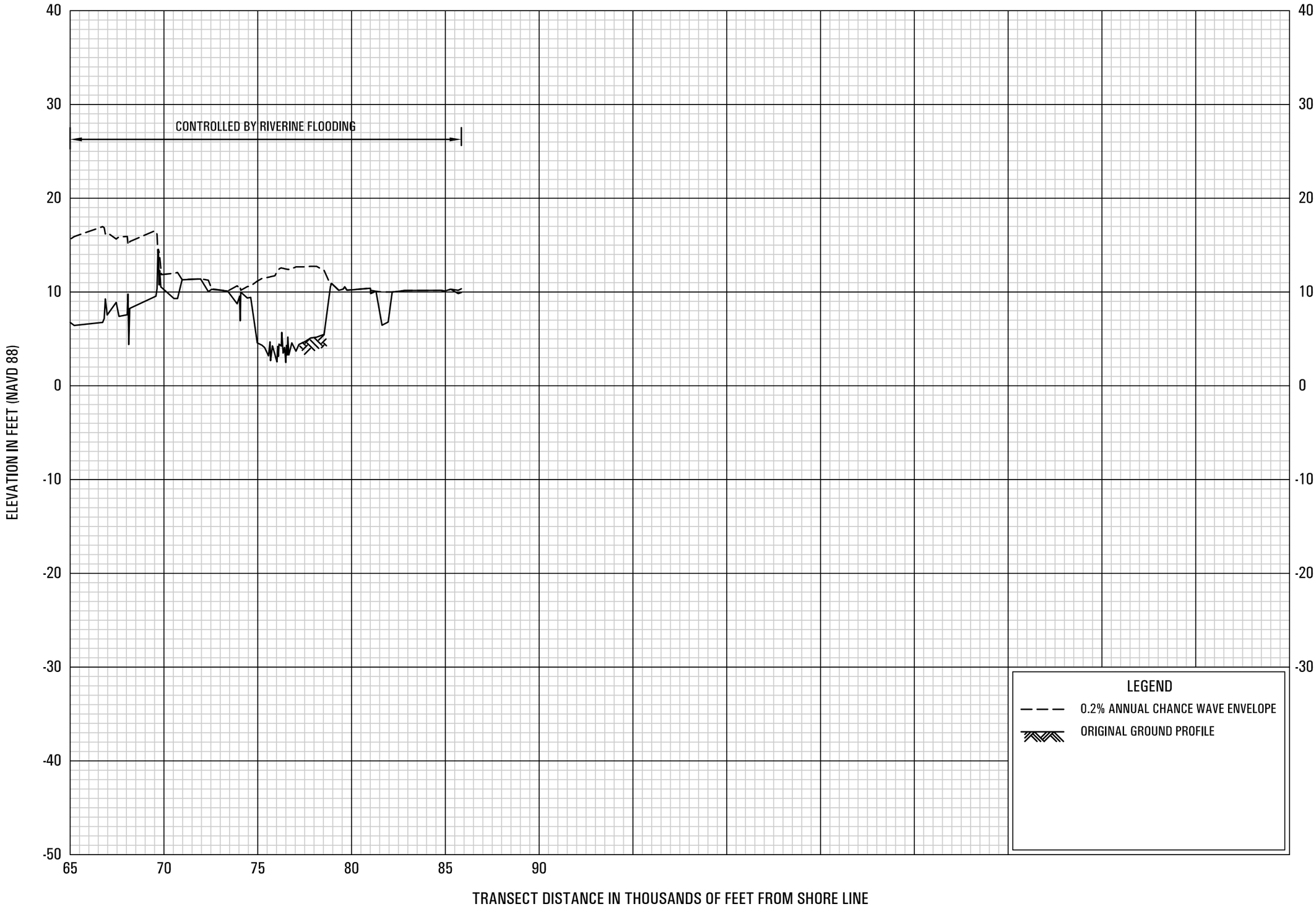
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

15P



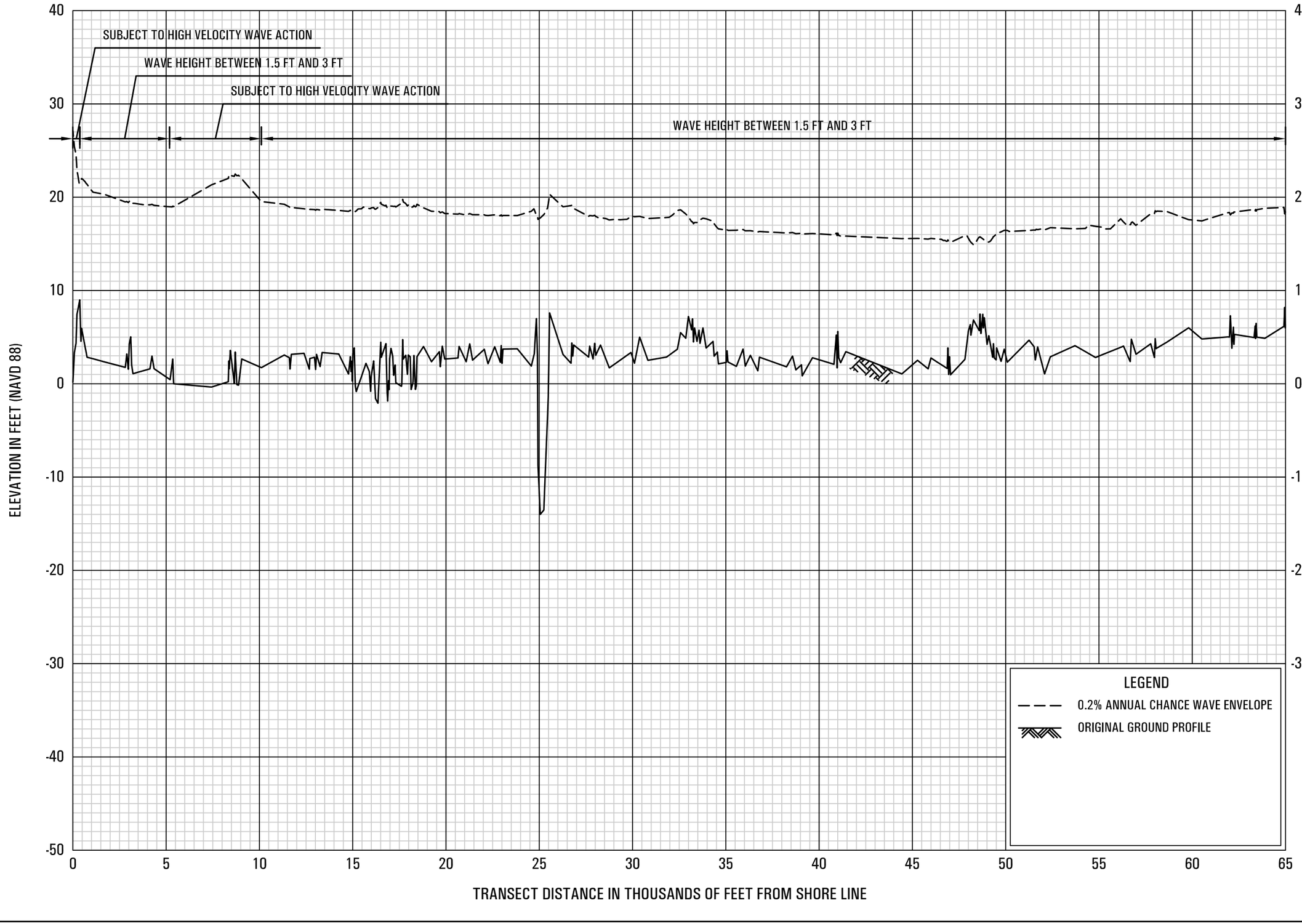
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

16P



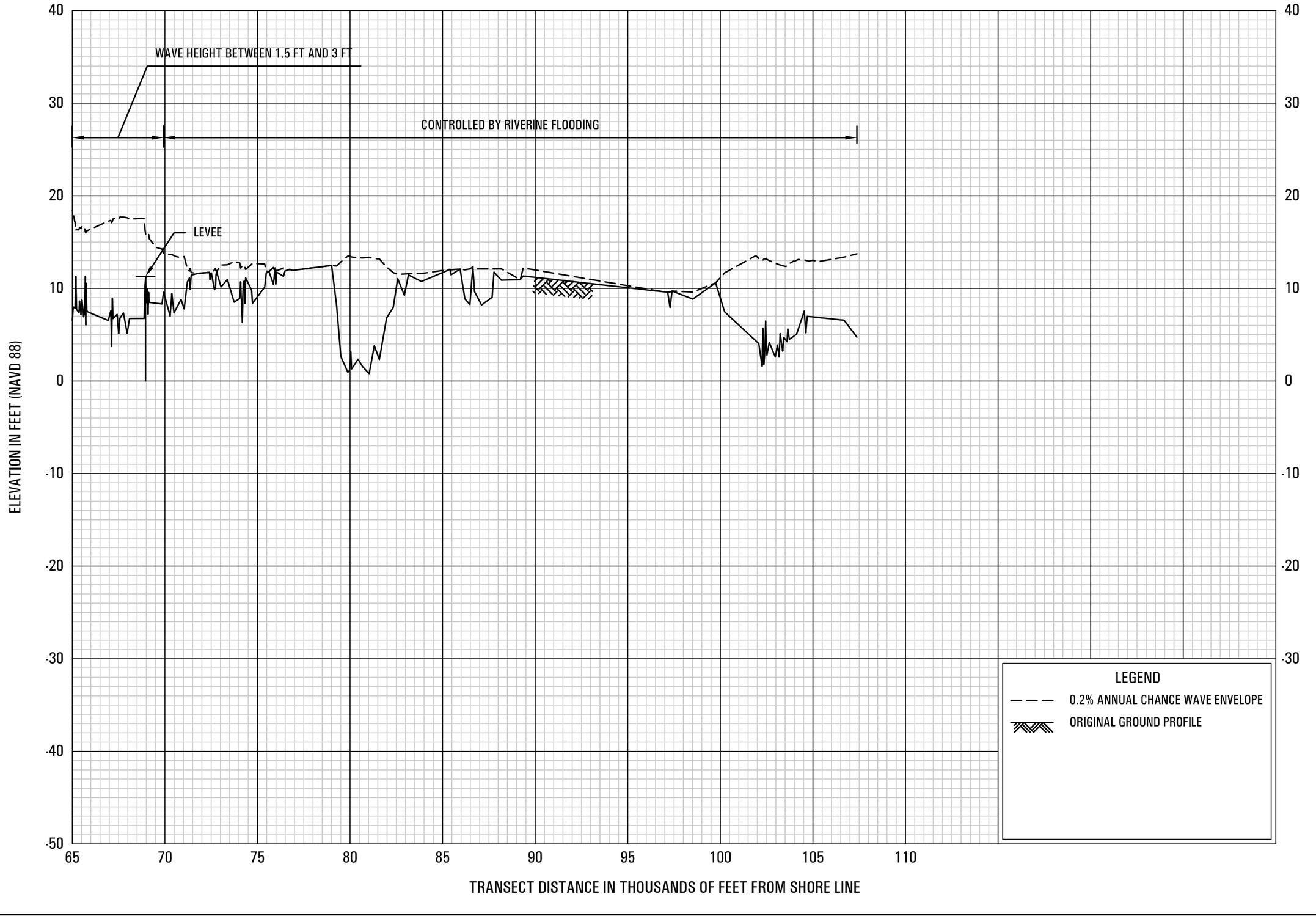
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

17P



0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

18P

SUBJECT TO HIGH VELOCITY WAVE ACTION

SUBJECT TO HIGH VELOCITY WAVE ACTION

WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT

ELEVATION IN FEET (NAVD 88)

40
30
20
10
0
-10
-20
-30
-40
-50

0
5
10
15
20
25
30
35
40
45
50
55
60
65

TRANSECT DISTANCE IN THOUSANDS OF FEET FROM SHORE LINE

LEGEND

0.2% ANNUAL CHANCE WAVE ENVELOPE

ORIGINAL GROUND PROFILE

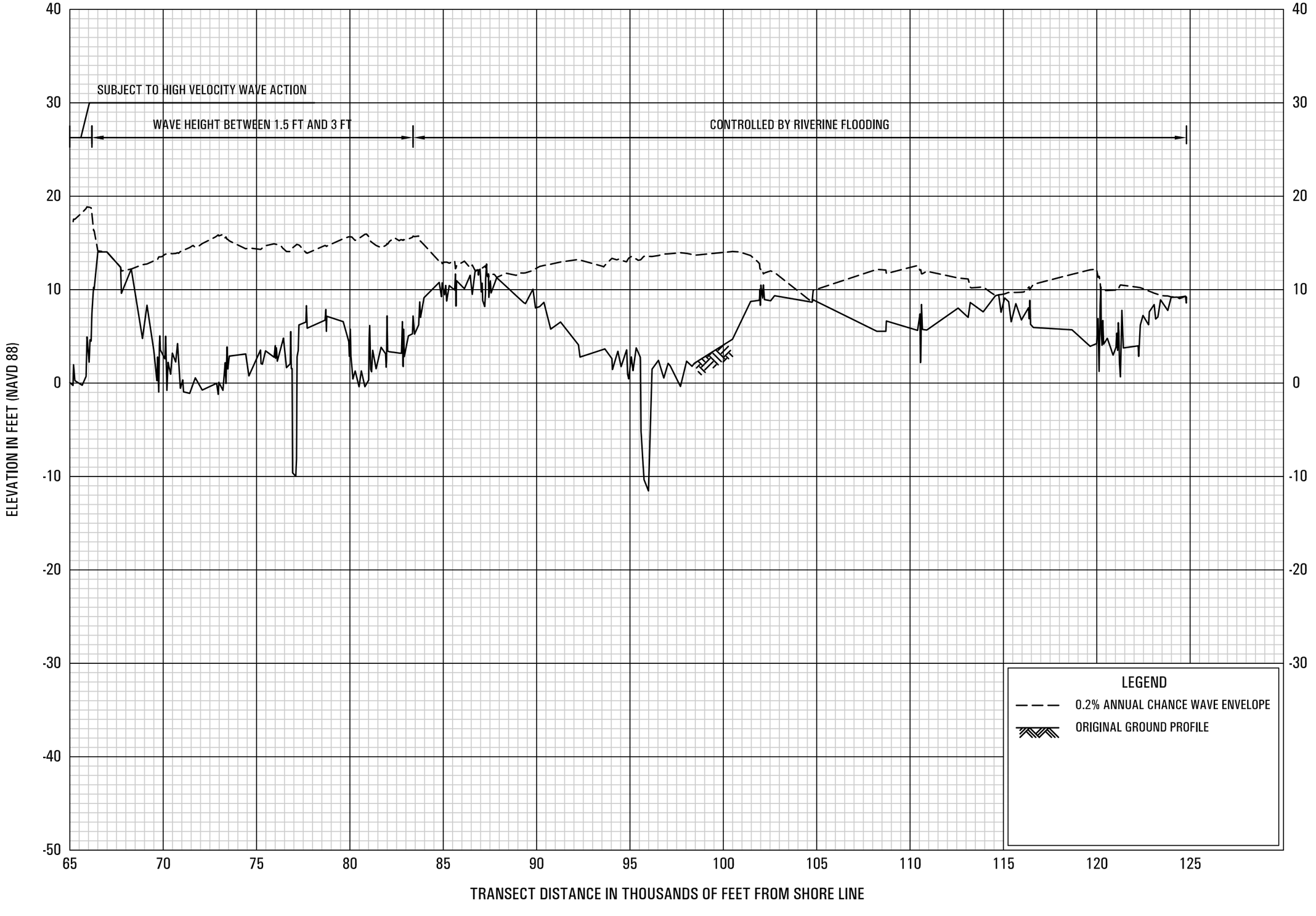
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 12

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

19P



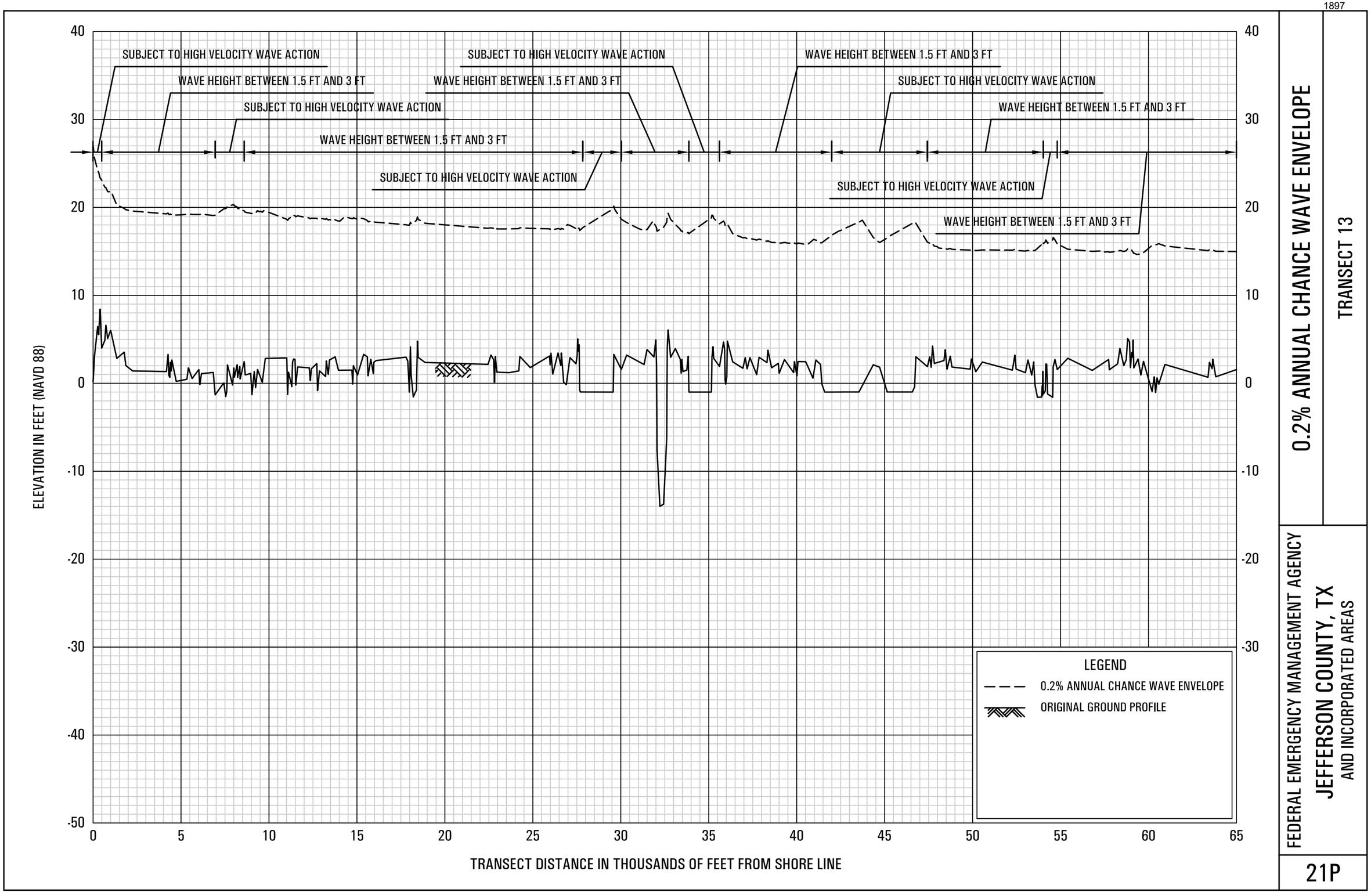
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 12

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

20P



0.2% ANNUAL CHANCE WAVE ENVELOPE

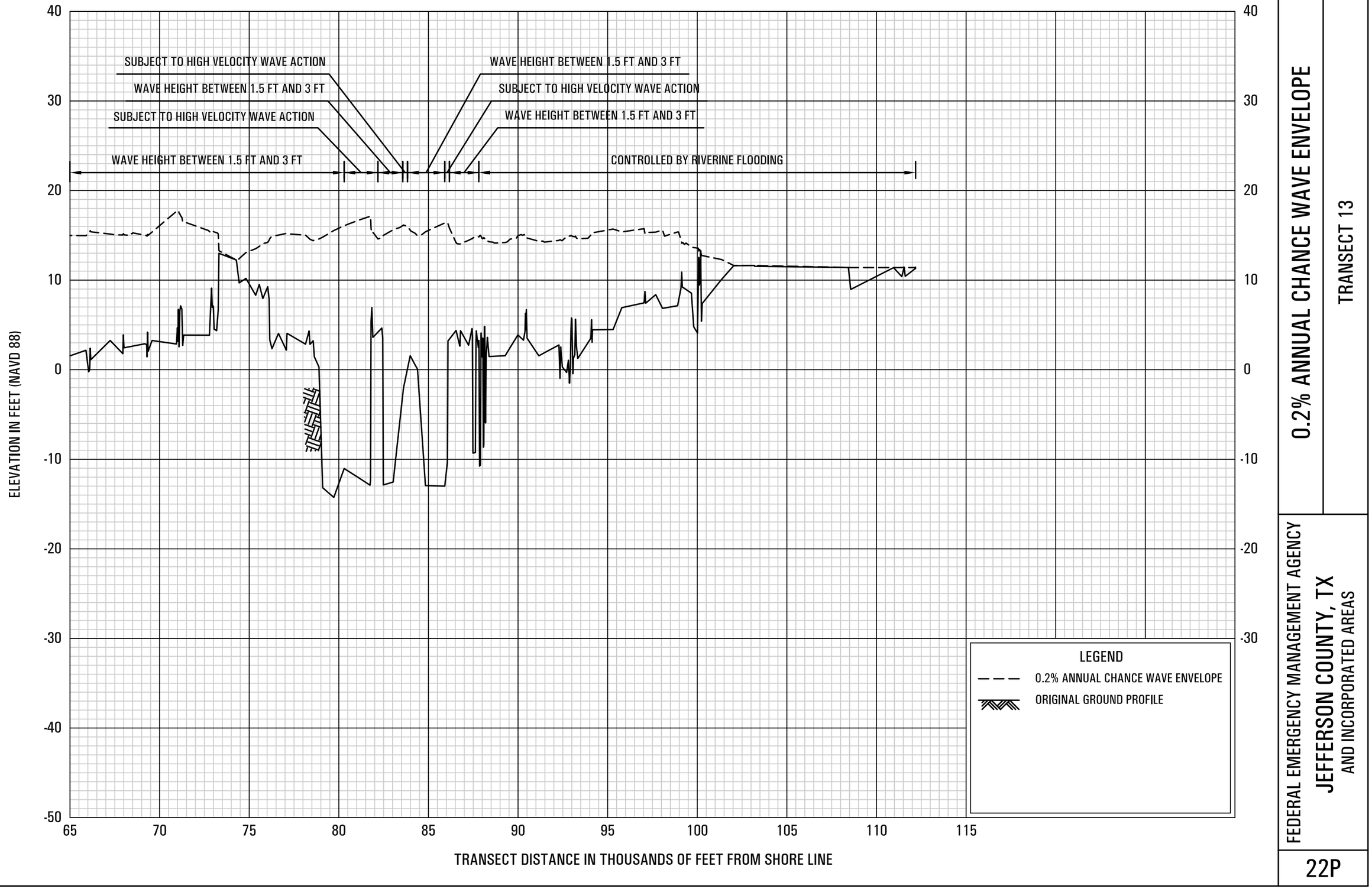
TRANSECT 13

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

21P

1898



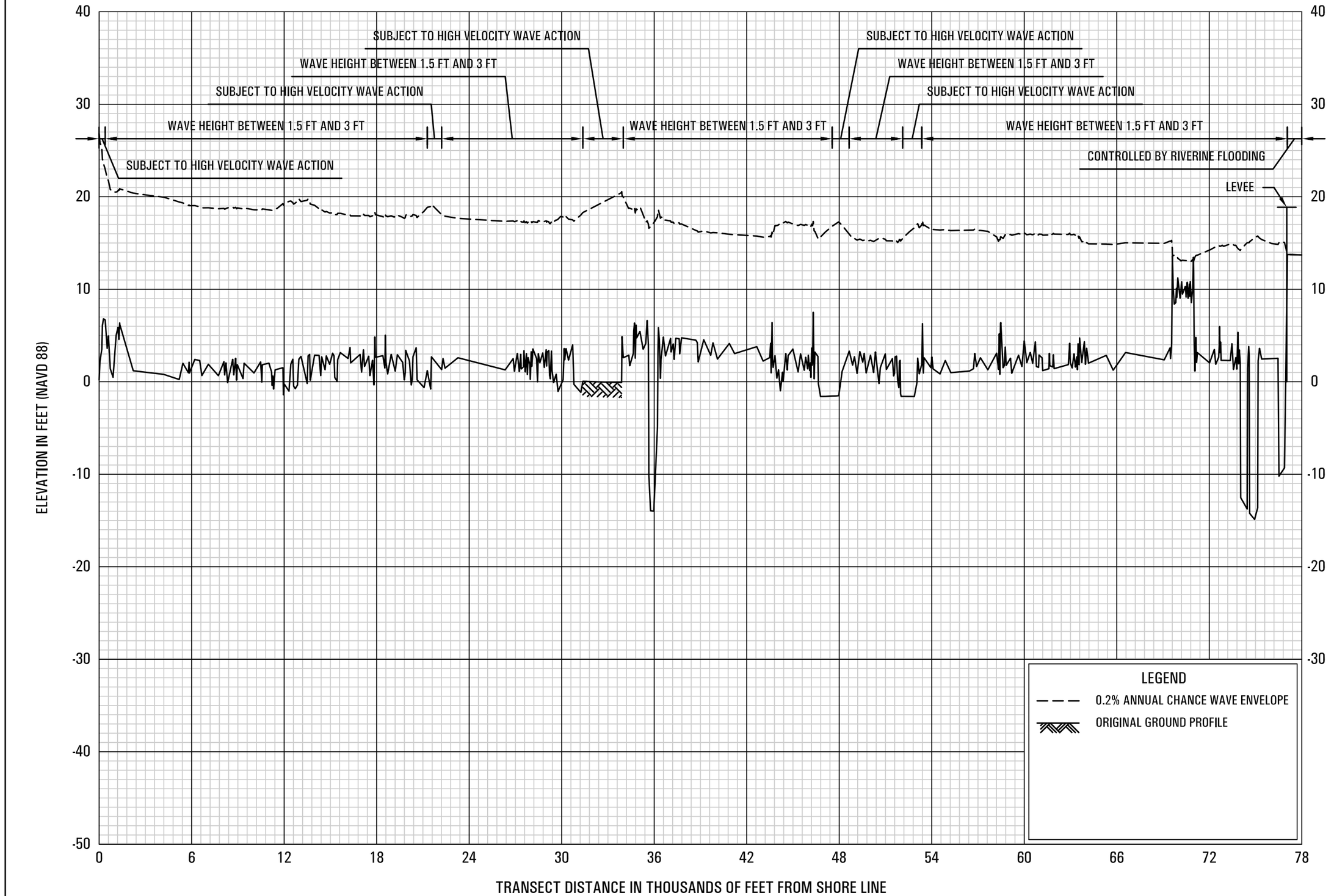
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 13

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

22P



0.2% ANNUAL CHANCE WAVE ENVELOPE

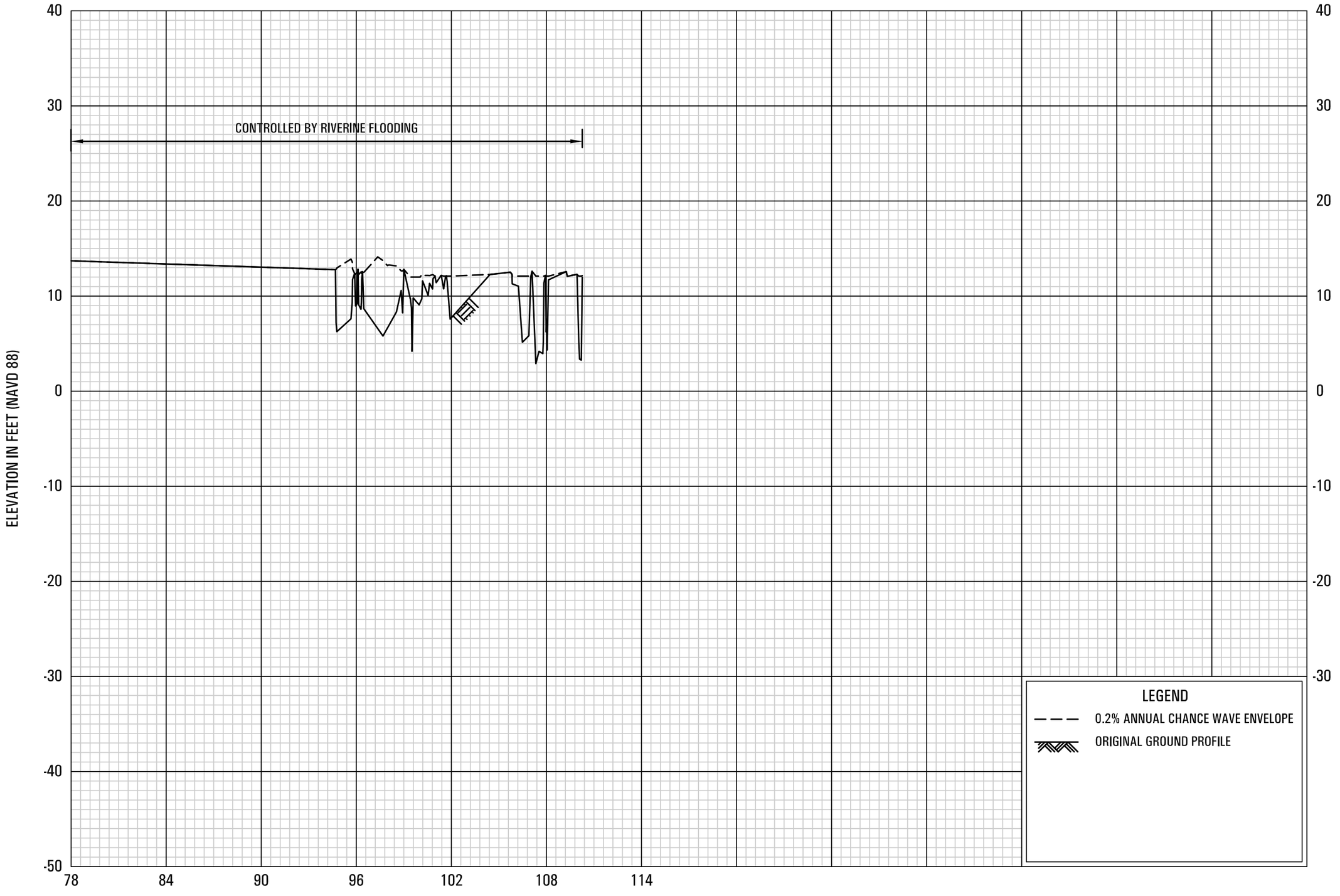
TRANSECT 14

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

23P

1900



ELEVATION IN FEET (NAVD 88)

TRANSECT DISTANCE IN THOUSANDS OF FEET FROM SHORE LINE

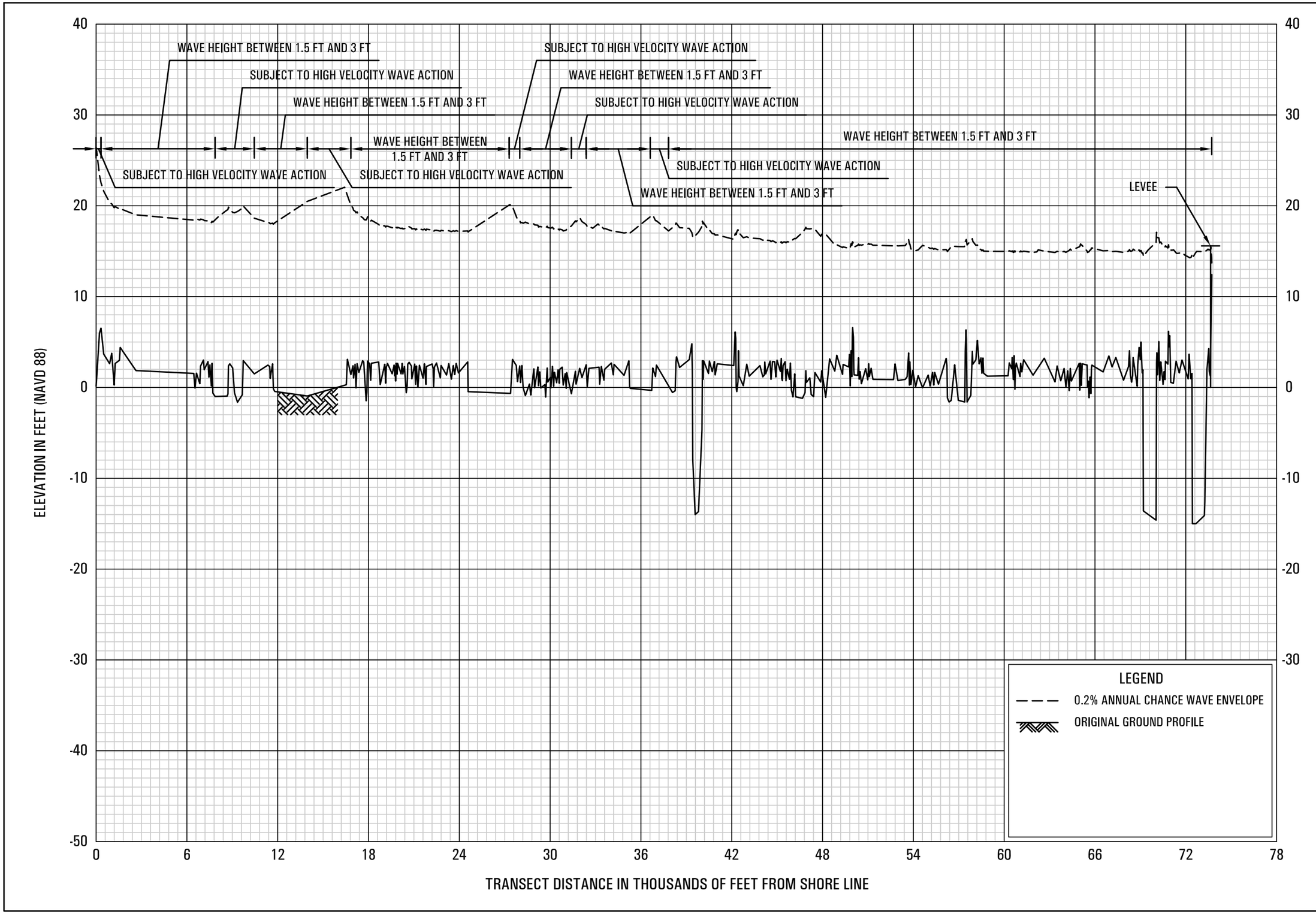
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 14

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

24P



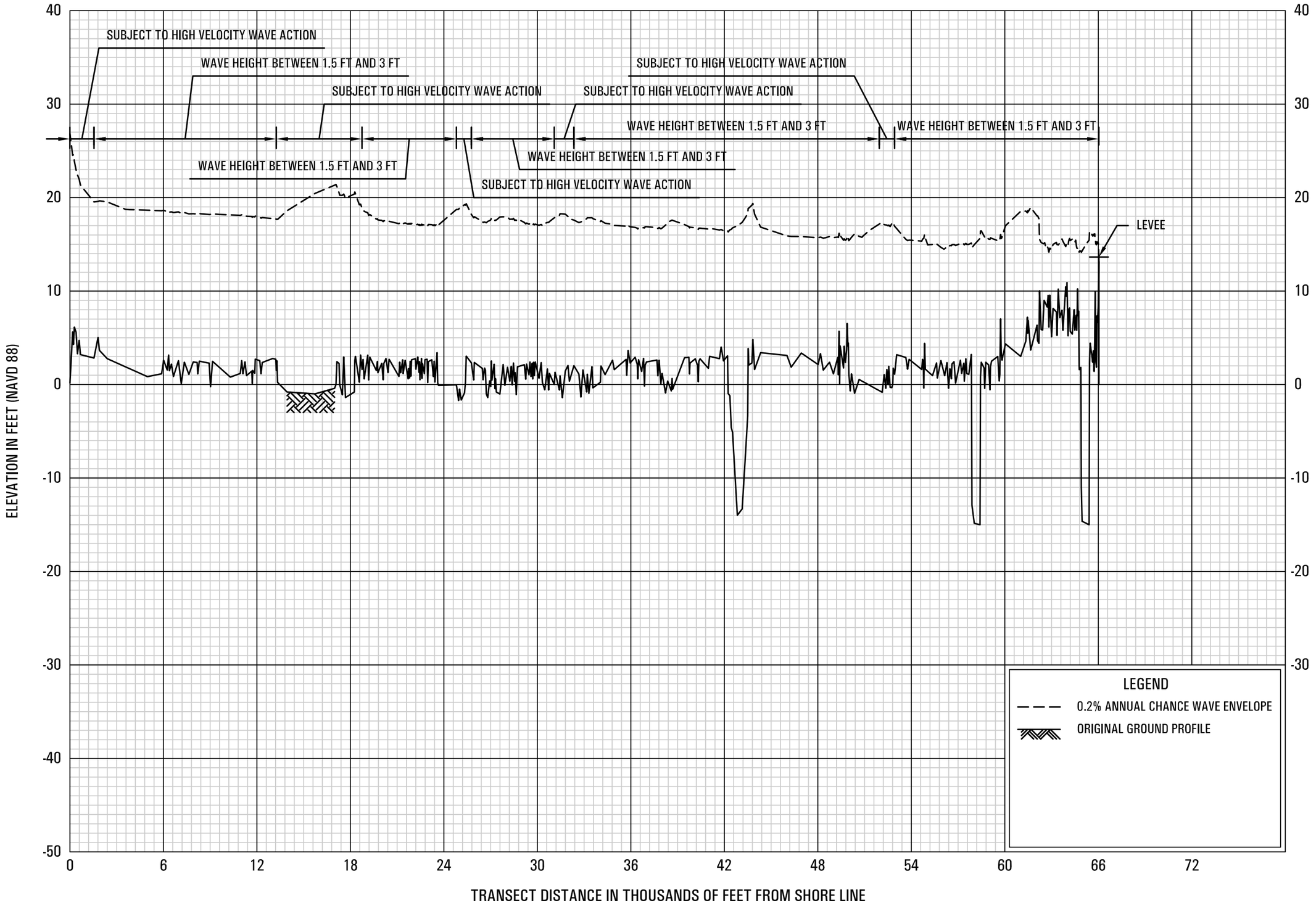
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 15

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

25P



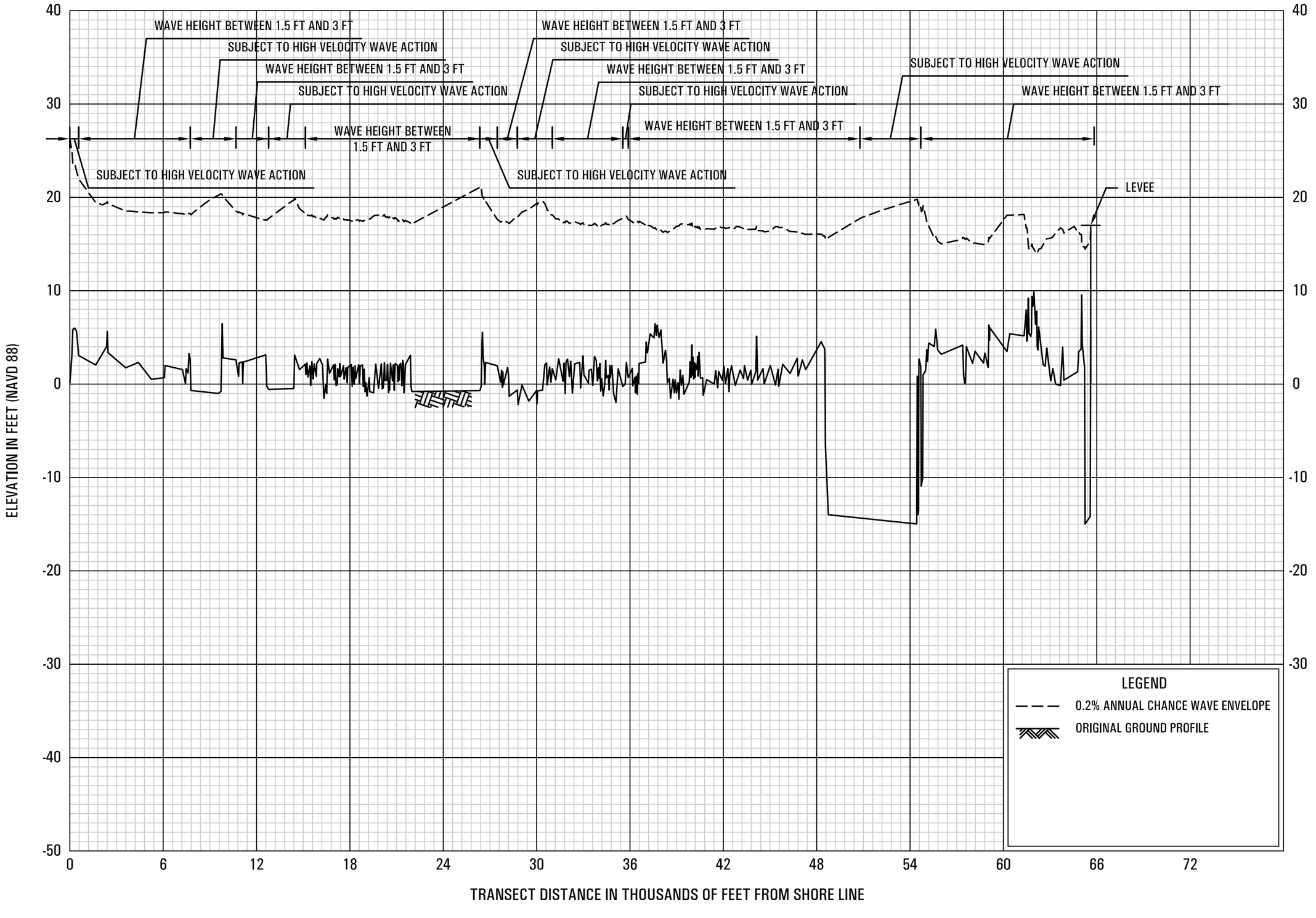
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 16

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

26P



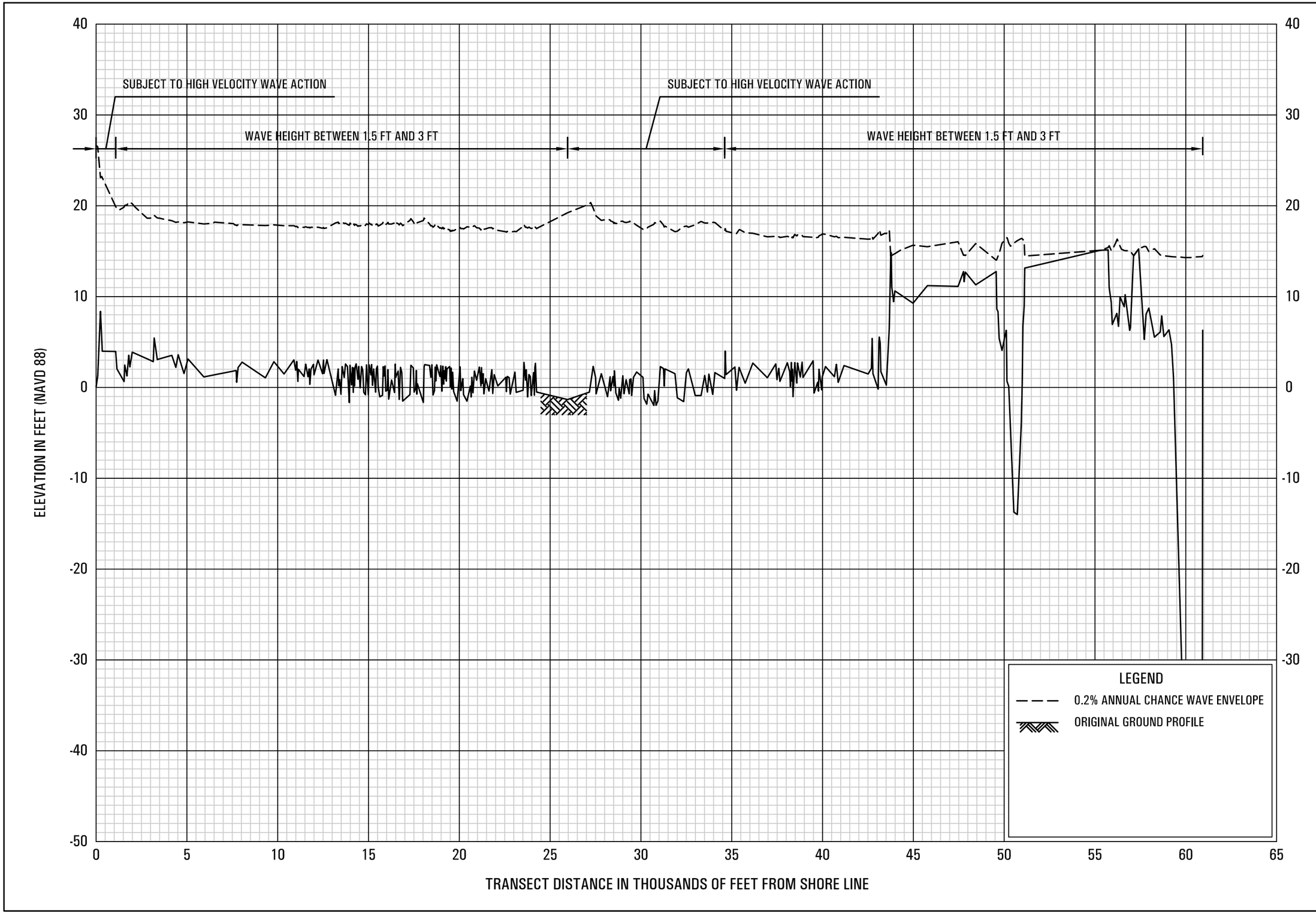
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 17

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

27P



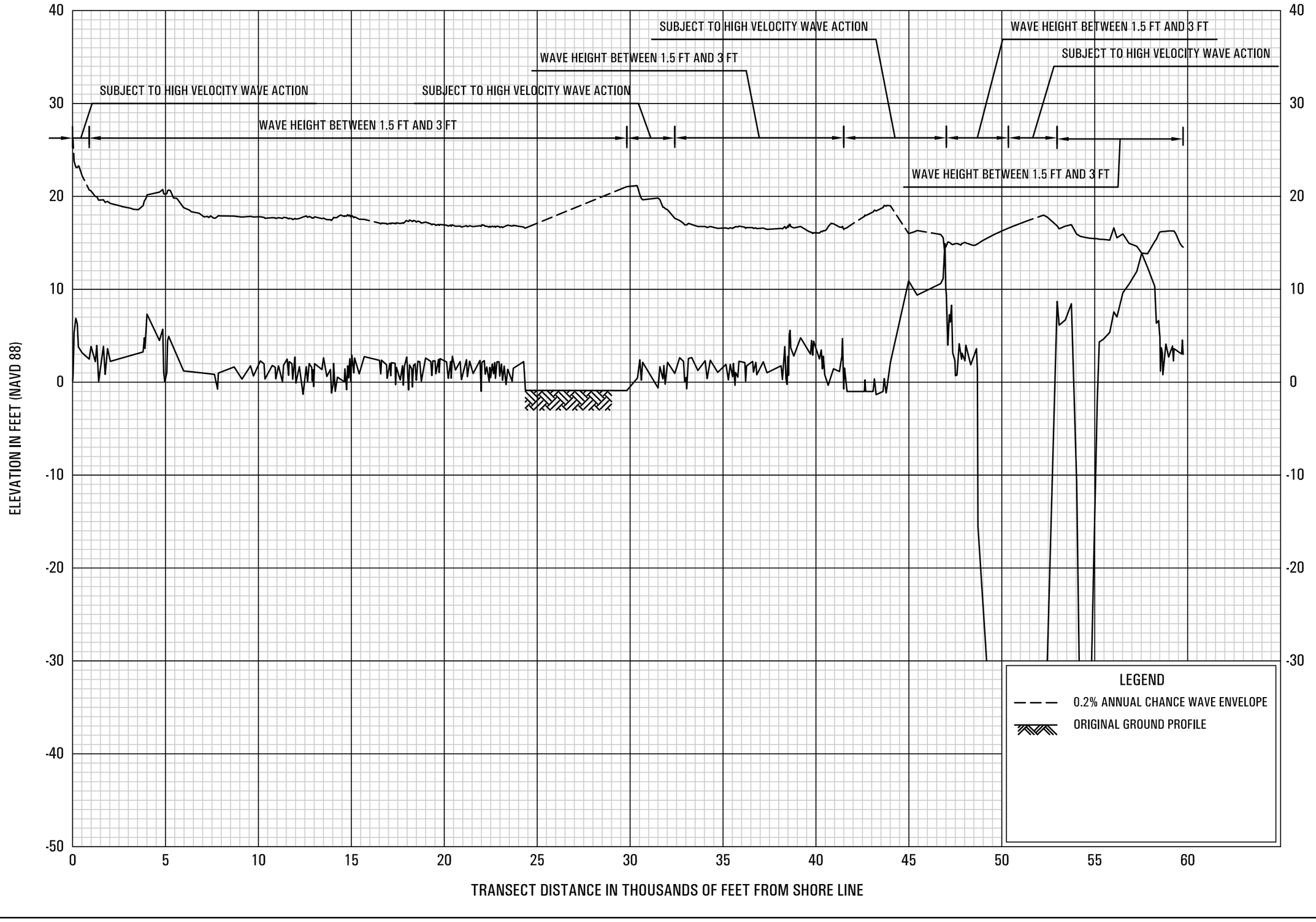
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 18

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

28P



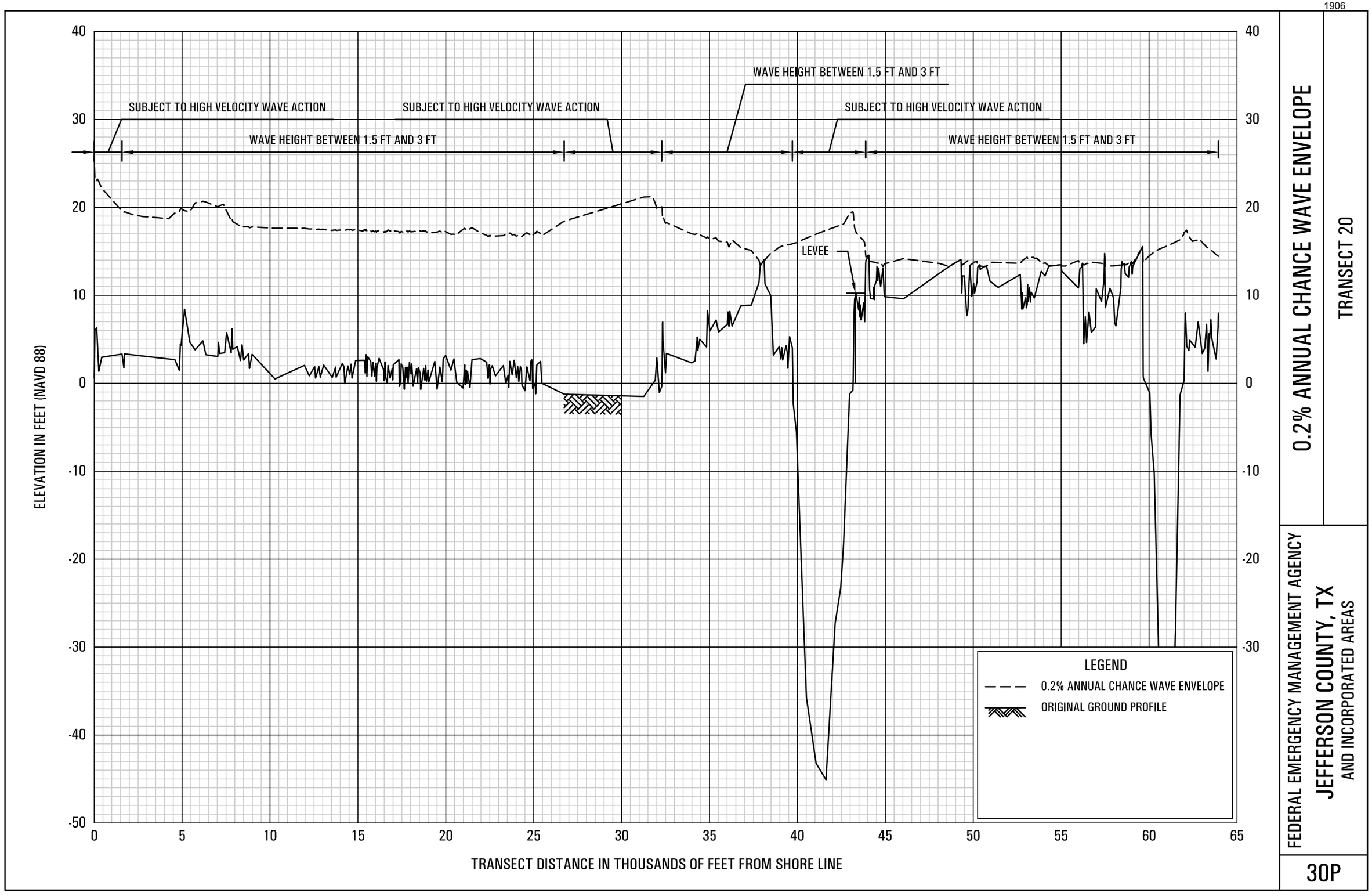
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 19

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

29P



0.2% ANNUAL CHANCE WAVE ENVELOPE

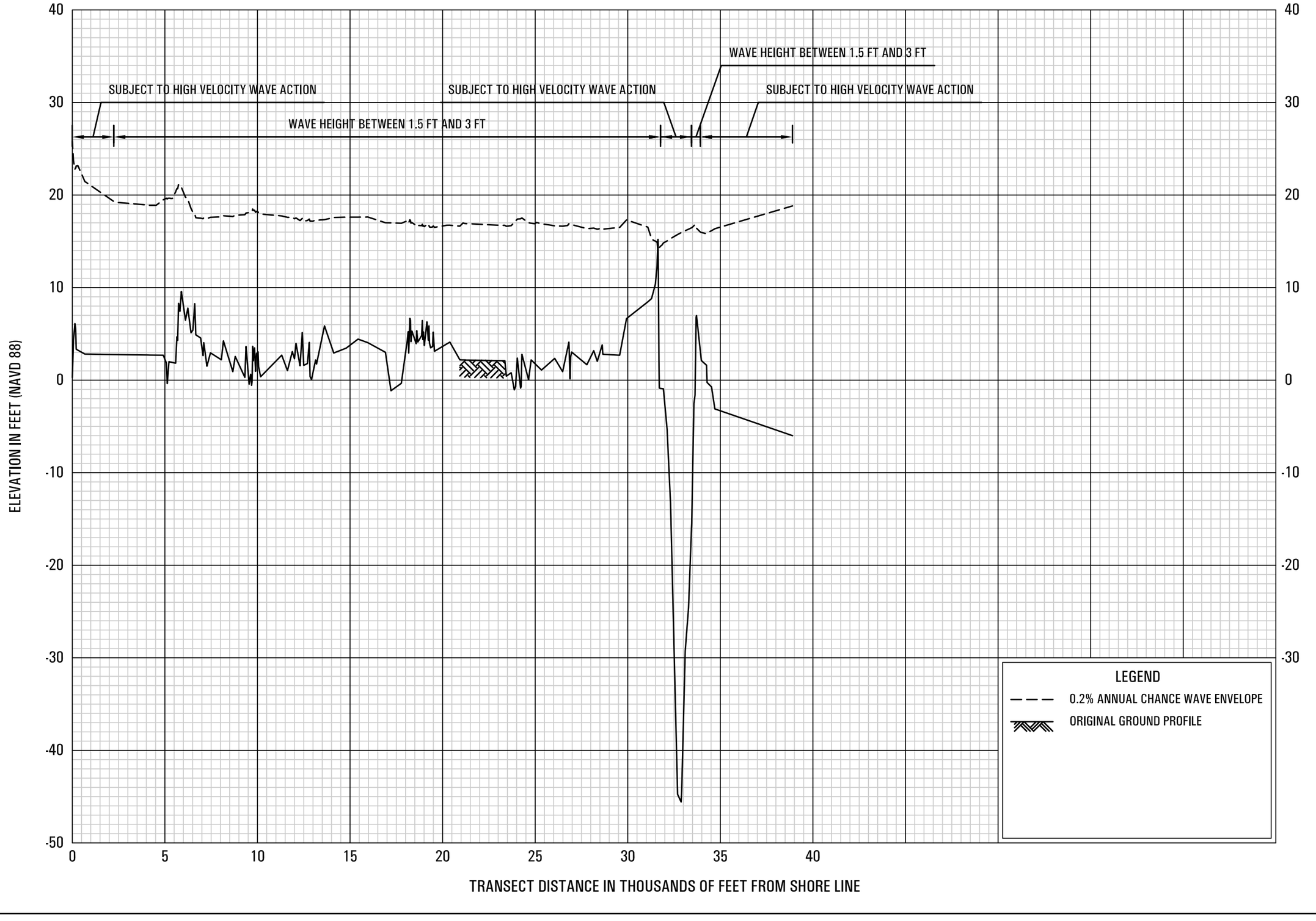
TRANSECT 20

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

30P

1907



0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 21

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

31P

SUBJECT TO HIGH VELOCITY WAVE ACTION
WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT
SUBJECT TO HIGH VELOCITY WAVE ACTION
WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT
SUBJECT TO HIGH VELOCITY WAVE ACTION
WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT
SUBJECT TO HIGH VELOCITY WAVE ACTION
LEVEE

ELEVATION IN FEET (NAVD 88)

40
30
20
10
0
-10
-20
-30
-40
-50

0
6
12
18
24
30
36
42
48
54
60
66
72

TRANSECT DISTANCE IN THOUSANDS OF FEET FROM SHORE LINE

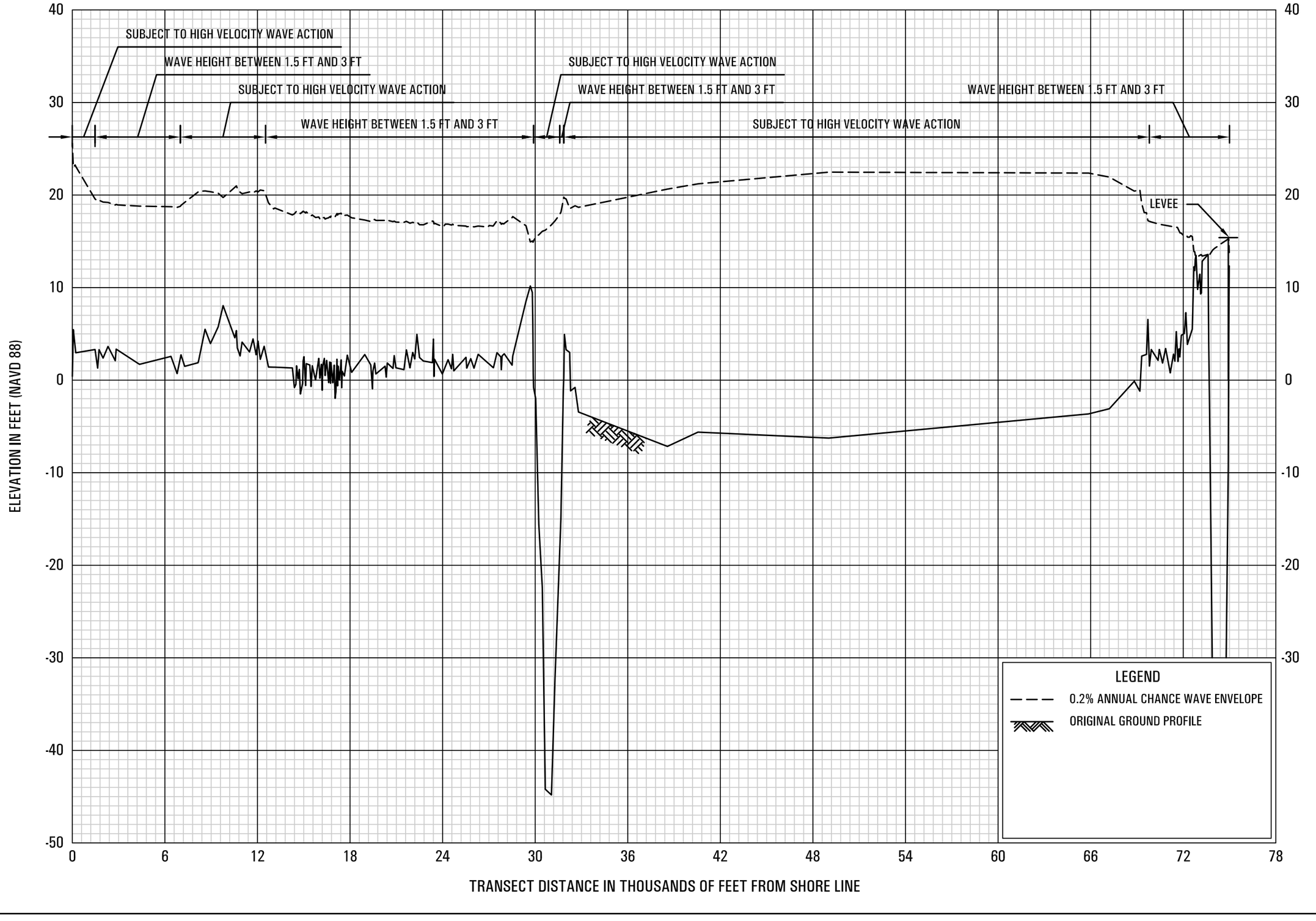
LEGEND
0.2% ANNUAL CHANCE WAVE ENVELOPE
ORIGINAL GROUND PROFILE

0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 22

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

32P



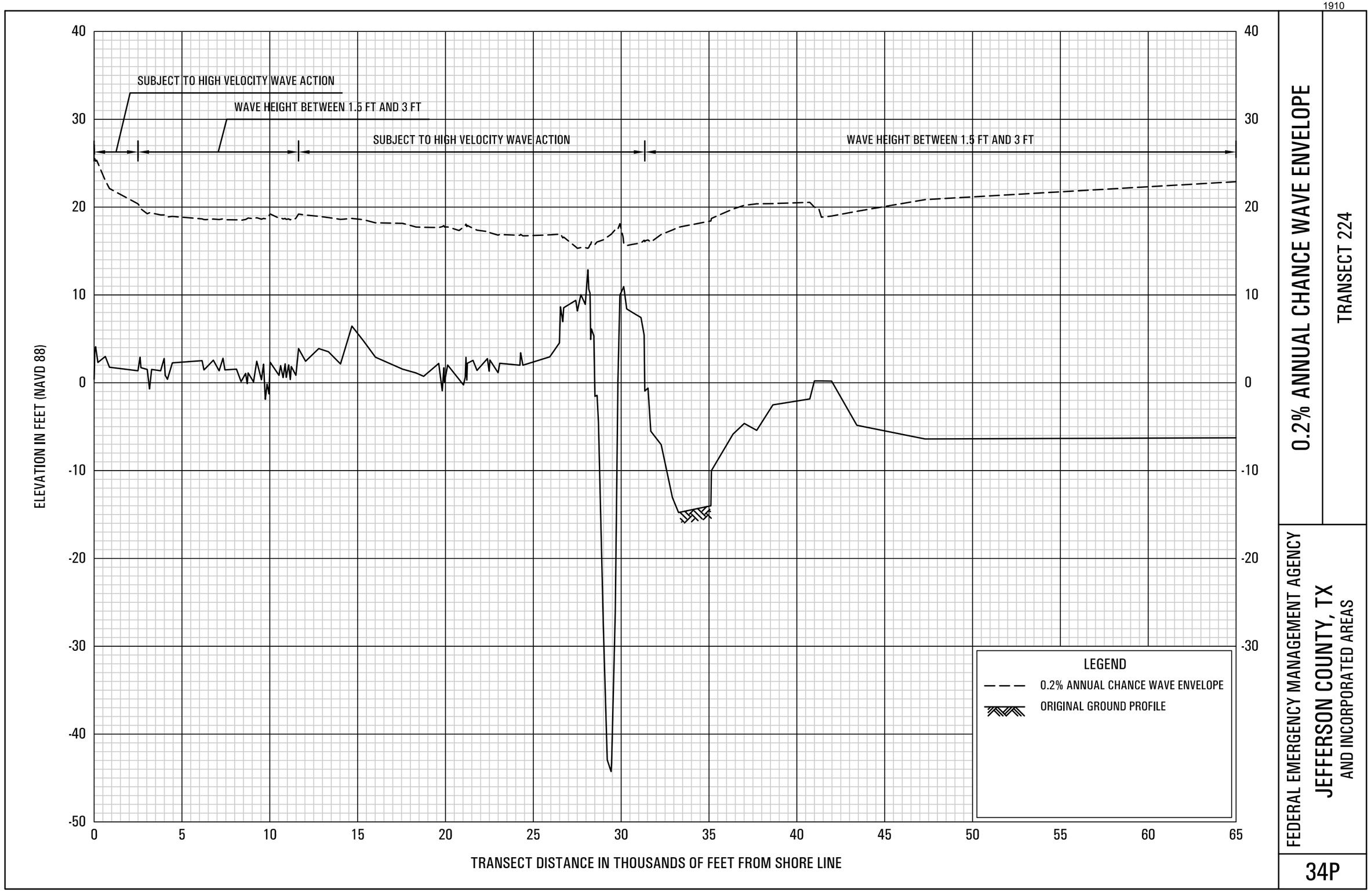
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

33P



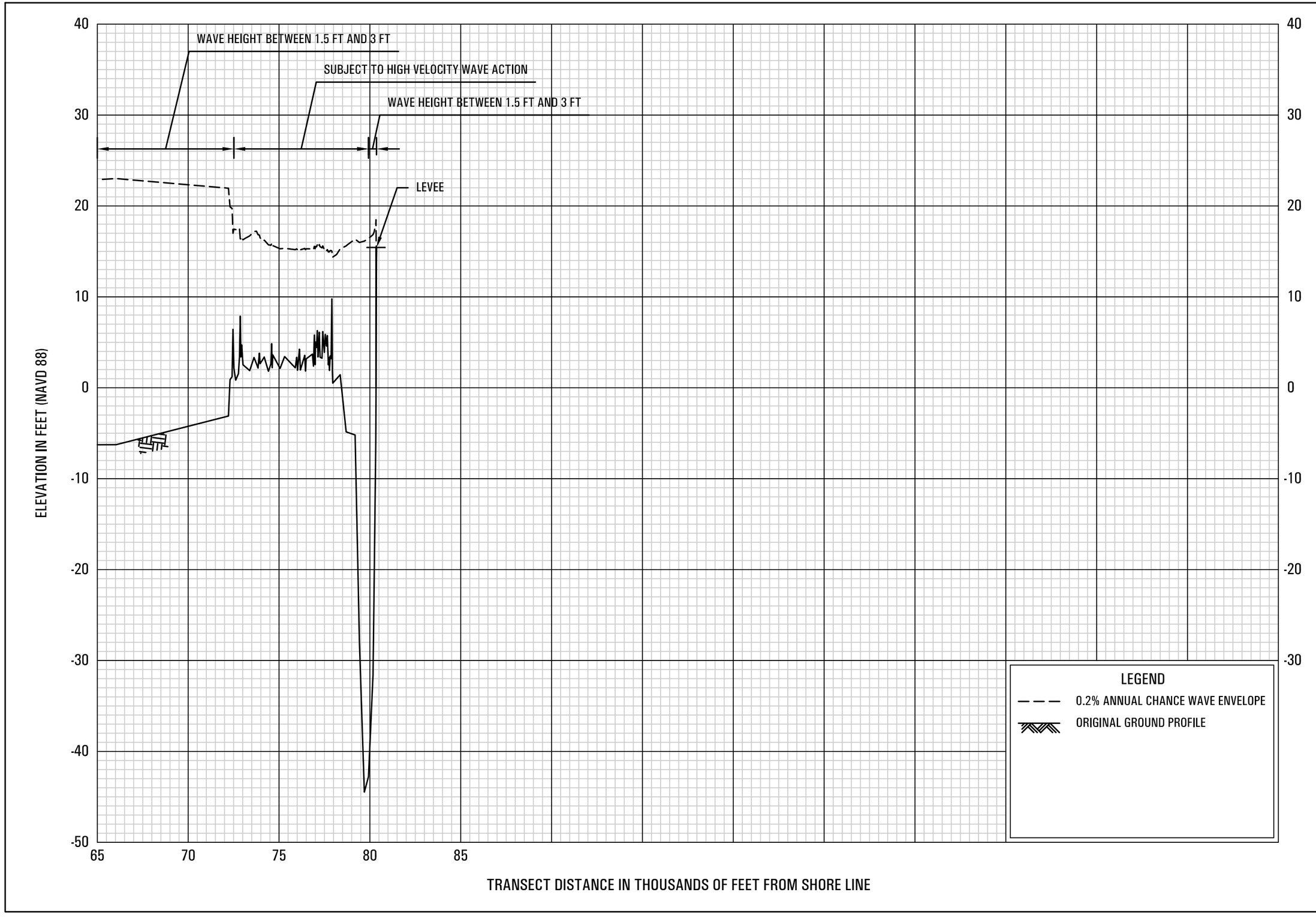
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 224

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

34P



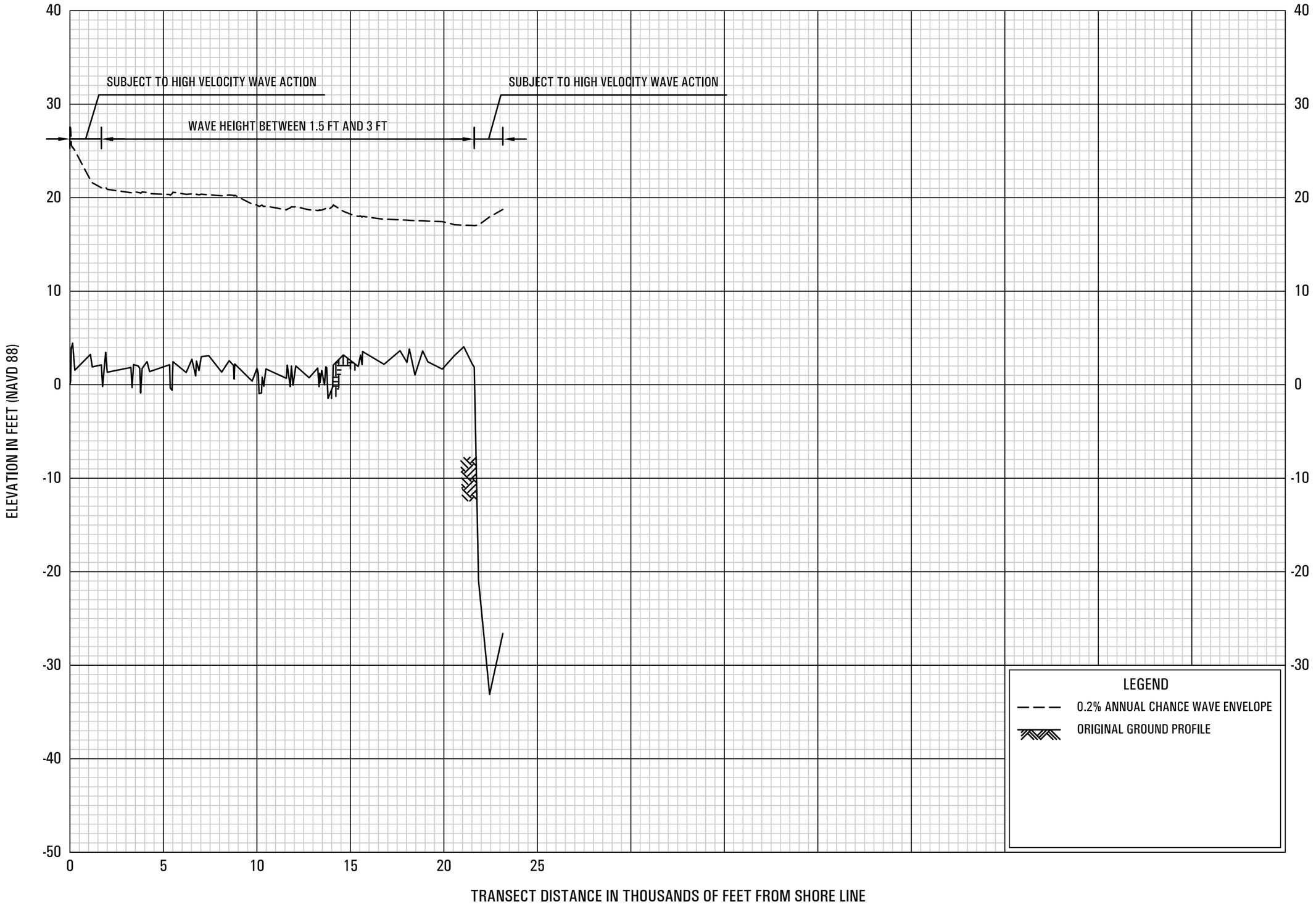
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

35P



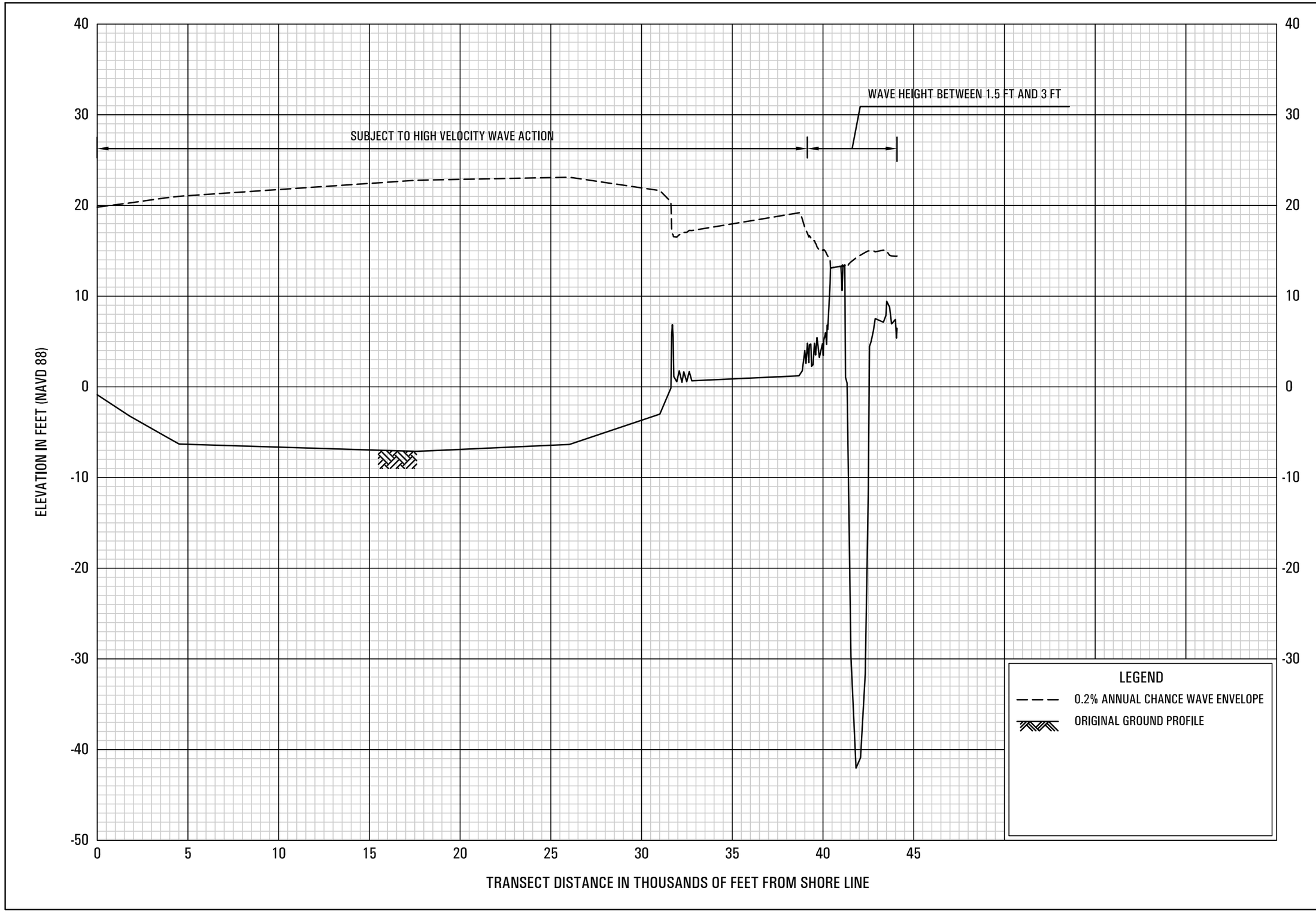
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 25

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

36P



0.2% ANNUAL CHANCE WAVE ENVELOPE

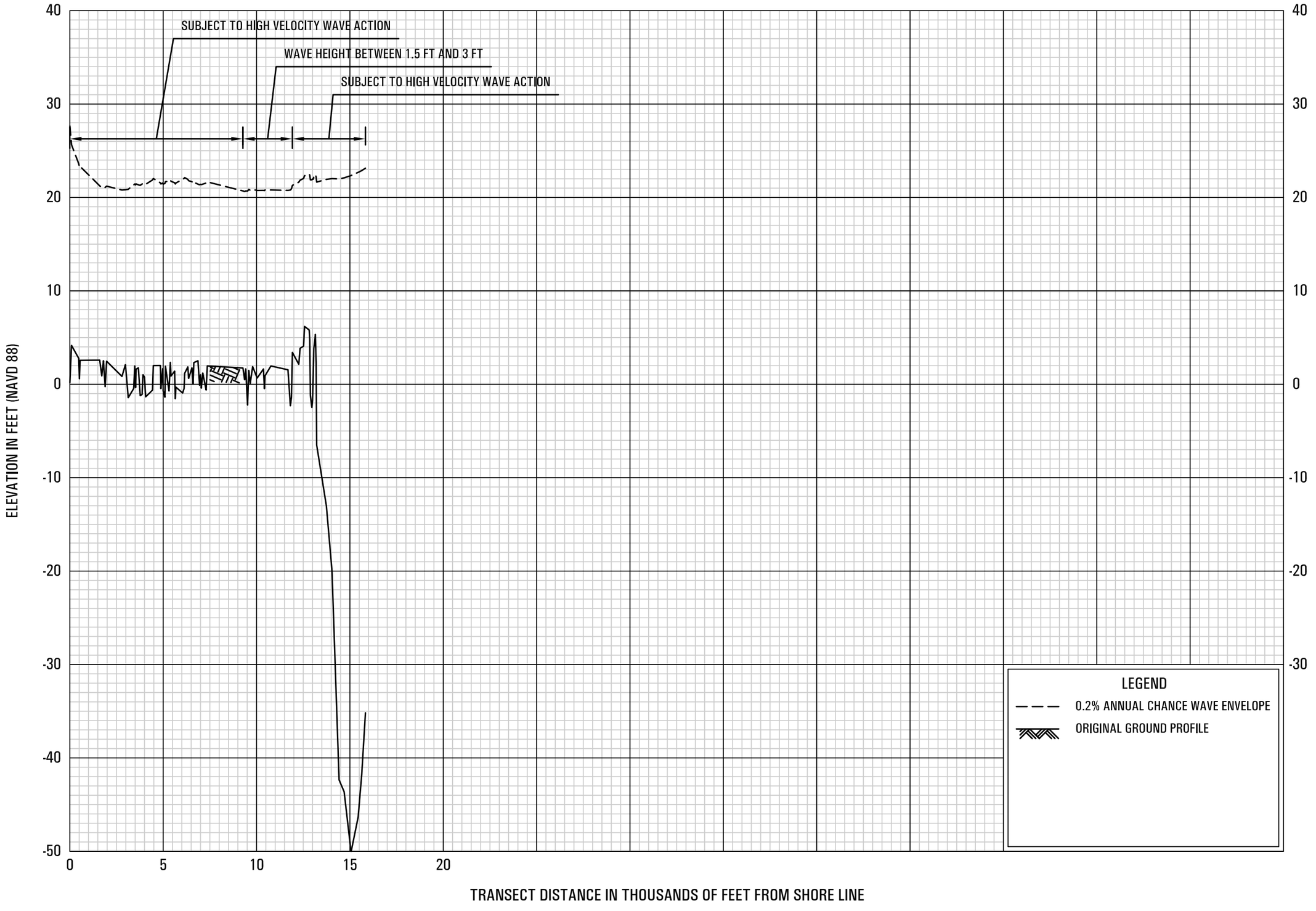
TRANSECT 26

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

37P

1914



0.2% ANNUAL CHANCE WAVE ENVELOPE

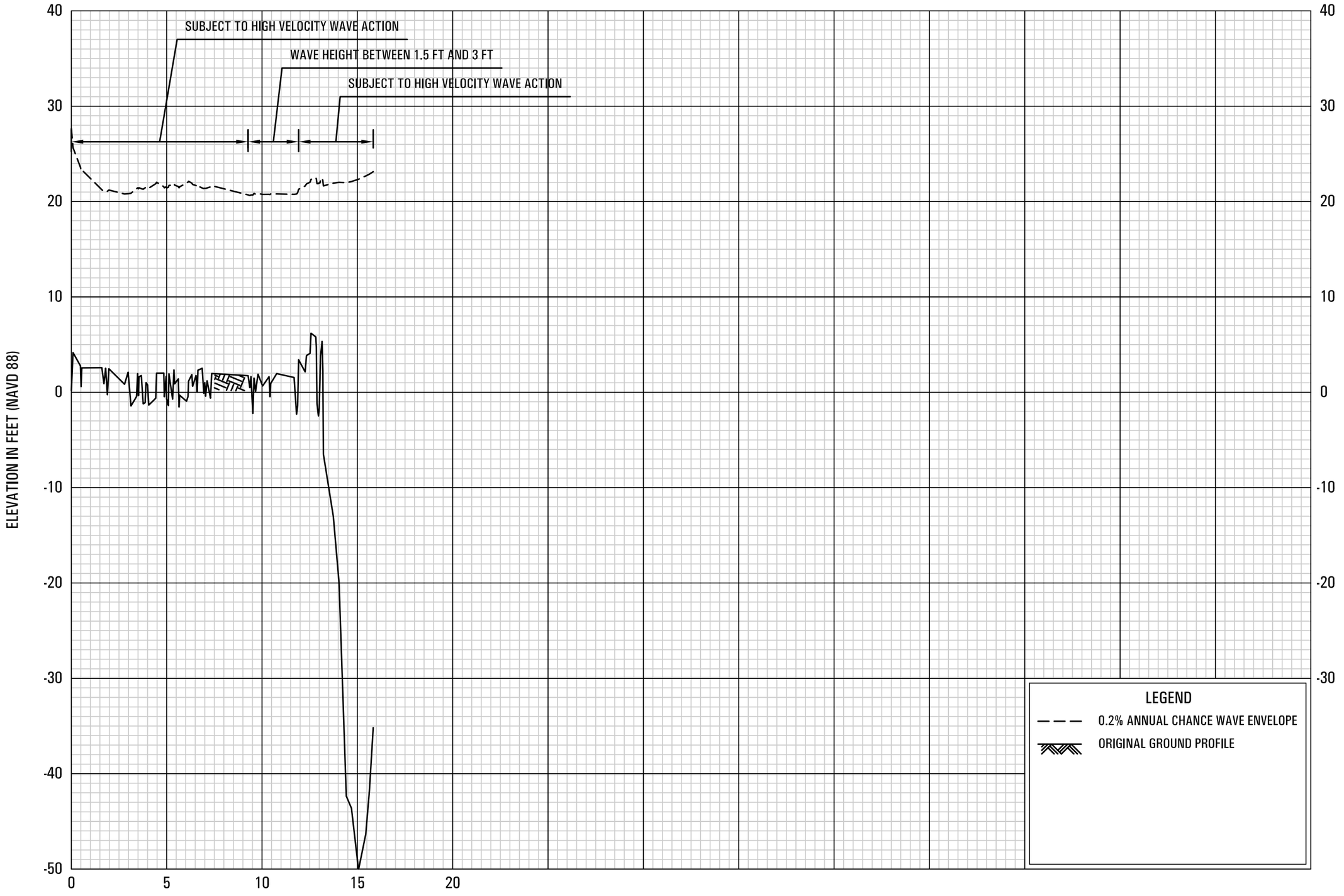
TRANSECT 27

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

38P

1915



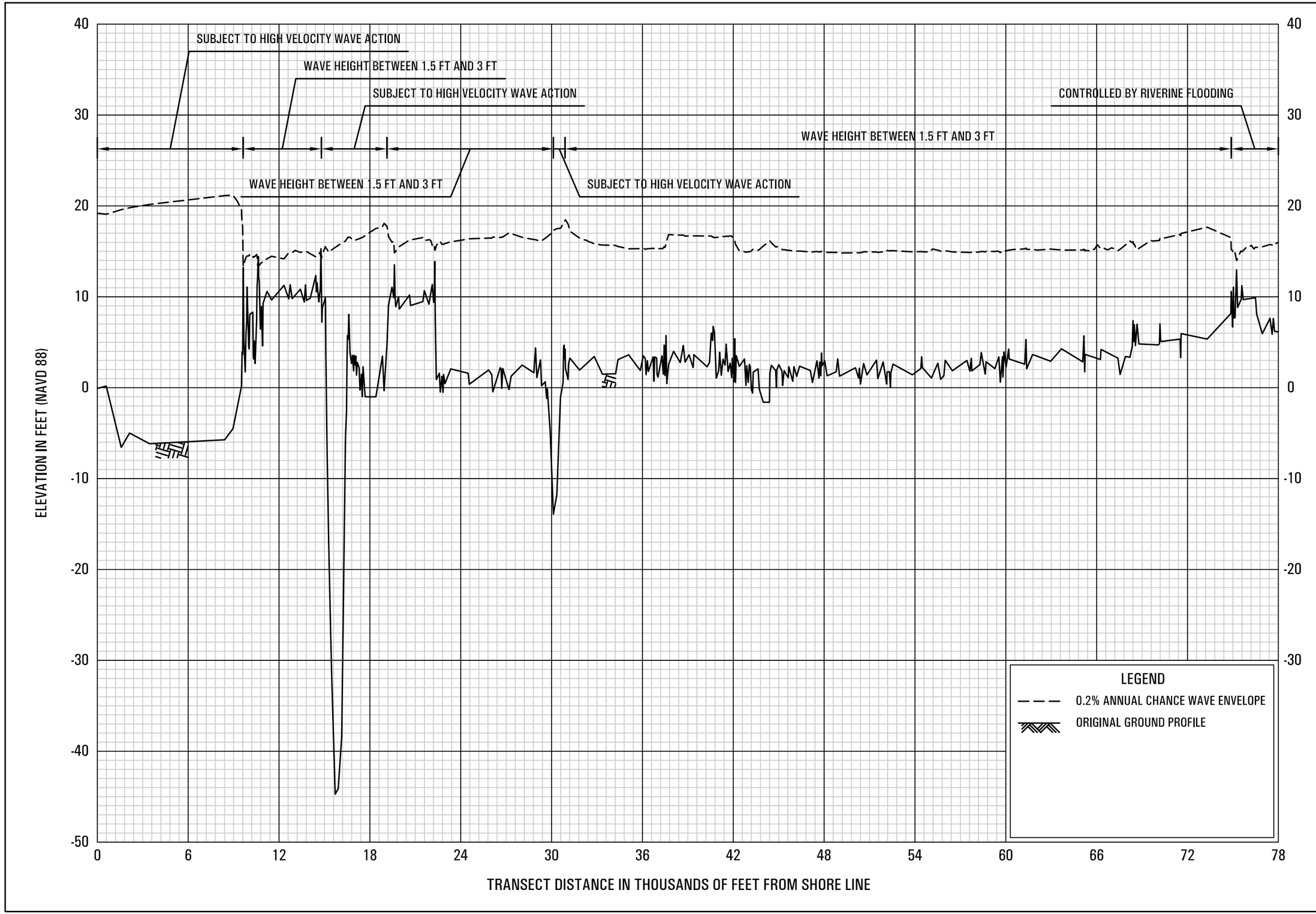
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 28

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

39P



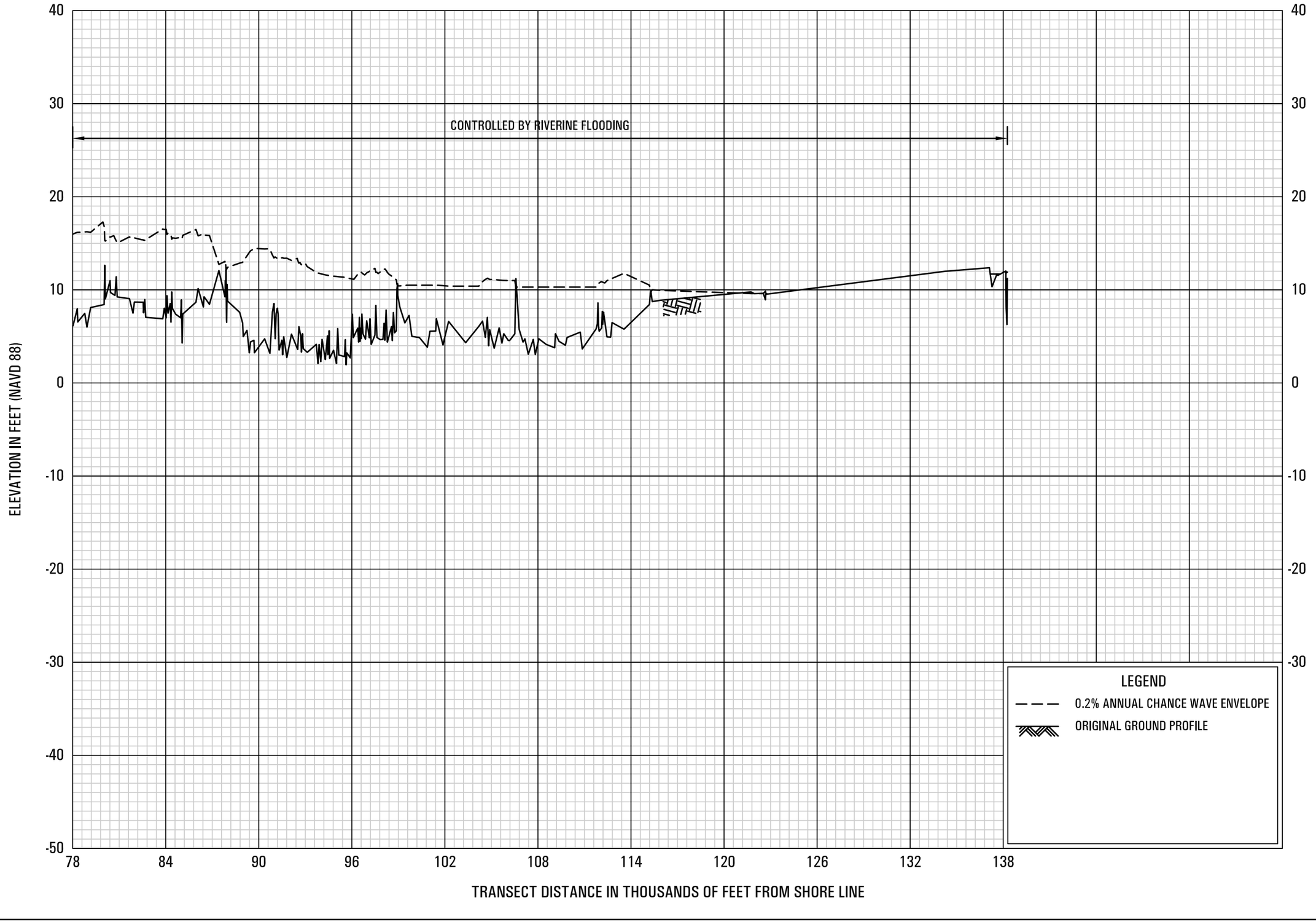
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 29

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

40P



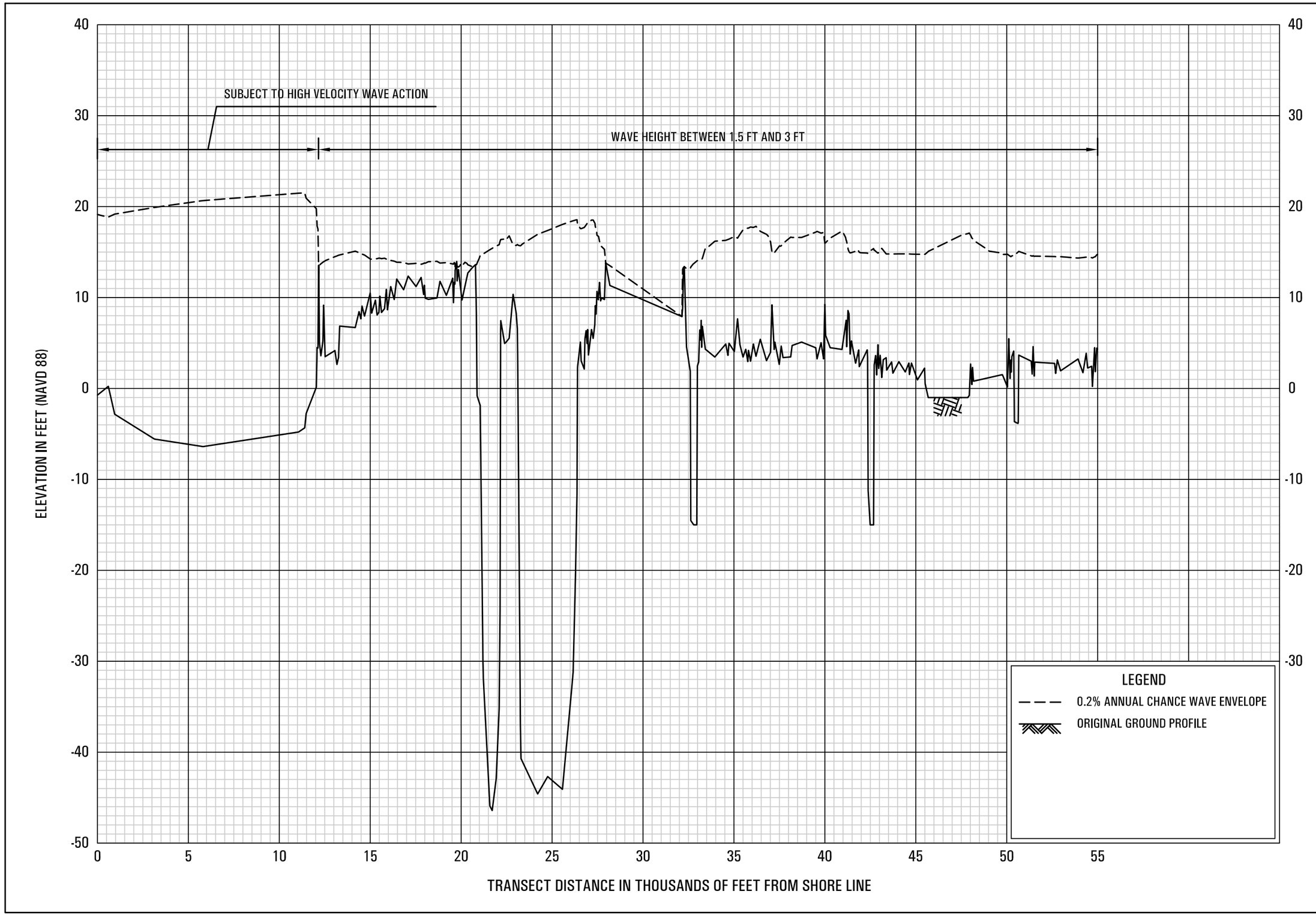
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 21

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

41P



0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 30

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

42P

1919



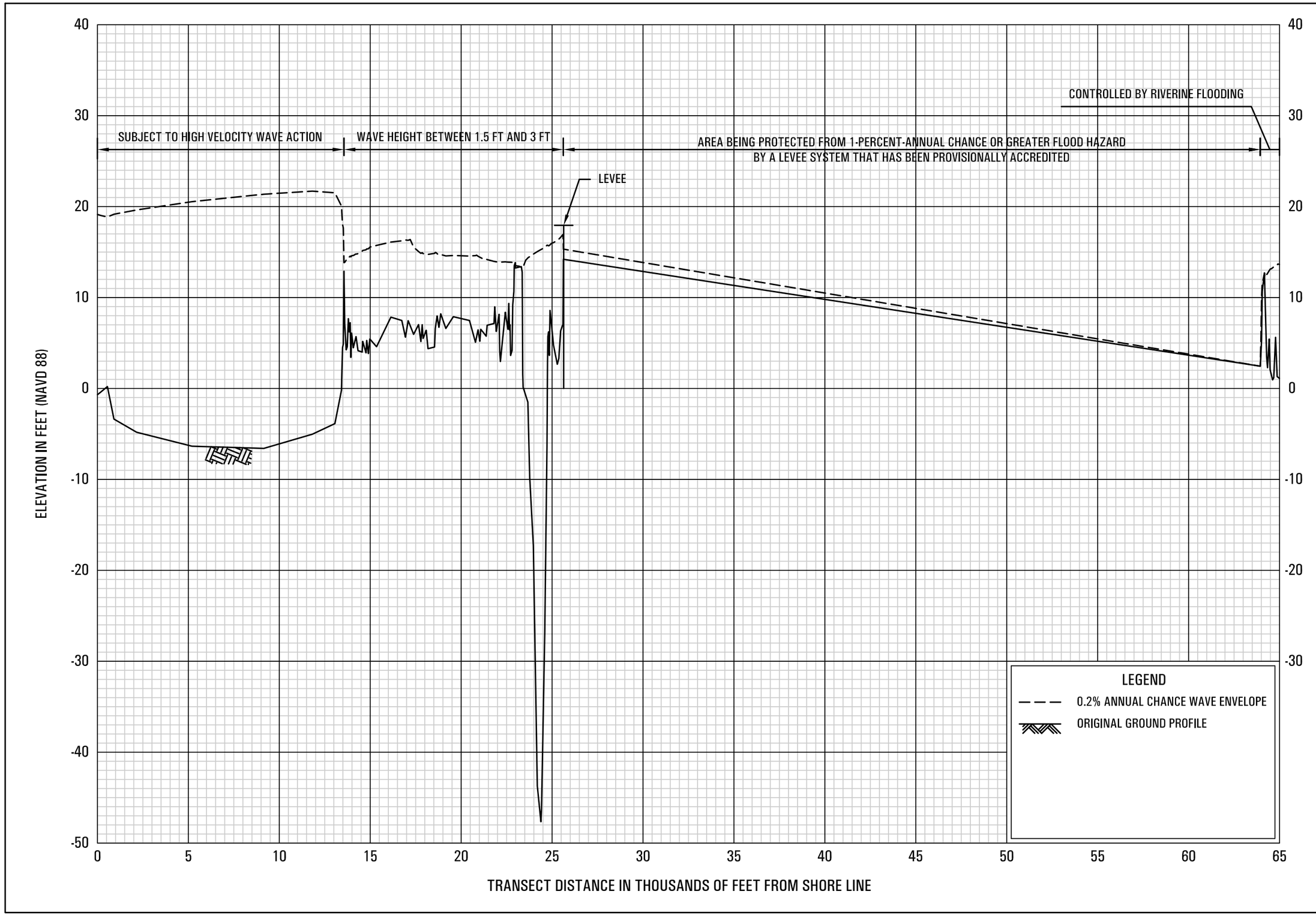
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 30

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

43P



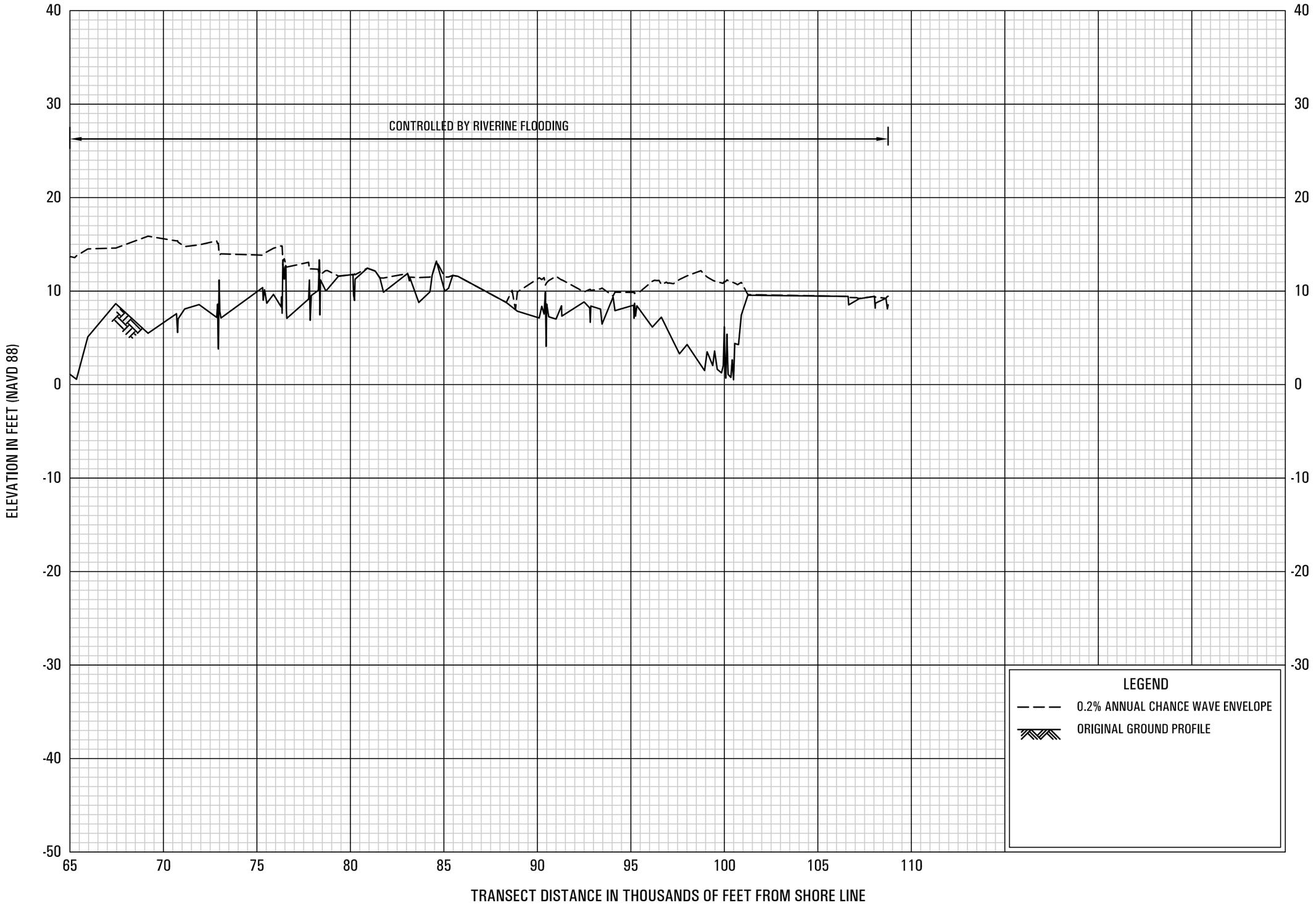
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 31

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

44P



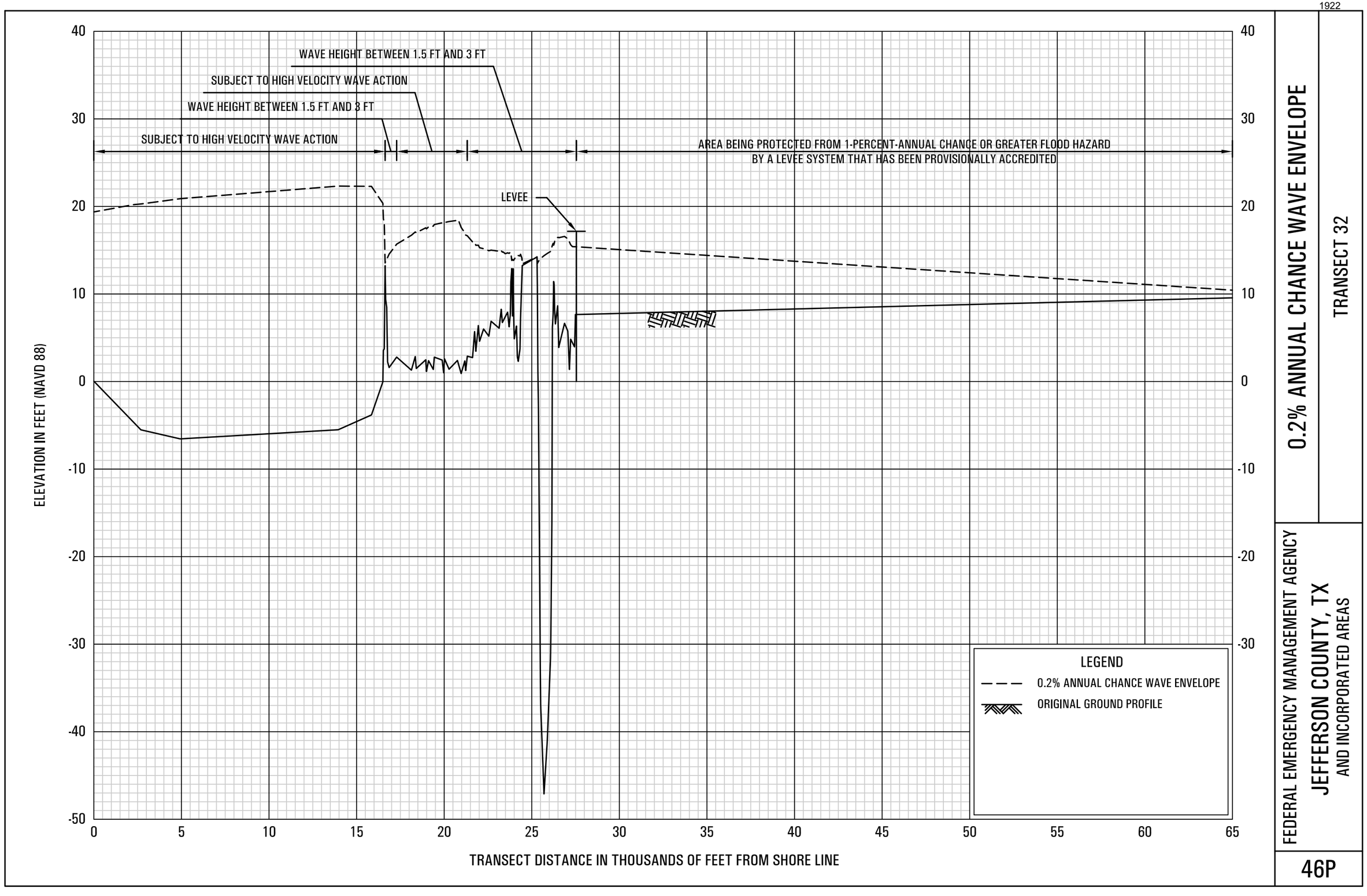
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 31

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

45P



0.2% ANNUAL CHANCE WAVE ENVELOPE

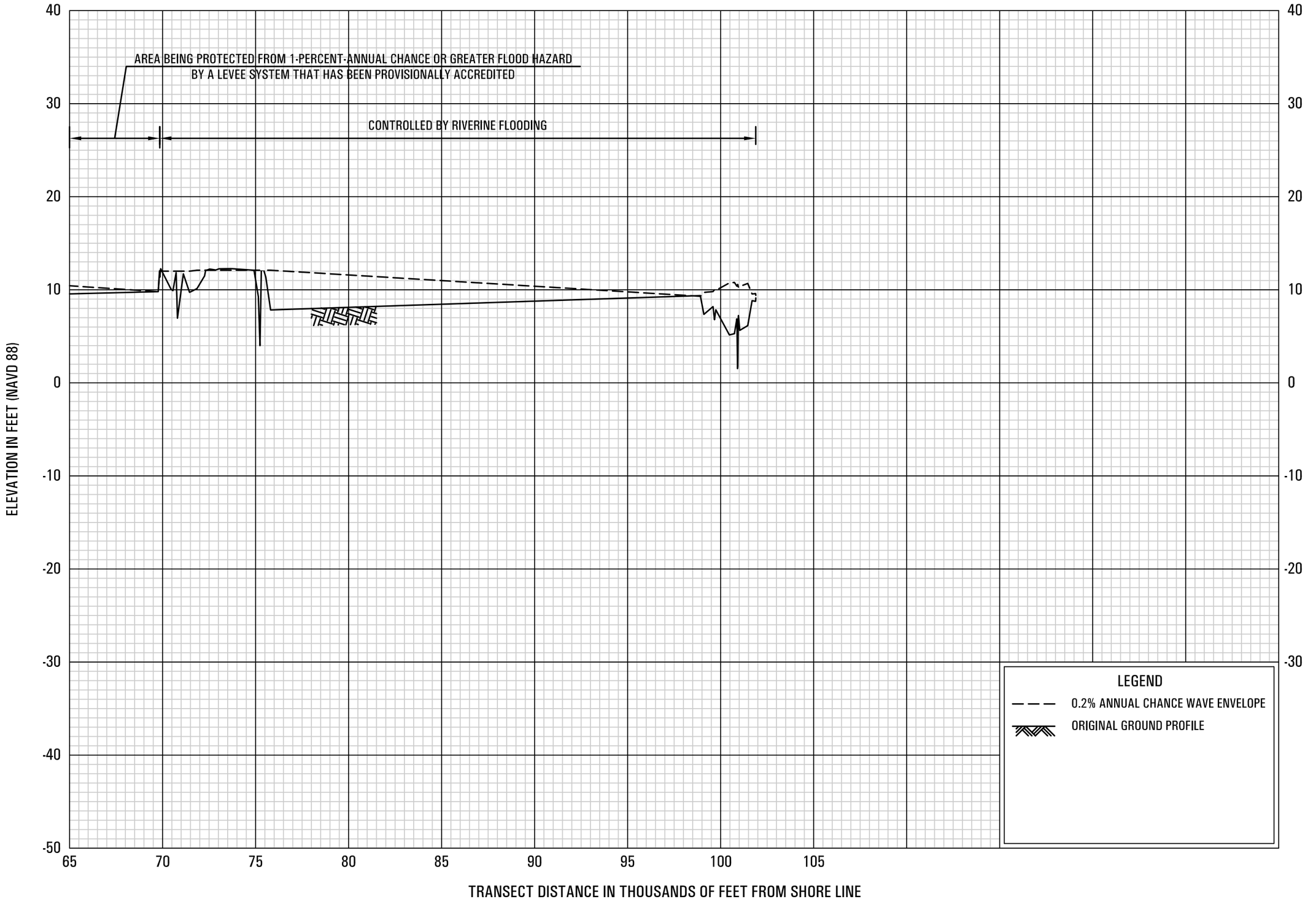
TRANSECT 32

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

46P

1923



0.2% ANNUAL CHANCE WAVE ENVELOPE

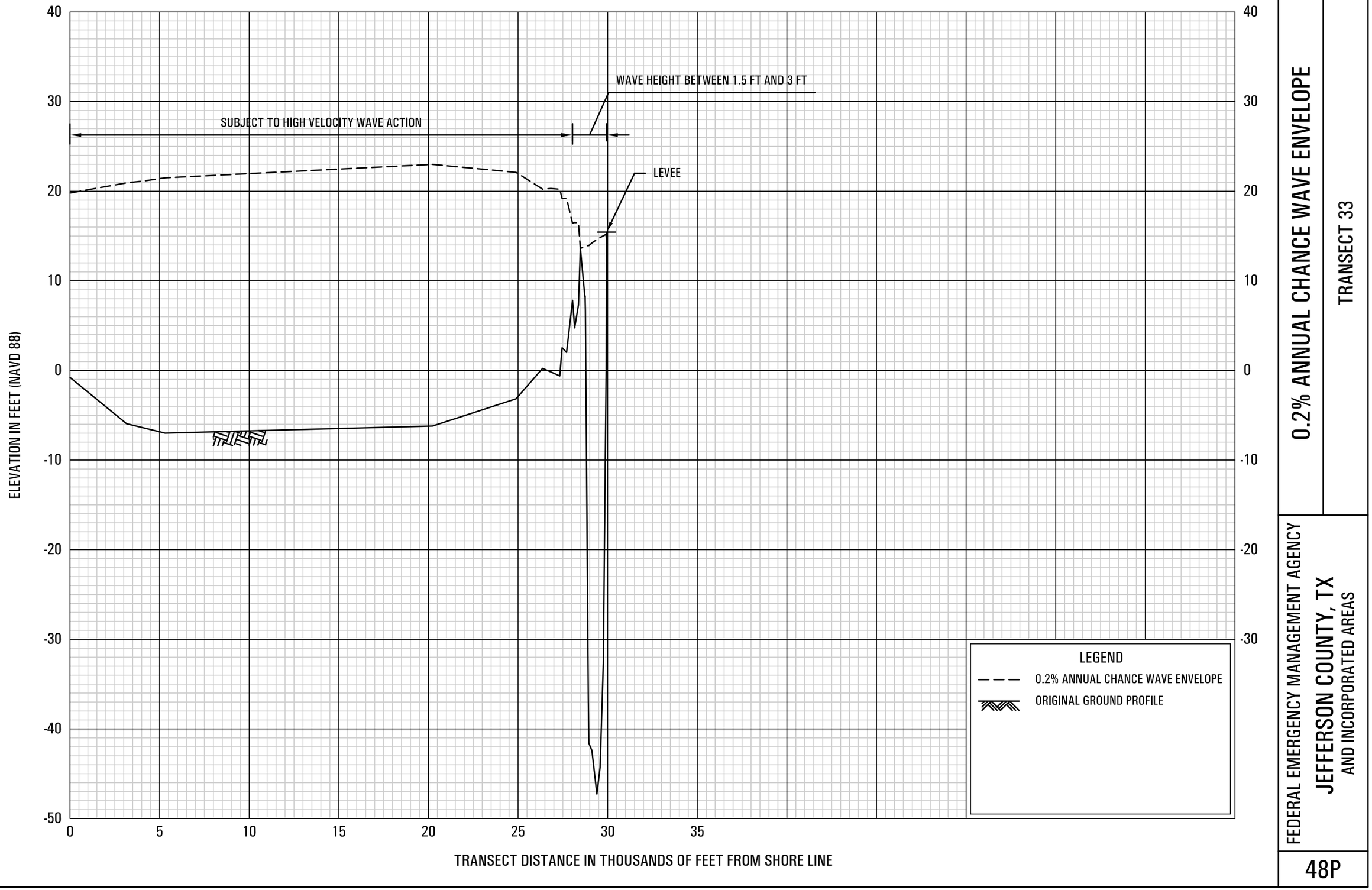
TRANSECT 32

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

47P

1924



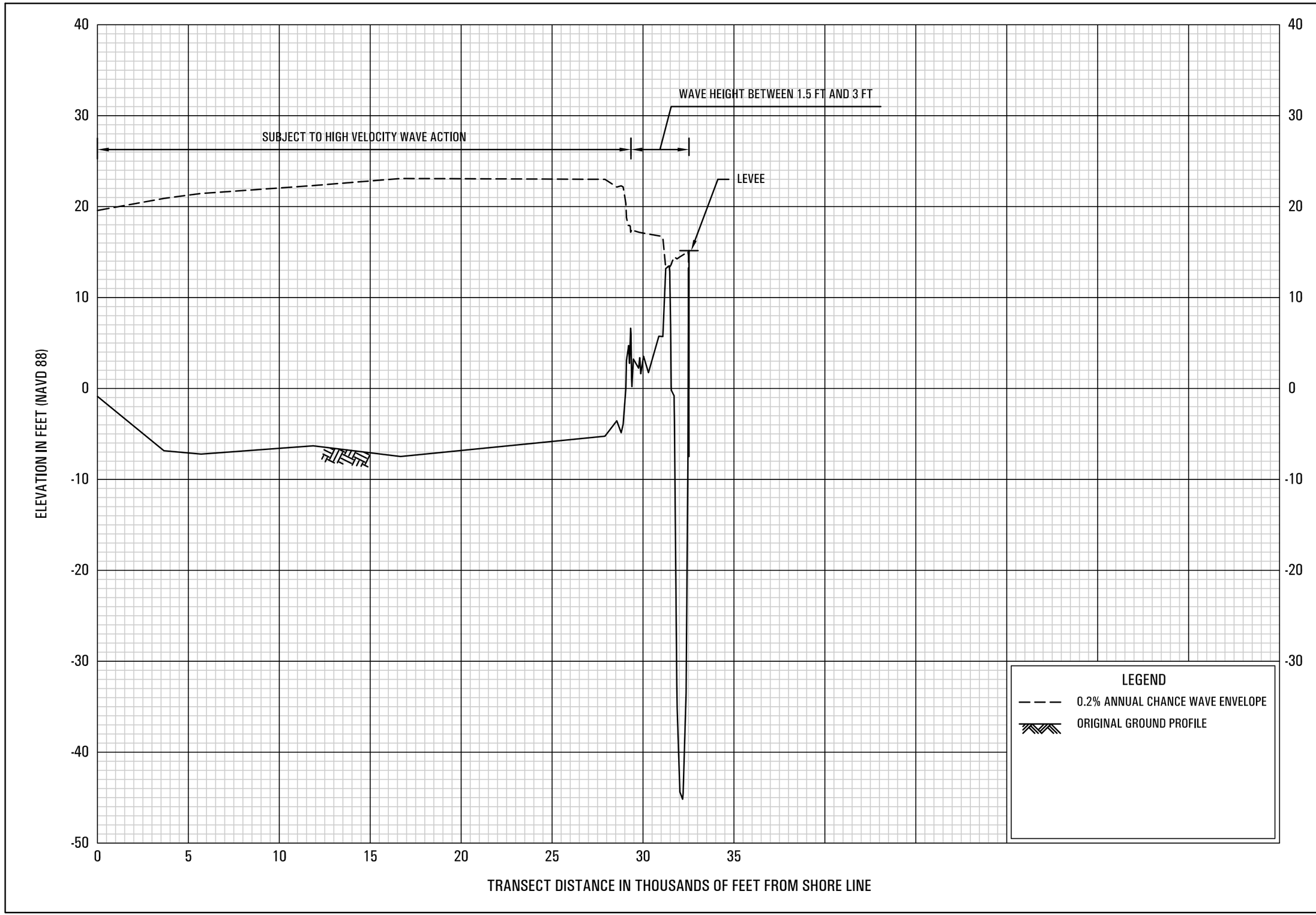
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 33

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

48P



0.2% ANNUAL CHANCE WAVE ENVELOPE

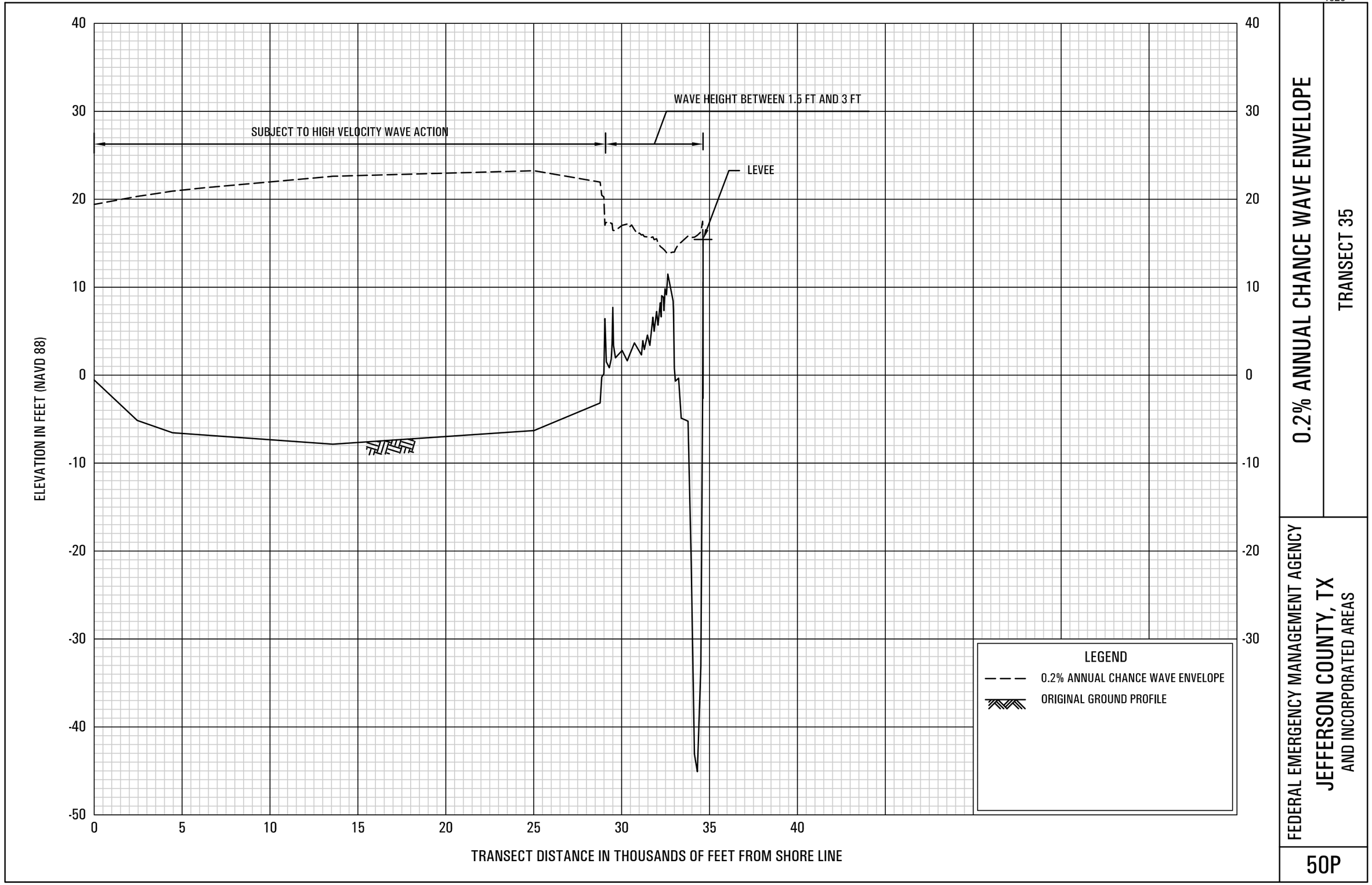
TRANSECT 34

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

49P

1926



0.2% ANNUAL CHANCE WAVE ENVELOPE

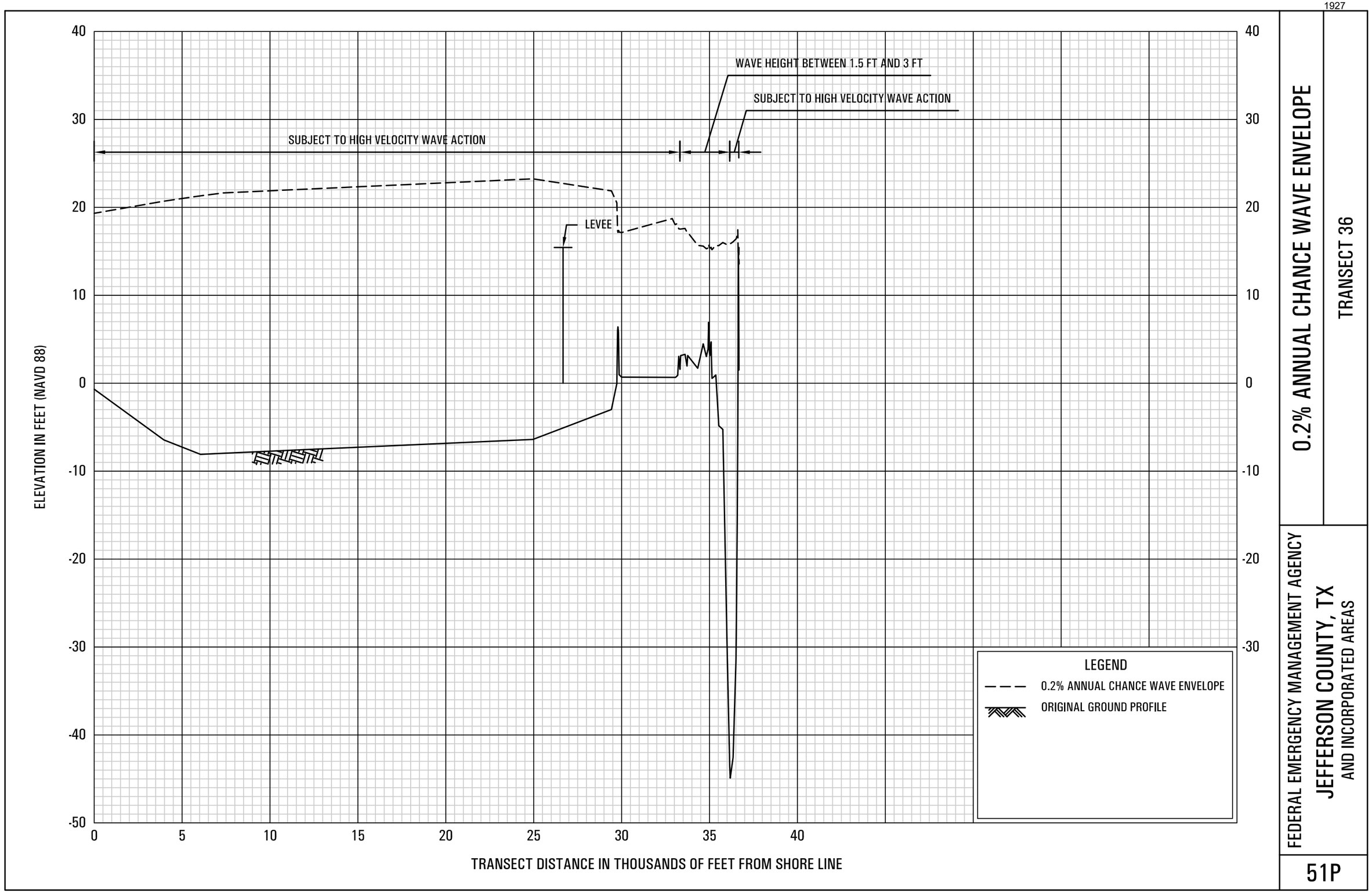
TRANSECT 35

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

50P

1927



0.2% ANNUAL CHANCE WAVE ENVELOPE

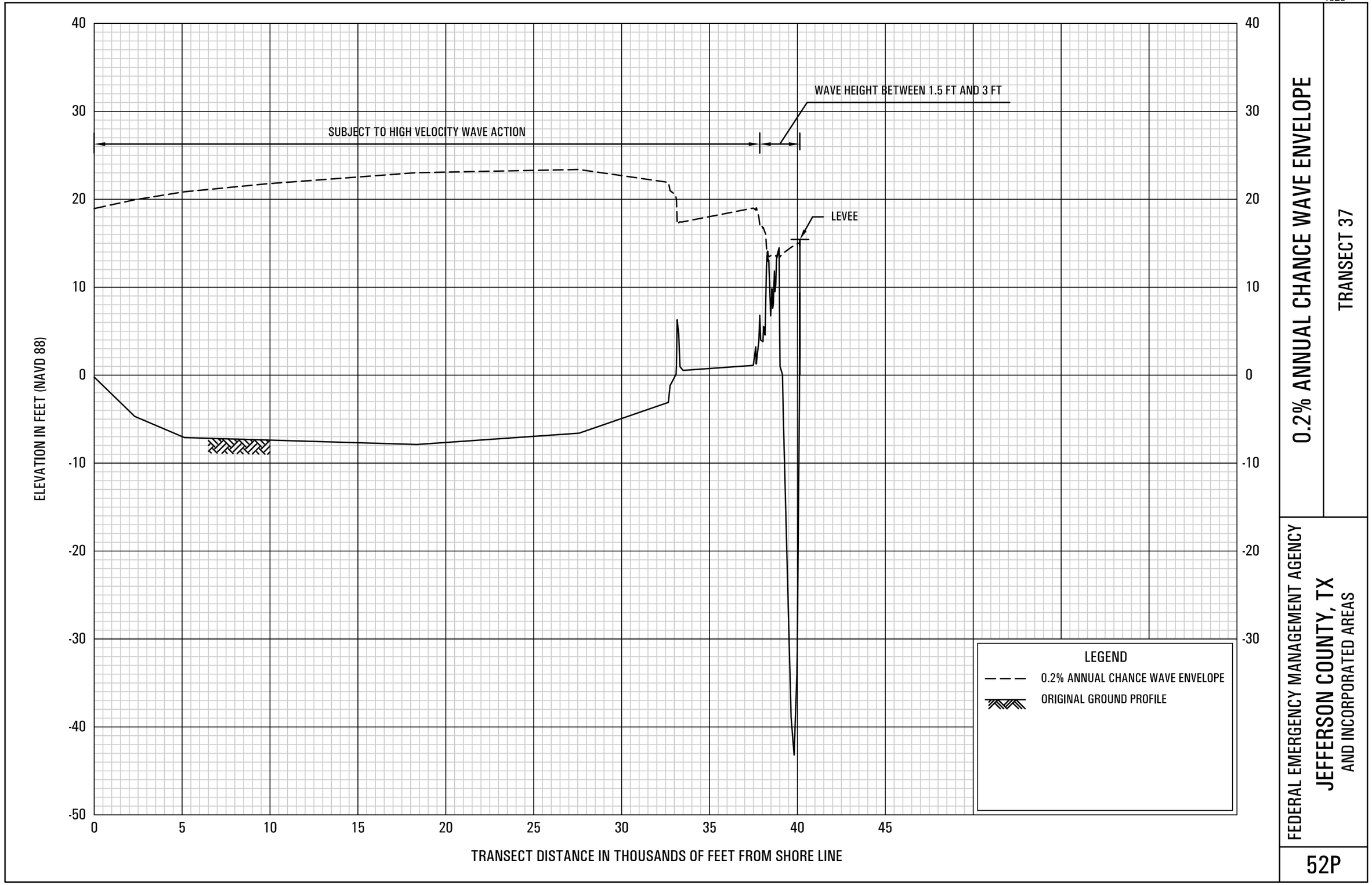
TRANSECT 36

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

51P

1928



0.2% ANNUAL CHANCE WAVE ENVELOPE

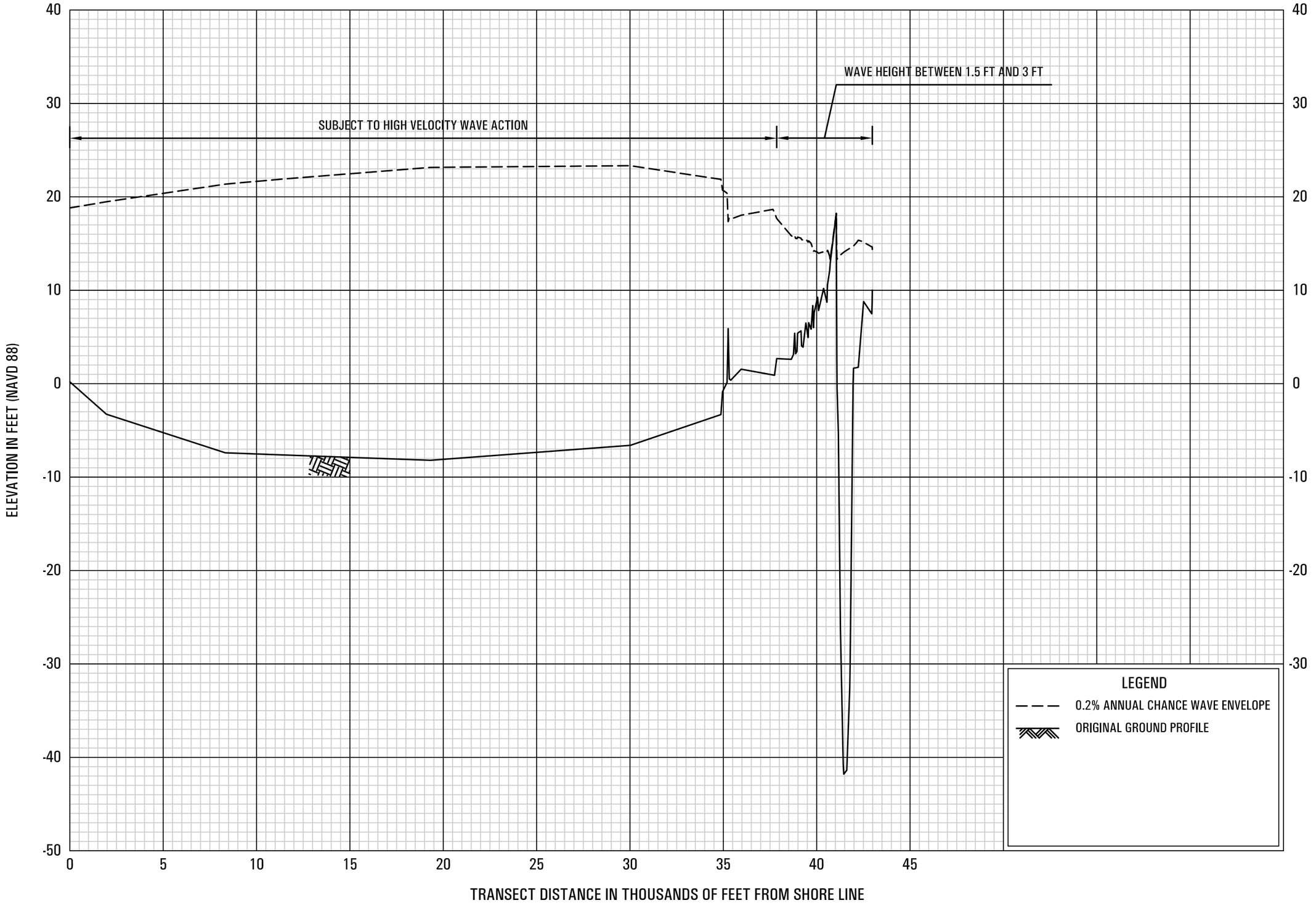
TRANSECT 37

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

52P

1929



0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 38

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

53P

1930

AREA BEING PROTECTED FROM 1-PERCENT-ANNUAL CHANCE OR GREATER FLOOD HAZARD BY A LEVEE SYSTEM THAT HAS BEEN PROVISIONALLY ACCREDITED

SUBJECT TO HIGH VELOCITY WAVE ACTION

WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT

SUBJECT TO HIGH VELOCITY WAVE ACTION

WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT

SUBJECT TO HIGH VELOCITY WAVE ACTION

WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT

LEVEE

ELEVATION IN FEET (NAVD 88)

40
30
20
10
0
-10
-20
-30
-40
-50

0 6 12 18 24 30 36 42 48 54 60 66 72 78

TRANSECT DISTANCE IN THOUSANDS OF FEET FROM SHORE LINE

LEGEND

0.2% ANNUAL CHANCE WAVE ENVELOPE

ORIGINAL GROUND PROFILE

0.2% ANNUAL CHANCE WAVE ENVELOPE

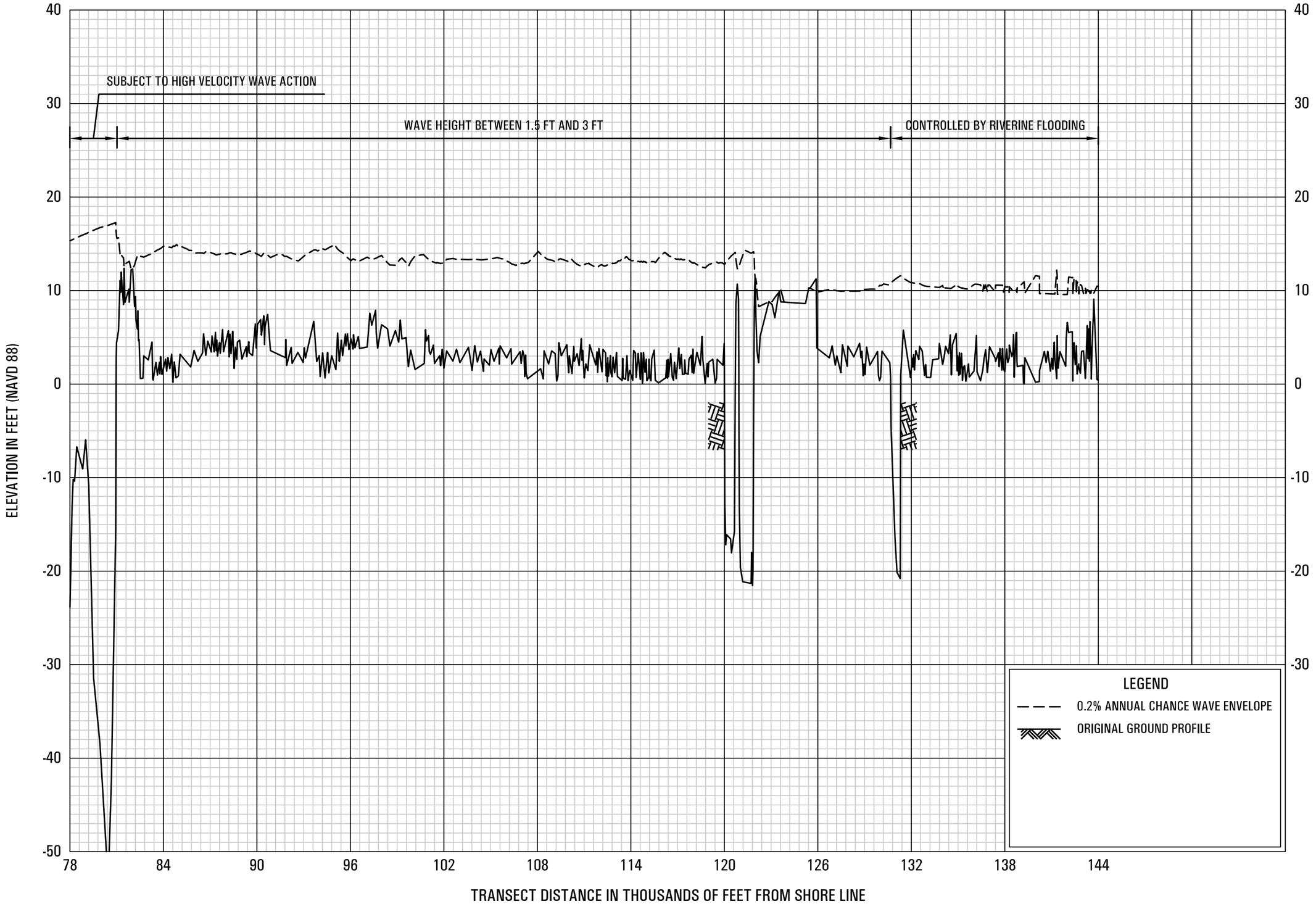
TRANSECT 39

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

54P

1931



0.2% ANNUAL CHANCE WAVE ENVELOPE

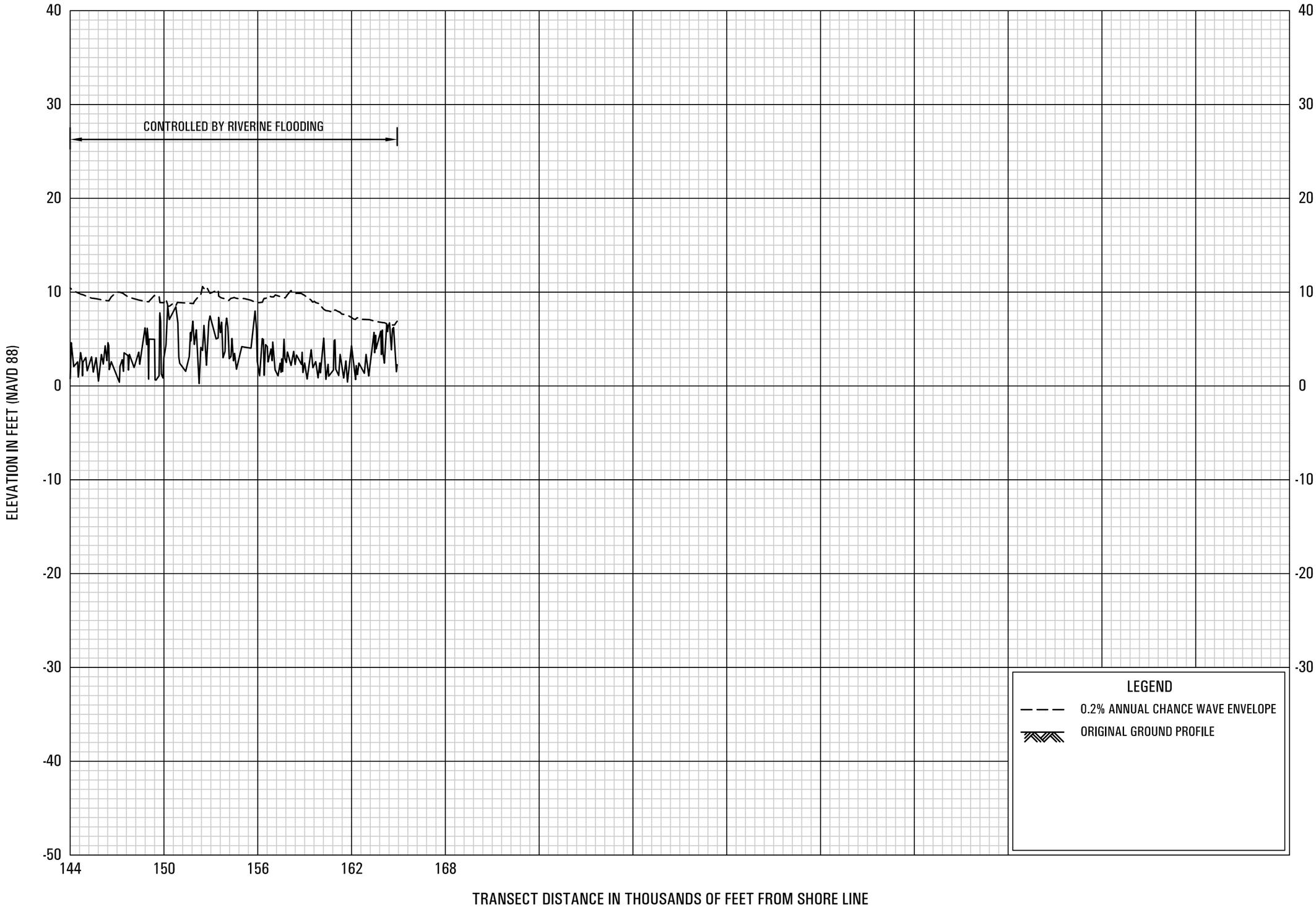
TRANSECT 39

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

55P

1932



0.2% ANNUAL CHANCE WAVE ENVELOPE

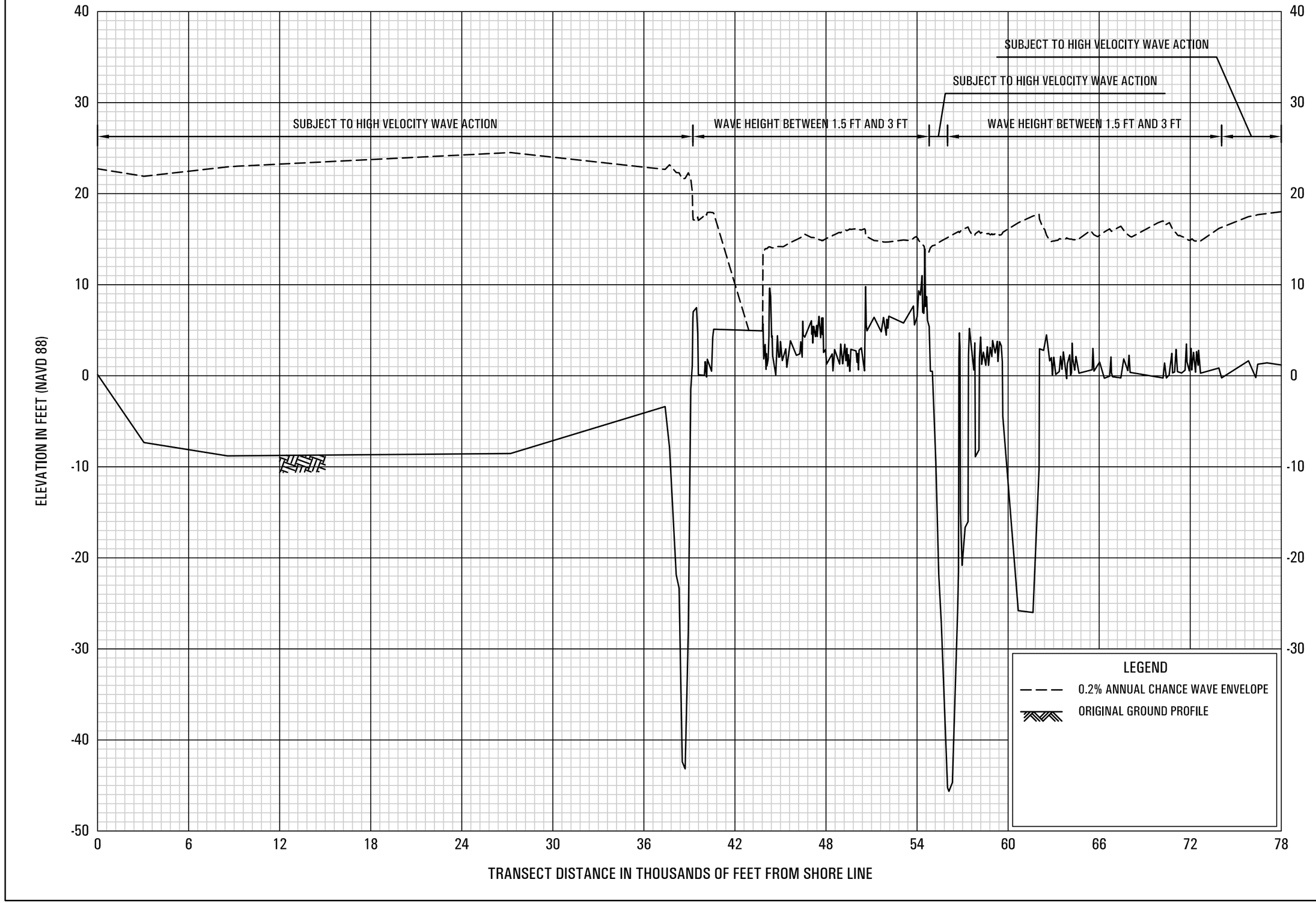
TRANSECT 39

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

56P

1933



0.2% ANNUAL CHANCE WAVE ENVELOPE

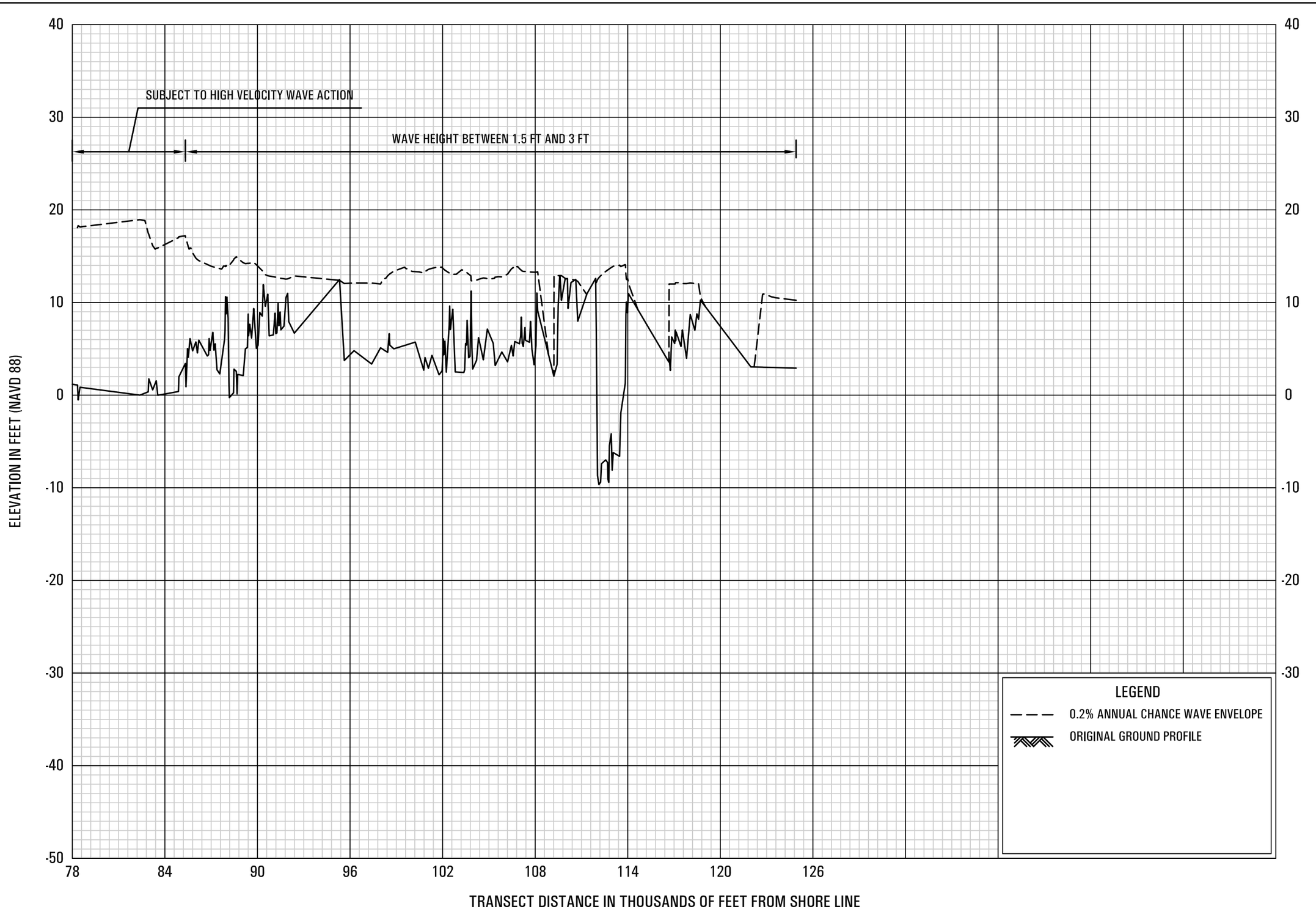
TRANSECT 40

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

57P

1934



0.2% ANNUAL CHANCE WAVE ENVELOPE

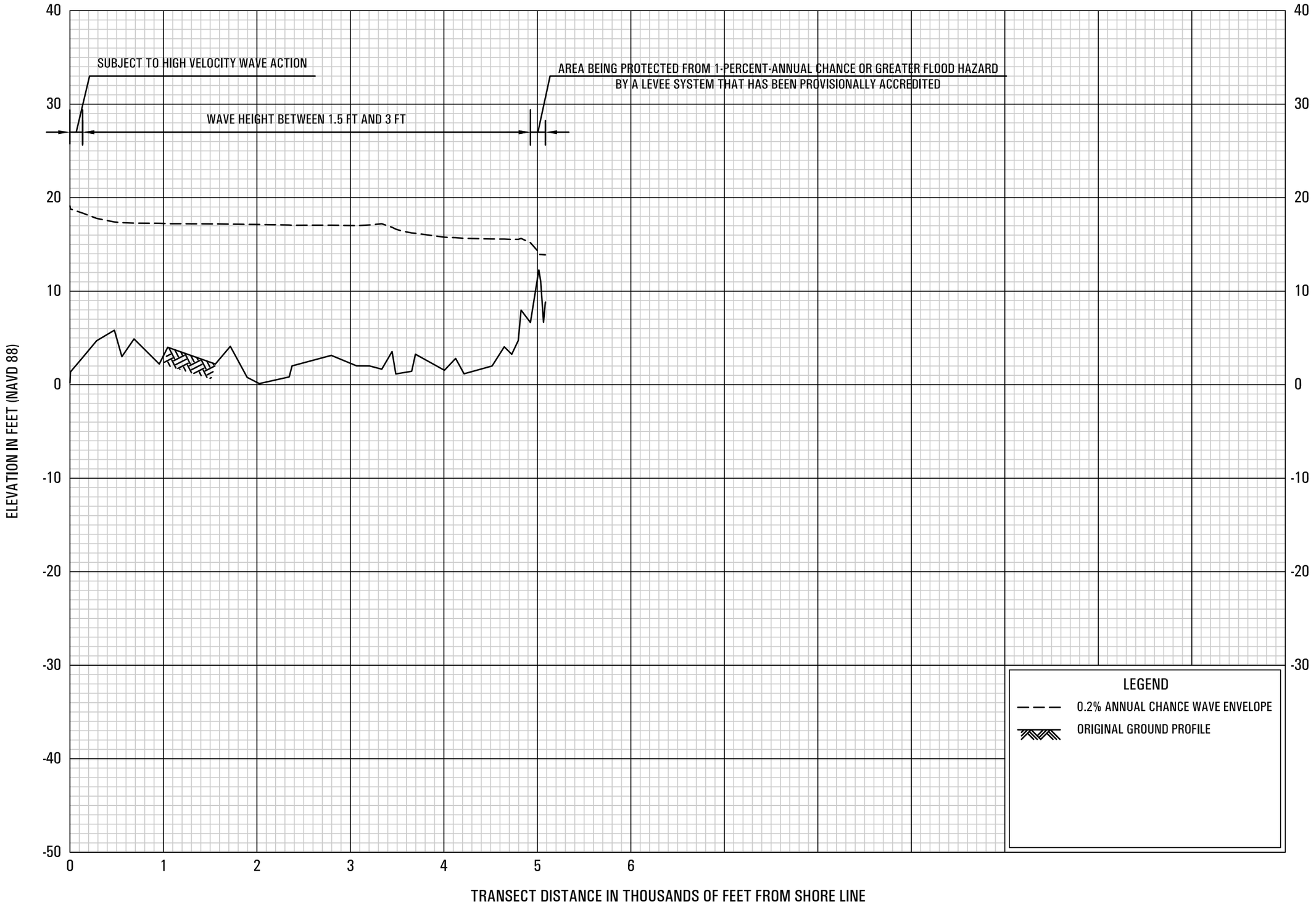
TRANSECT 40

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

58P

1935



0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 41

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

59P

1936

SUBJECT TO HIGH VELOCITY WAVE ACTION

WAVE HEIGHT BETWEEN 1.5 FT AND 3 FT

LEVEE

ELEVATION IN FEET (NAVD 88)

40
30
20
10
0
-10
-20
-30
-40
-50

0 1 2 3 4 5 6 7

TRANSECT DISTANCE IN THOUSANDS OF FEET FROM SHORE LINE

LEGEND

0.2% ANNUAL CHANCE WAVE ENVELOPE

ORIGINAL GROUND PROFILE

0.2% ANNUAL CHANCE WAVE ENVELOPE

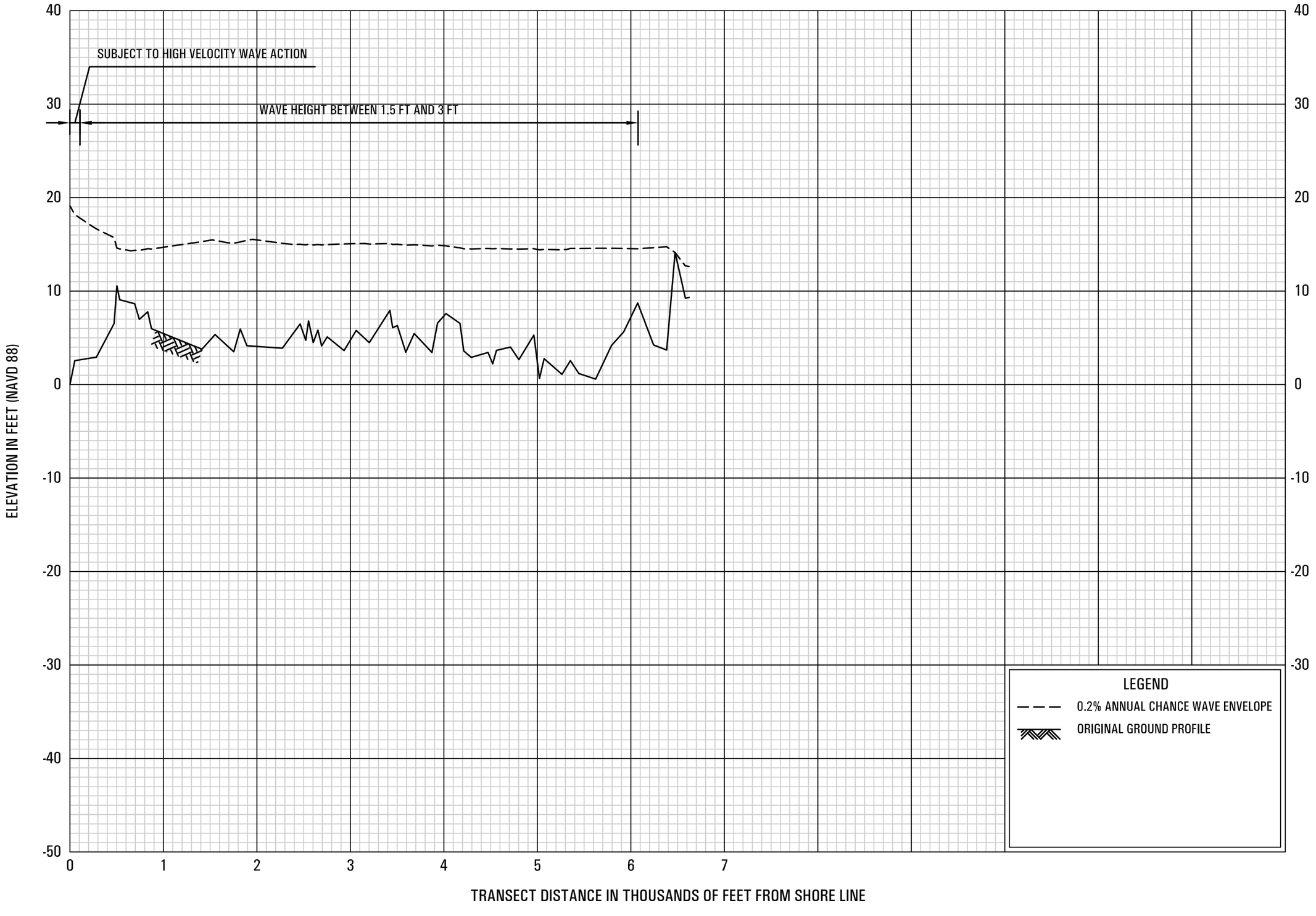
TRANSECT 42

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

60P

1937



0.2% ANNUAL CHANCE WAVE ENVELOPE

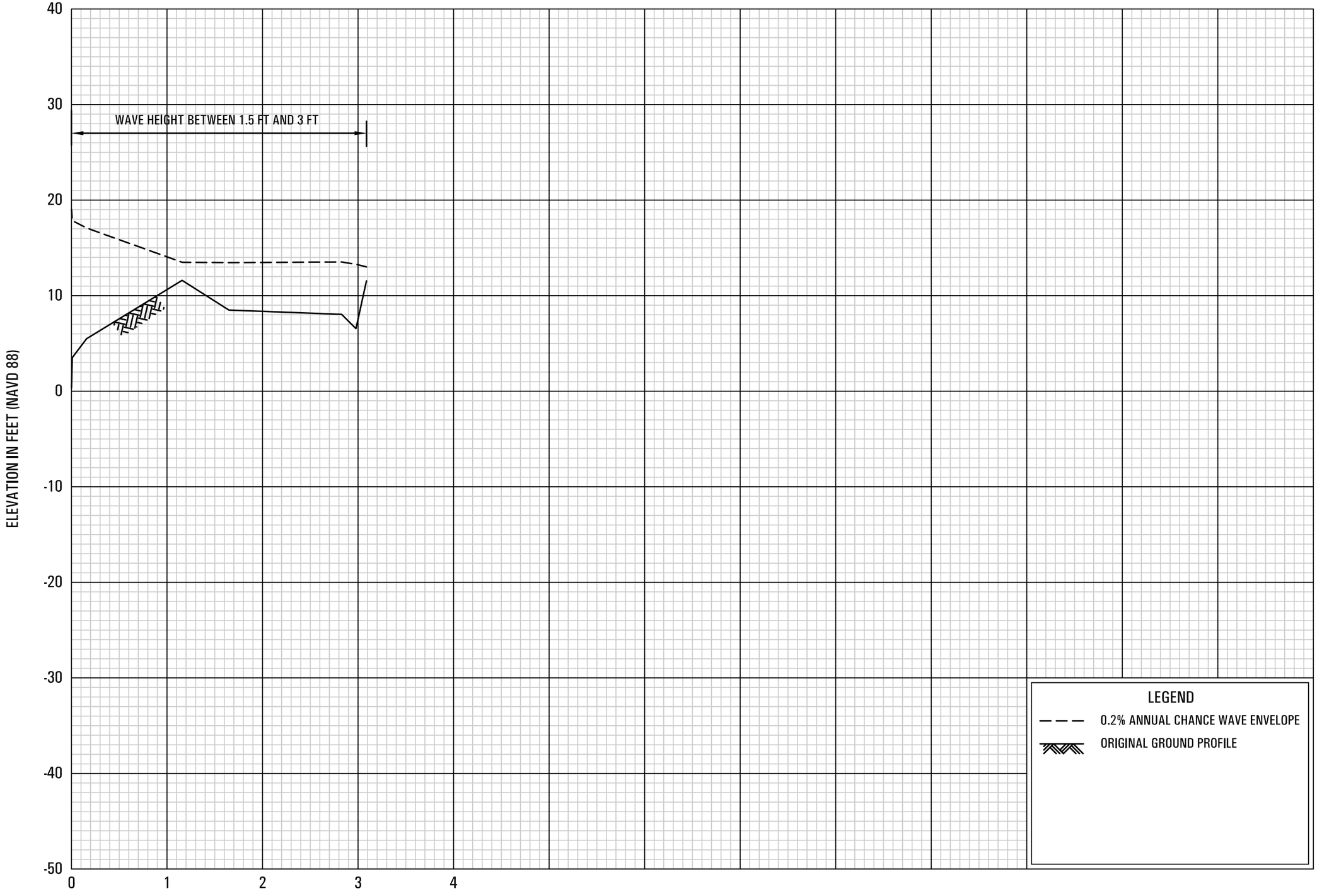
TRANSECT 43

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

61P

1938



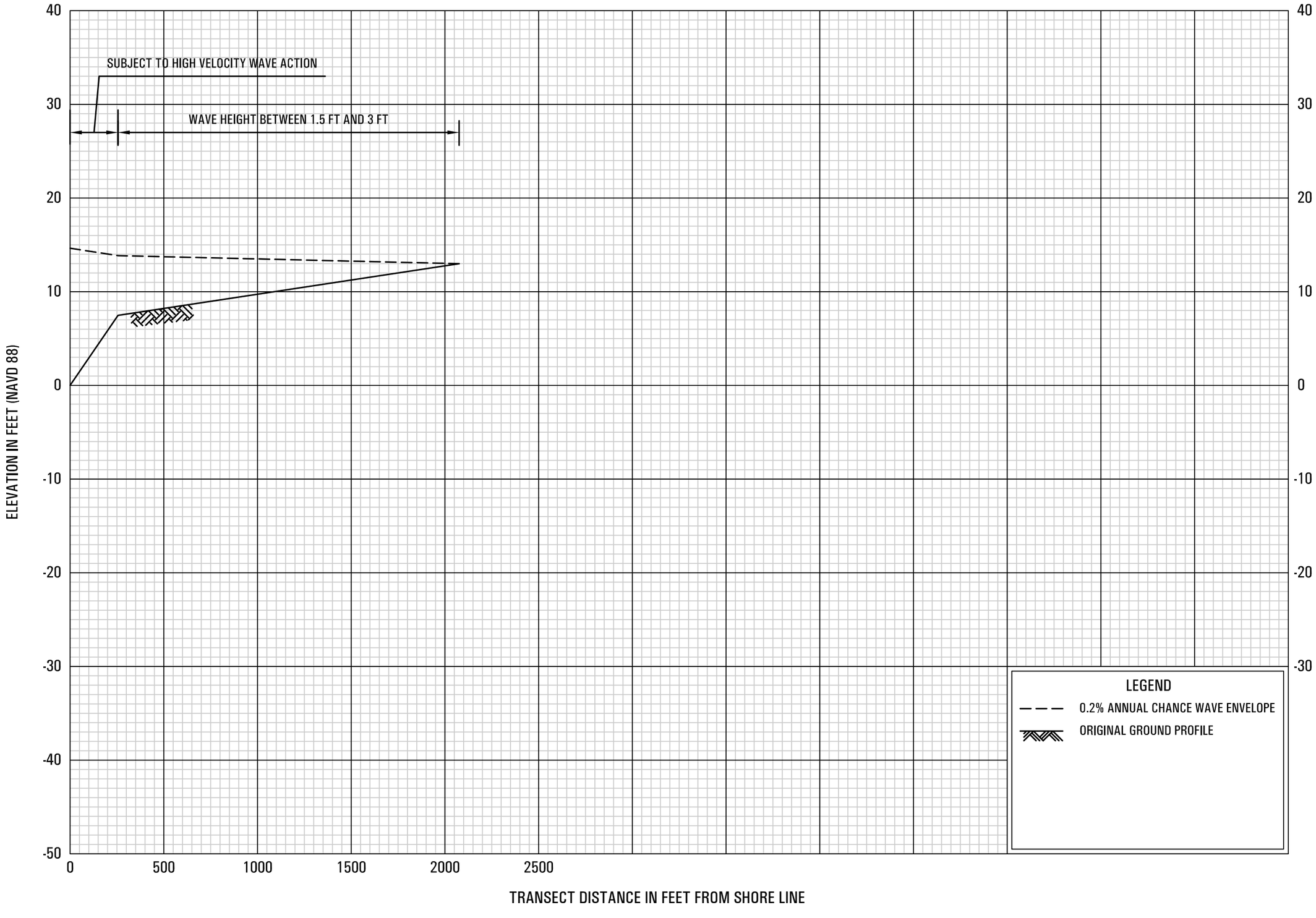
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 44

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

62P



0.2% ANNUAL CHANCE WAVE ENVELOPE

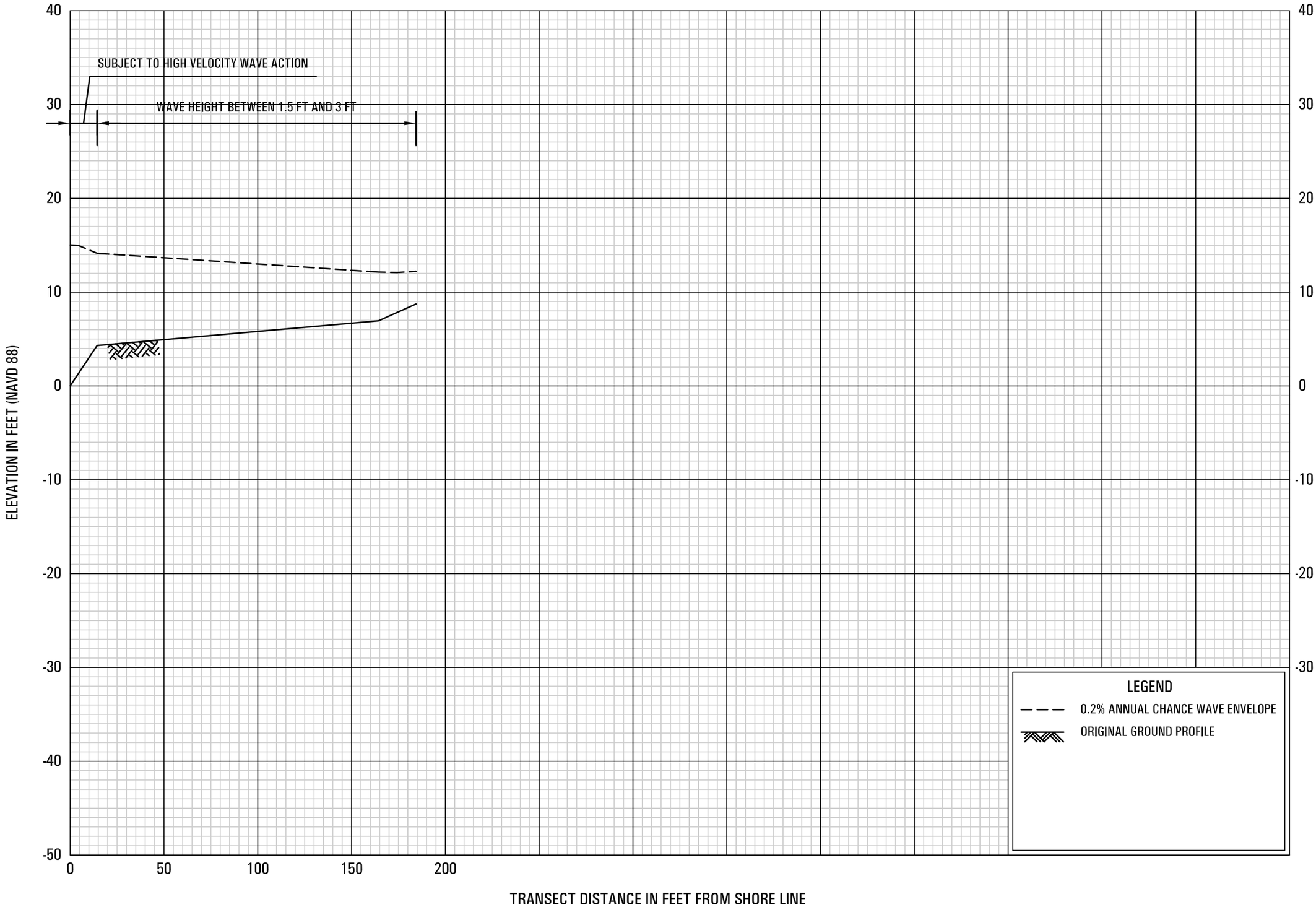
TRANSECT 45

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

63P

1940



0.2% ANNUAL CHANCE WAVE ENVELOPE

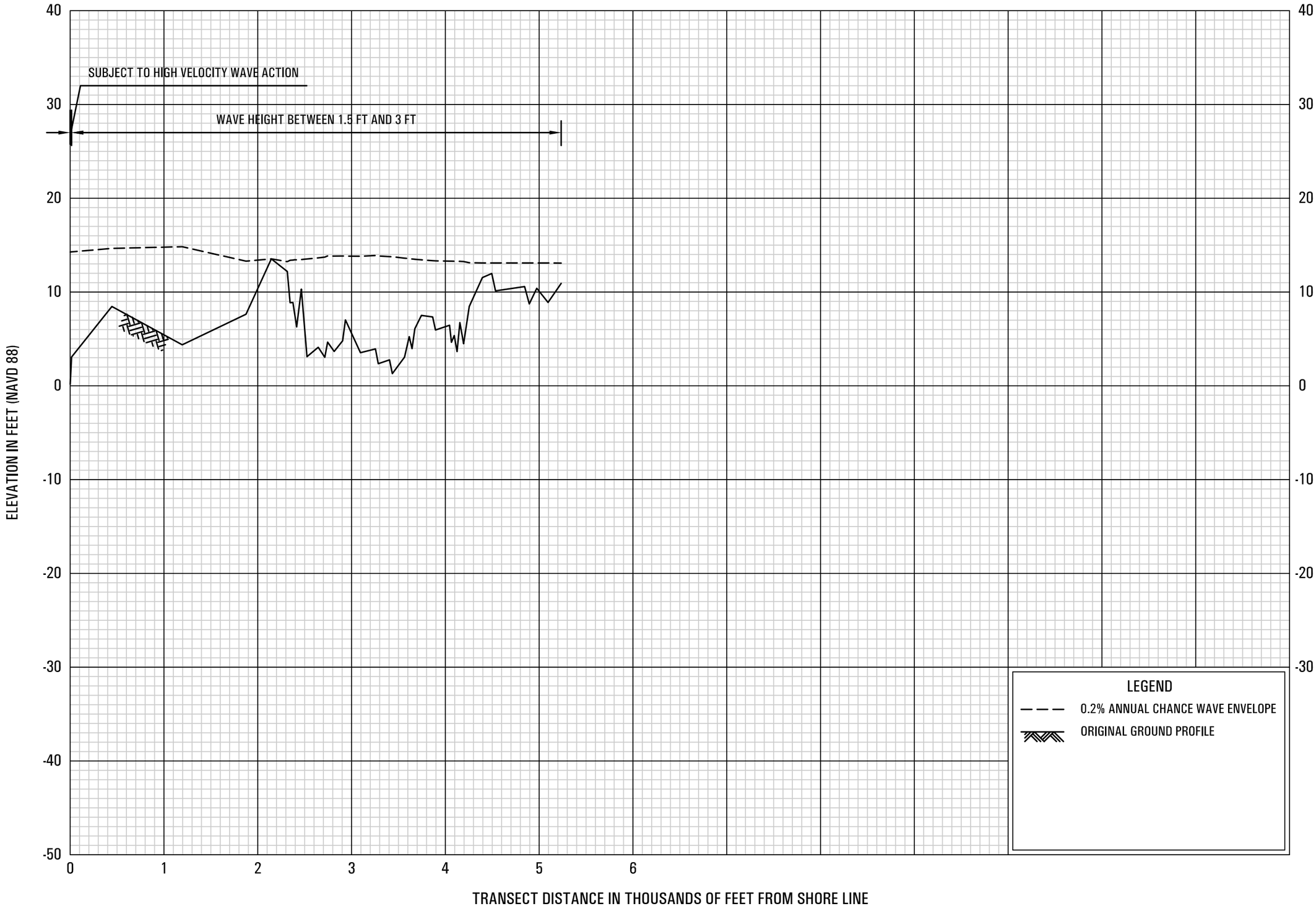
TRANSECT 46

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

64P

1941



0.2% ANNUAL CHANCE WAVE ENVELOPE

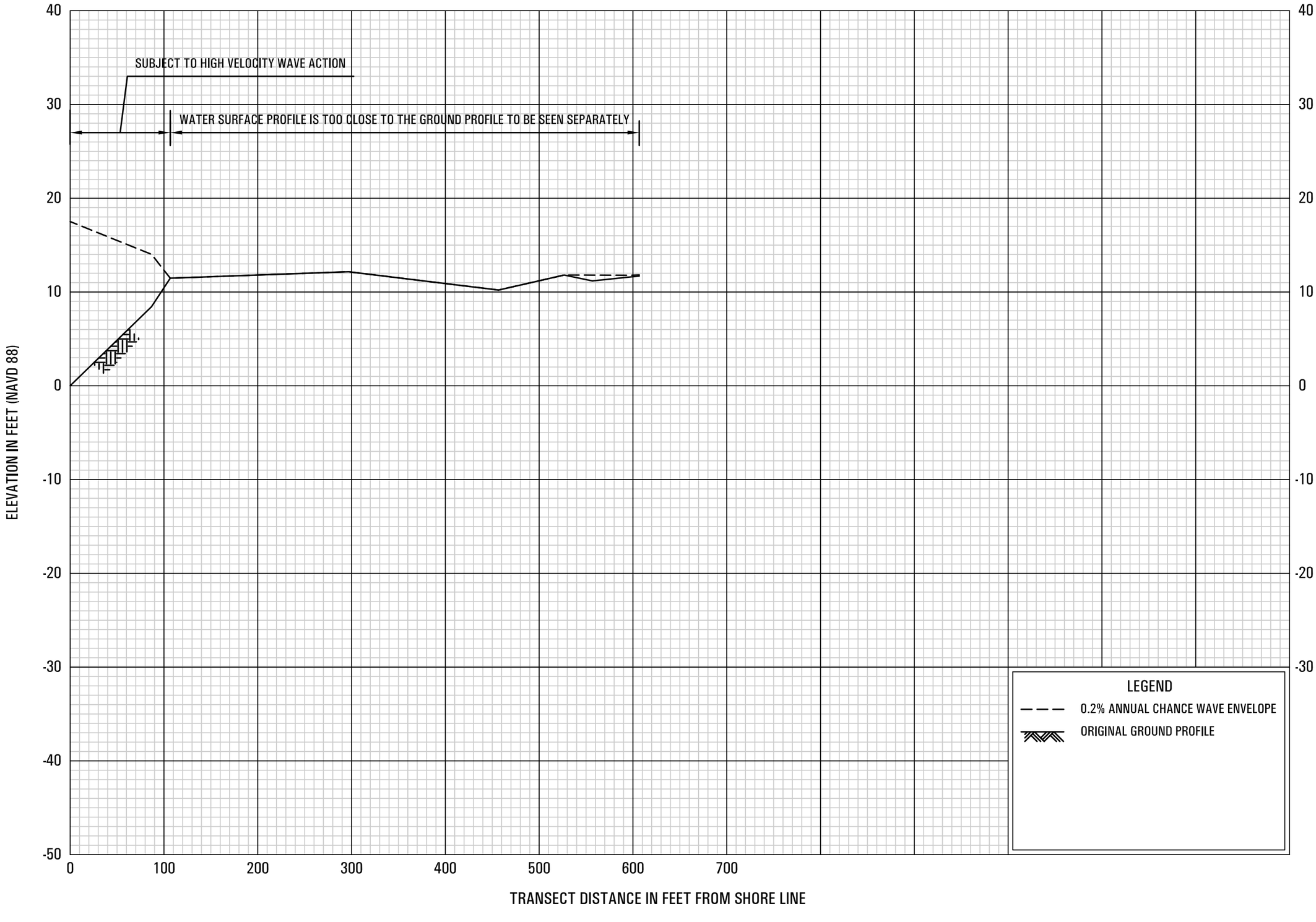
TRANSECT 47

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

65P

1942



0.2% ANNUAL CHANCE WAVE ENVELOPE

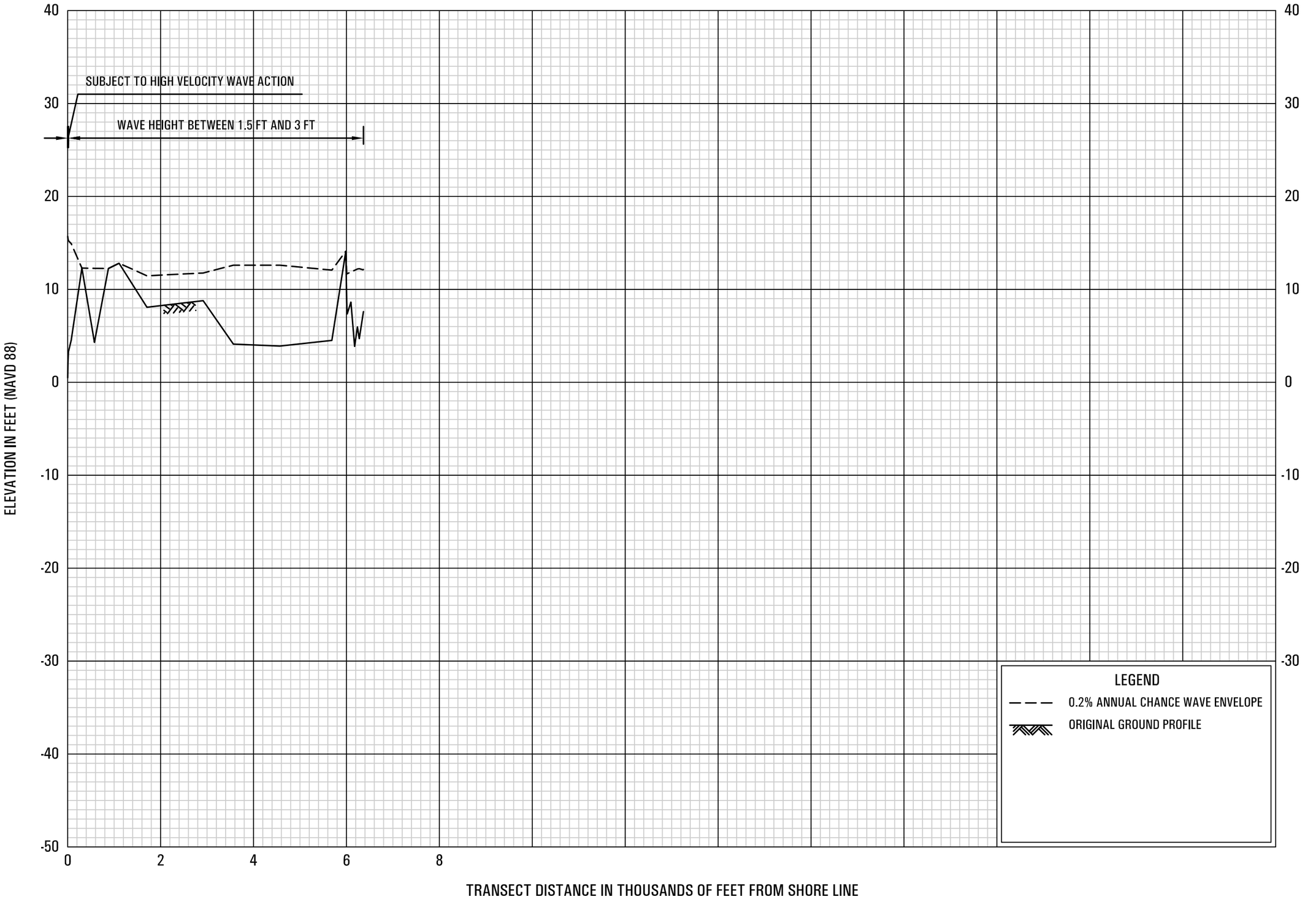
TRANSECT 48

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

66P

1943



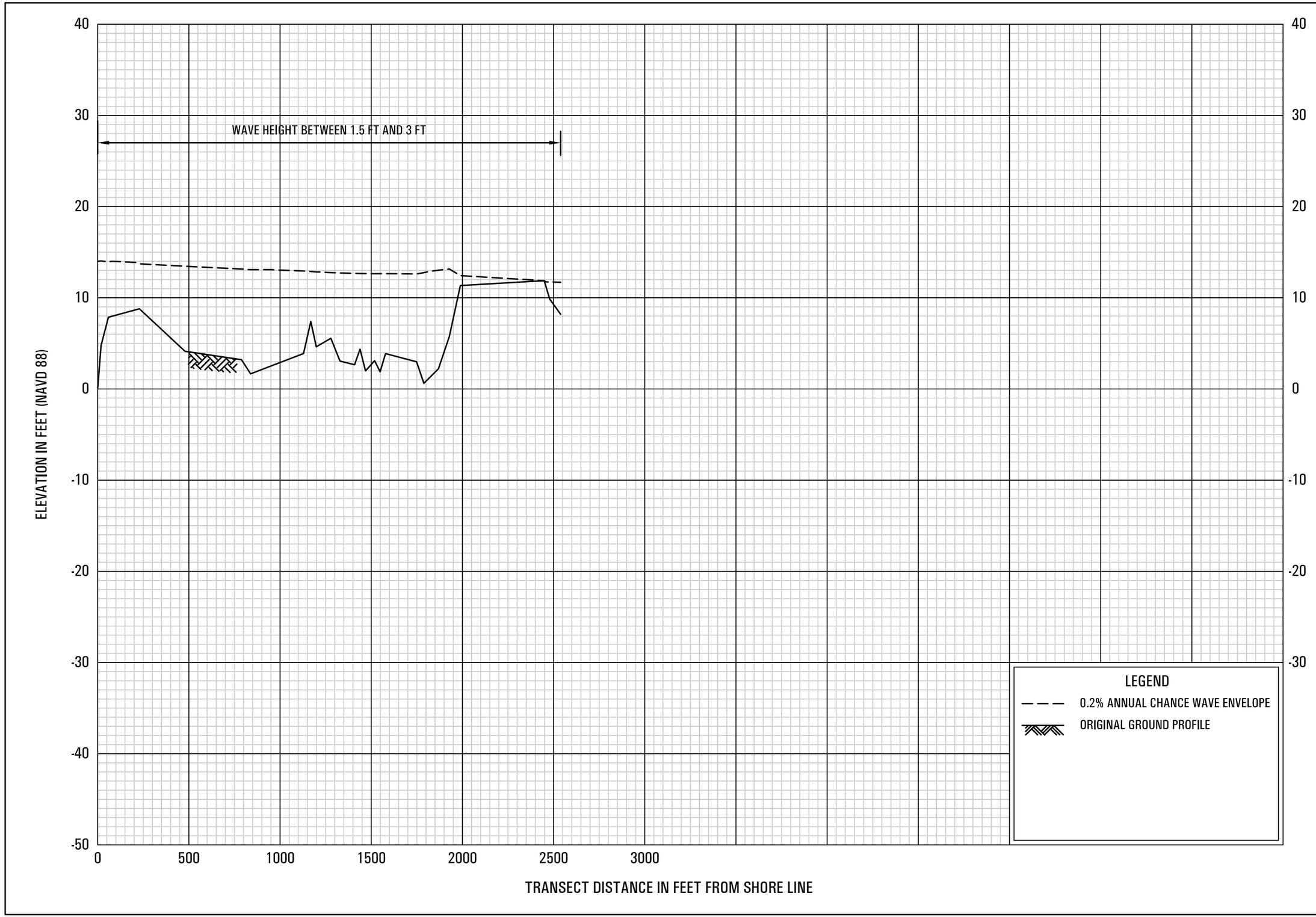
0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 49

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

67P



0.2% ANNUAL CHANCE WAVE ENVELOPE

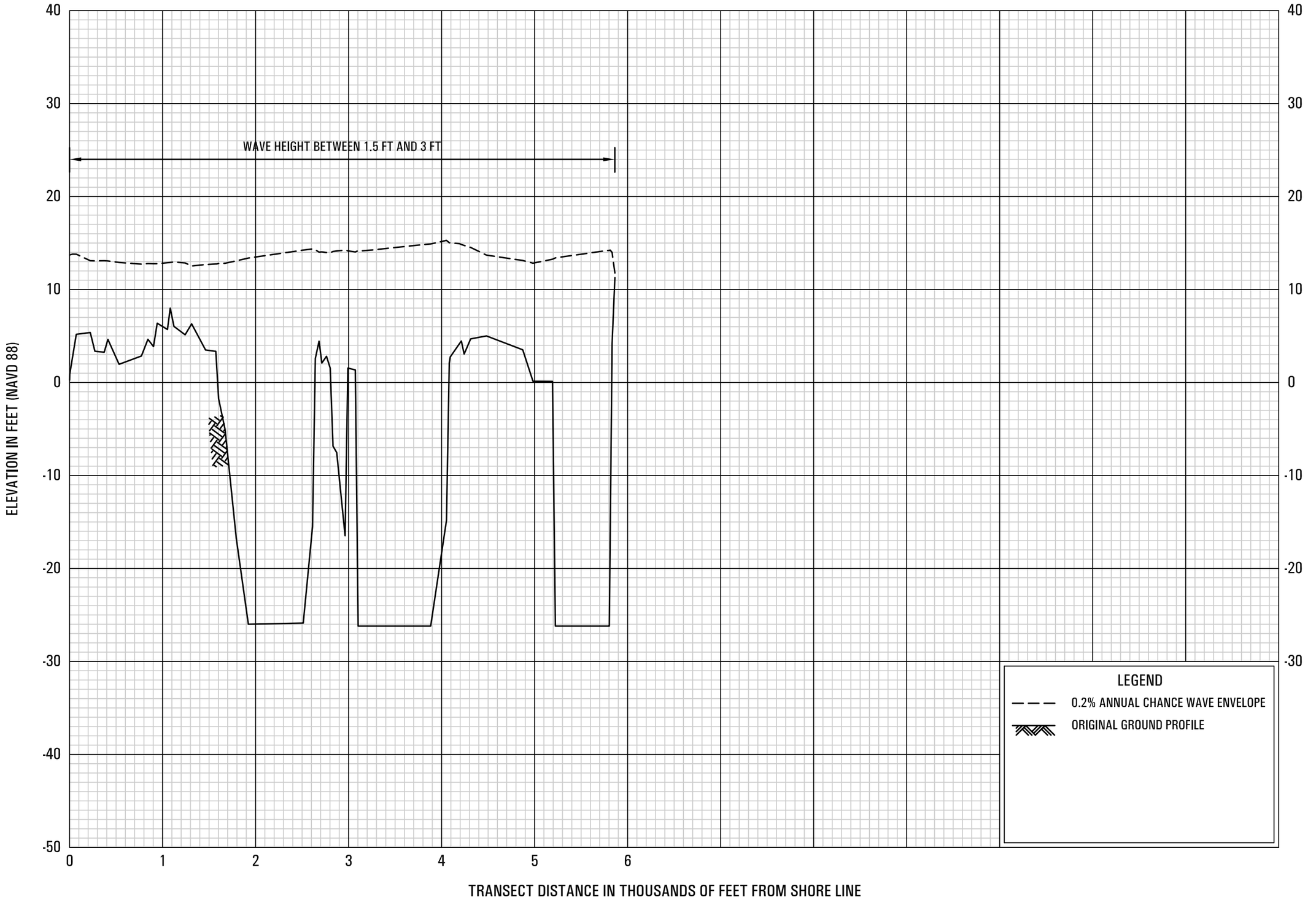
TRANSECT 50

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

68P

1945



0.2% ANNUAL CHANCE WAVE ENVELOPE

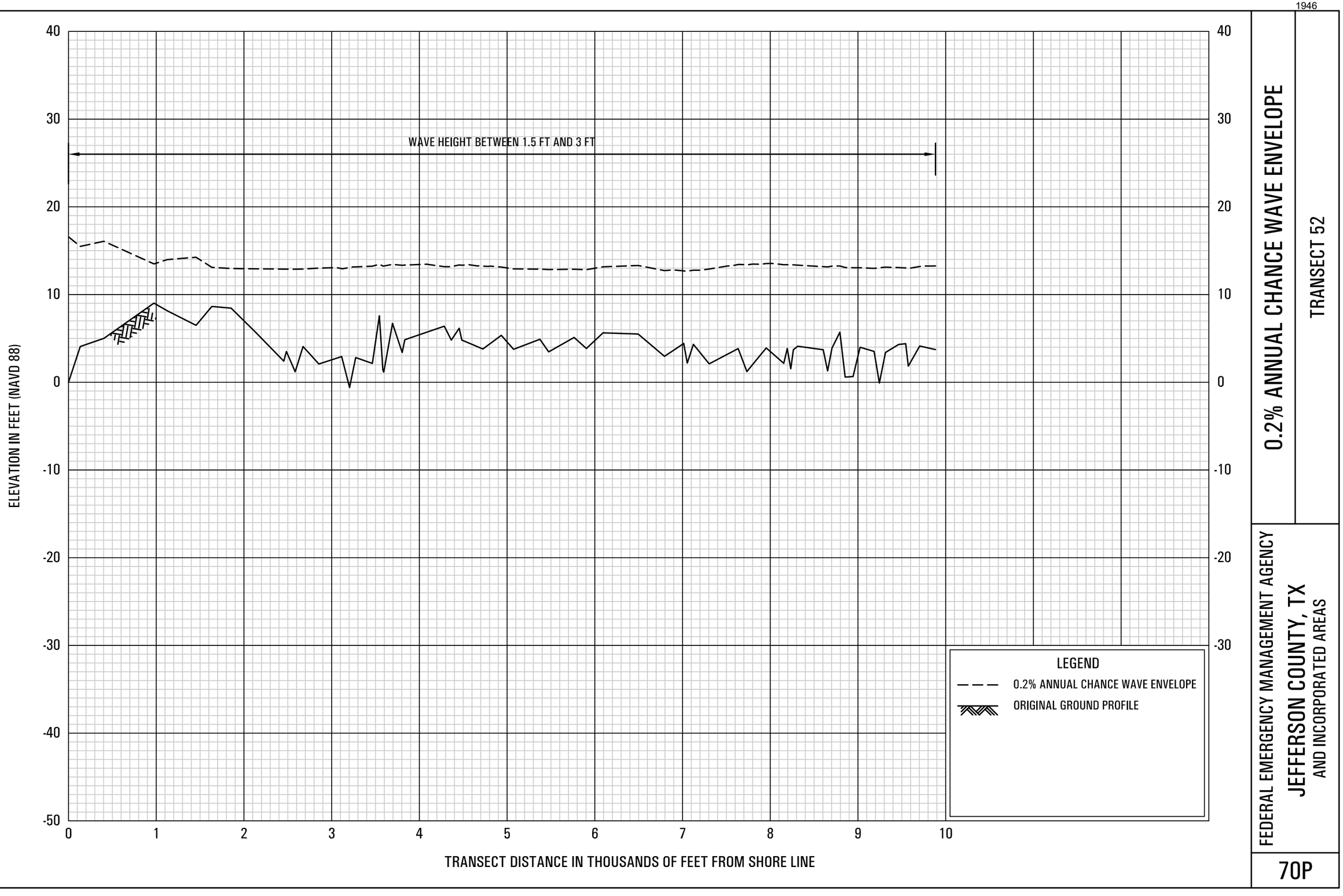
TRANSECT 51

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

69P

1946



0.2% ANNUAL CHANCE WAVE ENVELOPE

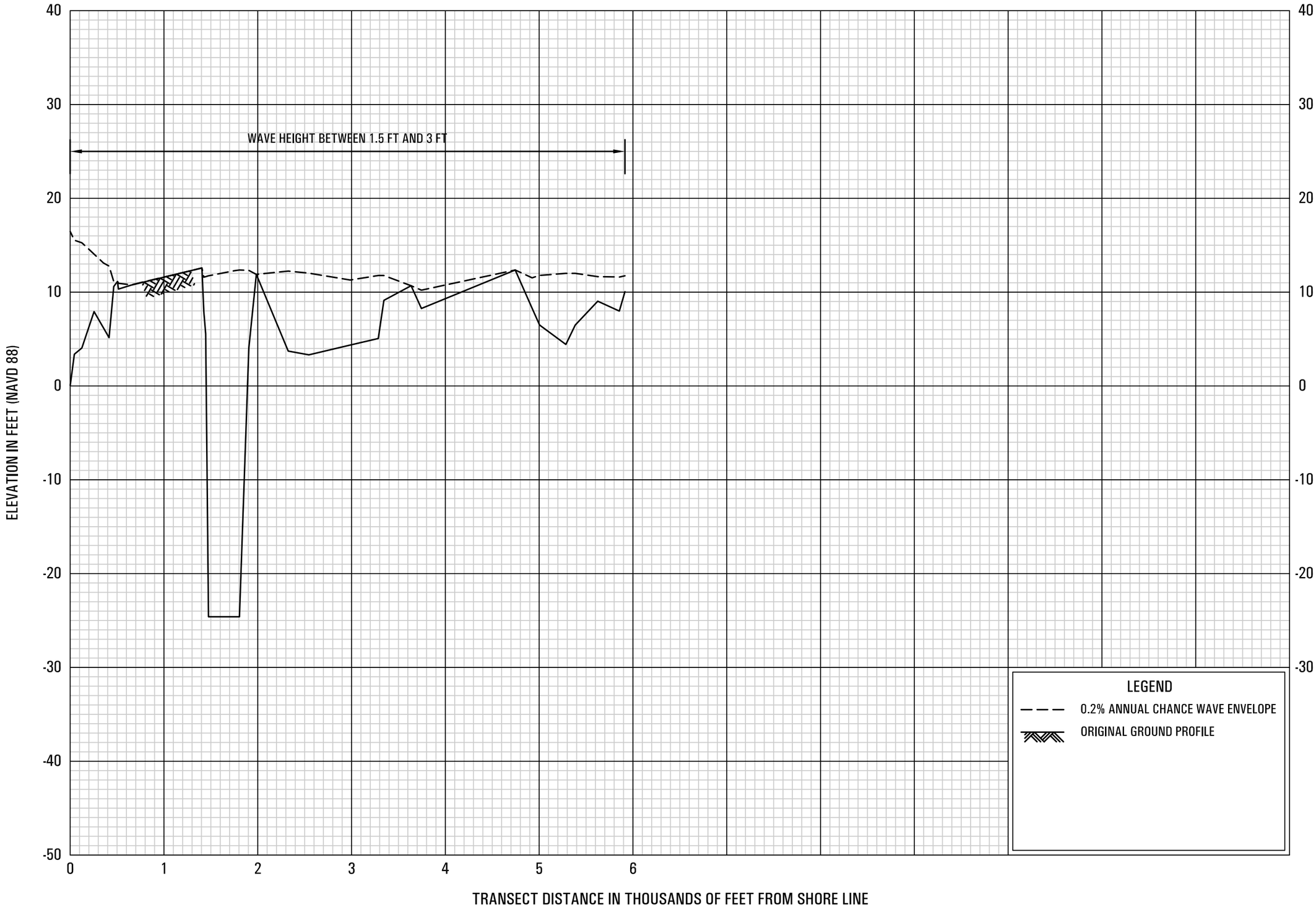
TRANSECT 52

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

70P

1947



0.2% ANNUAL CHANCE WAVE ENVELOPE

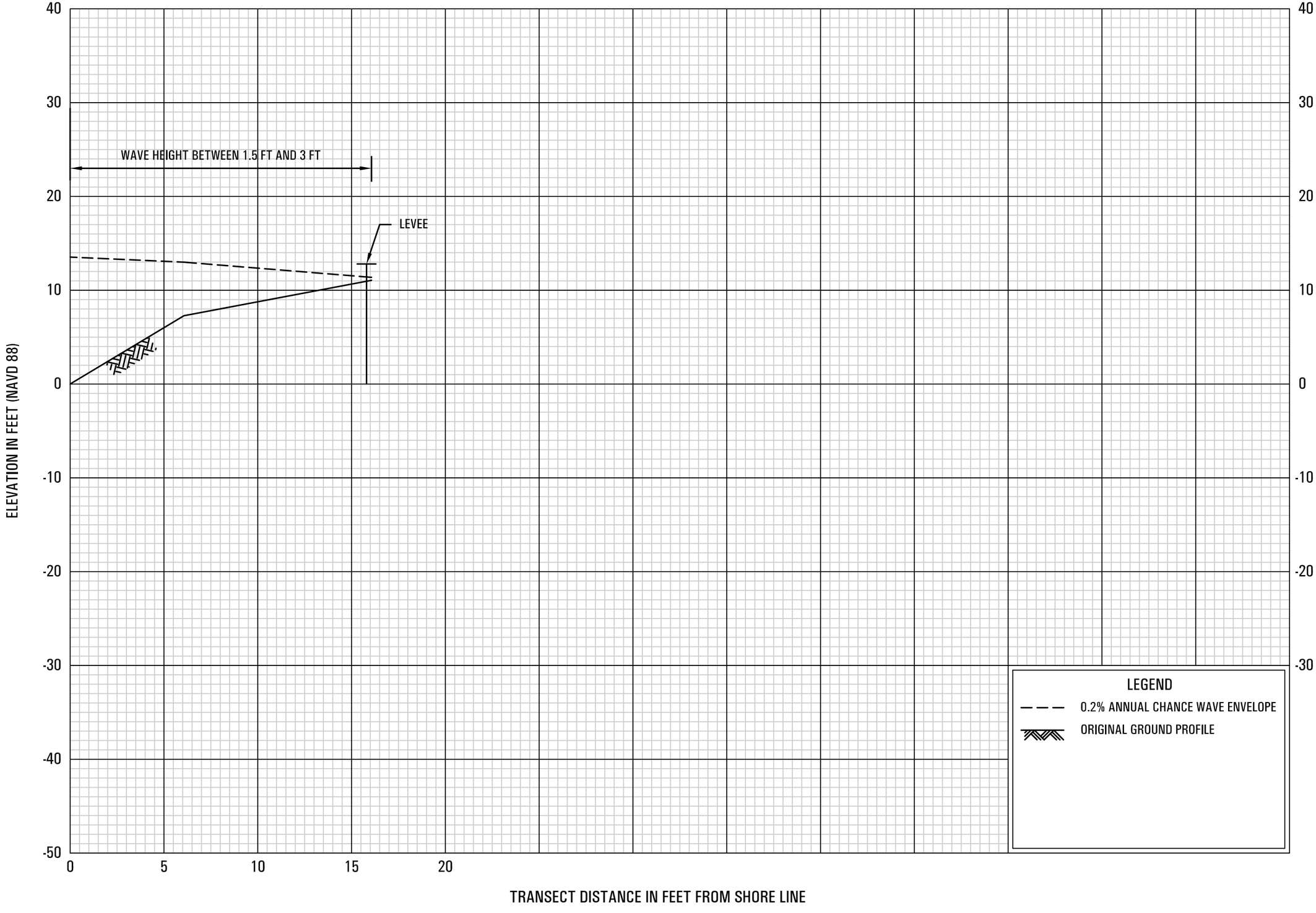
TRANSECT 53

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

71P

1948



0.2% ANNUAL CHANCE WAVE ENVELOPE

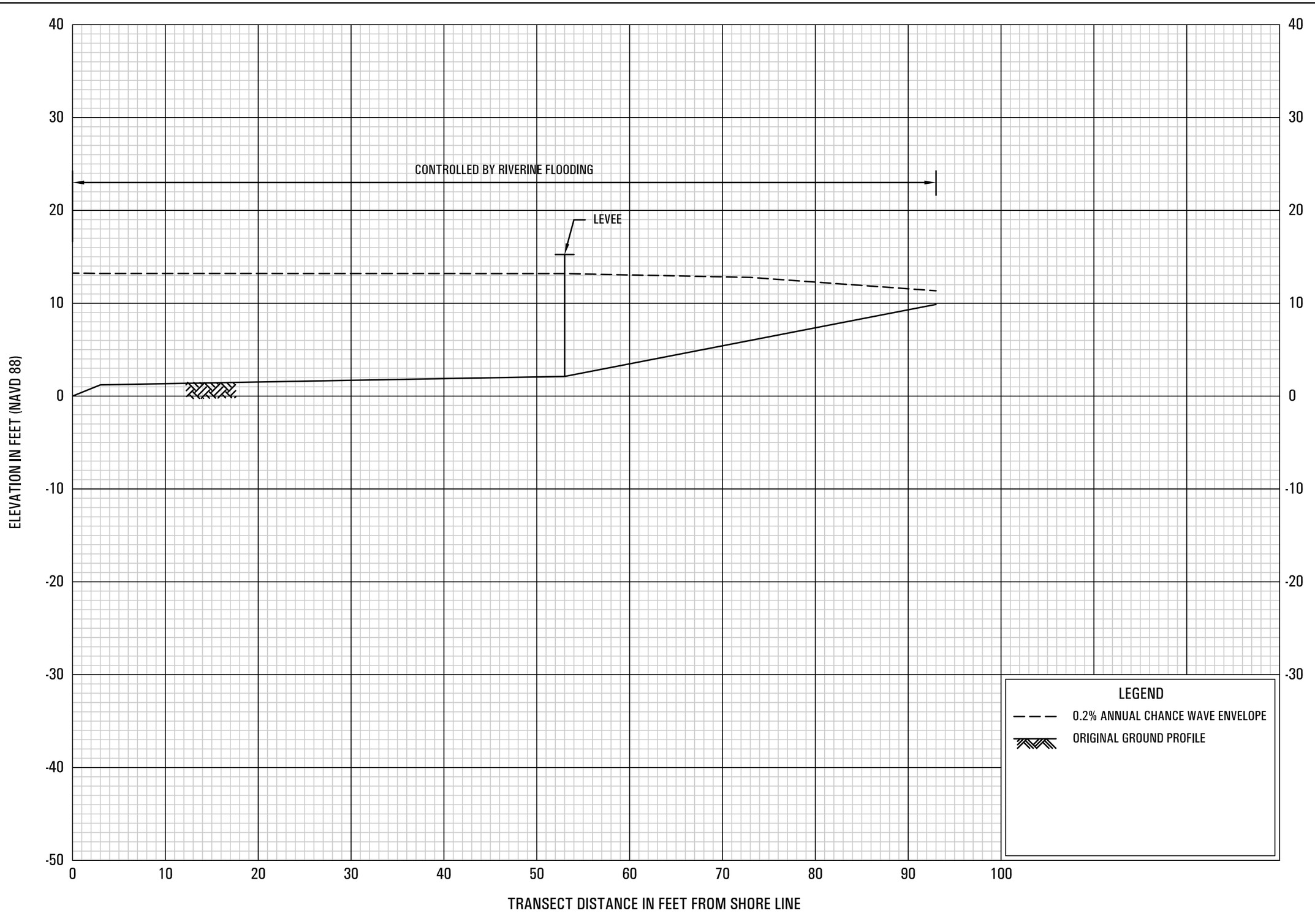
TRANSECT 54

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

72P

1949



0.2% ANNUAL CHANCE WAVE ENVELOPE

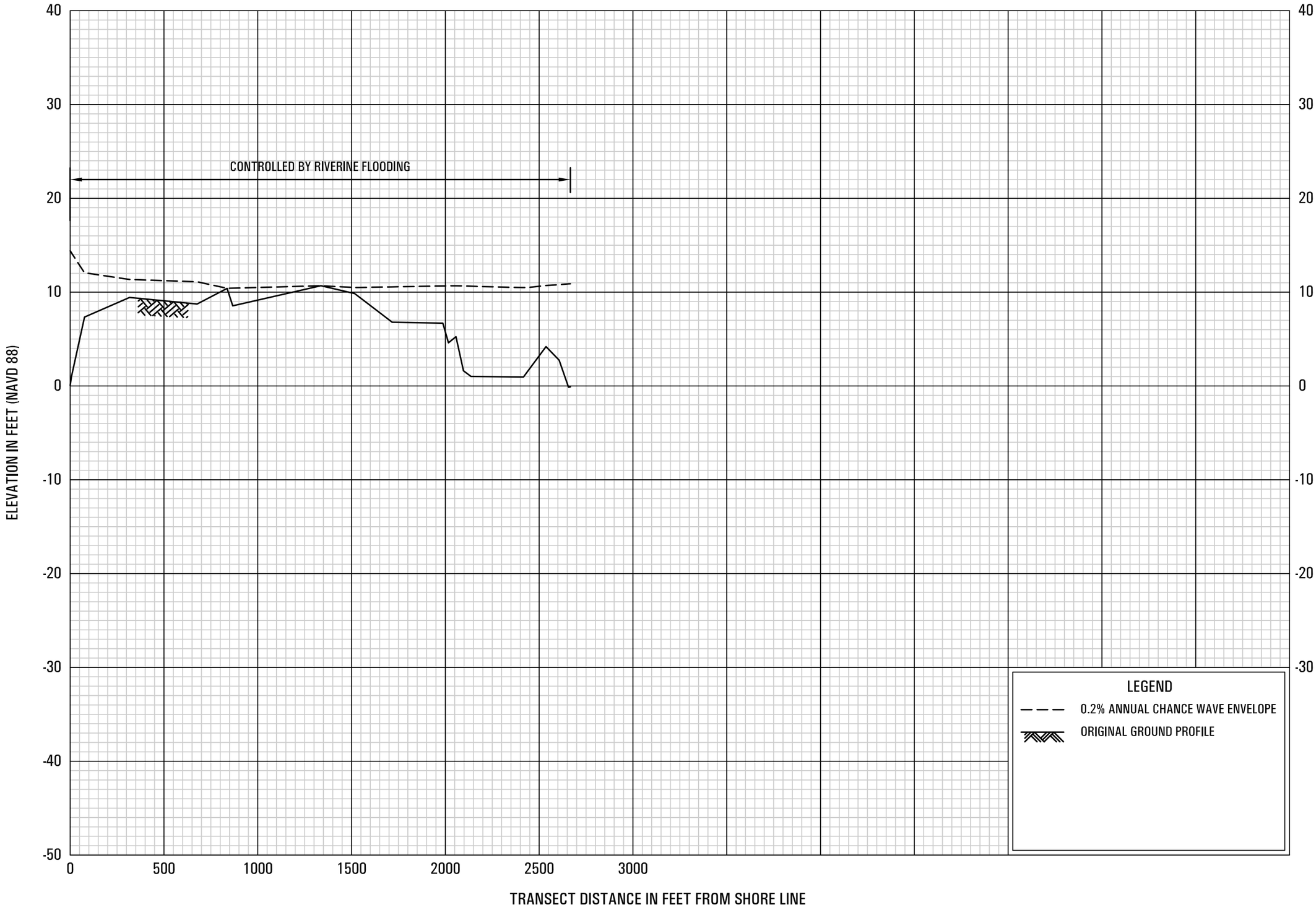
TRANSECT 55

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

73P

1950



0.2% ANNUAL CHANCE WAVE ENVELOPE

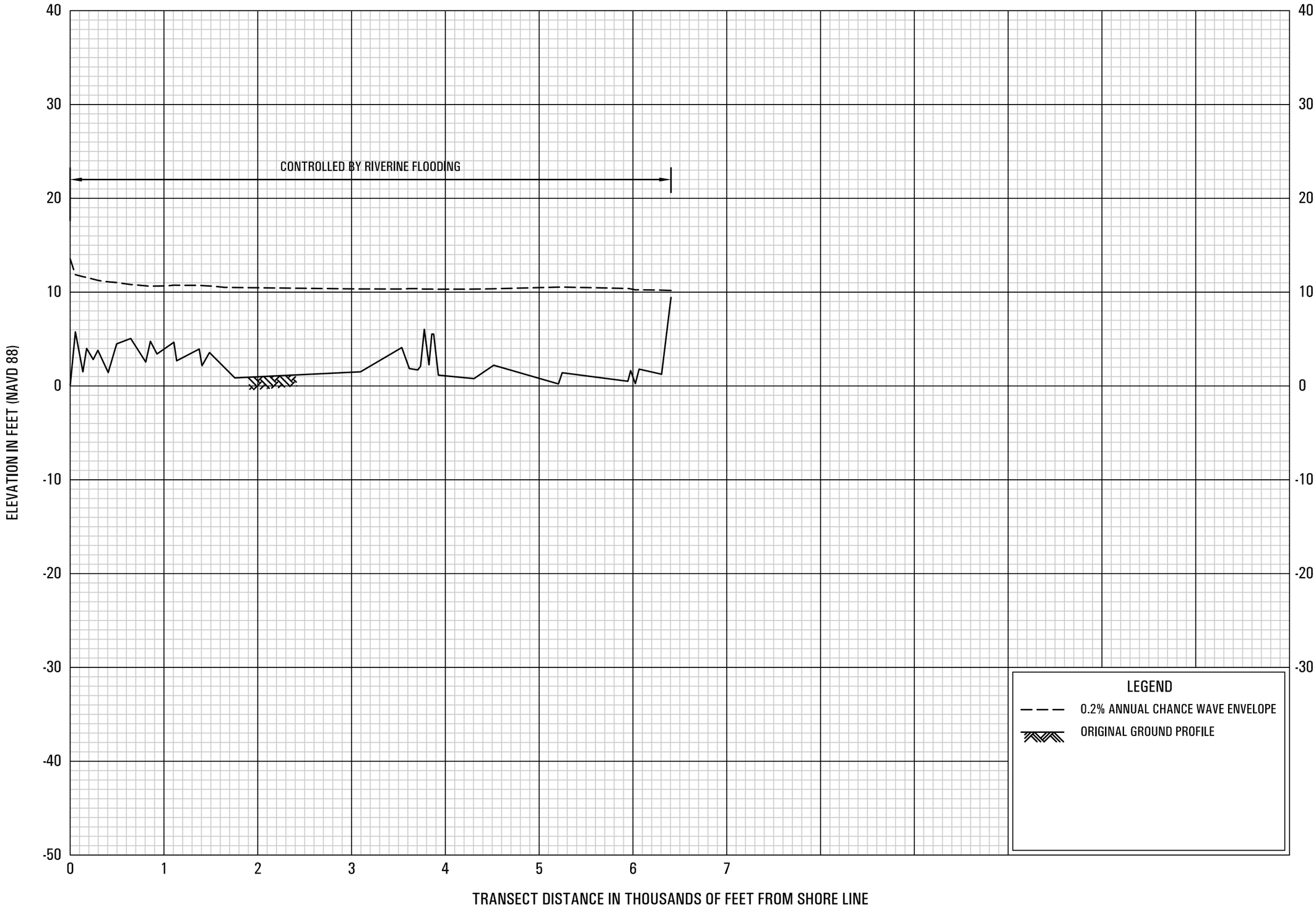
TRANSECT 56

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

74P

1951



0.2% ANNUAL CHANCE WAVE ENVELOPE

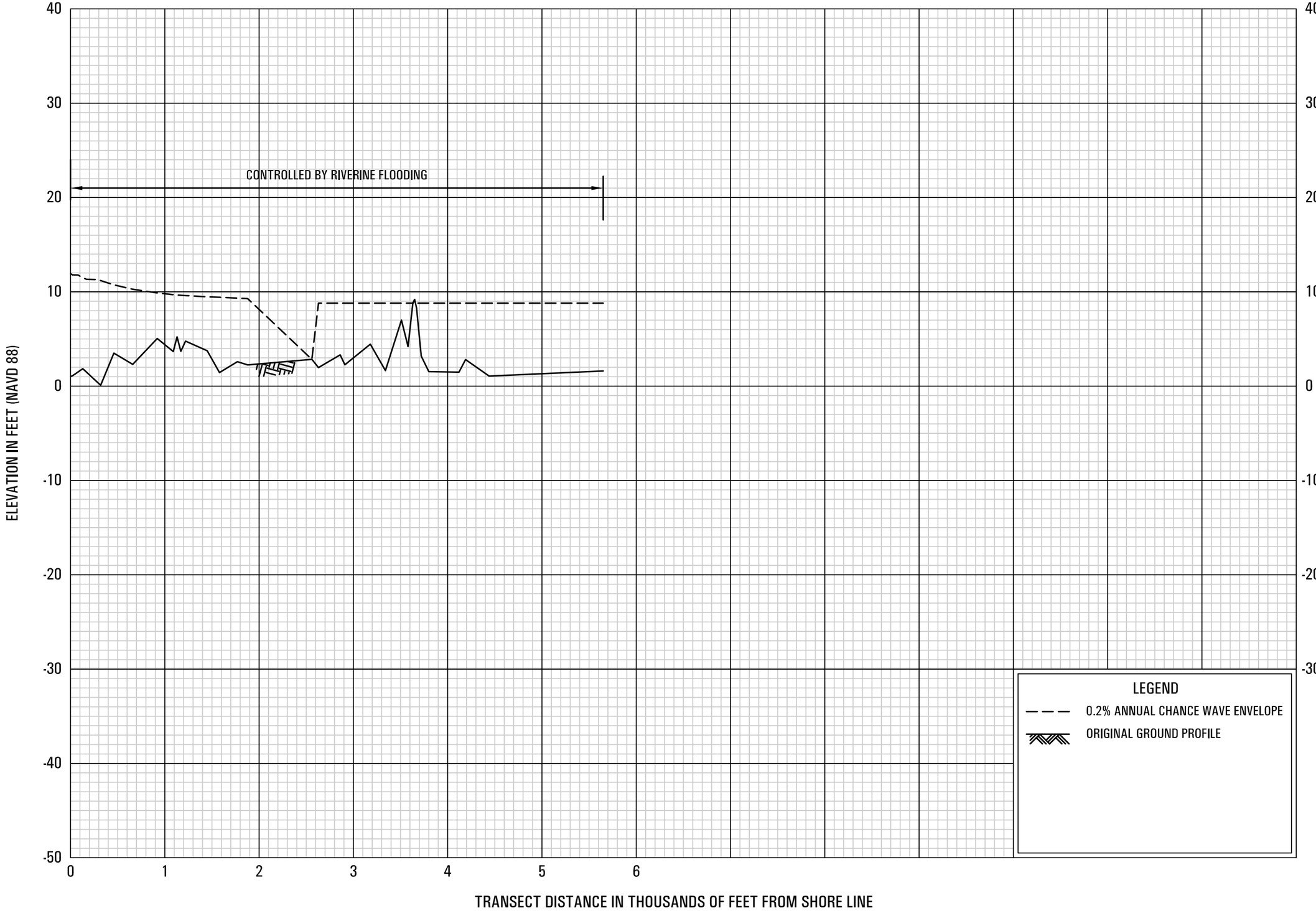
TRANSECT 57

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

75P

1952



0.2% ANNUAL CHANCE WAVE ENVELOPE

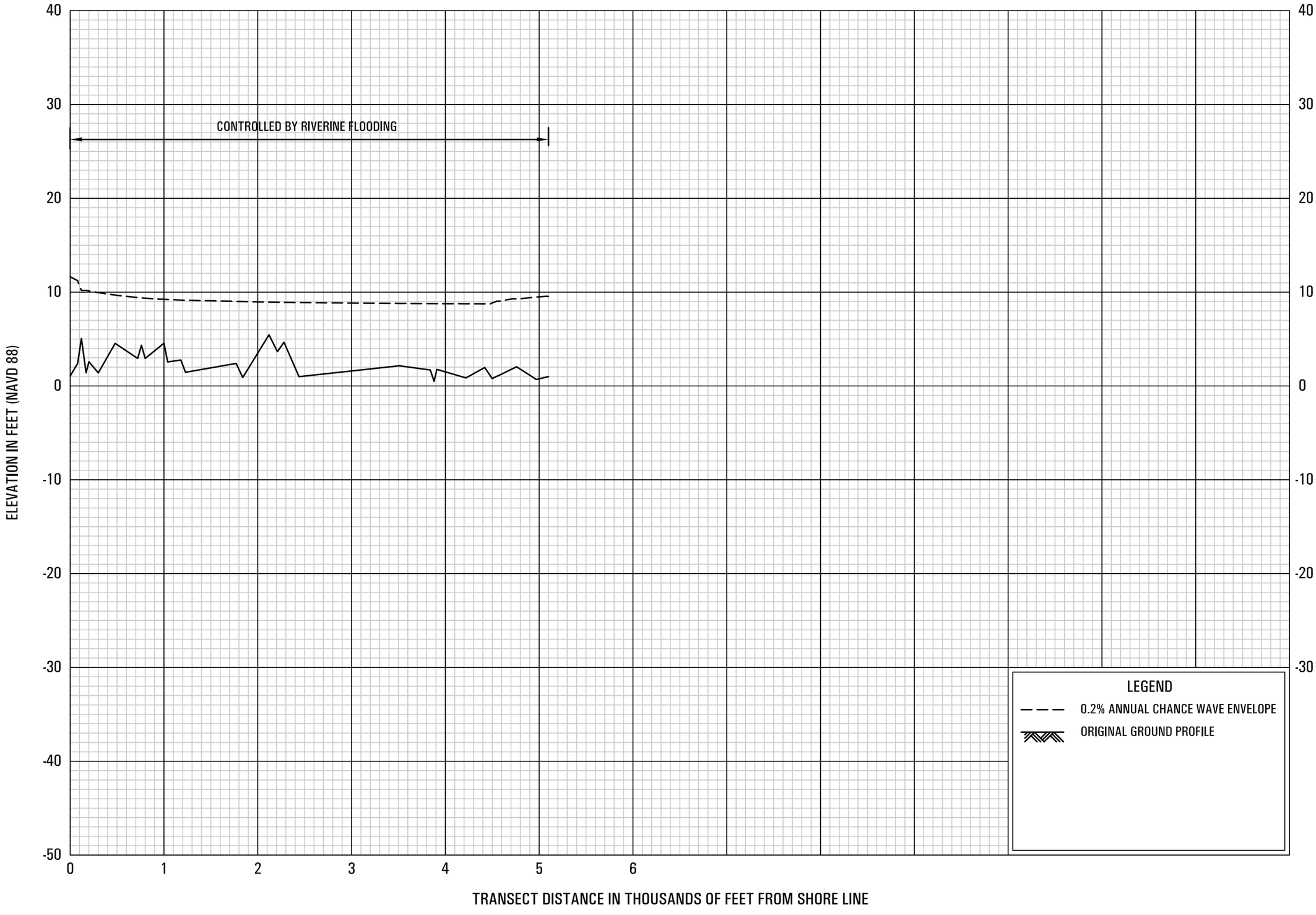
TRANSECT 58

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

76P

1953



0.2% ANNUAL CHANCE WAVE ENVELOPE

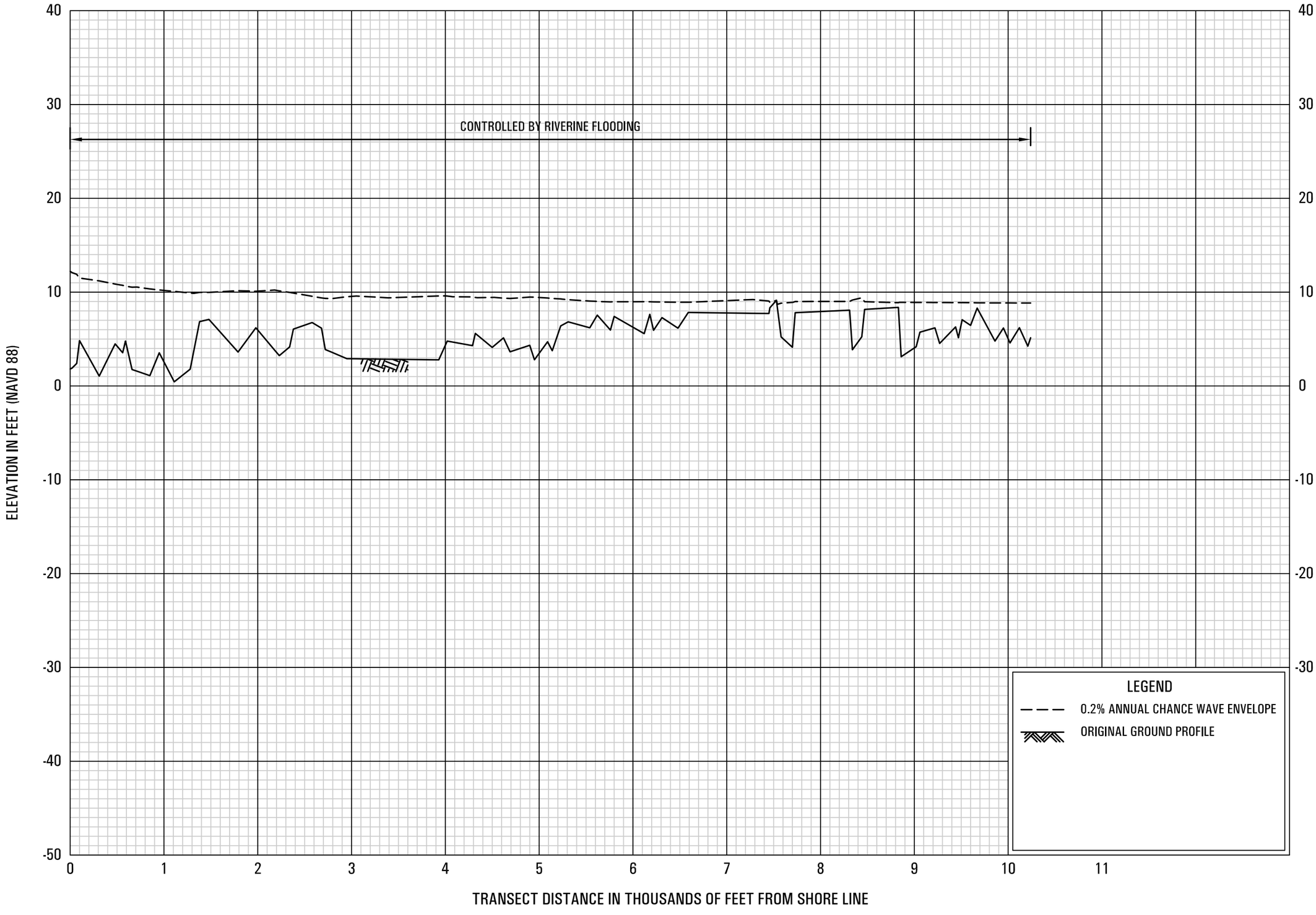
TRANSECT 59

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

77P

1954



0.2% ANNUAL CHANCE WAVE ENVELOPE

TRANSECT 60

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, TX
AND INCORPORATED AREAS

78P

NOTES TO USERS

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Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

The AE Zone category has been divided by a **Limit of Moderate Wave Action (LiMWA)**. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. The effects of wave hazards between the VE Zone and the LiMWA (or between the shoreline and the LiMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.

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The **projection** used in the preparation of this map was Texas State Plane South Central Zone (FIPS zone 4204). The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

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NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

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The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

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PROVISIONALLY ACCREDITED LEVEE NOTES TO USERS: CHECK WITH YOUR LOCAL COMMUNITY TO OBTAIN MORE INFORMATION, SUCH AS THE ESTIMATED LEVEL OF PROTECTION PROVIDED (WHICH MAY EXCEED THE 1-PERCENT-ANNUAL-CHANCE LEVEL) AND EMERGENCY ACTION PLAN, ON THE LEVEE SYSTEM(S) SHOWN AS PROVIDING PROTECTION FOR AREAS ON THIS PANEL TO MAINTAIN ACCREDITATION, THE LEVEE OWNER OR COMMUNITY IS REQUIRED TO SUBMIT THE DATA AND DOCUMENTATION NECESSARY TO COMPLY WITH SECTION 65.10 OF THE NFIP REGULATIONS BY MAY 23, 2014. IF THE COMMUNITY OR OWNER DOES NOT PROVIDE THE NECESSARY DATA AND DOCUMENTATION OR IF THE DATA AND DOCUMENTATION PROVIDED INDICATE THE LEVEE SYSTEM DOES NOT COMPLY WITH SECTION 65.10 REQUIREMENTS, FEMA WILL REVISE THE FLOOD HAZARD INFORMATION FOR THIS AREA TO REFLECT DE-ACCREDITATION OF THE LEVEE SYSTEM. TO MITIGATE FLOOD RISK IN RESIDUAL RISK AREAS, PROPERTY OWNERS AND RESIDENTS ARE ENCOURAGED TO CONSIDER FLOOD INSURANCE AND FLOODPROOFING OR OTHER PROTECTIVE MEASURES. FOR MORE INFORMATION ON FLOOD INSURANCE, INTERESTED PARTIES SHOULD VISIT THE FEMA WEBSITE AT HTTP://WWW.FEMA.GOV/BUSINESS/NFIP/INDEX.SHTM.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

	1% Annual Chance Floodplain Boundary
	0.2% Annual Chance Floodplain Boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
	Limit of Moderate Wave Action
513	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

A — A	Cross section line
23 — 23	Transect line
	Culvert
	Bridge
45° 02' 08", 93° 02' 12"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
3100000 FT	5000-foot ticks: Texas State Plane South Central Zone (FIPS Zone 4204), Lambert Conformal Conic projection
4989000m N	1000-meter Universal Transverse Mercator grid values, zone 15N
DX5510	Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5	River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'
500 0 1000 2000
FEET
METERS
300 0 300 600

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0455F

FIRM

FLOOD INSURANCE RATE MAP

JEFFERSON COUNTY, TEXAS (AND INCORPORATED AREAS)

PANEL 455 OF 675
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JEFFERSON COUNTY	480385	0455	F
PORT ARTHUR, CITY OF	485499	0455	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48245C0455F
EFFECTIVE DATE

Federal Emergency Management Agency

NOTES TO USERS

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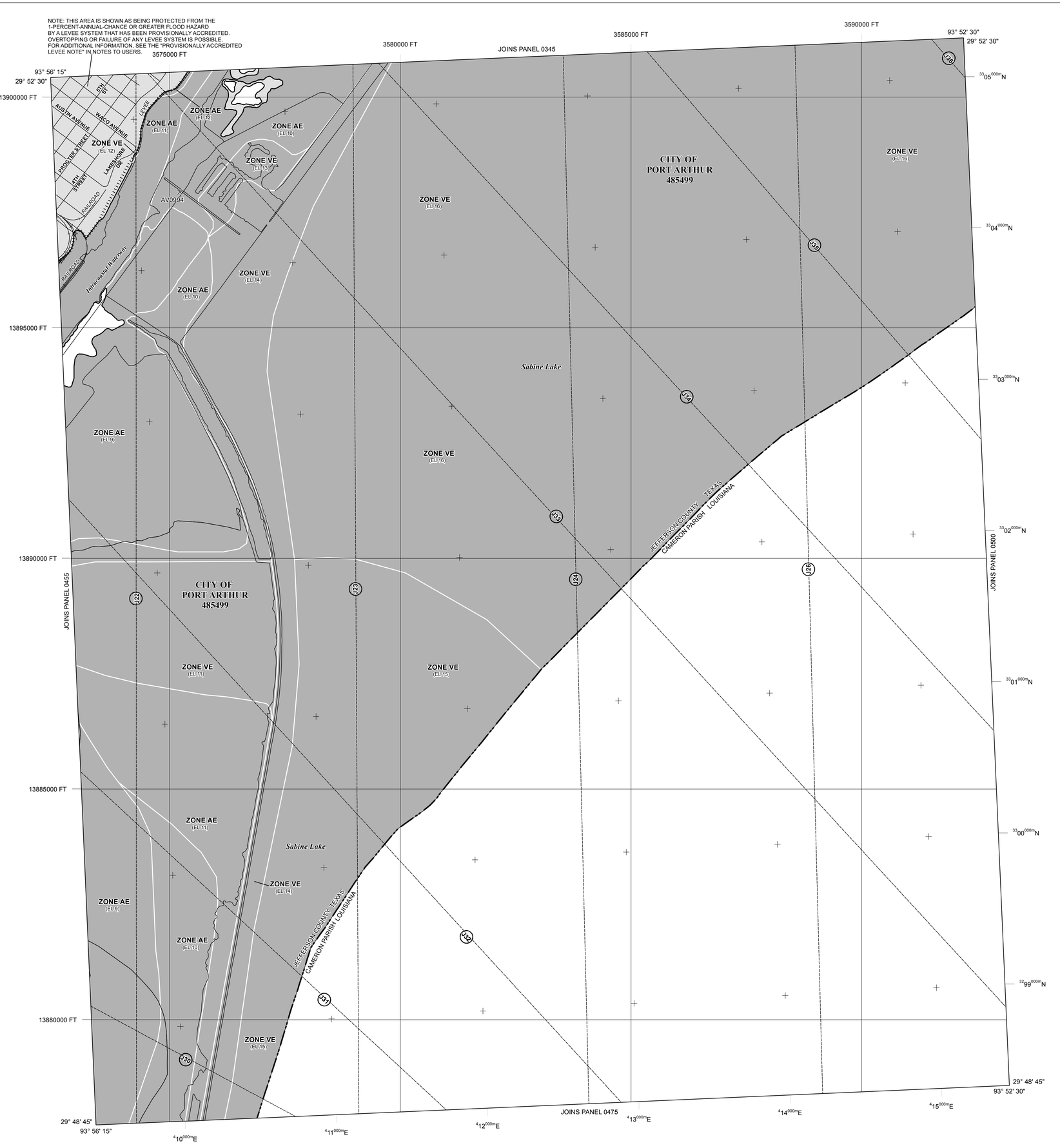

LEGEND

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The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

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- Limit of Moderate Wave Action
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- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

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- A — A — Cross section line
- 23 — 23 — Transect line
- Culvert
- Bridge
- 45° 02' 08", 93° 02' 12" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
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- 4 89 000m N — 1000-meter Universal Transverse Mercator grid values, zone 15N
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

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MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0460F

FIRM

FLOOD INSURANCE RATE MAP

JEFFERSON COUNTY, TEXAS (AND INCORPORATED AREAS)

PANEL 460 OF 675
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
PORT ARTHUR, CITY OF	485499	0460	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48245C0460F
EFFECTIVE DATE

Federal Emergency Management Agency

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Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

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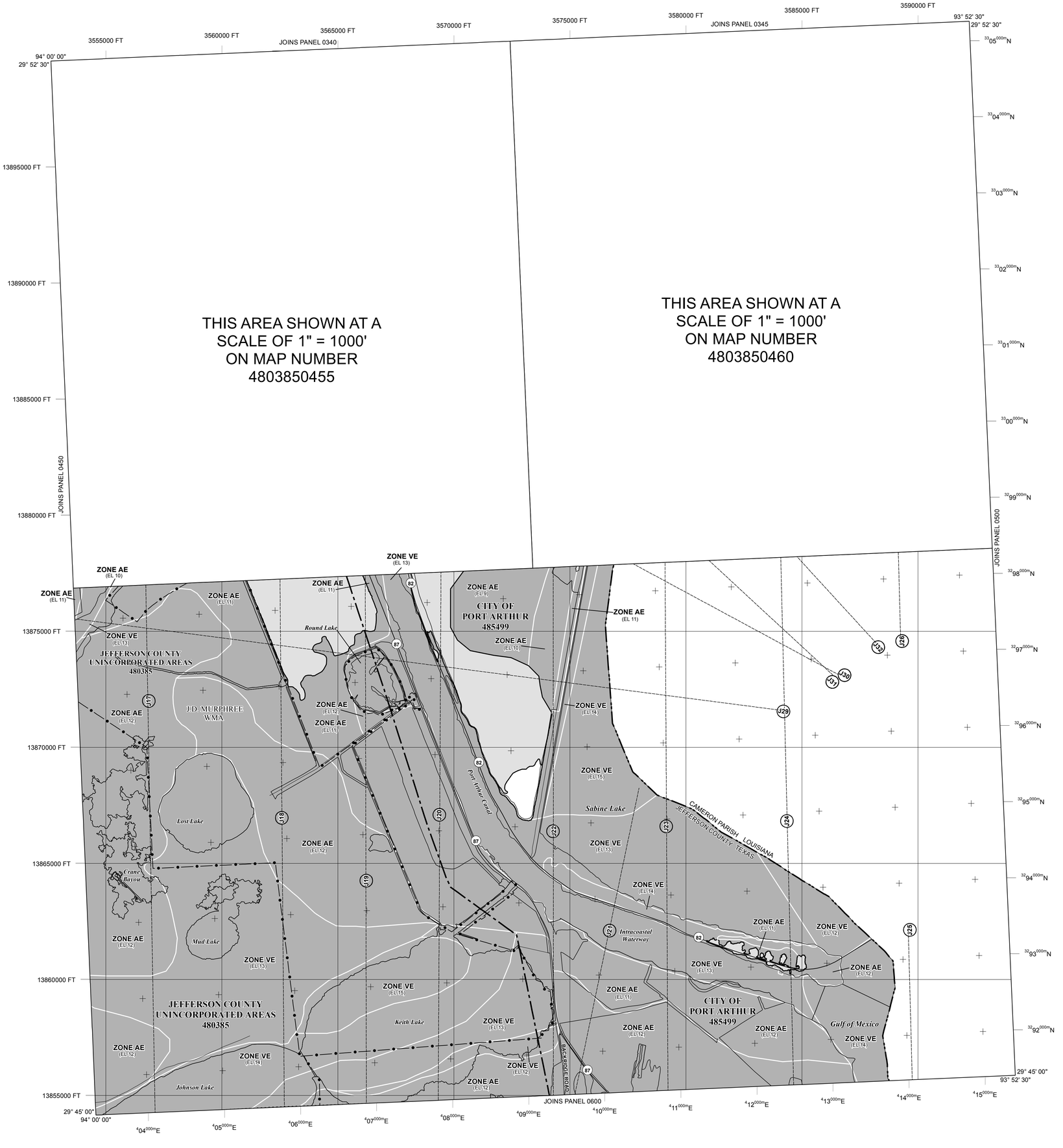

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- Limit of Moderate Wave Action
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- A — A — Cross section line
- 23 — 23 — Transect line
- Culvert
- Bridge
- 45° 02' 08", 93° 02' 12" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 3100000 FT — 5000-foot ticks: Texas State Plane South Central Zone (FIPS Zone 4204), Lambert Conformal Conic projection
- $^{489000m}N$ — 1000-meter Universal Transverse Mercator grid values, zone 15N
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'

1000 0 2000 4000 FEET

600 0 600 1200 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0475F

FIRM

FLOOD INSURANCE RATE MAP

JEFFERSON COUNTY, TEXAS (AND INCORPORATED AREAS)

PANEL 475 OF 675

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JEFFERSON COUNTY	480385	0475	F
PORT ARTHUR, CITY OF	485499	0475	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48245C0475F
EFFECTIVE DATE

Federal Emergency Management Agency

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

The AE Zone category has been divided by a **Limit of Moderate Wave Action (LiMWA)**. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. The effects of wave hazards between the VE Zone and the LiMWA (or between the shoreline and the LiMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Texas State Plane South Central Zone (FIPS zone 4204). The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

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LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

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ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
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- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- Limit of Moderate Wave Action
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

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- A — A — Cross section line
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- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
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MAP REPOSITORIES
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EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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MAP SCALE 1" = 1000'

500 0 1000 2000 FEET
300 0 300 600 METERS

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0455F

FIRM

FLOOD INSURANCE RATE MAP

JEFFERSON COUNTY, TEXAS (AND INCORPORATED AREAS)

PANEL 455 OF 675
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JEFFERSON COUNTY	480385	0455	F
PORT ARTHUR, CITY OF	485499	0455	F

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MAP NUMBER
48245C0455F
EFFECTIVE DATE

Federal Emergency Management Agency

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LEGEND

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ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

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MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0460F

FIRM

FLOOD INSURANCE RATE MAP

JEFFERSON COUNTY, TEXAS (AND INCORPORATED AREAS)

PANEL 460 OF 675
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
PORT ARTHUR, CITY OF	485499	0460	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48245C0460F
EFFECTIVE DATE

Federal Emergency Management Agency

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This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

The AE Zone category has been divided by a **Limit of Moderate Wave Action (LiMWA)**. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. The effects of wave hazards between the VE Zone and the LiMWA (or between the shoreline and the LiMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Texas State Plane South Central Zone (FIPS zone 4204). The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713- 3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on FIRM panels produced for this study was provided in digital format by Jefferson County Appraisal District. This Data was created in State Plane NAD 83 coordinates, U.S. Survey Feet and was produced at scales 1:2,200 (1"=100'); 1:4,800 (1"=400'). Aerial Photography of the area was captured in 2006.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

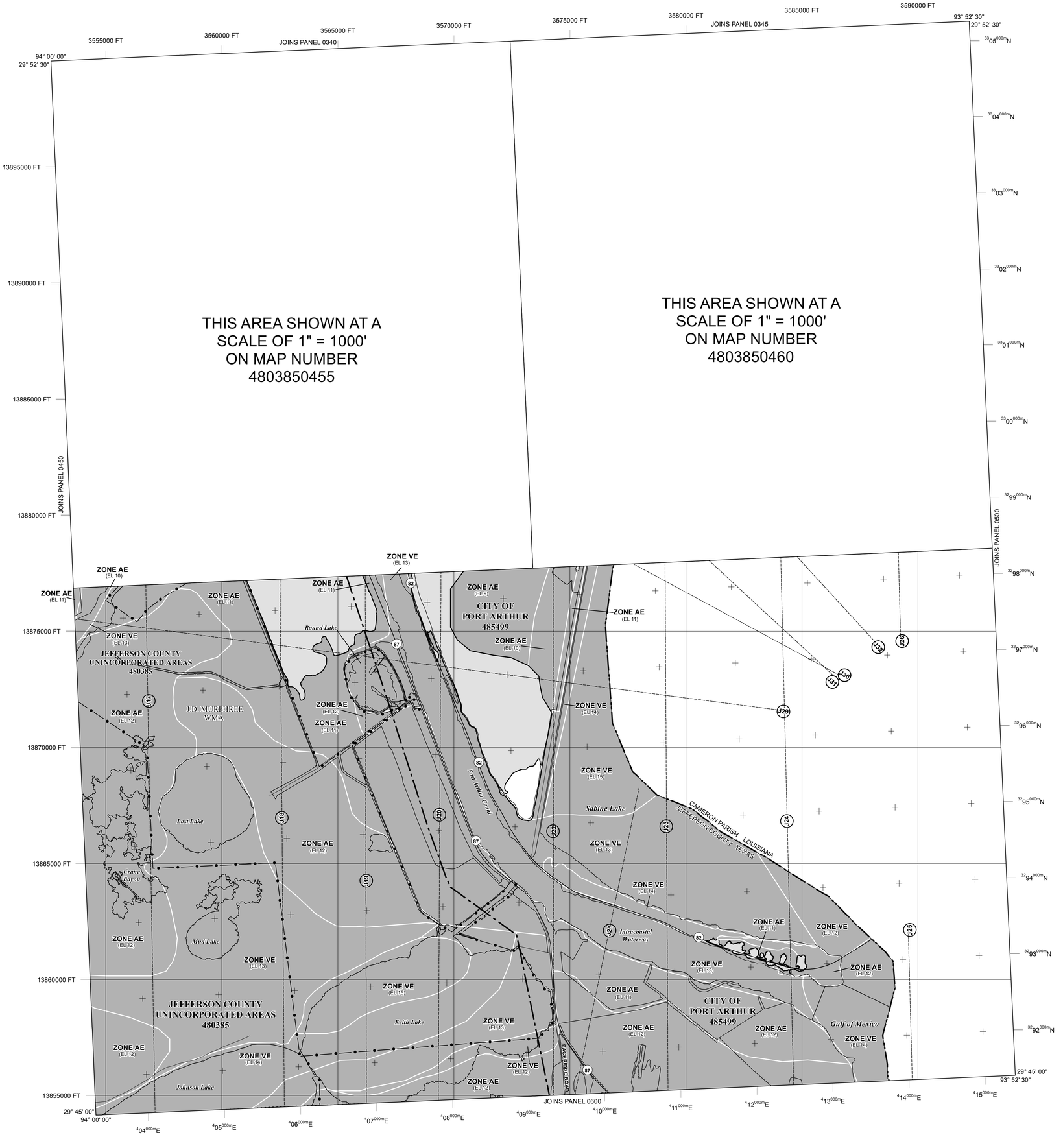
Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map,** how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange (FMIX)** at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.



1980

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- Limit of Moderate Wave Action
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- A — A — Cross section line
- 23 — 23 — Transect line
- Culvert
- Bridge
- 45° 02' 08", 93° 02' 12" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 3100000 FT — 5000-foot ticks: Texas State Plane South Central Zone (FIPS Zone 4204), Lambert Conformal Conic projection
- $^{489}000mN$ — 1000-meter Universal Transverse Mercator grid values, zone 15N
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'

1000 0 2000 4000 FEET

600 0 600 1200 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0475F

FIRM

FLOOD INSURANCE RATE MAP

JEFFERSON COUNTY, TEXAS (AND INCORPORATED AREAS)

PANEL 475 OF 675

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JEFFERSON COUNTY	480385	0475	F
PORT ARTHUR, CITY OF	485499	0475	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 48245C0475F

EFFECTIVE DATE

Federal Emergency Management Agency



MAP DATES

This FIRM Index displays the map date for each FIRM panel at the time that this Index was printed. Because this Index may not be distributed to unaffected communities in subsequent revisions, users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center (MSC) website at http://msc.fema.gov, or by calling the FEMA Map Information eXchange (FMIX) at 1-877-336-2627.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index.These may be ordered directly from the Map Service Center at the number listed above.

MAP REPOSITORIES

(Maps available for reference only, not for distribution.)

BEAUMONT, CITY OF:
Planning and Community Development
801 Main Street, Suite 201
Beaumont, Texas 77701

BEVIL OAKS, CITY OF:
Bevil Oaks City Hall
7525 Sweetgum Road
Beaumont, Texas 77713

CHINA, CITY OF:
City Hall
717 North Broadway
China, Texas 77613

GROVES, CITY OF:
Public Works Building
4925 McKinley
Groves, Texas 77619

JEFFERSON COUNTY
(UNINCORPORATED AREAS):
Jefferson County Courthouse
1149 Pearl Street, 5th Floor
Beaumont, Texas 77701

NEDERLAND, CITY OF:
Inspections Department
1903 Atlanta Avenue
Nederland, Texas 77627

NOME, CITY OF:
City Hall
1586 2nd Street
Nome, Texas 77629

PORT ARTHUR, CITY OF:
Planning and Zoning Department
444 4th Street, 3rd Floor
Port Arthur, Texas 77640

PORT NECHES, CITY OF:
Public Works Department
1005 Merriman Street
Port Neches, Texas 77651

TAYLOR LANDING, CITY OF:
Taylor Landing Building Permits Department
324 North Memorial Freeway
Nederland, Texas 77627

NOTE TO USER

Future revisions to this FIRM Index will only be issued to communities that are located on FIRM panels being revised. This FIRM Index therefore remains valid for FIRM panels dated or earlier. Please refer to the "MOST RECENT FIRM PANEL DATE" column in the Listing of Communities table to determine the most recent FIRM Index date for each community.

BASE MAP SOURCE

Base map information for this study was provided by Jefferson County Appraisal District (JCAD). This data was created in State Plane NAD 83 coordinates, U.S. Survey Feet and was produced at scales 1:2,200 (1"=100'); 1:4,800 (1"400'). Aerial photography of the area was captured in 2006.

ELEVATION DATUM

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282
(301) 713-3242

FIRM Panel Dates for Printed Panels of Jefferson County, Texas (And Incorporated Areas)					
Panel	Effective Date	Panel	Effective Date	Panel	Effective Date
48245C0025G		48245C0170G		48245C0245G	
48245C0040G		48245C0200G		48245C0450G	
48245C0045G		48245C0250G		48245C0455G	
48245C0050G		48245C0275G		48245C0460G	
48245C0075G		48245C0300G		48245C0475G	
48245C0100G		48245C0305G		48245C0500G	
48245C0125G		48245C0310G		48245C0525G	
48245C0130G		48245C0325G		48245C0550G	
48245C0135G		48245C0330G		48245C0575G	
48245C0140G		48245C0335G		48245C0600G	
48245C0145G		48245C0340G		48245C0625G	
48245C0155G		48245C0345G		48245C0650G	
48245C0160G		48245C0375G		48245C0675G	
48245C0165G		48245C4005G			

- NOTE-

Designated coastal barriers are located on panels 0450, 0525, 0550, 0575, 0600, 0625, 0650, and 0675

N

LISTING OF COMMUNITIES

COMMUNITY NAME	COMMUNITY NUMBER	LOCATED ON PANEL(S)	INITIAL NFIP MAP DATE	INITIAL FIRM DATE	MOST RECENT FIRM PANEL DATE
BEAUMONT, CITY OF	485457	0040, 0045, 0050, 0075, 0130, 0135, 0140, 0145, 0155, 0165, 0170, 0300, 0305, 0310	SEPTEMBER 2, 1970	AUGUST 6, 2002	
BEVIL OAKS, CITY OF	480878	0025	MAY 13, 1977	SEPTEMBER 4, 1987	
*CHINA, CITY OF	481298	0125	AUGUST 6, 2002	AUGUST 6, 2002	
*GROVES, CITY OF	485475	0330, 0335, 0345	MARCH 26, 1970	JANUARY 6, 1983	
JEFFERSON COUNTY	480385	0025, 0040, 0045, 0075, 0100, 0125, 0130, 0140, 0145, 0155, 0160, 0165, 0170, 0200, 0250, 0275, 0300, 0305, 0310, 0325, 0330, 0335, 0340, 0345, 0375, 0400, 0425, 0450, 0455, 0475, 0500, 0525, 0550, 0575, 0600, 0625, 0650, 0675	AUGUST 30, 1977	JUNE 1, 1983	
NEDERLAND, CITY OF	485492	0310, 0330	NOVEMBER 17, 1970	JUNE 3, 1991	
NOME, CITY OF	481297	0100	JULY 12, 1977	FEBRUARY 2, 1983	
PORT ARTHUR, CITY OF	485499	0310, 0325, 0330, 0335, 0340, 0345, 0375, 0450, 0455, 0460, 0475, 0500, 0600, 0625	MAY 26, 1970	MAY 26, 1970	
PORT NECHES, CITY OF	485500	0200, 0330, 0335	NOVEMBER 17, 1970	JANUARY 6, 1983	
TAYLOR LANDING, CITY OF	481698	0300, 0425, 0450	NOVEMBER 14, 2008	AUGUST 6, 2002	

*NO SPECIAL FLOOD HAZARD AREAS IDENTIFIED

NFIP NATIONAL FLOOD INSURANCE PROGRAM

MAP INDEX

FIRM

FLOOD INSURANCE RATE MAP

JEFFERSON COUNTY, TEXAS AND INCORPORATED AREAS

MAP INDEX

PANELS PRINTED: 25, 40, 45, 50, 75, 100, 125, 130, 135, 140, 145, 155, 160, 165, 170, 200, 250, 275, 300, 305, 310, 325, 330, 335, 340, 345, 375, 400, 425, 450, 455, 460, 475, 500, 525, 550, 575, 600, 625, 675

REVISED PRELIMINARY DECEMBER 11, 2015

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
48245CIND0A

EFFECTIVE DATE

Federal Emergency Management Agency

Office of Energy Projects

January 2019

FERC/FEIS-0285F

FINAL ENVIRONMENTAL IMPACT STATEMENT

FOR

Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector Project

Port Arthur LNG, LLC	Docket Nos.: CP17-20-000
PALNG Common Facilities Company, LLC	CP17-21-000
Port Arthur Pipeline, LLC	CP17-21-001
	CP18-7-000

Volume I



Source: Sempra LNG & Midstream, Port Arthur Liquefaction Project Website, 2018

Federal Energy Regulatory Commission
Office of Energy Projects
Washington, DC 20426

Cooperating Agencies:

US Army Corps of Engineers®

U.S. Coast Guard

U.S. Department of Energy

U.S. Department of Transportation PHMSA

U.S. Environmental Protection Agency

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:
OEP/DG2E/Gas 4
Port Arthur LNG, LLC; PALNG Common Facilities Company, LLC; and Port Arthur Pipeline, LLC
Docket Nos. CP17-20-000, CP17-21-000, CP17-21-001, and CP 18-7-000

TO THE INTERESTED PARTY:

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared a final environmental impact statement (EIS) for the Port Arthur Liquefaction Project proposed by Port Arthur LNG, LLC and PALNG Common Facilities Company LLC (collectively referred to as PALNG), and the Texas Connector Project and Louisiana Connector Project proposed by Port Arthur Pipeline, LLC (PAPL) in the above-referenced dockets. PALNG requests authorization pursuant to section 3(a) of the Natural Gas Act (NGA) to construct and operate liquefied natural gas (LNG) export facilities in Jefferson County, Texas, and PAPL requests a Certificate of Public Convenience and Necessity pursuant to section 7(c) of the NGA to construct, operate, and maintain certain natural gas pipeline facilities in Jefferson and Orange Counties, Texas and Cameron, Calcasieu, Beauregard, Allen, Evangeline, and St. Landry Parishes, Louisiana. Together, these proposed facilities are referred to as "the Projects."

The final EIS assesses the potential environmental effects of the construction and operation of the Projects in accordance with the requirements of the National Environmental Policy Act (NEPA). The FERC staff concludes that approval of the proposed Projects, with the mitigation measures recommended in the EIS, would have some adverse environmental impact; however, these impacts would be avoided or reduced to less-than-significant levels.

The U.S. Army Corps of Engineers, U.S. Coast Guard, U.S. Department of Energy, U.S. Environmental Protection Agency, and the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration participated as cooperating agencies in the preparation of the EIS. Cooperating agencies have jurisdiction by law or special expertise with respect to resources potentially affected by the proposal and participate in the NEPA analysis. Although the cooperating agencies provided input to the conclusions and recommendations presented in the final EIS, the

agencies will present their own conclusions and recommendations in their respective Records of Decision for the Projects.

The final EIS addresses the potential environmental effects of the construction and operation of the following proposed facilities:

- two liquefaction trains, each with a capacity of 6.73 million tons per annum of LNG for export;
- three LNG storage tanks, each with a capacity of 160,000 cubic meters;
- a refrigerant storage area and truck unloading facilities;
- a condensate storage area and truck loading facilities;
- a new marine slip with two LNG vessel berths, an LNG vessel and support vessel maneuvering area, and an LNG transfer system;
- a materials off-loading facility and Pioneer Dock;
- approximately 38.9 miles of 42-inch-diameter pipeline to bring feed gas from interconnections with Kinder Morgan Louisiana Pipeline LLC, Natural Gas Pipeline Company of America, Houston Pipeline Company LP, Texas Eastern Transmission, LP (TETCO), Florida Gas Transmission Company, LLC, and Golden Triangle Storage, Inc./Centana Intrastate Pipeline, LLC to the terminal site;
- approximately 131.3 miles of 42-inch-diameter pipeline to bring feed gas from interconnections with Centana Interstate Pipeline, LP, TETCO, Tennessee Gas Pipeline Company, Market Hub Partners – Egan, Pine Prairie Energy Center, Texas Gas Transmission, LLC, ANR Pipeline Company, and Columbia Gulf Transmission, LLC to the terminal site;
- three compressor stations;
- meter stations at the pipeline interconnects; and
- other associated utilities, systems, and facilities (mainline valves, pig launchers/receivers, contractor yards, access roads, etc.).

The Commission mailed a copy of the *Notice of Availability* to federal, state, and local government representatives and agencies; elected officials; environmental and

public interest groups; Native American tribes; potentially affected landowners and other interested individuals and groups; and newspapers and libraries in the project area. The final EIS is only available in electronic format. It may be viewed and downloaded from the FERC's website (www.ferc.gov), on the Environmental Documents page (https://www.ferc.gov/industries/gas/enviro/eis.asp). In addition, the final EIS may be accessed by using the eLibrary link on the FERC's website. Click on the eLibrary link (https://www.ferc.gov/docs-filing/elibrary.asp), click on General Search, and enter the docket number in the "Docket Number" field, excluding the last three digits (i.e., CP17-20, CP17-21, or CP18-7). Be sure you have selected an appropriate date range. For assistance, please contact FERC Online Support at FercOnlineSupport@ferc.gov or toll free at (866) 208-3676, or for TTY, contact (202) 502-8659.

Additional information about the project is available from the Commission's Office of External Affairs, at **(866) 208-FERC**, or on the FERC website (www.ferc.gov) using the eLibrary link. The eLibrary link also provides access to the texts of all formal documents issued by the Commission, such as orders, notices, and rulemakings.

In addition, the Commission offers a free service called eSubscription which allows you to keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically providing you with notification of these filings, document summaries, and direct links to the documents. Go to www.ferc.gov/docs-filing/esubscription.asp.

Port Arthur Liquefaction Project, Port Arthur Texas Connector Project, and Port Arthur Louisiana Connector Project
Final Environmental Impact Statement

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TECHNICAL ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
µPa	microPascal
ACHP	Advisory Council on Historic Preservation
ANR	ANR Pipeline Company
API	American Petroleum Institute
AQCR	air quality control region
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
BA	Biological Assessment
BACT	Best Available Control Technology
BCC	Birds of Conservation Concern
bcf	billion cubic feet
BECi	Beauregard Electric CO-OP Inc.
BGEPA	Bald and Golden Eagle Protect Act of 1940
BLEVE	boiling liquid expanding vapor explosion
BO	Biological Opinion
BOG	boil-off gas
BPVC	Boiler and Pressure Vessel Code
bscfd	billion standard cubic feet per day
Btu/ft^2-hr	British thermal units per square foot hour
CAA	Clean Air Act
Centana	Centana Interstate Pipeline, LP
CEQ	Council on Environmental Quality
Certificate	Certificate of Public Convenience and Necessity
CFR	Code of Federal Regulations
CGT	Columbia Gulf Transmission, LLC
CH_4	methane
CIP	Sabine-Neches Waterway Canal Improvement Project
CLECO	Central Louisiana Electric Company
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
COTP	Captain of the Port
CPT	cone penetration tests
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
CZMP	Coastal Zone Management Program
dB	decibels
dBA	A- weighted decibels
DCS	Distributed Control System
DHS	U.S. Department of Homeland Security
DOD	U.S. Department of Defense
DOE	U.S. Department of Energy, Office of Fossil Energy

DOT	U.S. Department of Transportation
DWPL	Driftwood Pipeline LLC
EEM	estuarine emergent
EEZ	Exclusive Economic Zone
EFH	essential fish habitat
Egan	Market Hub Partners – Egan
EI	Environmental Inspector
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
EPAct 2005	Energy Policy Act of 2005
ERP	Emergency Response Plan
ESA	Endangered Species Act of 1973
ESD	emergency shutdown
ESS	estuarine scrub-shrub
FE	Fossil Energy
FEED	front-end-engineering-design
FEMA	Federal Emergency Management Agency
FERC or Commission	Federal Energy Regulatory Commission
FGT	Florida Gas Transmission
FMP	fisheries management plans
FSA	Facility Security Assessment
FSP	Facility Security Plan
FTA	Free Trade Agreement
FWS	U.S. Fish and Wildlife Service
GCD	Groundwater Conservation Districts
GHG	greenhouse gases
GMD	Geomagnetic disturbances
GMFMC	Gulf of Mexico Fishery Management Council
GTS/CIPCO	Golden Triangle Storage, Inc./Centana Intrastate Pipeline, LLC
GWP	global warming potential
H_2S	hydrogen sulfide
HAP	hazardous air pollutants
HAZOP	hazard and operability review
HCA	high consequence area
HDD	horizontal directional drilling
HGB	Houston-Galveston-Brazoria
hp	horsepower
HPL	Houston Pipeline Company LP
HUC	Hydrologic unit code
IBA	Important Bird and Biodiversity Area
IBC	International Building Code
ICWW	Intracoastal Waterway
IMO	International Maritime Organization
ISA	International Society for Automation
KMLP	Kinder Morgan Louisiana Pipeline LLC
LAC	Louisiana Administrative Code

LDEQ	Louisiana Department of Environmental Quality
L_{dn}	day-night sound level
LDNR	Louisiana Department of Natural Resources
LDWF	Louisiana Department of Wildlife and Fisheries
LEDPA	Least Environmentally Damaging Practicable Alternative
L_{eq}	equivalent sound level
LNG	liquefied natural gas
LNHP	Louisiana Natural Heritage Program
LNVA	Lower Neches Valley Authority
LOD	Letter of Determination
LOR	Letter of Recommendation
LOS	level of service
Louisiana FWS	Louisiana Ecological Services Field Office of the U.S. Fish and Wildlife Service
m^3	cubic meter
MBTA	Migratory Bird Treaty Act of 1918
MCC	Municipal Code Corporation
MCL	Maximum Contaminant Level
Memorandum	*Memorandum of Understanding on Natural Gas Transportation Facilities*
MEOW	maximum envelope of water
MLLW	mean lower low water
MLV	mainline valve
MMPA	Marine Mammal Protection Act of 1972
MOF	material offloading facility
MOU	Memorandum of Understanding
MP	milepost
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MTPA	million tons per annum
MTSA	Maritime Transportation Security Act of 2002
MW	megawats
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAVD88	North American Vertical Datum of 1988
NEPA	National Environmental Policy Act of 1969
NESHAPs	National Emission Standards for Hazardous Air Pollutants for Source Categories
NFPA	National Fire Protection Association
NGA	Natural Gas Act
NGPL	Natural Gas Pipeline Company of America
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NNSR	Nonattainment New Source Review
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NOx	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service

NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSA	noise-sensitive areas
NSPS	New Source Performance Standards
NSQS	National Sediment Quality Survey
NSR	New Source Review
NWI	National Wetlands Inventory
OBE	operating basis earthquake
OCM	Office for Coastal Management
OEP	Office of Energy Projects
OSHA	Occupational Safety and Health Administration
P&IDs	piping and instrument diagrams
PALNG	Port Arthur LNG, LLC and PALNG Common Facilities Company, LLC
PAPL	Port Arthur Pipeline, LLC
PBR	Permit By Rule
PCBs	polychlorinated biphenyls
PEM	palustrine emergent
PFDs	process flow diagrams
PFO	palustrine forested
PGA	peak ground acceleration
PHMSA	Pipeline and Hazardous Materials Safety Administration
Pine Prairie	Pine Prairie Energy Center
Plan	Commission's *Upland Erosion Control, Revegetation and Maintenance Plan*
PM	particulate matter
PM_{10}	fine particulate matter less than or equal to 10 microns in diameter
$PM_{2.5}$	fine particulate matter less than or equal to 2.5 microns in diameter
ppt	parts per thousand
Procedures	Commission's *Wetland and Waterbody Construction and Mitigation Procedures*
Projects	Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector Project
PSD	Prevention of Significant Deterioration
psig	pounds per square inch gauge
PSS	palustrine scrub-shrub
PUB	palustrine unconsolidated bottom
RCP	Residential Construction Plans
RHA	Rivers and Harbors Act of 1899
RMP	Risk Management Plan
SCADA	Supervisory Control and Data Acquisition
SCPTs	seismic cone penetration tests
Secretary	Secretary of the Commission
SH	State Highway
SHPO	State Historic Preservation Office
SIL	significant impact levels

SIS	safety instrument system
SNND	Sabine-Neches Navigation District
SNWW	Sabine-Neches Waterway
SO_2	sulfur dioxide
SSA	sole source aquifer
SSE	safe shutdown earthquake
SSURGO	Soil Survey Geographic database
SWDA	Safe Water Drinking Act
SWEL	Still Water Elevation
SWPPP	Stormwater Pollution Prevention Plan
Systems Rivers	Louisiana Natural and Scenic Rivers System
TCEQ	Texas Commission on Environmental Quality
TCMP	Texas Coastal Management Program
TDOT	Texas Department of Transportation
TETCO	Texas Eastern Transmission Company
Texas FWS	Texas Coastal Ecological Services Field Office of the U.S. Fish and Wildlife Service
Texas RRC	Railroad Commission of Texas
TGLO	Texas General Land Office
TGP	Tennessee Gas Pipeline Company
TGT	Texas Gas Transmission, LLC
TNW	Traditional Navigable Water
TPWD	Texas Parks and Wildlife Department
tpy	tons per year
TSS	total suspended solids
TWDB	Texas Water Development Board
TWIC	Transportation Worker Identification Credential
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
VOC	volatile organic compounds
WHPA	wellhead protection area
WMA	Wildlife Management Area
WOUS	Waters of the United States
WSA	Waterway Suitability Assessment
yd^3	cubic yards

EXECUTIVE SUMMARY

The staff of the Federal Energy Regulatory Commission (FERC or Commission) prepared this final Environmental Impact Statement (EIS) to assess the environmental impacts associated with construction and operation of facilities proposed by Port Arthur LNG, LLC and PALNG Common Facilities Company, LLC (collectively referred to as PALNG) and Port Arthur Pipeline, LLC (PAPL). The EIS was prepared in accordance with the requirements of the National Environmental Policy Act of 1969 (NEPA) and the Commission's implementing regulations under Title 18 of the Code of Federal Regulations, Part 380 (18 CFR 380).

On November 29, 2016, PALNG filed an application with the FERC for the Port Arthur Liquefaction Project in Docket No. CP17-20-000 pursuant to section 3(a) of the Natural Gas Act (NGA) and Parts 153 and 380 of the Commission's regulations. On November 29, 2016, PAPL filed an application with the FERC for the Texas Connector Project in Docket No. CP17-21-000 for a Certificate of Public Convenience and Necessity (Certificate) pursuant to section 7(c) of the NGA and Parts 157 and 284 of the Commission's regulations.[1] On October 16, 2017, PAPL also filed an application with the FERC for the Louisiana Connector Project in Docket No. CP18-7-000 for a Certificate pursuant to section 7(c) of the NGA and Part 157 of the Commission's regulations. The combined PALNG and PAPL actions and facilities are referred to as the Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector Project (Projects). PALNG and PAPL propose to construct and operate onshore natural gas liquefaction and associated facilities in Texas to allow the export of liquefied natural gas (LNG), and to construct, own, operate, and maintain interstate natural gas pipelines, new compressor stations, and ancillary facilities in Texas and Louisiana.

The purpose of the EIS is to inform the FERC decision makers, the public, and the permitting agencies about the potential adverse and beneficial environmental impacts of the proposed Projects and their alternatives, and recommend mitigation measures that would reduce adverse impacts to the extent practicable. We[2] prepared our analysis based on information provided by PALNG and PAPL and further developed from data requests; field investigations; scoping; literature research; and contacts with or comments from federal, state, and local agencies, Native American tribes, and individual members of the public.

The FERC is the federal agency responsible for authorizing interstate natural gas transmission facilities under the NGA and is the lead federal agency for the preparation of this EIS in compliance with the requirements of NEPA. The U.S. Army Corps of Engineers (USACE); U.S. Coast Guard (USCG); Department of Energy (DOE); U.S. Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA); and U.S. Environmental Protection Agency (EPA)[3] are cooperating agencies for development of this EIS consistent with 40 CFR 1501.6(b). A cooperating agency has jurisdiction by law or has special expertise with respect to environmental resource issues associated with the Projects.

1 On November 7, 2017, PAPL filed an amendment to its application for the Texas Connector Project under Docket No. CP17-21-001 in which it identified changes to its proposed rate schedules and other non-environmental items.

2 "We," "us," and "our" refer to the environmental and engineering staff of the FERC's Office of Energy Projects.

3 Cooperating agencies for the Liquefaction Project and Texas Connector Project include the USACE, USCG, DOE, EPA, and DOT, PHMSA. Cooperating agencies for the Louisiana Connector Project include the USACE and EPA.

PROPOSED ACTION

The Liquefaction Project's purpose as stated by PALNG is to receive and liquefy domestic natural gas into liquefied natural gas (LNG) for export to foreign markets. The Texas Connector and Louisiana Connector Projects' purposes as stated by PAPL are to provide 2.0 billion standard cubic feet per day of feed gas to the Liquefaction Project.

Liquefaction Project

PALNG would construct the Liquefaction Project on 898 acres of a 2,900-acre property that PALNG has already purchased on the western shore of the Port Arthur Canal, about 5 miles south of Port Arthur, Texas and 6 miles north of Sabine, Texas. In the past, the site was used as a dredge material placement area for materials dredged during maintenance of the Port Arthur Canal. All ship traffic would access the Liquefaction Project via the Port Arthur Canal, while all construction and personnel vehicles would access the site from State Highway (SH) 87. Further, the Liquefaction Project would be located on a site previously reviewed and approved by the Commission in 2006 for a proposed LNG import terminal (FERC Docket No. CP05-83-000). The liquefaction site would include the following facilities:

- two liquefaction trains,[4] each with a capacity of 6.73 million tons per annum of LNG for export;
- three LNG storage tanks, each with a capacity of 160,000 cubic meters;
- a refrigerant storage area and truck unloading facilities;
- a condensate storage area and truck loading facilities;
- a new marine slip with two LNG vessel berths, an LNG vessel and support vessel maneuvering area, and an LNG transfer system;
- a material offloading facility (MOF);
- a Pioneer Dock;[5] and
- other ancillary utilities, buildings, and service facilities.

Construction of the Liquefaction Project would require the relocation of 3.3 miles of SH 87 and existing pipelines and utilities that parallel the highway, which are not under FERC's jurisdiction. PALNG would relocate the highway, pipelines, and utilities to its own property.

Texas Connector Project

PAPL proposes to construct and operate about 34.2 miles total of new natural gas pipeline in Jefferson and Orange Counties, Texas and Cameron Parish, Louisiana. The pipeline facilities would be comprised of the following:

- Northern Pipeline – 26.6 miles of 42-inch-diameter pipeline entering the liquefaction facilities site from the north and interconnecting with existing facilities near Beaumont, Texas owned by the following companies: Golden Triangle Storage, Inc./Centana

[4] Liquefaction and purification facility that condenses natural gas into a liquid at atmospheric pressure.

[5] The Pioneer Dock would consist of concreted docks and off-loading areas to support barge and aggregate bulk carrier vessel traffic to unload bulk materials such as gravel and rock.

Intrastate Pipeline, LLC (Centana); Houston Pipeline Company LP; Texas Eastern Transmission, LP (TETCO); and Florida Gas Transmission; and

- Southern Pipeline – 7.6 miles of 42-inch-diameter pipeline entering the liquefaction facilities site from the south to interconnections with an existing Natural Gas Pipeline Company of America facility in Jefferson County, Texas and an existing Kinder Morgan Louisiana Pipeline LLC facility in Cameron Parish, Louisiana.

The Texas Connector Project would also include 4.7 miles of 42-inch-diameter lateral pipelines that connect the Northern and Southern Pipelines to six meter stations proposed at existing pipelines that would supply feed gas to the Texas Connector Project and, ultimately, the Liquefaction Project; two compressor stations; six interconnecting meter stations, one receipt meter station, one mainline valve, and eight pig launchers/receivers; contractor yards; and access roads. Of these aboveground facilities, one compressor station and the receipt meter station would be constructed within the Liquefaction Project property boundaries.

Construction of the pipeline and associated facilities associated with the Texas Connector Project would affect a total of about 665 acres of land, and operation of the pipeline facilities would affect a total of about 186 acres.

Louisiana Connector Project

PAPL proposes to construct and operate about 130.8 miles total of new 42-inch-diameter natural gas pipeline in Jefferson and Orange Counties, Texas and Cameron, Calcasieu, Beauregard, Allen, Evangeline, and St. Landry Parishes, Louisiana. This pipeline would connect with the existing Centana; TETCO; Tennessee Gas Pipeline Company; Market Hub Partners – Egan; Pine Prairie Energy Center; Texas Gas Transmission, LLC; ANR Pipeline Company, and Columbia Gulf Transmission, LLC pipeline systems.

The Louisiana Connector Project would also include 0.5 mile of 42-inch-diameter lateral and tie-in pipelines to connect the Louisiana Connector Project to eight existing pipelines to supply feed gas to the Louisiana Connector Project and, ultimately, the Liquefaction Project; one compressor station; nine meter stations; nine mainline valves; four pig launchers/receivers; contractor yards; and access roads. Of these aboveground facilities, one meter station would be constructed within the Liquefaction Project property boundaries.

Construction of the pipeline and associated facilities associated with the Louisiana Connector Project would affect a total of about 2,807 acres of land, and operation of the pipeline facilities would affect a total of about 771 acres.

PUBLIC INVOLVEMENT

Liquefaction Project and Texas Connector Project

On March 20, 2015, PALNG and PAPL filed requests with FERC to use our pre-filing review process for the Liquefaction Project and Texas Connector Project (formerly referred to as the Port Arthur Pipeline Project). The requests to use our pre-filing review process were approved on March 31, 2015. Pre-filing Docket Nos. PF15-18-000 and PF15-19-000 were established for the Liquefaction Project and Texas Connector Project, respectively, to place information filed by PALNG and PAPL and related documents issued by the FERC, as well as comments from the public, agencies, tribes, organizations, and other stakeholders into the public record. PALNG and PAPL held Public Open Houses in Port Arthur, Texas on May 28, 2015. FERC staff participated in those meetings to describe the FERC process and

provide those attending with information on how to file comments with FERC. In addition, on May 28, 2015, FERC staff visited the proposed Liquefaction Project site.

On June 24, 2015, the FERC issued a *Notice of Intent to Prepare an Environmental Impact Statement for the Planned Port Arthur Liquefaction Project and Port Arthur Pipeline Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Meeting* (NOI). This notice was sent to 441 interested parties including federal, state, and local officials; agency representatives; conservation organizations; Native American tribes; local libraries and newspapers in the projects area; and property owners in the vicinity of the projects. Publication of the NOI established a 30-day public comment period for the submission of comments, concerns, and issues related to the environmental aspects of the proposed projects. On July 13, 2015, we conducted two public scoping meetings in Port Arthur, Texas, to provide an opportunity for the public to learn more about the projects and provide comments on environmental issues to be addressed in the EIS. One person provided comments during the sessions expressing support for the projects. On July 14, 2015, FERC staff visited the proposed pipeline routes and compressor station sites.

On May 27, 2015, we attended an interagency meeting hosted by PALNG and PAPL to discuss the projects and FERC process with representatives from the Texas Department of Transportation, Texas General Land Office, and Texas Parks and Wildlife Department (TPWD). On July 15, 2015, we held a joint interagency meeting for the projects and met with representatives of the USACE, USCG, and National Marine Fisheries Service (NMFS), and PALNG and PAPL representatives. On September 29, 2106, we conducted another agency meeting and met with representatives of the USACE, USCG, NMFS, U.S. Fish and Wildlife Service, EPA, DOT PHMSA, TPWD, J.D. Murphree Wildlife Management Area (WMA), Jefferson County, and the City of Port Arthur, as well as representatives of PALNG and PAPL.

Louisiana Connector Project

On February 27, 2017, PAPL filed a request with FERC to use our pre-filing review process for the Louisiana Connector Project, which would also provide feed gas to the liquefaction facilities. The request to use our pre-filing review process was approved on March 13, 2017. Pre-filing Docket No. PF17-5-000 was established for the Louisiana Connector Project to place information filed by PAPL and related documents issued by FERC into the public record, as well as comments from the public, agencies, tribes, organizations, and other stakeholders into the public record. PAPL held Public Open Houses in Kinder and Sulphur, Texas on May 2 and 3, 2017. The FERC staff participated in those meetings to describe the FERC process and provide those attending with information on how to file comments with FERC.

On May 25, 2017, the FERC issued a NOI for the Louisiana Connector Project. This notice was sent to 1,299 interested parties including federal, state, and local officials; agency representatives; conservation organizations; Native American tribes; local libraries and newspapers in the project area; and property owners in the vicinity of project facilities.

On June 12, 13, and 14, 2017, we conducted three public scoping sessions in Sulphur, Kinder, and Eunice, Louisiana, respectively, to provide an opportunity for the public to learn more about the project and provide comments on environmental issues to be addressed in the EIS. Four persons provided comments during the sessions, one of which expressed support for the project, one of which noted they are not affected, and two of which expressed environmental concerns. On June 12, 2017, FERC staff visited the proposed pipeline route. In addition, on June 13, 2017, we attended a meeting hosted by the Coushatta Tribe of Louisiana to discuss the project and the FERC process. At that meeting, the Coushatta Tribal Historic Preservation Office expressed the tribe's concerns regarding potential impacts on its cultural resources throughout the Louisiana Connector Project corridor. Representatives from PAPL also attended this meeting.

On October 16, 2018, a government to government meeting between FERC staff and the Coushatta Tribe of Louisiana, and a meeting between FERC staff, the Coushatta Tribe of Louisiana, and PAPL, was held to discuss the tribe's historical, archaeological, cultural, and religious ties to the Louisiana Connector Project corridor, and potential cultural resource impacts and mitigation issues, including proposed tribal monitoring and updates to PAPL's *Unanticipated Discoveries Plan*.

During the scoping comment period for PALNG's and PAPL's Projects, we received comments on a variety of environmental issues. Substantive environmental issues identified through this public review process are addressed in this EIS. The transcripts of the public scoping and draft EIS comment sessions and all written comments are part of the FERC's public record for the Projects, and are available for viewing under the Projects pre-filing docket numbers and the application docket numbers.

We issued a *Notice of Availability of the Draft Environmental Impact Statement for the Proposed Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector Project* on September 28, 2018. The draft EIS was mailed to 1,540 federal, state, and local government agencies; elected officials; Native American tribes; affected landowners; local libraries and newspapers; intervenors in the FERC's proceeding; and other interested parties. The notice described procedures for filing comments on the draft EIS and announced the time and locations for public comment sessions on the draft EIS.

We held three public comment sessions during the draft EIS comment period. The comment sessions were held in October 2018 in Port Arthur, Texas and Kinder and Sulphur, Louisiana. The comment sessions provided interested parties with an opportunity to present verbal comments on our analysis of the environmental impacts of the Projects as described in the draft EIS. A total of 17 people commented at the sessions. In addition, 19 parties submitted a total of 22 letters in response to the draft EIS. All environmental comments on the draft EIS have been addressed in this final EIS. Copies of the comment letters, transcripts, and our responses are provided in appendix T of this final EIS.

PROJECT IMPACTS

We evaluated the potential impacts of construction and operation of the Projects on geology; soils; water use and quality; wetlands; vegetation; wildlife, aquatic resources, and essential fish habitat; threatened, endangered, and special-status species; land use, recreation, and visual resources; socioeconomics; cultural resources; air quality and noise; reliability and safety; and cumulative impacts. Where necessary, we recommend additional mitigation to minimize or avoid these impacts. Section 5 of the EIS contains a compilation of our recommendations.

Overall, construction of Projects would disturb about 10,612 acres of land and open water, and operation of the Projects would require about 7,953 acres. For the land not used permanently to operate the Projects, PALNG and PAPL would allow the remaining land disturbed during construction to return to pre-construction conditions and uses.

Construction of the Liquefaction Project would result in impacts on about 948 acres of open land, road/transportation land, wetlands, and open water; of which about 898 acres would be permanently impacted. Associated with the Liquefaction Project would be the dredging of material in the Port Arthur Canal. This material would be placed at four locations: existing Dredge Disposal Areas 8, 9, and 9A, and at the J.D. Murphree WMA. The proposed dredging and disposal would affect an additional 6,071 acres of land, and includes the beneficial reuse of dredge material to create about 1,269 acres of coastal marsh wetland. Construction of the Texas Connector Project would affect about 665 acres of agricultural land, open land, forest land, residential land, industrial/commercial land, road/transportation land, wetlands, and open water, of which about 186 acres would be permanently impacted. Construction of the Louisiana Connector Project would affect about 2,807 acres of agricultural land, open land, forest land, silviculture land, rangeland, residential land, industrial/commercial land, and open water, of which about 771 acres

would be permanently impacted. About 14.7 miles, or 43 percent, of the Texas Connector Project's pipeline rights-of-way would be collocated with existing rights-of-way; about 95.4 miles, or 73 percent, of the Louisiana Connector Project's pipeline right-of-way would be collocated with existing rights-of-way.

Based on our analysis, scoping, and agency consultations, the major issues associated with the Projects are impacts on wetlands, visual resources, air quality, noise, and cumulative impacts.

Wetlands

Construction of the Projects would impact 2,677.7 acres of wetlands, of which 1,080.0 acres would be permanently affected by either fill, loss of function, or conversion to emergent wetland.

Construction of the Liquefaction Project would affect a total of 1,661.9 acres of wetlands, of which 724.0 acres would be permanently filled. Due to previous dredge disposal disturbance at the project site, however, these wetlands are considered low quality. PALNG would offset impacts on USACE jurisdictional wetlands through mitigation measures included in its project Compensatory Mitigation Plan. The mitigation measures include the beneficial reuse of over 7.8 million cubic yards of dredge material excavated from the ship berthing area and Pioneer Dock. The beneficial reuse of this material would create about 1,268.8 acres of coastal marsh wetland. PALNG's wetland mitigation would include adhering to the measures in the Commission's *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures) to control erosion, to minimize construction disturbance, and to ensure wetland restoration; acquisition of credits at a USACE-approved wetland mitigation banks; and compensatory mitigation, the amount of which will be determined based preliminary jurisdictional determinations by the USACE. PALNG has filed a draft *Compensatory Mitigation Plan* with the USACE, Galveston District, as part of its Clean Water Act, section 404, and Rivers and Harbors Act Section 10, permit application filing.

Relocation of State Highway (SH) 87 and associated utilities would temporarily impact 140.8 acres of wetland and permanently impact 45.1 acres of wetland. All areas outside the new roadway and maintained right-of-way would be allowed to revert to preconstruction conditions while forested wetlands would revegetate to palustrine and estuarine emergent or scrub-shrub wetlands.

Construction and operation of the Texas Connector Project and Louisiana Connector Project would affect about 238.1 acres and 636.9 acres of wetlands, respectively, of which 66.8 acres and 244.1 acres, respectively, would be permanently disturbed during operation of the projects. Emergent (palustrine and estuarine), scrub-shrub (palustrine), and unconsolidated bottom wetlands would be temporarily affected during construction and operation of the pipeline projects because the vegetation would return to a community that would function similarly to the pre-construction community. The 19.9 acres and 146.3 acres of forested wetlands that would be cleared for construction along the Texas Connector Project's and Louisiana Connector Project's pipeline and lateral construction rights-of-way, respectively, would result in long-term impacts to the value and functions of the wetlands because of the long regeneration period of these vegetation types. PAPL would implement the mitigation measures outlined in its project-specific *Environmental Plan*, which includes the FERC's Procedures, to control erosion and restore the grade and hydrology after construction in wetlands. In addition to the measures outlined in our Procedures, PAPL would be required to comply with any mitigation measures identified in the USACE permit conditions for the pipeline projects. With the implementation of PALNG's and PAPL's Project-specific plans, PALNG's proposed beneficial use of dredge material to restore emergent wetlands, the proposed mitigation measures discussed in this EIS, and our recommendations, significant impacts on wetlands due to construction and operation of the Projects are not anticipated.

Visual Resources

The liquefaction site would include many aboveground structures that could result in a visual resource impact. These include three LNG storage tanks that would be about 256 feet high each, liquefaction trains, and new buildings and infrastructure. In addition, most of these structures would require lighting. PALNG would site the liquefaction facilities along the Port Arthur Canal, which would create a strong vertical visual contrast across a relatively flat existing landscape. The ship berths, offloading facilities, and utility buildings would also alter the existing viewshed. The storage tanks and liquefaction facilities would not be screened and would result in permanent visual impacts on views from the eastern edge of the nearby J.D. Murphree WMA. Impacts on views for those traveling on SH 87 and SH 82, visiting Pleasure Island or the Port Arthur Canal, boaters in the waterway, and viewers from a variety of recreational locations would be relatively minor due to existing industrial facilities surrounding and northeast of the project area. In addition, viewers may be able to see the ground flare at night when in use; however, PALNG would restrict any permanent lighting needed for the Liquefaction Project terminal facilities to the property boundaries and ensure that the permanent lighting is pointed downward towards these sites. We conclude that, because of the existing commercial, industrial, and developed nature of the area, including the existing Golden Pass liquefaction terminal within 3 miles of the proposed project, impacts from facility siting and its lighting would be consistent with the area.

Air Quality and Noise

The Projects are generally located in air quality attainment areas; however, the delivery of equipment and facilities by marine vessels would pass through the Houston-Galveston-Brazoria area which is classified a marginal nonattainment area for the 2008 8-hour ozone standard. Based on our General Conformity applicability determination, the marine operation emissions would not exceed the general conformity determination thresholds for nitrogen oxides or volatile organic compounds (both precursors for ozone). As such, General Conformity would not apply to the Projects.

Construction emissions for the liquefaction facility would occur for an estimated 60 months of construction. The construction emissions would not be a permanent source of emissions, and, therefore, not have a long-term effect on air quality in the area. The primary impact on residents during construction would be local increases in fugitive dust and tailpipe emissions, which may result in intermittent, localized impacts near the construction areas during the construction period associated with the Liquefaction Project. During the years of concurrent commissioning, construction, and operation of the liquefaction facility, emissions levels may result in exceedances of the National Ambient Air Quality Standards in the immediate vicinity of the Liquefaction Project. These exceedances would not be persistent at any one time during these years due to the dynamic and fluctuating nature of construction activities within a day, week, or month.

Long-term impacts on air quality would result from operation of the Liquefaction Project facilities and the pipeline compressor stations. PALNG and PAPL would minimize potential impacts on air quality caused by operation of the liquefaction facilities and compressor stations by adhering to applicable federal and state regulations and installing best available control technology to minimize emissions. Therefore, with the mitigation measures that PALNG and PAPL have proposed, we conclude there would be no regionally significant impacts on air quality.

During construction of the Texas Connector and Louisiana Connector Projects, use of the horizontal directional drilling (HDD) method would result in minor impacts on noise-sensitive areas (NSA) in the vicinity. We recommend that PAPL develop an HDD noise mitigation plan to reduce the projected noise level attributable to the proposed drilling operations at nearby NSAs.

Operation of the liquefaction facilities and associated South Compressor Station would generate sound levels throughout the life of the project, but the increase in noise levels would be below the "barely detectable" noise level increase of 3 A-weighted decibels (dBA), would be below the FERC limit standard of a day-night sound level (L_{dn}) of 55 dBA, resulting in only minor impacts on the nearest NSA. We recommend that PALNG file a full-load noise survey no later than 60 days after each liquefaction train is put in service for the first and second liquefaction trains. If noise levels attributable to operation of the Liquefaction Project exceed the FERC limit of 55 dBA L_{dn}, PALNG would reduce the facilities' noise contribution to result in a noise level that is no higher than the FERC standard. We also recommend that PALNG file a full-load noise survey no later than 60 days after placing all the Liquefaction Project facilities and South Compressor Station in service. Therefore, we conclude that operational noise from the Liquefaction Project would result in minor impacts on the nearest NSAs.

Sound levels would increase during operation of the Texas Connector Project's North Compressor Station, the Louisiana Connector Project's compressor station, and the meter stations associated with the pipeline projects, which would occur for the life of the Projects. To reduce noise impacts, PAPL would implement mitigation measures such as the use of acoustically treated compressor enclosures, silencers on the exhaust outlet and air intake, and acoustically treated wall and roof fan openings. Based on our noise analysis, the predicted noise levels attributable to operation of the North Compressor Station associated the with Texas Connector Project, the Louisiana Connector Project's compressor station, and the meter stations would be less than 55 dBA L_{dn} at all nearby NSAs. To ensure that noise levels would be below 55 dBA L_{dn}, we recommend that PAPL file noise surveys during full-load operations and, if the noise levels exceed the FERC standard, that PAPL install additional noise controls to meet the FERC standard within 1 year of the in-service date. As a result, we conclude that any increase in noise levels during operation of the pipeline projects would be minor.

Safety and Reliability

We assessed the potential impact to the human environment in terms of safety and whether the proposed facilities would operate safely, reliably, and securely.

As a cooperating agency, the DOT advises the Commission on whether PALNG's proposed design would meet the DOT's 49 CFR 193 Subpart B siting requirements. On December 18, 2018, the DOT provided a Letter of Determination on the project's compliance with 49 CFR Part 193 Subpart B for the Commission's consideration in its decision on the project applications. If the Projects are authorized and constructed, the facilities will be subject to the DOT's inspection and enforcement program and final determination of whether the Liquefaction Project s is in compliance with the requirements of 49 CFR Part 193.

As a cooperating agency, the USCG also assisted the FERC staff by reviewing the Liquefaction Project and the associated LNG carrier traffic. The USCG reviewed a WSA submitted by PALNG that focused on the navigation safety and maritime security aspects of LNG carrier transits along the affected waterway. On September 11, 2015, the USCG issued a Letter of Recommendation to FERC staff indicating the Sabine Neches Ship Channel would be considered suitable for accommodating the type and frequency of LNG marine traffic associated with this project, based on the WSA and in accordance with the guidance in the USCG's NVIC 01-11. If the Projects are authorized and constructed, the Liquefaction Project facilities will be subject to the USCG's inspection and enforcement program to ensure compliance with the requirements of 33 CFR Parts 105 and 127.

FERC staff conducted a preliminary engineering and technical review of the Liquefaction Project, including potential external impacts based on the site location. Based on this review, we recommend a number of mitigation measures to be implemented prior to initial site preparation, prior to construction of final design, prior to commissioning, prior to introduction of hazardous fluids, prior to commencement of

service, and throughout life of the facility, to enhance the reliability and safety of the facility. Based on our external impact analysis and preliminary evaluation of the engineering design, and with the incorporation of our recommended mitigation measures and oversight, we conclude that the Liquefaction Project's design would include acceptable layers of protection or safeguards that would reduce the risk of a potentially hazardous scenario from developing into an event that could impact the offsite public.

PAPL must design, construct, operate, and maintain its proposed pipelines and aboveground facilities in accordance with the DOT Minimum Federal Safety Standards in 49 CFR 192. These regulations, which are intended to protect the public and to prevent natural gas facility accidents and failures, include specifications for material selection and qualification, minimum design requirements, and protection of pipelines from corrosion. PAPL's compliance with the DOT's safety standards will ensure that PAPL's construction and operation of the facilities would not have a significant impact on public safety.

Cumulative Impacts

We considered the cumulative contributions of the proposed Projects in specific impact areas for resources affected by the Projects. As a part of that assessment, we identified existing projects, projects under construction, and reasonably foreseeable projects. These included existing LNG terminals and future LNG liquefaction projects, currently operating and future oil and gas projects, land transportation projects, commercial and residential developments, and dredging projects. This also included areas where the Louisiana Connect Project could be collocated with another proposed pipeline project (the Driftwood Pipeline Project). Our assessment considered the impacts of the proposed Projects combined with the impacts of the other projects on resources within all or part of the same area and time. We conclude that the Projects' contribution to impacts on resources affected by the Projects would not result in significant cumulative impacts.

More detailed discussions of the Projects impacts, PALNG's and PAPL's proposed mitigation, and our recommendations to avoid or further reduce impacts are presented in sections 4.0 and 5.0 of this EIS.

ALTERNATIVES CONSIDERED

We assessed the No-Action Alternative, system alternatives, and other siting and design alternatives that could achieve the Projects' objectives. Alternatives were evaluated and compared to the Projects to determine whether the alternatives were technically and economically feasible and practical; and offer a significant environmental advantage over the proposed Projects. While the No-Action Alternative would avoid the environmental impacts identified in this EIS, adoption of this alternative would preclude meeting the Projects' objectives. If the Project is not approved and built, the need could potentially be met by other LNG export projects developed elsewhere in the Gulf Coast region or in other areas of the United States. Implementation of other LNG export projects likely would result in impacts similar to or greater than those of the proposed Projects.

We evaluated 20 new LNG or LNG terminal expansion system alternatives. To meet all or part of PALNG's contractual agreements, each of these projects would require substantial construction beyond what is currently planned and would not offer significant environmental advantages over the proposed Liquefaction Project. In addition, the permitting and authorization processes for constructing additional facilities and the time required for construction would substantially delay meeting the proposed timeline for the Liquefaction Project. As a result, we eliminated all potential system alternatives from further consideration.

Three alternative sites for the Liquefaction Project were evaluated along the Sabine Neches Waterway. The alternative sites were screened against a set of seven criteria: access to a deepwater channel, access to safety and security infrastructure, access to major roads and barge traffic, sufficient size, available

utilities, practicable site, and impacts on aquatic habitat characteristics relative to the proposed site. Alternative Site 2 lacked available land, and all three of the alternative sites considered had higher quality aquatic habitat present. Therefore, impacts on this resource would be greater at the alternatives than at the proposed site. As a result of comments on the draft EIS, we also analyzed a potential alternative liquefaction site along the north side of the Industrial Canal, which can be accessed via the Calcasieu Ship Channel, in Calcasieu Parish, Louisiana. The alternative site would impact fewer wetlands compared to the proposed liquefaction site; however, the impacts on forested wetland and forested vegetation types (deciduous, evergreen, and woody wetlands) would be greater than the proposed site. In addition, PALNG reviewed the proposed location's availability of sale and determined the property is owned by the Lake Charles Harbor and Terminal District and the properties on the north bank are currently leased. For these reasons, we concluded that these sites would be impractical or not available, and create greater impacts on aquatic habitat, and they were eliminated from further consideration.

Additionally, facility configurations at the proposed site location were evaluated. We determined that the current facility footprint of the Liquefaction Project has been designed to minimize impacts on aquatic habitat while meeting required regulatory siting and safety requirements. We did not identify alternative configurations that would meet regulations, codes, and guidelines while avoiding or reducing impacts when compared to the proposed site configuration.

Based on the Texas Connector Project's and Louisiana Connector Project's collocation with existing rights-of-way where possible, many types of environmental impacts have been lessened compared to establishing new rights-of-way. We analyzed three pipeline route alternatives (Sabine Lake Alternative, Driftwood Route Alternative, and Wimberley Route Alternative) and determined that these route alternatives do not convey a significant advantage over the proposed pipeline route and are not recommended. In response to comments on the draft EIS, we also considered pipeline routes that avoid deviations to the FERC's Procedures and pipeline routes that would avoid all Coushatta Tribe of Louisiana ancestral lands. Due to the presence of extensive waterbodies and wetlands along the pipeline routes, as well as the construction workspace needs considering the size of the pipeline and the specific environmental conditions, there were no other reasonable or practical locations for the pipeline routes and the associated construction workspace that could be constructed without the requested deviations to the FERC's Procedures. Also, because of the wide historical range of the Coushatta Tribe of Louisiana, and the location of gas sources to supply the proposed pipelines and liquefaction facility, there are no pipeline routes that could avoid ancestral lands that would meet the purpose and need of the Projects.

CONCLUSIONS

We conclude that, if constructed and operated in accordance with applicable laws and regulations, PALNG's and PAPL's proposed mitigation, and our recommendations presented in section 5.2 of the EIS, the Projects would result in some adverse environmental impact; however, those impacts would not be significant. The following factors were also considered in our conclusions:

- The Liquefaction Project would be located on a site previously reviewed and approved by the Commission in 2006 (FERC Docket No. CP05-83-000).
- PALNG's and PAPL's compensatory mitigation plans would be developed in accordance with the USACE's regulatory requirements to address impacts on wetlands and Waters of the United States.
- Adequate safety features would be incorporated into the design and operation of the Liquefaction Project facilities.

- The pipelines and associated aboveground facilities would be constructed, operated, and maintained in compliance with DOT safety standards published in 49 CFR 192.

- The USCG issued a Letter of Recommendation indicating the Sabine Neches River Ship Channel would be considered suitable for the LNG marine traffic associated with the Liquefaction Project.

- The proposed pipeline routes would be within or adjacent to existing rights-of-way for 43 percent (Texas Connector Project) and 73 percent (Louisiana Connector Project) of their respective lengths.

- PALNG and PAPL would implement their project-specific *Environmental Plan*, which includes the Commission's *Upland Erosion Control, Revegetation, and Maintenance Plan* and Commission's Procedures to minimize construction impacts on soils, wetlands, and waterbodies.

- Use of the HDD method for pipeline installation at 24 locations along the Texas Connector Project and 26 locations along the Louisiana Connector Project would avoid disturbances to wetlands, waterbodies, essential fish habitat, protected species, and vegetation and land use resources at those locations.

- FERC staff will complete the process of complying with section 7 of the Endangered Species Act prior to construction of the Projects.

- FERC staff will complete the process of complying with section 106 of the National Historic Preservation Act prior to construction of the Projects.

- PAPL further addressed potential impacts on cultural resources by submitting a revised *Unanticipated Discoveries Plan*, including its commitment to sponsor tribal cultural resource monitors for the land portion of the Louisiana Connector Project.

- FERC's environmental and engineering inspection and mitigation monitoring program for the Projects would ensure compliance with all mitigation measures and conditions of any FERC authorization.

In addition, we developed site-specific mitigation measures that PALNG and PAPL would implement to further reduce the environmental impacts that would otherwise result from construction and operation of the Projects. We recommend that these mitigation measures, presented in section 5.2 of the EIS, be attached as conditions to any authorization issued by the Commission for the Projects.

1.0 INTRODUCTION

On November 29, 2016, Port Arthur LNG, LLC and PALNG Common Facilities Company, LLC (collectively referred to as PALNG) filed an application with the Federal Energy Regulatory Commission (Commission or FERC) pursuant to section 3(a) of the Natural Gas Act (NGA) and Parts 153 and 380 of the Commission's regulations. In Docket No. Certificate Proceeding (CP)17-20-000, PALNG requests authorization to site, construct, and operate new liquefaction facilities adjacent to the Port Arthur Canal in Jefferson County, Texas. The Port Arthur Liquefaction Project (Liquefaction Project) would allow PALNG to liquefy domestic natural gas supplies for the export of about 2.0 billion standard cubic feet per day (bscfd) of liquefied natural gas (LNG).

Also on November 29, 2016, Port Arthur Pipeline, LLC (PAPL) filed an application with FERC for a Certificate of Public Convenience and Necessity (Certificate) pursuant to section 7(c) of the NGA and Parts 157 and 284 of the Commission's regulations. In Docket No. CP17-21-000, PAPL requests authorization to construct, install, and operate two new natural gas pipelines, lateral and tie-in pipelines at several locations, two compressor stations, six meter stations,[6] and appurtenant facilities within Jefferson and Orange Counties, Texas and Cameron Parish, Louisiana. PAPL also requests a Blanket Certificate for limited future activities and services. This project, referred to as the Texas Connector Project, would allow for the transportation of natural gas from various interstate pipeline interconnections to PALNG's proposed liquefaction site for export. The proposed pipelines would contribute to the about 2.0 bscfd of feed natural gas needed for the liquefaction facilities. On November 7, 2017, PAPL filed an amendment to its application for the Texas Connector Project under Docket No. CP17-21-001 in which it identified changes to its proposed rate schedules and other non-environmental items.

On October 16, 2017, PAPL filed an application for a Certificate pursuant to section 7(c) of the NGA and Part 157 of the Commission's regulations. In Docket No. CP18-7-000, PAPL requests authorization to construct, install, and operate a new natural gas pipeline, lateral and tie-in pipelines at nine locations, one compressor station, nine meter stations, and appurtenant facilities within Jefferson and Orange Counties, Texas and Cameron, Calcasieu, Beauregard, Allen, Evangeline, and St. Landry Parishes, Louisiana. This project, referred to as the Louisiana Connector Project, would allow for the transport of natural gas from various interstate pipeline interconnections to PALNG's proposed liquefaction site for export. The proposed pipeline would contribute to the about 2.0 bscfd of feed natural gas needed at the liquefaction facilities.

Collectively, PALNG's and PAPL's actions and facilities are referred to in this final environmental impact statement (EIS) as the Port Arthur Liquefaction and Pipeline Projects (Projects). As part of the Commission's consideration of these applications, we[7] prepared this final EIS to assess the potential environmental impacts resulting from construction and operation of the proposed Projects in accordance with the requirements of the National Environmental Policy Act of 1969 (NEPA).

6 A meter station is an aboveground facility on a pipeline that has equipment for measuring the volume of gas flowing in the pipeline.

7 "We," "us," and "our" refer to the environmental and engineering staff of the FERC's Office of Energy Projects.

The vertical line in the margin identifies text that is new or modified in the final EIS and differs materially from corresponding text in the draft EIS. Changes were made to address comments from the cooperating agencies and other stakeholders on the draft EIS; incorporate updated information provided by PALNG and PAPL regarding the Projects after publication of the draft EIS; and incorporate information filed by PALNG and PAPL in response to our recommendations in the draft EIS.

PALNG anticipates it would commence construction of the Liquefaction Project following the receipt of FERC authorization and all other applicable permits, authorizations, and approvals. The Liquefaction Project would consist of the following key facilities as described in more detail in section 2.0:

- two liquefaction trains, each with a maximum nameplate capacity of 6.73 million tons per annum (MTPA) (or 13.5 MTPA aggregate) of LNG for export;
- three 160,000-cubic meter (m^3) full containment LNG storage tanks;
- boil-off gas vapor handling system;
- flare systems;
- refrigerant and condensate storage areas;
- truck loading for condensate and truck unloading for refrigerant makeup;
- a marine facility, including two LNG berths designed to accept LNG vessels up to 266,000 m^3, each with three liquid loading arms and one vapor return arm;
- a material off-loading facility (MOF) consisting of a modified/improved existing concrete dock to transport large pieces of equipment and construction materials to the site by barge;
- a Pioneer Dock consisting of a modified/improved existing concrete dock to transport bulk aggregate materials (e.g., rock, gravel) to the site by barge; and
- common utilities and auxiliary systems needed to support the process (e.g., hot oil, diesel, utility air, instrument air and nitrogen).

Subject to the receipt of a FERC Certificate and all other applicable permits, authorizations, and approvals, PAPL anticipates it would begin construction of the Texas Connector Project in the fourth quarter of 2019 and initiate service in the third quarter of 2022. The Texas Connector Project would consist of the following key facilities as described in more detail in section 2.0:

- construction and operation of two 42-inch-diameter pipelines, one about 26.6 miles and the other about 7.6 miles long;
- construction and operation of 42-inch-diameter lateral and tie-in pipelines of varying lengths; and meter stations connecting with the existing Kinder Morgan Louisiana Pipeline LLC (KMPL), Natural Gas Pipeline Company of America (NGPL), Houston Pipeline Company LP (HPL), Texas Eastern Transmission, LP (TETCO), Florida Gas Transmission Company, LLC (FGT), and Golden Triangle Storage, Inc./Centana Intrastate Pipeline, LLC (GTS/CIPCO) pipeline systems;

- construction and operation of two compressor stations with a total of about 65,000 horsepower (hp);

- construction and operation of one delivery point meter station at the proposed liquefaction site; and

- construction of miscellaneous auxiliary and appurtenant facilities.

Subject to the receipt of a FERC Certificate and all other applicable permits, authorizations, and approvals, PAPL anticipates it would begin construction of the Louisiana Connector Project in the second quarter of 2021 and initiate service in the second quarter of 2023. The Louisiana Connector Project would consist of the following key facilities as described in more detail in section 2.0:

- construction and operation of a 42-inch-diameter pipeline about 130.8 miles long;

- construction and operation of lateral and tie-in pipelines, all 42 inches in diameter, of varying lengths and meter stations connecting with the existing Centana Interstate Pipeline, LP (Centana), TETCO, Tennessee Gas Pipeline Company (TGP), Market Hub Partners – Egan (Egan), Pine Prairie Energy Center (Pine Prairie), Texas Gas Transmission, LLC (TGT), ANR Pipeline Company (ANR), and Columbia Gulf Transmission, LLC (CGT) pipeline systems;

- construction and operation of one compressor station with a total of about 89,900 hp;

- construction and operation of one delivery point meter station at the proposed liquefaction site; and

- construction of miscellaneous auxiliary and appurtenant facilities.

1.1 PROJECT PURPOSE AND NEED

The Liquefaction Project's purpose as stated by PALNG is to receive and liquefy domestic natural gas into LNG for export to foreign markets under the authorities granted it by the U.S. Department of Energy, Office of Fossil Energy (DOE). The Texas Connector and Louisiana Connector Projects' purposes as stated by PAPL are to provide a total of 2.0 bscfd of feed gas to the Liquefaction Project.

Under section 3 of the NGA, the Commission considers as part of its decision to authorize natural gas facilities all factors bearing on the public interest. Specifically, regarding whether to authorize natural gas facilities used for importation or exportation, the FERC shall authorize the proposal unless it finds that the proposed facilities would not be consistent with the public interest.

Under section 7(c) of the NGA, the Commission determines whether interstate natural gas transportation facilities are in the public convenience and necessity and, if so, grants a Certificate to construct and operate them. The Commission bases its decisions on technical competence, financing, rates, market demand, gas supply, environmental impact, long-term feasibility, and other issues concerning a proposed project.

1.1.1 Basic Project Purpose and Water Dependency Determination[8]

Basic Project Purpose and Water Dependency Determination: According to U.S. Army Corps of Engineers (USACE) regulations governing project purpose, the basic project purpose is to discharge fill material into wetlands for the construction of facilities to transport, liquefy, and export domestic natural gas as LNG to the global market. Construction of the marine basin, the Pioneer Dock, and the MOF are considered to be a water dependent activities. All other aspects of the proposed Projects are considered to be non-water dependent, these include the terminal facilities, pipelines, and other ancillary features.

Overall Project Purpose: For USACE permit consideration, the overall project purpose is to discharge fill material into wetlands to: 1) construct the pipelines, laterals, compressor stations, meter stations, and associated facilities necessary to transport natural gas to a liquefaction terminal; and 2) construct the liquefaction terminal and associated equipment and facilities necessary for the production and exportation of LNG.

1.2 PURPOSE AND SCOPE OF THIS EIS

The principal purposes in preparing an EIS are to:

- identify and assess potential impacts on the human environment that would result from implementation of the proposed action;
- identify and assess reasonable alternatives to the proposed action that would avoid or minimize adverse effects on the human environment;
- facilitate public involvement in identifying significant environmental impacts; and
- identify and recommend specific mitigation measures to avoid or minimize environmental impacts.

This EIS focuses on the facilities that are under FERC's jurisdiction (that is, the new proposed liquefaction and pipeline facilities). The topics addressed in this EIS include geology; soils; water use and quality; wetlands; vegetation; wildlife; fisheries and essential fish habitat (EFH); threatened, endangered, and special status species; land use, recreation, and visual resources; socioeconomics; cultural resources; air quality; noise; reliability and safety; cumulative impacts; and alternatives. This EIS describes the affected environment as it currently exists, discusses the potential environmental consequences of the proposed Projects, and compares the Projects' potential impact to that of identified alternatives. This EIS also presents our conclusions and recommended mitigation measures.

The Energy Policy Act of 2005 (EPAct 2005) provides that the FERC shall act as the lead agency for coordinating all applicable authorizations related to jurisdictional natural gas facilities and for purposes of complying with NEPA. Based on its authority under the NGA, the FERC is the lead agency for preparation of this EIS in compliance with the requirements of NEPA, the Council on Environmental Quality's (CEQ) regulations for implementing NEPA, and FERC regulations implementing NEPA (Title 18 of the Code of Federal Regulations Part 380 [18 CFR 380]). As the lead federal agency for the Projects, FERC is required to comply with section 7 of the Endangered Species Act of 1973, as amended (ESA); the Magnuson-Stevens Fishery Conservation and Management Act (MSA); section 106 of the National Historic Preservation Act (NHPA); and section 307 of the Coastal Zone Management Act (CZMA). Each of these

8 As further discussed in section 1.2.2, the USACE is a cooperating agency on the Projects. The USACE could adopt the EIS in compliance with Title 40 of the Code of Federal Regulations, Part 1506.3 and, as such, a project purpose and water dependency determination are required as part of the USACE permitting requirements.

statutes has been taken into account in the preparation of this EIS. The FERC will use this document to consider the environmental impacts that could result if it issues an authorization to PALNG under section 3(a) of the NGA and Certificates to PAPL under section 7(c) of the NGA.

1.2.1 Federal Energy Regulatory Commission

The FERC is the federal agency responsible for authorizing interstate pipeline facilities, LNG facilities on interstate pipeline systems, and LNG import and export terminals. The Commission would consider the findings in this EIS during its review of PALNG's and PAPL's applications. The identification of environmental impacts related to the construction and operation of the Projects, and the mitigation of those impacts, as disclosed in this EIS, would be components of the Commission's decision-making process. The Commission would issue its decision in an Order. If the Projects are approved, the Order would specify that the liquefaction terminal, pipelines, and related facilities can be constructed and operated under the authority of sections 3 and section 7 of the NGA. The Commission may accept the application in whole or in part, and can attach engineering and environmental conditions to the Order that would be enforceable actions to assure that the proper mitigation measures are implemented during construction and prior to the Projects going into service.

As the lead federal agency, we prepared this EIS to assess the environmental impacts that could result from constructing and operating the Projects. This document was prepared in compliance with the requirements of NEPA, the CEQ's regulations implementing procedural provisions of NEPA in 40 CFR 1500-1508, and the FERC's regulations implementing NEPA in 18 CFR 380. As applicable, this EIS is also intended to fulfill the cooperating federal agencies' NEPA obligations (see section 1.2.2).

The Commission will consider the findings contained herein as well as non-environmental issues in its review of PALNG's and PAPL's applications. Approvals will be granted only if the FERC finds that the evidence produced on technical competence, financing, rates, market demand, gas supply, environmental impact, long-term feasibility, and other issues demonstrates that the Projects are in the public interest and/or required by the public convenience and necessity, as applicable. Environmental impact analyses and mitigation development are important factors in the overall public interest determination.

The FERC may impose conditions on any Certificate or authorization granted (if it chooses to do so) for the Projects. These conditions could include requirements and mitigation measures identified in this EIS to minimize environmental impacts associated with the Projects (see section 5.2). We will recommend to the Commission that these requirements and mitigation measures (indicated with bold type in the text) be included as conditions to any Order approving Certificates or authorization issued for the Projects. Further, PALNG and PAPL would be required to implement the construction procedures and mitigation measures it has proposed in its filings with the FERC, including those in appendices of this EIS, unless specifically modified by other Certificate or authorization conditions.

Other regulatory agencies also may include terms and conditions or stipulations as part of their permits or approvals. While there would be jurisdictional differences between the FERC's and other agencies' conditions, PALNG's and PAPL's environmental inspection program for the Projects would address all environmental or construction-related conditions or other permit requirements placed on PALNG and PAPL by all regulatory agencies.

1.2.2 Cooperating Agencies

The regulations that implement NEPA and establish the CEQ's regulations call on federal, state, and local government agencies to cooperate in the preparation of environmental documents (40 CFR 1501.6). A "cooperating agency" is another agency participating in the NEPA process that has jurisdiction

by law over all or part of the project and/or one that has special expertise with respect to environmental issues. Cooperating agencies are intended to have a significant role in shaping plans and environmental analyses according to their particular jurisdiction and expertise. The review of the proposed Projects herein was undertaken with the participation and assistance of the USACE, U.S. Coast Guard (USCG), DOE, U.S. Environmental Protection Agency (EPA), and U.S. Department of Transportation (DOT), Pipeline and Hazardous Materials Safety Administration (PHMSA) as cooperating agencies under NEPA because they have specific permitting requirements and/or special expertise on environmental resources associated with the Projects.[9] The roles of the FERC, USACE, USCG, DOE, EPA, and DOT PHMSA in the Projects' review process are described below.

The EIS provides a basis for coordinated federal decision making in a single document, avoiding duplication among federal agencies in the NEPA environmental review process. In addition to the lead and cooperating agencies, other federal, state, and local agencies may use this EIS in approving or issuing permits for all or part of the proposed Projects. Federal, state, and local permits, approvals, and consultations for the Projects are discussed in section 1.5.

1.2.2.1 U.S. Army Corps of Engineers

The USACE has jurisdictional authority pursuant to section 404 of the Clean Water Act (CWA) (Title 33 of the United States Code, section 1344 [33 USC 1344]), which governs the discharge of dredged or fill material into Waters of the United States (WOUS), as well as section 10 of the Rivers and Harbors Act of 1899 (RHA; 33 USC 403), which regulates any work or structures that potentially affect the navigable capacity of a waterbody. Because the USACE would need to evaluate and approve several aspects of the Projects and must comply with the requirements of NEPA before issuing permits under the above statutes, it has elected to participate as a cooperating agency in the preparation of this EIS. The USACE could adopt the EIS in compliance with 40 CFR 1506.3 if, after an independent review of the document, it concludes that the EIS satisfies the USACE's comments and suggestions.

The proposed Projects are within the Galveston District of the USACE Southwestern Division and the New Orleans District of the USACE Mississippi Valley Division. Staff from the Galveston District participated as a cooperating agency in the NEPA review, and both USACE districts will evaluate USACE authorizations, as applicable.

The primary decisions to be addressed by the USACE include:

- issuance of section 404 Permits for dredging activities and wetland impacts associated with construction of the Projects;
- issuance of a section 10 Permit for construction activities within navigable WOUS; and
- issuance of a section 408 letter to ensure the Projects are not injurious to the public interest or impair the usefulness of a USACE project.

The USACE will consider information contained in this EIS to help reach decisions on these issues. Through the coordination of this document and its own permitting process, the USACE will obtain the views of the public and natural resource agencies prior to reaching its decisions on the Projects. The USACE must also carry out its public interest review process before it can issue a standard permit. This

9 Cooperating agencies for the Liquefaction Project and Texas Connector Project include the Galveston District of the USACE, Coast Guard, DOE, EPA, and DOT PHMSA. Cooperating agencies for the Louisiana Connector Project include the Galveston District of the USACE and EPA.

EIS does not serve as a public notice for any USACE permits or take the place of the USACE's permit review process.

As an element of its review, the USACE must consider whether a proposed project avoids, minimizes, and compensates for impacts on existing aquatic resources, including wetlands, to strive to achieve a goal of no overall net loss of function to wetlands and WOUS. The CWA section 404(b)(1) Guidelines provide substantive criteria that the USACE uses to determine whether a proposed site is suitable for discharge of dredged or fill material and whether a proposed discharge of dredged or fill material (activity) is eligible for authorization under section 404. Central to the guidelines is a tiered approach designed to minimize impacts on wetlands and other WOUS. Specifically, applicants are required to: 1) avoid impacts where possible; 2) minimize unavoidable impacts; and 3) compensate for any remaining impacts that can neither be avoided nor minimized such that overall project impacts on the aquatic environment are minimal on both an individual and cumulative basis. The USACE must also evaluate whether or not a project, or components of a project, are "water dependent."[10] In addition, the USACE must assess the proposed project alternatives, and determine the Least Environmentally Damaging Practicable Alternative (LEDPA).

The USACE would issue a Record of Decision to formally document its decisions on the proposed action, including the LEDPA, section 404(b)(1) analyses and required compensatory mitigation.

1.2.2.2 U.S. Coast Guard

The USCG has authority over the safety of an LNG terminal's marine transfer area and LNG marine traffic, as well as over security plans for the entire LNG terminal and LNG marine traffic. The USCG regulations over LNG facilities are codified in 33 CFR Parts 105 and 127. The USCG exercises regulatory authority over LNG facilities that affect the safety and security of port areas and navigable waterways under Executive Order 10173 (*Regulations Relating to the Safeguarding of Vessels, Harbors, Ports, and Waterfront Facilities of the United States*, enacted October 18, 1950); the Magnuson Act (50 USC 191); the Ports and Waterways Safety Act of 1972, as amended (33 USC 1221, et seq.); and the Maritime Transportation Security Act of 2002 (MTSA; 46 USC 701). The USCG is responsible for matters related to navigation safety, vessel engineering and safety standards, and all matters pertaining to the safety of facilities or equipment in or adjacent to navigable waters up to the last valve immediately before the receiving tanks. The USCG also has authority for LNG Facility Security Plan (FSP) reviews, approval, and compliance verification as provided in 33 CFR 105, and siting as it pertains to the management of vessel traffic in and around LNG facilities to a point 12 nautical miles seaward from the coastline (i.e., within the territorial seas).

As required by its regulations, the USCG is responsible for issuing a Letter of Recommendation (LOR) as to the suitability of the waterway for LNG marine traffic following a Waterway Suitability Assessment (WSA). The process of preparing the LOR begins when an applicant submits a Letter of Intent to the local Captain of the Port (COTP). In a letter dated March 17, 2015, PALNG submitted its Letter of Intent and WSA to the USCG as required by 33 CFR 127.007.

In a letter dated September 11, 2015, the USCG issued the LOR for the Port Arthur Liquefaction Project, which stated that the Sabine Neches River Ship Channel is considered suitable for LNG marine

10 The CWA's section 404(b)(1) Guidelines define water dependency in terms of an activity requiring access or proximity to or siting within a special aquatic site to fulfill its basic project purpose. Special aquatic sites (as defined in 40 CFR 230.40-230.45) are: (1) sanctuaries and refuges; (2) wetlands; (3) mud flats; (4) vegetated shallows; (5) coral reefs; and (6) riffle and pool complexes.

traffic in accordance with the guidance in USCG Navigation and Vessel Inspection Circular 01-2011, dated January 24, 2011.

1.2.2.3 U.S. Department of Energy

The DOE must meet its obligation under section 3 of the NGA to review the proposed import or export of natural gas, including LNG. By law, exports to countries with which the U.S. has a free trade agreement requiring national treatment for trade in natural gas (Free Trade Agreement [FTA] countries) are deemed to be consistent with the public interest and must be authorized by DOE. For exports to non-FTA countries, DOE must authorize a proposed export unless it finds that the export is not consistent with the public interest.

PALNG seeks to export LNG from the liquefaction site to any country:

1) with which the United States has, or in the future may have, a free trade agreement requiring national treatment for trade in natural gas;

2) with which the United States does not have a free trade agreement requiring the national treatment for trade in natural gas and LNG;

3) that has, or in the future develops, the capacity to import LNG; and

4) with which trade is not prohibited by United States law or policy.

PALNG filed an application with the DOE (Fossil Energy [FE] Docket No. 15-53-LNG) on March 20, 2015 (supplemented on April 9, 2015), seeking authorization to export up to 517 billion cubic feet (bcf) per year of natural gas, in the form of LNG (equivalent to approximately 10 million MTPA of LNG) to FTA countries for a 25-year period, commencing the earlier of either the date of first export or 7 years from the date of issuance of the requested authorization. On October 19, 2018, PALNG filed an application (FE Docket No. 18-162-LNG) and on November 15, 2018, an amendment to its application in FE Docket No. 15-53-LNG, to increase the authorized volume by 181 bcf per year, to a total of 698 bcf per year.

Section 3(c) of the NGA, as amended by section 201 of the Energy Policy Act of 1992 (Public Law 102-486), requires that applications to the DOE requesting authorization of the import or export of natural gas, including LNG, from or to a nation with which there is in effect an FTA requiring national treatment for trade in natural gas, be deemed consistent with the public interest and granted without modification or delay. On August 20, 2015, the DOE issued an order granting authorization to PALNG to export LNG by vessel from the liquefaction site to any country that has or in the future develops the capacity to import LNG via ocean-going carrier and with which the United States has, or in the future enters into, an FTA requiring national treatment for trade in natural gas. DOE granted the requested increase in authorized export volume in both FE Docket No. 15-53-LNG and FE Docket No. 18-162-LNG, in Order No. 3698-A, on November 20, 2018.

On June 15, 2015, PALNG filed a second application with the DOE (FE Docket No. 15-96-LNG) seeking authorization to export up to 517 bcf per year of natural gas, in the form of natural gas (equivalent to approximately 10 MTPA of LNG) to non-FTA countries for a 20-year period, commencing the earlier of either the date of first export or 7 years from the date of issuance of the requested authorization. On October 19, 2018, PALNG filed an amendment to its application in FE Docket No. 15-96-LNG, increasing the requested export volume by 181 bcf per year, to a total of 698 bcf per year.

In the case of LNG export applications to non-FTA countries, section 3(a) of the NGA requires the DOE to conduct a public interest review and to grant the applications unless the DOE finds that the proposed exports would not be consistent with the public interest. Additionally, NEPA requires the DOE to consider the environmental impacts of its decisions on non-FTA export applications. The application of PALNG to export LNG by vessel to non-FTA countries is currently pending before the DOE. A decision would not be made until after a final EIS is issued.

1.2.2.4 U.S. Environmental Protection Agency

The EPA has delegated water quality certification (section 401 of the CWA) to the jurisdiction of individual state agencies, but the EPA may assume this authority if no state program exists, if the state program is not functioning adequately, or at the request of a state. For the Projects, this authority is assumed by Texas and Louisiana with EPA oversight. In addition, the EPA has the authority to review and veto USACE decisions on section 404 permits. Water used for hydrostatic testing of pipelines that is point-source discharged into waterbodies requires a National Pollutant Discharge Elimination System (NPDES) Permit (section 402 of the CWA) issued by the state with EPA oversight.

The EPA also has jurisdictional authority to control air pollution under the Clean Air Act of 1963 (CAA) (42 USC 85) by developing and enforcing rules and regulations for all entities that emit toxic substances into the air. Under this authority, the EPA has developed regulations for major sources of air pollution. The EPA has delegated the authority to implement these regulations to state and local agencies, while state and local agencies are allowed to develop their own regulations for non-major sources. The EPA also establishes general conformity applicability thresholds; a federal agency can use these thresholds to determine whether a specific action requires a general conformity assessment. In addition to its permitting responsibilities, the EPA is responsible for implementing certain procedural provisions of NEPA (e.g., publishing the Notices of Availability of the draft and final EISs in the Federal Register) to establish statutory timeframes for the environmental review process.

1.2.2.5 U.S. Department of Transportation

The DOT has authority to enforce safety regulations and standards related to the design, construction, and operation of natural gas pipelines, under the federal pipeline safety statutes codified in 49 USC 60101 *et seq,* and under 49 CFR 192, Transportation of Natural or Other Gas by Pipeline: Minimum Federal Safety Standards.

The DOT also establishes the minimum federal safety standards for LNG facilities in compliance with 49 USC 60101 *et seq*. Those standards are codified in 49 CFR 193 and apply to the siting, design, construction, operation, maintenance, and security of LNG facilities. The National Fire Protection Association (NFPA) Standard 59A (2001 edition), "Standard for the Production, Storage, and Handling of Liquefied Natural Gas," is incorporated into these requirements by reference, with regulatory preemption in the event of conflict. On August 31, 2018, FERC and DOT signed an MOU to streamline LNG project reviews and eliminate duplicative efforts.[11] The DOT will issue a Letter of Determination (LOD) to FERC on the 49 CFR 193 Subpart B regulatory requirements. The LOD will provide PHMSA's analysis and conclusions the Subpart B regulatory requirements. The DOT's conclusion on the siting and hazard analysis required by Part 193 would be based on preliminary design information, which may be revised as the engineering design progresses to final design. DOT regulations also contain requirements for the design, construction, installation, inspection, testing, operation and maintenance, and contingency plans for LNG facilities, which would be completed during later stages of the project. If the facilities are approved and constructed, final compliance with the requirements of 49 CFR 193 will be subject to DOT's inspection

11 https://www.ferc.gov/legal/mou/2018/FERC-PHMSA-MOU.pdf

and enforcement programs. Informal consultation between PALNG and the DOT regarding additional LNG and pipeline safety and federal safety standards is currently ongoing.

1.3 PUBLIC REVIEW AND COMMENT

1.3.1 Pre-filing Process and Scoping

1.3.1.1 Liquefaction and Texas Connector Projects

On March 20, 2015, PALNG and PAPL filed requests with FERC to use our pre-filing review process for the Liquefaction Project and Texas Connector Project (formerly referred to as the Port Arthur Pipeline Project). FERC established its pre-filing process to encourage early involvement of interested stakeholders, facilitate interagency cooperation, and identify and resolve environmental issues before an application is filed with the FERC and facility locations are formally proposed. The requests to use our pre-filing review process were approved on March 31, 2015. Docket Nos. PF15-18-000 and PF15-19-000 were established for the Liquefaction Project and Texas Connector Project, respectively, to place information filed by PALNG and PAPL and related documents issued by the FERC into the public record, as well as comments from the public, agencies, tribes, organizations, and other stakeholders into the public record. At that time, we selected Merjent, Inc. as our third-party environmental contractor to assist us in the preparation of this EIS.[12] In addition, Merjent staff, under FERC direction, attended open houses, public meetings, reviewed Resource Reports, and drafted environmental information request questions.

PALNG and PAPL held public open houses in Port Arthur, Texas on May 28, 2015. FERC staff participated in those meetings to describe the FERC process and provide those attending with information on how to file comments with FERC. FERC staff also visited the proposed liquefaction project site.

On June 24, 2015, the FERC issued a *Notice of Intent to Prepare an Environmental Impact Statement for the Planned Port Arthur Liquefaction Project and Port Arthur Pipeline Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Meeting* (NOI). This notice was sent to 441 interested parties including federal, state, and local officials; agency representatives; conservation organizations; Native American tribes; local libraries and newspapers in the area of the projects; and property owners in the vicinity of project facilities. Publication of the NOI established a 30-day public comment period for the submission of comments, concerns, and issues related to the environmental aspects of the projects.

On July 13, 2015, we conducted two public scoping meetings in Port Arthur, Texas to provide an opportunity for the public to learn more about the projects and provide comments on environmental issues to be addressed in the EIS. One person provided comments during the meetings, expressing support for the projects. On July 14, 2015, FERC staff visited the proposed pipeline routes and compressor station sites.

In total, three letters from federal agencies (USACE, EPA, and U.S. Department of Agriculture [USDA]), three letters from state agencies (Texas Parks and Wildlife Department [TPWD], Texas Commission on Environmental Quality [TCEQ], and Louisiana Department of Wildlife and Fisheries [LDWF]), and one stakeholder comment were received in response to the PALNG and PAPL NOI. After the end of the NOI comment period, the U.S. Department of Defense (DOD) Siting Clearinghouse provided a letter stating no opposition to the projects, and the Choctaw Nation of Oklahoma requested consulting party status for the portion of the projects within Cameron Parish, Louisiana. The Commission also

12 Third-party contractors are selected by Commission staff and funded by project applicants. Third-party contractors work solely under the direction of FERC staff, who directs the scope, content, quality, and schedule of the contractor's work. FERC staff independently evaluates the results of the third-party contractor's work, and the Commission, through its staff, bears ultimate responsibility for full compliance with the requirements of NEPA.

received a second letter from the EPA after the NOI comment period, which included comments on aquatic resources, dredge disposal, alternatives, and cumulative impacts. After PALNG and PAPL filed their respective FERC applications, we received comment letters from the LDWF and two landowners.

On May 27, 2015, we attended an interagency meeting hosted by PALNG and PAPL to discuss the projects and FERC process with representatives from the Texas Department of Transportation (TDOT), Texas General Land Office (TGLO), and TPWD. On July 15, 2015, we held a joint interagency meeting for the projects and met with representatives of the USACE, USCG, and National Marine Fisheries Service (NMFS), and PALNG and PAPL representatives to discuss coordination of agency review, permit requirements and status, each agency's interest in participating in our environmental review as a cooperating agency, and impacts on EFH and wetlands. On September 29, 2016, we conducted another agency meeting and met with representatives of the USACE, USCG, NMFS, U.S. Fish and Wildlife Service (FWS), EPA, DOT PHMSA, TPWD, J.D. Murphree Wildlife Management Area (WMA), Jefferson County, and the City of Port Arthur, as well as representatives of PALNG and PAPL, to reacquaint the agencies with the projects and FERC process; provide an update on PALNG's and PAPL's applications to FERC; and to discuss resource concerns related to EFH, wetlands, migratory birds, and threatened and endangered species.

1.3.1.2 Louisiana Connector Project

On February 27, 2017, PAPL a filed request with FERC to use our pre-filing review process for another project that would provide feed gas to the liquefaction site. The request to use our pre-filing review process was approved on March 13, 2017. Pre-filing Docket No. PF17-5-000 was established for the Louisiana Connector Project to place information filed by PAPL and related documents issued by FERC into the public record, as well as comments from the public, agencies, tribes, organizations, and other stakeholders into the public record.

PAPL held public open houses in Kinder and Sulphur, Texas on May 2 and 3, 2017. The FERC staff participated in those meetings to describe the FERC process and provide those attending with information on how to file comments with FERC.

On May 25, 2017, the FERC issued a NOI for the Louisiana Connector Project. This notice was sent to 1,299 interested parties including federal, state, and local officials; agency representatives; conservation organizations; Native American tribes; local libraries and newspapers in the project area; and property owners in the vicinity of project facilities. Publication of the NOI established a 30-day public comment period for the submission of comments, concerns, and issues related to the environmental aspects of the proposed project. In total, two letters from the TPWD were received in response to the PAPL NOI.

On June 12, 13, and 14, 2017, we conducted three public scoping sessions in Sulphur, Kinder, and Eunice, Louisiana, respectively, to provide an opportunity for the public to learn more about the project and provide comments on environmental issues to be addressed in the EIS. Four persons provided comments during the sessions, one of which expressed support for the project, one of whom noted he is not affected, and two of which expressed environmental concerns. On June 12, 2017, FERC staff visited the proposed pipeline route.

On June 13, 2017, we attended a meeting hosted by the Coushatta Tribe of Louisiana to discuss the project and FERC process with representatives from PAPL. At that meeting, the Coushatta Tribal Historic Preservation Office (THPO) expressed the tribe's concerns regarding potential impacts on its cultural resources throughout the Louisiana Connector Project corridor.

On October 16, 2018, we had a government-to-government consultation with the Coushatta Tribal Council, which is the governing body of the Coushatta Tribe of Louisiana. The meeting primarily focused on the tribe's historical, archaeological, cultural, and religious ties to the Louisiana Connector Project corridor; the Project's potential impacts on these resources; and proposed and possible mitigation measures to reduce impacts.

On October 16, 2018, we also met with representatives from the Coushatta Tribe of Louisiana and PAPL to discuss potential cultural resource impacts and mitigation issues, including proposed tribal monitoring and updates to PAPL's *Unanticipated Discoveries Plan*.

1.3.1.3 Issues Identified During Scoping

Issues identified after the open houses and during and after the public comment periods are summarized in table 1.3-1 along with a listing of the EIS sections that address the comments. Non-environmental comments, such as those declaring general support for the Projects, were noted but are considered outside the scope of the EIS.

TABLE 1.3-1

Environmental Issues and Concerns Raised During Public Scoping for the Projects

Issue/Concern	EIS Section Addressing Issue
GENERAL	
Purpose and Need	1.2
Beneficial use of dredge material	4.4.4
SOILS	
Soil testing and analysis at liquefaction site	4.2.1.6
WATERBODIES AND WETLANDS	
Impacts on wetlands and wetland mitigation; cumulative impacts	4.4.2; 4.4.4; 4.13.2.5
Impacts on surface water quality and use; impaired waters	4.3.2
Impacts on groundwater	4.3.1
VEGETATION, WILDLIFE, AND PROTECTED SPCIES	
Impacts on critical habitats including coastal prairie, oysters, colonial waterbird nesting areas, and submerged aquatic vegetation	4.5.2.2; 4.5.4; 4.6.2; 4.6.1.3; 4.6.1.2
Impacts on protected species and critical habitat	4.7
Potential spread of invasive species	4.5.3
LAND USE	
Hazardous wastes	4.8.7
Use of eminent domain	4.8.3
SOCIOECONOMICS	
Identify if any impacts on minority and low-income communities	4.9.8
CULTURAL RESOURCES	
Tribal outreach process	4.10.3
AIR QUALITY	
Impacts on air quality; nonattainment areas	4.11.1
Greenhouse gas emissions from liquefaction facilities	4.11.1
Effects to climate change	4.13.2.13
ALTERNATIVES	
Use of other existing liquefaction site	3.2.1
Reduction of or justification for wetland impacts	3.3; 3.4; 4.4

In July 2016, we mailed a Project Update to 508 interested parties, including federal, state, and local officials; agency representatives; conservation organizations; Native American tribes; local libraries and newspapers in the project area; and property owners in the vicinity of proposed Liquefaction Project and Texas Connector Project facilities. This update provided information on the proposed projects, a list of the primary concerns that were raised during scoping, information on the status of the environmental review process and the next steps in the process, and information on how to stay informed about the progress of the review process.

1.3.2 Public Review of the Draft and Final EIS

We issued a *Notice of Availability of the Draft Environmental Impact Statement for the Proposed Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector Project* on September 28, 2018. The draft EIS was filed with the EPA, and a formal notice of availability was issued in the Federal Register on September 28, 2018, indicating that the draft EIS was available online[13] to 1,540 federal, state, and local government agencies; elected officials; Native American tribes; affected landowners; local libraries and newspapers; intervenors in the FERC's proceeding; and other interested parties (i.e., individuals who provided scoping comments or asked to be on the mailing list). The distribution list was included as appendix A of the draft EIS. The notice of availability established a comment period on the draft EIS that ended on November 19, 2018. The notice described procedures for filing comments on the draft EIS and how information about the Projects could be found on the FERC's website.

We held three public comment sessions during the draft EIS comment period. The comment sessions were held in October 2018 in Port Arthur, Texas and Kinder and Sulphur, Louisiana. The comment sessions provided interested parties with an opportunity to present verbal comments on our analysis of the environmental impacts of the Projects as described in the draft EIS. A total of 17 people commented at the sessions. In addition, 19 parties submitted a total of 22 letters in response to the draft EIS. Motions to intervene were filed by three groups/parties (Coushatta Tribe of Louisiana; Sabine Pass LNG, L.P., Sabine Pass Liquefaction, LLC, and Cheniere Creole Trail Pipeline, L.P.; and Driftwood LNG LLC and Driftwood Pipeline LLC). The most commonly received comments on the draft EIS related to the socioeconomic benefits (e.g., tax revenue, job creation, economic development) from the Projects, improving access to the community of Sabine Pass by relocating State Highway (SH) 87, creation of marshland in the J.D. Murphree WMA, and impacts on the aquatic environment and soils from reuse of dredge material resulting from construction of the Liquefaction Project. All timely environmental comments on the draft EIS have been addressed in this final EIS. A transcript of each comment session and copies of each written comment are part of the public record for the Projects. Our responses to relevant comments are provided in appendix T of this final EIS. A subject index is provided in appendix U. Substantive changes in the final EIS are indicated by vertical bars that appear in the margins. The changes were made both in response to comments received on the draft EIS and as a result of updated information that became available after the issuance of the draft EIS.

The Commission's *Notice of Availability* for this final EIS is being mailed to the agencies, tribes, individuals, and organizations on the distribution list provided in appendix A. The *Notice of Availability* includes information on how this final EIS may be viewed and downloaded from the FERC website. This final EIS was filed with the EPA for issuance of a formal public notice of availability in the Federal Register. In accordance with CEQ's regulations implementing NEPA, no agency decision on a proposed action may be made until 30 days after the EPA publishes a notice of availability for this final EIS. However, the CEQ regulations provide an exception to this rule when an agency decision is subject to a formal internal process that allows other agencies or the public to make their views known. In such cases, the agency decision may be made at the same time the notice of this final EIS is published, allowing both periods to run concurrently.

[13] 83 Fed. Reg. 50656 (2018).

Should the Commission issue an authorization and Certificate to PALNG and PAPL for the proposed actions, it would be subject to a 30-day rehearing period. Therefore, the Commission could issue its decision concurrently with issuance of the final EIS.

1.4 NONJURISDICTIONAL FACILITIES

Under section 7 of the NGA, FERC is required to consider, as part of a decision to authorize jurisdictional facilities, all facilities that are directly related to a proposed project where there is sufficient federal control and responsibility to warrant environmental analysis as part of the NEPA environmental review for the proposed project. Some proposed projects have associated facilities that do not come under the jurisdiction of the Commission. These "nonjurisdictional" facilities may be integral to the need for the proposed facilities, or they may be merely associated as minor components of the jurisdictional facilities that would be constructed and operated as a result of authorization of the proposed facilities. The nonjurisdictional facilities associated with the Projects are described below and shown on the figures in appendix B.

The following nonjurisdictional actions were identified in association with the proposed Liquefaction Project:

- Relocation of approximately 3.3 miles of SH 87 to a location west of the Liquefaction Project site.
- Relocation or abandonment of five pipelines owned by third parties to a location west of the Liquefaction Project site, including:
    - 3.3 miles of 6-inch-diameter Buckeye Dev. & Logistics I LLC gas pipeline;
    - 3.3 miles of 10-inch-diameter Centana Intrastate Pipeline, LLC gas pipeline;
    - 3.3 miles of 12-inch-diameter Centana Intrastate Pipeline, LLC gas pipeline;
    - 3.3 miles of 24-inch-diameter Cameron Highway Oil Pipeline Company oil pipeline; and
    - 3.3 miles of 8-inch-diameter ONEOK Transmission Company gas pipeline.[14]
- Relocation of existing utilities to a location west of the Liquefaction Project, including:
    - 3.3 miles of electric power distribution line;
    - 3.3 miles of 16-inch-diameter water main line; and
    - 3.3 miles of communication (telephone and cable) lines.

These facilities are described in more detail in section 2.1, and the environmental impacts associated with these actions are addressed in each resource discussion in section 4.0 of this EIS.

Nonjurisdictional actions identified in association with the proposed Louisiana Connector Project consist of electric lines to the compressor station that would be built by Central Louisiana Electric Company (CLECO) and Beauregard Electric CO-OP Inc. (BECi) in Allen Parish, Louisiana. PAPL, CLECO, and

14 This pipeline is currently not operating. It would be abandoned in place and/or removed by PALNG.

BECi are currently investigating two options. Option One would tap into the existing CLECO distribution line at the intersection of SH 165 and Green Oak Cemetery Road then extend about 0.25 mile along the north side of Green Oak Cemetery Road to the proposed compressor station site. Option Two would tap into the existing BECi three phase distribution line at the intersection of Green Oak Cemetery Road and Green Oak Road then extend about 0.75 mile along the south side of Green Oak Cemetery Road before crossing Green Oak Cemetery Road to the proposed compressor station site. Both options have been assessed for their potential cumulative impacts on resources in section 4.13.

1.5 PERMITS, APPROVALS, AND REGULATORY REVIEWS

FERC has exclusive authority for siting interstate natural gas pipeline projects; however, other agencies also have responsibilities for other federal authorizations. As federal agencies, FERC and the USACE are required to comply with a number of regulatory statutes including, but not limited to, NEPA, section 7 of the ESA, the MSA, the CAA, the CWA, the RHA, section 106 of the NHPA, and section 307 of the CZMA. Each of these statutes has been taken into account in the preparation of this final EIS. The major permits, approvals, and consultations for the Projects are identified in tables 1.5-1, 1.5-2, and 1.5-3.

Section 7 of the ESA states that any project authorized, funded, or conducted by any federal agency should not "…jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined…to be critical…" (16 USC 1536[a][2][1988]). The FERC, or PALNG and PAPL as non-federal parties, is/are required to determine whether any federally listed or proposed endangered or threatened species or their designated critical habitat occur in the vicinity of the proposed Projects, and conduct consultations with the FWS and/or NMFS, if necessary. If, upon review of existing data or data provided by PALNG and PAPL, FERC determines that these species or habitats may be affected by the Projects, FERC is required to prepare a Biological Assessment (BA) to identify the nature and extent of adverse impacts, and to recommend measures that would avoid the habitat and/or species, or would reduce potential impact to acceptable levels. Section 4.7 provides information on the status of this review.

The Migratory Bird Treaty Act of 1918 (MBTA) implements various treaties and conventions between the United States, Mexico, Canada, Japan, and Russia for the protection of migratory birds. Birds protected under the MBTA include all common songbirds, waterfowl, shorebirds, hawks, owls, eagles, ravens, crows, native doves and pigeons, swifts, martins, swallows, and others, including their body parts (e.g., feathers, plumes), nests, and eggs. The act makes it unlawful to pursue, hunt, take, capture, or kill; attempt to take, capture, or kill; possess, offer to or sell, barter, purchase, deliver, or cause to be shipped, exported, imported, transported, carried, or received any migratory bird, part, nest, egg, or product, manufactured or not, without a permit. The MBTA is discussed further in in section 4.6.1.3.

The Bald and Golden Eagle Protect Act of 1940, as amended (BGEPA) prohibits taking without a permit, or taking with wanton disregard for the consequences of an activity any bald or golden eagle or their body parts, nests, chicks, or eggs, which includes collection, molestation, disturbance, or killing. The BGEPA protections include provisions not included in the MBTA, such as the protection of unoccupied nests and a prohibition on disturbing eagles. The BGEPA includes limited exceptions to its prohibitions through a permitting process, including exceptions to take golden eagle nests that interfere with resource development or recovery operations. We discuss compliance with the BGEPA in section 4.6.1.3.

The MSA, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), established procedures designed to identify, conserve, and enhance EFH for those species regulated under a federal fisheries management plan (FMP). The MSA requires federal agencies to consult with NMFS on all actions or proposed actions authorized, funded, or undertaken by the agency that may adversely affect EFH (MSA §305[b][2]). Although absolute criteria have not been established for conducting EFH consultations, NMFS

recommends consolidating EFH consultations with interagency coordination procedures required by other statues, such as NEPA, the Fish and Wildlife Coordination Act of 1934, or the ESA (50 CFR 600.920[e]), to reduce duplication and improve efficiency. As part of this consultation process, the FERC staff prepared an EFH Assessment. This assessment and the status of the EFH consultation are provided in section 4.6.3.

Section 106 of the NHPA requires that the FERC take into account the effects of its undertakings on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP), including prehistoric or historic sites, districts, buildings, structures, objects, or properties of traditional religious or cultural importance, and to afford the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on the undertaking. PALNG and PAPL, as non-federal parties, are assisting the FERC in meeting our obligations under section 106 by preparing the necessary information, analyses, and recommendations under ACHP regulations in 36 CFR 800. EIS section 4.10 provides information on the status of this review.

PALNG and PAPL must comply with sections 401 and 404 of the CWA. Water quality certification (section 401) has been delegated to the state agencies, with review by the EPA. Water used for hydrostatic testing that is point-source discharged into waterbodies would require a NPDES permit (section 402) issued by the Louisiana Department of Environmental Quality (LDEQ). The USACE has responsibility for determining compliance with all regulatory requirements associated with section 404 of the CWA. The EPA also independently reviews section 404 applications for wetland dredge-and-fill applications for the USACE and has section 404(c) veto power for wetland permits issued by the USACE. The section 404 permitting process regulates the discharge of dredged and fill material associated with the construction of pipelines across streams and in wetlands. Before an individual section 404 permit can be issued, the CWA requires completion of a section 404(b)(1) guideline analysis. FERC, in the NEPA review represented by this final EIS, has analyzed all technical issues required for the section 404(b)(1) guideline analyses, including analysis of natural resources and cultural resources that would be affected by the Projects, as well as analyses of alternatives. The results of our analysis of alternatives are provided in section 3.0 of this final EIS, and a summary of wetland impacts is provided in section 4.4. In addition to CWA responsibilities, the USACE has jurisdiction over section 10 permits, which would be required for all construction activities in navigable waterways under the RHA. Waterbody crossing methods and impacts are summarized in EIS section 4.3.

Section 404 and section 10 permits are required for proposed Pipeline Projects, while a section 404 permit is required for only the Liquefaction Project. PALNG's and PAPL's section 404 and section 10 permit applications are under review by the USACE.

The EPAct 2005 and section 3 of the NGA require us to consult with the DOD to determine if there would be any impacts associated with the siting, construction, or operation of the liquefaction facilities on military training or activities on any military installations. FERC initiated consultation with a letter to DOD on June 25, 2015. The DOD responded in a letter dated July 28, 2015, concluding the Liquefaction Project would have minimal impact on the military operations conducted in this area and that the DOD would not oppose construction of the Liquefaction Project.

The CZMA calls for the "effective management, beneficial use, protection, and development" of the nation's coastal zone and promotes active state involvement in achieving those goals. As a means to reach those goals, the CZMA requires participating states to develop management programs that demonstrate how those states will meet their obligations and responsibilities in managing their coastal areas. In Texas, the TGLO administers the Coastal Zone Management Program (CZMP); in Louisiana, the Louisiana Department of Natural Resources (LDNR) administers the CZMP. The TGLO and LDNR conducted consistency determinations concurrent with PALNG's and PAPL's filling of applications for a statement of consistency. The CZMP is discussed further in section 4.8.9 of this final EIS.

The CAA was enacted by Congress to protect the health and welfare of the public from the adverse effects of air pollution. The CAA is the basic federal statute governing air pollution. Federal and state air quality regulations established as a result of the CAA include, but are not limited to, Title V operating permit requirements and Prevention of Significant Deterioration (PSD) Review. The EPA is the federal agency responsible for regulating stationary sources of air pollutant emissions; however, the federal permitting process has been delegated to the TCEQ in Texas and LDEQ in Louisiana. As noted in tables 1.5-1 and 1.5-2, the TCEQ issued air permits for the Liquefaction Project on February 17, 2016; air permits from the TCEQ and LDEQ for the Texas Connector and Louisiana Connector Projects are pending. Air quality impacts that could occur as a result of construction and operation of the Projects are evaluated in EIS section 4.11.1.

Besides FERC, other federal agencies have responsibilities for issuing permits or approvals to comply with various federal laws and regulations. The USCG exercises regulatory authority over the suitability of the Project Waterway for LNG marine traffic. As required by its regulations, the USCG is responsible for issuing an LOR as to the suitability of the waterway for LNG marine traffic. The USCG issued its LOR on September 11, 2015. Impacts on vessel traffic are summarized in section 4.9.6 of this final EIS. The Coushatta Tribe of Louisiana also commented that certain tribally issued permits must be obtained on tribal trust land crossed by the Project.

Tables 1.5-1, 1.5-2, and 1.5-3 list the major permits, consultations, and approvals for the Projects. PALNG and PAPL are responsible for all permits and approvals required to implement the Projects, regardless of whether they appear in tables. FERC encourages cooperation between applicants and state and local authorities; however, state and local agencies, through the application of state and local laws, may not prohibit or unreasonably delay the construction or operation of facilities approved by FERC. Any state or local permits issued with respect to jurisdictional facilities must be consistent with the conditions of any authorization the Commission may issue.[15]

15 *See* 15 USC 717r(d) (state or federal agency's failure to act on a permit considered to be inconsistent with federal law); *see also Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 310 (1988) (state regulation that interferes with FERC's regulatory authority over the transportation of natural gas is preempted) and *Dominion Transmission, Inc. v. Summers*, 723 F.3d 238, 245 (D.C. Cir. 2013) (noting that state and local regulation is preempted by the NGA to the extent it conflicts with federal regulation, or would delay the construction and operation of facilities approved by the Commission).

TABLE 1.5-1

Permits, Approvals, and Consultations for the Liquefaction Project

Agency	Permit/Authorization	Date Filed *(Anticipated)*	Receipt Date *(Anticipated)*
FEDERAL			
FERC	Authorization	November 2016	*Pending*
USACE	CWA Section 10/404 Permit / Section 408 Review	November 2016; November 2017	*(May 2019)*
FWS	ESA Section 7 Consultation	October 2017	June 2018 and December 2018
USCG	WSA	July 14, 2015	September 11, 2015
National Oceanic and Atmospheric Administration, NMFS	ESA Section 7 and MSA Consultation	February 2018	August 2018
National Oceanic and Atmospheric Administration, NMFS	Essential Fish Habitat	October 2015	October 2018
EPA	NPDES Permits – Hydrostatic Test Water Discharge/Operational Stormwater	*(January 2019)*	*(August 2019/July 2019)*
U.S. Federal Aviation Administration	Aeronautical Study under 14 CFR 77	November 2018	December 2018
DOE	Authorization to Export (Free Trade Agreement Countries)	March 20, 2015; October 19, 2018	August 20, 2015; November 20, 2018
	Authorization to Export (Non-Free Trade Agreement Countries)	June 15, 2015; October 19, 2018	*(May 2019)*
STATE			
TCEQ	PSD Permit	April 9, 2015; June 6, 2017	February 17, 2016; July 7, 2017
	New Source Review Permit	April 9, 2015; June 6, 2017	February 17, 2016; July 7, 2017
	Title V Operating Permit	April 9, 2015; June 6, 2017	February 17, 2016; July 7, 2017
	General Construction Stormwater Permit (Nonjurisdictional Facilities only)	*(January 2019)*	*(March 2019)*
Railroad Commission of Texas (Texas RRC)	CWA 401 Certification	November 2016	December 2018
	Section 402 Hydrotest Discharge Permit	*(January 2019)*	*(July 2019)*
Texas Historical Commission (State Historic Preservation Office)	NHPA Section 106 Consultation	May 19, 2015	June 2, 2015
Texas General Land Office	Statement of Consistency with the Coastal Management Program / Miscellaneous Easement	November 2016; November 2017	*(May 2019)*
TDOT	Road Crossing/ Construction in Right-Of-Way Permit	*(February 2019)*	*(May 2019)*
TPWD	Protected Species Consultation and impacts in State WMAs	November 2016	November 2017
LOCAL			
Jefferson County	Floodplain Development Permit	*(December 2018)*	*(July 2019)*
	Development/ Building Permit	*(December 2018)*	*(July 2019)*
City of Port Arthur	Building Permit (if required)	*(December 2018)*	*(July 2019)*

TABLE 1.5-2

Permits, Approvals, and Consultations for the Texas Connector Project [a]

Agency	Permit/Authorization	Date Filed *(Anticipated)*	Receipt Date *(Anticipated)*
FEDERAL			
FERC	Certificate of Public Convenience and Necessity	November 2016	*Pending*
USACE	CWA Section 10/404 Permit / Section 408 Review	January 2017; November 2017	*(May 2019)*
FWS	ESA Section 7 Consultation	Texas – October 2017 Louisiana – March 2016	Texas – June 2018 and December 2018 Louisiana – April 2016 and June 2017
National Oceanic and Atmospheric Administration, NMFS	ESA Section 7 and MSA Consultation	February 2018	August 2018
National Oceanic and Atmospheric Administration, NMFS	Essential Fish Habitat	October 2015	October 2018
EPA	NPDES Permit	*(December 2020)*	*(July 2021)*
STATE			
TCEW	Standard Permit for Oil & Gas Facilities (Air Quality)	*(July 2019)*	*(December 2019)*
Texas RRC	NPDES Permit – Hydrostatic Test Water Discharge	*(December 2020)*	*(July 2021)*
	CWA 401 Certification	January 2017; November 2017	*(May 2019)*
Texas Historical Commission (State Historic Preservation Office)	NHPA Section 106 Consultation	August 2016	September 2016
TGLO	Statement of Consistency with the Coastal Management Program	January 2017; November 2017	*(May 2019)*
TDOT	Road Crossing/ Construction in Right-of-Way Permit	*(January 2020)*	*(March 2020)*
TPWD	Protected Species Consultation	November 2016	November 2017
LDEQ	NPDES Permit – Hydrostatic Test Water Discharge	*(December 2020)*	*(July 2021)*
	CWA 401 Certification	January 2017; November 2017	*(May 2019)*
Louisiana Office of Cultural Development (State Historic Preservation Office)	NHPA Section 106 Consultation	August 2016	September 2016
LDNR	Coastal Use Permit	January 2017; November 2017	*(May 2019)*
	Protected Species Consultation	March 2017	June 2017

[a] Local permits will be determined upon further facilities design.

TABLE 1.5-3

Permits, Approvals, and Consultations for the Louisiana Connector Project [a]

Agency	Permit/Authorization	Date Filed *(Anticipated)*	Receipt Date *(Anticipated)*
FEDERAL			
FERC	Certificate of Public Convenience and Necessity	October 2017	*Pending*
USACE	CWA Section 10/404 Permit / Section 408 Review	October 2017	*(May 2019)*
FWS	ESA Section 7 Consultation	March 2017	March 2018, August 2018, and ongoing[b]
National Oceanic and Atmospheric Administration, NMFS	ESA Section 7 and MSA Consultation	February 2018	August 2018
National Oceanic and Atmospheric Administration, NMFS	Essential Fish Habitat	October 2017	October 2018
Bureau of Indian Affairs	Right-of-Way Grant	June 2018	*(December 2020)*
Coushatta Tribe of Louisiana Tribal Trust Lands [c]	Tribal permits	*Pending*	*Pending*
STATE			
Texas RRC	NPDES Permit – Hydrostatic Test Water Discharge	*(June 2020)*	*(December 2020)*
	CWA 401 Certification	October 2017	*(May 2019)*
Texas Historical Commission (State Historic Preservation Office)	NHPA Section 106 Consultation	June 2017	*(May 2019)*
Texas General Land Office	Statement of Consistency with the Coastal Management Program	October 2017	*(May 2019)*
TPWD	Protected Species Consultation	August 2017	May 2017
LDEQ	Louisiana Pollutant Discharge Elimination System Permit	*(June 2020)*	*(December 2020)*
	NPDES Permit – Hydrostatic Test Water Discharge	*(June 2020)*	*(December 2020)*
	CWA 401 Certification	October 2017	*(May 2019)*
	Air Permit	September 2017	September 2018
Louisiana Office of Cultural Development (State Historic Preservation Office)	NHPA Section 106 Consultation	September 2017	October 2017
LDNR	Coastal Use Permit	October 2017	*(May 2019)*
	Protected Species Consultation	March 2017	June 2017
	Wild and Scenic Rivers Permit	*(February 2019)*	*(May 2019)*

[a] Local permits would be determined upon further facilities design.
[b] Consultations are ongoing for the American chaffseed.
[c] PAPL is required to coordinate and obtain these authorizations prior to construction across Tribal Trust lands.

2.0 DESCRIPTION OF THE PROPOSED ACTION

PALNG and PAPL are proposing to construct a natural gas liquefaction and export terminal and feed gas pipeline systems consisting of the following components:

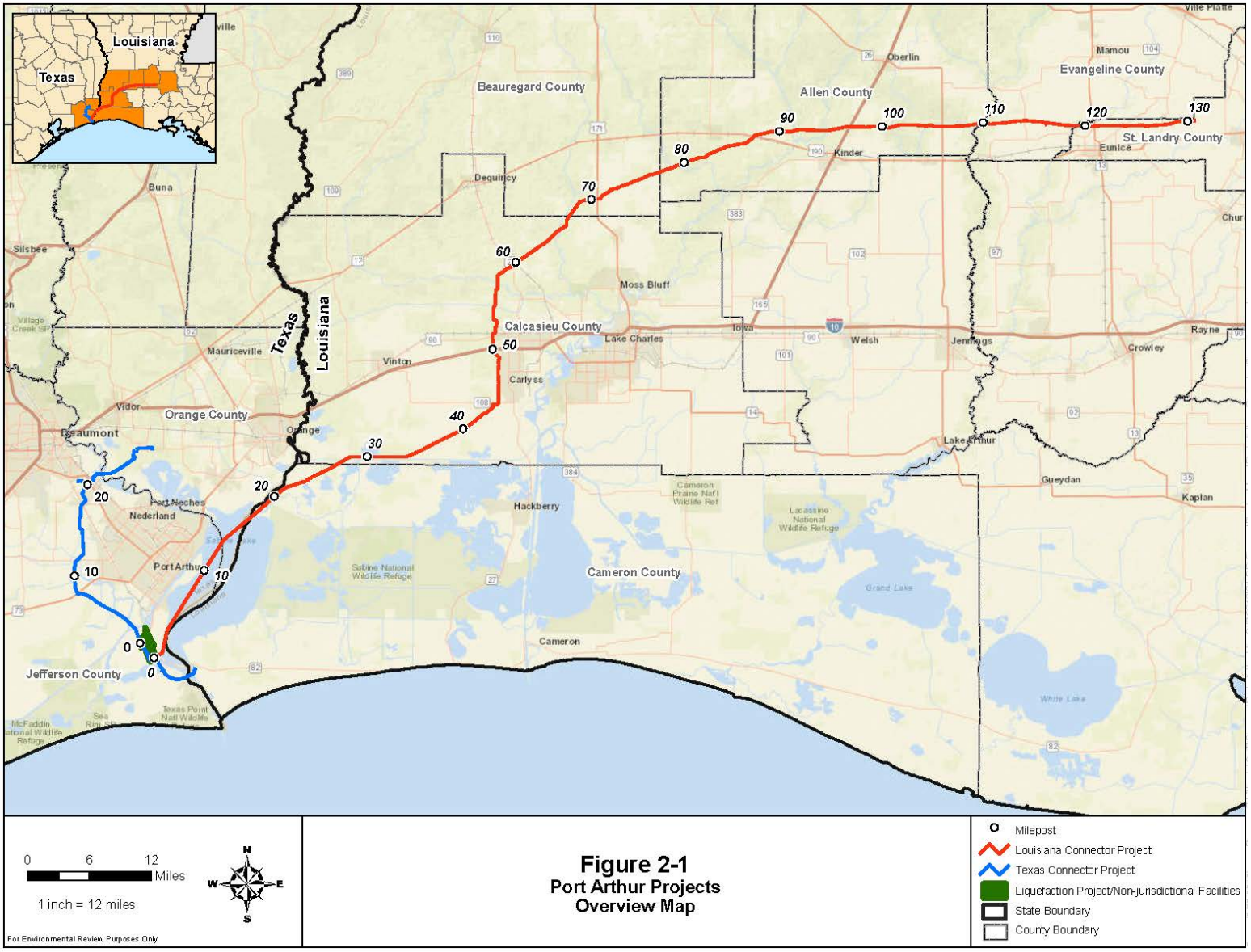
1. Port Arthur Liquefaction Project – development of natural gas liquefaction and LNG export capabilities through construction of new liquefaction facilities on the Port Arthur Canal of the Sabine-Neches Waterway (SNWW) in Jefferson County, Texas.

2. Texas Connector Project – construction of pipeline facilities to provide natural gas supplies to the proposed liquefaction facility, including two pipelines, two compressor stations, six lateral pipelines, six meter stations, and associated facilities in Jefferson and Orange Counties, Texas and Cameron Parish, Louisiana.

3. Louisiana Connector Project – construction of pipeline facilities to provide natural gas supplies to the proposed liquefaction facility, including a pipeline, a compressor station, 7 lateral pipelines, 17 tie-in pipelines, 9 meter stations, and associated facilities in Jefferson and Orange Counties, Texas and Cameron, Calcasieu, Beauregard, Allen, Evangeline, and St. Landry Parishes, Louisiana.

In addition, construction of the marine berth for the Liquefaction Project would require the relocation of 3.3 miles of SH 87 and existing pipelines and utilities that parallel the highway (see appendix B), which are not under FERC's jurisdiction. PALNG would relocate the highway, pipelines, and utilities to its own property.

This section describes the proposed liquefaction and pipeline system facilities, land requirements, construction procedures, schedule, environmental compliance and inspection monitoring, operation and maintenance procedures, and safety controls for the Projects. Figure 2-1 shows the locations of PALNG's proposed Liquefaction Project, PAPL's proposed Texas Connector and Louisiana Connector Projects, and the nonjurisdictional facilities. Detailed maps of the pipeline facilities are in appendix B.


Louisiana
Texas
Beauregard County
Allen County
Evangeline County
St. Landry County
Calcasieu County
Orange County
Cameron County
Jefferson County
Lake Charles
Port Arthur
Beaumont
Orange
Vinton
Moss Bluff
Hackberry
Cameron
Oberlin
Kinder
Eunice
Welsh
Jennings
Crowley
Rayne
Lake Arthur
Gueydan
Kaplan
Iowa
Carlyss
Mauriceville
Vidor
Port Neches
Nederland
Buna
Silsbee
Dequincy
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Louisiana
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60
70
80
90
100
110
120
130
0 6 12 Miles
1 inch = 12 miles
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For Environmental Review Purposes Only
Figure 2-1
Port Arthur Projects
Overview Map
Milepost
Louisiana Connector Project
Texas Connector Project
Liquefaction Project/Non-jurisdictional Facilities
State Boundary
County Boundary

2.1 PROPOSED FACILITIES

2.1.1 Liquefaction Project

The Liquefaction Project would consist of the following facilities:

- Two liquefaction trains,[16] each with a capacity of 6.73 MTPA of LNG for export.
- Three LNG storage tanks, each with a capacity of 160,000 m^3.
- A refrigerant storage area and truck unloading facilities.
- A condensate storage area and truck loading facilities.
- A new marine slip with two LNG vessel berths, an LNG vessel and support vessel maneuvering area, and an LNG transfer system.
- An MOF and Pioneer Dock.
- Other ancillary utilities, buildings, and service facilities.

The liquefaction facilities would collectively be located on about 898 acres of a 2,900-acre property that PALNG has already purchased on the western shore of the Port Arthur Canal, about 5 miles south of Port Arthur, Texas and 6 miles north of Sabine, Texas. In the past, the site was used as a dredge material placement area for materials dredged during maintenance of the Port Arthur Canal. All ship traffic would access the Liquefaction Project via the Port Arthur Canal, while all construction and personnel vehicles would access the site from SH 87. A site plan is included as figure 2.1.1-1.

2.1.1.1 Liquefaction Trains

The two liquefaction trains would be capable of producing a total of 13.5 MTPA of LNG using power supplied by the eight natural gas combustion turbine generators on site, with an additional generator available as a backup during maintenance or shutdowns. Each train would consist of a feed gas pre-treatment unit, heavy hydrocarbon removal unit, and liquefaction unit. Natural gas would be transported via the Texas Connector and Louisiana Connector Projects to the feed gas pre-treatment facilities, which would remove any impurities from the natural gas, including particulates, mercury, hydrogen sulfide (H_2S), carbon dioxide (CO_2), and water. The heavy hydrocarbon removal unit would remove compounds such as natural gas liquids (pentane, hexane, etc.), which would be transferred to the refrigerant and condensate storage area and later transported off site by truck (see sections 2.1.14 and 2.1.1.5). The lighter hydrocarbons would continue through the liquefaction process with a portion being used as makeup fuel in the fuel gas system. After the heavy hydrocarbons and other impurities are removed, the feed gas would be pre-cooled by thermal exchange with propane and further cooled using a mixed refrigerant stream to condense the natural gas into a liquid at -260 degrees Fahrenheit (°F).

16 Liquefaction and purification facility that condenses natural gas into a liquid at atmospheric pressure.

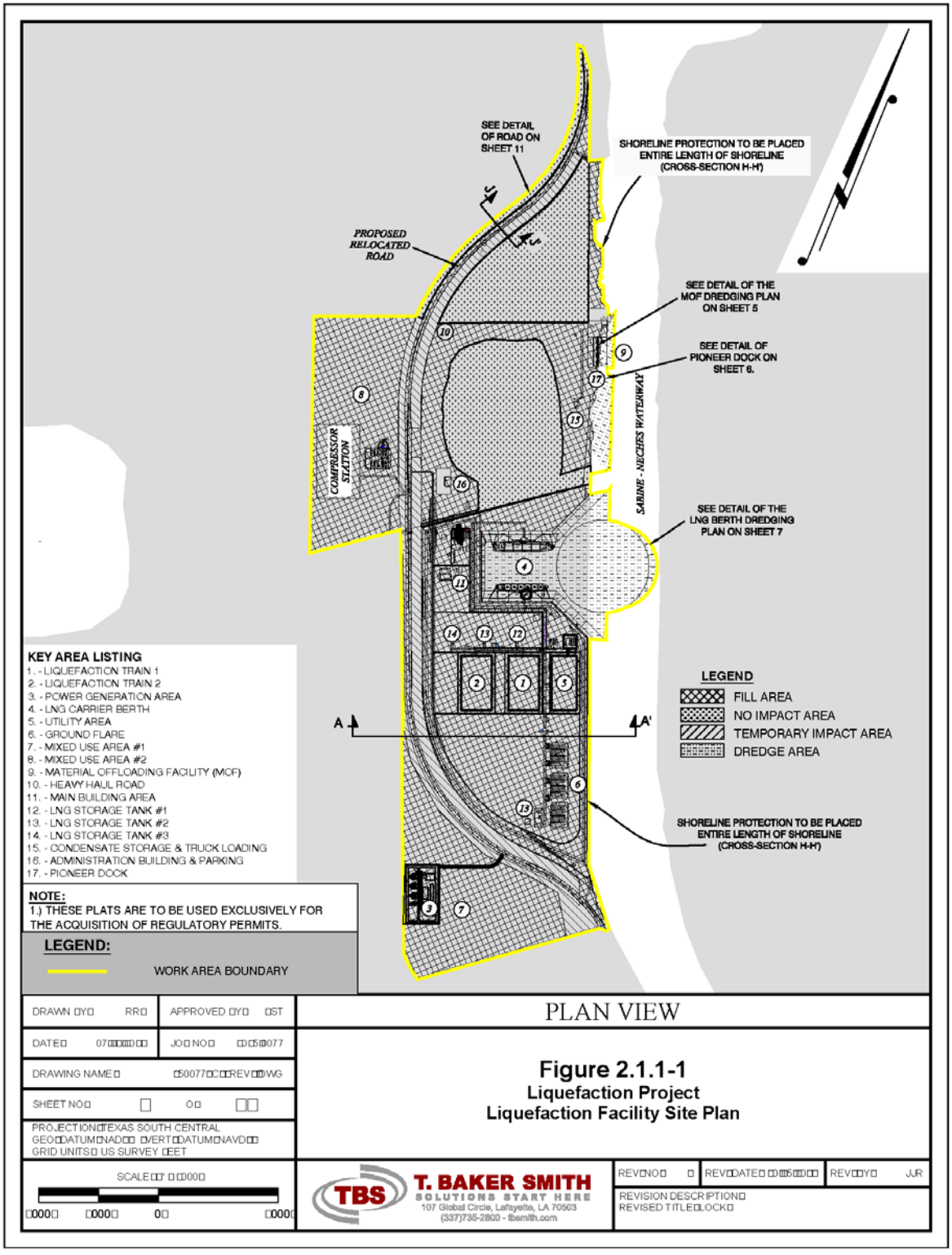


Figure 2.1.1-1
Liquefaction Project
Liquefaction Facility Site Plan

Two flare systems would be used to control unwanted vapor or vent gases created during emergency situations or startup of the Liquefaction Project. A ground flare system consisting of wet flare, low pressure wet flare, dry flare, and a low pressure dry flare would be installed to handle pressure relief valve releases upstream or downstream of molecular sieve dehydrators. A marine flare would also be installed to handle boil-off gas (BOG) generated from the LNG storage tanks and ship loading operation and cool down of warm ships.

2.1.1.2 LNG Storage Tanks

Three full containment LNG storage tanks would be designed to meet the requirements in NFPA 59A, 49 CFR 193, American Petroleum Institute (API) 620, and ACI 318. The tanks would each have a working capacity of 160,000 m^3 (or 480,000 m^3 total for all three tanks) at a temperature of -270°F and normal operating pressure of 1 to 4 pounds per square inch gauge (psig). Each tank would consist of the following:

- A 9 percent nickel steel primary inner tank.
- A pre-stressed reinforced concrete outer container surrounding the primary inner tank.
- A foam glass-insulated reinforced concrete bottom slab.
- A reinforced concrete domed roof.
- An aluminum insulation deck suspended from the domed roof above the primary inner tank.
- Expanded perlite insulation between the primary and secondary containers to help regulate temperature.
- Submerged LNG pumps and associated piping.
- Leak detection and process monitoring instrumentation systems.
- Walkways, platforms, stairways, and ladders for operations and maintenance access.

PALNG proposes to use full containment tanks, which provide secondary containment for stored LNG. Both the primary and secondary tanks are self-supporting and capable of independently containing the stored LNG, with the secondary outer tank would be designed to contain 110 percent of the inner tanks' capacity. Pumps would be contained within the tanks and all piping routed through the tank roofs so that a line failure would not cause the tanks to empty. PALNG would install storm surge berms that would also act as tertiary containment in the unlikely event of an outer tank failure. In addition, concrete impoundment basins would be installed in the LNG storage area to collect a spill from the process area of liquefaction trains 1 and 2, the main pipe rack, and a portion of the jetty loading line located at the northwest corner of the south berth. PALNG proposes to install another concrete impoundment at the north marine berth area that would collect a potential spill from the remaining portion of the north jetty LNG loading line. For more information on the spill containment systems, see section 4.12.

2.1.1.3 Refrigerant Storage Area and Truck Unloading Facilities

Propane and ethane would be used in the liquefaction trains' refrigeration systems and would be stored on site near the utility area. Liquid propane would be stored in two storage vessels for refrigerant

makeup to provide inventory of one liquefaction train. Two additional propane storage vessels would be installed and would remain empty and be available for de-inventorying in the event of a shutdown. The propane storage vessels would normally be filled from the refrigerant self-generation equipment; however, truck unloading facilities would be provided to allow for the import of propane from pressurized tanker trucks.

Liquid ethane would also be stored in an insulated jacketed or double-wall pressurized storage vessel to provide inventory for one liquefaction train. The ethane vessel would normally be filled from the refrigerant self-generation equipment; however, truck unloading facilities would also be provided to allow for the import of ethane from pressurized, refrigerated tanker trucks.

2.1.1.4 Condensate Storage Area and Truck Loading Facilities

Stabilized condensate produced by the heavy hydrocarbon removal units would be stored near the MOF in two low-pressure storage tanks with a capacity of approximately 510,000 gallons. This area would include truck offloading facilities for the average of 14 tanker trucks per week required to remove condensate from the liquefaction terminal and transport it off site using a heavy haul road constructed around Round Lake to the north and west.

2.1.1.5 Marine Berth

The Liquefaction Project would include construction of marine facilities to berth and load LNG vessels. The ship loading facilities would be designed in accordance with applicable codes and standards, including but not limited to, those of the Oil Companies International Marine Forum, the Society of International Gas Tanker and Terminal Operators, the API, and the American Society of Civil Engineers (ASCE). The marine transfer system, including all facilities associated with the LNG vessels up to the last valve immediately before the LNG storage tanks, would comply with USCG regulations for LNG Waterfront Facilities 33 CFR 127 and Executive Order 10173. The facilities would be designed to provide safe berthing for the receipt and mooring of LNG vessels and to ensure the safe transfer of LNG from the onshore storage facilities to the ships.

Ship Berthing and Maneuvering Area

The marine facilities would consist of an LNG loading slip with two berths and a turning basin approximately 1,700 feet in diameter. Once both liquefaction trains are operational, the marine facilities would be capable of receiving up to four Q-max and/or Q-flex ships with respective LNG storage capacities of 266,000 m^3 and 216,000 m^3 respectively per week, for a total of 180 ships per year or 3 to 4 ships per week. The actual number of ships would be dependent on the size of the ships calling on the liquefaction terminal over time.

The area for the LNG vessel loading slip and berths would be approximately 1,371 feet long and 903 feet wide and dredged to a nominal depth of -45 feet mean lower low water (MLLW). A turning basin with an approximate radius of 850 feet and side slopes with a 3:1 ratio would be located partially within the slip. Construction of the slip, berthing area, and turning basin would require dredging a total of about 7.8 million yd^3 of material.

Each berth would consist of four breasting dolphins and six breasting dolphins equipped with energy absorbing fenders capable of berthing the full range of ships being considered, as well as access ladders to the water and quick release mooring hooks with load monitoring systems. Personnel access bridges would be provided at each berth to connect each breasting dolphin to the lower deck of an unloading platform and to the six mooring dolphins. Mooring dolphins at each berth would also consist of reinforced

concrete caps supported on steel piles. Mooring dolphins would be provided with quick release mooring hooks with load monitoring systems, light poles, access ladders to the water, and protective hand railing, except on the mooring line faces. The loading platform at each berth would be supported on piles and be a separate structure than the breasting and mooring dolphins.

LNG Loading and Transfer Facilities

Each loading platform would have four 16-inch-diameter loading arms: two used to load LNG into ship storage tanks, and two hybrid arms that can load LNG onto ships or return vapor to the terminal storage tanks. The loading arms would be designed with swivel joints to provide the required range of movement between the ship and the shore connections. Each arm would be fitted with powered emergency release couplings and valves, as well as a quick connect/disconnect flange, to isolate the arm and the ship in the event of an emergency separation. Additional loading platform equipment would include a ship gangway, area lighting facilities, navigation aids, and firewater monitors.

After loading the ships, pressurized nitrogen gas would be used to de-inventory the LNG in the unloading arms either back to the ship tanks or to the transfer lines. During periods when there is no ship unloading operation in progress or "holding mode," LNG would be continuously circulated through the transfer lines to maintain the lines at cryogenic temperature. This would prevent thermal shock to the piping and the generation of excessive vapor upon initiation of the next loading operation.

2.1.1.6 Material Offloading Facility

Construction equipment and materials would be delivered to the site via barges on the Port Arthur Canal. The MOF would be created by modifying existing concrete dock structures on the western shore of the Port Arthur Canal north of the proposed liquefaction site. Construction of the MOF would require dredging the canal below and around the dock to a depth of -25 feet MLLW, producing about 67,600 yd^3 of dredge material. These spoil placement areas are discussed further in section 4.8. A heavy haul road would be constructed around Round Lake to the north and west to provide a route from the MOF to the other liquefaction facilities. Barge traffic during construction would reach a peak of 175 ships per month. Following construction, the dock would be maintained as a mooring area for tug boats associated with the LNG carrier ships.

2.1.1.7 Pioneer Dock

Bulk rock and gravel materials would be delivered via barges to a Pioneer Dock constructed on the Port Arthur Canal south of the MOF. Similar to the MOF, the Pioneer Dock would also be constructed by modifying existing concrete dock structures on the western shore of the canal. Construction of the Pioneer Dock would require dredging the canal below and around the dock to a depth of -45 feet MLLW, producing about 508,000 yd^3 of dredge material. Maintenance dredging would not be required for the Pioneer Dock during project operation. Aggregate materials would be unloaded from barges and transported over SH 87 to the Liquefaction Project site using an elevated conveyor system (see figure 2.1.1-2).

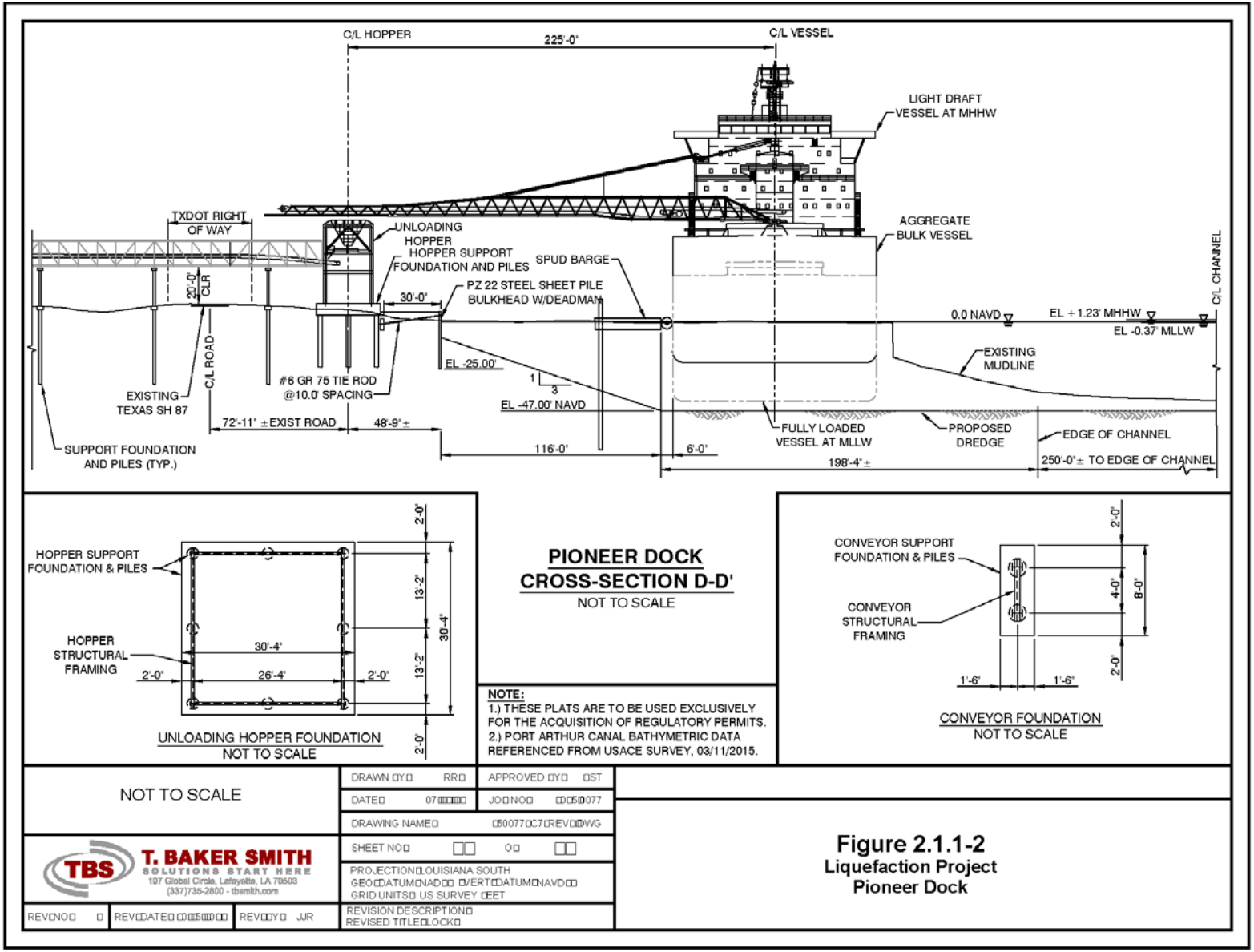


Figure 2.1.1-2
Liquefaction Project
Pioneer Dock

2.1.1.8 Ancillary Utilities, Buildings, and Service Facilities

In addition, the Liquefaction Project would include many utilities and associated auxiliary equipment. The major auxiliary systems required for the operation of the liquefaction facility include BOG, fuel gas, hot oil, flares, instrument and utility air supply, water supply, demineralized water, nitrogen, and backup power. Furthermore, hot oil would be used to provide the heat demand to the plant users, molecular sieve regeneration, amine regeneration, and deethanizer and debutanizer reboilers. There are two types of proposed flare systems, including ground flares and an elevated marine flare stack. The ground flares would be designed to handle the vent gases from the process areas associated with the liquefaction operations, while the elevated marine flare stack would be designed to control vent gases associated with the LNG storage tanks and LNG ship vapor return from the ship during unloading and cooldown operation. Diesel would be stored in dedicated tanks for their respective equipment, which includes essential firewater pumps, stormwater pumps, and three diesel generators. Electric power would be generated on-site but would be located outside the storm levee and would require using eight of nine gas turbine driven generators. Liquid nitrogen vaporizers would be used to supply gaseous nitrogen for various uses in the plant including pre-commissioning and start-up. In addition, aqueous ammonia would be used in the selective catalytic removal process to reduce the nitrogen oxide (NO_X) emissions from the self-generation power turbines proposed as part of the Liquefaction Project.

2.1.1.9 LNG Vessels

The marine facilities would be designed to accommodate LNG carrier ships as large as Q-Max (266,000 m^3 storage capacity), but would typically receive ships with capacities between 125,000 m^3 and 220,000 m^3. An LNG carrier's transit to the terminal would begin at the SNWW, where it would enter the pilot boarding station located approximately 20 miles offshore in the Gulf of Mexico. The LNG carrier then would travel 20 miles north to the entrance of the shipping channel. From here, the LNG carrier would transit approximately 6 nautical miles towards Sabine Lake, before turning left to enter the Port Arthur Ship Canal. Once in the Port Arthur Ship Canal, the LNG carrier would transit approximately 4.3 nautical miles to reach its final destination at PALNG's facility. LNG carriers would return to sea by reversing their travel.

2.1.1.10 Dredge Disposal Areas and Pipelines

The 7.8 million yd^3 of dredge material removed from the Port Arthur Canal for the marine berth, turning basin, MOF, and Pioneer Dock would be deposited on four disposal areas: Dredge Disposal Area 8, Dredge Disposal Area 9A, Dredge Disposal Area 9B, and the J.D. Murphree WMA. Dredge Disposal Areas 8, 9A, and 9B are existing sites located on the Port Arthur Canal north of the Liquefaction Project and are managed by the Sabine-Neches Navigation District (SNND). These areas have received dredge disposal from previous construction and maintenance dredging activities and would accommodate about 4.9 million yd^3 of dredge material from construction of the Liquefaction Project. The remaining 2.9 million yd^3 of dredge material would be placed on the J.D. Murphree WMA, managed by the TPWD, for beneficial use in restoring its marshlands (see section 4.4.2.1). PALNG would acquire all necessary permits and approvals from the TPWD and SNND for dredge disposal in these areas. As further described in section 4.4.2.1, PALNG developed a compensatory mitigation plan commensurate with the amount and type of impact resulting from construction and operation of the Liquefaction Project. Compensatory mitigation would be initiated at the time of the first USACE-jurisdictional impact occurs and based on a timeline established by the USACE.

Dredge material would be transported to these sites via an aboveground, temporary, 30-inch-diameter pipeline laid on the ground surface or, where necessary, floated in water. Figure 2.1.1-3 shows the locations of the dredge disposal areas and associated dredge pipelines, which would cross the Round

Lake Canal (to reach the J.D. Murphree WMA) as well as the Intracoastal Waterway (ICWW) and Port Arthur Canal (to reach Dredge Disposal Areas 8, 9A, and 9B).

2.1.2 Texas Connector Project

2.1.2.1 Northern and Southern Pipelines

PAPL proposes to construct a natural gas pipeline system consisting of 34.2 miles total of new natural gas pipeline in Jefferson and Orange Counties, Texas and Cameron Parish, Louisiana. The pipeline facilities would be comprised of the following:

- Northern Pipeline – 26.6 miles of 42-inch-diameter pipeline entering the liquefaction facilities site from the north and interconnecting with existing facilities near Beaumont, Texas owned by GTS/CIPCO, HPL, TETCO, and FGT.

- Southern Pipeline – 7.6 miles of 42-inch-diameter pipeline entering the liquefaction facilities site from the south to interconnections with an existing KMPL facility in Cameron Parish, Louisiana, and an existing NGPL facility in Jefferson County, Texas.

Figure 2.1.2-1 provides a general location map for the Texas Connector Project while more detailed location maps are included in appendix B.

The Northern and Southern Pipelines would be collocated with existing pipeline and utility rights-of-way for 14.7 miles, or about 43 percent of their total 34.2-mile length. The pipelines would be designed for a maximum allowable operating pressure (MAOP) of 1,400 psig and would contribute to transporting the total capacity of 2.0 bscfd of natural gas to the Liquefaction Project facilities.

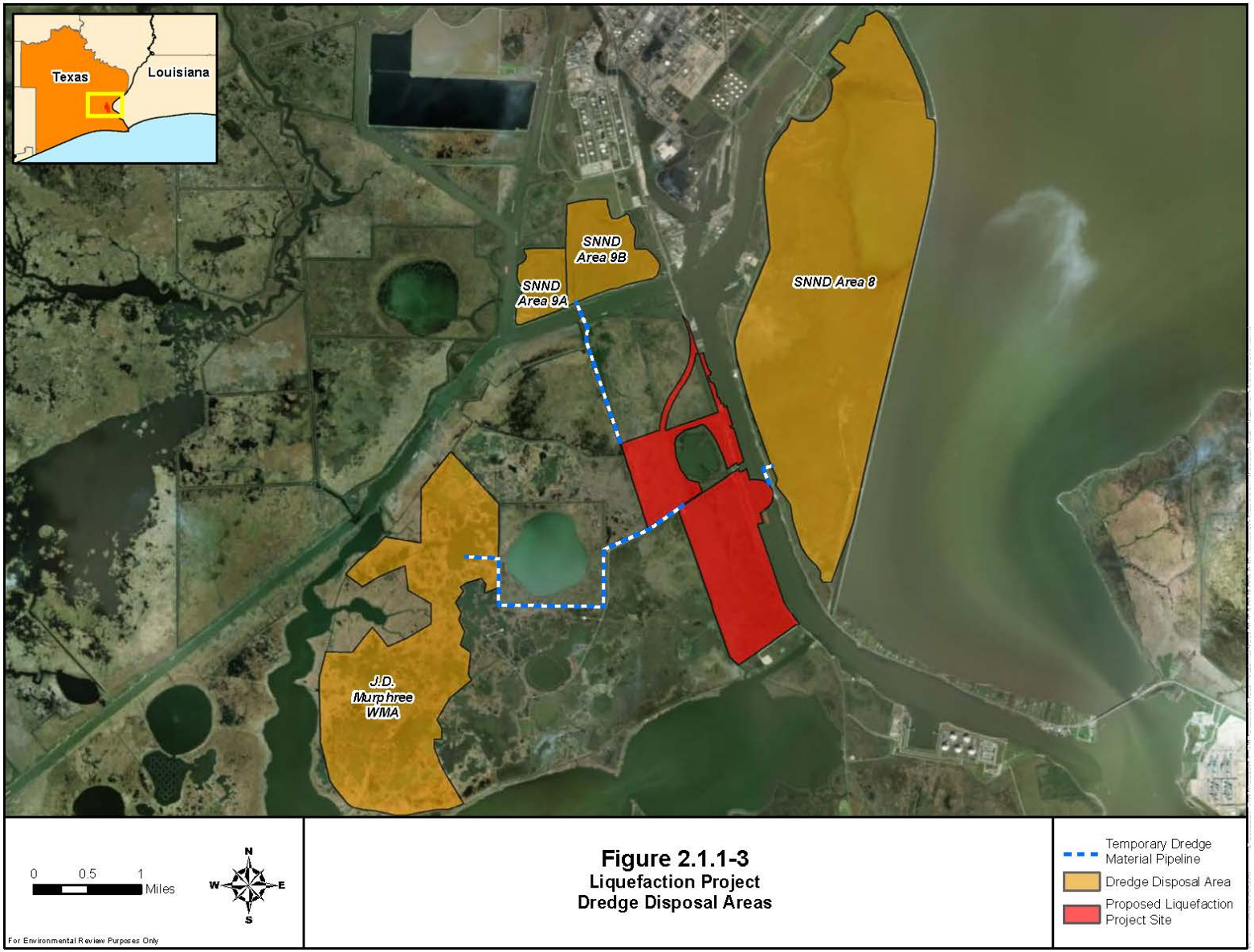
2.1.2.2 Laterals

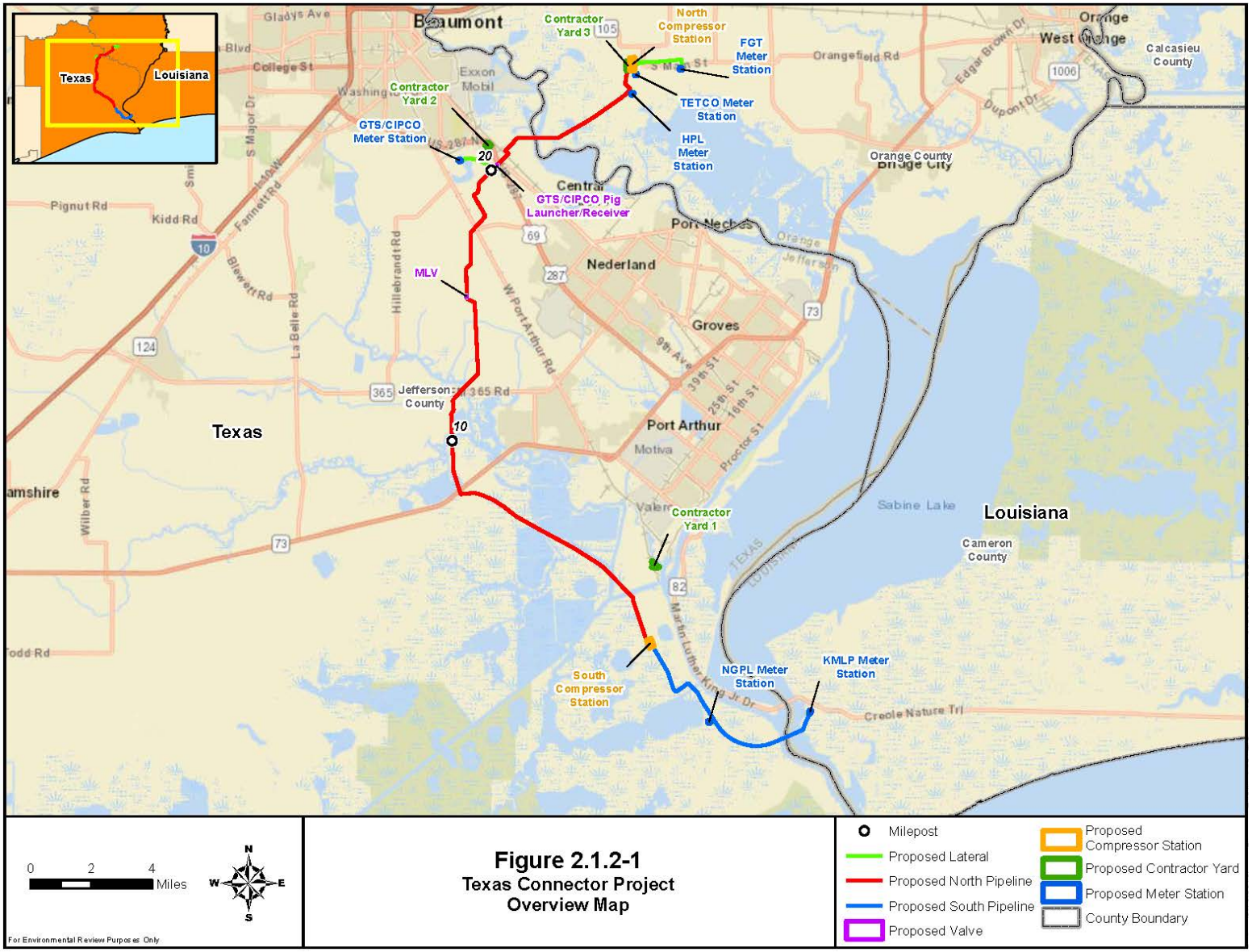
A total of 4.7 miles of 42-inch-diameter lateral pipelines would connect the Northern and Southern Pipelines to six meter stations proposed at existing pipelines that would supply feed gas to the Texas Connector Project (see table 2.1.2-1). The laterals would be collocated with existing pipeline and utility rights-of-way for 3.7 miles, or about 79 percent of their total 4.7-mile length.

TABLE 2.1.2-1

Pipeline Laterals for the Texas Connector Project

Facility	Approximate Milepost at Point of Interconnect with Texas Connector Project	Length (miles)
Northern Pipeline		
GTS/CIPCO Lateral	20.2	1.3
HPL Lateral	25.6	1.0
TETCO Lateral	26.6 (at North Compressor Station)	0.1
FGT Lateral	26.6 (at North Compressor Station)	1.8
	Laterals on Northern Pipeline Total	**4.2**
Southern Pipeline		
NGPL Lateral to Existing Meter Station	3.6	<0.1
NGPL Lateral	3.7	0.3
KMLP Lateral	7.6	0.1
	Laterals on Southern Pipeline Total	**0.4**
	Texas Connector Project Lateral Pipelines Total	**4.7**


Texas
Louisiana
SNND Area 9B
SNND Area 9A
SNND Area 8
J.D. Murphree WMA
0 0.5 1 Miles
N
W
E
S
For Environmental Review Purposes Only
Figure 2.1.1-3
Liquefaction Project
Dredge Disposal Areas
Temporary Dredge Material Pipeline
Dredge Disposal Area
Proposed Liquefaction Project Site


Texas
Louisiana
Beaumont
Contractor Yard 3
North Compressor Station
FGT Meter Station
TETCO Meter Station
HPL Meter Station
Contractor Yard 2
GTS/CIPCO Meter Station
GTS/CIPCO Pig Launcher/Receiver
MLV
Orange
West Orange
Calcasieu County
Orange County
Bridge City
Port Neches
Nederland
Groves
Port Arthur
Motiva
Jefferson County
Contractor Yard 1
South Compressor Station
NGPL Meter Station
KMLP Meter Station
Sabine Lake
Cameron County
Creole Nature Trl
Pignut Rd
Kidd Rd
College St
Orangefield Rd
Edgar Brown Dr
Dupont Dr
Fannett Rd
Blewett Rd
La Belle Rd
Hillebrandt Rd
W Port Arthur Rd
Wilber Rd
Todd Rd
Martin Luther King Jr Dr
Proctor St
9th Ave
39th St
25th St
16th St
20
10
0 2 4 Miles
For Environmental Review Purposes Only
Figure 2.1.2-1
Texas Connector Project
Overview Map
Milepost
Proposed Lateral
Proposed North Pipeline
Proposed South Pipeline
Proposed Valve
Proposed Compressor Station
Proposed Contractor Yard
Proposed Meter Station
County Boundary

2.1.2.3 Aboveground Facilities

As listed in table 2.1.2-2, the Texas Connector Project would require the construction of the following new aboveground facilities:

- Northern Pipeline – One compressor station, four interconnecting meter stations, one mainline valve (MLV), and four pig launchers/receivers.

- Southern Pipeline – One compressor station, two interconnecting meter stations, one receipt meter station, and four pig launchers/receivers. Of these facilities, the compressor and receipt meter stations would be constructed within the Liquefaction Project property boundaries.

All aboveground facilities would be constructed along the pipeline system within and/or adjacent to the permanent right-of-way and surrounded by fencing for security. Aboveground facilities would be located near existing roads, from which permanent driveways would be installed as part of facility construction.

TABLE 2.1.2-2

Aboveground Facilities for the Texas Connector Project

Facility	Approximate Milepost	County/Parish, State
Northern Pipeline		
MLV	15.3 on Northern Pipeline	Jefferson County, Texas
GTS/CIPCO Pig Launcher/Receiver	20.2 on Northern Pipeline	Jefferson County, Texas
North Compressor Station	26.6 on Northern Pipeline	Orange County, Texas
GTS/CIPCO Meter Station	1.3 on GTS Lateral	Jefferson County, Texas
HPL Meter Station	1.0 on HPL Lateral	Orange County, Texas
TETCO Meter Station	0.1 on TETCO Lateral	Orange County, Texas
FGT Meter Station	1.8 on FGT Lateral	Orange County, Texas
Southern Pipeline		
South Compressor Station	0.0 on Southern Pipeline	Jefferson County, Texas
KMLP Meter Station	7.6 on Southern Pipeline	Cameron Parish, Louisiana
NGPL Meter Station	0.2 on NGPL Lateral	Jefferson County, Texas

Compressor Stations

The two compressor stations would consist of centrifugal compressor units, upstream suction scrubbers, downstream electric motor-driven natural gas coolers, unit and station blowdowns with silencers, above and below ground piping and valves, system utilities (e.g., fuel gas, water and air supplies), control/ maintenance buildings with a septic tank/leach field or tie-ins to municipal sewer treatment facilities, and surrounding security fence.

The North Compressor Station would be constructed at milepost (MP) 26.6 along the Northern Pipeline and consist of three gas-driven compressors rated at 16,684 hp each. The compressor station would require approximately 1.3 megawatts (MW) of electric power for auxiliary equipment, which would be supplied by a nearby Entergy power line running across and adjacent to the compressor station property boundary. Personnel and equipment for both the construction and operation phases of the Texas Connector Project would access the compressor station site from South Mansfield Ferry Road located at the south end of the property.

The South Compressor Station would be constructed at MP 0.0 along the Southern Pipeline and consist of three electric-driven compressors rated at 5,000 hp each. The onsite combustion generators used

to power the liquefaction facilities would also provide the approximately 12 MW of electricity needed to power the South Compressor Station's compression units and ancillary equipment. Personnel and equipment for both the construction and operation phases of the Texas Connector Project would access the compressor station site from relocated SH 87 to the east.

Meter Stations

One delivery point meter station would be constructed within PALNG's property or the South Compressor Station fence line at the liquefaction site (MP 0.0 of the Northern and Southern Pipelines). Six receipt point meter stations would be constructed, with one at each of the six interconnects with existing pipelines (see table 2.1.2-2). Each receipt point meter station would be constructed within or adjacent to the right-of-way of each existing pipeline supplying feed gas to the Texas Connector Project at its point of interconnection with the lateral pipeline. The lateral pipeline would then extend from the meter station to the mainline where it would be tied-in.

A typical meter station and interconnect site would include a communications facility for each interconnection, generally including service for voice communications and Supervisory Control and Data Acquisition (SCADA) backup. Each site would include electric power for lighting, ventilation, and control equipment. Each meter station would be unmanned and consist of a meter and regulator building, meter and control valve skid, separator, condensate tank, associated above and below ground piping, valve fixtures to tie-in to the proposed pipeline, and surrounding security fence.

Mainline Valves

MLVs are designed to divide a pipeline into segments for safety reasons, including shutting down gas flow and allowing access to the pipeline from the surface. PAPL proposes to construct one MLV at MP 15.2 along the Northern pipeline, which would be consistent with DOT regulations in 49 CFR 192. The MLV would be installed within the permanent right-of-way over the buried pipeline, with the blowdown valve and manual valve operator extending aboveground. The valve site would be brought to level grade, surfaced with gravel or crushed rock, and surrounded by fencing with locked equipment and personnel access gates. At this time, PAPL has not identified whether MLVs would be operated manually, automatically, or remotely from a central control facility via the SCADA system.

Pig Launchers/Receivers

The pig launchers/receivers constructed for the Texas Connector Project would be designed to accommodate pipeline inspection gauges or "pigs," which monitor pipeline integrity by being launched into the gas stream to scan the interior of the pipe for corrosion, cracks, or other irregularities/anomalies. Pig launcher/receivers would be installed within the boundaries of each compressor station and all receipt point meter stations, except for the GTS/CIPCO tie-in location. At that location, the pig launcher/receiver would be constructed at the end of the GTS Lateral where it connects to the Northern Pipeline at MP 20.2.

Other Aboveground Facilities

As needed, cathodic protection facilities (including anode beds, test leads, rectifiers, and test stations) would be installed along the Northern and Southern Pipelines and lateral pipelines to help protect the metal pipe from corrosion. These facilities would be installed within the permanent right-of-way and enclosed by security fencing. PAPL would provide cathodic protection locations to FERC prior to construction of the Texas Connector Project, as locations where the facilities need to be installed are determined.

2.1.3 Louisiana Connector Project

2.1.3.1 Main Pipeline

PAPL proposes to construct a natural gas pipeline system consisting of 130.8 miles total of new 42-inch-diameter natural gas pipeline in Jefferson and Orange Counties, Texas and Cameron, Calcasieu, Beauregard, Allen, Evangeline, and St. Landry Parishes, Louisiana. This pipeline would connect with the existing Centana, TETCO, TGP, Egan, Pine Prairie, TGT, ANR, and CGT pipeline systems. Figure 2.1.3-1 provides a general location map for the Louisiana Connector Project, while more detailed location maps are included in appendix B.

The Louisiana Connector Project would be constructed collocated with existing pipeline and utility rights-of-way for 95.4 miles, or about 73 percent of its total length. The pipeline would be designed for a MAOP of 1,400 psig and would contribute to the total capacity of 2.0 bscfd of natural gas transported to the Liquefaction Project facilities.

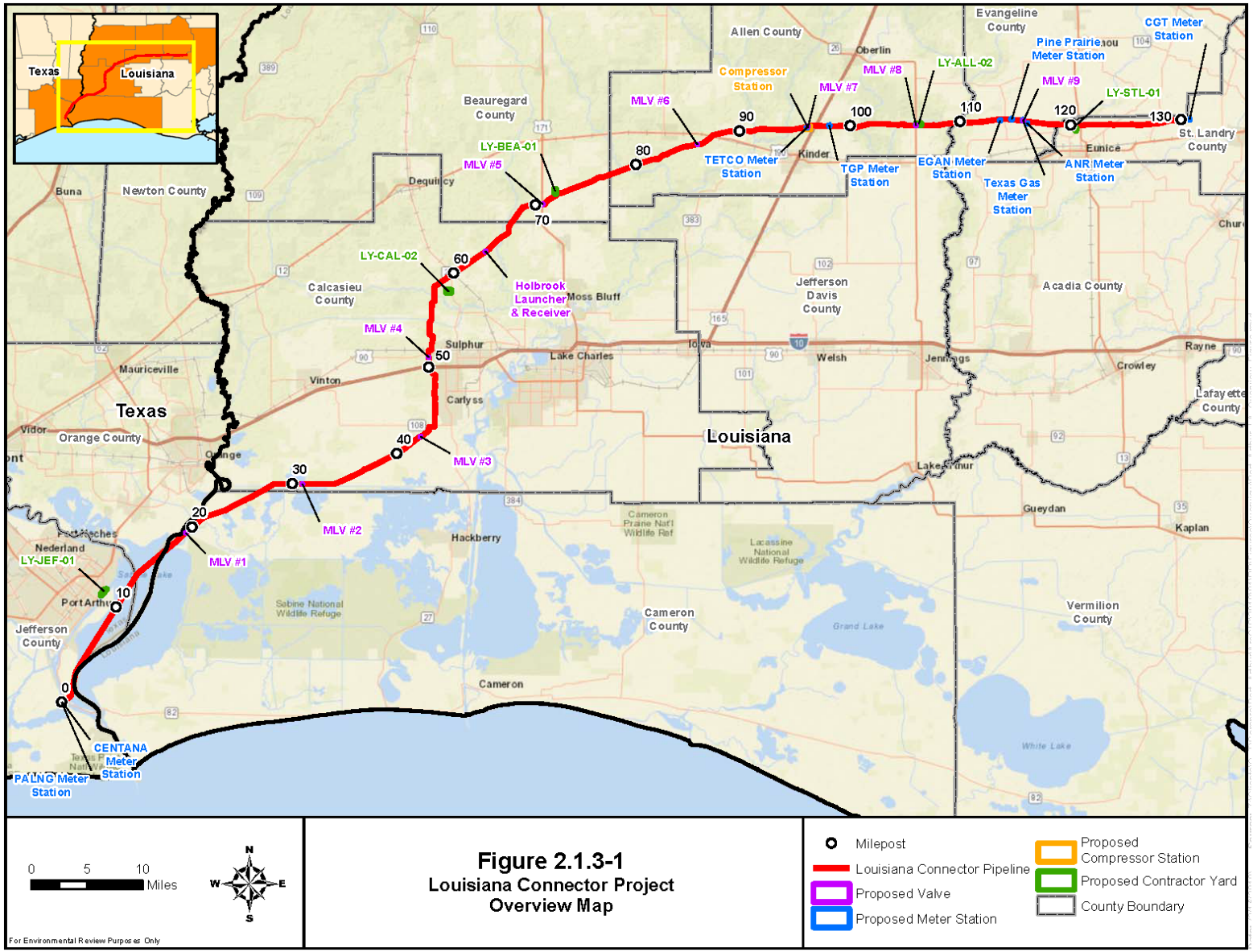
2.1.3.2 Laterals and Tie-Ins

A total of 0.5 mile of 42-inch-diameter lateral and tie-in pipelines would connect the Louisiana Connector Project to eight existing pipelines to supply feed gas to the Liquefaction Project (see table 2.1.3-1). Tie-ins would connect existing pipelines to their respective meter stations, which would be connected by laterals to the Louisiana Connector Project mainline.

TABLE 2.1.3-1

Pipeline Laterals and Tie-ins for the Louisiana Connector Project

Facility	Approximate Milepost at Interconnect with or Adjacent to Louisiana Connector Project	Length (miles)
Centana Tie-in #1	0.1	< 0.1
Centana Tie-in #2	0.1	< 0.1
Compressor Station Lateral #1	96.3	< 0.1
Compressor Station Lateral #2	96.3	< 0.1
TETCO Tie-in #1	96.4	< 0.1
TETCO Tie-in #2	96.4	< 0.1
TGP Lateral	98.1	< 0.1
TGP Tie-in	98.2	< 0.1
Egan Lateral	113.7	< 0.1
Egan Tie-in	113.8	< 0.1
Pine Prairie Lateral	114.8	< 0.1
Pine Prairie Tie-in #1	114.8	< 0.1
Pine Prairie Tie-in #2	114.8	< 0.1
TGT Tie-in #1	115.7	< 0.1
TGT Tie-in #2	115.7	< 0.1
TGT Tie-in #3	115.7	< 0.1
TGT Lateral	115.8	< 0.1
ANR Lateral	116.2	< 0.1
ANR Tie-in #1	116.2	< 0.1
ANR Tie-in #2	116.2	< 0.1
ANR Tie-in #3	116.2	< 0.1
CGT Tie-in #1	130.9	< 0.1
CGT Tie-in #2	130.9	< 0.1
CGT Tie-in #3	130.9	< 0.1
	Lateral and Tie-in Pipelines Total	**0.5**


Texas
Louisiana
Allen County
Evangeline County
Oberlin
Compressor Station
MLV #8
LY-ALL-02
Pine Prairie Meter Station
MLV #9
LY-STL-01
CGT Meter Station
St. Landry County
Beauregard County
MLV #6
90
100
110
120
130
MLV #7
Kinder
TETCO Meter Station
TGP Meter Station
EGAN Meter Station
Texas Gas Meter Station
ANR Meter Station
Eunice
Buna
Newton County
Dequincy
LY-BEA-01
MLV #5
80
70
LY-CAL-02
60
Holbrook Launcher & Receiver
Moss Bluff
Calcasieu County
Jefferson Davis County
Acadia County
MLV #4
50
Sulphur
Lake Charles
Iowa
Welsh
Jennings
Rayne
Crowley
Mauriceville
Vinton
Carlyss
Texas
Vidor
Orange County
Orange
40
MLV #3
Louisiana
30
MLV #2
20
MLV #1
Cameron Prairie Nat'l Wildlife Ref
Hackberry
Lacassine National Wildlife Refuge
Lake Arthur
Gueydan
Kaplan
Nederland
LY-JEF-01
Port Arthur
10
Sabine National Wildlife Refuge
Cameron County
Vermilion County
Jefferson County
0
Cameron
CENTANA Meter Station
PALNG Meter Station
0 5 10 Miles
N
W
E
S
For Environmental Review Purposes Only
Figure 2.1.3-1
Louisiana Connector Project
Overview Map
Milepost
Louisiana Connector Pipeline
Proposed Valve
Proposed Meter Station
Proposed Compressor Station
Proposed Contractor Yard
County Boundary

2.1.3.3 Aboveground Facilities

As listed in table 2.1.3-2, the Louisiana Connector Project would require the construction of one compressor station, nine meter stations, nine MLVs, and four pig launchers/receivers. All aboveground facilities would be constructed along the pipeline system within and/or adjacent to the permanent right-of-way and surrounded by fencing for security. Aboveground facilities would be located near existing roads, from which permanent driveways would be installed as part of facility construction.

TABLE 2.1.3-2

Aboveground Facilities for the Louisiana Connector Project

Facility	Approximate Milepost	County/Parish, State
PALNG Meter Station	0.0 on Pipeline	Jefferson County, Texas
Centana Meter Station	0.1 on Centana Tie-in	Jefferson County, Texas
MLV #1	19.3 on Pipeline	Cameron Parish, Louisiana
MLV #2	31.0 on Pipeline	Calcasieu Parish, Louisiana
MLV #3	42.7 on Pipeline	Calcasieu Parish, Louisiana
MLV #4	51.0 on Pipeline	Calcasieu Parish, Louisiana
MLV #5	70.7 on Pipeline	Beauregard Parish, Louisiana
MLV #6	85.9 on Pipeline	Allen Parish, Louisiana
MLV #7	96.3 on Pipeline	Allen Parish, Louisiana
Compressor Station	96.3 on Pipeline	Allen Parish, Louisiana
TETCO Meter Station	0.1 on TETCO Tie-in	Allen Parish, Louisiana
TGP Meter Station	0.1 on TCP Lateral	Allen Parish, Louisiana
MLV #8	106.0 on Pipeline	Allen Parish, Louisiana
Egan Meter Station	0.1 on Egan Lateral	Evangeline Parish, Louisiana
Pine Prairie Meter Station	0.1 on Pine Prairie Lateral	Evangeline Parish, Louisiana
TGT Meter Station	0.1 on TGT Lateral	Evangeline Parish, Louisiana
MLV #9	115.7 on Pipeline	Evangeline Parish, Louisiana
ANR Meter Station	0.1 on ANR Lateral	Evangeline Parish, Louisiana
CGT Meter Station	0.1 on CGT Tie-in	St. Landry Parish, Louisiana

Compressor Station

One compressor station would be constructed at MP 96.3 and consist of four natural gas turbine driven compressor units rated at 22,475 hp each, upstream suction scrubbers, downstream electric motor-driven natural gas coolers, unit and station blowdowns with silencers, above and below ground piping and valves, system utilities (e.g., fuel gas, water and air supplies), control/maintenance buildings with a septic tank/leach field or tie-ins to municipal sewer treatment facilities, and surrounding security fence. Two 568-kilowatt diesel generators would supply backup power to the compressor station, and diesel fuel would be stored onsite in an aboveground 4,200-gallon double-walled tank with secondary containment. During construction and operation, personnel and equipment would access the compressor station site from Green Oak Cemetery Road from the south and northeast ends of the property.

Meter Stations

One delivery point meter station associated with the Louisiana Connector Project would be constructed within PALNG's property in the southeast portion of the liquefaction site (MP 0.0 of the Louisiana Connector Project). In addition, eight receipt point meter stations would be constructed, with one at each of the eight interconnects with existing pipelines (see table 2.1.3-2). Each receipt point meter

station would be constructed within or adjacent to the right-of-way of each existing pipeline supplying feed gas to the Louisiana Connector Project at its point of interconnection with the lateral pipeline. The lateral pipeline would then extend from the meter station to the mainline where it would be tied-in. Meter stations would be constructed with the same typical design parameters as those described in section 2.1.2.3.

Mainline Valves

PAPL proposes to construct nine MLVs at locations along the pipeline consistent with DOT regulations in 49 CFR 192 (see table 2.1.3-2). All MLVs would be installed within the permanent right-of-way over the buried pipeline and constructed with the same typical design parameters as those described in section 2.1.2.3. At this time, PAPL has not identified whether MLVs would be operated manually, automatically, or remotely from a central control facility via the SCADA system.

Pig Launchers/Receivers

Four pig launchers/receivers would be constructed for the Louisiana Connector Project: one at each end of the pipeline, one at MP 63.4, and one at MP 96.3. Pig launchers/receivers would be constructed within the boundaries of an aboveground facility or in the permanent pipeline right-of-way.

Other Aboveground Facilities

As needed, cathodic protection facilities (including anode beds, test leads, rectifiers, and test stations) would be installed along the mainline and lateral pipelines to help protect the metal pipe from corrosion. These facilities would be installed within the permanent right-of-way. PAPL would provide cathodic protection locations to FERC prior to construction of the Louisiana Connector Project, as locations where the facilities need to be installed are determined.

2.1.4 Nonjurisdictional Facilities

Nonjurisdictional facilities associated with the Liquefaction Project and Louisiana Connector Project area summarized below. PAPL has not identified any nonjurisdictional facilities required for the Texas Connector Project.

2.1.4.1 Liquefaction Project

SH 87, five third-party gas and petroleum pipelines, two telecommunications lines, one electric transmission line, and one water main currently run parallel in a corridor along the western shore of the Port Arthur Canal. SH 87 provides the only land access route to the community of Sabine Pass. PALNG's proposed location for its marine berth on the Port Arthur Canal would require approximately 3.3 miles of these existing utilities to be relocated around the western side of the liquefaction site prior to construction of the liquefaction facilities (see appendix B and section 2.4.6). TDOT indicated in a letter to PALNG dated May 21, 2018, that PALNG would be required to "fulfill all applicable governmental environmental requirements necessary to begin construction." PALNG would work with TDOT to acquire the necessary permits and restore traffic flow to the new highway segment once it is complete and dispose of the old highway materials at an approved facility. Following relocation of the utilities and pipeline, the respective owners of each utility would be responsible for interconnecting the new facilities with the old, for abandoning the unused utility and pipeline segments per industry and regulatory requirements, and for all future operations of the facilities.

Because PALNG would conduct the relocation activities, we have included the environmental impacts associated with these actions in our analysis in section 4.0 of this EIS.

2.1.4.2 Louisiana Connector Project

The nonjurisdictional facilities associated with the Louisiana Connector Project include an electric power supply line to serve the proposed compressor station. The power line would be built by CLECO and BECi in Allen Parish, Louisiana. PAPL, CLECO, and BECi are currently investigating two options. Option One would tap into the existing CLECO distribution line at the intersection of SH 165 and Green Oak Cemetery Road and extend about 0.25 mile along the north side of Green Oak Cemetery Road to the proposed compressor station site. Option Two would tap into the existing BECi three phase distribution line at the intersection of Green Oak Cemetery Road and Green Oak Road and extend about 0.75 mile along the south side of Green Oak Cemetery Road before crossing Green Oak Cemetery Road to the proposed compressor station site. Both options have been assessed and would have similar impacts on environmental resources.

The proposed power supply line to the compressor station would not fall under FERC's jurisdiction, but it is an integral component of the Louisiana Connector Project. Although limited information is available about these facilities, we included them in our cumulative impacts analysis of this EIS (see section 4.13). We note that the power line also may be required to undergo an environmental review by the State of Louisiana.

2.2 LAND REQUIREMENTS

PALNG and PAPL would require 10,611.7 acres of land and open water for construction of the Projects (see table 2.2-1). Operation of the Projects would require a total of 7,952.5 acres, which would be maintained as new permanent right-of-way or new aboveground facility area. About 2,659.2 acres of temporary workspace would revert to preconstruction use and condition. See section 4.8 for more detailed information regarding land uses affected by the Projects.

TABLE 2.2-1

Land Use Summary for the Port Arthur Projects

Project, State, Facility	Construction Impacts (acres)	Operation Impacts (acres)
LIQUEFACTION PROJECT		
Texas		
Liquefaction Site Facilities	948.0	898.1
Dredge Material Disposal/Beneficial Reuse		
J.D. Murphree WMA	1,910.3	1,910.3
Sabine Neches Areas 8, 9A, and 9B [a]	4,141.8	4,141.8
Dredge Pipelines	19.1	0.0
Nonjurisdictional Facilities	121.0	45.2
Liquefaction Project Total	**7,140.0**	**6,995.4**
TEXAS CONNECTOR PROJECT		
Louisiana		
South Pipeline		
Pipeline Right-of-Way	2.9	1.8
ATWS	5.2	0.0
KMPL Lateral		
Pipeline Right-of-Way	1.3	0.5
ATWS	0.5	0.0
Aboveground Facilities		
KMPL Meter Station	3.0	3.0
Access Roads	3.4	1.2

TABLE 2.2-1 (cont'd)

Land Use Summary for the Port Arthur Projects

Project, State, Facility	Construction Impacts (acres)	Operation Impacts (acres)
Texas		
Southern Pipeline		
Pipeline Right-of-Way	40.4	16.1
ATWS	7.6	0.0
Northern Pipeline		
Pipeline Right-of-Way	242.1	92.7
ATWS	110.0	0.0
NGPL Lateral		
Pipeline Right-of-Way	3.4	1.3
ATWS	0.6	0.0
NGPL Lateral to Existing Meter Station		
Pipeline Right-of-Way	0.6	0.2
ATWS	0.0	0.0
GTS/CIPCO Lateral		
Pipeline Right-of-Way	10.5	4.0
ATWS	6.5	0.0
HPL Lateral		
Pipeline Right-of-Way	0.7	0.5
ATWS	0.2	0.0
TETCO Lateral		
Pipeline Right-of-Way	1.8	0.7
ATWS	0.1	0.0
FGT Lateral		
Pipeline Right-of-Way	20.6	6.1
ATWS	2.8	0.0
Aboveground Facilities		
North Compressor Station	40.3	40.3
South Compressor Station [b]	0.0	0.0
NGPL Meter Station	3.0	3.0
GTS/CIPCO Meter Station	2.8	2.8
GTS/CIPCO Pig Launcher/Receiver [c]	0.0	0.0
HPL Meter Station	3.0	3.0
TETCO Meter Station	2.8	2.8
FGT Meter Station	3.0	3.0
MLV Site	0.1	0.1
Access Roads	100.2	2.6
Pipe/Contractor Yard	44.8	0.0
Texas Connector Project Total	**664.7**	**186.1**
LOUISIANA CONNECTOR PROJECT		
Louisiana		
Pipeline		
Right-of-Way	1,482.3	600.9
ATWS	158.9	0.0
Laterals and Tie-ins		
Right-of-Way	2.9	1.3
ATWS	0.2	0.0
Aboveground Facilities		
Louisiana Connector Compressor Station	54.0	45.1
TETCO Meter Station	3.1	3.0
TGP Meter Station	3.3	3.1
Egan Meter Station	3.3	3.1
Pine Prairie Meter Station	3.8	3.3
TGT Meter Station	2.9	2.7
ANR Meter Station	3.5	3.2

TABLE 2.2-1 (cont'd)

Land Use Summary for the Port Arthur Projects

Project, State, Facility	Construction Impacts (acres)	Operation Impacts (acres)
CGT Meter Station	3.3	3.1
Holbrook Pig Launcher/Receiver [d]	0.0	0.0
MLV Sites	0.8	0.8
Access Roads	144.9	8.2
Pipe/Contractor Yards	270.8	0.0
Texas		
Pipeline		
Right-of-Way	575.0	93.2
ATWS	25.0	0.0
Aboveground Facilities		
PALNG Meter Station [b]	0.0	0.0
Centana Meter Station [b]	0.0	0.0
Access Roads [b]	0.0	0.0
Pipe/Contractor Yard	69.0	0.0
Louisiana Connector Project Total	**2,807.0**	**771.0**
Total for all Facilities in Louisiana	**2,154.3**	**684.3**
Total for all Facilities in Texas	**8,457.6**	**7268.2**
Port Arthur Projects Total	**10,611.7**	**7,952.5**

[a] Consists of the entire existing placement site.
[b] The Centana Meter Station, PALNG Meter Station, South Compressor Station, associated tie-in facilities, access roads, and construction workspace would be constructed within the liquefaction facility property boundaries; therefore, their impacts are not included here.
[c] The GTS/CIPCO Pig Launcher/Receiver would be constructed within the Northern Pipeline right-of-way on the Texas Connector Project; therefore, its impacts are not included here.
[d] The Holbrook Pig Launcher/Receiver would be constructed within the Louisiana Connector Project pipeline right-of-way; therefore, its impacts are not included here.
Note: Addends may not sum due to rounding.

2.2.1 Liquefaction Project

Of the total 2,900-acre property owned by PALNG, 948.0 acres would be used for construction of the project facilities, of which 153.5 acres would be for the marine facilities (e.g., ship berths, MOF, Pioneer Dock). Fencing would be used to permanently enclose the entire area of the liquefaction facilities following completion of construction activities. During operations, PALNG would maintain 898.1 acres of the site with concrete, gravel, and vegetation cover, and would permanently convert the area to industrial use. Vehicle traffic would access the liquefaction site via relocated SH 87, and ship traffic would access it from the Port Arthur Canal. About 725.7 acres of estuarine emergent (EEM), palustrine emergent (PEM), and palustrine scrub-shrub (PSS) wetlands would be permanently affected by construction and operation of the liquefaction facilities. The liquefaction facilities are shown on figure 2.1.1-1. Land requirements for the Liquefaction Project are summarized in table 2.2-1.

Dredge materials removed from the Port Arthur Canal as part of the Liquefaction Project would be transported to three approved disposal areas for beneficial reuse. Up to 4,141.8 acres of existing Dredge Disposal Areas 8, 9A, and 9B would receive approximately 4.9 million yd^3 of dredge material. A 1,900-acre area of the J.D. Murphree WMA would receive 2.9 million yd^3 of dredge material for beneficial reuse, resulting in the restoration of 1,268.8 acres of degraded coastal marshlands.

2.2.2 Texas Connector Project

2.2.2.1 Pipeline Right-of-Way and Additional Temporary Workspace

PAPL proposes to use a 125-foot-wide construction right-of-way for the Northern and Southern Pipelines and laterals. At wetland crossings, PAPL is requesting a modification of the Commission's Procedures (section VI.A.3) to allow for the use of a 100- to 125-foot-wide right-of-way to avoid the potential safety hazards associated with saturated and/or granular soils, including shifting soils and trench wall collapse. Our review of PAPL's proposed modifications to the Commission's *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures) is discussed further in sections 4.3 and 4.4. Appendix C summarizes the variations in construction right-of-way widths by milepost across the Texas Connector Project and provides a condition or construction method for each. Construction of the Northern and Southern Pipelines and laterals would temporarily affect 324.3 acres of land.

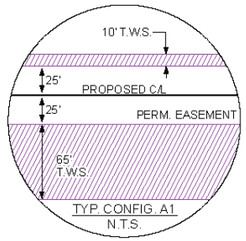
FERC regulations (18 CFR 380.15[d][1]) give primary consideration to the use, enlargement, or extension of existing rights-of-way over developing a new right-of-way to reduce potential impacts on sensitive resources. In general, installation of new pipeline along existing rights-of-way that have been previously cleared (such as pipelines, power lines, roads, or railroads) may be environmentally preferable to the development of new rights-of-way. Construction-related effects and cumulative impacts can normally be reduced by use of previously cleared rights-of-way; however, in congested or environmentally sensitive areas, it may be advantageous to deviate from an existing right-of-way. Additionally, collocation may be infeasible in some areas due to a lack of or unsuitably oriented existing corridors, engineering and design considerations, or constructability or permitting issues. A total of 19.3 miles of the Texas Connector pipeline construction right-of-way would be collocated with existing foreign pipeline and utility permanent rights-of-way, of which 11.2 miles would overlap and 8.1 miles would be adjacent to existing rights-of-way (see section 4.8.1 for details). Figure 2.2.3-1 depicts the typical proposed construction right-of-way cross sections adjacent to an existing pipeline.

In addition to the construction right-of-way, ATWS would be required during construction in areas such as the following:

- Roadway, waterbody, wetland, or other utility crossings.
- Points of intersection and crossovers.
- Entry and exit locations for the horizontal directional drill (HDD) construction method.
- Push-pull construction methods in wetlands.

Appendix D lists each ATWS area proposed on the Texas Connector Project. In total, ATWSs would temporarily require 133.5 acres of land. Although PAPL identified areas where ATWS would be required, additional or alternative areas could be identified in the future due to changes in site-specific construction requirements. PAPL would be required to file information on each of those areas for review and approval by FERC and other applicable federal agencies prior to use.

Following construction, PAPL would retain a 50-foot-wide permanent right-of-way along both pipeline segments. The permanent right-of-way would require 123.9 acres of land. All temporary construction workspace, including ATWS, would be reseeded and allowed to revert to preconstruction conditions in accordance with PAPL's *Environmental Plan* (see section 2.4).



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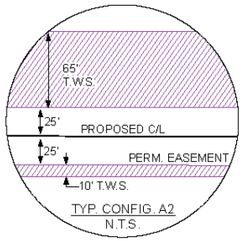

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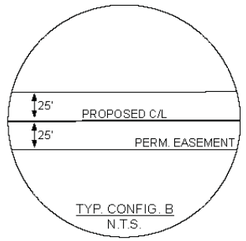

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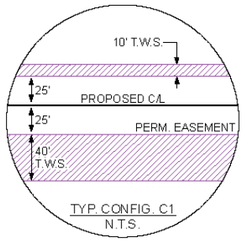

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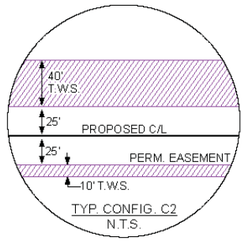

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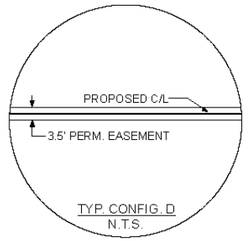

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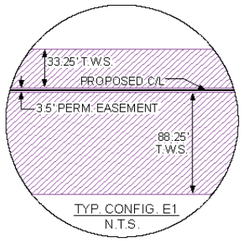

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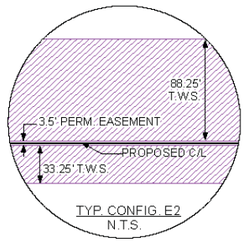

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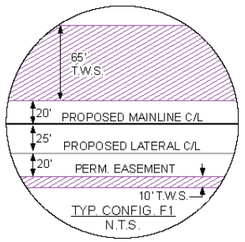

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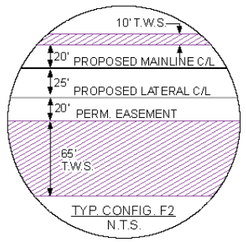

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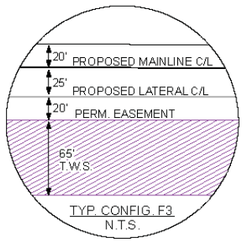

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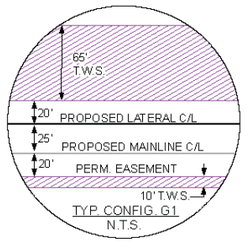

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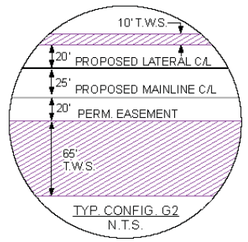

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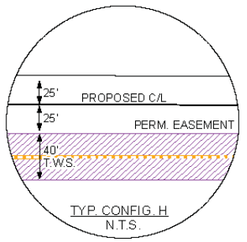

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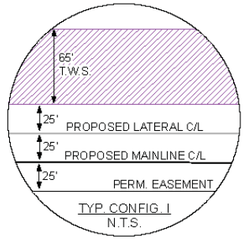

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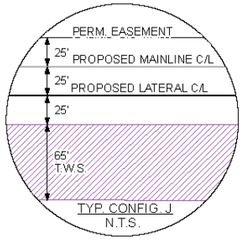

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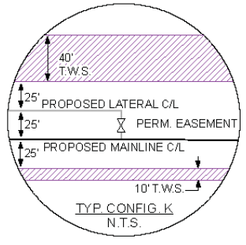

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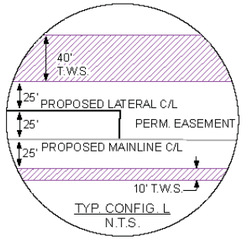

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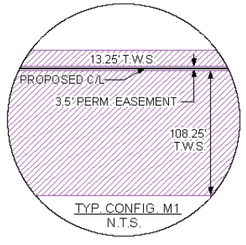

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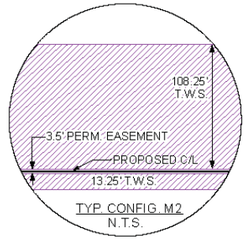

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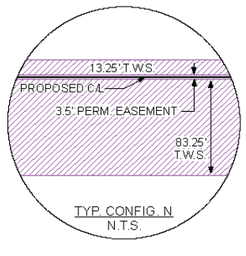
- TEMPORARY ACCESS ROAD



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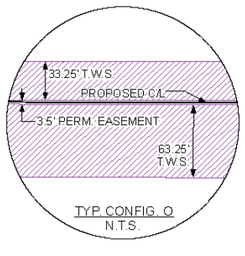

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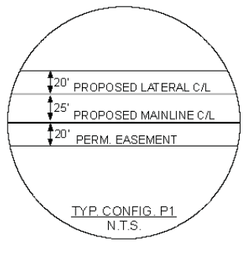

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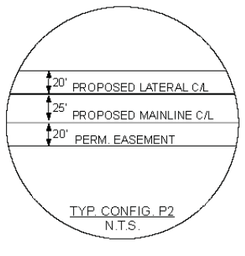

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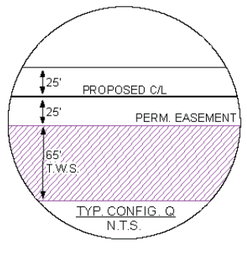

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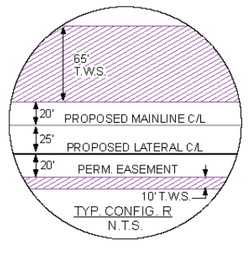

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NOTES:

LEGEND

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	03/01/2017	BWU	GLE	FAT

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DRAWN	BWU	DATE	03/01/2017
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SCALE		SHEET	1 OF 1
JOB NO	22670		
CLIENT	SEMPRA		
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Figure 2.2.3-1
Texas Connector and Louisiana Connector Projects
Typical Right-of-Way Configurations

TABLE 2.2.2-1

Aboveground Facilities for the Texas Connector Project [a]

Facility	Milepost	County/Parish, State	Property Size (acres)
Northern Pipeline			
MLV	15.3 on Northern Pipeline	Jefferson County, Texas	0.1
GTS/CIPCO Pig Launcher/ Receiver	20.2 on Northern Pipeline	Jefferson County, Texas	0.2
North Compressor Station	26.6 on Northern Pipeline	Orange County, Texas	40.4
GTS/CIPCO Meter Station	1.3 on GTS Lateral	Jefferson County, Texas	3.0
HPL Meter Station	1.0 on HPL Lateral	Orange County, Texas	3.0
TETCO Meter Station	0.1 on TETCO Lateral	Orange County, Texas	2.8
FGT Meter Station	1.8 on FGT Lateral	Orange County, Texas	3.0
		Northern Pipeline Total	**52.4**
Southern Pipeline			
South Compressor Station [b]	0.0 on Southern Pipeline	Jefferson County, Texas	0.0
KMLP Meter Station	7.6 on Southern Pipeline	Cameron Parish, Louisiana	3.0
NGPL Meter Station	0.2 on NGPL Lateral	Jefferson County, Texas	3.0
		Southern Pipeline Total	**6.0**
		Aboveground Facilities Total	**58.3**

[a] With the exception of the GTS/CIPCO tie-in location, pig launchers/receivers and the delivery point meter station would be constructed within the permanent pipeline right-of-way or new facility boundaries; therefore, their impacts are associated with those other facilities.

[b] The South Compressor Station would be constructed within the liquefaction facility property boundaries; therefore, its impacts are not included in the totals.

Note: Addends may not sum due to rounding.

2.2.2.2 Access Roads

PAPL would use 47 access roads during construction of the new pipeline facilities, including 29 for the Northern Pipeline, 10 for the Southern Pipeline, and 8 for the laterals, which together would temporarily affect 103.6 acres. Access roads would typically be no more than 40 feet wide. Eight of the access roads would be new roads constructed in open land; the remainder are existing dirt paths or roads. Grading, graveling, side vegetation trimming, and/or deployment of construction mats would possibly be required to improve the roads for project use based on site-specific conditions at the time of construction. Following construction, seven roads would be permanently maintained for project operations, affecting 3.8 acres of land. Appendix E identifies each road improvement proposed for the Texas Connector Project.

2.2.2.3 Contractor Yards

PAPL is proposing to use three contractor yards to house temporary field offices; stage and store equipment, pipe, materials, and vehicles; prepare pipe; and serve as field assembly areas. The contractor yards would be located in areas zoned for industrial activities along the Northern Pipeline and would be accessed via existing roads. These yards would temporarily impact 44.8 acres and PAPL would restore the entire area of each yard to pre-construction conditions (open land, industrial/commercial) after completion of construction. Appendix B shows the locations of the contractor yards.

2.2.3 Louisiana Connector Project

2.2.3.1 Pipeline Right-of-Way and Additional Temporary Workspace

For the mainline, laterals, and tie-ins on the Louisiana Connector Project, PAPL proposes to use a 125-foot-wide construction right-of-way in upland areas, 100- to 125-foot-wide rights-of-way in wetlands, and a 300-foot-wide right-of-way for in-water construction in Sabine Lake. PAPL is requesting a modification of the Commission's Procedures (section VI.A.3) to allow for a greater than 75-foot-wide construction right-of-way in wetlands; our review of PAPL's proposed modifications to the Commission's Procedures is discussed further in sections 4.3 and 4.4. Construction of the main pipeline, laterals, and tie-ins would temporarily affect 2,807.0 acres of land.

A total of 95.4 miles of the Louisiana Connector construction right-of-way would be collocated with existing foreign pipeline and utility permanent rights-of-way (see section 4.8.1 for details). Figure 2.2.3-1 depicts the typical proposed construction right-of-way cross sections adjacent to an existing pipeline.

As described in section 2.2.2-1, ATWS would be required during construction, including at crossings, points of intersection, HDDs, and push-pulls. ATWS for the Louisiana Connector Project would temporarily require 184.1 acres of land (see appendix D for a list of each ATWS area). As noted previously, PAPL would be required to request FERC/applicable agency approval for any additional or alternative ATWS areas prior to use.

Following construction, PAPL would retain a 50-foot-wide permanent right-of-way over the pipeline, which would require 771.0 acres of land. All temporary construction workspace, including ATWS, would be reseeded and allowed to revert to preconstruction conditions in accordance with PAPL's *Environmental Plan* (see section 2.4).

2.2.3.2 Aboveground Facilities

Construction of the aboveground facilities would affect a total of 78.0 acres, of which 67.4 acres would be permanently maintained for operation. Temporary construction areas would be reseeded and allowed to revert to preconstruction condition and use. Table 2.2.3-1 identifies the land requirements for the proposed aboveground facilities.

2.2.3.3 Access Roads

PAPL would use 154 temporary access roads affecting 144.9 acres during construction of Louisiana Connector Project facilities, 17 of which would be routes traveled by boat. Land access roads would typically be no more than 40 feet wide. Nineteen (19) of the land access roads would be permanently improved, 62 would be temporarily used during construction, and 56 would be improved minimally or not at all. Grading, graveling, side vegetation trimming, and/or deployment of construction mats would possibly be required to improve existing roads for project use based on site-specific conditions at the time of construction. Following construction, 19 permanent access roads would be maintained for project operations, affecting 8.2 acres of land. Appendix E identifies each road improvement proposed for the Louisiana Connector Project.

TABLE 2.2.3-1

Aboveground Facilities for the Louisiana Connector Project

Facility	Approximate Milepost	County/Parish, State	Property Size (acres) [a]
PALNG Meter Station [b]	0.0 on Pipeline	Jefferson County, Texas	0.0
Centana Meter Station [b]	<0.1 on Centana Tie-in	Jefferson County, Texas	0.0
MLV #1	19.3 on Pipeline	Cameron Parish, Louisiana	<0.1
MLV #2	31.0 on Pipeline	Calcasieu Parish, Louisiana	<0.1
MLV #3	42.7 on Pipeline	Calcasieu Parish, Louisiana	<0.1
MLV #4	51.0 on Pipeline	Calcasieu Parish, Louisiana	<0.1
MLV #5	70.7 on Pipeline	Beauregard Parish, Louisiana	<0.1
MLV #6	85.9 on Pipeline	Allen Parish, Louisiana	<0.1
MLV #7	96.3 on Pipeline	Allen Parish, Louisiana	<0.1
Compressor Station	96.3 on Pipeline	Allen Parish, Louisiana	45.1
TETCO Meter Station	<0.1 on TETCO Tie-in	Allen Parish, Louisiana	3.0
TGP Meter Station	<0.1 on TCP Lateral	Allen Parish, Louisiana	3.1
MLV #8	106.0 on Pipeline	Allen Parish, Louisiana	<0.1
Egan Meter Station	<0.1 on Egan Lateral	Evangeline Parish, Louisiana	3.1
Pine Prairie Meter Station	<0.1 on Pine Prairie Lateral	Evangeline Parish, Louisiana	3.3
TGT Meter Station	<0.1 on TGT Lateral	Evangeline Parish, Louisiana	2.7
MLV #9	115.7 on Pipeline	Evangeline Parish, Louisiana	<0.1
ANR Meter Station	<0.1 on ANR Lateral	Evangeline Parish, Louisiana	3.2
CGT Meter Station	7.6 on Southern Pipeline	Cameron Parish, Louisiana	3.1
		Aboveground Facilities Total	**67.4**

[a] Pig launchers/receivers would be constructed within the pipeline right-of-way or new facility boundaries; therefore, they are included here as part of the impacts calculated for those other facilities.

[b] Facility would be constructed within the liquefaction facility property boundaries; therefore, its impacts are not included in this table.

2.2.3.4 Contractor Yards

PAPL is proposing to use five contractor yards for the reasons generally described in section 2.2.2.4. Yards would temporarily impact 339.7 acres and PAPL would restore the entire area of each yard to pre-construction conditions after completion of construction (see table 4.8.1-3 for land use types). Appendix B shows the locations of the contractor yards.

2.2.4 Nonjurisdictional Facilities

A 295-foot-wide temporary and 120-foot-wide permanent right-of-way would be required for the relocation of SH 87 and utilities along a new 3.6-mile-long area located entirely within PALNG-owned property. The relocated facilities would be collocated with an existing electric transmission line that arcs around the western side of the Liquefaction Project site. Relocation would temporarily affect 121.0 acres of land during construction, and 45.3 acres would be retained as permanent right-of-way. The TDOT and utility owners would resume operation of their respective facilities following relocation.

2.3 CONSTRUCTION SCHEDULE

The Projects would be constructed in four separate phases on the following schedules, assuming receipt of all certifications, authorizations, and necessary permits:

1. Relocation of SH 87 and its collocated utilities would take about 16 months from the initiation of construction.

2. Site preparations for the Liquefaction Facilities would start after receipt of applicable permits with a phased approach for the first and second liquefaction trains. Engineering and constructing all facilities for the Liquefaction Project would last approximately 5 years from the initiation of construction.

3. The Texas Connector Project would be constructed in two spreads concurrently over a 32-month period from the initiation of construction to begin supplying the Liquefaction Project's liquefaction trains.

    - Spread 1 would consist of the area between MPs 0.0 and 11.6 of the Northern Pipeline, the entire length of the Southern Pipeline, the South Compressor Station, the NGPL facilities and lateral pipeline, and the KMPL facilities and lateral pipeline.

    - Spread 2 would consist of the area between MPs 11.6 and 26.6 of the Northern Pipeline, the North Compressor Station, the GTS/CIPCO facilities and lateral pipeline, the HPL facilities and lateral pipeline, the TETCO facilities and lateral pipeline, and the FGT facilities and lateral pipeline.

4. The Louisiana Connector Project would be constructed in three spreads concurrently over a 21-month period from the initiation of construction.

    - Spread 1 would consist of the area between MPs 0 and 40 of the mainline, the PALNG and Centana Meter Stations, one pig launcher/receiver, and two MLVs.

    - Spread 2 would consist of the area between MPs 40 and 90 of the mainline, the Holbrook pig launcher/receiver, and four MLVs.

    - Spread 3 would consist of the area between MPs 90 and 130 of the mainline; the compressor station; the TETCO, TGP, EGAN, Pine Prairie, Texas Gas, ANR and CGT Meter Stations, two pig launcher/receivers, and three MLVs.

The construction workforce for the Liquefaction Project would expand gradually to a peak of 3,000 employees around the 33rd month and average of 1,300 workers over the 60-month construction period. About 200 permanent employees would be hired for project operations. Relocation of SH 87 and its collocated utilities would require about 150 workers for construction, but none would be retained since operation of these facilities would resume with their respective owners following construction.

For the Texas Connector Project, PAPL would employ an average of 623 workers with a peak of about 750 during the 12-month construction phase, and retain about 20 full-time employees for operations.

The Louisiana Connector Project would employ an average of 474 workers (600 at peak) during its 21-month construction phase, and operations would require about 10 full-time employees.

Construction crews typically would work 10 hours per day, 6 days per week. Work would be conducted during daylight hours, except where the pipe would be installed using the HDD and bore methods, which require around-the-clock operations and typically last a few days to a few weeks. In addition, some time-sensitive construction activities, such as hydrostatic testing, waterbody crossings, and tie-ins, could also require nighttime work.

2.4 CONSTRUCTION PROCEDURES

PALNG and PAPL prepared an *Environmental Plan*[17] for their respective projects based on the Commission's Plan and Procedures. The intent of PALNG's and PAPL's *Environmental Plan* is to identify baseline mitigation measures for minimizing erosion and enhancing revegetation in upland areas; and to identify project-specific baseline mitigation measures for minimizing the extent and duration of construction-related disturbance on waterbodies and wetlands.

PALNG's *Environmental Plan* also includes additional plans and measures PALNG would use to avoid or reduce the various Liquefaction Project impacts:

- *Spill Notification & Agency Contacts*
- *Unanticipated Hazardous Waste Discovery Plan*
- *Unanticipated Discoveries Plan*
- Commission's *Upland Erosion Control, Revegetation and Maintenance Plan* (Plan)
- *Project Specific Wetland & Waterbody Construction & Mitigation Procedures* (PALNG's Procedures)

PAPL's *Environmental Plan* also includes additional plans and measures PAPL would use to avoid or reduce the various Texas Connector and Louisiana Connector Projects impacts:

- *Spill Notification & Agency Contacts*
- *Unanticipated Hazardous Waste Discovery Plan*
- *Unanticipated Discoveries Plan*
- Commission's *Plan*
- *PAPL Wetland & Waterbody Construction & Mitigation Procedures* (PAPL's Procedures)
- *Horizontal Directional Drilling Contingency Plan*

PALNG's and PAPL's respective *Environmental Plans* include certain modifications to the Commission's Procedures that PALNG or PAPL believes are appropriate to these Projects. These

17 *Environmental Plans* for the Liquefaction Project, Texas Connector Project, and Louisiana Connector Project were filed on November 29, 2016; December 12, 2017; and October 16, 2017, respectively. These plans can be found on the FERC eLibrary website using Accession Numbers 20161129-5254 (Liquefaction Project), 20171212-5147 (Texas Connector Project), and 20171016-5210 (Louisiana Connector Project).

modifications are specifically identified in PALNG's Procedures and PAPL's Procedures, which are attachments to their *Environmental Plans*.

Sections 4.3.2.3 and 4.4.3 outline the measures in PALNG's and PAPL's *Environmental Plans* that differ from the Commission's Procedures. Our Plan and Procedures are available on the FERC Internet website at http://www.ferc.gov/industries/gas/enviro/guidelines.asp. Generally, while we believe that PALNG's and PAPL's *Environmental Plans* meet the best management practices outlined in the Commission's Plan and Procedures, and would reduce impacts on the environment, we have identified several circumstances that we believe require additional environmental protection measures. These measures, along with our additional recommendations, are discussed throughout section 4.0.

In addition to its *Environmental Plan*, PAPL has developed *Residential Construction Plans* (RCP) for constructing near houses within 50 feet of the construction right-of-way (see appendix F).

2.4.1 Liquefaction Project

2.4.1.1 Site Preparation

Prior to clearing, crews would survey and mark the Liquefaction Project's site boundaries and facility component locations. Perimeter protections and initial erosion controls would also be installed at this time, in accordance with the PALNG's *Environmental Plan*. The entire 937.2-acre site would be cleared of all vegetation, which would be hauled offsite and/or burned in accordance with applicable Texas open burning laws. The topsoil layer would then be stripped and replaced with structural fill to raise the site to a final grade of 9 feet AMSL. The topsoil removed during this process would be used as fill in the mixed use area in the southwest corner of the site. Earthen berms with a height of 20 feet AMSL would be constructed around all areas containing critical process equipment, including the liquefaction trains and LNG storage tanks.

Once the site has been filled, the MOF and Pioneer Dock would be installed by improving existing concrete dock structures on the western shore of the Port Arthur Canal at the northeast end of the site. A concrete batch plant would be constructed in the mixed use area nearby to produce concrete for modifying the dock and for other foundational needs at the liquefaction site. To accommodate ships delivering construction materials and equipment to the MOF and Pioneer Dock, dredge material would be removed from the Port Arthur Canal and disposed of at the SNND Dredge Disposal Areas 8, 9A, and 9B and J.D. Murphree WMA. A permanent heavy haul road for construction vehicles would be constructed between the MOF and the liquefaction and LNG storage facilities.

The foundations of equipment that may be affected by earth movement or settling would be supported on piles driven 70 to 160 feet deep, pending the results of geotechnical investigations. Piles would be driven from land as practicable using standard techniques, although some in-water pile driving may be required for the marine facilities. Reinforced concrete pile caps would be installed to a top elevation of 9 feet ASML and would provide a stable base for reinforced concrete foundations, which would typically be prefabricated and delivered from offsite. Process equipment would be aligned and secured to these foundations before connecting the liquefaction systems using prefabricated pipe cut to fit and attached or welded in place. All piping leading into and installed on-site would be hydrostatically or pneumatically pressure tested prior to operation as per state and federal regulations; non-cryogenic piping would typically be hydrostatically tested using water obtained from a municipal source. Underground piping would then be backfilled, and aboveground piping would be painted or insulated as necessary.

2.4.1.2 Liquefaction Terminal

Marine Facilities

To construct the marine berth and turning basin, sheet pilings would be driven along the shore at the berth location to isolate the landside portion of the excavation area from the Port Arthur Canal. Conventional excavation techniques would be used to remove topsoil and subsoil to a depth of -45 feet MLLW, and then soil improvements involving shallow mixing of the top 8 feet of the remaining soil horizon would be performed to strengthen soils that would eventually be flooded for the berth. Ships would then use cutterhead suction dredge equipment to excavate the remaining section of the marine berth and the ship turning basin within the Port Arthur Canal. All fill and dredge material removed during excavation of the marine berth would be disposed of in the approved disposal areas discussed in section 2.5.1.4.

Structural work would include pile driving and foundation construction, starting on one berth and continuing in the same manner on the second. Next, structures and equipment for the loading platform, access trestle, breasting and mooring dolphins, and walkways would be installed. Finally, riprap would be placed on slopes along the shoreline to prevent erosion from wave action in the Port Arthur Canal.

Liquefaction Trains

The liquefaction trains would be designed, constructed, operated, and maintained in accordance with the DOT Federal Safety Standards for Liquefied Natural Gas Facilities at 49 CFR 193 and would meet the LNG Standards under NFPA 59A. Prefabricated pieces of the liquefaction trains would be delivered to the liquefaction site by truck or unloaded from barges at the MOF. Additional parts would be fabricated on site as necessary, then the trains would be assembled and moved into position.

LNG Storage and Processing Facilities

After site preparation is completed, each of the three LNG storage tanks would be installed on reinforced concrete foundations supported by 160-foot-deep piles using conventional construction techniques. Following the installation of the foundation, construction of the tank base and post-tensioning of the outer concrete container wall would occur. In parallel to construction of the outer concrete container wall, the steel dome roof and suspended deck would be constructed on temporary supports inside the outer container of each storage tank, to be later air-raised into position. The bottom carbon steel vapor liner would then be installed. On top of the outer concrete container wall, the steel dome roof compression ring would be cast into the concrete and then the steel dome roof would be air-raised into position and secured to the compression ring. Roof nozzles, penetrations, and studs would be installed, and steel reinforcement and concrete covering of the steel dome roof would occur. Concurrent with the installation of roof nozzles and penetrations, work would begin on the inner 9 percent nickel steel container, including the secondary bottom, bottom corner protection, and inner container annular and bottom plates. Internal accessories such as pump columns, bottom and top fill, instrument wells, and purge and cool-down piping would be installed, followed by installation of roof platforms, walkways, pipework, and pipe supports.

To ensure that the tanks are capable of operating at the design pressure, the inner and outer tanks would be tested in accordance with the API Standard 620. The integrity of the outer tanks would be pneumatically tested, and process piping would be installed from the tank top down to grade. The inner 9-percent nickel steel containers of the three LNG storage tanks would be independently hydrostatically tested using a total of 87 million gallons of water for all tanks. After hydrostatic testing is completed for each storage tank, the water would be discharged through an energy dissipation device into the Port Arthur Canal or onto vegetated uplands that drain to the canal.

Following testing, the required instrumentation would be installed inside the tank and annular space. Perlite insulation would be expanded into the tank annular space using vibration methods, and the suspended deck blanket insulation and external piping insulation would be installed, which would be followed by a visual inspection. The LNG pumps would then be installed, and the storage tanks would be purged with nitrogen to a positive gauge pressure, followed by purge and cool-down.

Piping and Equipment Installation

PALNG would fabricate and install piping in accordance with American Society of Mechanical Engineers (ASME) B31.3. Flanges or similar leak-minimization devices would be incorporated into the design of cryogenic pipes. Process equipment would be set on its foundations, roughly aligned, and secured before piping installation and final welding. PALNG would hydrostatically or pneumatically test each piping system as it is finished. Hydrostatic test water would be acquired from a municipal source. All piping and equipment would be coated with corrosion-resistant material according to the manufacturer's specifications and painted with PALNG's color identification system.

After the piping, mechanical, electrical, and instrumentation equipment is installed and completed, the following pre-commissioning activities would begin:

- Conformity checks and calibration of each part and piece of equipment to ensure proper installation.
- Flushing and cleaning of piping and equipment.
- Leak testing all hydrocarbon piping and associated equipment.

Once pre-commissioning activities are completed, PALNG would clean and test piping in accordance with applicable pipe design specifications, then purge the system with nitrogen.

Site Restoration

Following construction, the mixed-use areas and other locations not occupied by LNG process equipment, buildings, or access roads (see figure 2.1.1-1) would be restored in accordance with PALNG's *Environmental Plan*. Mixed use areas would be paved or covered in compacted aggregate, and all other areas would be restored with native vegetation recommended by the USDA's Natural Resources Conservation Service (NRCS) and maintained as open upland. Weather and soil conditions permitting, these areas would be seeded within 6 working days after final grading is complete. Seeding permanent vegetation is expected to occur during the growing season; however, if seeding occurs outside the growing season, temporary erosion control measures would be left in place until the next growing season, when reseeding efforts would take place. Revegetated areas would be monitored following construction for the first and second (as necessary) growing seasons.

2.4.1.3 Dredge Disposal/Beneficial Reuse Placement Areas

During construction of the marine facilities, the approximately 4.9 million yd^3 of material dredged from the Port Arthur Canal would be transported via a temporary 30-inch-diameter aboveground pipeline about 3 miles northeast to the Dredge Disposal Areas 9A and 9B and about 0.2 mile east to Dredge Disposal Area 8, all managed by the SNND (see figure 2.1.1-3). To transport material to Dredge Disposal Areas 9A and 9B, the dredge material pipeline would be placed within the corridor for the Northern Pipeline associated with the Texas Connector Project up to the southern bank of the ICWW. To transport material to Dredge Disposal Area 8, the dredge material pipeline would be placed across the Port Arthur Canal near

where the LNG vessel berth would be located. PALNG would use a combination of floating, submerged, and/or disconnecting dredge pipeline segments to cross the ICWW and Port Arthur Canal using methods similar to that use by the USACE for maintenance dredging, which would allow vessel traffic to continue unrestricted.

The remaining 2.4 million yd^3 of dredge material would be transported to the J.D. Murphree WMA using a temporary 30-inch-diameter aboveground pipeline floated in Round Lake Canal (see figure 2.1.1-3). PALNG would work with the TPWD to limit interruption of public use at the WMA during this restoration project, per an April 10, 2017 letter and November 14, 2017 meeting. Dredge material would be spread across the WMA using conventional grading techniques and restored using root stock prescribed in the TPWD's June 13, 2017 letter.

2.4.2 Texas Connector and Louisiana Connector Projects

Construction and operation of the Texas Connector and Louisiana Connector Projects would be conducted using similar, industry-recognized methods and mitigation measures. As such, the following discussions apply to both pipeline projects. Differences in methods are described separately by project as appropriate.

PAPL would design, construct, operate, and maintain its pipelines in accordance with DOT regulations under 49 CFR 192 (Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards) and other applicable federal and state regulations. The DOT regulations specify pipeline material selection; minimum design requirements; protection from internal, external, and atmospheric corrosion; and qualification procedures for welders and operations personnel, in addition to other design standards. PAPL also would comply with the siting and maintenance requirements in 18 CFR 380.15 (Siting and Maintenance Requirements) and other applicable federal and state regulations, including the requirements of the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA). These safety regulations are intended to ensure adequate protection of the public, pipeline workers, contractors, and employees, and to prevent natural gas pipeline accidents and failures.

Constructing the pipelines would generally be completed using sequential pipeline construction techniques, which include survey and staking; clearing and grading; trenching; pipe stringing, bending, and welding and coating; lowering-in and backfilling; hydrostatic testing; commissioning; and cleanup and restoration (see figure 2.4.2-1). These construction techniques would generally proceed in an assembly line fashion and construction crews would move down the construction right-of-way as work progresses. Construction at any single point along the pipelines, from surveying and staking to cleanup and restoration, would last approximately 8 to 12 weeks for any given segment of the pipeline.

2.4.2.1 Survey and Staking

The first step of construction involves survey crews staking the limits of the construction right-of-way, the centerline of the proposed trench, ATWSs, other approved work areas, approved access roads using temporary, the limits of approved disturbance on any access roads requiring widening, and other environmentally sensitive areas (e.g., waterbodies, cultural resources, sensitive species), where appropriate. PAPL would contact Texas811 and Louisiana One Call to locate, identify, and flag and existing underground utilities within the workspace to prevent accidental damage during pipeline construction.

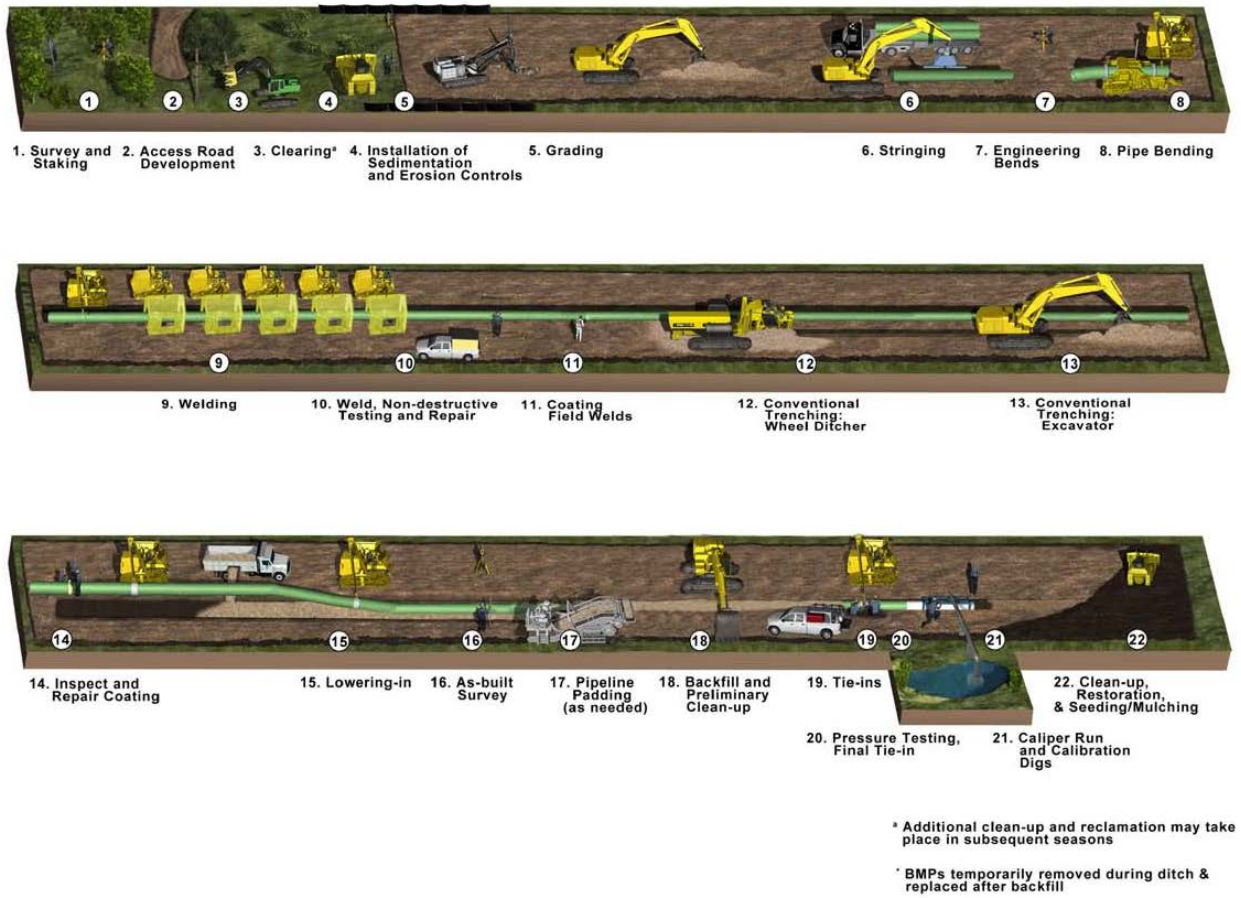


Figure 2.4.2-1
Texas Connector and Louisiana Connector Projects
Typical Pipeline Construction Sequence

2.4.2.2 Clearing and Grading

Clearing and grading would remove trees, shrubs, brush, roots, and large rocks from the construction work area and would level the right-of-way surface to allow operation of construction equipment. Vegetation would generally be cut or scraped flush with the surface of the ground, leaving rootstock in place where possible. Brush and other materials cleared from the construction corridor would be burned, chipped, or mulched within the construction right-of-way, or hauled to an appropriate disposal location. Burning would be conducted in accordance with applicable state and local regulations and project plans.

Grading would be conducted where necessary to provide a reasonably level work surface. Extensive grading may be required in uneven terrain and where the rights-of-way traverse steep slopes and side slopes; however, these conditions are not anticipated on the pipeline projects. PAPL would remove at least the top 12 inches of topsoil where 12 or more inches of topsoil is present, or the entire topsoil layer in areas with less than 12 inches of topsoil. Topsoil and spoil would remain segregated throughout construction and replaced in their original soil horizons during backfilling. PAPL may import topsoil in residential areas in lieu of soil segregation.

Temporary erosion controls would be installed along the construction right-of-way immediately after initial disturbance of the soil and would be maintained throughout construction. Temporary erosion control measures would remain in place until permanent erosion controls are installed or restoration is completed. PAPL has committed to employing Environmental Inspectors (EI) during construction to help determine the need for erosion controls and ensure that they are properly installed and maintained. Additional discussion of EI responsibilities is provided in section 2.5.

2.4.2.3 Trenching

Soil and bedrock would be removed to create a trench into which the pipeline would be placed. A rotary trenching machine, track-mounted excavator, or similar equipment would be used to dig the pipeline trench. When rock is encountered, tractor-mounted mechanical rippers or rock trenchers would be used to fracture the rock prior to excavation. Blasting would be required in areas where mechanical equipment cannot break up or loosen the bedrock. Excavated materials would be stockpiled along the right-of-way on the side of the trench away from the construction traffic.

The trench would be excavated to a depth that would provide sufficient cover over the pipeline in accordance with DOT standards in 49 CFR 192.327. Typically, the trench would range from 6 to 8 feet deep, depending on the substrate and resource being crossed. Excavations could be deeper in certain locations, such as at road and stream crossings or where foreign lines are located. Generally, the pipeline would be installed with a minimum of 3 feet of cover, except where consolidated rock prevents this depth of cover from being achieved. Additional cover would be provided at road and waterbody crossings. Additional cover (above DOT standards) could also be negotiated at a landowner's request to accommodate land use practices. Additional depth of cover generally requires a wider construction right-of-way to store the additional spoil.

PAPL would adhere to strict safety precautions during blasting and would exercise care to prevent damage to nearby structures, utilities, wells, springs, and other important resources. Blasting would only be conducted during daylight hours and would not begin until landowners and tenants have been provided sufficient advanced notice to protect property or livestock. Blasting mats or padding would be used where necessary to prevent fly rock from scattering. All blasting activities would be performed in compliance with federal, state, and local codes, ordinances, and permits; the manufacturers' prescribed safety

procedures; and industry practices. Impacts of blasting on various resources and details about the measures to mitigate the impacts of blasting on these resources are discussed in sections 4.1, 4.3, 4.6, and 4.7.

2.4.2.4 Pipe Stringing, Bending, Welding, and Coating

After trenching, sections of pipe typically between 40 and 80 feet long (also referred to as "joints") would be transported to the right-of-way by truck and strung beside the trench in a continuous line. The pipe would be delivered to the job site with a protective coating of fusion-bonded epoxy or other approved coating that would inhibit corrosion by preventing moisture from coming into direct contact with the steel.

Individual sections of pipe would be bent to conform to the contours of the ground after the joints of pipe sections are strung alongside the trench. Workers would use a track-mounted, hydraulic pipe-bending machine to bend the pipe. Where multiple or complex bends are required, bending would be conducted at the pipe fabrication factory, and the pipe would be shipped to project areas pre-bent.

After the pipe joints are bent, they would be aligned, welded together into a long segment, and placed on temporary supports at the edge of the trench. PAPL would use welders who are qualified according to applicable standards in 49 CFR 192 Subpart E, American Petroleum Standard 1104, and other requirements.

Once the welds are made, a coating crew would coat the area around the weld before the pipeline is lowered into the trench. Prior to application, the coating crew would thoroughly clean the bare pipe with a power wire brush or sandblast machine to remove dirt, mill scale, and debris. The crew would then apply the coating and allow the coating to dry. The pipeline would be inspected electronically for faults or voids in the coating and would be visually inspected for scratches and other defects. PAPL would repair any damage to the coating that may have occurred before the pipeline is lowered into the trench.

2.4.2.5 Lowering-In and Backfilling

The trench would be inspected to be sure it is free of rocks and other debris that could damage the pipe or protective coating before the pipe would be lowered into the trench. Trench dewatering may be necessary to inspect the bottom of the trench in areas where water has accumulated. Trench water discharges would be directed to well-vegetated areas and away from waterbodies to minimize the potential for runoff and sedimentation. The pipeline would then be lowered into the trench by a series of side-boom tractors (tracked vehicles with hoists on one side and counterweights on the other), which would carefully lift the pipeline and place it on the bottom of the trench.

Trench breakers (stacked sand bags or polyurethane foam) would then be installed in the trench on slopes at specified intervals to prevent subsurface water movement along the pipeline. The trench would then be backfilled using the excavated material. At locations where topsoil had been separated from subsoil during the clearing process, subsoil would be returned to the trench first, followed by topsoil. An up to 1-foot-high crown of soil about the width of the trench may be left over the trench in non-agricultural areas to compensate for settling. Appropriately spaced breaks may be left in the crown to prevent interference with stormwater runoff.

In rocky areas or where the trench contains bedrock, padding material such as sand, approved foam, or other protective materials would be placed in the bottom of the trench to protect the pipeline. Once the pipe is sufficiently covered with suitable material, the excavated rocky soil would be used for backfill within the original rocky soil horizon. Topsoil would not be used for padding.

2.4.2.6 Hydrostatic Testing

PAPL would hydrostatically test the pipelines after backfilling to ensure the system is capable of withstanding the operating pressure for which it was designed. Hydrostatic testing typically involves filling the pipeline with water to a designated test pressure and maintaining that pressure for approximately 8 hours. Actual test pressures and durations would be consistent with the requirements of 49 CFR 192. Any leaks would be repaired and the section of pipe retested until the required specifications are met.

Water for hydrostatic testing would be obtained from surface waterbodies and municipal water sources. Following satisfactory completion of hydrostatic testing, the test water would typically be discharged into vegetated upland areas through a dewatering structure designed to slow the flow of water. If discharging directly to receiving waters, PAPL would use diffusers (energy diverters) to minimize the potential for stream scour. All testing activities would be conducted within the parameter of the applicable water withdrawal and discharge permits. Section 4.3.2 provides more information on hydrostatic testing.

2.4.2.7 Cleanup and Restoration

Within 20 days of backfilling the trench (10 days in residential areas) all work areas would be graded and restored to preconstruction contours and natural drainage patterns as closely as possible. If seasonal or other weather conditions prevent compliance with these timeframes, temporary erosion controls would be maintained until conditions allow completion of final cleanup. Topsoil and subsoil would be tested for compaction at regular intervals in agricultural and residential areas disturbed by construction activities. Severely compacted agricultural areas would be plowed and appropriate soil compaction mitigation would be performed in residential areas. Cut and scraped vegetation would be spread back across the right-of-way. Some large shrubs and trees cut during clearing may be spread back across the right-of-way to impede vehicular traffic and other unauthorized access, or hauled away for disposal in accordance with applicable laws. Surplus construction material and debris would be removed from the right-of-way unless the landowner or land-managing agency approves otherwise. Excess rock and stone would be removed from at least the top 12 inches of soils in agricultural and residential areas and, at the landowner's request, in other areas, such that the size, density, and distribution of rock on the construction right-of-way would be similar to adjacent non-right-of-way areas. Landowners may be able to negotiate certain specific construction requirements and restoration measures directly with PAPL.

PAPL would conduct restoration activities in accordance with landowner agreements, permit requirements, and written recommendations on seeding mixes, rates, and dates obtained from the local conservation authority or other duly authorized agency and in accordance with PAPL construction and restoration plans. The right-of-way would be seeded within 6 working days following final grading, weather and soil conditions permitting. Alternative seed mixes specifically requested by the landowner or required by agencies may be used. Any soil disturbance that occurs outside the permanent seeding season or any bare soil not stabilized by vegetation would be mulched in accordance with PAPL's construction and restoration plans. Additional discussion of restoration activities is provided in section 4.2.2.

Markers showing the location of the pipeline would be installed at fence and road crossings to identify the owner of the pipeline and convey emergency information in accordance with applicable governmental regulations, including DOT safety requirements. Special markers providing information and guidance for aerial patrol pilots would also be installed.

Landowners would be compensated for damages in accordance with individual landowner agreements. Following construction, temporary access roads would be restored to their preconstruction condition unless the landowner or land-managing agency requests that the improvements be left in place.

2.4.2.8 Commissioning

Test manifolds would be removed and final pipeline tie-ins completed after hydrostatic testing. The pipeline then would be cleaned and dried using mechanical tools (pigs) that are moved through the pipeline with pressurized dry air. Pigs also would be used to internally inspect the pipeline to detect any abnormalities or damage. Any problems or concerns would be addressed as appropriate. Pipeline commissioning would then commence. Commissioning involves verifying that equipment has been properly installed and is working, verifying that controls and communications systems are functioning, and confirming that the pipeline is ready for service. In the final step, the pipeline would be prepared for service by purging the pipeline of air and loading it with natural gas. PAPL would not be authorized to place the pipeline facilities into service until they have received written permission from the Director of the FERC's Office of Energy Projects (OEP).

2.4.3 Special Pipeline Construction Procedures

Special construction techniques are required when a pipeline is installed across waterbodies, wetlands, roads, major utilities, steep slopes, residences, agricultural lands, and other sensitive environmental resources. In general, ATWS adjacent to the construction right-of-way would be used at most of these areas for staging construction, stockpiling spoil, storing materials, maneuvering equipment, and fabricating pipe.

2.4.3.1 Waterbody Crossings

Waterbody crossings would be completed in accordance with the measures described in PAPL's construction plans as summarized below and in accordance with federal, state, and local permits. PAPL's proposed waterbody crossing methods are discussed in section 4.3.2.

ATWS necessary for waterbody crossings would be located a minimum of 50 feet from the waterbody edge, except where adjacent upland consists of actively cultivated or rotated cropland or other disturbed land. The 50-foot setback would be maintained unless site-specific approval for a reduced setback is granted by the FERC and other jurisdictional agencies (see section 4.3.2.3).

To prevent sedimentation caused by equipment traffic crossing through waterbodies, PAPL would install temporary equipment bridges. Bridges may include clean rock fill over culverts, equipment pads, wooden mats, free-spanning bridges, and other types of spans. Equipment bridges would be maintained throughout construction. Each bridge would be designed to accommodate normal to high streamflow (from storm events) and would be maintained to prevent soil from entering the waterbody and to prevent restriction of flow during the period of time the bridge is in use.

Sediment barriers would be installed immediately after initial disturbance of the waterbody or adjacent upland. Sediment barriers would be properly maintained throughout construction and reinstalled as necessary until replaced by permanent erosion controls or restoration of adjacent upland areas is complete and revegetation has stabilized the disturbed areas.

For waterbodies without flow at the time of construction, PAPL would utilize the general construction methods described in section 2.4.2. After backfilling, the streambanks would be re-established to approximate preconstruction contours and stabilized, and erosion and sediment control measures would be installed across the construction right-of-way to reduce streambank and upland erosion and sediment transport into the waterbody.

Flume Construction Method

The flume method is a standard dry-ditch waterbody crossing method that involves diverting the flow of water across the in-stream construction work area through one or more flume pipes placed in the waterbody. The first step in the flume crossing method involves placing a sufficient number of adequately sized flume pipes in the waterbody to accommodate the highest anticipated flow during construction. After placing the pipe in the waterbody, sand bags or equivalent dam diversion structures are placed in the waterbody upstream and downstream of the trench area. These devices serve to dam the stream and divert the water flow through the flume pipes, thereby isolating the water flow from the construction area between the dams. Flume pipes are generally left in place during pipeline installation until final cleanup of the streambed is complete.

Dam and Pump Construction Method

The dam and pump method is another dry-ditch crossing method, similar to the flume crossing method except that pumps and hoses are used instead of flumes to move water across the in-stream construction work area. The technique involves damming of the waterbody with sandbags and/or clean gravel with a plastic liner upstream and downstream of the trench area. Pumps are set up at the upstream dam with the discharge line routed through the construction area to discharge water immediately downstream of the downstream dam. An energy dissipation device is commonly used to prevent scouring of the streambed at the discharge location. Water flow is maintained through all but a short reach of the waterbody at the actual crossing. The pipeline is then installed and backfilled. After backfilling, the dams are removed and the banks restored and stabilized.

Conventional Bore Method

The conventional bore method is a trenchless crossing method that involves excavating large bell holes on each side of a waterbody that are deep enough for the bore equipment to auger a hole horizontally from one bell hole to the other a minimum of 5 feet below the bed of a waterbody. Once the bore hole has been created, the pipeline is pushed or pulled through the hole. Due to the depth of the bell holes and proximity to water resources, this method may require use of sheet pile to maintain the integrity of the bell holes, and use of well point dewatering systems to avoid flooding of the bell holes.

Horizontal Directional Drill Construction Method

An HDD is a trenchless crossing method that involves drilling a hole under the waterbody (or other sensitive features) and installing a pre-fabricated pipe segment through the hole. To avoid wetlands, waterbodies, roadways, existing structures, and other utilities, PAPL proposes to use the HDD method at 24 locations for the Texas Connector Project and 26 locations for the Louisiana Connector Project (see table 2.4.3-1).

TABLE 2.4.3-1

HDD Crossings for the Texas Connector and Louisiana Connector Projects

Feature Crossing	Entry Milepost	Exit Milepost	Crossing Length (miles)
TEXAS CONNECTOR PROJECT			
Northern Pipeline			
ICWW and Bayou Outfall Canals	2.6	1.5	1.1
Big Hill Bayou Canal	6.2	5.2	1.0
Derring Gully	5.2	4.1	1.1
McFaddin Reservoir and SH 73	8.9	8.2	0.7
Taylor Bayou Wetlands	10.9	10.0	0.9

TABLE 2.4.3-1 (cont'd)

HDD Crossings for the Texas Connector and Louisiana Connector Projects

Feature Crossing	Entry Milepost	Exit Milepost	Crossing Length (miles)
Hillebrandt Bayou Wetlands and Highway 365	11.6	12.2	0.7
Hillebrandt Bayou Wetlands and Unnamed Canal	13.0	13.3	0.2
Gallier Canal	14.2	14.4	0.2
Johns Gully and Farm-to-Market Road	17.5	18.1	0.6
Johns Gully and Beaumont	18.5	18.2	0.3
Spindletop Oil Field Wetlands	19.0	18.6	0.4
Northern Spindletop Oil Field Wetlands	20.2	19.6	0.6
U.S. Highway 69 and SH 347 Wetlands	20.8	20.3	0.5
Neches River	21.6	22.4	0.8
Anderson Gully	23.7	22.9	0.7
Unnamed wetland, stream, and pond	25.2	24.6	0.6
	Northern Pipeline Subtotal		**10.3**
Southern Pipeline			
Keith Lake and Lost Lake Canals	1.0	0.1	0.9
Keith Lake Cut	2.2	2.5	0.4
SH 87	2.9	3.7	0.8
Sabine Pass	7.0	6.0	1.0
Aboveground infrastructure and wetlands	7.5	7.1	0.4
	Southern Pipeline Subtotal		**3.5**
GTS Lateral			
Unnamed Canal and Amco Road Ext	0.8	0.5	0.3
Unnamed Drainage and Spindletop Ave	0.8	1.1	0.3
	GTS Lateral Subtotal		**0.6**
FGT Lateral			
Unnamed canal and wetlands	1.2	0.8	0.4
	FGT Lateral Subtotal		**0.4**
	Texas Connector Project Total		**14.8**
LOUISIANA CONNECTOR PROJECT			
SH 87 / Port Arthur Canal / SH 82 / S Levee Road	0.0	0.8	0.8
Foreign Pipelines	4.3	4.8	0.5
Sabine Lake	18.1	17.5	0.6
East Pass	18.2	19.2	1.0
Foreign Pipelines	27.2	26.5	0.7
ICWW	27.5	28.3	0.9
Vinton Drainage Canal	30.9	30.6	0.2
Unnamed Waterbody	38.7	39.1	0.5
Waterbody / Canal / Unnamed Road	40.5	40.2	0.3
Bayou Choupique	42.5	42.0	0.5
Walker Rd	47.9	47.5	0.4
Foreign Pipeline	48.5	48.2	0.3
Interstate Highway 10	50.3	50.0	0.3
Houston River Canal	54.6	54.8	0.2
Houston River	56.8	57.4	0.6
State Route 27 / Bankens Road / Kansas City Southern Railroad	60.2	59.7	0.5
Little River	60.5	60.8	0.3
Beckwith Creek	63.9	64.3	0.4
Hickory Branch	65.0	65.4	0.4
Barnes Creek	79.4	78.8	0.7
Whisky Chitto Creek	91.1	91.2	0.2
Calcasieu River	94.7	94.5	0.2
U.S. Highway 165 / Union Pacific Railroad	96.9	96.7	0.3
Nezpique Bayou	110.1	109.9	0.2

TABLE 2.4.3-1 (cont'd)

HDD Crossings for the Texas Connector and Louisiana Connector Projects

Feature Crossing	Entry Milepost	Exit Milepost	Crossing Length (miles)
Pond	110.3	110.6	0.3
Des Cannes Bayou	119.0	119.2	0.2
Louisiana Connector Project Total			**11.5**
Texas Connector and Louisiana Connector Projects Total			**26.3**

The first step in an HDD is to drill a small diameter pilot hole from one side of the crossing to the other using a drill rig. As the pilot hole progresses, segments of drill pipe are inserted into the hole to extend the length of the drill. The drill bit is steered and monitored throughout the process until the desired pilot hole had been completed. The pilot hole is then enlarged using several passes of successively larger reaming tools. Once reamed to a sufficient size, a pre-fabricated segment of pipe is attached to the drill string on the exit side of the hole and pulled back through the drill hole toward the drill rig. Depending on the substrate, drilling and pull back can last anywhere from a few days to a few weeks.

The HDD method uses a slurry referred to as drilling mud, which is composed of water and bentonite, a naturally occurring clay mineral that can absorb up to 10 times its weight in water. Bentonite-based drilling mud is a non-toxic, non-hazardous material that is also used to construct potable water wells throughout the United States. The drilling mud is pumped under pressure through the inside of the drill pipe, and flows back (returns) to the drill entry point along the outside of the drill pipe. The purpose of the drilling mud is to lubricate the drill bit and convey the drill cuttings back to the drill entry point where the mud is reconditioned and re-used in a closed, circulating process. It also forms a cake on the rock surface of the borehole, which helps to keep the drill hole open and maintain circulation of the drilling mud system. Because the drilling mud is pressurized, it can seep into the surrounding matrix, resulting in an inadvertent release of fluid if the drill path encounters fractures or fissures that offer a path of least resistance, or near the drill entry and exit points where the drill path has the least amount of ground cover.

The potential for an inadvertent release is typically greatest during drilling of the initial pilot hole, and decreases once the pilot hole has been completed. The volume of mud lost would be dependent on a number of factors, including the size of the fault, the permeability of the geologic material, the viscosity of the drilling mud, and the pressure of the drilling system. A drop in drilling pressure would indicate that an inadvertent release may be occurring and if the mud moves laterally, the release may not be evident from the ground surface. For a release to be evident there must be a fault or pathway extending vertically to the surface.

In the event of a drilling mud release, pits or containment structures could be constructed to contain drilling mud released to the surface of the ground, and a pump may be required to transfer the drilling mud from the pit or the structure to a containment vessel. A release underground would be more difficult to contain and would be addressed by thickening the drilling mud, stopping drilling all together, or continuing to drill past the fault or blockage to re-establish the bore hole as the path of least resistance. In the event of lost drilling mud, PAPL may introduce additives into the drilling mud to stop or reduce the amount of drilling mud loss. These additives could include walnut shells, paper, other biodegradable solids, or approved polymers that would increase the viscosity and gel strength of the drilling mud. In the event of an inadvertent release of drilling mud, PAPL would implement the corrective actions and clean up measures described in the *HDD Contingency Plan* (included in its *Environmental Plan*) and further discussed in section 4.3.2.2.

It is possible for HDD operations to fail, primarily due to encountering unexpected geologic conditions during drilling or the pipe becoming lodged in the hole during pullback operations. PAPL would be required to seek approval from the Commission and other applicable agencies prior to abandoning any

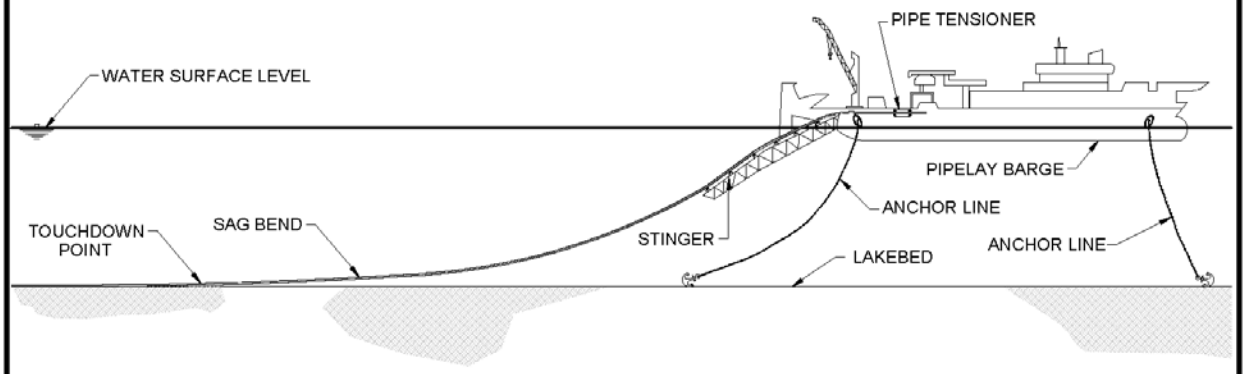
HDD crossing in favor of a new location, or using another construction method should a second attempt fail. If any of the HDD crossings are found to be infeasible, PAPL would be required to submit specific proposed alternate construction methods for review and approval by the Commission and other applicable agencies.

Sabine Lake Crossing

The Louisiana Connector Project would require installation of pipeline across the bottom of Sabine Lake using of a variety of construction methods. The pipeline would enter and exit the lake via HDDs drilling from the shore and surfacing in the lake bottom. The pilot hole would be reamed to the appropriate diameter and a dredge barge would excavate material before and after the drill exit points so the pipe can lay in the ditchline without an overbend. Pipe strung from a barge would be connected to the HDD drill stem at each drill exit hole and the pipe string pulled back through to the land side. The remaining pipeline would be trenched into the Sabine Lake bottom using open-cut or jetting methods with a minimum depth of cover of 4 feet. Pipe would be welded and installed using the "S-lay" method, where concrete-coated pipe joints would be strung and coated on pipelay barges, then mechanically rolled off onto the lakebed as the barges move along the centerline, forming an S-shaped curve (see figure 2.4.3-1).

Construction activities within Sabine Lake would require a variety of barge vessels and equipment types. All barges would be moved by tugboat at a speed no greater than 8 knots and no ballast water exchanges are anticipated during construction. Trenching and backfilling would occur from barges each measuring 50 feet by 150 feet by 50 feet, which would typically draw about 6 feet of water. Barges measuring 40 feet by 140 feet by 7 feet with a 3.5- to 4-foot draft would transport pipe segments from the LY-JEF-01 contractor storage yard on the Sabine Naches Canal to the three pipelaying barges. Two of the pipelay barges would be 40 feet by 140 feet by 7 feet and one would be 40 feet by 150 feet by 7 feet; both would draw 3.5- to 4-foot of water. The HDD barge would be 40 feet by 150 feet by 10 feet with a draft of 6 feet. Sabine Lake and Sabine Naches Canal are deep enough to accommodate vessel drafts, and PAPL stated that the creation of floatation channels is not anticipated during construction. PAPL would mark oyster habitat areas and advise project vessels to avoid water bottom impacts in these locations. Vessels would record tide level data and log vessel drafts as recommended by the TPWD.

Similar to upland construction, Sabine Lake would first be surveyed and staked for foreign-line crossings, access points, and the pipeline centerline. The construction right-of-way would be 300 feet wide and the permanent right-of-way would be 50 feet wide. The pipeline trench would be excavated using open-cut or jetting methods and spoil materials would be temporarily stored alongside the trench. PAPL would install BMPs, such as turbidity curtains, along the trenched pipeline and at the HDD segments tie-ins to minimize impacts on aquatic resources, including oyster habitat. Pipe segments would be coated with concrete at the LY-JEF-01 contractor storage yard then loaded onto pipe barges and transported via tugboat to the lay barges positioned above the trench. Pipe would be offloaded to the lay barges where it would be stored until it can be welded onto the end of the pipeline string. While on the lay barge, pipe segments would be welded, coated, non-destructively tested, and hydrotested, then the pipeline would be filled with water and sunk into the trench. The trench would be backfilled with spoil as the lay barges move down the line. Following backfill, the construction right-of-way would be restored to preconstruction condition and contours.



ELEVATION VIEW

UNIVERSAL ENSCO, INC. - LOUISIANA ENGINEERING
FIRM LIC. # EF.0001688
UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING
FIRM LIC. # F-1942

UniversalPegasus INTERNATIONAL
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Figure 2.4.3-1
Louisiana Connector Project
S-Lay Method

NO	REVISION	DATE	DRAWN	CHKD	APPD
B	ISSUE FOR APPROVAL	07/31/2017	DTT	GLE	CAS
A	ISSUE FOR REVIEW	07/06/2017	DTT	GLE	CAS

DRAWN		DATE	6/2017
CHKD	GLE	DATE	07/06/2017
APPD	CAS	DATE	07/06/2017
JOB NO.	23707	SHEET	1 OF 1
LOCATION	------	STATE	LA/TX
SCALE	NTS	REV	B
DWG NO.	23707-507-TYP-20013		
CLIENT JOB NO.	N/A		

Existing foreign pipelines on the bottom of Sabine Lake would be crossed using the HDD method from MP 4.3 to 4.8. A 40-foot by 150-foot by 10-foot spud barge with an HDD rig and drilling fluid tanks would install the pipeline to a depth of at least 20 feet below the foreign pipelines. Thirty-foot by 120-foot by 7-foot support barges, one storing water for the drilling fluid tanks and the other bringing water from a freshwater source, would accompany the spud barge. Similar to the procedure described above, a lay barge would assemble the pipeline for pullback, coat and test the pipeline, fill it with water, and sink it into place. Once pulled through the bore hole, the pipeline on each side of the HDD would be brought to the surface for tie-in, coating, and testing.

2.4.3.2 Wetland Crossings

Wetland crossings would be completed in accordance with federal and state permits and follow the measures described in PAPL's construction plans. In addition, the EPA recommended that PALNG and PAPL stake wetland areas based on a verified wetland delineation. The wetlands that would be crossed are discussed further in section 4.4.1.

Clearing of vegetation in wetlands would be limited to trees and shrubs, which would be cut flush with the surface of the ground and removed from the wetland. Stump removal, grading, topsoil segregation, and excavation would be limited to the area immediately over the trenchline. A limited amount of stump removal and grading may be conducted in other areas to ensure a safe working environment.

During clearing, sediment barriers, such as silt fence and staked straw bales, would be installed and maintained adjacent to wetlands and within temporary extra workspaces as necessary to minimize the potential for sediment runoff. Sediment barriers would be installed across the full width of the construction right-of-way at the base of slopes adjacent to wetland boundaries. Silt fence or straw bales installed across the working side of the right-of-way would be removed during the day when vehicle traffic is present and would be replaced each night. Sediment barriers would also be installed within wetlands along the edge of the right-of-way, where necessary, to minimize the potential for sediment to run off the construction right-of-way and into wetland areas outside the construction work area. If trench dewatering is necessary in wetlands, the trench water would be discharged in stable, vegetated, upland areas and/or filtered through a filter bag or siltation barrier. No heavily silt-laden water would be allowed to flow into a wetland.

Construction equipment working in wetlands would be limited to that essential for right-of-way clearing, excavating the trench, fabricating and installing the pipeline, backfilling the trench, and restoring the right-of-way. The method of pipeline construction used in wetlands would depend largely on the stability of the soils at the time of construction. In areas of saturated soils or standing water, low-ground-weight construction equipment and/or timber riprap, pre-fabricated equipment mats, or terra mats would be used to reduce rutting and the mixing of topsoil and subsoil. In unsaturated wetlands, the top 12 inches of topsoil from the trenchline would be stripped and stored separately from the subsoil. Topsoil segregation generally would not be possible in saturated soils.

PAPL is requesting a deviation from the Commission's Procedures (section VI.A.3) to allow for the use of a 100- to 125-foot-wide right-of-way on both the Texas Connector and Louisiana Connector Projects to avoid potential safety hazards associated with saturated and/or granular soils, including shifting soils and trench wall collapse (see section 4.7). In addition, PAPL is requesting a deviation from the Commission's Procedures (section VI.B.1) to locate ATWS less than 50 feet from or within wetlands at specific waterbody and road crossings (see section 4.4.2) associated with both the Texas Connector and Louisiana Connector Projects. These are discussed further in sections 4.3 and 4.4.

Where wetland soils are saturated and/or inundated, the pipeline may be installed using the push-pull technique (see table 2.4.3-2). The push-pull technique involves stringing and welding the pipeline

outside of the wetland and excavating the trench through the wetland using a backhoe supported by equipment mats. The water that seeps into the trench is used as the vehicle to "float" the pipeline into place together with a winch and flotation devices that would be attached to the pipe. After the pipeline is floated into place, the floats are removed, allowing the pipeline to sink into the trench. Pipe installed in saturated wetlands is typically coated with concrete or equipped with set-on weights to provide negative buoyancy. After the pipeline sinks to the bottom of the trench, a trackhoe working on equipment mats would backfill the trench and complete cleanup.

TABLE 2.4.3-2

Push-pull Locations for the Texas Connector and Louisiana Connector Projects

Starting Milepost	Ending Milepost	Crossing Length (miles)
TEXAS CONNECTOR PROJECT		
Northern Pipeline		
0.0	1.5	1.5
2.6	4.1	1.5
6.2	7.8	1.6
8.9	9.7	0.8
23.8	24.4	0.6
	Northern Pipeline Subtotal	**6.0**
Southern Pipeline		
1.7	2.1	0.4
3.7	6.0	2.3
	Southern Pipeline Subtotal	**2.7**
	Texas Connector Project Total	**8.7**
LOUISIANA CONNECTOR PROJECT		
18.1	18.2	< 0.1
19.2	22.2	3.0
22.3	24.8	2.6
24.9	25.3	0.4
26.2	26.5	0.4
27.2	27.5	0.3
28.3	30.6	2.3
30.9	33.7	2.9
	Louisiana Connector Project Total	**12.7**
	Texas Connector and Louisiana Connector Projects Total	**21.4**

Prior to backfilling, trench breakers would be installed where necessary to prevent the subsurface drainage of water from wetlands. Where topsoil has been segregated from subsoil, the subsoil would be backfilled first followed by the topsoil. Equipment mats, terra mats, and timber riprap would be removed from wetlands following backfilling.

Where wetlands are located at the base of slopes, permanent interceptor dikes and trench plugs would be installed in upland areas adjacent to the wetland boundary. Temporary sediment barriers would be installed where necessary until revegetation of adjacent upland areas is successful. Once revegetation is successful, sediment barriers would be removed from the right-of-way and disposed of properly.

2.4.3.3 Road and Railroad Crossings

Construction across roads would be conducted in accordance with the applicable laws, regulations, and requirements of road and railroad crossing permits obtained by PAPL. Generally, paved roads, unpaved roads where traffic cannot be detoured, and railroads would be crossed by boring beneath the road or railroad without disturbing the road or rail bed or disrupting traffic. Boring involves excavating a pit on each side of the road or railroad, placing the boring equipment in the pit, and then boring a hole under the

road or railroad that is at least equal to the diameter of the pipe. Once the hole is bored, a pre-fabricated section of pipe is then pushed through the borehole. At particularly long crossings, pipe sections may be welded onto the pipe string just before being pushed through. Bore crossings for the Projects would typically occur during normal construction work hours. However, if necessary as required by field conditions, borings could be conducted 24 hours per day, 7 days per week until completed. Each bore crossing typically would require between 2 and 10 days to complete from start to finish.

Most gravel and dirt roads would be crossed by the open-cut method, which generally requires temporary lane or road closures and the establishment of detours. Roads would be closed only where allowed by permit or landowner/land-managing agency consent. Most open-cut road crossings require only 1 or 2 days to complete, although resurfacing could require several weeks to allow for soil settlement and compaction. In residential areas, landowners would be provided continued access to their properties throughout construction.

PAPL would construct all road and railroad crossings in accordance with DOT safety standards and would coordinate traffic control measures with the appropriate state and local agencies. Where heavy equipment is known to use a road crossed by the pipeline, special safety measures, such as thicker-walled pipe or additional cover over the pipe, would be required.

2.4.3.4 Agricultural Areas

About 16 percent of the Texas Connector Project's total acreage and about 15 percent of the Louisiana Connector Project's total acreage would affect agricultural land, as identified in section 4.8. PAPL would conserve and segregate topsoil in all actively cultivated and rotated croplands, pastures, and hayfields, or import certified weed- and pest-free topsoil approved by the landowner. PAPL would also segregate topsoil at the specific request of the landowner or land management agency. The topsoil would be stored in separate windrows on the construction right-of-way. The depth of the trench would vary with the stability of the soil, but in all cases, it would be sufficiently deep to allow for at least 3 feet of cover over the pipe. Irrigation systems are not usually used in this part of Texas and none have been identified at this time; however, landowners are encouraged to disclose their locations. If any irrigation systems are damaged during construction, PAPL would attempt to make repairs within 1 week unless otherwise negotiated with the landowner.

2.4.3.5 Major Utilities

The pipelines would be constructed across or parallel to numerous utility lines. Prior to construction, PAPL's construction contractors would use the One Call systems in each state to identify and flag buried utilities before ground-disturbing activities. PAPL would install the pipeline with at least 12 inches of clearance from any other buried utility or underground structure not associated with the pipeline, as required by 49 CFR 192.325. Section 4.9 discusses the major utilities that would be crossed by the Texas Connector and Louisiana Connector Projects.

2.4.3.6 Residential Construction

Construction through or near residential areas would be done in a manner to ensure that all construction activities minimize adverse impacts on residences and that cleanup is prompt and thorough. Access to homes would be maintained, except for the brief periods essential for laying the new pipeline.

PAPL would implement the measures identified in its *Environmental Plan* to minimize construction-related impacts on all residences and other structures located within 50 feet of the construction right-of-way, including:

- attempting to maintain a minimum distance of 25 feet between any residence and the edge of the construction work area;
- installing safety fence at the edges of the construction right-of-way and work areas for a distance of 100 feet on either side of the residence or business establishment to ensure that construction equipment and materials, including the spoil pile, remain within the construction work area;
- attempting to leave mature trees and landscaping intact within the construction work area unless the trees and landscaping interfere with the installation techniques or present unsafe working conditions;
- ensuring piping is welded and installed as quickly as reasonably possible to minimize the amount of time a neighborhood is affected by construction;
- backfilling the trench as soon as possible after the pipe is laid or temporarily place steel plates over the trench;
- completing final cleanup, grading, and installation of permanent erosion control devices within 10 days after backfilling the trench, weather permitting; and
- restoring private property such as fences, gates, driveways, and roads disturbed by pipeline construction to original or better condition upon completion of construction activities.

In addition, PAPL has provided site-specific RCPs to inform affected landowners of proposed measures to minimize disruption and to maintain access to the residences located within 50 feet of the construction work area. These plans are described in section 4.8.5 and included in appendix F.

Construction in residential areas would potentially require use of the drag section or stove pipe techniques to minimize the length of time the pipeline trench remains open across a driveway. The drag section method involves welding several segments of pipe together prior to trenching and backfilling. The stove pipe method is similar but involves trenching, lowering-in, and backfilling each pipe segment one at a time. For the Projects, both methods would typically be completed within 24 hours, and steel plates would be installed over trenches as necessary for temporary driveway access.

2.4.4 Aboveground Facilities Construction Procedures

Construction activities at the Texas Connector Project's North and South Compressor Station and the Louisiana Connector's compressor station sites would include access road construction; site clearing; grading; installing concrete foundations; erecting metal buildings; installing compressors, metering facilities, and appurtenances; and enclosing the property with a security fence. Initial work at the compressor stations would focus on preparing foundations for the buildings and equipment. Building foundations and pipe trenches would be excavated with standard construction earthmoving equipment. Following foundation work, station equipment and buildings would be brought to the site and installed, using any necessary trailers or cranes for delivery and installation. Following installation of the buildings and primary facilities, associated equipment, piping, and electrical systems would be installed. Necessary

equipment testing and start-up activities would occur on a concurrent basis, including hydrostatic testing of piping and related facilities.

Construction of the other proposed aboveground facilities, including the meter stations, MLV, and pig launchers/receivers, would involve site clearing and grading as needed to establish appropriate contours for the facilities. Following installation of the equipment, the sites would be graveled, as necessary, and fenced. MLVs would be installed at intervals specified by the DOT or as needed for customer deliveries.

2.4.5 Access Roads

PAPL would use existing roads to access the construction right-of-way as practicable, and improve existing or construct new access roads as necessary to have a 40-foot width and bear the weight of construction vehicle traffic. Following construction, existing access roads would be returned to preconstruction conditions unless otherwise requested by the landowner; new access roads not being used to permanently access a facility would also be returned to preconstruction conditions.

2.4.6 Nonjurisdictional Facilities Construction Procedures

PALNG would relocate approximately 3.3 miles of the existing SH 87 and its collocated utilities prior to constructing the liquefaction facilities to allow ships to access to the marine berth from the Port Arthur Canal. The new 3.6-mile corridor for the highway and utilities would follow an existing electric transmission line around the western boundaries of the liquefaction site. PALNG would acquire all necessary regulatory approvals and agreements with facility owners prior to construction.

For the relocation of SH 87, PALNG would work with the TDOT to design and construct a new highway using standard road construction techniques that traverses around the proposed liquefaction site and connects to the existing highway on either side. Traffic would be allowed to continue as normal on the existing highway while the new roadway is constructed. Once completed and approved, the TDOT would divert traffic onto the new highway and allow PALNG to remove the old road materials and transport them to an approved offsite disposal facility. All aspects of the highway relocation would be subject to TDOT review and approval.

PALNG would also relocate nine existing pipelines and other utilities to run parallel to the relocated SH 87 corridor using construction methods standard for each utility, including the methods for pipeline construction described earlier in this EIS. PALNG would construct new facilities within the relocated corridor while allowing the existing utilities to operate as normal. Once construction is complete, the respective owners of each utility would tie-in the new facilities to the old, abandon any unused utility and pipeline segments per industry and regulatory requirements, and resume operations of the facilities.

As discussed in section 1.4, the power line associated with the Louisiana Connector Project's compressor station would be constructed by another party and, while details regarding this activity are limited, we have considered the impacts associated with the power line in our cumulative impacts analysis.

2.5 ENVIRONMENTAL COMPLIANCE

2.5.1 Compliance Monitoring

The FERC may impose conditions on any Certificate or Authorization granted for the Projects. These conditions could include requirements and mitigation measures identified in this EIS to minimize environmental impacts associated with the Projects (see section 5.2). We will recommend to the Commission that these requirements and mitigation measures (indicated with bold type in the text) be

included as conditions to any approving Certificate or Authorization issued for each of the Projects. Once the Projects are authorized, FERC staff would monitor compliance by conducting on-site inspections, reviewing post-authorization filings, weekly, monthly and semi-annual reports depending on the project phase. Further, PALNG and PAPL would be required to implement the construction procedures and mitigation measures it has proposed in its filings with the FERC, including those in appendices of this EIS, unless specifically modified by other Certificate/Authorization conditions.

Other regulatory agencies also may include terms and conditions or stipulations as part of their permits or approvals. While there would be jurisdictional differences between the FERC's and other agencies' conditions, the environmental inspection program for the Projects would address all environmental or construction-related conditions or other permit requirements placed on the Projects by all regulatory agencies.

PALNG would employ one full-time EI for the Liquefaction Project, and PAPL would employ at least four EIs for the Texas Connector and Louisiana Connector Projects (one per spread). The responsibilities of the EIs are described in PALNG's and PAPL's respective *Environmental Plans*.

The EIs' responsibilities include ensuring the environmental obligations, conditions, and other requirements of permits and authorizations for the Projects are met. PALNG's and PAPL's EIs would inspect all construction and mitigation activities to ensure environmental compliance. EIs may also oversee cultural resource and/or biological monitors that monitor and evaluate construction impacts on resources as specified in this EIS.

The FERC staff would also conduct field inspections during construction. Other federal and state agencies may also conduct oversight of inspection to the extent determined necessary by the individual agency. After construction is completed, the FERC staff would continue to conduct oversight inspection and monitoring during operation of the Project to ensure successful restoration. Additionally, the FERC staff would conduct bi-annual engineering safety inspections of the LNG facility operations.

2.6 OPERATION, MAINTENANCE, AND SAFETY PROCEDURES

2.6.1 Liquefaction Project

2.6.1.1 Liquefaction Facilities

The Liquefaction Project would be operated and maintained in accordance with 49 CFR 193, 33 CFR 127, NFPA 59A, and other applicable federal and state regulations.

The estimated 200 personnel employed during operation of the liquefaction facilities would be trained to properly and safely perform their assigned duties. Operators would be trained in the handling of potential hazards associated with LNG, cryogenic operations, and the proper operation of all the equipment. The operators would meet all the training requirements of the USCG, DOT, State Fire Marshall offices of Texas and Louisiana, and other applicable regulatory entities.

The liquefaction site's fulltime maintenance staff would conduct routine maintenance and minor overhauls as necessary. Major overhauls and other major maintenance would be handled by outside maintenance contractors specifically trained to perform the required services. All scheduled and unscheduled maintenance would be entered into a computerized maintenance management system.

2.6.1.2 LNG Vessels

Although LNG carriers and their operation are directly related to the use of the proposed liquefaction facilities, they are not subject to the section 3 authorization sought in this application. LNG carriers arriving at the liquefaction site must comply with all federal and international standards regarding LNG shipping. LNG vessels would travel from the Gulf of Mexico up the Sabine Pass Channel to the Liquefaction Project site along the Port Arthur Canal. The vessel/carriers would depart using the reverse of this course once loaded with LNG. Tug boats would be used to maneuver LNG vessels to and from place at the berths, and would dock at the MOF during LNG loading operations.

LNG vessels transiting the Port Arthur Canal and SNWW are typically designated to have a moving security zone during transit per USCG regulations at 33 CFR 165.805(a)(2). While in transit, LNG vessels are accompanied by a moving security zone that extends 2 miles ahead, 1 mile astern, and from shoreline to shoreline on the SNWW. As a safety and security precaution, no vessels are allowed to meet, cross, or overtake LNG vessels in transit or otherwise enter the security zone without the express permission of the USCG. At its discretion, the USCG may elect to provide escort boats during LNG carrier transits to enforce the moving security zone.

2.6.1.3 Maintenance Dredging

The USACE is responsible for regular maintenance dredging of the Port Arthur Canal and SNWW. PALNG would be responsible for maintenance dredging of its berthing area and turning basin, which could require material removal every 4 to 5 years based on past shoaling rates within the Port Arthur Canal. PALNG would prefer to use the J.D. Murphree WMA for the maintenance dredging during project operations, if opportunities remain for the beneficial use of the dredge material to create marsh habitats. Alternatively, existing dredge disposal areas could be used similar to other projects in the area. PALNG would work with USACE to determine maintenance dredging requirements and obtain long-term maintenance dredging capacity.

2.6.2 Texas Connector and Louisiana Connector Projects

The pipelines and aboveground facilities associated with the Texas Connector and Louisiana Connector Projects would be operated and maintained in accordance with DOT regulations in 49 CFR 192, the Commission's guidance in 18 CFR 380.15, and PAPL's construction and restoration plans.

2.6.2.1 Pipeline Surveys and Inspections

As required by 49 CFR 192.615, PAPL would establish an operation and maintenance plan as well as an emergency plan that includes procedures to minimize the hazards in a natural gas pipeline emergency. As a part of pipeline operations and maintenance, PAPL would conduct regular patrols of the pipeline rights-of-way in accordance with DOT requirements, including aerial and ground patrols of the pipeline facilities to survey surface conditions on and adjacent to the pipeline right-of-way for evidence of leaks, unauthorized excavation activities, erosion and wash-out areas, areas of sparse vegetation, damage to permanent erosion control devices, exposed pipe, missing markers and signs, new residential developments, and other conditions that might affect the safety or operation of the pipeline. Any cathodic protection systems would also be inspected to ensure they are functioning properly. In addition, pigs would be sent through the pipeline to check for corrosion and irregularities in the pipe in accordance with DOT requirements. The MLVs located along the pipeline are typically installed with equipment such that it may be remotely operated from a control center. PAPL would be required to keep detailed records of all inspections and supplements to the corrosion protection system as necessary to meet the requirements of 49 CFR 192.

PAPL would also maintain regular contact with the appropriate fire, police, and public officials as part of each of their emergency operating procedures. Communications with these parties would include the potential hazards associated with PAPL's facilities located in their service area and prevention measures undertaken, the types of emergencies that may occur on or near the new pipeline facilities, the purpose of pipeline markers and the information contained on them, pipeline location information, recognition of and response to pipeline emergencies, and procedures to contact PAPL for more information.

In addition, PAPL would install a SCADA system for the pipeline system that would continuously monitor gas pressure, temperature, and volume at specific locations along the pipeline. These systems would be continuously monitored from PAPL's gas control center and threshold and alarm values would be established to warn operators if critical parameters are exceeded.

2.6.2.2 Right-of-Way Maintenance

In addition to the survey, inspection, and repair activities described previously, operation of the pipelines would include right-of-way maintenance. Rights-of-way would be allowed to revegetate after restoration; however, larger shrubs and brush may be periodically removed near the pipeline. The frequency of the vegetation maintenance would depend upon the vegetation growth rate, and PAPL would regularly mow or clear vegetation from its permanent pipeline rights-of-way and at aboveground facilities in most land uses types. To facilitate periodic corrosion and leak surveys, a corridor not exceeding 10 feet in width centered on the pipeline may be maintained in an herbaceous state. Vegetation management is discussed further in section 4.5.2.

Pipeline facilities would be clearly marked at line-of-sight intervals and at crossings of roads, railroads, and other key points. The markers would clearly indicate the presence of the pipeline and provide a telephone number and address where a company representative may be reached in the event of an emergency or prior to any excavation in the area of the pipeline by a third party. PAPL would participate in the national and state One Call systems in both Texas and Louisiana.

3.0 ALTERNATIVES

In accordance with CEQ regulations for complying with NEPA (at 40 CFR 1502.14), this EIS compares the environmental impacts of the proposed action against a range of alternatives. Each of the cooperating agencies with obligations under NEPA can use this alternatives analysis as part of its decision-making process. Individual agencies would ensure consistency with their own administrative procedures prior to accepting the conclusions in this EIS.

In accordance with NEPA and Commission policy, we evaluated alternatives to the Projects to determine whether any would be reasonable and have significant environmental advantages compared to the proposed action. The alternatives analyzed consisted of the No-Action Alternative, system alternatives for the Projects, alternative liquefaction terminal locations, alternative pipeline routes, and alternative aboveground facility sites.

The principal criteria for considering and weighing the alternatives for the Projects were:

- the technical and economic feasibility and practicality of each alternative;
- the significance of each alternative's environmental advantages and disadvantages relative to the proposed undertaking;
- the ability of each alternative to reasonably meet PAPL's primary objective of providing up to 2.0 bscfd of natural gas to the Liquefaction Project within a timeframe that would allow contractual obligations to be met; and
- the ability of each alternative to reasonably meet PALNG's primary objective of exporting up to 517 bcf per year of LNG to FTA countries and up to 517 bcf per year of LNG to non-FTA countries.

PALNG and PAPL participated in our pre-filing process during the preliminary design stage for the Projects (see section 1.3). This process emphasized identification of potential stakeholder issues, as well as identification and evaluation of alternatives that could avoid or minimize impacts. We analyzed each alternative based on scoping comments and guidance received from federal, state, and local regulatory agencies. Additional input used during the analysis of alternatives included information provided by PALNG's and PAPL's field surveys, aerial photographs, U.S. Geological Survey (USGS) topographic maps, National Wetlands Inventory (NWI) maps, agency consultations, and other publicly available information. Identical data sources were used when comparing the alternative to the Projects (e.g., NWI maps were used for analyses of both the alternatives and the Projects). The scope, methodology, and results of our alternatives analyses are discussed in the following sections.

It is important to recognize that not all conceivable alternatives are technically and economically feasible and practical. Some alternatives may be impracticable because they are unavailable or incapable of being implemented after taking into consideration costs, existing technologies, and the overall purposes of the Projects.

The FERC or FERC staff does not design LNG terminal and natural gas pipeline projects. Rather, companies propose and design projects in response to market conditions. In turn, we analyze these proposals and identify and disclose a reasonable range of alternatives. In conducting this analysis, it is important to recognize the environmental advantages and disadvantages of the proposed actions in order to focus the analysis on reasonable alternatives that may reduce impacts and offer a significant environmental

advantage. A detailed discussion of the environmental consequences of the Projects (both adverse and beneficial) is included in section 4.

It should be noted that we conducted an analysis of the proposed Liquefaction Project site in 2006 (FERC Docket No. CP05-83-000). Although the project proposed in 2006 was to import LNG, similar siting criteria needs are also applicable to an LNG export project. The 2006 analysis concluded that the impacts associated with the Liquefaction Project were acceptable because the project would be mostly located on land that has been historically used for dredge material placement, best fulfilled the technical and economic criteria required to meet the project objectives and had received support of the community and elected officials. Conditions at the Liquefaction Project site have not changed significantly since 2006. Further, although the current proposal is to export LNG, the same criteria that made it an environmentally acceptable site in 2006 exist today, including receiving support from the community and elected officials.

3.1 NO-ACTION ALTERNATIVE

Under the No-Action Alternative, the Projects would not be developed and PALNG's and PAPL's objectives of providing the proposed liquefaction and transportation capacity for LNG export would not be realized. In addition, the potential adverse and beneficial environmental impacts discussed in section 4 of this EIS would not occur.

The development and production of gas from conventional and unconventional gas formations has increased in recent years throughout many areas of the United States and is projected to continue for decades. Natural gas is used in a variety of sectors (residential, commercial, electric power generation, industrial, transportation). The No-Action Alternative could require that potential end users make different arrangements to meet their needs. Liquefaction terminal and pipeline system expansions of similar scope and magnitude to the Projects would likely result in environmental impacts of comparable significance, especially those projects in a similar regional setting. Therefore, we have dismissed the No-Action Alternative as a reasonable alternative to meet the objectives of the Projects.

3.2 SYSTEM ALTERNATIVES

System alternatives would make use of other existing, modified, proposed, or planned LNG facilities and/or pipeline systems to meet the stated objectives of the proposed Projects. A system alternative generally makes it unnecessary to construct all or part of a proposed project; however, some modifications or additions to another existing system may be necessary to meet the project's purpose and need. Such modifications or additions may result in environmental impacts that could be less than, similar to, or greater than those associated with construction of a proposed project. The purpose of identifying and evaluating system alternatives is to determine whether potential environmental impacts associated with construction and operation of proposed facilities could be avoided or reduced while still meeting the basic objectives of the proposed project.

We reviewed system alternatives to evaluate the ability of existing, modified, proposed, or planned[18] facilities to meet the stated objectives of the Projects, and to determine if a system alternative exists that would have less significant adverse environmental impacts than those associated with the Projects. The status identified for each system alternative (e.g., planned, proposed, or approved) is current as of the time this EIS is being written, and is subject to change over time. Our analysis of the system

[18] "Proposed projects" are projects for which the proponent has submitted a formal application with the FERC or, for deepwater port projects, with the DOT's Marine Administration and the USCG; "planned projects" are in pre-filing at FERC or have been announced but not been formally proposed.

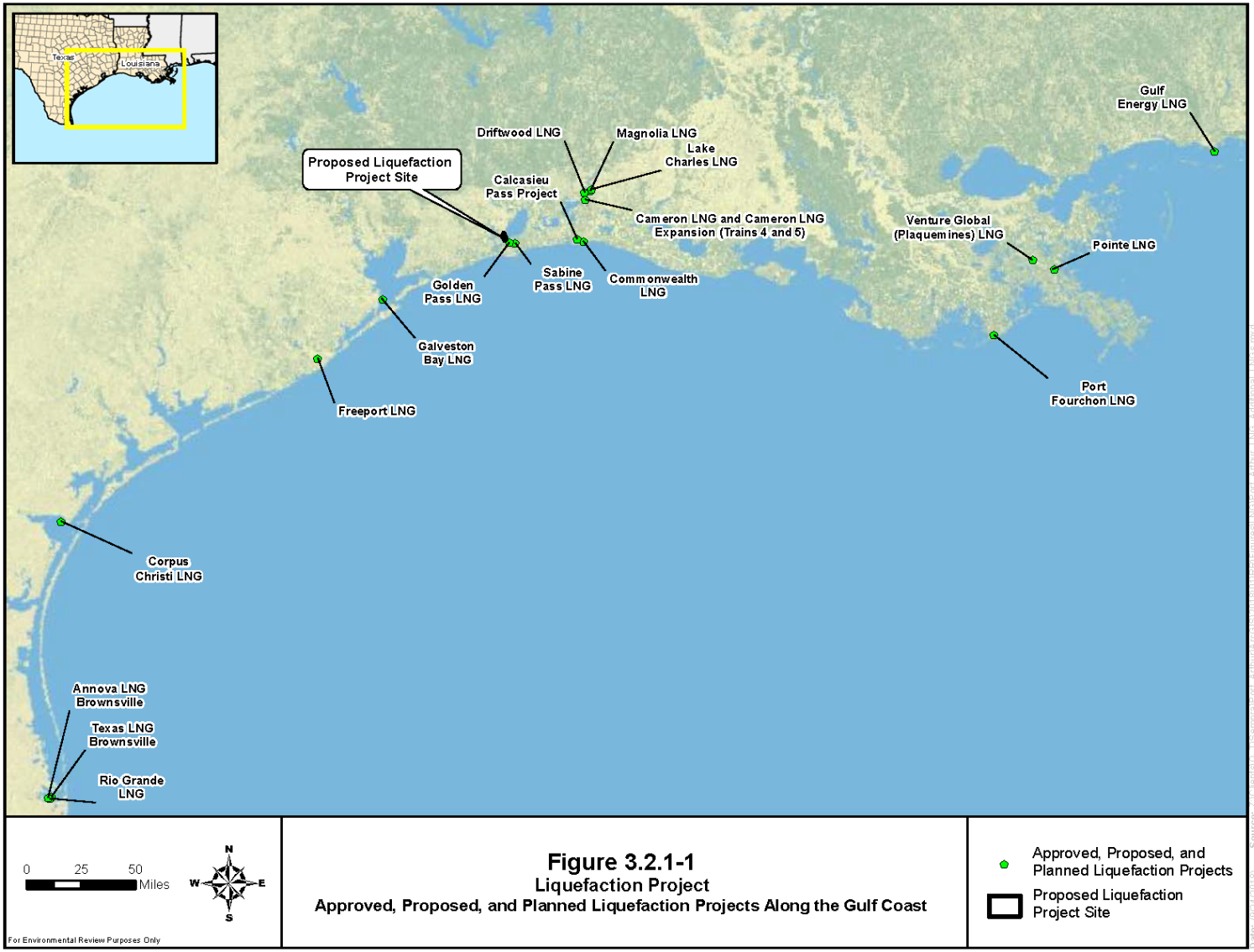
alternatives is presented in section 3.2.1 for the Liquefaction Project and in section 3.2.2 for the Texas Connector Project and Louisiana Connector Project.

3.2.1 Liquefaction Project System Alternatives

For a system alternative to be viable and recommended, it must meet the purpose and need of the Liquefaction Project, be technically and economically feasible, and offer a significant environmental advantage over the project as proposed. In the case of the Liquefaction Project, it must also be compatible with PALNG's proposal to the DOE to export up to 698 bcf per year of LNG to FTA countries and up to 698 bcf per year of LNG to non-FTA countries. The system alternatives considered in this analysis are depicted on figure 3.2.1-1.

PALNG is proposing to export LNG to FTA and non-FTA countries. The volume of gas (commodity) for FTA countries has already been approved by the DOE (and is determined to be in the public interest by the NGA, as amended). The DOE determination for non-FTA countries is pending. The other approved, planned, or proposed LNG export facilities have also either obtained or applied for DOE approval for the export of LNG associated with the production capacity in the respective project plans/proposals. Therefore, for PALNG's customers to obtain LNG from other facilities that have DOE approval for export, those facilities would need to construct additional liquefaction facilities to meet the export capacity proposed by PALNG, and as approved by the DOE authorizations. We recognize that liquefaction capacity may not be fully subscribed at all facilities based on contracts executed as of the writing of this EIS. However, because the DOE's export approval is a determination that the export is in the public interest, we will not speculate that any portion of other LNG terminals' liquefaction capacity is in "excess" or available as an alternative for use by PALNG to meet its project objectives.

Therefore, an expansion of existing facilities would be needed with a similar scope of pre-treatment and liquefaction facilities and possibly additional storage and marine transfer facilities, while any new facility would need a similar scope of pre-treatment, liquefaction, storage, and marine transfer facilities to accommodate the objectives of the proposed Projects. Any expansion of an existing facility could result in environmental impacts that would be similar to the environmental impacts of the proposed action (depending on the environmental resource affected) and may not provide a significant environmental advantage over the proposed project. Each of the planned, proposed, or authorized projects considered as a potential system alternative (either to expand an existing facility or new construction at a proposed terminal site to accommodate the PALNG's project objective) is listed in table 3.2.1-1. Our analysis of system alternatives listed in table 3.2.1-1 assumes and/or considers whether the project has an equal chance of being constructed; has the onsite space required for an expansion to accommodate facilities similar to those proposed for the Liquefaction Project; could be served by a pipeline system(s) for the export of 2.0 bscfd; and has a compatible in-service timeframe to meet the Liquefaction Project's objective. Meeting these criteria would qualify the system as a potential alternative. However, future Commission review and market forces will ultimately decide which and how many of these facilities are built.


Texas
Louisiana
Proposed Liquefaction Project Site
Driftwood LNG
Magnolia LNG
Lake Charles LNG
Calcasieu Pass Project
Cameron LNG and Cameron LNG Expansion (Trains 4 and 5)
Gulf Energy LNG
Venture Global (Plaquemines) LNG
Pointe LNG
Golden Pass LNG
Sabine Pass LNG
Commonwealth LNG
Galveston Bay LNG
Freeport LNG
Port Fourchon LNG
Corpus Christi LNG
Annova LNG Brownsville
Texas LNG Brownsville
Rio Grande LNG
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For Environmental Review Purposes Only
Figure 3.2.1-1
Liquefaction Project
Approved, Proposed, and Planned Liquefaction Projects Along the Gulf Coast
Approved, Proposed, and Planned Liquefaction Projects
Proposed Liquefaction Project Site

TABLE 3.2.1-1

Approved, Proposed, and Planned Liquefaction Projects Along the Gulf Coast – Summary Profile as System Alternatives

Project/FERC Docket No./Location	Facility Status	Existing or Proposed MTPA	FERC Status	In-Service Target Date	Could Expansion be Permitted/Completed to Meet PALNG Schedule (In-service 2023)?	Adequate Space for Expansion?
Sabine Pass LNG CP11-72-000 and CP14-12-000 *Sabine, LA*	Existing; Import/ Export	20.0	Authorized April 16, 2012 and February 20, 2014.	2016–2017	No	Possibly south of site or north of Highway 82, which forms northern border of site.
Sabine Pass LNG Expansion (Trains 5 and 6) CP13-552-000 and CP13-553-000 *Sabine, LA*	Existing; Export	9.0	Authorized April 6, 2015. As of December 2018, construction continues.	2019	No	See above.
Sabine Pass Third Berth Project CP19-11-000 *Sabine, LA*	Existing (expansion); Export		Application for expansion was filed with FERC in October 2018.	2022	No	See above.
Cameron LNG CP13-25-000, CP13-27-000, and CP13-516-000 *Hackberry, LA*	Existing; Import/ Export	14.95	Authorized June 19, 2014. As of December 2018, construction continues.	2018-2019	No	Possibly west and south of site. However, per Final EIS, higher quality wetlands; existing oil and gas production activities; and greater open water areas in these areas represent disadvantages.
Cameron LNG Expansion (Trains 4 and 5) CP15-560-000 *Hackberry, LA*	Existing; Export	9.97	Authorized May 5, 2016. As of December 2018, construction has not yet begun.	2019	No	No. See above.
Freeport LNG CP12-509-000, CP12-29-000, and CP15-518-000 *Freeport, TX*	Existing; Import/ Export	13.2	Authorized July 30, 2014 and July 7, 2016. As of December 2018, construction continues.	2018–2019	No	Possibly south of site and Highway 723. However, area is occupied by residences.
Corpus Christi LNG CP12-507-000 and CP12-508-000 *Corpus Christi, TX*	New; Import/ Export	15.0	Authorized December 30, 2014. As of December 2018, construction continues, with Commission approval requested to introduce gas to Train 1 and commission certain storage tanks.	2017–2020	No	Possibly west of site. East side of site is bound by existing industrial development.

TABLE 3.2.1-1 (cont'd)

Approved, Proposed, and Planned Liquefaction Projects Along the Gulf Coast – Summary Profile as System Alternatives

Project/FERC Docket No./Location	Facility Status	Existing or Proposed MTPA	FERC Status	In-Service Target Date	Could Expansion be Permitted/Completed to Meet PALNG Schedule (In-service 2023)?	Adequate Space for Expansion?
Lake Charles LNG CP14-119-000, CP14-120-000, and CP14-122-000 *Lake Charles, LA*	Existing; Export	16.45	Authorized December 17, 2015. As of January 2017, construction had ceased. As of December 2018, construction was not underway.	2019-2020	No	Possibly west of site. However, per Final EIS, physical and safety restrictions due to presence of existing plant infrastructure; lack of direct road access; and LNG pipeline routing constraints in these areas represent significant disadvantages.
Magnolia LNG CP14-347-000 CP19-19-000 *Lake Charles, LA*	New; Export	8.8	Authorized April 15, 2016. On November 19, 2018, Magnolia LNG filed an application with FERC to increase LNG production capacity from 8 MTPA to 8.8 MTPA. As of December 2018, construction has not yet begun.	2018–2019	No	No. Limited uplands and site is surrounded by Industrial Canal to north, existing industrial development to east and north, and saturated wetlands to south that would require fill.
Golden Pass LNG CP14-517-000 *Sabine Pass, TX*	Existing; Export	15.6	Authorized December 21, 2016. As of December 2018, construction has not yet begun.	2019–2020	No	Yes, south and southeast of site.
Gulf Energy LNG CP15-521-000 *Pascagoula, MS*	Existing; Export	10.0	Application filed June 19, 2015. Draft EIS issued on November 15, 2018; the NEPA process continues.	2020	No	No. Site is surrounded by existing industrial development.
Calcasieu Pass Project CP15-550-000 *Cameron Parish, LA*	New; Export	10.0	Application filed September 4, 2015. Final EIS issued on October 22, 2018.	2019	No	Yes, east of facility
Texas LNG Brownsville CP16-116-000 *Brownsville, TX*	New; Export	4.0	Application filed March 31, 2016. Draft EIS issued on October 26, 2018; the NEPA process continues.	2020	No	No. Site is surrounded by waterbodies and saturated wetlands that would require fill, and Laguna Atacosa National Wildlife Refuge.
Rio Grande LNG CP16-454-000 *Brownsville, TX*	New; Export	27.0	Application filed May 5, 2016. Draft EIS issued on October 12, 2018; the NEPA process continues.	2020	No	No. Limited upland area northeast of site, otherwise surrounded by waterbodies and saturated wetlands that would require fill.
Annova LNG Brownsville CP16-480-000 *Brownsville, TX*	New; Export	7.0	Application filed July 13, 2016. As of December 2018, the NEPA process continues.	2021	No	Possibly east and west of site where existing dredge disposal areas exist.

TABLE 3.2.1-1 (cont'd)

Approved, Proposed, and Planned Liquefaction Projects Along the Gulf Coast – Summary Profile as System Alternatives

Project/FERC Docket No./Location	Facility Status	Existing or Proposed MTPA	FERC Status	In-Service Target Date	Could Expansion be Permitted/Completed to Meet PALNG Schedule (In-service 2023)?	Adequate Space for Expansion?
Freeport LNG Expansion (Train 4) CP17-470-000 *Freeport, TX*	Existing; Export	5.1	Application filed June 29, 2017. EA issued on November 2, 2018.	2020	No	No. Site is surrounded by existing industrial development.
Venture Global (Plaquemines) LNG CP17-66-000 and CP17-67-000 *Plaquemines Parish, LA*	New; Export	20.0	Application filed March 13, 2017. Draft EIS issued on November 13, 2018.	2020	No	Yes, primarily east of site.
Driftwood LNG CP17-117-000 and CP17-118-000 *Calcasieu Parish, LA*	New; Export	26.0	Application filed April 11, 2017. Final EIS issued in January 2019.	2025	Possible	No. Limited upland area north and south of site, otherwise surrounded by waterbodies and saturated wetlands that would require fill.
Corpus Christi LNG (Stage 3) CP18-512-000 and CP18-513-000 *Corpus Christi, TX*	Existing; Export	10.0	Application filed June 28, 2018. As of December 2018, the NEPA process continues.	2021	No	No. Site is surrounded by existing industrial development.
Commonwealth LNG PF17-8-000 *Cameron Parish, LA*	New; Export	9.0	Pre-filing initiated August 15, 2017. As of December 2018, the pre-filing process continues.	2022	Possible; however, project is +1 year behind PALNG in the FERC process	Possibly west of site. Existing development and highways immediately north of site.
Port Fourchon LNG PF17-9-000 *LaFourche Parish, LA*	New; Export	5.0	Pre-filing initiated August 21, 2017. As of December 2018, the pre-filing process continues.	2021-2023	Possible; however, project is +1 year behind PALNG in the FERC process	Yes, east and west of site.
Galveston Bay LNG PF18-7 *Galveston County, TX*	New; Export	16.5	Pre-filing initiated October 10, 2018. As of December 2018, the pre-filing process continues.	2027	Possible; however, project is +1 year behind PALNG in the FERC process	No. Site is essentially located on an island in which it encompasses the entire area.
Pointe LNG PF18-8 *Plaquemines Parish, LA*	New; Export	6.0	Pre-filing initiated October 16, 2018. As of December 2018, the pre-filing process continues.	2025	Possible; however, project is +1 year behind PALNG in the FERC process	Yes, east and west of site.

As identified in table 3.2.1-1, we reviewed the liquefaction terminals that exist, have been authorized, or are proposed or planned as an alternative to PALNG's project. Our review of the proposed PALNG site in Port Arthur, Texas discussed in section 4 did not discover any significant environmental impacts from the construction of the liquefaction facilities. Additionally, we did not receive any specific comments relating to the use of a specific liquefaction terminal as a system alternative to the proposed site. We note again that the Commission does not design projects. If the Commission ultimately determines that another project would be more appropriate, it could deny a proposal, but it could not force another entity to build a project that it has not proposed. Also, if the market support is not there for a project, and export volumes proposed by one liquefaction terminal are met by another liquefaction terminal, a project may not get built. However, we cannot speculate as to the future state of export markets or any project which might ultimately meet the same market demands as PALNG.

Overall, PALNG and PAPL have designed projects that together incorporate liquefaction facilities and pipelines, respectively, to meet of the overall objectives of both projects. Any other project would also have to consider these dual objectives of not only being able to process and export the same amount of LNG as PALNG, but also being able to acquire the same volumes of natural gas by pipeline from the locations that PAPL proposes and all within a few months of the schedule proposed by PALNG and PAPL. This in and of itself could result in greater environmental impacts for those liquefaction projects located farther from PALNG's site and PAPL's receipt points, as the proposed pipelines are being constructed and operated specifically to serve the proposed liquefaction terminal. Any pipeline(s) constructed from PAPL's gas sources at the lateral and tie-in locations to these alternative liquefaction terminals could be quite extensive (e.g., to the Brownsville, Texas area). Further, the other proposed liquefaction terminals are proposed to be served by pipelines specific to the given project and in quantities needed to meet the objective of the project. These more distant projects would not provide a significant environmental advantage when considered in conjunction with the connecting gas sources. Liquefaction and export projects in proximity to PALNG's site could require less pipeline (such as Sabine Pass and Golden Pass, as those projects would require less pipeline compared to PAPL's southern pipeline), but would still require similar facilities to what PAPL requires to obtain gas from the same interconnects on its Northern Pipeline associated with the Texas Connector Project and Louisiana Connector Project, resulting in similar environmental impacts and not providing any significant environmental advantages.

As mentioned, PALNG's export of LNG (commodity) to FTA countries has already been determined to be in the public interest. For our analysis, we are assuming that all projects, like PALNG, have contracted volumes that are not available as a direct "replacement" for the export volumes proposed by PALNG, and any other system alternative terminals would require additional volumes above and beyond what they have proposed or have been authorized to replace the liquefaction facilities of PALNG. No other entity has proposed volumes that they contend are a replacement for PALNG's exports.

If we assume that another entity could propose replacement facilities for PALNG's facilities, the applicant would need to provide exactly what the replacement facilities would entail, including their environmental impact, and conduct the corresponding safety and engineering analysis. These data are not available to PALNG, nor do we have this information. A simple one-to-one "placement" of PALNG facilities at another location may not be an accurate representation of what would be required, especially if additional ship traffic would need to be accommodated with additional berths. This analysis would be purely based on speculation and hypotheticals and would not provide the information necessary to inform us in our review or the Commission in its decision-making.

It should also be noted that unlike a pipeline under section 7 of the NGA, an authorization granted under section 3 of the NGA does not grant the applicant eminent domain and, thus, we have limited ability to ensure that a recommended alternative site would be available unless the landowner willingly makes it available for purchase or lease.

Some alternative sites may have the land/waterway available to place the exact facilities proposed by PALNG at another location. The layout of these facilities would also be subject to detailed engineering analysis, so a simple placement of the facilities to determine their comparable environmental impacts would not be an accurate representation as discussed above but could provide a general comparison. In that regard, most other locations would have very similar impacts to PALNG's proposal as they are in coastal areas, and would typically include the permanent fill of wetlands over a similarly sized footprint, and would likely involve impacts on coastal wetlands, waterways, and fisheries (possibly including EFH).

In consideration that any system alternative project sponsor would not be able to engineer, permit, and construct a project within a similar timeframe as proposed by PALNG; other liquefaction terminal export projects have applied to the DOE for export authorization to service expected contracts; no alternative project proponent has proposed a project it contends would replace PALNG's project; and all system alternatives would require additional pipelines to account for the gas sources PAPL is proposing to use to source gas to PALNG, which would result in greater or very similar environmental impacts, we find that none of the system alternatives are a viable replacement to ultimately meet PALNG's objectives.

In conclusion, no system alternative meets the criteria of being technically and economically feasible, provides a significant environmental advantage, and meets the timeframes proposed by PALNG to permit and construct a project and, therefore, we do not recommend any alternative to replace PALNG's proposed facility.

3.2.2 Pipeline Project System Alternatives

To serve as a viable pipeline system alternative to the Texas Connector or Louisiana Connector Projects, the system would need to: 1) transport all or a part of the volume of natural gas required for liquefaction associated with the Liquefaction Project; and 2) cause significantly less impact on the environment than the proposed Texas Connector or Louisiana Connector Projects. Gas provided by a system alternative must connect to the Liquefaction Project site.

Neither PAPL nor its affiliates (Sempra LNG & Midstream and PALNG) currently own or operate existing pipeline infrastructure within the Texas Connector or Louisiana Connector Projects area that, according to PAPL, could provide sufficient capacity from existing regional interstate and intrastate carriers to the Liquefaction Project site.

Based on information provided by PAPL, it met with currently existing natural gas pipeline transportation and storage companies to provide the quantities of feed gas supply required for the Liquefaction Project. The interconnect pipelines would include natural gas supplies from existing ANR, Centana, CGT, Egan, FGT, GTS/CIPCO, HPL, KMLP, NGPL, Pine Prairie, TETCO, TGT, and TGP facilities. While the existing pipelines would have the capacity to provide the required natural gas volumes for the Liquefaction Project when cumulatively combined into the proposed Texas Connector or Louisiana Connector Projects pipelines, it is speculative as to if the gas supplies from proposed interconnections would be available in the quantity needed in the future to serve the Liquefaction Project's stated purpose if provided by a single source such as one expanded pipeline system. As such, PAPL has proposed to diversify its sources of natural gas to ensure adequate volumes are available in the future for the Liquefaction Project. Further, as of the issuance of this EIS, none of these existing pipeline companies have made an announcement to expand its infrastructure to provide service to the Liquefaction Project area.

Other pipeline operators in the area are currently constructing or considering transportation service like the proposed Texas Connector and Louisiana Connector Projects. Golden Pass Pipeline and Creole Trail Pipeline, for example, are currently expanding and could potentially offer similar projects for PALNG and PAPL to consider. However, these alternative projects would likely require the same amount of

facilities as PAPL to provide the same service, and these expansions are intended to serve the purpose and need of those projects, which includes proving natural gas to their associated existing LNG terminals. Even if adopted, reducing the number of interconnections would limit the diversity of supply from the interstate and intrastate natural gas markets needed to serve the Liquefaction Project. Beyond the general analysis above, we did not receive any comments requesting us to look at a specific system alternative. Therefore, we did not further consider pipeline system alternatives.

3.3 ALTERNATIVE TERMINAL SITE LOCATIONS

During initial project concept and planning, PALNG considered alternative locations for the Liquefaction Project site along the SNWW using screening criteria to narrow the list of potential terminal sites, as listed in table 3.3-1 and shown on figure 3.3-1. No other potential alternative terminal sites were identified or recommended during project scoping, and because we did not conclude any significant environmental limitations with the proposed site, our alternatives analysis in this EIS focused on the sites referenced above.[19] The alternative sites included the following:

- Alternative Site 1 - Alternative Site 1 is along the west bank of the SNWW across from Mesquite Point and southeast of and directly adjacent to the existing Golden Pass LNG facility.

- Alternative Site 2 - Alternative Site 2 is on the west bank of the SNWW about 0.9 mile north of the Gulf of Mexico.

- Alternative Site 3 - Alternative Site 3 is on the east bank of the SNWW about 0.9 mile north of the Gulf of Mexico.

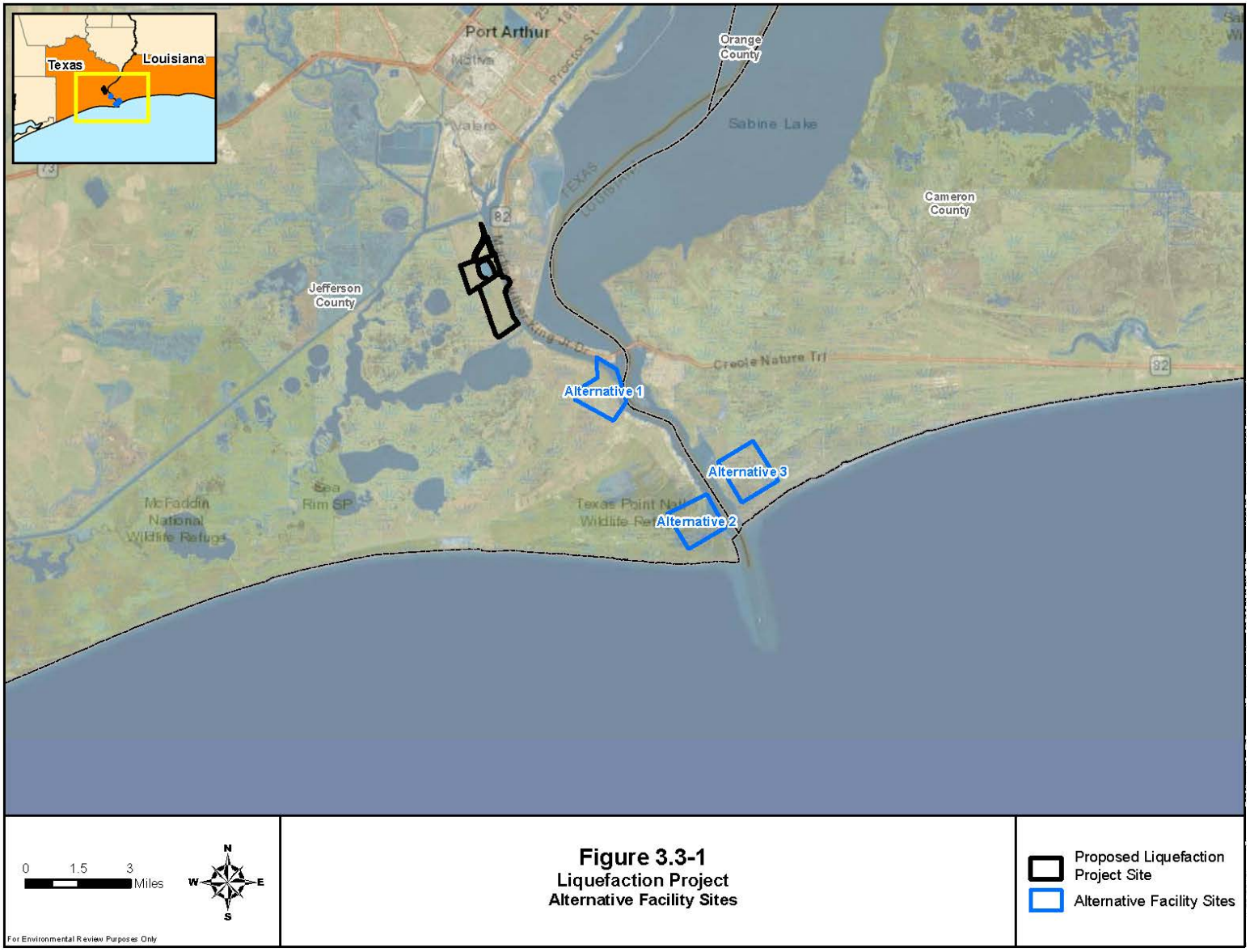
We received comments from the EPA, Region 6, stating that impacts on aquatic habitats be considered in our alternatives analysis and that impacts on aquatic habitats be avoided or minimized. Consideration of impacts on aquatic habitat is provided in the narrative below.

TABLE 3.3-1

Comparison of the Proposed Liquefaction Project Site and Alternative Terminal Site Locations

Site Screening Selection Criteria	Proposed Site	Alternative 1	Alternative 2	Alternative 3
Access to a Deepwater Channel	Yes	Yes	Yes	Yes
Access to Safety and Security Infrastructure	Yes	Yes	Yes	Yes
Access to Major Roads and Barge Traffic	Yes	Yes	Yes	Yes
Sufficient Size as Currently Proposed/Land Available for Expansion	NA/Yes	NA/Yes	NA/No	NA/Yes
Utilities Available	Yes	Yes	Yes	Yes
Practicable Site	Yes	Yes	No	Yes
Aquatic Habitat Characteristics (relative to the Proposed Site)	Low to Moderate	Higher Quality	Higher Quality	Higher Quality

[19] We also incorporate by reference our previous alternatives analysis for the site in FERC Docket No. CP05-83-000. See discussion in text.


Texas
Louisiana
Port Arthur
Orange County
Sabine Lake
Cameron County
Jefferson County
Creole Nature Trl
Alternative 1
Alternative 3
Alternative 2
McFaddin National Wildlife Refuge
Sea Rim SP
0 1.5 3 Miles
N
W
E
S
For Environmental Review Purposes Only
Figure 3.3-1
Liquefaction Project
Alternative Facility Sites
Proposed Liquefaction Project Site
Alternative Facility Sites

At Alternative Site 1, a historical dredge material deposition area occupies about 60 acres; the remainder consists of tidal coastal marsh. The wetland value of the tidal coastal marsh within Alternative Site 1 is greater than that found at the proposed site, most of which has been subjected to drainage and the deposition of dredge material. Due to the lack of sufficient upland habitat to provide suitable area for construction of the facilities, impacts on higher quality wetlands would be greater than the proposed site. Further, Alternative Site 1 lacks existing dock structures for material off-loading. As such, Alternative Site 1 would have greater impacts on aquatic resources and was removed from further consideration.

About 90 percent of the Alternative Site 2 is within the Texas Point National Wildlife Refuge (NWR), a refuge designated as a Globally Important Bird Area of the United States by the American Bird Conservancy. Because of this designation and higher quality aquatic habitat, impacts would be greater than at the proposed site. As such, Alternative Site 2 was removed from further consideration due to the lack of available land and the potential impacts on environmental resources associated with the NWR.

Alternative Site 3 predominantly consists of relatively undisturbed tidal coastal marsh. The only upland area at the site represents about 1.5 percent of the total acreage of Alternative Site 3. Vehicular access to the alternative site is currently not available. Therefore, PALNG estimates that a 2.5-mile-long access road would need to be constructed, and bridges would need to be improved or constructed to provide service for facility personnel, maintenance and supply trucks, and emergency responder vehicular traffic. Due to the proximity to the Gulf of Mexico and wetlands characterized by shallow tidal marshes, extensive salt cordgrass meadows, existing tidal channels, and the abundance of habitat preferred by migratory and pelagic bird species, the habitat value of wetlands at Alternative Site 3 are greater than the proposed site. As such, Alternative Site 3 was removed from further consideration.

In addition to the above, we conducted an analysis of the proposed Liquefaction Project site in 2006 (FERC Docket No. CP05-83-000). Although the project proposed in 2006 was to import LNG, similar siting criteria needs are also applicable to an LNG export project. Based on a regional alternatives analysis of ports in Port Arthur, Texas, and Port Plaquemines and Lake Charles, Louisiana, as well as potential sites in Florida, Mississippi, and Alabama, and along the Mississippi River; suitable port areas, including consideration of channel depth, air draft, and proximity to natural gas pipeline systems, although there were other developable sites for the import/export of LNG, none provided a significant environmental advantage over the proposed site. The 2006 site selection analysis was further refined to consider channel access (e.g., availability of a channel with enough depth, width, and air draft for the operation of a typical LNG vessel); current zoning, including compliance with DOT siting criteria (49 CFR 193); and enough area available to accommodate the proposed facilities, the safety features required by 49 CFR 193 and NFPA 59A (2001), and the berthing facilities.

As previously mentioned, the 2006 analysis concluded that the impacts associated with the proposed site were acceptable because the project would be mostly located on land that has been historically used for dredge material placement, best fulfilled the technical and economic criteria required to meet the project objectives, and had received the support of the community and elected officials. Those conditions have not changed significantly since 2006.

Alternative configurations of the Liquefaction Project's facilities were evaluated, design of the site was limited by the siting requirements of 49 CFR 193, NFPA 59A (2001), and industry and engineering standards. Regulatory requirements stipulate that potential thermal exclusion and vapor dispersion zones remain onsite; therefore, those requirements dictate the locations of specific pieces of equipment for the liquefaction facilities. Similarly, thermal radiation zones associated with flares require specific distances from other pieces of equipment and from property lines. The selected location of each of the components of the expanded terminal was based on the relevant regulations, codes, and guidelines. Finally, the marine berthing and offloading facilities are dependent on proximity and access to the Port Arthur Canal.

The proposed site consists primarily of PEM and palustrine shrub scrub wetland and vegetation types. PALNG would minimize impacts on wetlands and EFH by adopting the construction methods described in section 4.4.2.

Based on a comment on the draft EIS, we also analyzed a potential alternative liquefaction site along the north side of the Industrial Canal, which can be accessed via the Calcasieu Ship Channel, in Calcasieu Parish, Louisiana. This alternative is about 65 miles northeast from PALNG's proposed Liquefaction Project site and adjacent to Trunkline LNG Export, LLC's and Trunkline LNG Company, LLC's (Trunkline) Lake Charles LNG facility. In considering this alternative site, we overlaid PALNG's proposed facility layout onto the alternative area identified, as shown on figure 3.3-2. As discussed in section 2.2, about 950 acres and 898 acres would be required to construct and operate, respectively, the Liquefaction Project. Based on these land use requirements and how PALNG's has engineered its facility, the area required to accommodate the Liquefaction Project's facilities as proposed would extend into Trunkline's existing Lake Charles LNG facility site to the east and extensive wetlands to the west. While FERC does not design liquefaction facilities, and as discussed in section 3.2.1, a simple one-to-one "placement" of PALNG facilities at another location may not be an accurate representation of what would be required, especially if additional ship traffic would need to be accommodated with additional berths, we also considered an alternative layout that would not overlap onto Trunkline's Lake Charles LNG facility and extend further north, as shown on figure 3.3-3.

Using the layout described above (figure 3.3-3), table 3.3-2 provides a comparison of the proposed site against the alternative liquefaction site. We acknowledge the comparison does not include other resource impacts (geology, soils, etc.); however, it focuses on the wetland and vegetation impacts as identified in the commentor's letter.

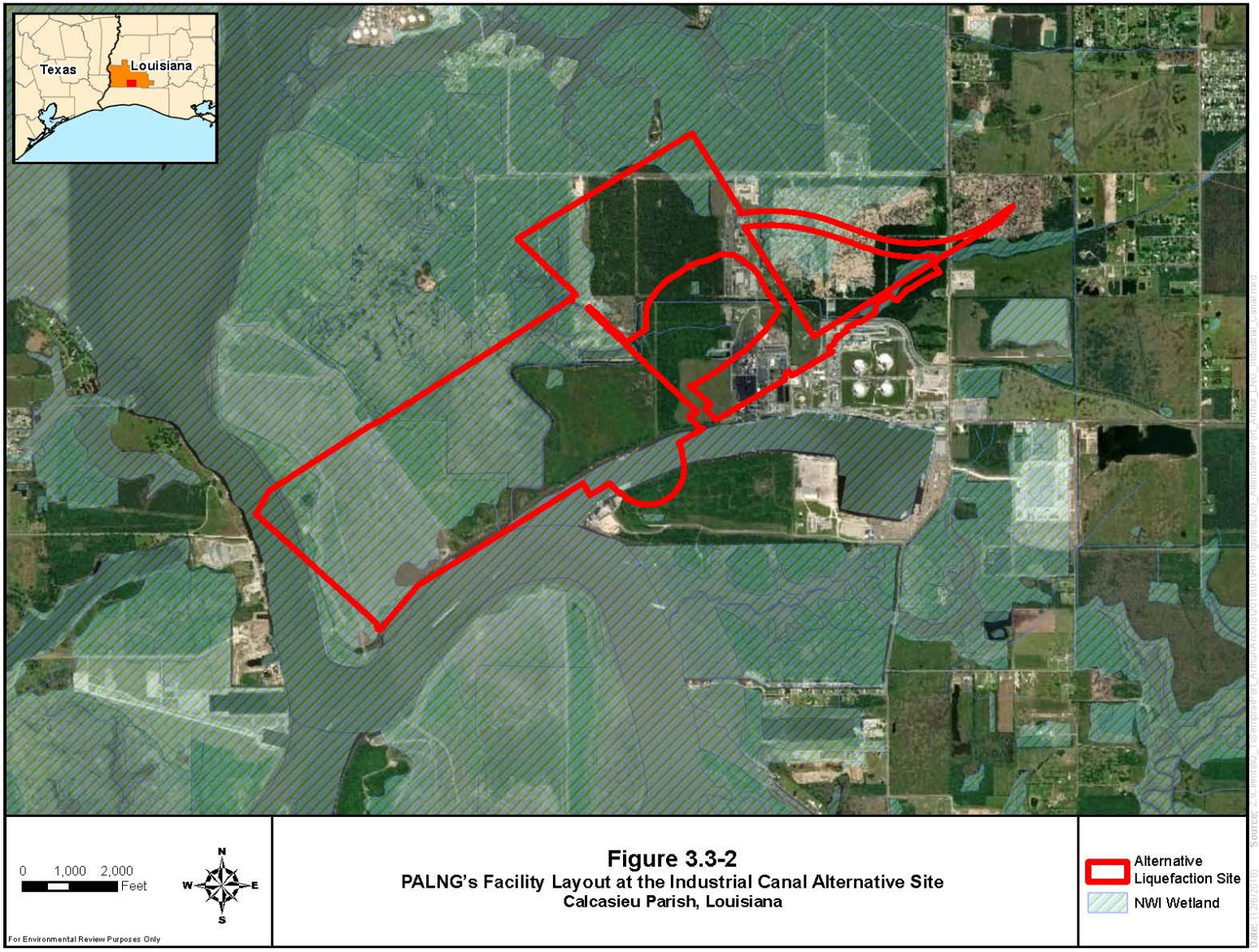


Figure 3.3-2
PALNG's Facility Layout at the Industrial Canal Alternative Site
Calcasieu Parish, Louisiana

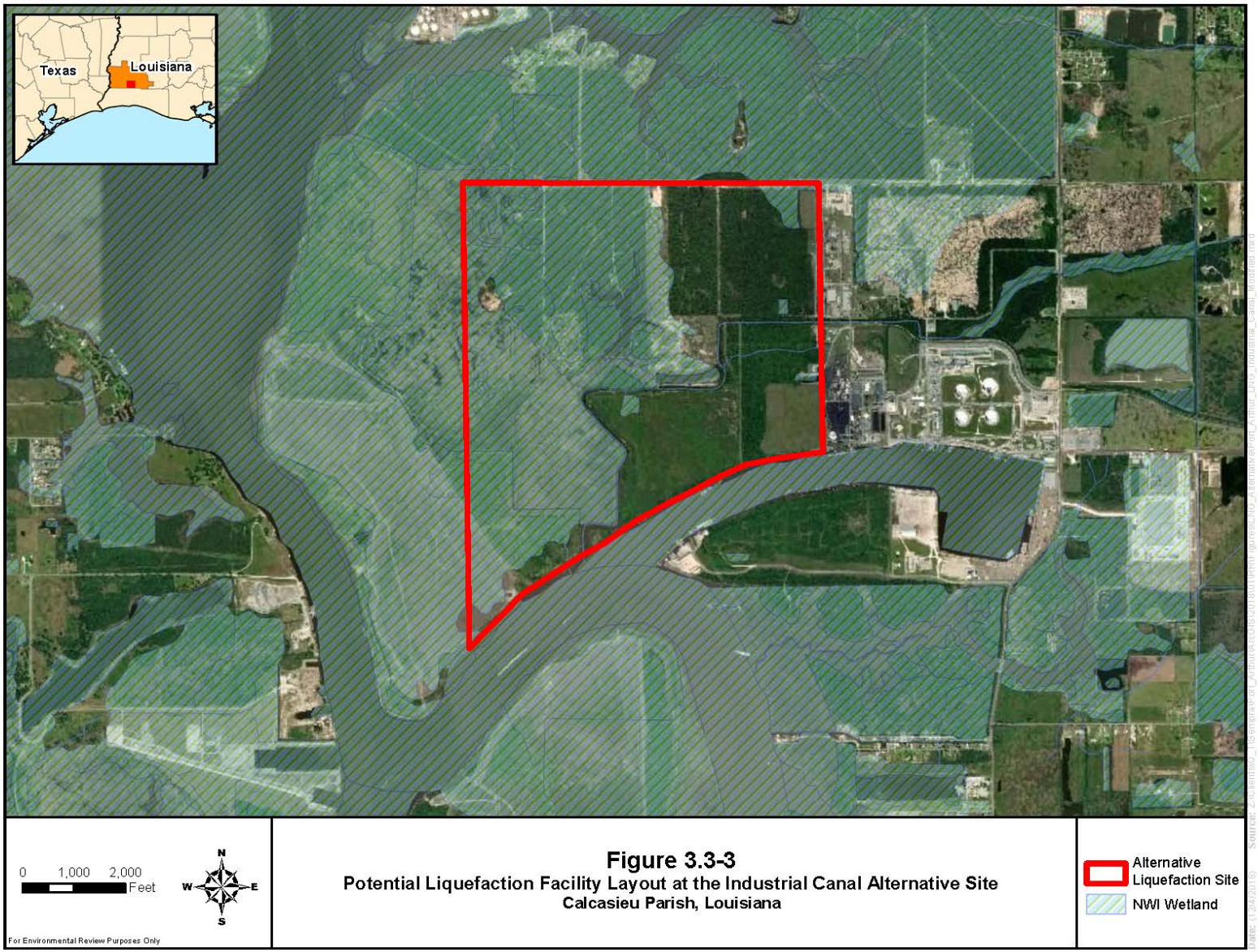


Figure 3.3-3
Potential Liquefaction Facility Layout at the Industrial Canal Alternative Site
Calcasieu Parish, Louisiana

TABLE 3.3-2

Comparison of Industrial Canal Alternative Liquefaction Site to the Port Arthur Canal Liquefaction Site

Resource	Proposed Site (Port Arthur Canal) [a]	Alternative Site (Industrial Canal)
Wetland Impacts (acres) [b]		
PEM	528.0	82.9
PSS	15.5	0.1
PFO	0.0	243.8
EEM	385.7	220.3
EUB	79.6	49.2
ESS	5.9	0.0
PAB	0.0	0.6
PUB	3.0	10.1
Wetland Total	1,017.7	607.0
Vegetation Impacts (acres)		
Open Land	6.0	7.6
Deciduous and Mixed Forest	0.0	41.4
Evergreen Forest	0.0	168.0
Developed	62.8	69.4
Emergent Herbaceous Wetlands	707.3	374.4
Grassland/Herbaceous	0.0	58.2
Hay/Pasture	252.7	55.3
Open Water	40.1	16.0
Shrub/Scrub	0.0	61.6
Woody Wetlands	0.0	217.1

[a] General area analyzed includes Round Lake. However, as described throughout the EIS, PALNG would avoid direct impacts on the lake during construction and operation of the liquefaction facilities.

[b] Based on FWS NWI data for both sites to compare wetland conditions using similar data sets. However, as discussed in section 4.4.2, the proposed Liquefaction Project site has been surveyed for the presence of wetlands, and construction and operation of the project would affect 758.4 acres and 724.0 acres, respectively, of wetlands.

Based on this comparison, the alternative site would impact fewer wetlands compared to the proposed liquefaction site. Of the wetland types affected, however, the alternative site would affect 243.8 acres more of PFO wetland compared to no impacts on PFO wetlands associated with the proposed liquefaction site. The alternative site would also affect about 426.5 acres more of forested vegetation types (deciduous, evergreen, and woody wetlands) compared to no impacts associated with the proposed liquefaction site.

We also note that PALNG filed information in response to the commentor's letter stating it reviewed the suggested alternative location in its "Alternative Analysis for the Port Arthur Liquefaction Project," filed with FERC on September 15, 2017 in response to FERC staff's February 17, 2017 information request. In PALNG's analysis, which used information from aerial photography interpretation, USGS topographic maps, and NWI maps, it was estimated that construction of a LNG facility at the alternative site would impact fewer wetlands but the quality of wetlands impacted would be greater. PALNG also contends that about 275 acres of tidal marsh and about 25 acres of tidal waters would be impacted, increasing EFH impacts as compared to the proposed facility site. In addition, PALNG stated that additional berthing areas would need to be added to the alternative site to accommodate its proposed facilities, and multiple LNG docking facilities located in close proximity to the alternative site could result in limited space for turning of vessels and may cause navigation concerns for LNG vessels in the area.

Based on PALNG's response to the commentor (filed with FERC on November 19, 2018), PALNG reviewed the proposed location's availability of sale and determined the property is owned by the Lake Charles Harbor and Terminal District and that the properties on the north bank are currently leased. As discussed in section 3.2.1, an authorization granted under section 3 of the NGA does not grant the applicant eminent domain and, thus, we have limited ability to ensure that a recommended alternative site would be available unless the landowner willingly makes it available for purchase or lease. As such, based on the information provided by PALNG, the availability of the site for sale is undetermined.

While the site could ultimately become available and these impacts could be mitigated for, it does not offer a significant environmental advantage over the site proposed by PALNG. In addition, as previously mentioned, the 2006 analysis of the proposed site concluded that the impacts associated with the proposed site were acceptable because the project would be mostly located on land that has been historically used for dredge material placement, best fulfilled the technical and economic criteria required to meet the project objectives, and had received the support of the community and elected officials. Those conditions have not changed significantly since 2006. For the reasons discussed above, we do not recommend the alternative liquefaction site along the Industrial Canal (Calcasieu Ship Channel).

The current facility footprint has been designed to minimize the impact on aquatic habitats, while maintaining the required regulatory siting and safety requirements. We did not identify any alternative configurations that would meet the regulations, codes, and guidelines while avoiding or reducing impacts when compared to those of the proposed site configuration. Therefore, we conclude that the proposed general configuration of the Liquefaction Project's facilities is acceptable.

3.4 ALTERNATIVE PIPELINE ROUTES

The proposed Texas Connector Project pipeline routes would be collocated with existing pipeline and other utility rights-of-way for about 43 percent of their combined lengths (see appendix L). The proposed Louisiana Connector Project pipeline route would be collocated with existing pipeline and other utility rights-of-way for about 73 percent of its length. In addition, where collocated with other pipelines owned and operated by one of its affiliates, the Louisiana Connector Project would be offset from the existing pipeline by 25 to 35 feet, where feasible. This would limit environmental impacts compared to a non-collocated route. In addition, PAPL incorporated minor route variations into the Texas Connector Project and Louisiana Connector Project routes as a result of environmental and engineering investigations, stakeholder outreach efforts, and potential issues identified by FERC staff. As a result of these routing considerations during early project design and identified during the pre-filing process, route modifications to avoid or reduce environmental impacts were eventually proposed as part of the projects in PAPL's section 7(c) applications. The associated environmental impacts are included as part of the overall analysis in section 4 of this EIS.

Generally, shorter route lengths are correlated with lower construction costs and fewer environmental impacts, although variables other than pipeline length (e.g., terrain, existing land development, sensitive natural resources) may weaken these correlations. Starting with the baseline route, PAPL implemented broad-scale adjustments to avoid or minimize crossings of wetlands, waterbodies, and forested land. Further, PAPL proposes to use the HDD method at 25 locations along the Texas Connector Project and 26 locations along the Louisiana Connector Project. As discussed throughout the EIS, use of the HDD method would avoid direct impacts on the features that exist between the entry and exit points. Compared to other pipeline projects of similar size, this is a relatively large number of HDDs that would further avoid impacts on resources.

Another consideration in selecting the pipeline routes is their location and ability to interconnect with existing natural gas systems in order to provide 2.0 bscfd of natural gas to the Liquefaction Project.

For example, of the nine interconnects proposed for the Louisiana Connector Project, six are east of the compressor station at MP 96.4. Adopting a route that ends prior to or at this point would be shorter and, thus, result in few overall environmental impacts. However, it would not ensure the capacity necessary to serve the Liquefaction Project. The diversity and number of interconnect opportunities is a critical factor in serving the Projects' purposes and need.

We analyzed the regional setting of PAPL's pipeline routes and determined that different routes (which would likely be longer) between other points of interconnection would not offer any environmental advantage, irrespective of engineering feasibility or cost. We identified minimal environmental impacts associated with the construction and operation of the proposed facilities. The alternatives discussed below are the result of alternatives suggested during the scoping period and provided in comments on the draft EIS.

3.4.1 Sabine Lake Alternative

Sabine Lake is a 90,000-acre salt water estuary on the Texas-Louisiana border that is about 14 miles long and 7 miles wide. The proposed Louisiana Connector Project's pipeline route would cross the lake for about 18 miles, with the majority of the route on the Texas side of the lake. PAPL considered an alternative early in project design to avoid crossing Sabine Lake, and considered routes located primarily on the Louisiana side of the lake versus the Texas side, as further summarized below.

Any route that avoids Sabine Lake to the west would cross urban/industrial areas in and around the City of Port Arthur and add about 30 miles of additional pipeline. The additional miles of pipeline construction would result in additional land use, wetland, waterbody, vegetation, and aquatic resource impacts, including crossing the Neches River, compared to the proposed route. Any route that avoids Sabine Lake to the east would need to cross the Sabine NWR, which borders about 10 miles of Sabine Lake. The NWR is managed to provide habitat for migratory waterfowl and other birds and to preserve and enhance coastal marshes for wildlife and fish. Also, according to the FWS, some of the largest wetland management efforts in Louisiana occur at the Sabine NWR. An easterly route would also encounter Calcasieu Lake, which is about 20 miles east of Sabine Lake and bordered on both sides by the Sabine NWR. A route alternative to avoid Sabine Lake, the Sabine NWR, and Calcasieu Lake would add about 50 miles of additional pipeline. As with a route to the west, the additional miles of pipeline construction would result in additional land use, wetland, waterbody, vegetation, and aquatic resource impacts, compared to the proposed route. As a result, routing the project to avoid Sabine Lake was eliminated from consideration.

A route that would cross Sabine Lake primarily on the Louisiana side was also considered by PAPL during early project design. This alternate route would be about 0.1 mile longer than the proposed route; however, it would be collocated with the Kinder Morgan pipeline right-of-way for about 66 percent of its length through the area and would have fewer foreign pipeline crossings. The primary disadvantage of this route is that it would cross Tier 1 Public Oyster Seed Grounds in Louisiana and, based on PAPL's consultations with the LDWF, Tier 1 level protected oyster habitat would be affected. As a result of the LDWF's concerns regarding potential impacts on oyster habitat, crossing Sabine Lake primarily on the Louisiana side was eliminated by PAPL from consideration.

We agree with these determinations and do not recommend either Sabine Lake Alternative (avoidance or the Louisiana side crossing).

3.4.2 Driftwood Route Alternative

Between approximate MPs 45.3 and 55.8 of the Louisiana Connector Project, PAPL has proposed a route that is collocated with a pipeline route proposed by Driftwood Pipeline LLC (DWPL) (FERC Docket Nos. CP17-117-000 and CP17-118-000). In some locations, the pipelines are proposed in the same workspace areas where construction right-of-way space is confined and limited such that there is not sufficient space to accommodate two new pipeline easements. As a result, and per our request, PAPL reviewed Driftwood's proposed alignment and developed an alternative route through this area in the event that the proposed Driftwood pipeline is certificated and authorized for construction. The following provides a detailed analysis of the resources that would be affected by an alternative route, referred to as the Driftwood Route Alternative, compared to the proposed route between MPs 45.3 and 55.8 (see appendix G).

The Driftwood Route Alternative begins at Louisiana Connector Project MP 45.3, diverges east and within 50 to 135 feet of the proposed route for 1.1 miles, and rejoins the proposed route at MP 46.4 until MP 46.7. The Driftwood Route Alternative then diverges east again and within 50 to 55 feet of the proposed route for about 0.3 mile until MP 47.1. At this point, the alternative follows the proposed route for 0.8 mile and includes an HDD of Walker Road before diverging east again and within 45 to 50 feet from the proposed route until MP 48.2. At MP 48.2, the Driftwood Route Alternative diverges further east of the proposed route, crossing a levee/canal and the proposed route via two HDDs, and then parallels proposed route to the west at MP 49.1. After this point, the alternative route is parallel to and about 10 to 280 feet to the west of the proposed route for 2.5 miles and includes an HDD crossing of Interstate Highway 10. At MP 51.6, the Driftwood Route Alternative crosses to the east and then west of the proposed route, within 2 to 35 feet, until rejoining the proposed route at MP 52.4. The Driftwood Route Alternative follows the proposed route for 2.4 miles, crossing the Houston River Canal via an HDD at MP 54.7, and at MP 54.81, it again diverges east and within 30 to 65 feet of the proposed route until rejoining the proposed route at MP 55.80.

Table 3.4.2-1 provides a comparison of the environmental impacts associated with both routes.

TABLE 3.4.2-1

Comparison of the Driftwood Route Alternative to the Louisiana Connector Project Route between MPs 45.3 and 55.8

Factor (Unit)	Proposed Route	Driftwood Route Alternative
Pipeline Length (miles)	10.5	10.6
Temporary Construction Workspace (acres)	160.4	163.7
Pipeline Permanent Easement (acres)	64.5	70.3
Existing Sempra Pipeline Crossings (number)	4	4
Adjacent or Collocated with Other Existing Rights-of-Way (percent)	73	68
Residences within 100 feet of Pipeline Centerline (number)	2	1
Upland Forested Impacts (acres)	25.3	30.2
Forested Wetland Impacts (acres)	43.6	51.5
Non-forested Wetland Impacts (acres)	45.5	43.2
Waterbody Crossings (number)	16 (7 via HDD)	9 (7 via HDD)
Major Waterbody ($\geq$ 100 feet) Crossings (number)	3	3

In general, and similar to the proposed route, PAPL would use a nominal 125-foot-wide construction right-of-way in upland areas, a nominal 125-foot-wide construction right-of-way in saturated wetlands, and a nominal 100-foot-wide construction right-of-way in non-saturated wetlands. PAPL has

indicated that it would prefer to overlap its proposed construction workspace with Sempra's existing Cameron Interstate Pipeline easement where feasible to maximize the use of previously disturbed areas. It should be noted that PAPL is a subsidiary of Sempra and, as such, use of the existing right-of-way for the Louisiana Connector Project route through this area is acceptable to Sempra. In those areas of collocation with its affiliate, PAPL would be able to reduce the permanent right-of-way needed, thus minimizing impacts compared to having to "swing out" into adjacent areas to accommodate the alternative. PAPL would adopt five HDDs along the alternative route, including Walker Road, Interstate Highway 10, the Houston River Canal, and two HDDs across the levee/canal system near MP 48.5. In addition, PAPL would use the same construction and restoration measures for the Driftwood Route Alternative as the proposed route as described in section 2.4.2.

The Driftwood Route Alternative would be slightly longer and, as a result, would impact about 3.3 acres more land during construction and 5.8 acres more land during operation when compared to the proposed route. The proposed route would be collocated with existing rights-of-way for a greater percent of its length than the Driftwood Route Alternative, which is primarily the result of the route alternative deviating from Sempra's existing Cameron Interstate Pipeline to avoid a levee/canal. The proposed route would be within 50 feet of one additional residence than the Driftwood Route Alternative; PAPL developed a site-specific RCP for the two residences along this segment of the Louisiana Connector Project. The number of waterbody crossings identified by PAPL's field surveys would be greater along the proposed route compared to the route alternative. All waterbody crossings would be conducted in accordance with the measures outlined in PAPL's *Environmental Plan*,[20] which includes the Commission's Plan and Procedures.

With the exception of an area between approximate MPs 48.3 and 49.1, the Driftwood Route Alternative workspace would be wholly or partially located within the environmental corridor surveyed for cultural and biological resources along the Louisiana Connector Project. As such, the impacts and mitigation measures developed for sensitive features would generally be the same for both routes. According to PAPL, it consulted with the FWS regarding federally threatened and endangered species that may be affected by the Driftwood Route Alternative, and no additional federally threatened and endangered species are anticipated to be affected by the Driftwood Route Alternative. Further, no suitable habitat for the red-cockaded woodpecker was identified along the Driftwood Route Alternative. In addition, PAPL consulted with the Louisiana Office of Cultural Development and conducted cultural resource investigations along the Driftwood Route Alternative to determine if such resources are likely to be affected; no additional cultural resources are anticipated to be affected by the Driftwood Route Alternative.

While both routes would result in similar impacts on environmental resources due to their relatively close alignment and overall length, the proposed route would be shorter and result in fewer impacts on land uses including upland forest and forested and non-forested wetlands. In addition, the proposed route would have the advantage of being more closely aligned with, and even overlapping, areas previously disturbed and/or currently maintained for the Cameron Interstate Pipeline. For these reasons, we determined that the proposed Louisiana Connector Project route between MPs 45.3 and 55.8 is the preferred alternative. However, we also conclude that should PAPL's proposed right-of-way be unavailable, the Driftwood Route Alternative would meet the project objectives, and the impacts associated with the route alternative would be environmentally acceptable and appropriately mitigated for through use of PAPL's construction and restoration plans (e.g., *Environmental Plan*).

[20] *Environmental Plans* for the Texas Connector Project and Louisiana Connector Project were filed on December 12, 2017 and October 16, 2017, respectively. These plans can be found on the FERC eLibrary website using Accession Numbers 20171212-5147 (Texas Connector Project) and 20171016-5210 (Louisiana Connector Project).

We do note that PAPL's proposed project does convey a slight environmental advantage compared to Driftwood's proposed pipeline project because of PAPL's colocation with its affiliate pipeline, which would slightly reduce the need for new permanent right-of-way for PAPL.

We received comments from Driftwood expressing concern over construction in areas where the projects parallel each other based on a recommended condition in the draft EIS for the Driftwood LNG Project. In response to Driftwood's comments, PAPL stated that it is committed to working with Driftwood to coordinate construction activities where their projects parallel, should construction activities take place at the same time. In addition, the recommended condition that would require Driftwood to file a construction coordination plan that identifies the specific construction measures it and PAPL would implement during construction of the parallel portions of their respective projects has been removed from the Driftwood final EIS based on both parties' mutual agreement to coordinate prior to construction.

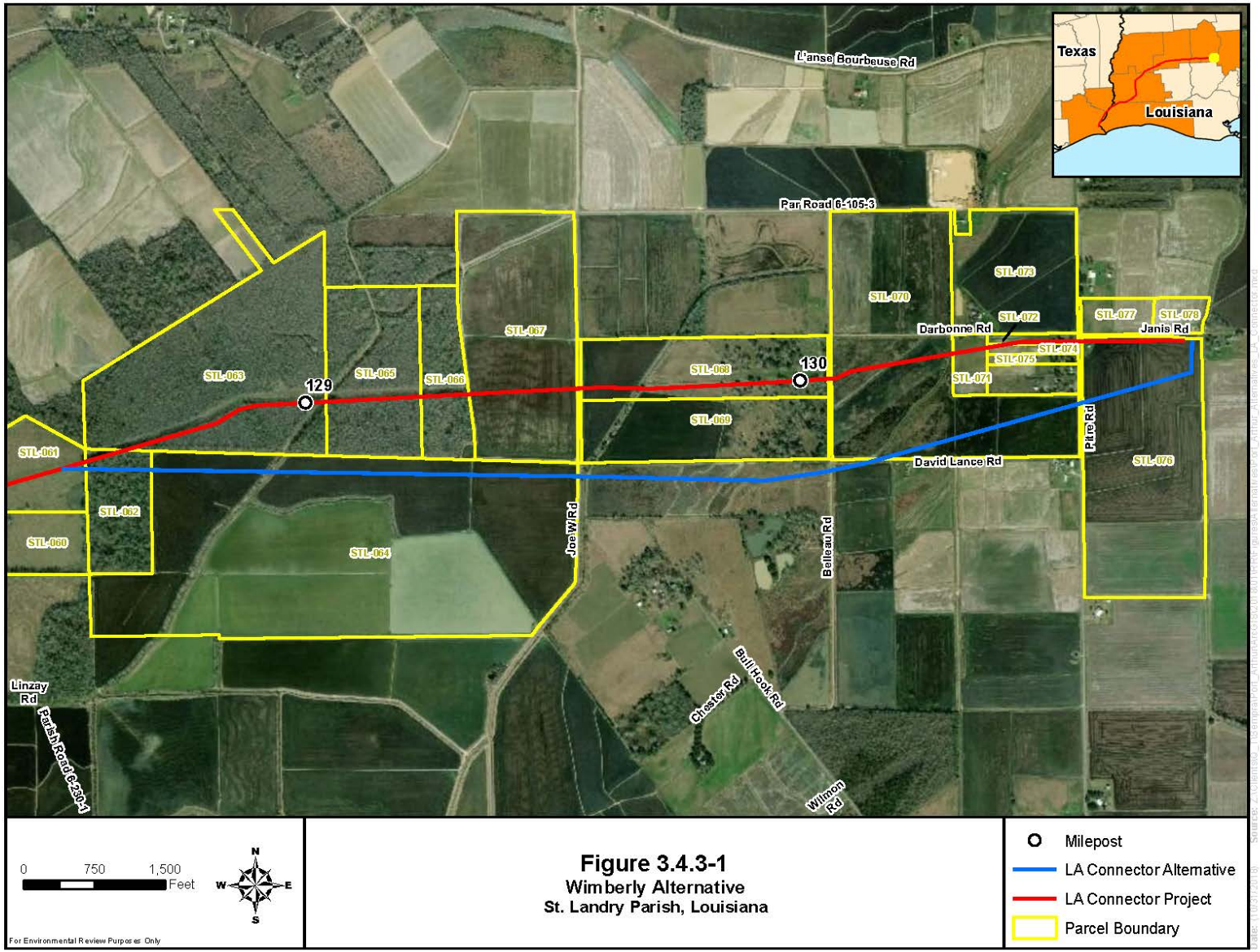
3.4.3 Wimberly Route Alternative

The Wimberly Route Alternative was considered at the request of a landowner to avoid forest land, which the landowner indicated had not be cut or disturbed for at least 50 years, and associated wildlife impacts on three parcels owned by the Wimberly family. This alternative pipeline route would diverge from the Louisiana Connector Project at MP 128.5 and rejoin at MP 130.8 (see figure 3.4.3-1 and table 3.4.3-1).

The Wimberly Alternative is similar but slightly greater in length and workspace requirements than the corresponding section of the proposed route for the Louisiana Connector Project. The alternative would impact 7.0 fewer acres of forested lands, including less forested wetland compared to the proposed route. However, the proposed route would affect less non-forested wetland, cross one fewer road, and be collocated with existing rights-of-way for 82.7 percent more than the Wimberly Alternative. Waterbodies were not field-delineated for the alternative route, so we reviewed desktop data from the USGS' National Hydrography Dataset and determined that both routes would cross the same number of waterbodies.

Overall, the route alternative has some environmental advantages and some disadvantages and the impacts would be acceptable and/or could be mitigated; however, the alternative would not convey a significant environmental advantage as compared to the proposed route. The alternative suggested by Mr. Wimberly would impact fewer overall landowners; however, new landowners could be crossed that have not had an opportunity to comment on a pipeline route across their property. Although we have found that the alternative suggested by Mr. Wimberly does not result in a significant environmental advantage, that alternative, or a modification of that alternative, could avoid the trees that Mr. Wimberly seeks to protect. We recognize that should PAPL decide to move forward with a modified route in this area to address Mr. Wimberly's request, PAPL would need to work with impacted landowners to seek approval and file a request for a variance to modify the pipeline route in this location in accordance with environmental recommendation number 5 (see section 5.2).

As noted above, based on the additional impacts associated with the Wimberly Route Alternative, and that it would not be collocated with existing rights-of-way, we do not find the route variation conveys a significant environmental advantage. Therefore, we do not recommend that the Wimberly Route Alternative be adopted as part of the Louisiana Connector Project.


L'anse Bourbeuse Rd
Texas
Louisiana
Par Road 6-105-3
STL-073
STL-070
STL-077
STL-078
Janis Rd
Darbonne Rd
STL-072
STL-074
STL-075
STL-067
STL-063
STL-065
STL-066
STL-068
130
129
STL-074
STL-069
Pitre Rd
STL-061
David Lance Rd
STL-076
STL-062
STL-060
STL-064
Joe Wirl Rd
Belleau Rd
Bull Hook Rd
Chester Rd
Linzay Rd
Parish Road 6-238-1
Wilmon Rd
0
750
1,500
Feet
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W
E
S
For Environmental Review Purposes Only
Figure 3.4.3-1
Wimberly Alternative
St. Landry Parish, Louisiana
Milepost
LA Connector Alternative
LA Connector Project
Parcel Boundary

TABLE 3.4.3-1

Wimberly Route Alternative to the Louisiana Connector Project Route between MPs 128.5 and 130.8 to the Louisiana Connector Project Route between MPs 128.5 and 130.8

Factor (Unit)	Proposed Route	Chester Wimberly Route Alternative
Pipeline Length (miles)	2.2	2.3
Landowners crossed (number)	12	7
Landownership (miles) – Private	2.2	2.3
Temporary Construction Workspace (acres) [a]	33.9	34.2
Pipeline Permanent Easement (acres) [b]	13.6	13.7
Adjacent or Collocated with Other Existing ROW (percent)	100	0
Upland Scrub/Shrub - Forested Impacts – Construction (acres) [a]	0.6	0.0
Upland Scrub/Shrub - Forested Impacts – Operation (acres) [b]	0.3	0.0
Scrub/Shrub - Forested Wetland Impacts – Construction (acres) [a]	8.6	1.7
Scrub/Shrub - Forested Wetland Impacts – Operation (acres) [b]	4.4	0.7
Non-forested Wetland Impacts – Construction (acres) [a]	12.3	25.3
Non-forested Wetland Impacts – Operation (acres) [b]	5.6	10.4
Waterbody Crossings (number)	3	3
Road / Rail Crossed (number)	3	4

[a] Temporary construction workspace based on a 125-foot-wide construction right-of-way, which includes the permanent easement and temporary workspaces.

[b] Permanent easement based on a 50-foot-wide operational right-of-way.

3.4.4 Miscellaneous Route Considerations

We received a comment on the draft EIS from a stakeholder requesting analysis of pipeline routes that are fully compliant with the FERC's Procedures. The FERC's Procedures are baseline mitigation measures that applicants are required to implement for all pipeline projects that are FERC-jurisdictional. The applicants are encouraged to develop project-specific Procedures, and as necessary, request variations where site-specific considerations require modification of the FERC's Procedures to safely construct and operate a project given the environmental conditions of the project area. We reviewed PAPL's requested modifications to the Procedures based on the specific conditions of the Texas Connector and Louisiana Connector Projects area, as discussed in section 4.4.3, and found they are acceptable.

No specific alternative routes were proposed by stakeholders in regard to minimizing variations to the Procedures, and based on the environmental conditions of the Projects' area, we do not believe that any alternative exists that would fully comply with the Procedures. However, as noted above, the Procedures consist of general baseline measures and guidelines; companies often propose project-specific modifications that provide equal (or greater) protection to environmental resources. We conclude that due to the presence of extensive waterbodies and wetlands along the pipeline routes, as well as the construction workspace needs considering the size of the pipeline and the specific environmental conditions, that there are no other reasonable or practical locations for the pipeline routes and the associated construction workspace that would result in full compliance with the FERC's Procedures, and that PAPL's requested modifications are acceptable.

We received a comment on the draft EIS from a representative of the Coushatta Tribe of Louisiana requesting analysis of pipeline routes that would avoid all Coushatta Tribe of Louisiana ancestral lands. As discussed in section 4.10.3.2, the Coushatta Tribe has identified archaeological sites and traditional cultural properties throughout the Sabine, Calcasieu, and Houston River valleys, along Sabine Lake, along the Creole Trail, and throughout Bayou Blue, Bayou Nezpique, and Bayou Cannes. According to the Coushatta Tribe of Louisiana, there exists a significant and strong likelihood that project construction would disturb and irreversibly destroy Tribal cultural resources. However, because of the wide historical range of the Tribe, and the location of natural gas sources to supply the proposed pipeline and liquefaction facility, there are no pipeline routes that could avoid ancestral lands that would meet the purpose and need of the Projects.

3.5 ALTERNATIVE ABOVEGROUND FACILITY SITES

We considered the need to evaluate potential alternative sites for aboveground facilities associated with the Texas Connector and Louisiana Connector Projects. In general, compressor station requirements are dependent on the length of the project, the pressure of the existing feed source(s), and the distance traveled to achieve the required pressure at the receipt meter station. In selecting its proposed sites, PAPL reviewed several potential compressor stations locations along the pipeline routes, looking at design and potential impacts on the surrounding public and environmental resources. We did not identify any significant environmental concerns with PAPL's proposed sites. We did not receive any comments on or objections to the proposed sites, nor did we receive any suggested alternative locations. PAPL's preliminary site investigations determined that the proposed sites were well-suited with regards to engineering and hydraulic constraints, and posed minimal environmental impact. We agree, and as such did not evaluate site alternatives for the compressor stations.

All of the Texas Connector and Louisiana Connector Projects meter stations would be within existing natural gas pipeline rights-of-way and/or reflect customer and system requirements. The locations of other facilities such as MLVs and pig launchers and pig receivers are dependent on DOT regulations and are located within the permanent right-of-way and/or associated with another aboveground facility. We did not identify any significant environmental concerns with PAPL's proposed sites for the meter stations, MLVs, pig launchers, or pig receivers. We did not receive any comments on or objections to the proposed sites, nor did we receive any suggested alternative locations. PAPL's preliminary site investigations determined that the proposed sites were well-suited with regards to engineering and hydraulic constraints, and posed minimal environmental impact. We agree, and as such did not evaluate site alternatives for the meter stations, MLVs, pig launchers, or pig receivers.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

This section of the final EIS provides our analysis of impacts on the affected environment as it currently exists and the environmental consequences of construction and operation of the Projects. The section is organized by the following major resource topics: geology; soils; water resources; wetlands; vegetation; wildlife, including aquatic resources and EFH; special status species; land use, recreation, special interest areas, and visual resources; socioeconomics; cultural resources; air quality and noise; reliability and safety; and cumulative impacts.

The environmental consequences of constructing and operating the Projects would vary in duration and significance. Four levels of impact duration were considered: temporary, short term, long term, and permanent. Temporary impacts generally occur during construction with the resource returning to pre-construction condition almost immediately afterward. Short-term impacts could continue for up to 3 years following construction. Impacts were considered long term if the resource would require more than 3 years to recover. A permanent impact could occur as a result of any activity that modifies a resource to the extent that it would not return to pre-construction conditions during the life of the Projects.

We considered an impact to be significant if it would result in a substantial adverse change in the physical environment. The applicants, as part of their proposals, developed certain mitigation measures to reduce the impact of the Projects. In some cases, we determined that additional mitigation measures could further reduce the Projects' impacts. Our additional mitigation measures appear as bulleted, boldfaced paragraphs in the text of this section and are also included in section 5.2. We will recommend to the Commission that these measures be included as specific conditions in any Certificate or Authorization the Commission may issue to the applicants for these Projects.

The conclusions in the final EIS are based on our analysis of the environmental impact and the following assumptions:

- The applicants would comply with all applicable laws and regulations.
- The proposed facilities would be constructed as described in the applicants' various application materials and filed supplements, as summarized in section 2.0 of the EIS.
- The applicants would implement the mitigation measures included in their applications and supplemental submittals to the FERC and cooperating agencies, and in other applicable permits and approvals.
- The applicants would comply with our recommended mitigation measures that become conditions in any Commission authorization.

4.1 GEOLOGY

4.1.1 Geologic Setting

The Projects are within the West Gulf Coastal Plain section of the Coastal Plain physiographic province (Fenneman, 1928) and within the Coastal Prairies subprovince, which is characterized by nearly flat geologic strata and topography with typically less than 1-foot-per-mile gradient (Bureau of Economic Geology, 1996).

Chenier plain and coastal plain sediments consisting of unconsolidated sand, silt, and clay occur at the land surface in the Projects area. The Chenier plain is characterized by two types of landforms: broad

marshes containing organic clays and peat, and long, narrow relict beach features called "cheniers" that appear as ridges parallel to the coast. Chenier ridges form as a result of cyclic shoreline advance and retreat, and are mixtures of silt, sand, and shell fragments. They are slightly elevated features that attain elevations of 5 to 10 feet above sea level. These geologic materials were deposited by fluvial, tidal, littoral, and deltaic processes over the past 5,000 years (Fisher et al., 1973). The land surface near the Sabine-Naches Waterway has been modified by placement of dredge material. The topography in the Liquefaction Project area ranges between 1 and 11 feet AMSL. The topography in the Texas Connector Project area ranges between 1 and 15 feet AMSL. The topography in the Louisiana Connector Project area ranges between near mean sea level and 78 feet AMSL.

At the liquefaction site, the sedimentary units within the upper 70 to 100 feet of the surface contain normally consolidated clays, overlying slightly to generally over-consolidated soils to a depth of about 170 feet below the ground surface (Fugro, 2017a). Intermittent sand layers of varying thickness also occur within the soil stratigraphy. Shell fragments and shell hash occur throughout the sand, silt, and clay layers. Organic materials ranging from below 10 percent to 28 percent organic content also occur at various depths. Within the liquefaction site, dredged materials consisting of clay, silty clay, silts, and clayey silts overlay the natural terrain to a depth ranging from 10 to 14 feet.

Bedrock geologic units underlying the Projects are predominantly Cenozoic sedimentary rocks, including sandstone, claystone, and tuff. The depth to bedrock ranges from 200 to several thousand feet, and neither outcrops or near-surface bedrock are present in the Projects area. As such, no blasting would be necessary for construction of the Projects facilities due to the depth of bedrock.

Regarding the Liquefaction Project nonjurisdictional facilities, which includes the realignment of SH 87 and associated pipelines and utilities, the geological resources and hazards described for the Liquefaction Project are also applicable to these facilities unless discussed separately. In addition, due to their proximity to the liquefaction site and location along the Northern Pipeline corridor associated with the Texas Connector Project, the geologic resources and hazards described for the dredge disposal areas (J.D. Murphree WMA and Dredge Disposal Areas 8, 9A, and 9B) and associated temporary dredge material pipelines are also applicable to these facilities unless discussed separately.

4.1.2 Mineral Resources

Mineral resources found near the Projects in southeastern Texas and southwestern Louisiana include sand, gravel, salt, and sulfur (with associated crude oil) (USGS, 2013; 2015). Appendix H lists the mineral resources within 0.25 mile of the Projects.

No active or inactive surface sand, gravel mines, salt resources, or sulfur-from-oil extraction plants exist on the Liquefaction Project site. There are, however, four abandoned oil or gas wells on the site, and there are other oil and gas wells greater than 0.25 mile away from the site (see appendix H).

There are 356 oil and gas wells, 1 abandoned surface gravel pit, and 1 abandoned sulfur mine (Spindletop Dome Mine) within 0.25 mile of the Texas Connector Project; and 129 oil and gas wells within 0.25 mile of the Louisiana Connector Project (see appendix H). Regarding the Louisiana Connector Project, 12 oil or gas wells are within 150 feet of the proposed centerline; however, these wells are all listed as plugged and/or abandoned, or dry and plugged. Therefore, there are no wells within 150 feet of the Louisiana Connector Project centerline that could be placed back in service.

Regarding the Liquefaction Project nonjurisdictional facilities, the mineral resources identified for the Liquefaction Project are also applicable to these facilities, including two oil and gas wells in the road

and utility corridor. These wells were permanently plugged and abandoned, the first in 2004 and the second in 2013.

Construction of the Projects would not affect any known mineral resources or active wells, pits, or mines. However, the Projects would affect at least four abandoned wells. Although no other abandoned wells have been identified, because of the history of the Projects area, other abandoned wells may be discovered during surveying and construction of the Projects. PALNG and PAPL have not indicated what steps they would take if construction could impact an abandoned well. Therefore, **we recommend that:**

- **Prior to construction of the Projects, PALNG and PAPL should file with the Secretary of the Commission (Secretary), for review and written approval by the Director of OEP, a project-specific plan for construction near known abandoned oil and gas wells. This plan should identify actions to be taken if any unidentified oil or gas wells are discovered during construction and discuss how PALNG or PAPL would maintain the integrity of any plugged wells.**

4.1.3 Geologic Hazards

Geologic hazards are natural, physical conditions that can result in damage to land and structures, or injury to people. Potential geologic hazards in the Projects area include earthquakes, surface faults, soil liquefaction, subsidence, karst, landslides, and flooding. In general, the potential for geologic hazards to significantly affect construction or operation of the proposed Projects facilities is low.

4.1.3.1 Geotechnical Site Characterization

Liquefaction Project

Section 4.12.5.2 provides a discussion of the engineering review completed for the proposed liquefaction site, including safeguards built into the engineering design to reduce the risk of an incident occurring and impacting the public and the results of a geotechnical and structural design review. The discussion in section 4.12.5.2 focuses on the resilience of the liquefaction facilities against natural hazards, including extreme geological, meteorological, and hydrological events, such as earthquakes, tsunamis, seiche, hurricanes, tornadoes, floods, rain, ice, snow, regional subsidence, sea level rise, landslides, wildfires, volcanic activity, and geomagnetism.

Texas Connector and Louisiana Connector Projects

The North and South Compressor Stations associated with the Texas Connector Project would be underlain by the Beaumont Formation and unnamed alluvium, respectively, which are both predominantly clay. The proposed Louisiana Connector compressor station site is underlain by alluvium and Prairie Terraces, which are both predominantly clay. PAPL stated that it would conduct geotechnical investigations of these sites to demonstrate the site preparation and foundation designs would be appropriate for the underlying soil characteristics and generally accepted good engineering practices. However, the results of these investigations were not available at the time the final EIS was prepared. Because these investigations have not yet been provided, **we recommend that:**

- **Prior to construction of the compressor stations associated with the Texas Connector and Louisiana Connector Projects, PAPL should file with the Secretary the results of geotechnical studies for the compressor stations, including any recommended mitigation measures PAPL would adopt as part of the final engineering design.**

4.1.3.2 Earthquakes and Faults

Most significant earthquakes around the world are associated with tectonic subduction zones, where one crustal plate is overriding another (e.g., the Japanese islands), where tectonic plates are sliding past each other (e.g., California), or where tectonic plates are converging (e.g., the Indian Subcontinent). Unlike these highly active tectonic regions, the Gulf Coast region occurs in a relatively seismically quiet part of the North American tectonic plate. However, earthquake ground motions do occur in the Projects area, primarily caused by distance earthquake sources such as the New Madrid fault zone in southeastern Missouri. Also present in the Projects area are growth faults and faults associated with salt domes, which are not considered to be the sources of significant earthquakes (not seismogenic). Salt domes are formed when a thick bed of salt minerals intrude vertically into surrounding rock layers, due to the relative buoyancy of salt when buried beneath other sediments, which can result in radial faulting around the salt dome. Growth faults in southern Texas and Louisiana formed during periods of rapid basin subsidence as a result of accelerated deposition of sediment more than 12 kilometers thick (Crone and Wheeler, 2000). Growth faults developed parallel to the coastline in a process of gradual creep in response to dewatering and compaction of the massive thickness of sediment during the Pleistocene (Stevenson and McCulloh, 2001).

Earthquakes can result in displacement of bedrock along fault lines. For a fault to be considered active, displacement must have taken place in the past 10,000 years (USGS, 2008). Subsurface or blind faults are considered to present generally less potential for displacement of bedrock during earthquakes, in contrast to surface faults. The USGS has completed several studies to identify Quaternary (less than 2.6 million years old) faults and other tectonic structures in the eastern United States (Crone and Wheeler, 2000; Wheeler, 2005), resulting in the Quaternary Fault and Fold Database that tracks Quaternary faults, liquefaction features, and other tectonic potential tectonic features (USGS, 2006). These features are evaluated and classified into one of four categories (Crone and Wheeler, 2000):

- Class A – Features that have geologic evidence that demonstrates the existence of a Quaternary fault or tectonic origin either exposed by mapping or inferred deformational features.

- Class B – Features that have geologic evidence that is indicative of a Quaternary deformation, but the fault is not deep enough to be a potential source for earthquakes or the evidence available is too significant to assign a fault as Class C, but not enough to assign as Class A.

- Class C – Features that do not have sufficient evidence to demonstrate the existence of a tectonic fault, or Quaternary slip or deformation associated with the feature.

- Class D – Features that are defined by the USGS as not to be seismogenic.

The Projects would not intersect any known, mapped, or inferred active fault lines (USGS, 2006); however, they are within the Gulf-Margin Normal Faults region, which is identified as a Class B feature in the Quaternary Fault and Fold Database (Crone and Wheeler, 2000). The Gulf-Margin Normal Faults are present in poorly lithified rock and sediments and do not extend into crystalline basement bedrock. Therefore, they are unable to produce significant seismic ruptures that could generate damaging ground motion. Several additional studies have been identified (Bernreuter et al., 1989; Frankel et al., 2002; Hanson et al., 1999; Savy et al., 1998; Wheeler, 2005; Wheeler and Crone, 2001) that do not consider the Gulf-Margin Normal Faults to be seismogenic. Instead, they imply that these faults occur in weak sedimentary rocks that are unable to store sufficient strain energy needed to produce seismic ruptures that could generate damaging ground motion.

The nearest salt domes are about 15 miles or more from the Liquefaction Project and Texas Connector Project areas, near Port Neches, Hillebrand Bayou, and Salt Bayou (Kosters et al., 1989). Most faults in the Liquefaction Project area are active in response to oil and gas exploration and pumping; however, no detected earthquakes have been attributed to the mapped growth fault systems (Stevenson and McCulloh, 2001). Along the Louisiana Connector Project, the nearest salt dome is in Sulfur, Louisiana, 0.6 mile west of MP 53.5 (USGS, 2013).

The Gulf Coast from Florida to east Texas periodically experiences small earthquakes, but they rarely cause property damage. The area also infrequently experiences long-period low-amplitude ground motion from rare distant earthquakes along the New Madrid fault zone in southeastern Missouri (ABS Consulting Inc., 2004). The nearest earthquake to the Projects facilities in Texas was a Magnitude 3.3 earthquake in 1952 centered 9.5 miles northeast of the northern limits of the Texas Connector Project and 9 miles northwest of MP 21 along the Louisiana Connector Project. The nearest earthquake to project facilities in Louisiana was a Magnitude 3.8 earthquake in 1983 near MP 53 along the Louisiana Connector Project route (Petersen et al., 2014a). Earthquakes of Magnitude between 3.0 and 3.9 are typically felt by people indoors, especially on upper floors of buildings. Standing automobiles may rock slightly, and minimal structural damage occurs.

The shaking during an earthquake can be expressed in terms of the acceleration relative to gravity (g). Seismic risk can be quantified by the motions experienced by the ground surface or structures during a given earthquake, expressed in terms of g. For reference, peak ground acceleration (PGA) of 10 percent of gravity (0.1 g) is generally considered the minimum threshold for damage to older structures or structures not made to resist earthquakes.

The USGS estimates there is a 2 percent chance for an earthquake to occur within the Projects area in the next 50 years (i.e., a recurrence interval of 2,475 years) that would result in a PGA between 0.02 g and 0.04 g (Petersen et al., 2014b). The USGS also estimates there is a 10 percent chance for an earthquake to occur within the Projects area in the next 50 years (i.e., a recurrence interval of 475 years) that would result in a PGA of between 0.01 g and 0.02 g. These estimates are for rock sites and can be amplified by a factor of 2 or more on soft soil sites such as those found in the Projects area. In addition, the USGS has assessed the potential for deep fluid injection to contribute to earthquake activity in the United States and determined there is less than a 1 percent chance in the next 50 years for a damaging earthquake with a PGA of 0.12 g to occur in the Projects area due to combined natural or induced causes within the next year (Petersen et al., 2016). The USGS intends to continue to monitor induced earthquake activity and revise its risk assessment annually. Section 4.12.5.2 provides additional discussion about the site-specific seismic conditions at the liquefaction facility site.

The Texas and Louisiana Gulf Coast is in Seismic Zone 0 of the Uniform Building Code's Seismic Risk Map (International Conference of Building Officials, 2015). Seismically engineered structures are practically nonexistent within the Gulf Coast Province. Similar to the entire Gulf Coast region, there is no record of damaging earthquakes historically affecting the areas along the pipeline routes in Texas and Louisiana.

The Texas Connector and Louisiana Connector Projects would be constructed to meet DOT's Minimum Federal Standards outlined in 49 CFR 192, further reducing the potential for seismic-related damage to occur. These are the same regulations that govern the construction and operation of natural gas pipelines throughout the country, including areas with greater seismic hazards.

Studies of earthquake performance of gas transmission pipelines in southern California indicate that modern, arc-welded, ductile steel pipelines have performed very well in earthquakes with magnitudes

greater than or equal to 5.8 (O'Rourke and Palmer, 1996). These studies addressed the effects of 11 earthquakes between 1933 and 1994 with magnitudes ranging from 5.8 to 7.7.

In conclusion, due to the low level of seismic activity in the region and construction of the proposed facilities using modern materials in accordance with current industry standards and federal regulations, the potential for seismic hazards to impact the Projects facilities is low.

4.1.3.3 Soil Liquefaction

Soil liquefaction is a phenomenon that occurs when granular, saturated soils temporarily lose strength and liquefy (i.e., behave like a viscous liquid) when subject to strong and prolonged shaking as may occur during an earthquake. Areas susceptible to liquefaction may include soils that are generally sandy or silty and are generally along rivers, streams, lakes, and shorelines, or in areas with shallow groundwater (University of Washington, 2000). Structures on or within an area experiencing soil liquefaction could sustain damage due to loss of underlying soil strength.

At the Liquefaction Project site, the subsoil profiles developed from site-specific geotechnical investigations indicate the presence of layers of silty sands and sands with silt that are dense to very dense. These sand layers could be liquefiable under sufficiently strong ground motions. However, due to the low seismicity of the region, the potential for soil liquefaction to occur is low. In addition, PALNG would address possible issues relating to the potential for soil liquefaction and loss of soil strength by using piles in the foundation design.

Some sandy soils underlie portions of the Texas Connector and Louisiana Connector Project routes; however, the potential for soil liquefaction to occur is low based on the low seismicity of the region.

4.1.3.4 Subsidence

Subsidence hazards include either a sudden collapse of the ground resulting in a depression, or a slow compaction of the sediments near the earth's surface (Nelson, 2004). This can occur due to the removal of fluids present in pore space or rock fractures that are under pressure, which can be followed by a decrease in fluid pressure, resulting in a loss of support and potential collapse. Subsidence occurs throughout the Gulf Coast Region as a result of sediment compaction, oil and gas extraction, and groundwater extraction. The results of PALNG's geotechnical investigation at the Liquefaction Project site indicate that subsurface conditions are generally suitable for the proposed facilities, if adequate site preparation, foundation design, and construction methods are implemented.

Because subsidence is a recognized concern in the Liquefaction Project area, PALNG would install all key liquefaction facilities on piles, including but not limited to loading facilities and trestles, LNG storage tanks, LNG booster pumps, gas turbines, pre-treatment and liquefaction equipment, and all compressors and blowers. PALNG would monitor foundations and other critical facilities to ensure they are maintained within acceptable limits. Site preparation activities would be monitored to ensure adherence to the geotechnical design. Surface subsidence would be controlled by potential use of lime stabilization of the fill materials during placement and compaction with monitoring settlement and systematic reworking, as needed. Foundations would be constructed with pile supports to protect equipment and interconnecting piping from differential movement. Earthen containment embankments would be earth-supported and constricted with wide bases (using 2H:1V or 3H:1V slopes, depending on height) to ensure stability. Earth-supported elements, such as the storm surge barrier and plant roads, would require periodic maintenance to mitigate the long-term effects of settlements and differential movements.

Because site-specific geotechnical mitigation has been incorporated into the Liquefaction Project design (e.g., pile-supported foundations) and would include our additional recommendations as contained in section 4.12.5.2, and the facilities would be designed in accordance with NFPA 59A (2001) and, where applicable, NFPA 59A (2006), subsidence would not be a significant hazard to the Liquefaction Project facilities.

Subsidence is a likely occurrence along the Texas Connector and Louisiana Connector Projects routes and would be considered during final design. However, subsidence is generally slow and long term, and rates in the pipeline projects area are considered low (0 to 1 foot every 100 years or 0.0 to 0.12 inch per year) to intermediate (between 1.1 and 2 feet every 100 years or 0.13 to 0.24 inch per year) (USACE, 2016). Subsidence would not be likely to affect the pipeline integrity as pipelines are generally flexible structures, except at tie-in locations. PHMSA regulations requiring periodic monitoring of the pipeline right-of-way during operation would aid in identification of subsidence-related conditions that may require maintenance. As a result of compliance with 49 CFR 192.613, pipeline route inspections would be completed once per year for Class 1 and Class 2 areas and twice per year for Class 3 areas to monitor the right-of-way for subsidence. In the event of subsidence, PAPL would expose the affected pipe, reposition or replace to a stress-free condition, and properly bed and backfill to restore existing grade. As a result, the Texas Connector and Louisiana Connector Projects have a low risk of subsidence impacts.

4.1.3.5 Karst

Karst terrain and physiography result from the dissolution of soluble bedrock, such as limestone, dolomite, marble, or gypsum, through the circulation of groundwater that has become slightly acidic as a result of atmospheric CO_2 being dissolved in the water. Karst terrain is characterized by the presence of sinkholes, caverns, irregular "pinnacled" bedrock surface, and springs. Any landscape that is underlain by soluble bedrock has the potential to develop karst landforms. The geology of the Projects area lacks shallow soluble bedrock and, therefore, karst landforms have not been identified in the Projects area, nor are they anticipated.

4.1.3.6 Landslides

A landslide is defined as the movement of a mass of rock, debris, or earth, down a slope. Landslides can be initiated by heavy rainfall, earthquakes, changes in groundwater conditions, and/or slope disturbance resulting from constriction activity. Since the topography of the liquefaction and pipeline facilities sites is relatively flat with very little grade change, and the USGS has identified the region as having a low incidence and susceptibility rate (Radbruch-Hall et al., 1982), the Projects have a low risk of impact caused by landslides.

4.1.4 Other Hazards

4.1.4.1 Flooding/Storm Surge/Tsunami

Liquefaction Project

The Gulf Coast region experiences tropical cyclones and hurricanes that generate significant rainfall, flooding, storm surges, shoreline erosion, and travel interruptions. A flood occurs when the water level in a stream or river channel overflows the natural or man-made bank. Flash floods result from high intensity precipitation events in upstream areas that lead to extensive short-duration runoff into a stream channel. Based on the historical record, a 100-year flood represents a river channel water level that is likely to be equaled or exceeded once every 100 years. Storm surge is a coastal phenomenon associated with tropical cyclones, hurricanes, and intense winter storms. The surge of ocean water inland above the high tide mark is a result of low barometric pressure combined with high winds pushing on the ocean surface,

causing water to "pile up" higher than ordinary sea level. The effect of a storm surge is further enhanced if it occurs at high tide (National Oceanic and Atmospheric Administration [NOAA], 2017a).

According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FEMA, 2013) for Jefferson County, Texas, the 100-year Base Flood Elevation for the Liquefaction Project site is 12 feet in reference to the National Geodetic Vertical Datum of 1929 and 12.04 feet in reference to the North American Vertical Datum of 1988 (NAVD88). The entire Liquefaction Project site would be enclosed for flood protection by construction of earthen levees on the channel and land sides. The channel-side earthen levee height is designed to a 500-year Still Water Elevation (SWEL) of 14.0 feet NAVD88, a 500-year wave of 5.9 feet (rounded to 6.0 feet for the purposes of levee sizing), 0.6 feet of sea level rise and subsidence, and 1.6 feet of expected settlement, yielding an initial crest height of 22.2 feet with a final post-settlement height not lower than 20.6 feet. The land-side earthen levee height is designed to a combined 100-year SWEL, 100-year wave, and sea level rise height of 17.0 feet, and 2.0 feet of expected settlement, yielding an initial crest height of 19.0 feet with a final post-settlement crest height not lower than 17.0 feet. In addition, given the uncertainty in levee settlement, PALNG would periodically monitor and maintain the crest elevation of the levee to be no less than 20.6 feet NAVD88 on the channel side and no less than 17.0 feet NAVD88 on the land side. Section 4.12.5.2 provides additional discussion of the hurricanes and possible storm surge elevations at the liquefaction site.

The basic wind speed incorporated into structural design would be a 3-second gust speed of 183 mph at an elevation of 33 feet above ground surface. This converts to a sustained wind speed of 150 mph. See section 4.12.5.2 for more details on wind speeds.

Between 1865 and August 2017, 45 hurricanes and tropical storms made landfall within 60 miles of the Liquefaction Project site (NOAA, 2017a). Three storms: Unnamed (1886), Audrey (1957), and Rita (2005), made landfall within 30 miles of Port Arthur, Texas and produced significant storm surges, with maximum heights greater than 12 feet AMSL (Needham and Keim, 2012). In addition, in 2008, Hurricane Ike made landfall east of Houston, Texas and continued northwest toward Port Arthur, resulting in water heights of 14.5 feet AMSL (NOAA, 2009; Louisiana State University, 2013). On August 30, 2017, Tropical Storm Harvey made landfall near Cameron, Louisiana. The Port Arthur area received 26 inches of rain in 24 hours, with a storm total of over 47 inches, resulting in widespread flooding, and is being considered a 500-year to 1,000-year storm event. NOAA reported that the maximum storm surge near Port Arthur was between 3 and 5 feet (NOAA, 2017b).

PALNG's commissioned Seismic Hazard Assessment (Fugro, 2017b) and Geotechnical Report (Fugro, 2017a) evaluated the potential for a tsunami or seiche (i.e., a condition in which a partially enclosed body of water is caused to oscillate, causing wave action) to affect the liquefaction facility. The Liquefaction Project would be about 7 miles north of the Gulf of Mexico shoreline. As discussed in section 4.12, the facility is designed for storm surge, which is above the maximum estimated wave height for tsunamis.

Section 4.12.5.2 further discusses liquefaction facilities safety and potential impacts on the facilities from hazards such as earthquakes, tsunamis, seiche, hurricanes, tornadoes, floods, rain, ice, snow, regional subsidence, sea level rise, landslides, wildfires, volcanic activity, and geomagnetism.

Texas Connector and Louisiana Connector Projects

As discussed previously, storm events can lead to flooding in the Beaumont-Port Arthur, Texas area. For a Category 1 hurricane, the SLOSH model predicts a storm surge of between 3 and 6 feet along the Louisiana Connector Project in Jefferson County, Texas and Cameron Parish, Louisiana (MP 0 to MP 27) and along the Texas Connector Project's Southern Pipeline; and up to 3 feet along the Texas

Connector Project's Northern Pipeline. For a Category 2 hurricane, the model predicts a storm surge greater than 9 feet along the Louisiana Connector Project in Jefferson County, Texas, Cameron Parish, Louisiana, and the southern part of Calcasieu Parish, Louisiana, and along the Texas Connector Project's Southern Pipeline; and up to 9 feet along the Texas Connector Project's Northern Pipeline. Category 3 and stronger hurricanes would produce storm surges greater than 9 feet along these areas (NOAA, 2015a).

Buried pipelines are rarely affected by flooding; however, PAPL would implement buoyancy control measures such as concrete-coated piping, anchors, or aggregate filled saddle bags to weigh the pipe in wet areas. Concrete-coated pipe would be installed in areas that are within a wetland or waterbody, except when the pipeline is being installed using a bore or HDD, or when the pipeline is within a waterbody or wetland that is not considered wet or prone to flooding (i.e., a non-saturated wetland or an intermittent stream). In the event that the pipeline is within a waterbody or wetland, but also inside a push-pull construction area, concrete-coated pipe would not be used, but other buoyancy control measures such as anchor blocks or saddle weights may be used.

Evaluation of the potential for flooding at compressor station sites and other aboveground facilities would be conducted during the detailed engineering stage. The Texas Connector Project's North Compressor Station and the Louisiana Connector Project's Compressor Station (at MP 96) are outside of FEMA flood zones. The Texas Connector Project's South Compressor Station would be constructed within the footprint of the Liquefaction Project facility, which is within a FEMA 100-year flood zone and is discussed in previous sections. PAPL would obtain a floodplain development permit prior to construction, which would include a "no rise" certification determined by a professional engineer licensed to practice in the State of Texas. PAPL would construct aboveground facilities outside of 100-year flood zones or surround them with a storm protection levee to minimize the potential for flooding. For instance, the Texas Connector Project's North Compressor station would be built outside of the flood zone and the South Compressor Station would be within the Liquefaction Project storm protection berm. The Louisiana Connector compressor station is outside of the 100-year flood zone; however, two meter stations and four MLVs would be within the 100-year flood zone in Louisiana. PAPL would build these facilities in accordance with local parish drainage regulations. As a result, the Texas Connector and Louisiana Connector Projects facilities would not be affected by flooding or storm surge.

4.1.4.2 Erosion and Sedimentation

Shoreline erosion occurs when waves, shoreline currents, and vessel wakes disturb shoreline soils and mobilized soil is transported away from the site. Changing or irregular stream channel morphology, typically as a result of man-made structures or stream channel debris, can lead to channel scour during high water flow. Water vortices can develop in deep scour holes. The Texas and Louisiana Gulf Coast area is experiencing the highest rates of coastal erosion and wetland loss in the United States. The average coastal erosion rate was -1.2 meters per year between 2000 and 2012 along the Texas coastal shoreline, with the area between Sabine Pass and Rollover Pass experiencing a shoreline loss rate of -4.7 meters per year between 2000 and 2012 (McKenna, 2014).

Liquefaction Project

Shoreline erosion could occur at the Liquefaction Project site and along the opposite shoreline as a result of waves, currents, and vessel wakes. To prevent erosion, new revetment in the form of sheet piling riprap or other erosion prevention measures would be installed on the water side of the storm protection berm. Even though shoreline erosion is a concern at the site of the liquefaction facility, the proposed mitigation measures would minimize erosion and scour impacts.

Texas Connector and Louisiana Connector Projects

The Texas Connector Project would not be directly on the shoreline of or adjacent to a major waterbody; therefore, the facilities would not be subjected to direct effects of shoreline erosion.

The Louisiana Connector Project would be installed at the Texas shoreline at the southern end of Sabine Lake using the HDD construction method, exiting Sabine Lake via HDD at Shell Island. The HDD method is designed to avoid the disturbance of land surface and/or lake floor between the entry and exit points of the HDD. All HDDs would be drilled from the shore into the lake, minimizing the potential for shoreline erosion to occur.

4.1.5 Paleontological Resources

While fossils in the region are generally rare, there have been occasional discoveries of fossil remains of animals such as camels and mastodons. Holocene and Pleistocene marine fossil fragments are sometimes found within sedimentary units deposited in these epochs, but these fragments have little scientific value. No known paleontological resources are in the Projects area (Fossilworks, 2017). If any paleontological resources are discovered during construction, they would be treated in accordance with PALNG's and PAPL's *Unanticipated Discovery of Paleontological Resources Plan*, which is included in their *Environmental Plans*. We have reviewed PALNG's and PAPL's *Unanticipated Discovery of Paleontological Resources Plan* for the Liquefaction Project, Texas Connector Project, and Louisiana Connector Project, and find it acceptable.

4.1.6 General Impacts and Mitigation

4.1.6.1 Liquefaction Project

The primary impacts would be limited to construction activities and would include disturbance of slopes within the work areas, which would be permanent where grading and filling is required to create a safe and stable land surface to support the facilities. Based on the low probability of localized seismic ground shaking near the project, we do not anticipate any problems attributable to seismicity. According to available soils and geologic maps and the geotechnical investigations conducted by PALNG, blasting is not anticipated during construction of the liquefaction facilities.

Based on the above discussion, in consideration of PALNG's proposed mitigation and design criteria, and our recommended mitigation measures, we conclude that the Liquefaction Project would not significantly impact or be impacted by geological conditions in the area and that the overall effect of the Liquefaction Project on topography and geology would be minor.

4.1.6.2 Texas Connector and Louisiana Connector Projects

The primary impacts would be limited to construction activities and would include disturbance of slopes within the work areas. Such impacts resulting from grading and trenching operations along the pipeline rights-of-way would be temporary because PAPL would restore these areas to preconstruction contours to the maximum extent practicable. Further, based on available soils and geologic maps provided by PAPL, blasting is not anticipated during construction of the project facilities.

PAPL's parent company, Sempra Energy, has direct experience successfully completing HDDs at 15 of the 26 proposed HDDs along the Louisiana Connector Project route. PAPL conducted a qualitative analysis of geologic and soil features at the 26 proposed HDD sites and identified a consistent geologic formation of alluvium material with a high silt and clay content which rarely contained gravel. The soils

are predominantly clay, mucky clay, silt loam, or sand, with little to no cobble, rock, or gravel. These formations typically create a stable HDD borehole with low occurrence of inadvertent fluid returns or borehole instability. Sempra Energy's direct experience with 15 of the 26 HDD locations indicates no issues affecting waterbodies or other resources occurred during construction, as all 15 HDDs were completed successfully; one small inadvertent return on one HDD was confined to an upland area near the entry bore hole. PAPL also consulted with HDD contractors that have completed large-diameter pipelines near the Louisiana Connector Project area, and the contractors shared similar successes as Sempra Energy's direct experience. PAPL estimates that HDD depths for the Texas Connector Project would typically be less than 50 feet below grade except for HDDs beneath the Sabine and Neches Rivers, which would be up to 100 feet below grade. Geology at these depths near the Texas Connector Project HDDs consists of clay and/or sandy clay to depths of 150 feet below grade. As noted with Sempra Energy's direct experience with other HDDs near the Louisiana Connector Project, the low permeable soils/sediment create a stable borehole with low occurrence of inadvertent fluid returns or borehole stability. Use of the HDD method would reduce impacts on existing geologic conditions between the HDD entry and exit points at the locations where this method is used. Prior to construction, and as part of its implementation Plan, PAPL has committed to provide detailed geotechnical surveys/reports for each HDD to confirm the site-specific geological conditions (as described above) which have resulted in the success of previous HDDs in the area. If any additional mitigation measures are required, PAPL has also committed to provide those measures.

Based on the low probability of localized seismic ground shaking near the projects, we do not anticipate any problems attributable to seismicity. As previously disclosed, studies of earthquake performance of gas transmission pipelines indicate that modern, arc-welded, ductile steel pipelines have performed very well in earthquakes, and the pipelines and associated aboveground facilities must be designed and installed in accordance with DOT standards, including those in 49 CFR 192, *Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards*. Each facility would be designed and constructed to provide adequate protection from washouts, floods, unstable soils, subsidence, movement due to growth faults, or other hazards that could cause it to move or sustain abnormal loads.

Based on this discussion, in consideration of PAPL's proposed mitigation and design criteria, and our recommended mitigation measures, we conclude that the Texas Connector and Louisiana Connector Projects would not significantly impact or be impacted by geological conditions in the area and that the overall effect of the Texas Connector and Louisiana Connector Projects on topography and geology would be minor.

4.2 SOILS

4.2.1 Existing Soil Resources

The soils that would be affected by construction and operation of the Projects were identified and assessed using the Soil Survey Geographic database (SSURGO). The SSURGO database is a digital version of the county-level soil surveys developed and made available by the USDA NRCS for use with geographic information systems. The soils within the proposed facility locations and routes were evaluated to identify prime farmland and major soil characteristics that could affect construction or increase the potential for adverse construction-related soil impacts. Potential impacts on soil resources that would be affected by construction and operation of the Projects may be associated with certain soil types and limitations, prime farmland, hydric soils, soil compaction, soil erosion, revegetation, and contamination. Table 4.2.1-1 summarizes the soil characteristics affected by construction of the Projects.

TABLE 4.2.1-1

Characteristics of Soils Affected by Construction of the Projects (in acres)

Facility	Project Total	Prime Farmland [a]	Hydric [b]	Compaction Potential [c]	Erosion Potential [d]	Revegetation Potential [e]
LIQUEFACTION PROJECT [f]	888.0	--	888.0	888.0	--	--
Dredge Disposal Areas						
J.D. Murphree WMA	1,910.3	**--**	1,910.3	--	--	--
Disposal Areas 8, 9A, 9B [g]	4,141.8	**--**	4,141.8	2,584.5	--	--
Subtotal	**6,940.1**	**--**	**6,940.1**	**3,472.5**	**--**	**--**
TEXAS CONNECTOR PROJECT						
Northern Pipeline	217.5	36.3	88.5	60.0	15.5	17.2
Southern Pipeline	35.3	--	26.1	4.8	2.2	2.2
FGT Lateral	11.1	11.1	--	--	--	--
GTS Lateral	3.6	1.9	0.3	1.4	--	--
HPL Lateral	8.1	4.6	1.4	2.1	--	--
KMPL Lateral	0.00	--	--	--	--	--
NGPL Lateral	1.6	--	1.6	--	--	--
TETCO Lateral	0.8	0.8	--	--	--	--
Access Roads	136.1	25.6	51.6	33.8	6.3	18.8
Aboveground Facilities	148.8	46.5	74.4	27.9	--	--
Subtotal	**562.9**	**126.9**	**243.9**	**130.0**	**24.0**	**53.2**
LOUISIANA CONNECTOR PROJECT						
Mainline	1,625.0	809.1	1,062.8	493.9	1,523.5	36.1
Centana Tie-In	0.4	--	0.4	0.4	--	--
CS Lateral	0.1	0.1	0.1	--	0.1	--
TETCO Tie-In	0.1	0.1	0.1	--	0.1	--
TGP Lateral and Tie-In	--	<0.1	<0.1	--	--	--
Egan Lateral and Tie-In	0.5	0.5	0.5	--	0.5	--
Pine Prairie Lateral and Tie-In	0.4	0.4	0.4	--	0.4	--
Texas Gas Lateral and Tie-In	0.2	0.2	0.2	--	0.2	--
ANR Lateral and Tie-In	0.3	0.3	0.3	0.3	0.3	--
CGT Tie-In	0.2	0.2	0.2	0.2	0.2	--
Access Roads	256.3	5.0	8.2	4.0	--	--
Contractor Yards	428.3	298.9	427.5	356.1	68.2	208.3
Aboveground facilities	61.2	55.2	61.2	55.2	--	11.1
Subtotal	**2,373.0**	**1,170.0**	**1,561.9**	**910.1**	**1,593.5**	**300.5**

TABLE 4.2.1-1 (cont'd)

Characteristics of Soils Affected by Construction of the Projects (in acres)

Facility	Project Total	Prime Farmland [a]	Hydric [b]	Compaction Potential [c]	Erosion Potential [d]	Revegetation Potential [e]
NONJURISDICTIONAL FACILITIES	121.0	--	121.0	121.0	--	--
Subtotal	**121.0**	**--**	**121.0**	**121.0**	**--**	**--**
Projects Total	**9,997.0**	**1,296.9**	**8,866.9**	**4,633.6**	**1,617.5**	**353.7**

[a] As designated by the NRCS. Includes soils that are considered prime if a limiting factor is mitigated (e.g., artificial drainage).

[b] Areas identified to have a hydric rating meet all the hydric criteria as determined by NRCS SSURGO.

[c] Includes soils in somewhat poor, poor, and very poor drainage classes with surface textures of sandy clay loam or finer.

[d] Includes land highly erodible water or highly erodible wind categories, which include severe to extreme erosion limitations for agricultural use and soils with an average slope >8 percent and/or soils with poor aggregation that are particularly susceptible to wind erosion.

[e] Includes coarse-textured soils (sandy loams and coarser) that are moderately well to excessively drained and soils with an average slope greater than 8 percent.

[f] Data do not include about 60 acres associated with unmapped soils and open water.

[g] Dredge disposal pipelines associated with transferring material to these locations would be placed on the ground surface or floated in water, and would not disturb soils.

4.2.1.1 Prime Farmland

The USDA categorizes prime farmland soils under its national inventory, and defines prime farmland as:

> Land that has the best combination of physical and chemical characteristics for producing food, fee, forage, fiber, and oil seed crops. It has the soil quality, growing season, and moisture supply needed to produce economically sustained high yields of crops when treated and managed according to acceptable farming methods (Soil Survey Division Staff, 1993).

Prime farmland generally contains few or no rocks, is permeable to air and water, and it is not excessively erodible or saturated with water for long periods of time. Soils that do not meet the criteria and definition above may still be considered prime farmland if the limiting factor is mitigated such as with the use of artificial drainage.

Liquefaction Project

None of the soils found at the liquefaction facilities site or dredge disposal areas are classified as prime farmland soils.

Texas Connector and Louisiana Connector Projects

Construction of the Texas Connector Project would affect 126.9 acres of prime farmland soil, which comprises about one-third of the project area, and operation would affect 46.5 acres, which would be permanently impacted by aboveground facilities. Construction of the Louisiana Connector Project would affect 1,170.1 acres of prime farmland, which is less than half the project area, and operation would affect 59.2 acres which would be permanently impacted by aboveground facilities. Based on the amount of prime farmland in the counties and parishes affected by the projects, construction and operation of the Texas

Connector and Louisiana Connector Projects would result in a fraction of one percent of impact on the total prime farmland available.

Nonjurisdictional Facilities

None of the soils along the SH 87, pipelines, or utilities relocations are classified as prime farmland soils.

4.2.1.2 Farmland of Statewide Importance

The USDA categorizes farmland of statewide importance under the Farmland Protection Policy Act. In general, farmland of statewide is defined as land that meets specific criteria based on the physical and chemical properties of the soils, and the climatic environment of soil occurrence. We received comments from the USDA NRCS Texas State Office that construction and operation of the North Compressor Station for the Texas Connector Project would permanently affect 39.0 acres of farmland of statewide importance.

Liquefaction Project

None of the soils found at the liquefaction facilities site or dredge disposal areas are classified as farmland of statewide importance.

Texas Connector and Louisiana Connector Projects

The NRCS reviewed the potential permanent impact of 39 acres of farmland of statewide importance and assigned the project a Farmland Conversion Impact Rating of 88. The Farmland Protection Policy Act states that a rating of 160 or less requires no further evaluation or protection considerations; therefore, impacts on farmland of statewide importance resulting from the Texas Connector Project are within the acceptable range.

None of the soils found along the Louisiana Connector Project are classified as farmland of statewide importance.

Nonjurisdictional Facilities

None of the soils along the SH 87, pipelines, or utilities relocations are classified as farmland of statewide importance.

4.2.1.24.2.1.3 Hydric Soils

Hydric soils are formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper soil horizon (Soil Survey Staff, 1994). These soils are generally associated with wetlands and proximity to waterbodies. Soils that are artificially drained or protected from flooding (e.g., by levees) are still considered hydric if the soil in its undisturbed state would meet the definition of a hydric soil.

Liquefaction Project

The upland portions of the liquefaction facilities site and dredge disposal areas are comprised entirely of soils categorized as hydric soils.

Texas Connector and Louisiana Connector Projects

The Texas Connector Project would affect several soil associations that contain hydric soils, including Creole mucky clay, Allemands mucky peat, Bancker mucky peat, Beaumont clay, Caplan mucky peat, Franeau clay, Ijam clay, Leton loam, Leerco muck, Orcadia-Aris, and Zummo muck. Construction of the Texas Connector Project would affect 243.9 acres of hydric soils, and operation would affect 74.4 acres of hydric soils impacted by aboveground facilities.

The Louisiana Connector Project would affect several soil associations that contain hydric soils, including Basile and Guyton silt loams, Basile and Brule, Brimstone silt loam, Clovelly muck, Prairieland silt loam, Frost silt loam, Gentilly muck, Ijam clay, Judice silty clay, and more. Construction and operation of the Louisiana Connector Project would affect 1,561.9 acres and 69.4 acres, respectively, of hydric soils.

Due to the high levels of saturation within hydric soils, compaction and rutting are primary concerns requiring avoidance and mitigation. Buoyancy hazards for the pipeline may also be encountered within hydric soil areas and high groundwater elevations.

Nonjurisdictional Facilities

Soils affected by the SH 87, pipelines, and utilities relocation are all classified as hydric soils. Construction and operation of the nonjurisdictional facilities would temporarily and permanently affect 121.0 acres of hydric soils.

4.2.1.34.2.1.4 Compaction Potential

Soil compaction modifies the structure and reduces the porosity and moisture-holding capacity of the soil. The degree to which soil is compacted during construction depends on moisture content and texture of the soil. Fine-textured soils with low internal drainage and high shrink-swell potential are the most susceptible to compaction. Construction equipment travel and vehicular access over wet soils may disrupt soil structure, reduce pore space, increase runoff potential, and cause rutting. Moist or saturated soils are more likely to compact or rut (Soil Survey Division Staff, 1993).

Liquefaction Project

The liquefaction facilities site and dredge disposal areas are comprised entirely of clay and peat soils prone to compaction.

Texas Connector and Louisiana Connector Projects

Construction of the Texas Connector Project would affect 130.0 acres of soils that are prone to compaction due to poor drainage qualities. About 27.9 acres of the total would be affected permanently by the operation of the Texas Connector Project's aboveground facilities. Construction of the Louisiana Connector Project would affect 910.1 acres of soils that are prone to compaction due to poor drainage qualities. About 59.2 acres of that total would be affected permanently by the operation of the Louisiana Connector Project's aboveground facilities and access roads.

Nonjurisdictional Facilities

Soils affected by the SH 87, pipelines, and utilities relocation are comprised entirely of clay and peat soils prone to compaction.

4.2.1.44.2.1.5 Erosion

Erosion is a continuing natural process that can be accelerated by construction and earth-disturbing activities. Factors that influence erosion potential include soil characteristics, climate, topography, vegetation cover, soil texture, surface roughness, percent slope, and length of slope. Soils most susceptible to erosion by water are typified by bare or sparse vegetation cover, non-cohesive soil particles with low infiltration rates, and moderate to steep slopes. Soils typically more resistant to erosion by water include those that occupy low relief areas, are well vegetated, and have high infiltration capacity and internal permeability. Wind erosion typically occurs in an arid climate with soils containing little vegetation growth and high wind conditions. Clearing, grading, and equipment movement could accelerate the erosion process and, without adequate protection, result in discharge of sediment into waterbodies and wetlands. Soil loss due to erosion also could reduce soil fertility and impair revegetation rates.

Liquefaction Project

No soils listed as having a severe erosion potential would be impacted by construction and operation of the liquefaction facilities site or dredge disposal areas.

Texas Connector and Louisiana Connector Projects

The Texas Connector Project would affect several soil series amounting to less than 5 percent of its total with severe erosion potential. Construction would affect about 24.0 acres of soils prone to erosion, the majority of which occur along the Northern Pipeline and are associated with access roads. Operation of the Texas Connector Project's aboveground facilities would not affect any soils with susceptibility to erosion.

The Louisiana Connector Project would affect the Gore sandy loam, Acadiana silt loam, and Caddo-Messer loam soil series, which are all susceptible to water erosion. Construction of the Louisiana Connector Project would affect 1,593.5 acres of soils with erosion susceptibility. Operation of the Louisiana Connector Project's aboveground facilities would not affect any soils with susceptibility to erosion.

Nonjurisdictional Facilities

While no soils characterized as having severe erosion potential are found along the SH 87, pipelines, and utilities relocation area, SH 87 has experienced long-term erosion issues associated with tidal action. These issues would be alleviated for the portion of the highway relocated as part of the Liquefaction Project by moving SH 87 farther inland.

4.2.1.54.2.1.6 Revegetation Potential

Long-term revegetation success and restoration are essential for maintaining soil productivity and avoiding future erosion problems and associated soil loss. The revegetation potential of the Projects area soils was evaluated based on soil characteristics including texture, slope, and drainage class. Drier soils have less water to aid in the germination and eventual establishment of new vegetation. Coarser textured soils have a lower water holding capacity following precipitation, which could result in moisture deficiencies in the root zone and unfavorable growing conditions for many plants.

Liquefaction Project

None of the soils found on the liquefaction facilities site or at the dredge disposal areas are classified as having poor revegetation potential.

Texas Connector and Louisiana Connector Projects

The Texas Connector Project would affect several soil series (about 7 percent of its total) with poor revegetation potential. Construction of the Texas Connector Project would affect 53.2 acres of soils with poor revegetation potential. About 50 percent of these soils occur along the combined pipeline route itself and the other 50 percent are associated with access roads. Operation of the Texas Connector Project's aboveground facilities would not affect any soils with poor revegetation potential.

The Louisiana Connector Project would affect several soil series (about 5 percent of its total) with poor revegetation potential. Construction and operation of the Louisiana Connector Project would affect 300.5 and 20.1 acres, respectively, of soils with poor revegetation potential. All impacts on soils as a result of project operation would be associated with aboveground facilities.

Nonjurisdictional Facilities

No soils classified as having poor revegetation potential would be impacted by the relocation of SH 87, pipelines, and utilities.

4.2.1.64.2.1.7 Soil Contamination

Contamination from spills or leaks of fuels, lubricants, and coolant from construction equipment and facility operations could adversely affect soils. The effects of contamination would typically be minor because of the low frequency and volumes of spills and leaks.

Liquefaction Project

PALNG consulted a regulatory database search of hazardous and solid wastes in accordance with parameters set forth and recommended by the American Society for Testing and Materials (ASTM) Standard Practice 1527:97, including, but not limited to the National Priority List under the Superfund program, the Resource Conservation and Recovery Act Information Service, State Hazardous Waste list, Leaking Underground Storage Tanks database, and State Voluntary Cleanup Program. There were no listed sites found within 0.25 mile of the liquefaction facilities or the dredged material disposal areas (Environmental Data Resources, Inc., 2015).

PALNG performed a site reconnaissance of the liquefaction facilities site and found no unusual odors, waste pits, vent pipes, ground stains, or other typical indicators of potential hazardous waste or contaminated soil. PALNG collected sediment samples from 15 locations during its original site reconnaissance in 2004 to determine whether dredged material would be suitable for beneficial reuse. About 48 percent of the liquefaction site area was tested in association with this 2004 report. These samples were analyzed using the National Sediment Quality Survey (NSQS) and the TCEQ's Ecological Benchmark, guidelines utilized by the USACE Galveston District and TPWD, respectively. Sediments collected during the 2004 site reconnaissance were determined to be under all contamination thresholds identified under NSQS and the Ecological Benchmark. PALNG performed a Tier 1 Evaluation of Dredged Material for Beneficial Reuse, which also found composite analytical results for dredge material falls below NSQS and Ecological Benchmark.

The 2004 site assessment demonstrates sampling of about one-half of the site, and PALNG completed supplemental site assessments in 2008, 2015, and 2016 covering the remaining liquefaction site area. These site assessments make the determination that the liquefaction facilities property meets the TCEQ's Tier 1 Commercial/Industrial Protection Concentration Levels for soil and groundwater.

Based on its review of the above, the EPA recommends that all dredged material proposed to be disposed of in aquatic habitats, including material proposed to be disposed of in upland disposal facilities that discharge to an aquatic habitat and/or proposed to be used onsite, be tested in accordance with the Inland Testing Manual or Upland Testing Manual. In addition, the testing should be done using EPA-approved methods; the results should include detailed laboratory quality assurance/quality control information; and a draft sampling and analysis plan should be provided to the EPA, USACE, and TCEQ prior to sampling. Although portions of the affected area were previously tested, the EPA further recommended that the soils and sediments at the Liquefaction Project site be resampled, specifically the area within the ship canal at the marine berth, construction dock, MOF, and landward component at the MOF. The EPA also encourages PALNG to continue actively seeking other beneficial use opportunities for habitat restoration and creation when dredged material is suitable and free of toxic pollutants.

PALNG asserts that because there has been no site activity on the proposed liquefaction facilities site since the original sampling, no additional work is necessary. However, PALNG committed to resampling the area within the ship canal at the marine berth, construction dock, and MOF due to receiving new sediment loads since the original sampling analysis was conducted. PALNG also committed to resampling sediments at the landward component of the MOF as recommended by the EPA. PALNG committed to conducting this resampling in accordance with the Inland Testing Manual prior to dredging and disposal. To verify the assumption that the past soil sampling is still valid and site conditions have not changed, **we recommend that:**

- **Prior to construction of the Liquefaction Project, PALNG should provide the EPA, USACE, TCEQ, and Texas RRC with the soil and sediment analysis conducted at the area within the ship canal at the marine berth, construction dock, MOF, and landward component of the MOF for review. PALNG should file the conclusions of the agency reviews with the Secretary along with documentation of its consultations with these agencies including any measures PALNG would need to adopt if the analysis discovers previously unknown contamination.**

If, as a result of the analysis, it is determined that the dredge material is not suitable for use as proposed and the handling of dredge material must be modified (for example, a new location for dredge disposal is identified), PALNG would be required to request from FERC a variance to its project and document that it has obtained all applicable federal authorizations and permits for the modified activity(ies) prior to its use.

With respect to resampling soils and sediments previously analyzed, in its letter dated June 13, 2017, the TPWD stated that it "requires that all dredge material used in restoration be tested for contaminants and, at a minimum, meet the standards as stated in the TCEQ ecological risk assessment manual and EPA's Evaluation of Dredge Material Proposed for Discharge in Waters of the US - Testing Manual. PALNG will be required to provide documentation that all dredge material for [beneficial use] has been tested and meets these standards before proceeding with beneficial use of dredge materials activities on the WMA" (TPWD, 2017a). In addition, the need for sediment testing could be required as part of the section 401 Water Quality Certification process, which is overseen by the Texas RRC.

Texas Connector and Louisiana Connector Projects

Based on a review of potentially contaminated sites registered within 0.25 mile of the Texas Connector and Louisiana Connector Projects areas via state and federal databases (LDEQ, 2017a, 2017b, 2017c; EPA Facility Registry Service, 2017), no registered sites were identified.

Nonjurisdictional Facilities

The potential for soil contamination to be encountered during the SH 87, pipelines, and utilities relocation work was determined by the same regulatory database search and site reconnaissance detailed in section 4.2.1.6, and no registered sites were identified.

4.2.1.74.2.1.8 Subsurface Sediments

The following discussion applies to the Liquefaction Project only and is based on our 2006 EIS of the proposed site, as subsurface conditions have not changed since that time. However, some of PALNG's engineering design and construction commitments have altered or are currently not known. Regardless, based on the following discussion, our analysis indicates that issues of concern and potential hazards associated with soft sediments, ground subsidence, and hydric soils underlying areas that would be developed by PALNG for the Liquefaction Project would be adequately addressed with PALNG's engineering design.

The Liquefaction Project would be in an area that contains several thousand feet of deltaic and alluvial deposits consisting of interlayered clays and sands. Recent deposits located close to the Gulf Coast, including the area of the liquefaction site, consist of alluvium, deltaic, littoral, and marsh deposits. These deposits can be weak and unsuitable for supporting major structures on shallow foundations.

Significant loading on these sediments would occur during construction, hydrostatic testing, and operation of the LNG storage tanks. As a result, based upon its geotechnical evaluations of the site, PALNG may choose to use several techniques to stabilize and enhance the shear strength of the soils and sediments in various locations for the aboveground facilities. The prior studies identified the design criteria for ground improvements and foundations, which identified that the foundations for settlement-sensitive equipment and structures such as the LNG storage tanks, process equipment, and pipe racks, should be supported by piles. Foundations would be constructed on top of the piles. PALNG would install all critical process equipment and structures 9 feet above mean sea level. Vegetation clearing, grading, and over-excavation and the placement of structural fill would be conducted. Sandy clay soils free of organic or other deleterious materials would be used as structural fill and would be compacted to ASTM standards. Alternatively, PALNG may choose to use tested and approved portions of the on-site clay soils preconditioned with lime and fly-ash. Because the first layer of structural fill may be difficult to compact if the soft underlying soils are exposed or the soils become wet, geo-textile fabric may be used to reduce this difficulty and to aid in the process of structural fill placement and compaction.

Additionally, all major equipment and structures, including the LNG storage tanks, LNG process equipment, pipe racks, and the marine berth facilities would be supported on deep-driven pile foundations. Piles would be installed to a depth of about 160 feet for the LNG storage tanks and to a depth of about 70 to 80 feet for the remaining foundations. The number of piles required is not yet known but, based on the 2006 EIS, could range between 1,000 to 2,300 piles per tank. The settlement of the LNG tanks after construction could be on the order of 11 to 12 inches because of consolidation of the soils; however, differential settlement of the LNG storage tanks, as a result of the pile cap and pile stiffness, is predicted to be minimal.

4.2.2 General Impacts and Mitigation

4.2.2.1 Liquefaction Project

Construction activities such as clearing, grading, excavation, backfilling, and the movement of construction equipment may affect soil resources. Clearing removes protective vegetation cover and exposes the soil to the effects of wind and rain, which increases the potential for soil erosion and sedimentation of sensitive areas. Grading, spoil storage, and equipment traffic can compact soil, reducing porosity and increasing runoff potential.

To increase the load bearing capacity of soils along the heavy haul road, an engineered grout would be added to the subsoil that would alter the physical characteristics of the soil. The resulting substrate would have characteristics resembling soft rock (e.g., lightly cemented sandstone). Once soil alteration has taken place, it is not possible to revert to pre-existing conditions. Areas not reinforced with engineered soil surfaces would be graded, covered with a soil base and topsoil, and seeded per NRCS recommendations to prevent erosion.

To protect the liquefaction facility post-construction during its operation, PALNG would construct a storm surge barrier of improved soil and structural clay to a top elevation of 20 feet. Soils on the remainder of the liquefaction facilities site would be filled and maintained at an elevation of 6.5 feet AMSL. The total volume of soil to be cut is about 1.5 million cubic yards (yd^3). The total volume of fill required for the final elevations is about 4.4 million yd^3, including fill and stone material. The materials for and construction of the storm surge barrier would be in accordance with the recommendations set forth by a certified geotechnical engineer. In addition, PALNG would further armor the Port Arthur Canal adjacent to the site by means of riprap or other erosion prevention measures.

Localized erosion may occur during operation in the shoreline zone due to shipping vessels' bow thrusters and "prop wash." PALNG developed a Shoreline Protection Report to address potential shoreline erosion under these circumstances. LNG vessels would be assisted by tugs during vessel berthing and departure maneuvers and would minimize their own stern propeller and bow thruster use, such as in emergency maneuvering situations.

As described in detail in section 2.5.1.4, dredge material would be transported from the ship berthing area at the liquefaction site to Dredge Disposal Areas 8, 9A, and 9B using a 30-inch-diameter temporary pipeline. Based on correspondence with the SNND, the USACE has listed Dredge Disposal Areas 9A and 9B as active federal placement areas. The SNND currently owns the areas, which would be able to accommodate the proposed 4.8 million yd^3 of dredge material (SNND, 2017a). Dredge Disposal Area 8 would also receive material from the project and it is also an active federal placement area for USACE maintenance dredging (USACE, 2018).

Based on correspondence with the TPWD, a plan for beneficial use of dredge material would be required as part of a Surface Use Agreement for the project related to placement of material at the J.D. Murphree WMA (TWPD, 2017a). PALNG is currently coordinating with the J.D. Murphree WMA and TPWD in the development of its plan for the beneficial use site. According to PALNG's draft Compensatory Mitigation Plan (November 2016), the proposed WMA disposal and mitigation area has degraded over recent years due to dredging of the Gulf Intracoastal Waterway and the SNWW, which has limited freshwater inflow and increased salt water inflow into the system. PALNG met with the TPWD on November 14, 2017, to continue coordination on the placement of material within the WMA. The TPWD stated in an April 10, 2017 correspondence that beneficial use projects within the WMA were limited to 500 acres at any one time. The TPWD indicated in the November 14, 2017 meeting that it would continue

to work with PALNG to ensure that the 1,900 acres of proposed dredge material could be placed on the WMA in a manner that would satisfy regulatory requirements.

To reduce the impacts of construction on soils, PALNG would implement its project-specific *Environmental Plan*, which includes measures to control erosion and sedimentation during construction and to ensure proper restoration of disturbed areas following construction. Relevant mitigation measures specified in PALNG's *Environmental Plan* include the following:

- Sediment barriers would be installed before ground-disturbing activities to prevent sediment flow from construction areas into waterbodies, wetlands, and roads.
- Temporary erosion control measures (e.g., temporary slope breakers and mulch) would be installed during construction.
- Permanent erosion control measures would be maintained following construction.
- Erosion control fabric would be placed at dike and drainage swale outlets and adjacent to roads and waterbodies as necessary.
- Dust suppression, via water application, would be used as necessary to control and minimize wind erosion.
- During periods of heavy rainfall or unusual soil saturation, rutting and compaction would be avoided to the extent practicable by utilizing low-ground weight construction equipment and/or timber mats.
- An EI would monitor field conditions daily to ensure that the erosion and sedimentation control measures are functional and adequate until the construction workspace is fully stabilized.

Most of the soils disturbed within the liquefaction facilities site (888.0 acres) would be permanently impacted by paved or gravel plant roads, occupied by aboveground facilities, or converted to open water within the recessed berthing area. PALNG would seed any remaining areas within the liquefaction facilities site with native vegetation recommended by the NRCS. Disturbed areas at the dredge disposal location sites would be seeded in accordance with the J.D. Murphree WMA recommendations as well as NRCS recommendations. Revegetated areas would be monitored following construction for the first and second growing seasons to ensure successful restoration (see section 2.5.1.9).

To prevent contamination of soils within nearby wetlands, waterbodies, and other sensitive resources during construction, PALNG developed preliminary spill prevention, control, and countermeasure plans within its *Environmental Plan*. These plans identify cleanup protocol to be implemented should fuel, lubricant, coolant, or solvent spill or leak occur thereby contaminating the project soils. Implementation of the protocols and best management practices in the spill plan would adequately minimize the potential for soil contamination. Further, should there be any unanticipated discovery of soil contamination during construction, PALNG would follow the protocols detailed in its *Unanticipated Hazardous Waste Discovery Plan* within its *Environmental Plan*. We conclude that implementation of our recommended measures (see section 4.1.2), and the measures outlined in PAPL's *Environmental Plan*, including the *Unanticipated Hazardous Waste Discovery Plan*, would help to ensure that soil contamination would not be a concern for the Liquefaction Project.

Given the impact minimization and mitigation measures described above, impacts on soils due to construction and operation of the Liquefaction Project would be permanent, but minor.

4.2.2.2 Texas Connector and Louisiana Connector Projects

Construction of the Texas Connector and Louisiana Connector Projects would impact 563.0 and 2,079.0 acres, respectively. About 74 percent of the soils impacted by the Texas Connector Project and 80 percent of the soils impacted by the Louisiana Connector Project would be restored to preconstruction conditions. Further, PAPL would adopt the HDD method at 24 locations along the Texas Connector Project and 26 locations along the Louisiana Connector Project, including the shorelines of Sabine Lake. As previously discussed, use of the HDD method would avoid most direct impacts, including soil disturbance between the drill entry and exit points. Cumulatively, about 26.5 miles of soil impacts would be avoided.

PAPL would conduct restoration in accordance with the landowner's request in agricultural land or using a native seed mix developed in consultation with the NRCS, thus temporarily impacted soils are anticipated to retain their former productivity. During construction, PAPL would adhere to the construction measures outlined in its project-specific *Environmental Plan*, which includes the Commission's Plan and Procedures. For example, topsoil segregation and decompaction would be implemented at all areas of temporary impact, including pipeline construction, access roads, and laydown yards. These practices would promote the maintenance of prime farmland; however, there would be a slight loss of useable prime farmland soil area associated with the locations of compressor stations, meter stations, and MLVs.

Soil grade and compaction would be monitored over time during operation after the completion of the Projects. If any noticeable expansion or subsidence is observed, remediation and mitigative action would take place as per the Commission's Plan and Procedures. Construction of the pipeline would not negate the use of the land for agriculture. The most effective best management practices for soil erosion is the preservation of existing vegetation, but where that is not feasible, silt fencing, timber mats, street sweeping, and other practices would be implemented and regularly maintained throughout construction. Additionally, PAPL would implement the spill prevention, control, and countermeasure measures in its *Environmental Plan* (which we have reviewed and found to be acceptable) to reduce potential impacts on soils from spills of hazardous materials used during construction and operation. If soil contamination is encountered, PAPL would follow the conditions of its *Unanticipated Hazardous Waste Discovery Plan* and all local, state, and federal regulations. We conclude that implementation of PAPL's *Environmental Plan*, including the *Unanticipated Hazardous Waste Discovery Plan*, would help to ensure that soil contamination would not be a concern for the Texas Connector and Louisiana Connector Projects.

Successful restoration and revegetation in areas that are not permanently developed are important to maintain ecosystem productivity and to protect the underlying soil from potential damage, such as erosion. Soils along the Texas Connector and Louisiana Connector Projects pipeline routes are currently well vegetated, and a relatively small percentage (less than 7 percent) are predicted to have a low revegetation potential following construction. PAPL would implement the measures outlined in its *Environmental Plan*, which includes the Commission's Plan, for revegetation of disturbed land areas following construction, including seeding of disturbed areas with native vegetation as recommended by soil conservation authorities and local landowners and monitoring disturbed areas for up to 3 years to ensure the success of revegetation. If upland revegetation is conducted in accordance with these measures, areas disturbed by construction would be successfully revegetated.

In addition, PAPL is coordinating with the USACE and other federal and state agencies to develop an appropriate wetland restoration plan for wetlands affected by the Texas Connector and Louisiana Connector Projects.

Operation of the Texas Connector and Louisiana Connector Projects would result in little, if any, soil disturbance. If routine or emergency repairs are required, the effects associated with the repair work will be mitigated with the same measures outlined in PAPL's *Environmental Plan*. Based on experience

with herbaceous and shrub communities in the projects area, PAPL estimates that the revegetation efforts may take 1 to 5 years to reestablish.

Given the impact minimization and mitigation measures described in these plans, impacts on soils due to construction and operation of the Texas Connector and Louisiana Connector Projects would be temporary and minor, except for the soils affected by aboveground facilities and new and/or permanent access roads, which would experience permanent but still minor impacts.

4.2.2.3 Nonjurisdictional Facilities

As shown in table 4.2.1-1, construction of the nonjurisdictional facilities would impact 121.0 acres of soils, none of which are classified as prime farmland. Temporary workspaces totaling 75.7 acres would be restored to preconstruction conditions, replanted in accordance with the landowner's request in agricultural land or using a native seed mix developed in consultation with the NRCS, and are anticipated to retain their former productivity. Further, PALNG would implement the spill prevention, control, and countermeasure measures in its *Environmental Plan* to reduce potential impacts on soils from spills of hazardous materials used during construction and operation. Soil impacts during construction would be minimized through the implementation of the measures outlined in the Commission's Plan and Procedures. Given the impact minimization and mitigation measures described in these plans, we conclude that impacts on soils due to the relocation of SH 87 would be permanent and minor, and impacts on soils due to construction and operation of the nonjurisdictional pipelines and utilities would be minor. Following construction, operation of the facilities would be transferred back to the TDOT and the pipeline and utility operators.

4.3 WATER RESOURCES

4.3.1 Groundwater Resources

4.3.1.1 Aquifers

The Projects would be above the coastal lowlands aquifer system (Ryder, 1996). The coastal aquifer system extends from southern Texas to the Florida panhandle, underlying most of the Gulf Coastal Plains. The coastal lowlands aquifer system is one of the most extensively used aquifer systems in the southern United States and supplies large quantities of water for agricultural, commercial, industrial, and public/domestic uses (Renken, 1998).

The coastal lowlands aquifer system within the State of Texas is also called the Gulf Coast aquifer. The Gulf Coast aquifer consists of three individual aquifers named the Chicot, Evangeline, and Jasper aquifers, from shallowest to deepest. A fourth, deeper aquifer, named the Catahoula aquifer, is also sometimes recognized; however, the Catahoula aquifer is more often identified as a confining layer (Texas Water Development Board [TWDB], 2011). The Chicot and Evangeline aquifers underlie the proposed liquefaction and pipeline facilities with the base of the Chicot aquifer at a depth of about 800 to 1,200 feet and the base of the Evangeline aquifer at a depth of about 2,600 to 4,000 feet. The lower portion of the Chicot aquifer (700-foot sand) is the primary water source for the Projects area and underlies the Projects. The Chicot and Evangeline aquifers consist of interbedded clays, silts, sands, and gravels. Over much of the Projects area the first usable sand layer within the Chicot aquifer is overlain by a 50- to 100-foot-thick clay confining layer. Recharge to the Chicot aquifer occurs mainly in sandy outcrops northwest of the Projects area. In Louisiana, the Chicot aquifer is the most heavily used aquifer and provides over 650 million gallons per day for various uses including agriculture, public water supply, and industry (USGS, 2010). Water levels in the Chicot aquifer have declined in portions of Louisiana due to extensive pumping, which has led to concerns over the potential for saltwater intrusion (USGS, 2010).

The TWDB categorizes aquifer systems as major and minor aquifers in Texas. Major aquifers supply large quantities of water over large geographic areas, and minor aquifers supply either smaller quantities of water over large geographic areas or large quantities of water over small areas (TWDB, 2011). The Gulf Coast aquifer is designated as a major aquifer; however, for regulatory purposes, the coastal area that extends about 10 miles inland is not included in the major aquifer designation due to the presence of predominantly brackish water. Therefore, the Liquefaction Project site, portions of the Texas Connector Project (between MPs 0.0 and 3.4 along the Northern Pipeline and between MPs 0.0 and 6.3 along the Southern Pipeline), and portions of the Louisiana Connector Project (between MPs 0.0 and 17), would not be located above a major aquifer as designated by the TWDB. The rest of the Texas Connector Project route is underlined by the Chicot aquifer, which the TWDB has designated as a major aquifer. Louisiana does not have an equivalent designation of major and minor aquifers.

The Chicot aquifer has three primary water-bearing zones used for drinking water, typically referred to as the 200-, 500-, and 700-foot sands. This nomenclature is based on depth of the aquifer at specific municipalities, and the 200-foot sand in one municipality is not hydraulically connected to a 200-foot sand found in another municipality. The Chicot aquifer underlies the Texas Connector Project between MPs 6.3 and 7.6 of the Southern Pipeline and the Louisiana Connector Project between MPs 17 and 130.

The brackish to saline quality of much of the groundwater in the Jefferson County, Texas and Cameron Parish, Louisiana area limits the use of such water. The groundwater in Orange County, Texas is mostly fresh to slightly saline. Groundwater wells in Jefferson County are predominantly in the northern and western portions of the county where salinity levels are lower. Depth to surficial groundwater in Jefferson and Orange Counties, Texas and Cameron Parish, Louisiana ranges from about 3 to 50 feet below

ground surface, with shallow groundwater near wetlands. Soil borings completed at the Liquefaction Project site encountered groundwater at the existing ground surface. Fresh water is obtained from surface water sources for most industrial, agricultural, and municipal use. Surface water use is discussed in section 4.3.1.

4.3.1.2 Sole Source Aquifers

The EPA defines a sole source aquifer (SSA) or principal source aquifer area as one that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer, where contamination of the aquifer could create a significant hazard to public health, and where there are no alternative water sources that could reasonably be expected to replace the water supplied by the aquifer (EPA, 2015). The EPA has designated the Chicot aquifer as an SSA in southwestern Louisiana, but this designation does not apply to the Chicot aquifer in Texas. Therefore, the Louisiana portions of the Texas Connector and Louisiana Connector Projects would overlie an EPA-designated SSA, but the other project facilities in Texas would not.

4.3.1.3 Water Supply Wells

Under the Safe Water Drinking Act (SWDA), each state is required to develop and implement a Wellhead Protection Program to identify the land and recharge areas contributing to public supply wells and prevent the contamination of drinking water supplies. The SWDA was updated in 1996 with an amendment requiring the development of a broader-based Source Water Assessment Program, which includes the assessment of potential contamination to both groundwater and surface water through a watershed approach. A wellhead protection area (WHPA) encompasses the area around a drinking water well where contaminants could enter and pollute the well.

The TCEQ Source Water Assessment and Protection Program has identified protection areas around each public water supply well or surface water source in the state. The TCEQ's method of groundwater management is through the establishment of Groundwater Conservation Districts (GCD). GCDs are locally governed districts established for the management of groundwater by supporting the conservation, preservation, protection, recharging, and prevention of waste of the groundwater resources within their jurisdiction (TCEQ, 2017a). The TCEQ, TWDB, and TPWD are authorized to identify and delineate Priority Groundwater Management Areas in Texas. The Priority Groundwater Management Area Program identifies regions of Texas that are experiencing, or are expected to experience, critical groundwater problems and encourage the formation of GCDs for those areas (TCEQ, 2017b). Jefferson and Orange Counties are not within a GCD or a Priority Groundwater Management Area (TCEQ, 2013; TCEQ, 2017c).

The State of Louisiana Wellhead Protection and Source Water Protection Program is a component of the LDEQ's Drinking Water Protection Program and is designed to protect the quality of public drinking water supplies obtained from community water wells. The LDEQ delineates a WHPA around each public water supply well or well field in the state. WHPAs typically range from a 1,000-foot radius to a 1-mile radius, depending on well screen depth, construction date, or aquifer source. A management plan is then created for each well to minimize the potential risks to public water supplies, which can include ordinances, source prohibitions, and/or education of the public.

There are no known groundwater withdrawal wells or WHPAs designated by Texas within 0.25 mile of the Liquefaction Project (TWDB, 2017). There are no drinking water wells within 150 feet of the Liquefaction Project (TWDB, 2017). The nearest registered well to the liquefaction facilities is about 1.8 miles south of the property boundary, uses the Chicot aquifer, and is classified as unused (TWDB, 2017). No springs have been identified on or within 150 feet of the Liquefaction Project site.

There are no known groundwater withdrawal wells, drinking water wells, designated WHPAs, or springs within 150 feet of the Texas Connector Project in Texas and Louisiana (LDNR, 2017a; TWDB, 2017).

There are 16 known groundwater withdrawal wells or drinking water wells within 150 feet of the Louisiana Connector Project in Louisiana and none in Texas (LDNR, 2017a; TWDB, 2017). Eight of these wells are identified as plugged and abandoned, and eight are identified as active. Active wells include six private water wells for domestic or agricultural use, one commercial well, and one monitor well. There are no designated WHPAs or springs identified within 150 feet of the Louisiana Connector Project (LDNR, 2017a; TWDB, 2017).

4.3.1.4 Groundwater Quality

The LDEQ operates an Aquifer Sampling and Assessment Program to monitor the groundwater quality in Louisiana's major freshwater aquifers. This program publishes a triennial report that presents the results of groundwater sampling of about 200 wells in 14 different aquifers. Under the SWDA, the EPA has established the primary Maximum Contaminant Level (MCL) for pollutants that may pose a health risk in public drinking water. A primary MCL is the highest level of a contaminant that the EPA allows in public drinking water. Secondary MCLs have also been established by the EPA; however, they are defined as non-enforceable guidelines for taste, odor, or appearance of water (LDEQ, 2009a; LDEQ, 2009b).

The latest available triennial report from 2009 indicates that the water from the Chicot aquifer is hard, of good quality when considering health risk guidelines, and of fair quality when considering taste, odor, and appearance. No wells from the Chicot aquifer sampled in 2008 exceeded any of the primary MCLs that are established for 90 compounds regulated by the EPA; however, several wells exceeded secondary MCLs, including 17 wells for iron, 5 wells for total dissolved solids, 4 for pH, 3 for chloride, and 3 for color. Over the past 12 years, the average concentration of six analytical parameters (pH, alkalinity, chloride, hardness, barium, and iron) have increased in the Chicot aquifer (LDEQ, 2009a; LDEQ, 2009b).

In some areas of southwest Louisiana, decreasing water levels (drawdown) and saltwater encroachment have been the result of increased groundwater withdrawals. The rate of decline is primarily due to industrial use in the Lake Charles area and rice irrigation, where water levels drop up to 2 feet per year in the 500-foot sand due to intensive groundwater withdrawal (LDNR, 2012; Louisiana Department of Transportation and Development and USGS, 2011). Chloride levels have remained relatively constant since the mid-1970s; however, in the eastern and southern Lake Charles area, elevated chloride levels greater than 100 milligrams per liter have been observed in public water supply wells, suggesting that additional saltwater intrusion and upward migration from the 500-foot sand and 700-foot sand may occur in the future (Louisiana Department of Transportation and Development and USGS, 1999; LDEQ, 2009a).

The LDNR's Office of Conservation has the authority to regulate usage of groundwater on a statewide basis through designation as an Area of Ground Water Concern or a Critical Area of Ground Water Concern. Areas of Ground Water Concern are defined as areas where the sustainability of an aquifer is not being maintained due to either movement of a salt water front, water level decline, or subsidence. A Critical Area of Groundwater Concern is defined as an Area of Ground Water Concern, where the Office of Conservation's Commissioner of Conservation finds that the sustainability of the aquifer cannot be maintained without restrictions on groundwater withdrawal. Louisiana has three designated Areas of Ground Water Concern, all of which are in northern Louisiana, within the Sparta aquifer, and over 130 miles from the Projects.

Although no portion of the Chicot aquifer has been designated as an Area of Ground Water Concern, high water use in southwest Louisiana has been identified as one of the current major issues having an impact on groundwater sustainability management (LDNR, 2012). In 2012, the LDNR and USGS entered a partnership to increase groundwater monitoring. Thus, the number of wells within Louisiana monitored for water level, chlorides, and water quality has nearly doubled. In addition, the University of Louisiana at Lafayette has initiated a 3-year study in southwest Louisiana of regional groundwater use and management (LDNR, 2014).

Texas does not currently have an equivalent program for groundwater areas of concern.

4.3.1.5 Groundwater Impacts and Mitigation

Liquefaction Project

Construction activities associated with the Liquefaction Project that could potentially affect groundwater resources include foundation excavation and installation, installation of piles for LNG vessel loading facilities and LNG tanks, and accidental release of fuels, lubricants, and/or hazardous materials during construction. New impervious surfaces created as part of construction of the Liquefaction Project could also potentially affect groundwater resources by reducing infiltration and groundwater recharge. For the evaluation of the groundwater resource, the dredge disposal areas (J.D. Murphree WMA and existing Dredge Disposal Areas 8, 9A, and 9B) and associated temporary dredge material pipelines are considered part of the Liquefaction Project. Further, other than the placement of dredge material onto the surface, no ground-disturbing activities would occur at these placement areas.

The nearest registered water supply well is 1.8 miles from the liquefaction facility site. Subsurface conditions found during geotechnical investigations at the Liquefaction Project site consist predominantly of clays with low hydraulic conductivity. There is a 25-foot-thick layer of dense to very dense silty fine sand at about 155 feet below grade. PALNG may drive pilings as deep as 160 feet but expects most piles to terminate within the clay layer. Even if a few piles terminated within the sand layer, neither the soil nor the water from the shallow depth would be carried into the sand stratum by the pile, as direct transfer is typically negligible and conduit formation potential for displacement piles is low when the ratio of pile unit volume to external surface area is high (Boutwell et al., 2000). In addition, the clay subsoil above the sand stratum is not known to contain any contaminants. The various buildings at the liquefaction facility would have shallow foundations above the local water table, the excavation and installation of which would not cause significant impacts on local groundwater. Pile driving operations are not be expected to have an adverse effect on the groundwater or the aquifers at the liquefaction site.

Accidental spills and leaks of hazardous materials associated with equipment trailers; the refueling or maintenance of vehicles; and the storage of fuel, oil, and other fluids pose the greatest risk to groundwater resources. If not cleaned up, contaminated soil could continue to leach and add pollutants to groundwater long after a spill has occurred. PALNG would adhere to the spill prevention, control, and countermeasure plans outlined in its *Environmental Plan* to minimize potential impacts on groundwater resources. The *Environmental Plan* identifies preventive measures to reduce the likelihood of a spill, including, but not limited to the following:

- Storage of fuels and lubricants, and refueling and lubrication of equipment, would be restricted to designated upland staging areas at least 100 feet away from stream channels and wetlands.

- Secondary containment for petroleum products would be constructed around aboveground storage tanks in staging areas.

- All vehicles, equipment, and staging areas would be equipped with absorbent materials and spill kits.

- Routine equipment maintenance would be performed at staging areas, and all spent oils, lubricants, filters, etc. would be collected and disposed of in accordance with federal and state regulations.

- Equipment would not be washed in streams.

The *Environmental Plan* also specifies measures to contain and clean up a spill should one occur. In addition, the plan addresses the storage and transfer of hazardous materials and petroleum products. We have reviewed the *Environmental Plan* for the Liquefaction Project and find it acceptable to minimizing impacts on groundwater resources.

PALNG does not propose to use groundwater as a water supply during construction or operation of the liquefaction facilities. Instead, water for the facility would be obtained from the local municipal water system, which has a water main pipeline on the west side of the Liquefaction Project site that would be relocated as part of the project. Since groundwater withdrawals are not anticipated, potential resultant changes in flow patterns and/or lowering of the local groundwater table because of such withdrawals would not occur.

With implementation of the measures discussed above, the activities associated with the construction and operation of the Liquefaction Project would result in negligible to minor and temporary impacts on local groundwater resources.

Texas Connector and Louisiana Connector Projects

Construction of the Texas Connector and Louisiana Connector Projects would take place mostly above the water table; however, where the water table is within the trench or grading depth, shallow groundwater resources could be temporarily affected by minor fluctuations of water level, flow characteristics, and/or increased turbidity in localized areas adjacent to the trench, which could also affect the hydrology of nearby wetland areas. New impervious surfaces caused by construction of the compressor stations for the Texas Connector and Louisiana Connector Projects could also potentially affect groundwater resources by reducing infiltration and groundwater recharge. We estimate that shallow groundwater could be encountered within the first 3 feet below grade within Jefferson and Orange Counties, Texas and in Cameron, Calcasieu, and Beauregard Parishes, Louisiana. If it becomes necessary to remove water from the pipeline trench during construction, the water would be pumped through filter bags prior to being discharged. The typical pipeline trench excavation depth would be at least 6.5 feet, which is far shallower than the depth of the Chicot aquifer in the Texas Connector and Louisiana Connector Projects area, as discussed in section 4.3.1.1. The pipeline would be installed deeper in areas where it crosses other pipelines, roads, and waterbodies. PAPL would complete pipeline construction in a given area in a short period of time and, therefore, any potential trench dewatering impacts on nearby vegetated areas would be temporary and localized. Water table elevations would return to preconstruction levels soon after the trench has been backfilled. Should the trench be continually flooded and dewatering is not feasible, PAPL would use push-pull or float techniques to place the pipe in the trench (see section 2.4.3.2 for a description of these methods). PAPL has identified several areas where the push-pull construction method would be used due to wetlands and groundwater issues (see table 2.4.3-2). Excavation could also increase turbidity within the groundwater resources adjacent to construction activities; however, there would not be a significant or adverse impact on groundwater quantity or quality as potential turbidity would be localized to the disturbance area.

The Southern Pipeline of the Texas Connector Project would cross about 0.5 mile of the Chicot aquifer in Louisiana, which is designated as an SSA. Due to saltwater intrusion in this area, the aquifer is unsuitable for domestic purposes. The Louisiana Connector Project would cross over 110 miles of the Chicot aquifer in Louisiana. Given the impermeability of the clay layer and the depth of the Chicot aquifer, construction of the Louisiana Connector Project would not adversely affect the Chicot aquifer, its groundwater quality, or the SSA in Louisiana.

Localized, near-surface soil compaction caused by heavy construction vehicles could reduce water infiltration and increase runoff and potential ponding. In areas of cleared vegetation, water infiltration would be reduced until vegetation has been restored, which could have a temporary effect on deep aquifer recharge. To minimize impacts on groundwater during construction of the Texas Connector and Louisiana Connector Projects and to restore preconstruction overland flow and recharge patterns, PAPL would adhere to the measures in its project-specific *Environmental Plan*. This includes installation of trench breakers to prevent groundwater movement or loss from nearby wetlands, restoration of topographic contours to preconstruction conditions, and restoration of vegetation to the right-of-way. Further, PAPL would use an HDD at 25 locations along the Texas Connector Project and 26 locations along the Louisiana Connector Project, including the shorelines of Sabine Lake. As previously discussed, use of the HDD method would avoid most direct impacts, including ground disturbance between the drill entry and exit points. However, a temporary, localized increase in groundwater turbidity could occur in the event of an inadvertent release of drilling fluid (also termed an "inadvertent return") into the groundwater. Drilling fluid is composed of water and bentonite clay (a naturally occurring mineral). The EPA does not list bentonite as a hazardous substance, and no long-term adverse environmental impacts are expected should an inadvertent return occur. Similarly, while native soils may mix with the drilling fluid because of the drilling process, no adverse environmental impacts from these materials are expected should an inadvertent return occur. Cumulatively, about 26.3 miles of ground disturbance impacts would be avoided. With implementation of these measures, we conclude that impacts on groundwater would be temporary and minor.

Impacts on shallow groundwater resources could occur due to an accidental spill, leak, or other release of fuels, lubricants, or other hazardous materials during construction or operation of the Texas Connector and Louisiana Connector Projects. Potential contamination due to accidental spills or leaks of hazardous materials associated with vehicle refueling, vehicle maintenance, and storage of construction materials would present the greatest potential threat to groundwater resources during construction of the pipeline and aboveground facilities. PAPL would adhere to its project-specific *Environmental Plan*, which includes spill prevention and containment measures to minimize potential impacts on groundwater resources. We have reviewed the *Environmental Plan*'s spill prevention and containment measures for the Texas Connector and Louisiana Connector Projects and find them acceptable.

While there are no known groundwater withdrawal or drinking wells within 150 feet of the Texas Connector Project, 16 groundwater withdrawal wells or drinking water wells are known to be within 150 feet of the Louisiana Connector Project (see section 4.3.1.3). Prior to construction, PAPL would offer to the land/well owner(s) pre- and post-construction water quality well testing conducted by a qualified independent inspection service. Should construction of the projects temporarily impact a private or public well quality, PAPL would provide alternative water sources or other compensation to the land/well owner(s). Should construction impacts permanently impact a well, PAPL would repair, replace, or provide alternative sources of potable water to the land/well owner(s).

PAPL does not plan to use groundwater as a water supply during construction or operation of the pipeline. Water for hydrostatic testing would be obtained from the City of Port Arthur, the Lower Neches Valley Authority (LNVA), and/or surface water sources. Since groundwater withdrawals are not anticipated, potential resultant changes in flow patterns and/or lowering of the local groundwater table as a result of such withdrawals would not occur.

With implementation of the measures discussed above, the activities associated with the construction and operation of the Texas Connector and Louisiana Connector Projects would result in negligible to minor and temporary impacts on local groundwater resources.

4.3.1.6 Nonjurisdictional Facilities

Activities associated with the relation of SH 87, pipelines, and utilities are on the same site as the Liquefaction Project. Construction of SH 87 could increase the amount of impervious surfaces present, which could potentially affect groundwater resources by reducing infiltration and groundwater recharge. The description of the groundwater resources provided in section 4.3.1.1 and impacts discussed and mitigation measures committed to in section 4.3.1.3 are applicable to these facilities. Therefore, activities associated with the relocation of nonjurisdictional facilities would result in negligible to minor and temporary impacts on local groundwater resources.

4.3.2 Surface Water Resources

4.3.2.1 Existing Surface Water Resources

Liquefaction Project

The Liquefaction Project would be within the Sabine Lake Watershed about 11 miles north of the Gulf of Mexico on the SNWW's western shore. The Sabine Lake watershed covers an area of 1,040 square miles in southwest Texas and southeast Louisiana. Waterbodies that would be affected by the project include the Port Arthur Canal, and the Round Lake/Oilfield Road Canal. The ICWW and Port Arthur Canal would also be temporarily impacted by placement of the dredge disposal pipelines. Round Lake is surrounded by both the jurisdictional and nonjurisdictional portions of the project on the northern end of the facility, but would not be directly impacted by project activities.

The Port Arthur Canal is part of the SNWW, which is an estuarine, perennial waterbody used as a navigation channel that extends about 79 miles inland to provide access to ports at Port Arthur, Beaumont, and Orange (USACE, 2012). The SNWW is the fourth most widely used shipping channel in the United States in terms of total tonnage (USACE, 2012). The Port Arthur Canal is about 0.2 mile wide at the project site. The channel is regulated and maintained by the USACE as a Traditional Navigable Water and is considered EFH (discussed further in section 4.6.3). The Port Arthur Canal has been substantially altered by widening and dredging for navigational channel use. Dredging of the channel to about 48 feet was authorized and implemented in 2014 (SNND, 2017a). Railroad activities, pipeline installations, and discharge of fill material have also altered this waterway.

As described in section 2.1.1.1, the Liquefaction Project requires installation of a MOF, Pioneer Dock, and marine berth and turning basin in the Port Arthur Canal. This would require initial dredging of about 67,600 yd^3 for the MOF, about 508,000 yd^3 for the Pioneer Dock, about 5.3 million yd^3 for the ship slip and berthing area, and about 1.4 million yd^3 for the ship turning basin. During project operations, regular maintenance dredging is anticipated to total 287,000 yd^3 of material at the berth, turning circle, and MOF on a yearly basis. According to PALNG, the Pioneer Dock would not require maintenance dredging during operations. PALNG would use dredged material as part of its wetland mitigation plan, which is further discussed in section 4.4. Section 4.3.2.2 discusses potential dredging impacts on the Port Arthur Canal's water quality.

As described in section 2.4.1.1, PALNG would construct a heavy haul road adjacent to Round Lake to the north and west to provide a route from the MOF to the other liquefaction facilities, with an equipment

bridge crossing the Round Lake/Oilfield Road Canal. A discussion of potential impacts from the installation of equipment bridges is provided in section 4.3.2.2.

The SNWW is used for commercial and recreational fishing; however, the waterbody is not considered high quality fish habitat by the state of Texas. Potential project-related impacts on recreational and commercial fishing are discussed in more detail in sections 4.8.6 and 4.9.2, respectively.

Wetland and waterbody impacts in Texas and Louisiana are regulated by the USACE under section 404 of the CWA, which establishes standards with which to regulate wetland and waterbody impacts, with the goal of no net loss of WOUS, and section 10 of the RHA (33 USC 403). Section 404(b)1 guidelines require that wetland and waterbody impacts be avoided to the extent practicable, and minimized where avoidance is not possible. The USACE Galveston District office has the authority to review and issue permits for projects that involve discharge of dredge or fill material into WOUS and work within or crossing any waters regulated under section 10 of the RHA, which includes the Port Arthur Canal.

As described in section 2.1.1.10, dredge material would be beneficially reused at the J.D. Murphree WMA and disposed of at existing Dredge Disposal Areas 8, 9A, and 9B. Dredge material would be transported to these sites via an above ground, temporary, 30-inch-diameter pipeline laid on the ground surface or, where necessary, floated in water. Figure 2.1.1-3 shows the locations of the dredge disposal areas and associated dredge pipelines, which would cross the Round Lake Canal (to reach the J.D. Murphree WMA) and ICWW and Port Arthur Canal (to reach Dredge Disposal Areas 8, 9A, and 9B).

Impaired Waters

Section 303 of the CWA, requires states, territories, and authorized tribes to develop water quality standards and prepare a list of waterbodies within their boundaries that do not meet these standards, which are referred to as "impaired waterbodies." These lists are known as 303(d) Impaired Waters lists. Contaminants can accumulate in the sediments of contaminated waterbodies. Therefore, waters in the Liquefaction Project area where there are contaminated sediments have the potential to become contaminated if there is a resuspension of sediments. Because of the current and historical industrial use of the Port Arthur Canal the potential exists for chemical contamination. The Port Arthur Canal is not listed as an impaired water in the Texas 2014 303(d) impaired waters list.

Based on comments from the EPA and requirements from the TPWD, and as described in section 4.2.1.6, a soil and sediment analysis would be conducted according to the EPA recommendations for dredge materials relocated to the J.D. Murphree WMA.

Sensitive Waterbodies

Waterbodies may be considered sensitive for several reasons, including the presence of significant fisheries, habitat for threatened or endangered species, high-quality recreational or visual resources, historic value, or impaired water or contaminated sediments. The closest TPWD-listed "ecologically significant" waterbody, Keith Lake, is about 1.5 miles from the Liquefaction Project (TPWD, 2016). Therefore, no impacts on sensitive waterbodies as a result of the project are anticipated.

Potable Water Intakes

No sole-source drinking water supply surface waters would be affected by the Liquefaction Project and no potable water intakes are within 3 miles downstream of the Liquefaction Project (TCEQ, 2015). Therefore, no impacts on potable water intakes as a result of the project are anticipated.

Texas Connector and Louisiana Connector Projects

Texas Connector Project

The Texas Connector Project would cross five watersheds (see table 4.3.2-1).

TABLE 4.3.2-1

Watersheds Crossed by the Texas Connector Project

Watershed	Location of Watershed Within Project Area (County/Parish and State)	Project Component(s) Within the Watershed	Project Crossing (miles)
LNVA Canal – Taylor Bayou	Jefferson County, Texas	Northern Pipeline	2.0
Salt Bayou	Jefferson County, Texas	NGPL Lateral Northern Pipeline Southern Pipeline	14.7
Union Canal – Neches River	Jefferson County, Texas	Northern Pipeline GTS/CIPCO Lateral TETCO Lateral HPL Lateral FGT Lateral	2.5
Gray's Bayou – Neches River	Jefferson County, Texas	Northern Pipeline FGT Lateral	0.9
Johnson Bayou – Starks South Canal	Orange County, Texas Cameron Parish, Louisiana	Southern Pipeline KMLP Lateral	0.8

Project construction would affect 55 waterbodies, including 37 perennial, 6 intermittent, and 12 ephemeral waterbodies (see table 4.3.2-2). Appendix I lists of the waterbodies crossed along the pipelines, laterals, and access roads; milepost locations; state waterbody classifications; flow type; and proposed crossing method. The FERC classifies surface waters based on size: major waterbodies are greater than 100 feet wide, intermediate waterbodies are greater than 10 feet wide but less than or equal to 100 feet wide, and minor waterbodies are less than or equal to 10 feet wide. Fifteen major waterbodies, including the Neches River, Sabine Pass, the ICWW, Taylor Bayou, and Hillebrandt Bayou as well as 11 unnamed waterbodies, would be crossed by the Texas Connector Project pipelines. The remaining waterbodies crossed by the project are classified as intermediate or minor.

TABLE 4.3.2-2

Summary of Surface Waters Affected by the Texas Connector Project

Project Component [a]	Perennial	Intermittent	Ephemeral	Total
Northern Pipeline	27	5	10	42
Southern Pipeline	6	-	-	6
GTS/CIPCO Lateral	3	-	-	3
FGT Lateral	1	1	2	4
Project Total	**37**	**6**	**12**	**55**

[a] Waterbodies would not be affected by the KMLP, NGPL, HPL, and TETCO Laterals, or by aboveground facilities.

Waterbodies would be crossed along the Northern Pipeline, Southern Pipeline, GTS/CIPCO Lateral, and FGT Lateral. No waterbody crossings or impacts are associated with the KMLP, NGPL, HPL, and TETCO Laterals, or within proposed aboveground facilities.

Impaired Waters

In Texas, Taylor Bayou and Hillebrandt Bayou are listed on the Texas 2014 303(d) impaired waters list where crossed by the project. Taylor Bayou is listed as impaired due to presence of dioxin and polychlorinated biphenyls (PCBs), both of which are believed to be caused by point source discharge from an industrial operation. Hillebrandt Bayou is listed as impaired due to bacteria, the cause for which is not listed (EPA, 2014).

In Louisiana, the waterbodies crossed by the Texas Connector Project are not listed on Louisiana's 2016 303(d) list of impaired waters. Therefore, contaminated sediments are not expected to be encountered in waterbodies along the Southern Pipeline route in Louisiana, and the project would not have significant effects on contaminated sediments.

Sensitive Waterbodies

None of the waterbodies crossed by the Texas Connector Project are listed as National Wild and Scenic Rivers, are listed as important riparian areas, or contain federally listed species. Ecologically unique river and stream segments (Texas only) are discussed in section 4.6.2. Waterbodies designated as EFH are further discussed in section 4.6.3.

Potable Water Intakes

There are no public water supply wells or surface water intakes within 150 feet of the proposed construction rights-of-way (TCEQ, 2015; LDNR, 2012). The Texas Connector Project does not cross any designated sole-source drinking water supply stream segments and is not within 3 miles of any identified stream segments in Texas (TCEQ, 2015). Also, the project is not within 3 miles of any surface water intakes in Louisiana (LDEQ, 2001).

For the Texas Connector Project, the USACE Galveston District office has the authority to review and issue permits for projects that involve discharge of dredge or fill material into WOUS, including wetlands, and work within or crossing any waters regulated under section 10 of the RHA. Sabine Pass, the ICWW, and the Neches River are waterbodies crossed by the project and regulated under section 10 of the RHA.

Louisiana Connector Project

The Louisiana Connector Project would cross seven watersheds as listed in table 4.3.2-3.

TABLE 4.3.2-3

Watersheds Crossed by the Louisiana Connector Project

Watershed	Location of Watershed Within Project Area (County/Parish and State)	Project Component(s) Within the Watershed	Project Crossing (miles)
Lower Sabine	Calcasieu, LA Cameron, LA	Mainline	13.1
Sabine Lake	Orange, TX Jefferson, TX Cameron, LA	Mainline Centana Meter Station PALNG Meter Station	17.5
Lower Calcasieu	Calcasieu, LA	Mainline	26.0
West Fork Calcasieu	Calcasieu, LA	Mainline	15.6

TABLE 4.3.2-3 (cont'd)

Watersheds Crossed by the Louisiana Connector Project

Watershed	Location of Watershed Within Project Area (County/Parish and State)	Project Component(s) Within the Watershed	Project Crossing (miles)
Upper Calcasieu	Allen, LA Beauregard, LA	Mainline Compressor Station TETCO Meter Station TGP Meter Station	26.0
Whiskey Chitto	Allen, LA	Mainline	1.5
Mermentau Headwaters	Allen, LA Evangeline, LA St. Landry LA	Mainline ANR Meter Station Egan Meter Station Texas Gas Meter Station Pine Prairie Meter Station CGT Meter Station	30.8

Project construction would affect a total of 167 waterbodies, including 60 perennial, 36 intermittent, 57 ephemeral, and 14 open water waterbodies (see appendix I). Thirty-six major waterbodies (e.g., Sabine Lake, Sabine-Neches Canal, Bayou Choupique, Whiskey Chitto Creek, Calcasieu River, Bayou Blue) would be crossed by the Louisiana Connector Project. The remaining waterbodies crossed by the project are classified as intermediate or minor.

No waterbody crossings or impacts are proposed within aboveground facilities. Temporary construction matting would be used to cross waterbodies along access roads. Appendix I lists the waterbodies crossed along the pipeline, laterals and tie-ins, and access roads; milepost locations; state waterbody classifications; flow type; and proposed crossing method.

For the Louisiana Connector Project, the USACE Galveston and New Orleans District offices have the authority to review and issue permits for projects that involve discharge of dredge or fill material into WOUS and work within or crossing any waters regulated under section 10 of the RHA. The Calcasieu River, Sabine Lake, Sabine-Neches Canal, Bayou Choupique, Bayou Nezpique, the Houston River, Little River, Hickory Branch, Beckwith Creek, and Marsh Bayou have the potential to be regulated under section 10 of the RHA. The USACE would determine the final list of waters regulated under section 10 of the RHA as part of its permitting process.

Impaired Waters

The Louisiana Connector Project would cross 14 waterbodies listed on the EPA's 303(d) list of impaired waters as shown in table 4.3.2-4.

TABLE 4.3.2-4

Impaired Waterbodies Crossed by the Louisiana Connector Project

State/County or Parish	Waterbody Name	Milepost (s)	Reason for Impairment [a]
TEXAS			
Jefferson	Sabine-Neches Canal	0.2	Bacteria
Jefferson and Orange	Sabine Lake in Texas	0.7, 1.0, 3.7, 13.2	PCBs in edible tissue
LOUISIANA			
Evangeline	Bayou Des Cannes	119.1	Mercury in Fish Tissue, Nitrate/Nitrite, Dissolved Oxygen, Phosphorus (Total), Total Dissolved Solids, and Turbidity

TABLE 4.3.2-4 (cont'd)

Impaired Waterbodies Crossed by the Louisiana Connector Project

State/County or Parish	Waterbody Name	Milepost (s)	Reason for Impairment [a]
Allen and Evangeline	Bayou Nezpique	110.0	Lead, Mercury in Fish Tissue, Nitrate/Nitrite, Dissolved Oxygen, Phosphorus (Total), Turbidity, Fecal Coliform
Allen	Bayou Blue	100.9, 104.4, 104.7, 108.7	Lead, Dissolved Oxygen, and Fecal Coliform
Allen	Calcasieu River	94.6	Mercury in Fish Tissue
Allen	Barnes Creek	79.1	Dissolved Oxygen
Beauregard	Marsh Bayou	73.2	Dissolved Oxygen
Beauregard	Indian Bayou	69.8	Fecal Coliform and Dissolved Oxygen
Calcasieu	Hickory Branch	65.3	Mercury in Fish Tissue and Dissolved Oxygen
Calcasieu	Beckwith Creek	64.1	Fecal Coliform, Dissolved Oxygen, Total Dissolved Solids, and Mercury in Fish Tissue
Calcasieu	Little River	60.6	Fecal Coliform, Lead, Dissolved Oxygen, and Mercury in Fish Tissue
Calcasieu	Houston River	56.9	Chloride, Mercury in Fish Tissue, Dissolved Oxygen, Sulphates and Total Dissolved Solids
Cameron	Sabine Lake in Louisiana	13.2, 16.8	Fecal Coliform

[a] Sources: LDEQ, 2016 Louisiana Water Quality Inventory: Integrated Report (305[b]/303[d]) and TPWD, 2014 Texas Integrated Report Index of Water Quality Impairments (305[b]/303[d]).

Sensitive Waterbodies

The State of Louisiana created the Louisiana Natural and Scenic Rivers System (System Rivers) in 1970 with the purpose of preserving, protecting, developing, reclaiming, and enhancing designated free-flowing Louisiana waterbodies. These waterbodies are designated due to their unique scenic and wilderness qualities, as well as their ecological benefits. Under the Louisiana Scenic Rivers Act of 1988, the LDWF requires a Scenic River Permit for all activities on or near System Rivers that may negatively impact the waterbodies. Four waterbodies crossed by the pipeline route are designated as System Rivers: Beckwith Creek, Hickory Branch, Barnes Creek, and Whiskey Chitto Creek (LDWF, 2017a).

None of the waterbodies crossed by the Louisiana Connector Project are listed as National Wild and Scenic Rivers, or are listed as important riparian areas. There are no public water supply intakes within 150 feet of the construction right-of-way. Ecologically unique river and stream segments (Texas only) are discussed in section 4.6.2. Potential impacts on protected species associated with sensitive waterbodies are discussed further in section 4.6.

Potable Water Intakes

The TCEQ identifies protection zones for areas surrounding sole-source surface drinking water supplies, including 3 miles upstream from the water supply intake. The project does not cross any designated sole-source drinking water supply stream segments and is not within 3 miles of any identified stream segments in Texas (TCEQ, 2015). In Louisiana, one surface water intake for a public water supply is approximately 1.2 miles east of the Sabine River Diversion Canal crossing (Louisiana Geographic Information Center, 1999).

Nonjurisdictional Facilities

The existing environment for the relocation of 3.3 miles of SH 87, pipelines, and utilities is consistent with the description provided for the Liquefaction Project. We received comments on the draft EIS stating that SH 87 often floods from tidal action and storm surge, leaving the community of Sabine Pass inaccessible. CommentorsCommenters indicated that relocating SH 87 farther inland, as proposed by PALNG, would alleviate these issues. The new road right-of-way would cross the Round Lake Canal, which is a dual channel canal connecting Round Lake to Lost Lake, and is not connected to the Port Arthur Canal.

4.3.2.2 Surface Water Impacts and Mitigation

Direct impacts on surface water resources are defined as those project-related impacts that occur to waterbodies in the construction workspace that are temporarily or permanently disturbed and for which the acreage of impacts is quantifiable. Direct impacts may include increased sedimentation and turbidity associated with construction activities and alterations to the depth of the waterbody (e.g., filling or dredging). Indirect impacts on surface water resources would occur outside of the construction workspace and may include potential changes in flow regime or water quality, temperature profiles, and sedimentation.

Liquefaction Project

Dredging and Dredge Material Placement

The primary impacts associated with the Liquefaction Project within the Port Arthur Canal would result from dredging associated with construction of the marine berths, MOF, and Pioneer Dock, which is described above.

Dredging for construction and maintenance dredging during operation are anticipated to result in temporarily increased turbidity levels, decreased dissolved oxygen levels, and resuspension of nutrients or chemicals into the Port Arthur Canal water column. Increased turbidity levels have the potential to negatively impact aquatic plants and phytoplankton in the immediate area of dredging activities, while decreased dissolved oxygen concentrations may negatively impact benthic organisms.

Sedimentation and turbidity associated with marine berth, MOF, and Pioneer Dock construction would be minimized by using dry excavation methods to the extent practicable. Where hydraulic dredging is required, pumps used to convey material from the hydraulic cutter heads would capture most of the siltation for transport to the dredge material disposal area, thus minimizing increased turbidity. The ambient turbidity levels in the Port Arthur Canal are high due to regular activities such as ship traffic, flows, and waves, thereby reducing the relative impact of the increased turbidity produced by project-related dredging. Based on an analysis of turbidity near the Liquefaction Project conducted in 2005, and considering the flow velocity and average depth of the Port Arthur Canal at the project site, total suspended solids (TSS) resulting from construction and maintenance dredging would drop to less than 10 mg/l after 200 to 300 yards (PI Engineering, 2005). Considering the average background TSS of the Port Arthur Canal is about 40 mg/l, it is anticipated that construction and maintenance dredging associated with the PALNG facilities would have an incremental, but minor effect on the existing TSS levels within the Port Arthur Canal. Turbidity impacts related to dredging are expected to be short term and to have minimal adverse effects on water quality and aquatic life due to existing activities in Port Arthur Canal, which already contribute to high levels of background turbidity.

PALNG would comply with all conditions of permits required to construct the marine facilities and perform maintenance dredging, including USACE section 10 and section 401 permits, and a Coastal Zone

Consistency Determination. Dredged material would be placed within the J.D. Murphree WMA if authorized by the USACE, as well as SNND Dredge Disposal Areas 8, 9A, and 9B, which are currently authorized to receive dredge material by the USACE (see section 4.4.2.1). Dredge material would be transported to the WMA and SNND Dredge Disposal areas 8, 9A, and 9B using an above ground 30-inch-diameter pipeline that would be temporarily placed across the surface of the lands and canals between the liquefaction site and the WMA. PALNG stated it would use board mats as necessary to accommodate the dredge pipelines to minimize surface impacts along the Northern Pipeline right-of-way. PALNG also stated that it is likely the dredge pipeline would be placed and managed similar to what is currently done by the USACE and SNND when maintenance dredging is performed within the ICWW and Port Arthur Canal, which may consist of installing a floating pipe that can be disconnected and moved out of a vessel's path, placed under the ICWW channel, or placed along the bottom of the channel. PALNG has committed to ensure that navigational traffic in waterways would not be interrupted and would complete a final design of this temporary pipeline at the ICWW and Port Arthur Canal crossing locations prior to construction.

LNG Loading and Ship Berthing Facilities

Construction of the LNG loading and ship berthing facilities would also require over-water and land-based equipment installation (e.g., LNG loading platform, breasting dolphins, personal access bridges). A combination of conventional in-water marine construction equipment (e.g., barges, cranes, pile driving equipment) and shore-based construction equipment (e.g., backhoes, bulldozers) would be used to install the necessary structures.

Impacts on water quality resulting from construction of the LNG loading and ship berthing facilities, which would involve dredging, resulting in temporary increases in suspended sediment and turbidity levels. The USACE conducts period maintenance dredging of the Port Arthur Canal in the vicinity of the proposed liquefaction site. This routine dredging, combined with existing vessel traffic associated with operation of existing facilities, causes sustained high and variable turbidity levels within the Port Arthur Canal. The project-related dredging impacts would vary depending on the methods and equipment used. For example, hydraulic cutter-suction pipeline dredging may cause localized increases in suspended sediment near the site of dredging; however, the nature of suction dredging incorporates the suspended sediments into the surrounding waters then the mixture is pumped to the placement location. Mechanical dredging may also cause localized increases in suspended sediments; however, based on similar projects, it is anticipated that the sediments would remain largely as clumps within the clamshell bucket. Sediments that are suspended in the water column during dredging operations are expected to settle out within hours or days. The amount of time depends on factors such as the grain size of the sediments, with finer sediments taking longer to be redeposited, especially if there are other outside influences causing continued water movement (e.g., currents, ship traffic).

PALNG is required to obtain several permits that would address dredging and dredged material management, including permits under section 404 of the CWA and sections 10 and 14 of the RHA from the USACE, a permit for water discharges under section 401 of the CWA, and a Coastal Use Permit.

While the creation of additional surface water area would be a permanent impact, increases in suspected sediments and turbidity associated with dredging for the LNG loading and ship berthing area would be temporary (i.e., confined primarily to the period of in-water activity and shortly thereafter) and limited to the area within and immediately adjacent to the LNG loading and ship berthing facilities. As such, no significant or adverse water quality impacts are anticipated from LNG loading and ship berthing facilities.

Vessel Traffic

Shoreline Erosion and Resuspension of Sediments

Throughout construction of the project, barges and support vessels would deliver large equipment and materials to the MOF and Pioneer Dock. The Port Arthur Canal was specifically created to provide deepwater access for maritime commerce and is maintained by regular dredging (SNND, 2017b). As such, use of the channel by barges and support vessels to deliver materials during construction of the liquefaction facility would be consistent with the planned purpose and use of this active shipping channel, and associated impacts on water quality within the channel would be minor. PALNG anticipates that construction barge traffic would peak at about 175 barges per month in the early stages of construction. Increased barge traffic also has the potential to negatively impact shoreline erosion and cause resuspension of bottom sediments, resulting in temporary increases in turbidity within the Port Arthur Canal. As described in section 4.2.2.1, PALNG developed a Shoreline Protection Report to address potential shoreline erosion under these circumstances. LNG vessels would be assisted by tugs during vessel berthing and departure maneuvers and would minimize their own stern propeller and bow thruster use, such as in emergency maneuvering situations. Also, PALNG would protect the shoreline within the project area through the installation of riprap or other erosion prevention measures, which has been successfully implemented for other facilities along the Port Arthur Canal. Given the fact that the Port Arthur Canal was created to accommodate vessel traffic and PALNG's mitigation measures described above, impacts on waterbody shorelines due to construction and operation of the Liquefaction Project would be permanent, but minor.

Ballast Water Discharge

During operation of the Liquefaction Project, up to 180 LNG vessels would call on the liquefaction facility per year, each of which could discharge between 12 to 18 million gallons of ballast water (depending on LNG vessel size) into the Port Arthur Canal during loading. As required by USCG regulations (33 CFR 151.2025), vessels equipped with ballast tanks must maintain a vessel-specific ballast water management plan and assign responsibility to the master or appropriate official to understand and execute the ballast water management strategy for that vessel. Under these requirements, vessels must implement strategies to prevent the spread of exotic aquatic nuisance species in U.S. waters. These strategies include retaining ballast water on board, minimizing uptake or discharge at certain times or locations, and exchanging ballast water from coastal sources with mid-ocean seawater. Vessels that have operated outside of the U.S. Exclusive Economic Zone (EEZ) must retain their ballast water on board or undergo a mid-ocean (greater than 200 nm from shore and at a water depth greater than 6,562 feet) ballast water exchange in accordance with applicable regulations. LNG vessels would discharge all ballast water under federal oversight and in accordance with federal regulations. The International Maritime Organization (IMO) has adopted this regulation, which requires each vessel to install and operate a ballast water management system. Therefore, ballast water discharged into the Port Arthur Canal would be composed of open ocean water, and potential impacts on water quality may include changes in temperature, pH, dissolved oxygen, and salinity levels.

The volume of water required for ballast varies depending on the size and type of vessel. Depending on hydrologic conditions at the time of discharge, the composition of ballast water may be very similar to or different from the ambient water within the Port Arthur Canal. The primary potential impact on water quality associated with ballast water discharge would be a temporary increase in salinity level. Because the Port Arthur Canal is about 11 miles north of the Gulf of Mexico, these differences may not be measurable under normal tidal cycles. Furthermore, the amount of ballast water discharged into the Port Arthur Canal during each LNG vessel visit to the liquefaction facility would represent 0.03 percent of the water within a 500-meter stretch of the Port Arthur Canal, which would present a minor influence on the overall system.

Another water quality parameter that may be influenced by ballast water discharge is dissolved oxygen levels. Ballast water would be discharged near the bottom of the marine berth and may contain lower levels of dissolved oxygen than the surrounding water. This could impact aquatic life, but based on the volume of ballast water compared to the 500-meter stretch of the Port Arthur Canal, these lower levels would be expected to come relatively quickly into equilibrium with surrounding dissolved oxygen levels, resulting in a temporary, minor impact.

Ballast water discharge has the potential to introduce aquatic invasive species. PALNG would not be operating the LNG vessels, but anticipates that the vessels would comply with all international and national requirements for ballast water management to avoid these potential issues such as Ballast Water Management for Control of Nonindigenous Species in WOUS CFR Title 33, Chapter I, Subchapter O, Part 151, Subpart D. This requires that ballast water be obtained from a public water system that meets the requirements under 40 CFR 141 and 143 as ballast water, that a record be kept of which public water system the water was obtained from, and that complete ballast water exchange must take place 200 nautical miles from any shore. If ballast water must be discharged into WOUS, a Ballast Water Management System must be developed and approved by the USGS.

Impacts on water resources resulting from ballast water would be temporary and minor, only affecting a relatively small area. Further, to ensure compliance with U.S. laws and regulations governing ballast water discharges, PALNG would ensure that any visiting vessels possess documentation to demonstrate compliance with ballast water regulations and BMPs prior to allowing any ballast water to be discharged into the marine berthing area. Therefore, significant impacts on surface waters would not result from ballast water discharge.

Cooling Water Discharge

During operation, LNG vessels and barges require water for cooling of the main engine/condenser, diesel generators, and equipment associated with fire and hotel services (Hunt, 2003). The volume of water required for cooling varies depending on what mode of operation the vessel is in (i.e., transit, maneuvering, in-port). While at the liquefaction facility (in-port mode), LNG vessels would need cooling water for the auxiliary diesel engines that are used to generate electrical power for onboard systems while loading.

Water required for engine cooling would vary greatly based on the type of vessel calling on the liquefaction facility. Cooling water needs may range from 530,000 to 660,000 gallons per hour depending upon type and size of the LNG vessel (CH2M Hill, 2013). Steam-powered LNG vessels that have a capacity of 138,000 m^3 would have the highest cooling water requirements, while LNG vessels with dual fuel/diesel electric engines (maximum LNG capacity of 218,000 m^3) would require a smaller volume of cooling water. LNG vessels with a maximum LNG capacity of 15,000 m^3 would require the least cooling water due to their smaller size, increased maneuverability, and reduced time spent at the liquefaction facility. At the high end of this range, a complete discharge of cooling water would represent less than 0.01 percent of the water in the Port Arthur Canal in the project area.

Impacts on surface waters from cooling water intake and discharge would be primarily limited to an increase in water temperature near the LNG vessel. Cooling water return temperatures vary widely depending on the type of LNG vessel and mode of operation. Based on a review of available information, we anticipate that cooling water discharged at the liquefaction facility could range between 2.7 ˚F and 7.2 °F warmer than ambient water temperatures (Caterpillar, 2012). Section 4.6.2 describes further impacts on aquatic resources from temperature changes.

Due to the limited temperature differences, and relatively small volume of discharge compared to the total water within the Port Arthur Canal, we anticipate that the increased water temperature levels would diminish shortly after discharge and, therefore, would have temporary and minor impacts on water quality.

While in transit through the Gulf of Mexico, the temperature of water used for engine cooling could increase by as much as 9.5 ˚F. Due to the volume of water within the Gulf of Mexico and the use of established shipping lanes where frequent vessel traffic would increase the speed at which the warmer water would be diluted to ambient temperatures, increased water temperatures would have a negligible impact on water quality within the Gulf of Mexico.

Site Modification and Stormwater Runoff

Ground disturbance during construction of the liquefaction facilities would increase stormwater discharges, resulting in a temporary increase in suspended sediment levels. As described in section 4.3.1.1, there are no known contaminated soils within the liquefaction site, including the portion of the site within the Port Arthur Canal. Therefore, increased stormwater runoff is not expected to contribute significant amounts of contaminated sediments to the Port Arthur Canal.

Construction of the liquefaction facility would permanently reduce the amount of existing pervious surfaces, thereby increasing the potential frequency and volume of stormwater runoff into the Port Arthur Canal. Stormwater runoff may pick up debris, chemicals, dirt, and other pollutants before entering directly into a waterbody (EPA, 2013). Construction of the marine berth, Pioneer Dock, and MOF also would require dredging of about 7.7 million yd^3 from the Port Arthur Canal, which may cause temporary increases in erosion and sedimentation in the immediate vicinity of construction.

In accordance with section 402(l)(2) of the CWA, the NPDES Construction Stormwater General Permit does not apply to the project because it is considered an oil and gas production facility, and as such, non-contact stormwater runoff from these facilities are exempted. However, during construction, impacts on downgradient surface water resources would be minimized through the implementation of PALNG's *Stormwater Pollution Prevention Plan* (SWPPP). This includes installation and maintenance of erosion and sedimentation control structures to reduce impacts on the Port Arthur Canal and nearby surface waters. Following construction, the shoreline would be stabilized with an armored shoreline protection system to prevent post-construction erosion.

With implementation of these measures and the design of the project, erosion and stormwater runoff from construction and operation would be minimized, and impacts on the Port Arthur Canal would not be adverse or significant.

Waterbody Crossings

A heavy haul road would be constructed around Round Lake Canal as described in section 2.1.1. As with the other project facilities, construction would be conducted in accordance with PALNG's *Environmental Plan* (which includes the Commission's Plan and Procedures), including the installation and maintenance of erosion and sedimentation control structures, and all Texas permitting requirements. As such, impacts on Round Lake Canal resulting from use of the heavy haul road would not be adverse or significant.

Hydrostatic Testing

PALNG would hydrostatically test the piping and storage tanks to verify the integrity of these facilities prior to placing them in service. Water also would be used to flush pipes to remove any solids that may be present inside of them. Water used for hydrostatic testing as well as pipe flushing would be

obtained the LNVA or the City of Port Arthur municipal water source. If water is obtained via surface water appropriation from the LNVA, water intake hoses with mesh strainers would be used to avoid impacts on aquatic organisms. The mesh would have 0.25-inch spacing, and the speed of intake would be kept low enough to minimize the entrapment of aquatic organisms. No additives, such as a biocide or oxygen scavenger, would be used during hydrostatic testing or pipe flushing activities.

About 87 million gallons of test water would be required for hydrostatic testing of the LNG tanks. After completion of hydrostatic testing, PALNG would discharge the hydrostatic test water to the Port Arthur Canal in accordance with its Texas RRC discharge permit and PALNG's *Environmental Plan* to minimize impacts on surface water. Hydrostatic testing of the liquefaction facility piping and tanks would result in a temporary, localized, and minor impact on surface waters.

Firewater and LNG Storage Tank Deluge System

PALNG would construct firewater and deluge supply and distribution systems for extinguishing fires, cooling structures and equipment exposed to thermal radiation, and dispersing flammable vapors at the liquefaction facility. The primary source of water supply for the firewater and deluge systems would be from the same municipal source used for potable water at the liquefaction facility, and backup water pumps would be installed to withdraw water from the Port Arthur Canal.

The firewater and deluge systems would be used on an intermittent, as-needed basis during emergency situations. Potable water would be obtained via a municipal source. Any discharge would be similar to that of stormwater runoff. As discussed previously regarding stormwater runoff, PALNG would implement measures, including installation and maintenance of all necessary erosion and sedimentation control structures, to avoid impacts on the Port Arthur Canal and nearby surface waters as detailed in PALNG's *Environmental Plan*. With implementation of these measures and the design of the project, erosion and runoff from usage of the firewater and deluge systems would be minimized.

Inadvertent Releases

Water quality of the Port Arthur Canal, Round Lake Canal, Round Lake, and Oil Field Road Canal could be adversely affected by a spill, leak, or other release of hazardous materials during construction. Transport of released hazardous materials into these waterbodies by stormwater runoff may degrade water quality and could affect aquatic organisms. To minimize the potential for a release of hazardous materials and to avoid or minimize the impacts of a release if one were to occur, PALNG would adhere to the measures outlined in its *Environmental Plan*. Spill prevention measures that PALNG would implement include but are not limited to the following:

- Store fuels and lubricants only at designated staging areas and at least 100 feet away from the water's edge.
- Maintain a supply of sorbent and barrier materials sufficient to allow the rapid containment and recovery of any spill at the construction staging areas.
- Restrict refueling and lubrication of equipment to upland areas at least 100 feet away from stream channels and wetlands.

With the implementation of these measures, impacts on water quality in the event of a spill or leak are expected to be minor and temporary.

Miscellaneous Water Uses

Water may be necessary to aid in dust control and equipment or vehicle washing to control the spread of noxious weeds during construction. However, due to the average annual precipitation greater than 60 inches per year, dust suppression is not likely necessary (U.S. Climate Data, 2016). Also, equipment or vehicle washing to prevent the spread of noxious weeds has not been recommended or required by any agency. In the event water use for these purposes is required, PALNG has committed to obtaining any permits necessary to collect, use, and dispose of this water.

Through implementation of PALNG's *Environmental Plan* (which includes the Commission's Plan and Procedures), SPCC Plan, potential construction and operation impacts resulting from miscellaneous water use for dust control and/or vehicle washing would be temporary and minor.

Texas Connector and Louisiana Connector Projects

Construction and operation of the Texas Connector and Louisiana Connector Projects would be conducted using similar, industry-recognized methods and mitigation measures. As such, the following discussions apply to both pipeline projects. Differences in methods or mitigation measures are described separately as appropriate by project.

Pipeline Installation Methods

The open-cut method of construction involves clearing and grading of stream banks, in-water trenching, trench dewatering, and backfilling. These activities may increase sedimentation, turbidity, and water temperature; decrease dissolved oxygen levels; and re-suspend chemical or nutrient pollutants that may be contained in sediments. The primary impact on water quality due to in-stream trenching and backfilling would be sediment suspension. The extent of the impact would depend on sediment loads and stream velocity at the time of construction, as well as sediment particle size. These factors would determine the density, downstream extent, and persistence of the sediment plume.

Through the transport of sediment and movement of aquatic biota from upstream sources, these resources would be expected to return to preconstruction conditions soon after the completion of instream work, backfilling, and restoration, including the adjacent uplands. To minimize surface water impacts, PAPL would implement the construction and mitigation measures described in PAPL's *Environmental Plan*. Open-trench construction measures that PAPL would implement include but are not limited to the following:

- Limit the use of equipment operating in waterbodies to that needed to construct each crossing.
- Install and maintain sediment barriers around spoil piles to prevent the flow of spoil into the waterbody.
- Do not begin in-stream activity until the in-stream pipe section is complete and ready to be installed in the waterbody.

Adherence to these measures would minimize impacts associated with open trench waterbody crossings.

The HDD construction method (see section 2.4.3.1) involves the circulation of drilling mud to remove cuttings, stabilize the borehole, and cool and lubricate the drill bit. Drilling mud is composed

primarily of freshwater, bentonite clay, and a small amount of other additives. The use of the HDD method would eliminate or significantly reduce the potential for construction-related impacts on water quality because it avoids disturbance of stream beds and banks, and associated riparian vegetation. However, there is the potential during drilling for an inadvertent release of drilling mud through sand or gravel, or through fractured rock formations. Because drilling mud is composed of primarily freshwater and bentonite, a small release would likely dissipate, and impacts on water quality beyond a temporary increase in turbidity would not be anticipated. In larger quantities, the release of drilling mud could negatively affect fisheries and/or vegetation, although impacts would generally be less than those associated with an open-cut crossing. To minimize potential impacts on water quality in the event of an inadvertent release of drilling mud, PAPL would implement its *HDD Contingency Plan* (included within PAPL's *Environmental Plan*). Measures to prevent or control an inadvertent release of drilling mud include installing perimeter controls to contain any inadvertent release of drilling mud.

Texas Connector Project

The surface waters that would be impacted during construction and operation of the Texas Connector Project are summarized in table 4.3.2-2 and listed in appendix I. No surface water impacts related to aboveground facilities, ATWS, access roads, or construction yards are anticipated from pipeline construction and operation. Therefore, they are not discussed further in this section.

PAPL proposes to conduct 24 HDD operations as part of the Texas Connector Project. As some of the HDDs would encompass more than one waterbody, a total of 38 waterbodies would be crossed using the HDD or bore method. Of these, 29 crossings are associated with construction of the Northern Pipeline, 4 crossings are associated with construction of the Southern Pipeline, 2 crossings are associated with construction of the GTS/CIPCO Lateral, and 3 crossing is associated with construction of the FGT Lateral.

PAPL provided preliminary profile drawings showing the proposed HDD crossings (see appendix J). In accordance with the Commission's Procedures, PAPL would provide detailed plans for each HDD crossing for FERC review and approval prior to construction. The HDD crossing plans would consist of site-specific diagrams showing the location of mud pits, pipe assembly areas, and areas to be disturbed; and would identify any aboveground disturbances or clearing between the HDD entry and exit workspaces.

As previously discussed, the use of the HDD method would eliminate or significantly reduce the potential for construction-related impacts on water quality because the HDD crossings avoid disturbance of the stream beds, banks, and associated riparian vegetation. There is the potential during drilling for drilling mud to enter waterbodies that, when in larger quantities, could negatively affect fisheries and/or vegetation. Based on previous PAPL's experience in the project area and the existing geologic and soil conditions, the proposed HDD crossings are anticipated to be successful. In accordance with the Commission's Procedures, PAPL is required to provide a contingency plan for each crossing in the event the HDD is unsuccessful and how the abandoned drill hotel would be sealed, if necessary. PAPL prepared a preliminary *HDD Contingency Plan* that describes measures PAPL would implement in the event the HDD is unsuccessful. PAPL stated that it would finalize the *HDD Contingency Plan* with the selected contractor, and the final plan would be incorporated into construction compliance documents.

Tidal movement has the potential to impact construction by causing flooding of the right-of-way and increasing the possibility for increased erosion and turbidity. PAPL identified portions of the construction right-of-way with the highest potential to be impacted by tidal movement as between MPs 0.0

and 12.0 on the Northern Pipeline, and between MPs 1.0 and 7.6 on the Southern Pipeline. PAPL would monitor these areas during construction and, as necessary, implement the following mitigation measures:

- Temporarily build up the right-of way with sand.
- Use amphibious excavators.
- Install soil and sediment containment measures.

Louisiana Connector Project

The surface waters that would be impacted during construction and operation of the Louisiana Connector Project are summarized in table 4.3.2-9 and listed in appendix I. Potential impacts on these surface waters during construction and operation of the project are described in the following sections. No surface water impacts from ATWS, access roads, or construction yards are anticipated during pipeline construction and operation. Therefore, they are not discussed further in this section.

PAPL would use the open-cut method at 91 waterbody crossings, the HDD method at 46 crossings, the bore method at 7 crossings, the barge lay method at 3 crossings, and the push-pull method at 23 crossings along the Louisiana Connector Project.

Similar to the Texas Connector Project, PAPL provided preliminary profile drawings showing the proposed HDD crossings (see appendix J). In accordance with the Commission's Procedures, PAPL would provide detailed plans for each HDD crossing prior to construction, which would be reviewed and approved by FERC. The HDD crossing plans would consist of site-specific diagrams showing the location of mud pits, pipe assembly areas, and areas to be disturbed, and identification of aboveground disturbances or clearing between the HDD entry and exit workspaces. In addition, and as discussed in section 4.1.7.2, PAPL provided supporting information for 22 of the crossings that demonstrated, based on previous experience in the project area and the existing geologic and soil conditions, the proposed HDD crossings are anticipated to be successful. In accordance with the Commission's Procedures, PAPL is required to provide a contingency plan for each crossing in the event the HDD is unsuccessful and how the abandoned drill hotel would be sealed, if necessary. PAPL prepared a preliminary *HDD Contingency Plan* that describes measures PAPL would implement in the event of the HDD is unsuccessful. PAPL stated that it would finalize the *HDD Contingency Plan* with the selected contractor, and the final plan would be incorporated into construction compliance documents.

One waterbody is listed as being near the proposed compressor station. PAPL proposes to avoid impacts on this waterbody through station siting, and best management practices such as silt fencing or an equivalent measure.

PAPL would cross the Sabine River Diversion Canal, which is identified as a surface water intake used for public water supplies, using the HDD method. Therefore, impacts on this surface water intake are not anticipated.

Sabine Lake Crossing

Approximately 18 miles of the Louisiana Connector Project would be installed in Sabine Lake using a combination of the HDD method and open-cut construction from lay barges. An HDD would be used to install the pipeline at the shoreline approaches of Sabine Lake between MPs 0.0 and 1.0, and MPs 17.5 and 18.2. Open-cut construction across the lake bottom would connect the two HDD exit points.

PAPL has stated that its current plan is to conduct both HDD entry and exit into Sabine Lake with the HDD entry point on land and the exit point in the lake. Depending on if a closed pumping and return system is used, drilling mud could be more difficult to control if not contained within a closed system. Therefore, the greatest potential for drilling mud to be released into the lake would be at the HDD entry and exit points.

Temporary siltation and sedimentation could occur at the HDD entry and exit points in Sabine Lake, primarily from the drilling mud associated with the initial drilling of the pilot hole, the subsequent reaming, and the pulling of the pipeline through the hole. Drilling mud is non-toxic and would not chemically affect organisms in the lake; however, sessile organisms near the release could be smothered and killed.

Open-cut construction would be used for the remainder of the Sabine Lake crossing. As described in section 2.4.3.1, PAPL proposes to use a 300-foot-wide construction right-of-way to allow for dredging of both the pipeline trench and the floatation channels that would be required for operation of the lay barges.

Pipeline construction across Sabine Lake would require the dredging and excavation to allow a 4-foot minimum depth from lake bottom to top of pipe. Sediments excavated to install the pipeline would be temporarily stored in the lake adjacent to the pipeline ditches. After the pipeline installation is complete, the pipe trench would be backfilled and the lake bottom contours returned to preconstruction conditions to the maximum extent practicable.

PAPL selected its proposed construction methods after analyzing several alternative methods for constructing through Sabine Lake. Construction methods considered included the use of a standard shallow water lay barge, simultaneous dual lay operation from a single barge, push-pull, and jet trenching. PAPL's analysis considered seasonal timing and duration of construction activities in the lake, total extent of physical disturbance in the lake, and constructability under specific lake conditions. These timing and duration parameters were identified in consideration of economic impacts on the lake users, impacts on fishery resources, public perception, and impacts on the lake.

The primary impacts on water quality associated with open-cut construction in the lake would be the resuspension of sediment into the water column. Dredging and excavation operations necessary to install the pipeline through Sabine Lake would suspend sediment and affect water quality and aquatic resources. Sediments may be resuspended during trench excavation and from spoil pile erosion due to wind and wave forces. These lake processes could result in additional impacts on water quality and aquatic resources. The suspended solids and turbidity levels would decline to ambient levels following completion of construction.

Turbidity resulting from trenching could reduce light penetration and the corresponding primary production of aquatic plants, algae, and phytoplankton. Additionally, the resuspension of organic materials and sediments could cause an increase in biological and chemical oxygen demand along the construction right-of-way. Lower dissolved oxygen concentrations could cause a temporary displacement of motile organisms and may stress or kill sessile benthic organisms within the construction right-of-way.

PAPL's affiliate, Sempra, proposed to cross Sabine Lake as part of the Port Arthur LNG Project approved by the Commission in 2006. That project, which was for the import of LNG, was never constructed; however, the current proposal for the Louisiana Connector Project would cross Sabine Lake in generally the same location as the project approved by the Commission in 2006. As part of originally proposed project, Sempra conducted a turbidity analysis for the Sabine Lake crossing. As described in our EIS for the Port Arthur LNG Project (2006) and based on Sempra's turbidity analysis from 2005, the proposed dredging activities in all but the lowest reaches of Sabine Lake would have the potential to

generate turbidity levels above background concentrations. However, the ambient turbidity levels in the water (as generated by flows, waves, and ship traffic in the ICWW) create a high background level of turbidity, thereby reducing the potential relative impact of dredging-related turbidity. Further, the 2006 EIS also stated that, based on correspondence from the TPWD, Sabine Lake is chronically turbid, and aquatic species mortality due to excess turbidity has not been documented.

PAPL asserts that the analysis and turbidity impacts described in the 2005 turbidity analysis reflect the current proposed project conditions. However, to verify if the conditions described in the 2005 turbidity analysis are still applicable today, PAPL consulted with the TPWD, Sabine Lake Ecosystem Leader. A response from the agency has not yet been received.

In accordance with the Commission's Procedures, PAPL is required to provide a site-specific crossing plan for each major waterbody and HDD crossing, which includes Sabine Lake. As such, PAPL would file detailed information, including site-specific plans, for the Sabine Lake crossing prior to construction.

As discussed above, we expect that construction activities near waterbodies would not significantly affect water quality in Sabine Lake or cause contaminant limits to be exceeded. Only localized and short-term increased turbidity events are anticipated during construction.

Miscellaneous Water Uses

Water may be necessary to aid in dust control and equipment or vehicle washing to control the spread of noxious weeds during construction. However, due to the average annual precipitation greater than 60 inches per year in the project area, dust suppression is not likely necessary (U.S. Climate Data, 2016). Also, equipment or vehicle washing to prevent the spread of noxious weeds has not been recommended or required by any agency. In the event water use for these purposes is required, PAPL has committed to obtaining any permits necessary to collect, use, and dispose of this water.

The volume and source of water to be used for dust control and site preparation would not be known until prior to construction. Therefore, **we recommend that**:

- **Prior to construction of the Texas Connector and Louisiana Connector Projects, PAPL should file with the Secretary for review and approval by the Director of OEP the anticipated volume and source of water to be used for dust control.**

HDD Water Use

The HDD construction method involves the circulation of a drilling mud to remove cuttings, stabilize the borehole, and cool and lubricate the drill bit. Drilling mud is composed primarily of freshwater and bentonite clay. PAPL proposes to use both municipal and surface water sources for HDD operations. Volume requirements by HDD feature crossing and intake locations are described in table 4.3.2-5.

TABLE 4.3.2-5

Surface Water Appropriation for HDD Water Use

Project/Facilities Tested	Feature Crossing	Drilling Mud Volume (approximate gallons)
TEXAS CONNECTOR PROJECT		
Southern Pipeline	Canals	300,652
Southern Pipeline	Inlet to Keith Lake, Wetland, Boat Ramp	1,006,204
Southern Pipeline	Foreign Pipeline Easement, Hwy 87	1,055,643

TABLE 4.3.2-5 (cont'd)

Surface Water Appropriation for HDD Water Use

Project/Facilities Tested	Feature Crossing	Drilling Mud Volume (approximate gallons)
Southern Pipeline	Sabine Pass	1,206,684
Southern Pipeline	Foreign Pipeline Easement/ Road	404,756
Northern Pipeline	Intercoastal Waterway/ Taylor Bayou	1,256,405
Northern Pipeline	J.D. Murphree WMA	1,285,710
Northern Pipeline	J.D. Murphree WMA	1,164,516
Northern Pipeline	HWY 73/ Pond	760,563
Northern Pipeline	Taylor Bayou	1,023,023
Northern Pipeline	Hillebrandt Bayou, HWY 365	764,575
Northern Pipeline	Canals	271,015
Northern Pipeline	Canal	248,368
Northern Pipeline	Foreign Pipeline Easement, W. Port Arthur Road	637,164
Northern Pipeline	Foreign Pipeline Easement	384.237
Northern Pipeline	Foreign Pipeline Easement	417,869
Northern Pipeline	Foreign Pipeline Easement/Canal	705,022
Northern Pipeline	HWY 69, HWY 347, Foreign Pipeline Easement, Railroad	607,342
Northern Pipeline	Neches River	620,076
Northern Pipeline	Wetland/ Floodplain	837,743
Northern Pipeline	Forested Wetland, Foreign Pipeline Easement	743,396
Northern Pipeline	Foreign Pipeline Easement	242,352
GTS Lateral	Foreign Pipeline Easement	910,000
FGT Lateral	Wetland	351,006
	Project Subtotal	**16,820,468**
LOUISIANA CONNECTOR PROJECT		
Pipeline	State Hwy 87 / Port Arthur Canal / State Hwy 82 / S Levee Rd	308,344
Pipeline	(Foreign Pipelines)	199,985
Pipeline	Sabine Lake	241,275
Pipeline	East Pass	393,867
Pipeline	(Foreign Pipelines)	258,006
Pipeline	ICWW	332,974
Pipeline	Vinton Drainage Canal	87,606
Pipeline	Unnamed Waterbody	179,520
Pipeline	Waterbody / Canal / Unnamed Rd	129,254
Pipeline	Bayou Choupique	189,573
Pipeline	Walker Rd	145,698
Pipeline	Foreign Pipeline	103,619
Pipeline	Interstate Hwy 10	112,092
Pipeline	Houston River Canal	93,350
Pipeline	Houston River	236,248
Pipeline	State Route 27 / Bankens Rd / Kansas City Southern RR	204,940
Pipeline	Little River	96,941
Pipeline	Beckwith Creek	164,369
Pipeline	Hickory Branch	163,507
Pipeline	Barnes Creek	253,482
Pipeline	Whiskey Chitto Creek	57,446

TABLE 4.3.2-5 (cont'd)

Surface Water Appropriation for HDD Water Use

Project/Facilities Tested	Feature Crossing	Drilling Mud Volume (approximate gallons)
Pipeline	Pipeline	86,313
Pipeline	Pipeline	103,188
Pipeline	Nezpique Bayou	78,558
Pipeline	Pond	114,103
Pipeline	Des Cannes Bayou	71,808
	Project Subtotal	**4,406,066**

While specific locations of hydrostatic test water discharge are unknown at this time, it is anticipated that water used to test the HDD segments would be discharged to a vegetated upland or Sabine Lake following the completion of hydrotesting. Also, PAPL has committed to comply with the Commission's Procedures, which requires that before construction, PAPL file with the Secretary a list identifying the location of all waterbodies proposed for use as a hydrostatic test water source or discharge location. With the implementation of these measures, impacts on water quality due to hydrostatic testing of the HDD segments would be temporary and minor.

Hydrostatic Testing

Before being placed into service, the pipeline and lateral pipeline segments would be hydrostatically tested. Pipeline segments installed using HDD would also be hydrostatically tested prior to installation (known as an HDD pre-test) to ensure structural integrity per DOT standards in 49 CFR 192. PAPL proposes to use both municipal sources and surface waters for hydrostatic testing of the pipeline facilities. Surface water requirements as well as proposed intake and discharge locations are described in table 4.3.2-6.

TABLE 4.3.2-6

Surface Water Appropriation and Discharge for Hydrostatic Testing of the Texas Connector and Louisiana Connector Projects

Project/Facilities Tested	Intake Water Source	Intake Milepost	Discharge Source	Discharge Milepost	Volume Required (gallons)
TEXAS CONNECTOR PROJECT					
Northern Pipeline (MP 0 – 10.2), Southern Pipeline (MP 0 – 7.6), and KMLP and NGPL laterals	Taylor Bayou	10.2 on the Northern Pipeline	Sabine Pass	MP 7.6 on the Southern Pipeline	7,000,000
South Compressor Station and KMLP and NGPL meter stations	Municipal Source	N/A (Municipal Source)	Upland	South Compressor Station and KMLP and NGPL meter stations	300,000
Northern Pipeline (MP 10.2 – MP 26.6) and GTS/CIPCO, HPL, TETCO, and FGT laterals	Hillebrandt Bayou	11.7 on the Northern Pipeline	Upland	11.7 on the Northern Pipeline	7,000,000
North Compressor Station and GTS/CIPCO, HPL, TETCO, FGT meter stations	Municipal Source	N/A (Municipal Source)	Upland	Northern Compressor Station	300,000
LOUISIANA CONNECTOR PROJECT					
Mainline	Municipal Source	N/A (Municipal Source)	Upland	Unknown	49,500,000

Withdrawals of hydrostatic test water would be from impaired waterbodies and municipal water sources. The discharge water would be tested in accordance with Texas RRC and LDNR permits.

After the hydrostatic test is successfully completed, each pipeline segment would be de-watered by pushing the water out with compressed air. PAPL would not add any chemicals to the hydrostatic test water, and the discharged water would be tested in accordance with permitting requirements. In addition, PAPL would implement the measures outlined in its Procedures (included within PAPL's *Environmental Plan*), which include notifying state agencies prior to testing; screening intakes to avoid entrainment of fish; maintaining adequate stream flow rates to protect aquatic life and to provide for all waterbody uses and downstream withdrawals of water by existing users; siting hydrostatic test manifolds outside of wetlands and riparian areas to the maximum extent practicable; regulating discharge rates; using energy dissipation devices; and installing sediment barriers as necessary to prevent erosion, streambed scour, suspension of sediments, or excessive streamflow.

PAPL has requested comment from the Texas RRC regarding appropriation of hydrostatic test water from impaired waterbodies.

Surface water appropriation and discharge for hydrostatic testing is still pending for the Louisiana Connector Project. PAPL has committed to compliance with the Commission's Procedures (including the measures discussed above), which require that before construction PAPL file with the Secretary a list identifying the location of all waterbodies proposed for use as a hydrostatic test water source or discharge location. With the implementation of these measures, impacts on water quality due to hydrostatic testing would be temporary and minor.

Operation

Impacts on surface waters are not expected during operation of the Texas Connector and Louisiana Connector Projects because no further in-stream activities would be expected. Because the pipelines would be installed at a sufficient depth below the beds of waterbodies, exposure of the pipe is not anticipated. If a pipeline anomaly (i.e., corrosion, dent, rupture) is detected during routine inspections that could require pipeline excavation or replacement within a waterbody, impacts would be similar to those described above for construction, but typically the same or shorter in duration.

Nonjurisdictional Facilities

Construction of relocated SH 87 would include culvert installation into Round Lake Canal for the road crossing, and open-cut installation of all underground utility facilities. Impacts from open-cut installation would be similar to those described above for pipeline installation. Impacted waterbodies would be restored to their previous contours, with the exception of culvert installation into Round Lake Canal, and allowed to revert to their previous flow regime. Construction requirements, erosion and sediment control, and inadvertent releases would be managed in accordance with PALNG's *Environmental Plan*. Further, PALNG would comply with all conditions of applicable permits. Conditions may include the maintenance of specific flow rates or special measures to limit impacts on aquatic species. Any maintenance required during operation of the roadway and collocated utility facilities would be managed by the owner of each facility.

4.3.2.3 Alternative Measures to the Commission's Procedures

Liquefaction Project

Section V.B.1 of the Commission's Procedures states that in-stream work, except that which is required to install or remove bridges, should occur between June 1 and November 30 for warmwater fisheries. As described previously, construction and operation of the liquefaction facility would involve year-round activity within the Port Arthur Canal, which is currently utilized for both commercial and recreational fishing activities. Use of the Port Arthur Canal year-round for construction and operation would shorten the duration of construction activities, and allow for maintenance dredging of the marine berth and MOF. PALNG would comply with the required federal and state permits and their conditions. As such, we find year-round use of the Port Arthur Canal to be consistent with federal and state water quality permitting.

Section V.C. of the Commission's Procedures states that all waterbody banks should be returned to pre-construction contours or to a suitable angle of repose, as approved by the EI. PALNG proposes to place rock armoring along the shoreline for the entire length of the project at the Port Arthur Canal. This rock armoring is proposed to reduce the potential for erosion caused by increased wave action associated with barge traffic. As such, we find installation of rock armoring along the shoreline to be reasonable and adequately justified provided that PALNG complies with the conditions of its USACE permit.

Section V.B.2 of the Commission's Procedures states that all extra work areas should be at least 50 feet from the water's edge, except where adjacent upland consists of cultivated cropland or other disturbed land. ATWS associated with construction of the liquefaction facility would be within 50 feet of the Port Arthur Canal. There are insufficient upland areas within the project area to provide the extra workspace necessary for construction, and workspace is required to conduct the necessary construction work within the Port Arthur Canal for the marine berth, MOF, and Pioneer Dock. As such, we find locating ATWS within 50 feet of the shoreline to be reasonable and adequately justified.

Texas Connector Project

Section V.B.2 of the Commission's Procedures states that all extra work areas should be at least 50 feet from the water's edge, except where adjacent upland consists of cultivated cropland or other disturbed land. PAPL proposes to site ATWS within 50 feet of the water's edge at several locations due to the need to tie-in to the pipeline at a point of intersection after completion of HDD waterbody crossings. Appendix D lists the locations of ATWS areas in which this modification applies, and our conclusion.

Sections V.B.3 and V.B.4 of the Commission's Procedures also state the following:

- Section V.B.3.b: Construct crossings as close to perpendicular to the axis of the waterbody channel as engineering and routing conditions permit.

- Section V.B.3.c: Where pipelines parallel a waterbody, maintain at least 15 feet of undisturbed vegetation between the waterbody and the construction right-of-way.

- Section V.B.4.a: All spoil from minor and intermediate waterbody crossings, and upland spoil from major waterbody crossings, must be placed in the construction right-of-way at least 10 feet from the water's edge.

PAPL is proposing to work within waterbodies between MPs 13.2 and 14.2 and between MPs 14.5 and 14.7. PAPL has identified these as existing agricultural canals. PAPL proposes to work within these

canals and the adjacent field road to avoid additional impacts on adjacent cultivated areas and avoid working over an existing pipeline in the area. As such, PAPL is requesting alternative measures to the Procedures measures listed above to allow for work in the waterbody. Based on the site-specific conditions, we find that the modifications to place the pipeline in the canals and clearing vegetation, place spoil less than 10 feet from the agricultural canals, and locate ATWS within 50 feet of the shoreline to be reasonable and adequately justified.

Louisiana Connector Project

Section V.B.2 of the Commission's Procedures states that all extra work areas should be at least 50 feet from the water's edge, except where adjacent upland consists of cultivated cropland or other disturbed land. PAPL proposes to locate ATWS within 50 feet of the water's edge at several locations. ATWS at these locations are proposed due to the need to tie-in to the pipeline at a point of intersection after completion of HDD waterbody crossings. Appendix D lists the locations of ATWS areas in which this modification applies and our conclusion. Although adequate justification has been provided for these alternative measures, PALNG and PAPL would be required to comply with other requirements of the Commission's Procedures. Erosion and sedimentation control devices should be monitored and maintained in these areas more frequently than the minimum time intervals required by the Commission's Procedures until final grading and revegetation have been completed.

4.4 WETLANDS

Wetlands are defined by the USACE and EPA as areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (Environmental Laboratory, 1987). The Liquefaction Project and portions of the Texas Connector Project are in an extensive coastal wetland complex.

Wetland and waterbody impacts in Texas and Louisiana are regulated by the USACE under section 404 of the CWA, which establishes standards to regulate wetland impacts with the goal of no net loss of WOUS. Section 404(b)1 guidelines require that wetland impacts be avoided to the extent practicable and minimized where avoidance is not possible. For the Liquefaction Project and Texas Connector Project, the USACE Galveston District has the authority to review projects and issue permits for projects that involve discharge of dredge or fill material into WOUS, including wetlands. For the Louisiana Connector Project, this authority is provided to the USACE Galveston and New Orleans Districts.

In response to a recommendation in the draft EIS, PALNG and PAPL provided updated wetland impact data for the Projects to ensure accuracy and consistency with the wetland data provided to the USACE. This section reflects this updated information.

Texas and Louisiana do not have their own wetland protection laws or programs; instead, they are required to conduct a section 401 certification review of USACE section 404 permit applications to determine whether a project would comply with their respective state's water quality standards. Water quality certification under section 401 of the CWA has been delegated to the state agencies (TCEQ and LDEQ), with review by the EPA.

In addition to being regulated by the USACE, wetlands within Texas and Louisiana coastal zones are regulated by the TGLO's Texas Coastal Management Program (TCMP) and the LDNR Coastal Management Program, respectively (TGLO, 2017; LDNR, 2017b). The Projects area within Jefferson and Orange Counties are entirely within the Texas Coastal Zone (TGLO, 2017). Under section 307 of the CZMA, the TGLO would coordinate with the Texas RRC to develop a consistency determination for the Projects. The Projects would also affect wetlands in Louisiana's coastal zone in Cameron Parish and southern Calcasieu Parish (USACE, 2016). PALNG and PAPL must comply with all conditions of applicable permits issued by the USACE, the TGLO, and the LDEQ, including the provisions of section 307 of the CZMA and required compensatory wetland mitigation. Section 4.8 provides more discussion of project-related impacts within designated coastal zones.

4.4.1 Existing Environment

Field delineations, where access was allowed, were used to identify wetlands present on the liquefaction site and crossed by the proposed pipelines and their associated facilities (e.g., access roads). PALNG conducted wetland delineations at the liquefaction site in 2004 and again in 2014; PAPL conducted wetland delineations for the Texas Connector Project facilities in August 2014 and the Louisiana Connector Project facilities in March through July 2017. Wetland delineations were performed in accordance with the USACE's Wetlands Delineation Manual and the Atlantic and Gulf Coastal Plain regional supplement, which require the identification of wetlands based on the presence of three parameters: hydrophytic vegetation, hydric soils, and wetland hydrology (Environmental Laboratory, 1987). In addition, PALNG and PAPL conducted qualitative assessments for each identified wetland based on the USACE's five ecological parameters: quality of wetland vegetation, soils, hydrology, presence of plant and animal species of concern, and degree of disturbance within wetlands and adjacent areas. Where survey access permission was not granted by the landowner, FWS NWI maps were used to supplement field delineations. The

wetland delineations for the Projects have not yet been verified by the USACE; therefore, the wetlands acreage impacted could change upon USACE verification. PALNG and PAPL would be required to complete wetland surveys and obtain necessary authorizations for all project areas prior to construction.

Six types of wetlands were identified within the Projects area, including the nonjurisdictional facilities. Table 4.4.1-1 lists the Cowardin classification for wetlands within the Projects area and includes a description of each. In general, the Cowardin classification system is based on the hydrology and dominant vegetation present in the wetland, and further classifies wetland types according to the flooding regime, which ranges from temporarily or irregularly flooded to seasonally flooded or permanently flooded (Cowardin et al., 1979).

TABLE 4.4.1-1

Wetland Classification Types in the Projects Area

Wetland Type	Wetland Description
Palustrine Emergent	Vegetation standing in up to 3 feet of water; dominated by erect, rooted herbaceous freshwater hydrophytic vegetation
Palustrine Scrub-Shrub	Areas dominated by woody vegetation less than 20 feet (6 meters) tall; woody shrub component consisting of shrubs and small trees
Estuarine Scrub-Shrub	Wetlands adjacent to the subtidal area that are exposed and flooded by tides periodically; dominated by woody vegetation less than 20 feet (6 meters) tall; woody shrub component consisting of shrubs and small trees
Estuarine Emergent Wetland	Wetlands adjacent to the subtidal area that are exposed and flooded by tides periodically; includes wetlands not normally flooded associated with the splash zone
Palustrine Forested	Areas dominated by woody vegetation that is 20 feet (6 meters) tall or taller
Palustrine Unconsolidated Bottom	All wetland and deepwater habitats with at least 25 percent cover of particles smaller than stones, and a vegetation cover less than 30 percent

Source: Cowardin et al., 1979

4.4.1.1 Liquefaction Project

PEM wetlands are the dominant wetland type at the Liquefaction Project site. The site was historically an extensive marsh complex characterized by vegetation suited to brackish water conditions. The site has been used previously as a disposal site for dredged material by the USACE and Jefferson County and Beaumont navigation districts, which has resulted in pockets of upland and a system of levees. Dominant PEM plant species found at the site include common reed (*Phragmites australis*), California club rush (*Schoenoplectus californicus*), salt meadow cord grass (*Spartina patens*), brown seed paspalum (*Paspalum plicatulum*), and seaside tansy (*Borricha frutescens*) (T. Baker Smith, LLC, 2015).[21]

EEM wetlands are located on the southern end of the Liquefaction Project site and are classified as high-quality wetlands as they are in an area that was not previously used for disposal of dredged material or levee creation (T. Baker Smith, LLC, 2015). The estuarine wetlands in the project area have been manipulated via installation of a bulkhead, which has limited access to fish species and excluded it from consideration as EFH. Dominant EEM plant species found at the site included salt meadow cord grass, coastal salt grass (*Distichlis spicata*), seaside club rush (*Schoenoplectus robustus*), and California club rush.

PSS wetlands are in the southern half and along the northern edge of the Liquefaction Project site. These wetlands have been affected by the dredge material disposal and levee construction, negatively impacting wetland quality, and are comprised of cottonwood-hackberry-salt cedar brush. Dominant PSS

21 Chinese tallow is a non-native species that occupies most of the liquefaction site; however, this plant is not indicative of a wetland. Chinese tallow is discussed in sections 4.5.1.1 and 4.5.3.1.

plant species found at the site included Jesuit's bark (*Iva frutescens*) and groundsel tree (*Baccharis halemifolia*).

4.4.1.2 Texas Connector and Louisiana Connector Projects

Texas Connector Project

PAPL used a combination of field survey and NWI data to identify six types of wetlands within the Texas Connector Project area: PEM, EEM, PSS, estuarine scrub-shrub (ESS), palustrine unconsolidated bottom (PUB), and palustrine forested (PFO) (see table 4.4.1-1). Based on PAPL's wetland delineation surveys, 156 wetland crossings are associated with the Texas Connector Project. In some cases, the project would include multiple crossings of the same wetland. PAPL would conduct 51 crossings using the open-cut method, 81 crossings using HDD or bore methods, and 20 crossings using the push-pull method. These crossing methods are described in section 2.4.3. Appendix K provides additional information on proposed wetland crossings, including wetland identification numbers, crossing locations by milepost, temporary and permanent impacts (acres), and the proposed crossing methods. There are no wetlands at the proposed pipe storage and contractor yards; therefore, they are not discussed further in this section.

PEM wetlands are the dominant wetland type in the Texas Connector Project area. Dominant PEM plant species include green flatsedge (*Cyperus virens*), common rush (*Juncus effusus*), California bulrush (*Schoenoplectus californicus*), and shortbristle horned beaksedge (*Rhynchospora corniculata*). EEM wetlands identified in the Texas Connector Project area range from brackish mashes to mangrove swamps and coastal rivers. Dominant EEM plant species include coastal salt grass, green bulrush (*Scirpus atrovirens*), and several varieties of cordgrass (*Spartina*). PSS wetlands identified in the Texas Connector Project area contain plant species such as Chinese tallow (*Triadica sebifera*), Black willow (*Salix nigra*), and buttonbush (*Cephalanthus occidentalis*) in the northern project area; common reed (*Phragmites australis*), grassleaf rush (*Juncus marginatus*), and Eastern baccharis (*Baccharis halimifolia*) are dominant in the southern project area. ESS wetlands were identified in the northern project area, consisting primarily of common reed, eastern baccharis, and seacoast marsh elder (*Iva imbricate*). Dominant PUB plant species include knotweed (*Fallopia japonica*) and bald cypress (*Taxodium distichum*) in the northern project area; broadleaf cattail (*Typha latifolia*) and common rush are dominant in the southern project area. PFO wetlands in the Texas Connector Project area are dominated by Chinese tallow and bald cypress in the northern project area, and Chinese tallow and American sweetgum (*Liquidambar styraciflua*) in the southern project area.

Louisiana Connector Project

PAPL used a combination of field survey and NWI data to identify four types of wetlands within the Louisiana Connector Project area: PEM, EEM, PSS, and PFO (see table 4.4.1-1). Based on these surveys, 594 wetland crossings are associated with the Louisiana Connector Project. In some cases, the project would include multiple crossings of the same wetland. PAPL would conduct 436 crossings using the open-cut method, 109 crossings using HDD or bore methods, and 49 crossings using the push-pull method. These crossing methods are described in section 2.4.3. Appendix K provides additional information on the proposed wetland crossings, including wetland IDs, crossing locations by milepost, and temporary and permanent impacts (acres). The proposed crossing methods for each wetland are shown on PAPL's alignment sheets for the Louisiana Connector Project.[22]

22 PAPL's alignment sheets for the Louisiana Connector Project can be found under Accession No. 20171016-5210; under the Files, select the files titled "2017-10-16 RR1 - Part 2 of 2 - Public.PDF." The alignment sheets are included as Appendix 1.F.

Emergent wetland types are common along the proposed right-of-way due to the collocation of the route with other utility rights-of-way. The dominant vegetation species are consistent with those found in the Texas Connector Project area and described above.

4.4.1.3 Nonjurisdictional Facilities

Wetlands impacted by nonjurisdictional facilities are adjacent to, and consistent with, those identified for the Liquefaction Project. PEM wetlands are the dominant wetland type in the nonjurisdictional facilities area, with EEM and PSS wetlands making up a portion of the project area as well. The USACE may require a section 10 and/or a section 404 permit for these facilities, if they involve regulated activities in areas subject to USACE jurisdiction.

4.4.2 Wetland Impacts and Mitigation

4.4.2.1 Liquefaction Project

Construction of the Liquefaction Project facilities would permanently convert 724.0 acres of wetlands, including 317.4 acres of PEM wetland, 21.2 acres of EEM wetland, and 420.2 acres of PSS wetland (see table 4.4.2-1). Permanently impacted wetlands would be converted to upland industrial or open land within the liquefaction site, or open water within the marine berth, Pioneer Dock, and MOF. Operation and maintenance of the proposed facilities is not expected to result in additional wetland impacts.

PALNG proposes to discharge 2.4 million yd^3 of dredge material from the ship berthing area and Pioneer Dock for beneficial reuse into the J.D. Murphree WMA. Based on consultations with the TPWD and WMA staff, PALNG has identified an area in Salt Bayou Unit 16, known as Pintail Flats, as a location where deposition of dredge material would be beneficial. The WMA has been impacted by increased salt water inflow and sediment loss, partially due to maintenance dredging of the ICWW and SNWW. This has caused areas of the marsh to convert to shallow open water areas.

Locations of dredge material placement would be coordinated with WMA staff, and determined by conducting geotechnical analyses to determine settling and compaction. Elevation targets would be determined, not to exceed mean higher high water, and visually marked in the field. Dredge material would be transported via a temporary discharge pipe placed in the Round Lake Canal, and mechanized equipment may be used to achieve appropriate elevations once dredge material is placed.

Containment dikes and berms would be used as necessary to ensure that dredge material is not deposited outside of the approved beneficial reuse area, which could alter the surface hydrology of existing wetlands. Placement of dredge material is anticipated to result in the creation of about 1,268.8 acres of coastal marsh wetland. Based on PALNG's *Compensatory Mitigation Plan*, revegetation of the WMA would be monitored over a minimum of 5 years to ensure achievement of 80 percent native vegetation cover.

TABLE 4.4.2-1

Wetlands Affected by the Projects

	Wetland Type													
	PEM		PSS		PFO		EEM		ESS		PUB		Impacts (acres)	
Project	Cons. [a]	Oper.[a]	Cons.	Oper.	Cons.	Oper.	Cons.	Oper.	Cons.	Oper.	Cons.	Oper.	Cons.	Oper.
LIQUEFACTION PROJECT	317.0	301.9	420.2	400.9	0.0	0.0	21.2	21.2	0.0	0.0	0.0	0.0	758.4	724.0
Dredge Disposal Areas														
J.D. Murphree WMA	0.0	0.0	0.0	0.0	0.0	0.0	903.0	0.0	0.0	0.0	0.0	0.0	903.0	0.0
Disposal Areas 8, 9A, 9B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dredge Disposal Pipelines														
J.D. Murphree WMA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Disposal Areas 8, 9A, 9B	0.4	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.5	0.0
Subtotal	**317.4**	**301.9**	**420.2**	**400.9**	**0.0**	**0.0**	**924.3**	**21.2**	**0.0**	**0.0**	**0.0**	**0.0**	**1,661.9**	**724.0**
TEXAS CONNECTOR PROJECT														
Northern Pipeline	92.2	35.2	8.3	3.4	14.6	4.3	5.5	2.7	0.0	0.0	0.0	0.0	120.6	45.6
Southern Pipeline	9.7	4.0	0.0	0.0	0.0	0.0	22.5	9.4	0.0	0.0	0.0	0.0	32.2	13.4
FGT Lateral	0.2	0.1	0.0	0.0	2.3	0.8	0.0	0.0	0.0	0.0	0.1	0.0	2.6	0.9
GTS Lateral	0.1	0.0	0.1	0.0	3.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	3.0	1.5
KMLP Lateral	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.5	0.0	0.0	0.0	0.0	1.3	0.5
NGPL Lateral	0.0	0.0	0.0	0.0	0.0	0.0	3.9	1.5	0.0	0.0	0.0	0.0	3.9	1.5
HPL Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TETCO Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GTS/CIPCO Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aboveground Facilities [b]	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0
Access Roads	10.5	0.0	6.1	0.3	2.2	0.0	3.0	0.1	0.0	0.0	0.0	0.0	21.8	0.4
ATWS	28.7	0.0	6.0	0.0	7.5	0.0	7.3	0.0	0.0	0.0	0.0	0.0	49.5	0.0
Subtotal	**141.5**	**39.3**	**20.5**	**3.6**	**29.6**	**6.6**	**46.5**	**17.3**	**0.0**	**0.0**	**0.0**	**0.0**	**238.1**	**66.8**
LOUISIANA CONNECTOR PROJECT														
Mainline	237.6	100.4	33.4	14.7	146.3	68.1	123.5	49.2	0.0	0.0	0.0	0.0	540.8	232.4
TETCO Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CS Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TGP Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Egan Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pine Prairie	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Texas Gas Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANR Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 4.4.2-1 (cont'd)

Wetlands Affected by the Projects

Project	Wetland Type												Impacts (acres)	
	PEM		PSS		PFO		EEM		ESS		PUB			
	Cons. [a]	Oper.[a]	Cons.	Oper.	Cons.	Oper.	Cons.	Oper.	Cons.	Oper.	Cons.	Oper.	Cons.	Oper.
CGT Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aboveground Facilities	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.2
Laydown Yard	2.9	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0
Access Roads	15.1	9.9	0.3	0.0	0.8	0.6	5.2	1.0	0.0	0.0	0.0	0.0	21.4	11.5
ATWS	28.1	0.0	2.2	0.0	25.3	0.0	15.1	0.0	0.0	0.0	0.0	0.0	71.3	0.0
Subtotal	**283.8**	**110.4**	**36.2**	**14.7**	**173.0**	**68.7**	**143.9**	**50.3**	**0.0**	**0.0**	**0.0**	**0.0**	**636.9**	**244.1**
Nonjurisdictional Facilities	90.5	28.4	50.3	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	140.8	45.1
Projects Total	**833.2**	**480.0**	**527.2**	**435.9**	**202.6**	**75.3**	**1,114.7**	**88.8**	**0.0**	**0.0**	**0.0**	**0.0**	**2,677.7**	**1,080.0**

[a] Construction and operation impacts are based on the typical construction and permanent rights-of-way widths (125 feet, 110 feet, 50 feet, etc.) and workspace areas as discussed in section 2.2. The HDD method would be used to avoid direct impacts on wetlands at various locations, as listed in table 2.4.3-1. Most wetland types would be allowed to revert to pre-construction conditions, and limited vegetation maintenance would be allowed in wetlands during project operations.

[b] The South Compressor Station and Centana and PALNG laterals would be within the liquefaction site boundaries and, therefore, their impacts on wetlands are included as part of the impacts for the Liquefaction Project.

Placement of dredge material and incorporation of design features described above is intended to provide, maintain, or enhance the following: shoreline protection, sediment deposition, nutrient and organic carbon exchange, wildlife habitat, native plant community, and plant biomass production. Achievement of these functions would provide adequate restoration of natural marsh function once the material is deposited and the areas are restored. PALNG would also be required to meet any permit conditions and/or landowner negotiation stipulations.

Although the placement of dredge material within the J.D. Murphree WMA would be considered a permanent impact, the resulting re-creation of historic emergent wetlands would result in the Liquefaction Project contributing a net benefit to wetlands within the Sabine Lake Watershed. We anticipate that, if the USACE issues a section 404/section 10 permit for the Liquefaction Project, it would be conditional upon project-related adverse impacts on WOUS being effectively offset by the beneficial use of dredge material.

Dredge material would be transported to the WMA using a 2.7-mile-long, 30-inch-diameter pipeline that would be temporarily placed across the surface of the lands and canals between the liquefaction site and the WMA. The dredge disposal pipeline to the J.D. Murphree WMA would temporarily impact 16.6 acres of open water (discussed in section 4.3.2). The USACE will assess the impacts on wetlands and WOUS associated with the placement of this temporary pipeline, including activities such as matting, grading, or vegetation removal. If the USACE Galveston District determines that these activities constitute a dredge and fill activity, they will be subject to USACE authorization.

The remaining 4.9 million yd^3 of dredged material would be placed in established Dredge Disposal Areas 8, 9A, and 9B under the permits obtained for this use by the SNND. PALNG communicated with SNND staff on September 2016 to confirm that capacity for this volume of dredge material is available at Dredge Disposal Areas 9A and 9B and covered under SNND's existing permits (Fountain, 2016). While similar correspondence with the SNND for Dredge Disposal Area 8 is not available, the site is significantly larger than areas 9A and 9B combined and likely able to accommodate dredge material from the Liquefaction Project. Dredge material would be transported to these disposal areas using a 2,031-foot-long, 30-inch-diameter pipeline that would be temporarily placed across the surface along the Texas Connector Project's proposed North Pipeline right-of-way and within the ICWW between the liquefaction site and the disposal areas. PALNG has not completed final design of the temporary pipeline at the ICWW crossing location. However, the USACE and SNND conduct similar activities during maintenance dredging within the ICWW. This may involve installing a floating pipe that can be disconnected and moved out of a vessel's path, placed under the ICWW channel, or along the bottom of the channel. PALNG stated it would use board mats where necessary to minimize surface impacts along the Texas Connector Project's North Pipeline right-of-way for the dredge disposal pipeline to Dredge Disposal Areas 8, 9A, and 9B. The dredge disposal pipeline to Dredge Disposal Areas 8, 9A, and 9B would temporarily impact 0.4 acre of PEM wetland, 0.1 acre of EEM wetland, and 1.8 acres of open water (discussed in section 4.3.2). As stated above, the USACE Galveston District will determine if these activities constitute a dredge and fill activity, subject to USACE authorization.

In addition to the mitigation measures required by the Commission's Procedures (which is part of PALNG's *Environmental Plan*), PALNG would be required to comply with the permit conditions attached to the USACE's section 10 and 404 permit, the Texas RRC's section 401 permit, and the TGLO's Coastal Zone Management Consistency Determination.

The USACE, under section 404(b)1 guidelines, employs a method referred to as "sequencing," which requires that wetland project siting and alternatives be approached first with an attempt at avoidance, followed by minimization, and finally mitigation. PALNG is required to avoid wetland impacts to the extent practicable, and all unavoidable impacts must be minimized to the extent possible. The guidelines also restrict the discharge of dredge or fill material where a less environmentally damaging alternative is

feasible. Additionally, the USACE requires compensatory mitigation for all permanent wetland loss. The USACE has a goal of "no net loss" of wetlands in the United States. This means that unavoidable wetland impacts must be offset by the creation, restoration, enhancement, or preservation of at least an equal amount of wetlands, which is referred to as compensatory mitigation.

As required by 33 CFR 332.3, PALNG is required to propose compensatory mitigation that is commensurate with the amount and type of impact resulting from construction and operation of the Liquefaction Project. There are three mechanisms for providing compensatory mitigation: permittee-responsible compensatory mitigation, mitigation banks, and in-lieu fee mitigation. PALNG developed a mitigation plan that would include credit purchases from USACE-approved mitigation banks and permittee-responsible compensatory mitigation, with the amount of compensatory mitigation determined based on the USACE's preliminary jurisdictional determinations. The plan is subject to review and approval by the USACE Galveston District as part of the section 404/10 permit process. PALNG has filed its section 404 permit application with the USACE, Galveston District, and provided a draft *Compensatory Mitigation Plan*. Compensatory mitigation would be initiated at the time of the first USACE-jurisdictional impact occurs and based on a timeline established by the USACE. The USACE may recommend additional conditions to address components of the *Compensatory Mitigation Plan* or project authorization.

During operation, vessel traffic along the Port Arthur Canal and within the berthing area could result in increased shoreline erosion, potentially impacting wetland fringe along the canal due to increased wave activity. PALNG would install rock armoring to provide scour protection from propeller wash along the entire shoreline within the project area. In addition to providing scour protection, the rock armoring would prevent erosion of the adjacent unprotected shoreline resulting from wave activity produced by vessels maneuvering within the recessed berthing area. With the implementation of PALNG's proposed rock armor, and considering the anticipated vessel speed and the fact that the Port Arthur Canal is an existing ship channel regularly subject to commercial marine traffic, we have determined the increase in vessel traffic within the Port Arthur Canal and recessed berthing area would cause a negligible increase in erosion of the adjacent wetland fringe.

Based on the mitigation measures that PALNG would implement, including adopting the measures identified in its *Environmental Plan* and USACE permit, the low quality of the wetlands identified and that the site is dominated by the non-native Chinese tallow; and the compensatory wetland mitigation PALNG would adopt, including the beneficial reuse of dredge material to create about 1,268.8 acres of coastal marsh wetland, impacts on wetlands resulting from construction and operation of the liquefaction facilities would be permanent but minor.

4.4.2.2 Texas Connector and Louisiana Connector Projects

Construction and operation of the Texas Connector and Louisiana Connector Projects would be conducted using similar, industry-recognized methods and mitigation measures. As such, the following discussions apply to both pipeline projects. Differences in methods or mitigation measures are described separately as appropriate by project.

Ground-disturbing activities associated with construction of the Texas Connector and Louisiana Connector Projects, including clearing and grading of temporary work areas, could temporarily affect the rate and direction of water movement within wetlands. Temporary wetland impacts resulting from construction may vary based on construction timing and construction techniques, and may include temporary ground disturbance, removal of wetland vegetation, temporary storage of dredged and/or excavated material, and rutting or compaction. Excavation of the pipeline trench, stockpiling of the trench spoil, and backfilling of the trench would disturb soils and could temporarily affect the rate and direction of water movement within wetlands. If contours and elevations are not properly restored, these effects

could adversely impact wetland hydrology and revegetation by creating soil conditions that may not support wetland communities and hydrophytic vegetation at preconstruction levels. If soils are not properly segregated during construction, the resulting mixed soil layers could alter biological components of the wetland and affect the reestablishment of native wetland vegetation. The temporary stockpiling of soil and movement of heavy machinery across wetlands could also lead to inadvertent compaction and furrowing of soils, which could alter natural hydrologic patterns, inhibit seed germination, and increase seedling mortality. Equipment could also introduce non-native and invasive species to the disturbed soil. Altered surface drainage patterns, stormwater runoff, runoff from the trench, accidental spills, and discharge of hydrostatic test water could also negatively affect wetland regeneration.

The effects of construction would be greatest during and immediately following construction. Generally, once the pipelines are in place, wetland vegetation communities would transition back to a community with a function similar to that of the wetland prior to construction. In emergent (EEM, PEM) and PUB wetlands, the impact of construction would be relatively minor and short term, because the herbaceous vegetation would regenerate quickly (generally within 1 to 2 years). Scrub-shrub wetland (PSS) impacts would also be minor and short term, but these wetlands could take 2 to 4 years to reach functionality similar to preconstruction conditions depending on the age and complexity of the wetland system. In forested wetlands (PFO), the impact of construction would be long term due to the long regeneration period of these vegetation types (30 years or more).

During construction and operation of the facilities, PAPL would adhere to the measures outlined in its project-specific *Environmental Plan*, which includes the Commission's Procedures, to minimize wetland impacts. The measures include the following requirements:

- Wetland crossings would be installed using standard cross-country construction methods, push-pull methods, or HDD.
- When possible, extra workspace would be located at least 50 feet outside of wetlands.
- Existing roadways through wetlands may be used as access roads only if they can be used without modification and do not impact adjacent wetlands.
- Dewatering would be conducted such to prevent sediment discharge into wetland areas.
- The right-of-way would be returned, as closely as possible, to preconstruction contours following construction.
- When possible, push-pull methods of pipe laying would be used in which an open trench is dug, and the pipe is pushed down the trench segment by segment as it is fabricated and welded in an adjacent upland area or a central location within a large wetland complex.

PAPL would minimize wetland impacts by collocating the Texas Connector Project pipelines with existing rights-of-way for 43 percent of its pipeline routes, and the Louisiana Connector Project pipeline with existing rights-of-way for 73 percent of its route (see appendix L). Section 2.2.2 provides additional details and typical drawings of right-of-way cross-sections in both collocated and non-collocated areas. Additionally, several wetlands would be avoided using the HDD method. Apart from a minor cut line path that may be required along the HDD guide wire path, no clearing is proposed between the entry and exit points of the HDDs. Section 2.4.3 describes the specialized construction techniques that PAPL would implement for construction through wetlands.

Our Procedures require that an applicant identify those provisions of the Commission's Procedures that may be technically infeasible or unsuitable due to site conditions. The applicant must provide site-specific justification why those provisions are not applicable and/or provide alternative measures that would ensure an equal or greater level of protection. PAPL would typically construct the pipelines using a 100- to 125-foot-wide construction right-of-way in wetlands. This construction right-of-way is greater than that provided for in the Commission's Procedures, which requires no greater than a 75-foot-wide construction right-of-way in wetlands. Because this represents a difference to the Commission's Procedures, PAPL requested approval to its proposed alternative construction rights-of-way in wetlands, which is discussed in more detail in section 4.4.3. PAPL has identified provisions where it proposes alternative measures, as discussed in section 4.4.3.

Upon completion of construction, all temporarily impacted wetlands would be restored to preconstruction contours and allowed to revegetate in accordance with PAPL's *Environmental Plan*. Per the Commission's Procedures, which is included as part of PAPL's *Environmental Plan*, PAPL is required to consult with federal and state agencies to develop a project-specific restoration plan and would monitor and maintain the site until revegetation has been successful. In accordance with the Commission's Procedures, wetland revegetation is determined to be successful when the affected wetland satisfies the current federal definition of a wetland; the vegetation is at least 80 percent of either the cover documented for the wetland prior to construction, or at least 80 percent of the cover in adjacent areas not disturbed by construction; the plant species composition is consistent with wetland plant communities in the area if natural revegetation measures are used; and invasive species and noxious weeds are absent, unless present in adjacent areas undisturbed by project construction activities.

As stated above, all workspaces outside the 50-foot-wide permanent right-of-way would be allowed to revegetate to preconstruction conditions in accordance with PAPL's *Environmental Plan*. Within the 50-foot-wide permanent right-of-way; however, PAPL would maintain up to a 10-foot-wide corridor centered over each pipeline in an herbaceous state during operation to facilitate pipeline inspections and maintenance. In addition, in accordance with the Commission's Procedures, PAPL may selectively remove trees within a 30-foot-wide corridor centered over each pipeline with roots that could compromise the integrity of the pipeline coating. The remaining 20 feet within the permanent easement would be allowed to revegetate naturally. As a result, a 10-foot-wide corridor through both PSS and PFO wetlands would be permanently converted to emergent wetland. An additional 20-foot-wide corridor (extending 10 feet on either side of the 10-foot-wide corridor centered over each pipeline) through PFO wetlands would be permanently converted to PSS wetland.

Within the permanent easement, existing PFO wetlands would be converted to EEM, PEM, and PSS wetlands. While the conversion would not constitute a wetland loss, it would represent a potential permanent change in wetland function. The function and value of PFO wetlands within the maintained right-of-way would be altered as they would be converted to EEM, PEM, and PSS wetlands. It is expected that converted wetlands would continue to provide important ecological functions such as sediment/toxicant retention, nutrient removal and transformation, flood attenuation, and groundwater recharge/discharge. If a pipeline anomaly (i.e., corrosion, dent, rupture) is detected during routine inspections that could require pipeline excavation or replacement within a wetland, impacts would be similar to those described above for construction.

In addition to the mitigation measures required by the Commission's Procedures (which is part of PAPL's *Environmental Plan*), PAPL would be required to comply with the permit conditions attached to the USACE's section 404 permit, the Texas RRC's and LDEQ's section 401 permits, the TGLO's Coastal Zone Management Consistency Determination, and LDNR's Coastal Use Permit.

We received comments on the draft EIS from the TPWD stating that no [wetland] compensation was proposed in the EIS for any of the Texas Connector Project's wetland impacts. The TPWD further recommended that PAPL should compensate for all temporary and permanent wetland impacts identified for the Texas Connector Project as follows:

- Purchase the appropriate amount of in-kind wetland credits from the Pineywoods Mitigation Bank for impacts on forested wetlands and for impacts on freshwater, non-forested wetlands within the bank's secondary service area. Specifically, this includes project features associated with the northern pipeline (i.e., MPs 20.1 to 26.55 of the mainline; as well as the lateral pipelines, access roads, additional temporary workspaces, contractor yard 3, and the north compressor station).

- Increase the amount of compensation proposed at the WMA by incorporating estuarine wetland impacts.

The TPWD also stated that compensatory mitigation conducted on TPWD-owned lands must be done in a manner consistent with the mission of the TPWD, department policy, and applicable Texas laws (e.g., Chapter 26 of the Parks and Wildlife Code and Chapter 34 of the Natural Resources Code). The TPWD also commented that specific details of any habitat restoration activity would need to be reviewed on a case-by-case basis, and each project would need to be compatible with the short-term and long-term restoration needs and goals of the TPWD at the time the project is undertaken.

Similar to the Liquefaction Project discussed above (see section 4.4.2.1), PAPL is required to avoid wetland impacts to the extent practicable, and all unavoidable impacts must be minimized to the extent possible. Additionally, unavoidable wetland impacts must be offset by the creation, restoration, enhancement, or preservation of at least an equal amount of wetlands, which is referred to as compensatory mitigation by the USACE.

PAPL has indicated its intent to use credit purchase from USACE-approved mitigation banks and agency in-lieu fee programs to provide compensatory mitigation for both the Louisiana Connector and Texas Connector Projects. PAPL has provided applications to the USACE for both projects; however, the finalized *Compensatory Mitigation Plans* have not been provided.

With the implementation of the above measures, construction and operation of the proposed pipeline facilities would have short-term to permanent, but minor impacts on wetlands.

Texas Connector Project

Construction of the Texas Connector Project would affect 188.0 acres of PEM and EEM wetlands, 20.5 acres of PSS wetland, and 29.6 acres of PFO wetland (see table 4.4.2-1). Most of the wetland impacts resulting from construction and operation of the proposed project would be temporary, as the marsh and emergent vegetation would recover over time. However, operation of the project would result in the conversion of 6.6 acres (4.3 acres along the Northern Pipeline, 0.8 acre along the FGT Lateral, and 1.5 acres along the GTS Lateral) of PFO wetland to PEM or PSS wetland, as well a permanent loss of 3.0 acres at aboveground facilities and 0.4 acre at permanently maintained access roads.

About 120.6 acres of wetlands would be affected by construction of the Northern Pipeline and about 32.2 acres of wetlands would be affected by construction of the Southern Pipeline (see table 4.4.2-1). About 10.8 acres of wetlands would be affected by construction of pipeline laterals, including 3.0 acres for the GTS Lateral, 2.6 acres for the FGT Lateral, 1.3 acres for the KMPL Lateral, and 3.9 acres for the

NGPL Lateral. Temporary workspace within wetlands also totals 7.8 acres along the Northern Pipeline, 0.5 acre along the FGT lateral, and 1.7 acres along the GTS Lateral.

ATWS areas would affect 49.5 acres of wetlands (see table 4.4.2-1). Of these acreages, about 7.5 acres would be located within PFO wetlands. Although PFO wetlands would take longer to revegetate, all ATWS located in wetlands along the pipeline routes would be allowed to return to pre-existing conditions following restoration.

Construction and operation of the aboveground facilities associated with the Texas Connector Project would permanently convert 3.0 acres of wetlands to upland industrial use (see table 4.4.2-1), including less than 0.1 acre of PEM wetland at the North Compressor Station, 1.0 acre of ESS wetland at the KMLP Meter Station, and 2.0 acres of EEM wetland at the NGPL Meter Station (see section 4.4.3.2). Aboveground facilities were sited to be near proposed interconnects and on previously impacted lands. Due to the need to site these facilities in proximity to necessary interconnects, PAPL has indicated that wetland impacts are not avoidable at these locations.

Construction of access roads associated with the Texas Connector Project would impact about 21.8 acres of wetland, including 2.2 acres of PFO wetland. About 4.1 acres of these impacts would be permanent and PFO wetland would be converted to PSS and PEM wetland types.

Pipeline facilities would cross two wetlands enrolled in the Texas Prairie Wetland Program at MP 10.7 along the Northern Pipeline. To avoid impacts on Texas Prairie Wetland Program-enrolled wetlands, PAPL would cross these wetlands using the HDD method.

Louisiana Connector Project

Construction of the Louisiana Connector Project would affect 636.9 acres of wetlands, including 427.7 acres of marsh (PEM and EEM wetlands), 36.2 acres of PSS wetland, and 173.0 acres of PFO wetland (see table 4.4.2-1). Similar to the discussion for the Texas Connector Project, most of the wetland impacts resulting from construction and operation of the proposed project would be temporary, as the marsh and emergent vegetation would recover over time. However, operation of the project would result in the conversion of 68.7 acres of PFO wetland to EEM, PEM, or PSS wetland along the pipeline right-of-way. In addition, about 11.5 acres would be affected by permanently maintained access roads.

ATWS areas would affect 71.3 acres of wetlands (see table 4.4.2-1). Of this acreage, about 25.3 acres would be within PFO wetlands. Although PFO wetlands would take longer to revegetate, all ATWS located in wetlands along the pipeline routes would be allowed to return to pre-existing conditions following restoration.

Construction and operation of the compressor station would temporarily impact less than 0.1 acre of wetlands, of which a small amount is forested and actively disturbed by silviculture activities. Construction and operation of MLVs would result in about 0.1 acre of permanent wetland loss. Construction of access roads for the Louisiana Connector Project facilities would impact about 21.4 acres of wetland, including 0.8 acre of PFO wetlands. About 11.5 acres of these impacts would be permanent; 0.6 acre of forested wetland would be converted to PSS, PEM, or EEM wetlands. Aboveground facilities were sited to be near to proposed interconnects and on previously impacted lands. Due to the need to site these facilities in proximity to necessary interconnects, PAPL has indicated that wetland impacts are not avoidable at these locations.

In its comments on the draft EIS, the Coushatta Tribe of Louisiana noted that the results of wetland surveys on tribal trust lands had not yet been filed with FERC. While that is true, PAPL has filed an

application with the USACE, which has jurisdictional authority pursuant to section 404 of the CWA (33 USC 1344) over the discharge of dredged or fill material into WOUS. Based on desktop wetland information provided to FERC and listed in appendix K, the Louisiana Connector Project would cross about 2,893 feet of wetlands on Coushatta tribal trust lands, affecting about 11.6 acres during construction (1.4 acres PEM wetland, 10,2 acres PFO wetland) and 5.5 acres during operation (PFO wetland) of the project. The information on file at FERC is sufficient for us to draw solid conclusions regarding wetland impacts, while acknowledging that the USACE will be the specific permitting agency for overseeing mitigation of those impacts.

4.4.2.3 Nonjurisdictional Facilities

The relocation project was selected to accommodate space requirements of the liquefaction site, to comply with TDOT design requirements, to remain within property owned by PALNG, and to avoid wetlands, such as those that are present adjacent to Round Lake and the J.D. Murphree WMA. Relocation of SH 87 would result in impacts on about 140.8 acres of wetlands associated with the roadway and shoulders, and conversion of 45.1 acres for the roadway and maintained utility right-of-way. All areas outside the new roadway and maintained right-of-way would be allowed to revert to preconstruction conditions. PFO wetlands within the maintained utility right-of-way would revegetate to PEM or PSS wetlands. Wetland impacts associated with relocation of electrical transmission lines would be limited to the areas surrounding the structures.

4.4.3 Alternative Measures to the Commission's Procedures

4.4.3.1 Liquefaction Project

Section VI.A.6 of the Commission's Procedures states that aboveground facilities should be located outside of wetlands except where the location of such facilities outside of wetlands would prohibit compliance with DOT regulations. As described previously, PALNG proposes to construct the new liquefaction facility within a site that would affect 758.4 acres of wetlands during construction and 724.0 acres of wetlands during operation. Section 3.0 of this EIS provides an analysis of alternative liquefaction facility sites and concludes that, when multiple factors are considered, the proposed site is the environmentally preferable site. Further, the site was previously approved for use in 2006 (FERC Docket No. CP05-83-000). As such, we find that the placement of the liquefaction facility within wetlands is reasonable and adequately justified. In addition, PALNG would be required to comply with the conditions of its USACE permit, including the implementation of compensatory mitigation.

4.4.3.2 Texas Connector and Louisiana Connector Projects

Texas Connector Project

Additional Temporary Workspace

PAPL identified numerous locations where ATWS would be located partially or completely within wetlands. Per the Commission's Procedures (section VI.B.1), all extra workspace areas should be at least 50 feet away from wetland boundaries (expect where the adjacent upland consists of cultivated or rotated cropland or other disturbed land). If this is not feasible, the project sponsor should file a site-specific justification for each extra work area, including a discussion as to why the site-specific conditions do not permit a 50-foot setback and measures to ensure the wetland would be adequately protected.

PAPL's justification for each requested ATWS in a wetland is presented in appendix M. We have reviewed these requests and believe that, due to the presence of extensive wetlands along the pipeline routes,

there is no other reasonable or practical location for them except in wetlands and that these ATWS are necessary for installation of the pipeline.

Expanded Construction Corridor in Wetlands

Section VI.A.3 of the Commission's Procedures state that the construction right-of-way in wetlands be limited to 75 feet or less. If this is not feasible, the project sponsor must receive FERC approval where topographic conditions or soils limitations require that the construction right-of-way width in federally delineated wetlands be greater than 75 feet.

PAPL identified several areas where additional width would be needed in wetland areas; these are listed in appendix M. PAPL justifies its requests for additional width by citing previous experience with soils in the project area, which present additional challenges in establishing slope stability and containing spoil material along the temporary right-of-way due to saturated soil conditions. Additional space has been requested to allow for additional slope stability, and space for storage. Saturated soil conditions in wetlands, classified by the OSHA as Type C soils, are less cohesive than unsaturated soils, and require longer trench slopes to prevent safety concerns due to soil sloughing off the trench walls. This type of soil is also difficult to contain and requires additional measures to keep it from flowing off the right-of-way. Additionally, the need to operate excavators on semi-submersible mats or employ amphibious excavators in saturated environments may require additional space due to the size of the equipment. The proposed construction corridor as proposed would be 100 to 125 feet wide in wetlands.

Given the soil conditions along the route as described above and the size of the pipelines, we believe that it may not be feasible to maintain construction disturbance within a 75-foot-wide right-of-way. Therefore, in wetland areas where conventional construction methods would be used, we have no objection to the proposed construction right-of-way width (up to 125 feet).

Aboveground Facilities

Section VI.A.6 of the Commission's Procedures states that aboveground facilities should be sited outside of wetlands, except where such siting would prohibit compliance with DOT regulations. PAPL identified 3.0 acres of wetlands impacted construction by aboveground facilities associated with the Texas Connector Project, 3.0 of these acres being permanently converted to upland industrial use. PAPL justifies its request stating that aboveground facilities were sited based on project engineering requirements, DOT regulations, and minimization of wetland impacts to the extent practicable. Due to extensive wetlands in the project area, wetland avoidance was not feasible while complying with other regulatory and engineering requirements (e.g., tie-ins to existing pipelines). Based on these justifications, we have determined that the proposed deviations from the Commission's Procedures are reasonable and adequately justified.

Louisiana Connector Project

Additional Temporary Workspace

PAPL identified numerous locations where ATWS would be used partially or completely within wetlands. Our Procedures do not allow extra work space in wetlands without written approval for a variance. PAPL's justification for each requested ATWS in a wetland is presented in appendix M and include reasons for the ATWS such as soil stability or road crossing locations. We have reviewed these requests and believe that, due to the presence of extensive wetlands along the pipeline routes, there is no other reasonable or practical location for them except in wetlands and that these ATWS are necessary for installation of the pipeline.

Expanded Construction Corridor in Wetlands

Our Procedures do not allow for construction corridor in wetlands to exceed 75 feet in width without receiving written approval for a variance. PAPL has identified several areas where additional width would be needed in wetland areas, which are listed in appendix M. Similar to the Texas Connector Project, PAPL cites previous experience with soils in the project area (saturated soil conditions, classified by OSHA as Type C soils). The proposed construction corridor as proposed would be 100 to 125 feet wide.

Given the soil conditions along the route as described above and the size of the pipelines, we believe that it may not be feasible to maintain construction disturbance within a 75-foot-wide right-of-way. Therefore, in wetland areas where conventional construction methods would be used, we have no objection to the proposed construction right-of-way width (up to 125 feet).

Aboveground Facilities

Section VI.A.6 of the Commission's Procedures states that aboveground facilities should be sited outside of wetlands, except where such siting would prohibit compliance with DOT regulations. PAPL identified 0.2 acre of wetlands that would be impacted construction of aboveground facilities associated with the Louisiana Connector Project. PAPL justifies its request stating that aboveground facilities were sited based on project engineering requirements, DOT regulations, and minimization of wetland impacts to the extent possible. Due to extensive wetlands in the project area, wetland avoidance was not practicable while complying with other regulatory and engineering requirements. Based on these justifications, we have determined that the proposed deviations from the Commission's Procedures are reasonable and adequately justified.

4.5 VEGETATION

4.5.1 Existing Vegetation Resources

4.5.1.1 Liquefaction Project

The Liquefaction Project would be within the Western Gulf Coastal Plain level III ecoregion, which is a relatively flat area adjacent to the Gulf of Mexico. The dominant natural vegetation is grassland and land uses include cropland, developed land, and oil and gas production (Griffith et al., 2007). The project is in the Texas-Louisiana Coastal Marshes level IV ecoregion, which extends east from Galveston Bay along the coast of Texas and Louisiana to the Marsh Island area, and is characterized by lakes, rivers, bayous, tidal channels, and canals. The estuarine and marsh complex supports numerous grass species, waterfowl, small mammals, alligators, shrimp, oysters, and sport fishery species (USGS, 2017).

The TPWD has further subdivided the Texas ecoregions into three sub-regions (TPWD, 2012), of which the Liquefaction Project falls within the upper sub-region, which includes areas adjacent to Sabine Lake and Galveston Bay.

The Liquefaction Project would be on a previously disturbed parcel that is atypical of the coastal marsh area due to alteration of hydrology by leveeing and placement of fill. The site was selected based on avoiding, to the extent practical, unique vegetation communities, while still providing sufficient area and the required orientation for the slip relative to the Port Arthur Ship Canal. Thus, the parcel meets the requirements for spacing between the liquefaction-related facilities and the relocation of SH 87 in compliance with TDOT requirements. Exotic invasive plant species have established dominance over large portions of the proposed liquefaction site, which has altered the vegetation complex such that native plant species are completely absent in many locations on the property. A limited amount of forested cover is found on the site, primarily along previous dredge material deposit levee edges. These forested areas are highly invaded by Chinese tallow.

PALNG's field surveys identified four vegetation cover types at the liquefaction site: PEM wetlands, EEM wetlands, PSS wetlands, and open upland. Most of the vegetated land that would be affected by the project is open wetland (758.3 acres) followed by open land uplands (87.0 acres). Due to the installation of Jefferson County's new boat ramp and bulkhead at Keith Lake, some of the EEM wetlands in the project area are separated from tidal flow and are converting to brackish or PEM wetlands. Wetland vegetation types, acres impacted by wetland vegetation type, measures to minimize impacts, and compensatory mitigation for unavoidable impacts are discussed in detail in section 4.4.2.1. Thus, our evaluation of impacts in this section focuses on the upland vegetation at the liquefaction site.

4.5.1.2 Pipeline Projects

Texas Connector Project

The Texas Connector Project is within the Western Gulf Coastal Plain level III ecoregion. Within this, the south segment of the Texas Connector Project is in the Texas-Louisiana Coastal Marshes level IV ecoregion. The north segment would pass through approximately 17 miles of this ecoregion as well as 9 miles of the Northern Humid Gulf Coastal Prairies level IV ecoregion. This coastal plain traditionally supported mostly grassland species with clusters of oaks or maritime woodlands, but has mostly been converted to cropland, rangeland, pasture, or urban land uses and has been heavily invaded by non-native species such as Chinese tallow (USGS, 2014).

Coastal prairies native to the Northern Humid Gulf Prairies and Texas-Louisiana Coastal Marshes ecoregions in the project area have largely been converted to rangeland, cropland, pasture, and developed land uses. The Texas Connector Project falls within the TPWD-defined upper sub-region, which includes areas adjacent to Sabine Lake and Galveston Bay.

The Texas Connector Project area is comprised of forested uplands; upland open lands, scrub-shrub uplands, agricultural lands (including pasture lands), and PFO, PSS, PUB, PEM, and EEM wetlands. Forested uplands in the Texas Connector Project area are dominated by species in the tree stratum, including loblolly pine, (*Pinus taeda*), American sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), sugar-berry (*Celitus laevigata*), water oak (*Quercus nigra*), and the invasive Chinese tallow (*Triadica sebifera*). Upland open lands are characterized by herbaceous vegetation such as Bermuda grass (*Cynodon dactylon*), golden crown grass (*Paspalum dilatatum*), annual ragweed (*Ambrosia artemisiifolia*), southern dewberry (*Rubus trivialis*), perennial rye grass (*Lilium perenne*), brown-seed crown grass (*Paspalum plicatulum*), and Bahia grass (*Paspalum notatum*). Scrub-shrub uplands typically consist of low woody vegetation such as yaupon (*Ilex vomitoria*), southern bayberry (*Morella cerifera*), groundsel tree (*Baccharis halimifolia*), fringed greenbriar (*Smilax bonanox*), and southern dewberry (*Rubus trivialis*). Agricultural lands in the project area are used for pasture and include vegetation such as golden crown grass, Bermuda grass, brown-seed crown grass, Bahia grass, red clover (*Trifolium pretense*), and white clover (*Trifolium repens*). Wetland vegetation types, acres impacted by wetland vegetation type, measures to minimize impacts, and compensatory mitigation for unavoidable impacts are discussed in detail in section 4.4.2.1.

Louisiana Connector Project

The Louisiana Connector Pipeline Project is within both the Western Gulf Coastal Plain and South Central Plains Level III ecoregions. The Western Gulf Coastal Plain is discussed above, while the South Central Plains ecoregion is characterized by rolling plains typically used for timber production, livestock grazing, and oil and gas production (USGS, 2014). Within this larger ecoregion, the Louisiana Connector Project crosses four level IV ecoregions: the Texas-Louisiana Costal Marshes, Northern Humid Gulf Coastal Prairies, Flatwoods, and Lafayette Loess Plains. The Texas-Louisiana Costal Marshes and Northern Humid Gulf Coastal Prairies are discussed in section 4.5.1.1 and the Texas Connector Project section, respectively, above. The Flatwoods ecoregion tends to be flat to gently sloping and was once dominated by longleaf pine flatwoods and savannas. The Lafayette Loess Plains originally supported prairie species such as big bluestem, little bluestem, yellow Indiangrass, and switchgrass. However, it has largely been converted to agricultural land use (USGS, 2014). The Texas portion of the Louisiana Connector Project falls within the TPWD-defined upper sub-region, which includes areas adjacent to Sabine Lake and Galveston Bay. The State of Louisiana does not further divide level IV ecoregions.

The Louisiana Connector Project area consists of upland open lands, agricultural lands, forested uplands (including pine plantations), scrub-shrub uplands, and PEM, EEM, PFO, and PSS wetlands. Upland open lands are characterized by herbaceous vegetation as described in the Texas Connector Project discussion above. Wetland vegetation types, acres impacted by wetland vegetation type, measures to minimize impacts, and compensatory mitigation for unavoidable impacts are discussed in detail in section 4.4.2.1.

Agricultural lands in the project area are used for cultivated or rotated cropland, orchards, vineyards, and hay fields. Typical crops include rice, soybeans, corn, and sugarcane (USGS, 2014). Forested uplands in the project area are dominated by species in the tree stratum, including southern live oak (*Quercus virginiana*), post oak (*Quercus stellata*) slash pine (*Pinus elliotti*), loblolly pine, (*Pinus taeda*), American sweetgum, southern magnolia (*Magnolia grandiflora*), and greenbriar. Pine plantation species are typically monocultures of slash or loblolly pine.

Open water crossed by the project includes Sabine Lake (MP 0.8 to MP 17.6) as well as the waterbody flows to Black Bayou (MP 22.9 to MP 24.5). The Sabine Lake crossing entrance and exits would be constructed using the HDD method, resurfacing about 500 feet from the shoreline, reducing impacts on the shoreline and associated vegetation habitats. Seagrasses have been extirpated from Sabine Lake and as such, no impacts on seagrasses are anticipated (NOAA, 2004). The waterbody flows to Black Bayou would be crossed using the push-pull method described in section 2.4.3.2.

4.5.1.3 Nonjurisdictional Facilities

Nonjurisdictional facilities associated with the Liquefaction Project include the relocation of SH 87 and existing pipelines and utilities to accommodate the proposed marine facilities. The relocation of the highway, pipelines, and utilities would require a new 295-foot-wide temporary right-of-way adjacent to an existing transmission corridor. The existing vegetation along the nonjurisdictional corridor is predominantly PEM and PSS wetland, with a small amount of forested upland and open water habitat. The vegetation at this site is the same as described above for the Liquefaction Project.

4.5.2 Construction and Operation Impacts and Mitigation

Table 4.5-1 provides acreages of vegetation cover types that would be affected by construction and operation of the Projects. Project-specific discussions follow the table. Wetland impacts are discussed in greater detail in section 4.4.

TABLE 4.5-1

Vegetation Impacts from Construction and Operation of the Projects

	Forested [a]				Open Land [b]					
	Upland		Wetland [c]		Upland		Wetland [c]		Totals	
Project, State, Facility	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.
LIQUEFACTION PROJECT										
Texas										
Jurisdictional Facilities	-	-	-	-	87.0	82.3	758.3	725.7	845.3	808.0
Dredge Disposal Areas [d]										
J.D. Murphree WMA	-	-	-	-	-	-	903.0	903.0	903.0	903.0
Sabine Neches Areas 9A and 9B	-	-	-	-	-	-	481.0	481.0	481.0	481.0
Sabine Neches Area 8	93.6	93.6	14.3	14.3	3.1	3.1	2,839.8	2,839.8	2,950.8	2,950.8
Nonjurisdictional Facilities	-	-	-	-	2.6	1.1	112.5	42.4	115.1	43.5
Liquefaction Project Total	**93.6**	**93.6**	**14.3**	**14.3**	**92.7**	**86.5**	**5,094.6**	**4,991.9**	**5,295.2**	**5,186.3**
TEXAS CONNECTOR PROJECT										
Louisiana										
Pipeline Right-of-Way and ATWS										
PAPL South	-	-	-	-	0.5	0.1	2.5	0.7	3.0	0.8
KMPL Lateral	-	-	-	-	-	-	1.8	0.5	1.8	0.5
KMPL Meter Station	-	-	-	-	-	-	3.0	3.0	3.0	3.0
Access Roads	-	-	-	-	0.2	0.2	1.1	0.4	1.3	0.6
Texas										
Pipeline Right-of-Way and ATWS										
PAPL South	0.2	0.1	-	-	4.6	1.0	34.6	12.7	39.4	13.8
PAPL North	1.8	0.0	20.3	4.3	137.8	43.1	141.7	41.3	301.6	88.7
NGPL Lateral	-	-	-	-	-	-	4.0	1.3	4.0	1.3
HPL Lateral	-	-	-	-	0.7	0.5	-	-	0.7	0.5
TETCO Lateral	-	-	-	-	1.9	0.7	-	-	1.9	0.7
FGT Lateral	-	-	2.5	0.8	18.3	5.9	0.4	0.1	21.2	6.8
GTS Lateral	0.4	-	-	1.5	5.5	1.2	0.2	-	6.1	2.7
NGPL Lateral to Meter Station	-	-	-	-	0.0	0.0	0.5	0.2	0.6	0.2

TABLE 4.5-1 (cont'd)

Vegetation Impacts from Construction and Operation of the Projects

	Forested [a]				Open Land [b]					
	Upland		Wetland [c]		Upland		Wetland [c]		Totals	
Project, State, Facility	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.
Aboveground Facilities										
North Compressor Station	-	-	-	-	40.3	40.3	-	-	40.3	40.3
South Compressor Station	-	-	-	-	-	-	-	-	-	-
NGPL Meter Station	-	-	-	-	-	-	-	-	-	-
HPL Meter Station	-	-	-	-	3.0	3.0	-	-	3.0	3.0
TETCO Meter Station	-	-	-	-	2.8	2.8	-	-	2.8	2.8
FGT Meter Station	-	-	-	-	3.0	3.0	-	-	3.0	3.0
GTS Meter Station	-	-	-	-	-	-	-	-	-	-
Tie-in to GTS Lateral	-	-	-	-	0.2	0.2	-	-	0.2	0.2
MLV	-	-	-	-	0.1	0.1	-	-	0.1	0.1
Pipe/Contractor Yards	-	-	-	-	19.8	-	-	-	19.8	-
Access Roads	-	-	2.2	-	14.2	0.5	18.7	0.1	35.1	0.6
Texas Connector Project Total	**2.4**	**0.1**	**25.0**	**6.6**	**252.9**	**102.6**	**208.5**	**60.3**	**482.8**	**169.6**
LOUISIANA CONNECTOR PROJECT										
Texas										
Pipeline Right-of-Way and ATWS										
Mainline	-	-	-	-	-	-	0.1	-	0.1	-
Aboveground Facilities	-	-	-	-	-	-	-	-	-	-
PALNG Meter Station [e]	-	-	-	-	-	-	-	-	-	-
Centana Meter Station [e]	-	-	-	-	-	-	-	-	-	-
Pipe/Contractor Yards	-	-	-	-	-	-	-	-	-	-
Access Roads	-	-	-	-	-	-	-	-	-	-
Louisiana										
Pipeline Right-of-Way and ATWS										
Mainline	411.0	134.9	171.8	68.0	539.0	203.2	439.9	164.3	1561.7	570.5
Compressor Station Lateral #1 and #2	-	-	-	-	0.1	0.1	-	-	0.1	0.1
TGP Lateral	-	-	-	-	-	-	-	-	-	-
EGAN Lateral	-	-	-	-	0.8	0.3	-	-	0.8	0.3
Pine Prairie Lateral	-	-	-	-	-	-	-	-	-	-
Texas Gas Lateral	-	-	-	-	-	-	-	-	-	-
ANR Lateral	-	-	-	-	2.1	0.9	-	-	2.1	0.9
Aboveground Facilities										
Holbrook Launcher and Receiver	0.1	0.1	-	-	0.3	0.3	-	-	0.4	0.4
Compressor Station	53.0	45.0	-	-	0.8	0.1	-	-	53.8	45.1
MLV #1	-	-	-	-	-	-	0.1	0.1	0.1	0.1
MLV #2	-	-	-	-	-	-	0.1	0.1	0.1	0.1
MLV #3	-	-	-	-	-	-	0.1	0.1	0.1	0.1
MLV #4	-	-	-	-	-	-	-	-	0.1	0.1
MLV #5	-	-	-	-	0.1	0.1	-	-	0.1	0.1
MLV #6	-	-	-	-	-	-	0.1	0.1	0.1	0.1
MLV #7	0.1	0.1	-	-	-	-	-	-	0.1	0.1
MLV #8	0.1	0.1	-	-	-	-	-	-	0.1	0.1
MLV #9	-	-	-	-	-	-	-	-	-	-
TETCO Meter Station	3.0	3.0	-	-	0.2	0.1	-	-	3.2	3.1
TGP Meter Station	-	-	-	-	3.3	3.1	-	-	3.3	3.1
EGAN Meter Station	-	-	-	-	3.4	3.1	-	-	3.4	3.1

TABLE 4.5-1 (cont'd)

Vegetation Impacts from Construction and Operation of the Projects

	Forested [a]				Open Land [b]					
	Upland		Wetland [c]		Upland		Wetland [c]		Totals	
Project, State, Facility	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.
Pine Prairie Meter Station	-	-	-	-	3.8	3.3	-	-	3.8	3.3
Texas Gas Meter Station	-	-	-	-	2.9	2.7	-	-	2.9	2.7
ANR Meter Station	-	-	-	-	3.5	3.2	-	-	3.5	3.2
CGT Meter Station	-	-	-	-	3.3	3.1	-	-	3.3	3.1
Pipe/Contractor Yards	61.5	-	-	-	205.6	-	3.2	-	270.3	-
Access Roads	17.7	1.2	0.8	0.4	91.7	2.0	20.3	4.0	130.5	7.5
Louisiana Connector Project Total	**546.4**	**184.3**	**172.5**	**68.4**	**860.9**	**225.4**	**463.8**	**168.5**	**2,044.1**	**647.2**
Texas Total	**96**	**93.7**	**39.3**	**20.9**	**344.9**	**188.8**	**5,294.8**	**5,047.6**	**5,775.2**	**5,351**
Louisiana Total	**546.5**	**184.4**	**172.6**	**68.4**	**861.6**	**225.9**	**472.2**	**173.3**	**2,053.0**	**652.1**
PROJECTS TOTAL	**642.5**	**278.1**	**211.9**	**89.3**	**1,206.5**	**414.7**	**5,767.0**	**5,220.9**	**7,828.1**	**6,003.1**

[a] Includes PFO under the wetland heading.

[b] Open uplands include open lands and agricultural lands. Open wetlands include PEM, EEM, PSS, and ESS wetlands, discussed further in table 4.4.2-1. Residential lands, developed lands, and open water land uses (per tables in section 4.8) are excluded as they are not typically considered vegetated lands.

[c] See section 4.4.2 and table 4.4.2-1 for detailed wetland impacts based on field surveys and PALNG's and PAPL's applications with the USACE.

[d] Dredge disposal pipelines associated with transferring material to these locations would be placed on the surface and not require the removal of vegetation.

[e] Facilities would be constructed within the liquefaction facility property boundaries; therefore, these impacts are not included in the table.

Notes: Table does not include impacts on open water or developed land.
Addends may not sum due to rounding.

4.5.2.1 Liquefaction Project

Table 4.5-1 provides acreages of vegetation cover types that would be affected by construction and operation of the Liquefaction Project. Upland vegetation is primarily open land at the terminal site. No silvicultural or agricultural lands would be affected.

Of the 845.3 acres of vegetated land (which excludes open water and developed lands) affected by the project, 808.0 acres would be converted to industrial use by being permanently filled with gravel or other material (e.g., asphalt), and 151.0 acres of open water would be created for project operations. Vegetation would be removed at the ground surface using mechanical or manual methods, or a combination of the two, and/or by burning the vegetation. Following construction, temporarily impacted areas would be restored to their original contours and revegetated per landowner or NRCS recommendations in accordance with the Commission's Plan and Procedures, which are part of PALNG's *Environmental Plan*.[23] Additional details of construction procedures are provided in section 2.0.

Dredge materials removed by construction of the Liquefaction Facility would be deposited in four areas: the J.D. Murphree WMA, and the existing SNND Dredge Disposal Areas 8, 9A, and 9B. The J.D. Murphree WMA borders the Liquefaction Project to the west and is managed by the TPWD. The WMA is classified as estuarine wetland marsh and open water. Field surveys conducted in May 2016 determined that the dominant species is marsh hay cord grass (*Spartina patens*). Other species present include leafy three-square (*Schoenoplectus robustus*), saltgrass (*Distichlis spicata*), and smooth cordgrass (*Spartina*

23 The *Environmental Plan* for the Liquefaction Project was filed on November 29, 2016 and can be found on the FERC eLibrary website using Accession Number 20161129-5254.

alterniflora). Marsh area is being lost at a rapid rate due to subsidence, erosion, and saltwater intrusion (TPWD, 2017). The beneficial use of dredge material would assist in restoring elevation to the WMA. Dredge Disposal Areas 9A and 9B are classified as PEM wetland and encompass about 481 acres. Dredge Disposal Area 8 is classified as PEM and EEM wetlands (forested and marshes), grassland uplands, and open water and encompasses about 3,565 acres. No additional restoration activities are proposed as the sites are existing permitted dredge disposal locations operated by the SNND and permitted as such by the USACE. Vegetation clearing would not be required for these dredge disposal pipelines and, therefore, impacts on vegetation would not occur.

Transport of the dredge material would be conducted by the use of temporary, above ground 30-inch-diameter pipelines to their respective sites where the dredge material would be placed on the surface. Project-related dredge material placement at the J.D. Murphree WMA would affect 903.0 acres of EEM wetlands. Once dredge materials are placed on the site, TPWD would require that revegetation consist of planting bare-root stems or potted plants to promote the re-establishment of vegetative cover within two to three growing seasons. As such, no permanent impacts in the form of lost vegetation are anticipated.

Although impacts on vegetation would be permanent, the severity of impacts would be decreased when considering the disturbed condition of the area, including its past function as a dredge disposal area and its tidal isolation; the established presence of the invasive exotic Chinese tallow; and the proposed beneficial use of dredge material to re-create EEM wetlands on the J.D. Murphree WMA. PALNG's implementation of its project-specific *Environmental Plan*, which require the use of temporary and permanent erosion control measures, revegetation procedures, and post-construction monitoring, would further minimize impacts on vegetation communities within and adjacent to the liquefaction facility. Due to the limited vegetation diversity caused by previous use as a dredge disposal site and the proposed beneficial use of dredge material to re-create EEM wetlands, impacts on vegetation from construction and operation of the liquefaction facility would be permanent, but minor.

4.5.2.2 Texas Connector and Louisiana Connector Projects

Construction and operation of the Texas Connector and Louisiana Connector Projects would be conducted using similar, industry-recognized methods and mitigation measures. As such, the following discussions apply to both pipeline projects. Differences in methods or mitigation measures are described separately as appropriate by project.

Construction of the Texas Connector Project would disturb a total of 482.8 acres of vegetated land, and construction of the Louisiana Connector Project would disturb a total of 2,044.1 acres of vegetated land. Table 4.5-1 provides acreages of vegetation cover types that would be affected by construction and operation of the projects.

The duration and magnitude of impacts on vegetation would depend on the type and amount of vegetation affected, the rate at which vegetation regenerates after construction, and the frequency of vegetation maintenance conducted on the right-of-way during pipeline operation. In addition, right-of-way revegetation would depend on factors such as soil types, right-of-way maintenance practices, and land use. The Texas Connector and Louisiana Connector Projects would cause minor and generally short-term changes on agricultural land, herbaceous wetlands, and upland open land because these areas would revegetate within 1 to 4 years. Impacts on upland forested areas that are not located in areas of regular mowing would be longer term, though species common to southern pine forests (such as loblolly pine) tend to grow quickly, adding up to 2 feet of height growth per year (Texas Forest Service, Texas A&M University System, 2010). Deciduous hardwood species such as the sweet gum and red maple also tend to grow at a medium to fast rate (Arbor Day Foundation, 2017).

Impacts on vegetation associated with installation of the pipeline primarily would be caused by vegetation clearing within the construction right-of-way and associated ATWS. Except for areas that would be crossed by HDD, vegetation would be cleared from the entire working right-of-way. Vegetation would be removed at the ground surface using mechanical or manual methods. Following vegetation removal, the construction right-of-way would be graded to allow for safe, level working conditions. Once the pipeline is installed, the trench would be backfilled, and the temporary right-of-way would be revegetated according to PAPL's *Environmental Plan*.[24]

Following construction, the permanent right-of-way generally would be 50 feet wide. In wetlands, a 10-foot-wide corridor centered over the centerline would be regularly mowed and maintained in an herbaceous state to facilitate periodic pipeline corrosion/leak surveys. Typically, PAPL would not reseed actively cultivated crop lands unless requested by the landowner. Within forested areas, landowners would be allowed to replant temporary work areas; however, the 50-foot-wide permanent easements would be maintained in an herbaceous state. PAPL would monitor disturbed areas until restoration and revegetation are successful. At a minimum, on the ground inspections would be performed for 3 years following construction. Impacts associated with ATWS would be temporary as these areas would be allowed to return to preconstruction conditions following construction.

Upland forested areas within the permanent easement would be permanently converted to herbaceous cover. Of the 548.8 acres of upland forest that would be cleared during construction of the project, PAPL would permanently maintain 184.4 acres in an herbaceous state. Within wetlands, PAPL would maintain a 10-foot-wide strip over the pipeline in an herbaceous state, and would selectively remove trees located within 15 feet of the pipeline that have roots that could compromise the integrity of the pipeline coating. Of the 197.5 acres of forested wetland that PAPL would clear during construction, about 75.0 acres would be permanently converted to herbaceous or scrub-shrub wetland within this 30-foot-wide permanently maintained corridor. In temporary work areas (temporary rights-of-way and ATWS) where upland forest and forested wetland would be allowed to regrow, impacts would be long term because re-establishment to preconstruction conditions could take 10 to 30 years, depending on the species type.

PAPL would minimize impacts on vegetation communities affected by pipeline construction by collocating the Texas Connector Project with existing pipelines and utilities for 43 percent of the routes and the Louisiana Connector Project for 73 percent of its route. Additionally, PAPL proposes to install the pipelines using the HDD method at 25 locations along the Texas Connector Project and at 26 locations along the Louisiana Connector Project (see table 2.4.3-1), which would avoid or minimize impacts on riparian vegetation and wetland communities, including forested wetlands. Vegetation clearing would be minimal between HDD entry and exit locations during construction and operation of the project, apart from a minor hand-cut line path, which may be necessary to allow for the placement of a tracing wire to ensure HDD accuracy. Approximately 3 acres would be affected by clearing and construction mat placement between HDD entry and exit points on the Texas Connector Project. Approximately 410.0 acres of vegetation impacts would be avoided by use of the HDD method.

The J.D. Murphree WMA would be crossed by the Northern Pipeline between approximate MPs 4 and 6 (Big Hill Unit) and MPs 10 and 12 (Hillebrandt Unit), and by the South Pipeline between approximate MPs 0 and 2 (Salt Bayou Unit) (see figure 4.5.2-1). Use of the HDD crossing method at these locations would reduce direct impacts on the WMA.

24 *Environmental Plans* for the Texas Connector Project and Louisiana Connector Project were filed on December 12, 2017 and October 16, 2017, respectively. These plans can be found on the FERC eLibrary website using Accession Numbers 20171212-5147 (Texas Connector Project) and 20171016-5210 (Louisiana Connector Project).

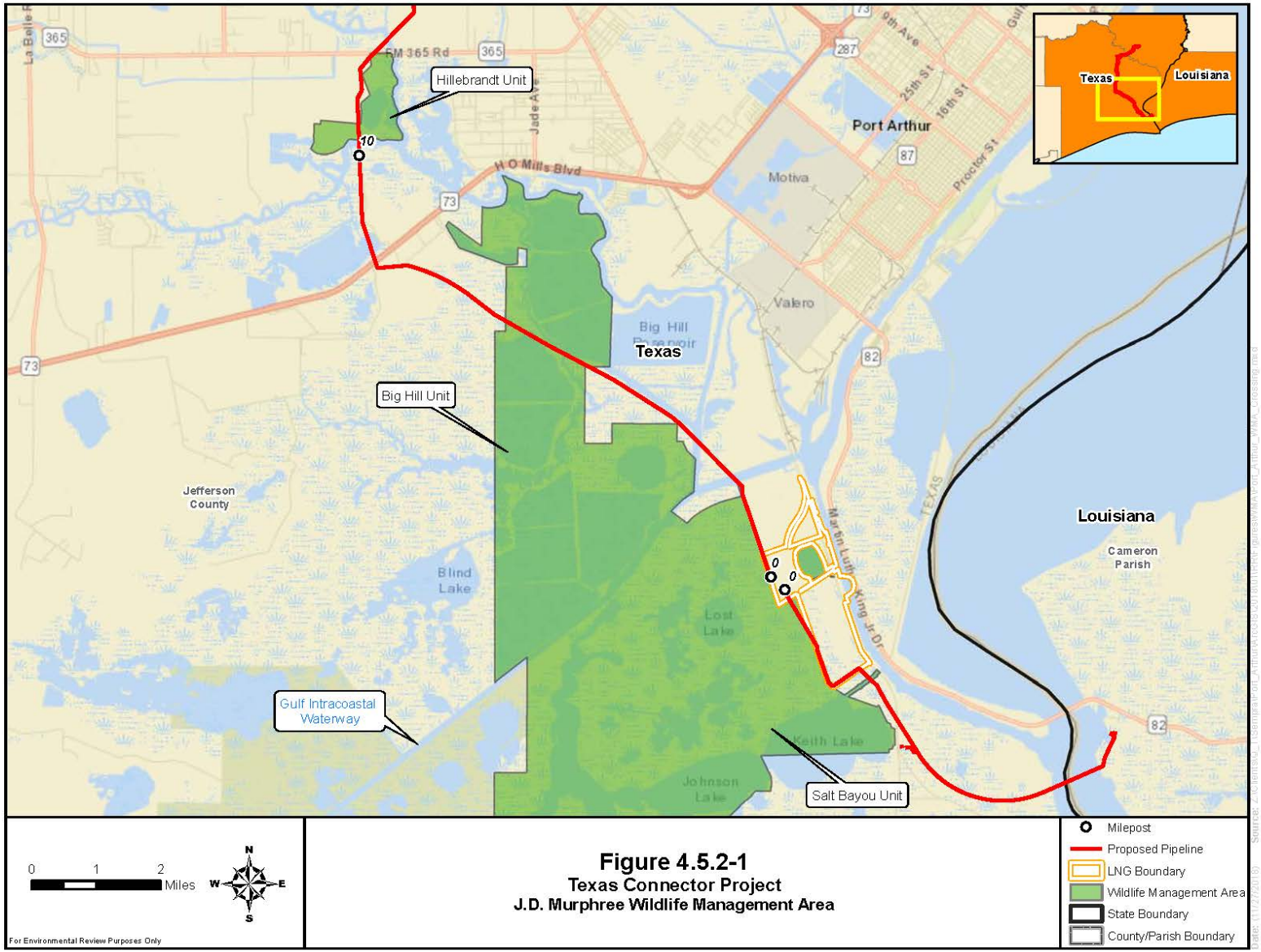


Figure 4.5.2-1
Texas Connector Project
J.D. Murphree Wildlife Management Area

PAPL's implementation of its *Environmental Plan*, which require the use of temporary and permanent erosion control measures, topsoil segregation in select areas, testing and mitigation for soil compaction, post-construction monitoring, and limited routine vegetation maintenance would further minimize impacts on vegetation. All disturbed areas would be routinely monitored until restoration and revegetation are successful. Impacts on wetlands would be addressed through the implementation of PAPL's Compensatory Mitigation Plan (see section 4.4.2.1).

Construction and operation of the compressor stations, meter stations, MLVs, and pig launchers and receivers associated with the Texas Connector Project would affect 49.4 acres of vegetated land (see table 4.5-1). Construction of the compressor stations, meter stations, MLVs, and pig launchers and receivers associated with the Louisiana Connector Project would affect 78.0 acres of vegetated land (see table 4.5-1). Of these impacts, all of those associated with the Texas Connector Project and 67.4 acres associated with the Louisiana Connector Project would be permanently impacted by project operations at aboveground facilities.

In addition, a total of 49.4 acres of vegetated land would be affected by pipe storage/contractor yards and access roads associated with the Texas Connector Project during construction, of which 0.6 acre would be used in operations. A total of 400.8 acres of vegetated land would be affected by pipe storage/contractor yards and access roads associated with the Louisiana Connector Project during construction, of which 7.5 acres would be used during operations. Project construction would require vegetation clearing and grubbing within the construction workspace, surface grading, and placement of permanent fill for facility operations. PAPL would grade and re-gravel the sites as necessary. Following construction, PAPL would restore the sites to pre-construction conditions in adherence to its *Environmental Plan* and/or the areas would be allowed to revegetate naturally.

Specific to the Louisiana Connector Project, 170.3 acres of open water would be affected by use of the barge lay method of construction in Sabine Lake and 40.2 acres would be affected during operations. Submerged aquatic vegetation may be present, though no surveys have been done to confirm presence. The barge lay construction method is discussed in detail in section 2.4.3.1.

Based on the amounts and types of vegetation impacted along the pipeline routes, the temporary nature of the impacts, and PAPL's proposed impact minimization measures, construction and operation of the Texas Connector and Louisiana Connector Projects would not have a significant impact on vegetation communities in the project areas.

4.5.2.3 Nonjurisdictional Facilities

Construction of the nonjurisdictional facilities associated with the Liquefaction Project would temporarily affect a total of 115.1 acres of vegetation, including 112.5 acres of open wetlands, and 2.6 acres of open uplands. A total of 71.6 acres would be revegetated in accordance with PALNG's *Environmental Plan*, which includes the Commission's Plan and Procedures, using seed mixes following landowner or NRCS recommendations. The remaining 43.5 acres would be permanently converted to developed land associated with the paved road surface.

4.5.3 Exotic or Invasive Plant Communities and Noxious Weeds

Exotic plant communities, invasive species, and noxious weeds can out-compete and displace native plant species, thereby negatively altering the appearance, composition, and habitat value of affected areas. In accordance with the Plant Protection Act of 2000 (7 USC 7701), 13 plants have been federally designated as noxious weeds that could occur in Louisiana (NRCS, 2010), and the State of Louisiana has designated one plant as a noxious weed, Chinese tallow (Louisiana Revised Statutes Title 3 Part 1791).

The Texas Department of Agriculture defines a noxious and invasive plant as any plant species that has a serious potential to cause economical or ecological harm to the agriculture, horticulture, native plants, ecology and waterways of Texas (Texas Department of Agriculture, 2016). A total of 26 noxious plants are listed with four of those also listed as invasive, including the Chinese tallow tree. The state of Texas has created noxious weed control districts to assist in the reclamation of land from noxious weeds in the interest of conservation and development of natural resources in the state (Texas Agriculture Code, Title 5, Subtitle B, Chapter 78).

4.5.3.1 Liquefaction Project

Field surveys identified that Chinese tallow, Japanese honeysuckle, and Chinaberry tree fern were present at the liquefaction site. Because the site would be cleared of vegetation and maintained in such state, no invasive species controls are anticipated. Invasive species present at the nonjurisdictional facilities would be periodically mowed by TDOT or controlled by the owner of each of the other nonjurisdictional facilities, in accordance with their requirements.

4.5.3.2 Texas Connector and Louisiana Connector Projects

Vegetation communities are more susceptible to infestations of invasive or noxious weed species following soil disturbances. Vegetation removal and soil disturbance during construction of the Texas Connector Project could create optimal conditions for the establishment or spread of undesirable species. Invasive or noxious plants could negatively affect habitat by competing for resources such as water and light, changing the community composition, eliminating or reducing native plants, or changing the vegetation structure. The changes in community composition or vegetation structure could reduce native plant populations and can also negatively affect wildlife habitat.

Chinese tallow and alligator weed (both on the Texas noxious plant list) were identified in the Texas Connector Project area. PAPL proposes to control Chinese tallow and alligator weed through routine mowing of the right-of-way. The presence of invasive species along the Louisiana Connector Project was observed during wetland delineations. Chinese tallow was identified in upland areas and alligator weed and water hyacinth were observed in canals and drainage ditches.

PAPL proposes to control Chinese tallow through a management approach of leaf spraying per consultation with the NRCS. PAPL's *Environmental Plan* details measure that would be implemented to minimize the spread of aquatic invasive species, including equipment inspection and invasive species removal before equipment arrives on site, during in-stream work, and before equipment leaves the worksite.

PAPL also would implement the measures in the Commission's Plan and Procedures, which require post-construction monitoring for the first and second growing seasons in uplands, and for 3 years in wetlands, to evaluate the success of revegetation. As part of this monitoring program, PAPL would be required to examine the project areas for the presence of invasive species. In non-agricultural upland areas, revegetation would be considered successful if the density and cover of non-nuisance species within the areas disturbed during construction are similar to the density and cover in adjacent undisturbed areas. Wetland revegetation would be considered successful if all the following criteria are satisfied:

- The affected wetland satisfies the current federal definition for a wetland (i.e., soils, hydrology, and vegetation).
- Vegetation is at least 80 percent of either the cover documented for the wetland prior to construction, or at least 80 percent of the cover in adjacent wetland areas that were not disturbed by construction.

- If natural rather than active revegetation was used, the plant species composition is consistent with early successional wetland plant communities in the affected ecoregion.

- Invasive species and noxious weeds are absent, unless they are abundant in adjacent areas that were not disturbed by construction.

PAPL and PALNG have committed to incorporating the measure in the Commission's Plan requiring them to develop specific procedures in coordination with the appropriate agencies to prevent the introduction or spread of invasive species, noxious weeds, and soil pests resulting from construction and restoration activities. These measures would adequately minimize the colonization and/or spread of noxious and invasive species in areas disturbed by the Projects.

4.5.4 Vegetation Communities of Special Concern

4.5.4.1 Liquefaction Project

Vegetation communities of special concern may include ecologically important natural communities, threatened or endangered plant species, or other rare or imperiled plants in need of special protection or minimal disturbance. No critical habitat or vegetation communities of special concern have been identified in the project area, including both jurisdictional and nonjurisdictional facilities. Protected state plant species potentially occurring within the project area are discussed in section 4.7.

4.5.4.2 Texas Connector and Louisiana Connector Projects

Federally listed plant species are discussed in section 4.7.3 and state-listed plant species are discussed in section 4.7.4. The FWS indicated concern regarding regrowth of marsh grasses due to compaction from heavy construction equipment. PAPL has committed to monitoring the pipeline rights-of-way according to regulatory permit conditions and would coordinate with regulatory agencies to address regrowth issues if identified. In accordance with the Commission's Plan, restoration of disturbed areas would be considered successful if the right-of-way surface condition is similar to adjacent undisturbed lands and revegetation efforts would continue until revegetation is successful. In accordance with the Commission's Procedures, wetland revegetation would be considered successful if vegetation is at least 80 percent of either the cover documented for the wetland prior to construction, or at least 80 percent of the cover in adjacent wetland areas not disturbed by construction.

The LNHP identified two unique vegetation communities affected by the Louisiana Connector Project. The project would cross the Coastal Prairie community between MPs 34.5 and 38.5. This community is considered S1 (critically imperiled) in Louisiana. This community type is typically dominated by grass species such as brownseed paspalum (*Paspalum plicatulum*), little bluestem (*Schizachyrium scoparium*), slender bluestem (*Schizachyrium tenerum*), big bluestem (*Andropogon gerardii*), panic grasses (*Panicum spp*.), dropseeds (*Sporobolus spp*.), wire grass (*Spartina patens*), sedges (*Carex spp*.), beaked sedges (*Rhynchospora spp*.), paspy grasses (*Paspalum spp*.), three-awn grasses (*Aristida spp*.), broomsedges (*Andropogon spp*.), switch grass (*Panicum virgatum*), love grasses (*Eragrostis spp*.), Indian grass (*Sorghastrum nutans*), purple-top (*Tridens spp*.), umbrella sedges (*Cyperus spp*.), and nut-rushes (*Scleria spp*.). Grazing, invasive species, fire suppression, development, and saltwater intrusion are the primary threats to this community. The project would cross this area where it is actively grazed by livestock, which can remove the native and perennial grasses, leaving areas exposed and increase the risk of subsequent dominance of invasive species. PAPL would implement its *Environmental Plan* to restore this open upland area and, as such, permanent impacts in the form of loss of sensitive vegetation are not anticipated.

The Louisiana Connector Project would also cross a stand of Western Acidic Longleaf Pine Savannah/Flatwoods between MPs 65.5 and 67.23. The Western Acidic Longleaf Pine Savannah community is ranked S1S2 (imperiled). The upper vegetation stratum of this community is typically characterized by longleaf pine (*Pinus palustris*), sweet bay (*Magnolia virginiana*), black gum (*Nyssa sylvatica*), live oak (*Quercus virginiana*), blackjack oak (*Q. marilandica*), laurel oak (*Q. laurifolia*), swamp cyrilla (*Cyrilla racemiflora*), wax myrtles (*Morella spp.),* St. John's worts (*Hypericum spp*.), and littleleaf snowbell (*Styrax Americana*).

The herbaceous vegetation stratum of the western acidic longleaf pine savannah/flatwoods is typically very diverse and dominated by graminoids. The community at the crossing location is managed for active silviculture production. Existing management activities include clear cutting, thinning, stand rotation, and equipment access/operation. Construction and operation of the Louisiana Connector Project would result in conversion of forested vegetation to herbaceous right-of-way. However, due to existing silviculture management at the crossing location, the area is already disturbed. In addition, proposed access road AR-CAL-59 is an existing logging road through this vegetation community; impacts associated with project use of the road would be temporary (see appendix E).

Based on the disturbed nature of both unique vegetation communities affected by the Louisiana Connector Project and PAPL's implementation of the measures in its *Environmental Plan* to restore the areas disturbed by construction, no significant impact on the vegetation communities are anticipated.

4.6 WILDLIFE AND AQUATIC RESOURCES

4.6.1 Wildlife Resources

Wildlife species in the Projects area were identified through literature review, interpretation of aerial photography of various vegetation habitats, and field surveys. Detailed information on vegetation types present within the Projects area is included in section 4.5. Protected wildlife species affected by the Projects are discussed in section 4.7. Typical wildlife species occurring within the various habitat types of the Projects area are listed in table 4.6.1-1.

TABLE 4.6.1-1

Wildlife Species in the Projects Area by Associated Habitat

Species	PEM Wetlands	PSS wetlands	PFO Wetlands	EEM Wetlands	Forested Uplands	Open Uplands	Open Water
Mammals							
Common muskrat (*Ondatra zibethicus*)	X	X	X	X			X
Coyote (*Canis lutrans*)		X				X	
Eastern cottontail rabbit (*Sylvilagus floridanus*)					X	X	
Gray squirrel (*Sciurus carolinensis*)					X		
Marsh rice rat (*Oryzomys palustris*)	X	X					X
Nine-banded armadillo (*Dasypus novemcinctus*)					X	X	
North American mink (*Neovison vison*)	X	X	X	X			X
Plains spotted skunk (*Spilogale putorius interrupta)*					X	X	
Raccoon (*Procyon lotor*)		X			X	X	
Red fox (*Vulpes vulpes*)					X	X	
Seminole bat (*Lasiurus seminolus*)					X		
Southeastern myotis (*Myotis austroriparius*)					X		
Swamp rabbit (*Sylvilagus aquaticus*)	X	X	X	X			X
Tree squirrels (*Sciuridae spp*.)			X		X	X	
Virginia opossum (*Didelphis virginiana*)					X		
White-tailed deer (*Odocoileus virginianus*)					X	X	
Wild hog (*Sus scrofa*)		X				X	
Birds							
American bittern (*Botaurus lentiginosus*)	X	X		X			
American coot (*Fulica Americanaamericana*)	X	X		X			
American peregrine falcon (*Falco peregrinus anatum*)		X					
American white ibis (*Eudocimus albus*)	X						X
American widgeon (*Anas Americanaamericana*)	X	X	X	X			
Bald eagle (*Haliaeetus leucocephalus*)					X		
Barred owl (*Strix varia*)					X	X	
Black-crowned night–heron (*Nycticorax nycticorax*)	X						
Black–neck stilt (*Himantopus mexicanus*)	X						
Blue jay (*Cyanocitta cristata*)					X	X	

TABLE 4.6.1-1 (cont'd)

Typical Wildlife Species in the Projects Area by Associated Habitat

Species	PEM Wetlands	PSS wetlands	PFO Wetlands	EEM Wetlands	Forested Uplands	Open Uplands	Open Water
Brown thrasher (*Toxostoma rufum*)					X	X	
Canvasback (*Aythya valisineria*)		X		X			X
Cattle egret (*Bubulcus ibis*)	X						
Carolia chickadees (*Peocile carolinensis*)					X	X	
Cedar waxwing (*Bombycilla cedrorum*)					X	X	
Clapper rail (*Rallus longirostris*)	X						
Common snipe (*Capella gallinago*)	X						
Cooper's hawk (*Accipiter cooperi*)					X	X	
Downy woodpecker (*Picoides pubescens*)					X	X	
Great blue heron (*Ardea Protonataria citrea*)	X			X			
Great horned owl (*Bubo virginianus*)					X	X	
Greater white-fronted goose (*Anser albifrons*)		X		X			X
Green heron (*Butorides virescens*)	X	X	X				
Green-winged teal (*Anas carolinensis*)		X		X			X
Hairy woodpecker (*Picoides villosus*)					X	X	
Hermit thrush (*Catharus guttata*)					X	X	
Mallard (*Anas platyrhynchos*)		X		X			X
Mottled duck (*Anas fulvigula*)		X		X			X
Northern cardinal (*Cardinalis cardinalis*)					X	X	
Northern flicker (*Colaptes auratus*)					X	X	
Ovenbird (*Seiurus aurocapilla*)					X	X	
Pileated woodpecker (*Dryocopus pileatus*)	X						
Pine warbler (*Setophaga pinus*)					X	X	
Redwinged blackbird (*Agelaius phoeniceus*)	X				X	X	
Red-bellied woodpecker (*Melanerpes carolinus*)					X	X	
Reddish egret (*Egretta rufescens*)		X	X				
Red-headed woodpecker (*Melanerpes erythrocephalus*)					X	X	
Red knot (*Calidris canutus)*		X					X
Red-tailed hawk (*Buteo jamaicensis*)					X	X	
Snowy egret (*Egretta thula*)	X						
Song sparrow (*Melospiza melodia*)					X	X	
Spotted sandpiper (*Actitis macularia*)		X		X			X
Tricolored heron (*Egretta tricolor*)	X						X
Whip-poor-will (*Caprimulgus vociferus*)					X	X	
White-faced ibis (*Plegadis chihi*)		X					X
Wild turkey (*Meleagris gallopavo*)					X	X	
Wood duck (*Aix sponsa*)	X						
Wood stork (*Fusconaia askewi*).		X					
Wood thrush (*Hylocichla mustelina*)					X	X	
Yellow warbler (*Setophaga petechia*)					X	X	
Reptiles and Amphibians							
American alligator (*Alligator mississippiensis*)		X		X			
Bronze frog (*Rana clamitans*)	X						X

TABLE 4.6.1-1 (cont'd)

Typical Wildlife Species in the Projects Area by Associated Habitat

Species	PEM Wetlands	PSS wetlands	PFO Wetlands	EEM Wetlands	Forested Uplands	Open Uplands	Open Water
Buttermilk racer (*Coluber constrictor anthicus*)						X	
Cornsnake (*Pantherophis guttatus*)						X	
Cottonmouth water moccasin snake (*Agkistrodon piscivorus*)	X	X	X	X			X
Diamondback water snake (*Nerodia rhombifer*)	X	X	X	X			X
Eastern hognose snake (*Heterodon platirhinos*)						X	
Eastern newt (*Notophthalmus viridesens louisianenisis*)		X	X				X
Green anole (*Anolis carolinensis*)						X	
Mud snake (*Farancia abacura*)						X	
Narrow-mouth toad (*Gastrophryne carolinensis*)	X						X
Northern cricket frog (*Acris crepitans*)						X	
Rough earth snake (*Virginia striatula*)						X	
Six-line racerunner (*Aspidoscelis sexlineata*)						X	
Speckled king snake (*Lampropeltis getula holbrooki*)	X						
Timber rattlesnake (*Crotalus horridus*)						X	
Woodhouse's toad (*Anaxyrus woodhousii*)	X						X

4.6.1.1 Existing Wildlife Habitat

Liquefaction Project

The wildlife habitat types at the Liquefaction Project site include PSS, PEM, and EEM wetlands, forested uplands, developed/disturbed lands, and open water. Open water habitat, both palustrine and estuarine, is present at the Liquefaction Project site; aquatic resources are discussed in section 4.6.2 and EFH is discussed further in section 4.6.3. A limited amount of forested cover is located primarily on dredge material levees and elevated spoil placement areas; these areas are dominated by the invasive Chinese tallow, which provides only low-quality wildlife habitat. Developed lands provide minimal habitat for wildlife species, and wildlife diversity in these areas is often limited to species that are adapted to human disturbance, such as raccoons, muskrat, squirrels, and sparrows.

Approximately 7.7 million yd^3 of dredge materials associated with construction of the marine berth, turning basin, MOF, and Pioneer Dock would be disposed of off-site. Of this, about 2.4 million yd^3 would be deposited on the J.D. Murphree WMA as beneficial reuse. The existing wildlife habitat at the WMA is comprised of coastal wetland communities, including freshwater, intermediate, and brackish wetlands and marshes. The WMA is a key nesting and brooding area for waterfowl, marsh birds, shorebirds, and wading birds. It also hosts a diverse population of reptiles, amphibians, and mammals (TPWD, 2017c). Deposition of dredge material would increase the elevation at the WMA, which is currently being lost through subsidence, erosion, and saltwater intrusion (TPWD, 2017b).

The remaining 4.8 million yd^3 of dredge material would be deposited in existing Dredge Disposal Areas 8, 9A, and 9B owned and managed by the SNND. Wildlife habitat at existing Dredge Disposal Areas 8, 9A, and 9B consists of open water, and PEM and EEM wetlands.

Pipeline Projects

Wildlife habitat within and around the Texas Connector and Louisiana Connector Projects include forested uplands; upland open lands; scrub-shrub uplands; agricultural lands (including pasture lands); PFO, PSS, PUB, PEM, and EEM wetlands; and developed/disturbed lands. Fisheries habitats are discussed in section 4.6.2.

Upland forested areas, as well as open water and the various wetland habitats, provide foraging and nesting habitat for a variety of waterfowl, raptors, songbirds, mammals, reptiles, and amphibians. Wildlife species typical to these habitats are listed in table 4.6.1-1 above.

The various upland open lands (e.g., agricultural lands, road ditches, maintained utility rights-of-way), as well as upland scrub-shrub habitat provide foraging and breeding habitat for many species. For example, hayfields, small grains, fallow and old fields, pastures, idled croplands, and grasslands provide nesting and foraging habitats for grassland birds (USDA, 1999). Utility rights-of-way maintained in early successional communities also provide valuable nesting and foraging habitats for grassland bird species (USDA, 1999). Grasslands and old fields can be used as foraging and denning habitat by mammals, and provide nesting and breeding habitat to upland game birds such as pheasants. Shrublands provide sources of food and nesting sites for various birds, as well as cover for invertebrates, reptiles, and amphibians. Open fields and shrublands provide habitat for small mammal species such as mice, rabbits, and voles, which make them prime hunting grounds for predator species. Developed lands provide minimal habitat for wildlife species.

Open water areas crossed by the Texas Connector and Louisiana Connector Projects include creeks, streams, and rivers. Open water cover type provides important foraging habitat for species listed above. Aquatic resources and EFH are discussed further in sections 4.6.2 and 4.6.3.

Nonjurisdictional Facilities

Because the 295-foot-wide right-of-way associated with the relocation of SH 87, pipelines, and utilities is within the liquefaction facility boundary, wildlife habitat and species present would be similar to those discussed for the Liquefaction Project above.

4.6.1.2 Wildlife Resources Impacts and Mitigation

Liquefaction Project

A total of about 845.3 acres of terrestrial/vegetated wildlife habitat would be affected by construction of the Liquefaction Project. Overall, the greatest impacts would be on open wetlands. Construction of the Liquefaction Project would result in permanent impacts on 808.0 acres of habitat, primarily through the conversion of these habitats to industrial land and open water.

Impacts on wildlife from construction of the liquefaction facilities would include displacement, stress, and direct mortality of some individuals. Vegetation clearing would potentially reduce suitable cover, nesting, and foraging habitat for some wildlife species. More mobile wildlife, such as birds and mammals, may relocate to similar habitats nearby when construction activities commence. However, smaller, less mobile wildlife (e.g., some reptiles and amphibians) could be inadvertently injured or killed

by construction equipment. The permanent reduction in available habitat within the liquefaction facility as well as the influx of individuals to other nearby areas may increase population densities for certain species, resulting in increased inter- and intra-specific competition and reduced reproductive success of individuals.

Although the liquefaction facility site has been previously disturbed by the historic deposition of dredge material and is in proximity to routine dredging activity, wildlife habitat would be affected within the liquefaction facility by permanent conversion to industrial land use. However, a large amount of similar or higher quality habitat exists at the J.D. Murphree WMA, adjacent to the liquefaction facility, which could be used by mobile animals able to vacate the liquefaction site.

Pilings would be installed during the construction of the liquefaction facility using hammer or vibratory methods. Noise resultant from pile driving activities has the potential to alter wildlife behavior, including foraging and nesting activities within the Liquefaction Project area. Pile-driving noise would be intermittent and temporary, and preparatory activities likely would encourage mobile species to leave the immediate area prior to commencing pile driving. Less mobile species would be subject to resulting noise.

Construction activities would require vegetation clearing, grading, and filling to level the site. This would reduce cover, nesting, and foraging habitat for some species and may result in mortality of less mobile forms of wildlife, such as small rodents and reptiles. The greatest impacts on terrestrial wildlife would result from the permanent loss of approximately 808.0 acres of vegetated lands within the liquefaction facility site, which would result in a permanent reduction in habitat in the general vicinity of the Liquefaction Project. Due to the site's previous use as a dredge disposal site, vegetation species diversity is low, which lessens its habit value for wildlife and, as such, impacts would be permanent but minor. Of the 808.0 acres that would be permanently converted to developed land, 725.7 acres are wetlands. Wetland habitats support a diverse ecosystem that provides nutrients, cover, shelter, and water for a variety of terrestrial and aquatic wildlife species. Additionally, construction of the marine facilities would convert approximately 151 acres of vegetated land (and terrestrial wildlife habitat) to open water habitat. See section 4.6.3 for more detail.

Placement of dredge material at the J.D. Murphree WMA and dredge disposal areas 8, 9A, and 9B would disturb the existing habitat and affect wildlife foraging, nesting, and use of cover. Similar to the liquefaction site, because dredge disposal areas 8, 9A, and 9B have been previously disturbed, vegetation species diversity is low, which lessens its wildlife habitat value. Wildlife habitat at the WMA is higher quality than surrounding areas; however, impacts are expected to be minor and temporary, lasting until the areas are stabilized. Further, placement of dredge material would ultimately improve the vegetation quality, as discussed in section 4.5.2.1, and as a result, improve the overall wildlife quality.

Fragmenting contiguous wildlife habitats into smaller units could alter wildlife habitat and species survival. Many wildlife species require large, undisturbed habitats. When these habitats are affected, wildlife may be subject to increased predation, parasitism, or inter-specific competition; reduced pairing, nesting, and reproductive success; inhibited migration, dispersal, and foraging; and expansion of non-native vegetation.

Fragmentation generally affects birds by creating dispersal barriers, resulting in smaller suitable microhabitats, smaller population sizes, and edge effects (Degraaf and Healy, 1990). Edge effects can cause interactions between birds that nest in the interior of forests and species that inhabit surrounding landscapes, typically lowering the reproductive success of the interior species. Other evidence suggests that certain mammals, amphibians, reptiles, and plants are also adversely affected by forest fragmentation. Species that require large tracts of unbroken forest land may be forced to seek suitable habitat elsewhere. Reptiles and amphibians could experience greater impacts from habitat fragmentation, as they are less mobile and less likely to relocate to more suitable habitat.

The loss of forest habitat, expansion of existing corridors, and the creation of open, early successional and induced edge habitats could decrease the quality of habitat for forest interior wildlife species in a corridor much wider than the actual cleared right-of-way. The distance an edge effect extends into a woodland is variable, but most studies point to at least 300 feet (Rodewald, 2001; Jones et al., 2000; Ontario Ministry of Natural Resources, 2000; Robbins, 1988; Rosenberg et al., 1999). Edge effects within this distance could include a change in available habitat for some species due to an increase in light and temperature levels on the forest floor and the subsequent reduction in soil moisture, thereby resulting in habitat that would no longer be suitable for species that require these specific habitat conditions, such as salamanders and amphibians. An alteration of habitat could affect the fitness of some species and increase competition both within and between species, possibly resulting in an overall change to the structure of the forest community.

As stated above, there would be a permanent reduction in wildlife habitat and fragmented vegetated areas around and in the general vicinity of the Liquefaction Project due to the permanent loss of approximately 808.0 acres of vegetated lands within the liquefaction facility site. No habitat fragmentation from dredge material placement is anticipated because other surrounding areas currently or have historically served similarly as dredge disposal areas and, based on the conditions at these existing areas, the J.D. Murphree WMA and dredge disposal areas 8, 9A, and 9B are anticipated to continue functioning as wildlife habitat following placement of dredge material.

Operation of the liquefaction facilities would result in increased noise, lighting, and human activity that could disturb wildlife in the area. However, due to current industrial activities at other facilities in the area, wildlife species in the area are expected to be acclimated to the noise and artificial lighting associated with these activities.

To minimize project-related impacts on wildlife, PALNG would implement its project-specific *Environmental Plan* as well as its *Spill Prevention Plan* during construction, and would develop and implement a SPCC Plan during operation.

Based on the previous use of the liquefaction site for dredge material placement, adequate similar habitat for wildlife near the site, presence of exotic and/or invasive species (e.g., Chinese tallow), limited amount of forest habitat impacts, proposed beneficial use of dredge material (which would create additional wildlife habitat), and implementation of PALNG's proposed mitigation measures, we have determined that construction and operation of the proposed Liquefaction Project would have permanent, but minor impacts on wildlife.

Pipeline Projects

Texas Connector Project

Construction of the Texas Connector Project would temporarily disturb 482.8 acres of vegetation during construction, of which 169.6 acres would be permanently altered during operation for maintenance of the pipeline right-of-way and aboveground facilities, including the new pipelines and laterals, compressor stations, meter stations, and access roads (see table 4.5-1). Of this, a total of 0.1 acre of upland forest would be permanently affected by construction. Approximately 225 acres of vegetation impacts would be avoided through use of the HDD construction method at 24 locations. Vegetation clearing would be minimal (about 3 acres) between HDD entry and exit locations on the Texas Connector Project. Fencing would limit the wildlife use of suitable habitat at the North and South Compressor Stations and meter stations, particularly for larger mammals. Increased noise levels near the compressor and meter stations may result in avoidance of the area by wildlife until they become acclimated to the new noise source.

The impact of construction on wildlife species and their habitats would vary depending on the resource requirements of each species and the existing habitat present along the pipelines and lateral routes and at aboveground facilities. The greatest effects to wildlife would occur during cutting, clearing, and/or removal of existing vegetation, which would reduce the amount of available habitat within the construction right-of-way and temporary workspaces. The degree of temporary impact would depend on the rate at which vegetation regenerates after construction. Herbaceous and scrub-shrub habitats generally revegetate within 4 years of disturbance, while forested areas may longer to recover. Impacts on forested areas that are not in areas of regular mowing would be longer term, though tree species common to southern pine forests (such as loblolly pine) tend to grow quickly, adding up to 2 feet of height growth per year (Texas Forest Service, 2010). Deciduous hardwood species such as the sweet gum and red maple also tend to grow at a medium to fast rate (Arbor Day Foundation, 2017).

Clearing of the temporary construction right-of-way would reduce cover, nesting, and foraging habitat for some species and may result in direct mortality for less mobile forms of wildlife, such as small rodents and reptiles. Larger or more mobile wildlife, such as birds and large mammals, would be expected to leave the right-of-way as construction begins and relocate into similar habitats near the project. However, if a lack of adequate territorial space exists, some individuals could be forced into suboptimal habitats. This could increase inter- and intra-specific competition and lower reproductive success and survival. The potential influx and increased density of species in some undisturbed areas could reduce the reproductive success of animals that are not displaced by construction. These effects would cease after completion of construction and right-of-way restoration, when wildlife could return to the disturbed areas and adjacent undisturbed habitats after restoration is complete. Species that use early successional shrub or forest communities may benefit from the clearing and revegetation process, as additional habitat of this type would be created by construction and operation of the pipeline projects. In addition, non-woody, early successional vegetation may provide forage for small mammals and birds, as well as breeding habitat for ground-nesting birds, mammals, and reptiles.

In forested areas, construction of the Texas Connector Project would increase edge habitats, which are used by various wildlife species, such as songbirds and small mammals. Many species can adapt to this habitat shift and could take advantage of edge habitats. Predatory species such as red-tailed hawk and coyote commonly use utility rights-of-way for hunting; other species, such as the eastern cottontail, mourning dove, field and song sparrow, white-tailed deer, and red fox, could benefit from the transition to early successional habitat for foraging.

In addition, noise could impact wildlife during all phases of the Texas Connector Project, such as that associated with HDD activities, which would occur 24 hours a day and could last from several weeks to several months depending on the length of the drill and the hardness of the substrate being drilled (see section 4.11.2.3). Certain species rely on hearing for courtship and mating, prey location, predator detection, and/or homing. These life functions could be affected by construction and operational noise.

Research has demonstrated various wildlife reactions to noise from traffic, airplanes, sonic booms, helicopters, military activities, and blasting; however, specific noise studies from pipeline construction have not been conducted. Studies show that some species avoid roadways due to noise from a few meters to over 3 kilometers in distance (Bennett, 1991). These species appear to be most sensitive during the breeding season. Conversely, the abundance of small mammals and birds (e.g., starlings, house sparrows, song sparrows, red-winged blackbirds) increases closer to the roadway, possibly due to increased availability of prey species such as insects. Construction-related sounds may have an adverse impact on raptors and bird species during nesting and breeding. These impacts occur when noise levels substantially exceed ambient conditions that existed prior to a project (i.e., by 20 to 25 dB, as experienced by the animal) and/or when the total sound level exceeds 90 dB. Such impacts could result in nest abandonment, egg failure, reduced juvenile growth and survival, or malnutrition or starvation of the young. During construction, these impacts

are generally related to areas immediately adjacent to the construction right-of-way but can extend to greater distances for activities such as blasting (Benítez-López et al., 2010).

Noise generated from construction of the Texas Connector Project would result from heavy equipment and machinery use. Most construction activities would be limited to daytime hours, except for a limited number of 24-hour activities, such as water pump operation, road bores, and HDD installations. Noise impacts from construction are expected to be minor to moderate and temporary.

The proposed compressor stations would generate noise on a continuous basis once in operation. The noise impacts associated with the compressor stations would be limited to the general vicinity of the facilities; however, certain operations, such as blow-downs, would generate infrequent, but high noise levels that would extend for a greater distance from the compressor stations. Noise emissions associated with compressor stations are described in section 4.11.1.4. While compressor station noise could affect birds in the area, we expect that in subsequent years birds and other wildlife would either be habituated to the noise source, or would have moved into similar available habitat farther from the noise source. This, in turn, could lead to increased competition for preferred habitats, depending on the amount of habitat available. During pipeline operation, noise emissions also would be generated during monitoring and maintenance activities, such as vegetation clearing on the permanent right-of-way, or during ground or air surveillance of the pipeline, as required by regulations.

Short- or long-term impacts on wildlife habitat could occur if construction spreads noxious weeds and other invasive species (see section 4.5.3 for a discussion regarding noxious weed impacts on vegetation). Noxious weeds can out-compete native vegetation and displace native species by spreading rapidly and co-opting resources (i.e., nutrients, water, and sunlight) that can eventually lead to a weed-dominated monoculture. Such transformed habitat can be unsuitable to former wildlife inhabitants. Often, as habitat quality degenerates, wildlife diversity declines. Invasive plant species can form dense monocultures that inhibit native vegetation from flourishing, cause a decrease in species diversity, limit water flow and wildlife access to water, and in some instances, make waterfowl nesting areas unsuitable. Section 4.5.3 discusses invasive species, including proposed mitigation measures.

Fragmenting contiguous vegetated areas, including forested wetlands, and wildlife habitats into smaller units could alter wildlife habitat and species survival, as described in the Liquefaction Project discussion. Habitat fragmentation would generally result where the pipeline facilities are not collocated with existing rights-of-way and forested and scrub habitats are crossed. As outlined in section 2.0, the Texas Connector Project's Northern and Southern Pipeline segments would parallel existing, maintained rights-of-way and corridors for 43 percent of their total length, which would reduce fragmentation effects. When collocated with existing corridors, it is unlikely that the relatively small widening of existing permanently cleared right-of-way would impede the movement of most wildlife species. Where the facilities would create a new corridor through shrub and forested habitats, wildlife composition would shift from those species favoring shrub and forest habitat to those favoring edge habitat or open areas.

Potential positive impacts from creating or widening utility rights-of-way would include increased diversity and density of bird species, increased access to a variety of food resources, and increased ground cover, which would favor ground-nesting species (Rosenberg and Raphael, 1986). The proximity of cover and forage areas at forest edges provides ideal habitat for many bird and game species. For example, bird species diversity in power line corridors through forested vegetation was found to be higher in the corridor than within the adjacent forest (Kroodsma, 1984). Higher levels of flower and fruit production, pollinator, and frugivore densities are often found along the edge.

To adequately minimize fragmentation impacts, the construction right-of-way would be restored according to PAPL's *Environmental Plan*, which includes reseeding measures using site-specific seed

mixtures recommended by local seeding authorities, augmented by recommendations from the FWS, land-managing agency, and/or landowner to enhance wildlife habitat. PAPL would also adopt the NRCS' recommendation for Jefferson and Orange Counties, which includes revegetating disturbed areas with common bermudagrass and *Pensicola bahia* in upland areas, and full bermudagrass seeding in hydric saline soils. The NRCS also recommended that native topsoil be stockpiled in marshes and used to sod areas of disturbance during restoration. The right-of-way would be monitored as required by FERC and other agency permit conditions.

Although individuals of some wildlife species would be affected by construction and operation of the proposed aboveground facilities, most impacts on wildlife would be temporary (limited to the construction period) to long term where forested vegetation is affected. With the implementation of PAPL's *Environmental Plan*, the measures identified above (e.g., collocating pipeline, revegetation), and the presence of abundant similar wildlife habitat adjacent to the affected areas, construction and operation of the Texas Connector Project would not have a significant impact on local wildlife populations or habitat.

Louisiana Connector Project

Construction of the Louisiana Connector Project (and associated aboveground facilities, access roads, and yards) would temporarily disturb 2,043.7 acres of vegetated wildlife habitat during construction, of which 646.7 acres would be permanently altered during operation for maintenance of the pipeline right-of-way and aboveground facilities, including the new pipeline, compressor stations, interconnections, and access roads (see table 4.5-1). Of this, a total of 184.3 acres of upland forest and 68.4 acres of wetland forest would be permanently affected. In addition, 0.4 acre of open wetlands would be permanently converted to developed land for aboveground facilities. About 185 acres of vegetation impacts would be avoided through use of the HDD construction method at 26 locations.

Impacts on wildlife habitat would be similar to those described above for the Texas Connector Project. Agricultural lands, open wetlands, and upland areas would be revegetated to a cover state similar to pre-construction conditions. The degree of temporary impact would depend on the rate at which vegetation regenerates after construction. The 50-foot-wide permanent right-of-way centered on the pipeline would be maintained in an herbaceous state. Routine clearing would occur every 3 years. Forested areas of the temporary right-of-way and ATWS would be allowed to revert to forested cover, considered a long-term impact.

Construction of the Louisiana Connector Project would fragment habitat where the pipeline facilities are not parallel to existing right-of-way; forested and scrub habitats would be affected. As outlined in section 2.0, the Louisiana Connector Project would parallel existing, maintained rights-of-way and corridors for 73 percent of its total length, which would reduce fragmentation effects. When collocated with existing corridors, it is unlikely that the widening of permanently cleared right-of-way by an additional 50 to 75 feet would impede the movement of most wildlife species. Where the facilities create a new corridor through shrub and forested habitats, wildlife composition would shift from those species favoring shrub and forest habitat to those favoring edge habitat or open areas.

Additionally, construction of the Louisiana Connector Project would require dredging and excavation operations necessary to install the pipeline through Sabine Lake. The lake entrance and exits would be constructed using the HDD method. The project would resurface approximately 500 feet from the shoreline, reducing impacts to the shoreline and associated wildlife and wildlife habitat. In the open water of Lake Sabine, the project would be constructed using the Barge Lay and S-lay construction method and would require a 300-foot-wide construction right-of-way. The primary impacts associated with the installation of the project across Sabine Lake could be resuspension of sediment in the water column. If present, submerged aquatic vegetation may also be directly affected by construction activities or indirectly

due to sedimentation and increased turbidity. Wildlife species that use the open water habitat of Sabine Lake may be affected by resuspended sediments and turbidity, temporarily limiting their ability to forage and/or utilize cover within submerged aquatic vegetation, if present. Impacts on EFH and aquatic species are discussed in sections 4.6.2 and 4.6.3, respectively.

Similar to the Texas Connector Project, some wildlife species would be affected by construction and operation of the aboveground facilities. Most impacts on wildlife would be temporary (limited to the construction period) to long term where forested vegetation is affected. With the implementation of PAPL's *Environmental Plan*, the measures identified above (e.g., collocating pipeline, revegetation), and the presence of abundant similar wildlife habitat adjacent to the affected areas, construction and operation of the Louisiana Project would not have a significant impact on local wildlife populations or habitat.

Nonjurisdictional Facilities

A total of 115.1 acres of vegetated wildlife habitat would be affected by construction activities (see table 4.5-1). The impacts from nonjurisdictional facilities would be similar to the impacts described in section 4.6.1.2 for the Liquefaction Project. Impacts on wildlife species and cover, nesting, and foraging habitat for some species and may result in mortality of less mobile forms of wildlife, such as small rodents and reptiles. Other wildlife, such as birds and larger mammals, would be expected to leave the area as construction activities approach. Indirect impacts due to noise and dust generation would be temporary.

Following completion of the relocation of SH 87, pipelines, and utilities, 175 feet of the construction right-of-way would be revegetated in accordance with PALNG's *Environmental Plan*; the remaining area would consist of permanently paved highway surface. Operation of nonjurisdictional facilities would affect 43.5 acres of wildlife habitat, resulting in a permanent conversion of these habitats to industrial land. Permanent loss of wetland habitat would be mitigated through the USACE permitting process.

4.6.1.3 Unique and Sensitive Wildlife

Migratory Birds, Birds of Conservation Concern, and Bird Fallout Sites

Migratory bird species nest in the United States and Canada during the summer months and then migrate south to the tropical regions of Mexico, Central and South America, and the Caribbean for the non-breeding season. Some species migrate from breeding areas in the north to the Gulf Coast for the non-breeding season. Migratory birds are protected under the MBTA, which prohibits the intentional take or killing of individual migratory birds, their eggs and chicks, and active nests. The MBTA provides that it is unlawful to pursue, hunt, take, capture, kill, possess, sell, purchase, barter, import, export, or transport any migratory bird, or any part, nest, or egg of any such bird. The FWS is the agency with statutory authority and responsibility for enforcement of the MBTA. Executive Order 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds, issued January 10, 2001) directs federal agencies to consider the effects of agency actions on migratory birds and determine where unintentional take is likely to have a measurable negative effect on migratory bird populations, and to avoid or minimize adverse impacts on migratory birds through enhanced collaboration with the FWS. The executive order states that emphasis should be placed on species of concern, priority habitats, and key risk factors, and that particular focus should be given to addressing population-level impacts. On March 30, 2011, the FWS and the Commission entered into a Memorandum of Understanding (MOU) that focuses on avoiding or minimizing adverse impacts on migratory birds and strengthening migratory bird conservation through enhanced collaboration between the two agencies. This voluntary MOU does not waive legal requirements under the MBTA, BGEPA, ESA, Federal Power Act, NGA, or any other statute and does not authorize the take of migratory birds.

In order to accurately identify bird species with the greatest conservation priority and stimulate action by federal/state agencies and private parties, the FWS Migratory Bird Office issued a report describing the Birds of Conservation Concern (BCC) (FWS, 2008a). The report identifies priority bird species at the national, regional, and Bird Conservation Region levels. The proposed Projects, including the nonjurisdictional facilities, are within Bird Conservation Region 37 – Gulf Coastal Prairie (FWS, 2008a). Appendix N identifies the BCCs with the potential to occur near the Projects, which species breed within the region, and the nesting habitat of the breeding species. BCC species within the Gulf Coastal Prairie Region include migratory species, non-migratory birds, game and nongame species, and ESA candidate, proposed, and recently delisted species.

Colonial waterbirds, a subset of migratory birds, include a large variety of bird species that share two common characteristics: 1) they tend to gather in large assemblies, called colonies or rookeries, during the nesting season, and 2) they obtain all or most of their food from the water (Audubon Texas, 2017). Colonial waterbirds return to the same rookery year after year. Rookeries are typically established in marshes or near the shores of ponds or streams. Although some colonial waterbirds (e.g., least terns) do nest in developed areas, many waterbirds (e.g., great blue heron and great egrets) are wary of human activity.

Migratory birds follow broad routes called flyways between breeding grounds in Canada and the United States and wintering grounds in Central and South America and the Caribbean. Additionally, several species migrate from breeding areas in the north to winter along the Gulf Coast, where they remain throughout the non-breeding season. Project elements in Louisiana are within the Mississippi Flyway. Project elements in Texas are within the Central Flyway. The Gulf Coast provides wintering and migration habitat for large numbers of continental duck and goose populations that use the Central and Mississippi Flyways. The Gulf Coast is considered one of the most important waterfowl areas in North America, specifically for Nearctic-neotropical migrating birds (Shackelford et al., 2005).

Beyond the MBTA, the BGEPA provides additional protection to bald and golden eagles. The BGEPA prohibits the take, possession, sale, offer to sell, purchase, barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit. "Take" under this act is defined as "to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, or molest or disturb." Disturb is defined as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." If a proposed project or action occurs in an area where nesting, feeding, or roosting eagles occur, the proponent often needs to implement special conservation measures to comply with the BGEPA.

Liquefaction Project

Though one potential colonial waterbird rookery was identified in TPWD mapping of the liquefaction facility, field surveys and correspondence with the J.D. Murphree WMA confirmed that no rookery was present (TPWD, 2015).

Several migratory bird fallout sites were identified by the TWPD in the Texas Natural Diversity Database. During spring migration periods, birds traveling north may encounter southward-moving storms, slowing their progress across or along the Gulf of Mexico. Exhausted birds "fall out" in large numbers when they reach the coast, stopping to seek shelter and forage (Butcher, 2008). The four known occurrences of fallout sites occurred in 1981 and were about 4.5 miles south of the Liquefaction Project.

Round Lake, which is within the Liquefaction Project site but would be avoided by construction and operation, is commonly used by waterfowl species and was identified as a birding hotspot by eBird, an online birding checklist program developed through a partnership between the Cornell Lab of Ornithology and the National Audubon Society (Cornell Lab of Ornithology, 2017a). The lake is located along the eastern boundary of the site, adjacent to the Port Arthur Canal. While the Liquefaction Project would not directly affect Round Lake, construction activities would occur around the lake. PALNG would install erosion and sediment control devices in accordance with its *Environmental Plan*; in addition, a berm already exists around Round Lake that would restrict surface water flow into the lake. Wildlife species would be impacted due to noise from equipment and machinery, as discussed below.

Pipeline Projects

Along the Texas Connector Project, seven rookeries were identified by the TWPD in the Texas Natural Diversity Database within 6 miles of the Northern Pipeline. The most recent observed rookery record is from 1992. Additionally, the TPWD identified one rookery about 1 mile northeast of the South Compressor Station, which is within the proposed Liquefaction Project site. A total of four migratory bird fallout sites were also identified by the TPWD about 3.5 miles south of MP 5.5 along the Southern Pipeline. Along the Louisiana Connector Project, potential rookery/wading bird colonies were identified about 0.2 mile southeast of MP 39 and 0.2 mile south of MP 90, according to a review of the Louisiana Natural Heritage Program (LNHP) database.

An Important Bird and Biodiversity Area (IBA) is an area defined as places of international significance for the conservation of birds and other biodiversity, recognized as practical tools for conservation and action. More than 12,000 sites in over 200 countries worldwide have been identified as IBAs (BirdLife International, 2017). The Texas Connector and Louisiana Connector Projects in Texas are not within any IBAs. However, the Texas Connector Project in Louisiana (Southern Pipeline) would be in the Chenier Plain IBA. Additionally, the Louisiana Connector Project would cross the Chenier Plain IBA between approximate MPs 18 and 58 and between approximate MP 96 and the CST Meter Station at the end of the pipeline route. Louisiana's largest at over 2,300,000 acres, this IBA is a mix of open water, marsh, and woodland habitat in southern Louisiana. The biggest threat to this IBA is coastal erosion and wetland habitat loss (Audubon Texas, 2017).

Bald eagles are listed as threatened in Texas and endangered in Louisiana and have the potential to occur throughout the Projects area.

Impacts and Mitigation

The vegetation communities within the Projects areas provide potential habitat for migratory bird species and BCC species, including songbirds, waterbirds, and raptors. However, much of the vegetated land associated with the Liquefaction Project and nonjurisdictional facilities is previously disturbed and/or within or adjacent to existing facilities. Removal or conversion of these habitat types would reduce bird nesting and foraging habitat value. Impacts on migratory birds and BCC species and their habitat due to construction and operation of the Projects would typically be similar to impacts on general wildlife resources (see section 4.6.1.2). In addition, potential impacts specific to migratory birds include loss of habitat and injury or disorientation due to flaring and other artificial illumination. Many migratory birds use natural light from the sun, moon, and stars for navigation. Artificial lighting such as that associated with permanent aboveground facilities or used during 24-hour HDD activities can hide natural light sources, having unknown effects on birds at the population level. Fatalities to avian species due to artificial light are well documented. Avian fatalities are associated with attraction to light sources, especially in low light, fog, and when there is a low cloud ceiling (Patterson, 2012).

Adjacent vegetation clearing would potentially reduce suitable cover, nesting, and foraging habitat for some wildlife species. The influx of displaced individuals to other nearby areas may increase population densities for certain species, resulting in increased inter- and intra-specific competition and reduced reproductive success of individuals.

During a November 13, 2015 meeting between PALNG, PAPL, and the FWS (Texas FWS), the Texas FWS stated that its primary project-related concern was habitat loss due to inadequate restoration practices and lighting impacts on migratory birds. The Texas FWS confirmed that no significant impacts on migratory birds are anticipated at the liquefaction facility site but encouraged the applicants to use mitigation measures to avoid or reduce impacts. In addition, during an interagency meeting on September 28, 2016, the Texas FWS requested implementation of BMPs for flares and lighting to minimize impacts on migratory birds. The Texas FWS indicated that flare lights are lower luminescence than artificial lighting at facilities and are of less concern.

In its June 8, 2018 letter, the Texas FWS identified the following voluntary avoidance and minimization measures to protect migratory birds (FWS, 2018a), which PALNG and PAPL have agreed to adopt for the Projects:

- PALNG facility lighting would be designed to minimize the quantity of lights required to that needed to safely operate the facility.
- Lighting would be installed with downward oriented shrouds, unless safety concerns warrant otherwise.
- Red strobe lights, rather than white, would be used to mark taller cranes if permitted by the Federal Aviation Administration.
- Any temporary lighting associated with pipeline construction would be restricted to the boundaries of the pipeline corridor and associated staging areas and pointed downwards.
- Any permanent lighting needed for the pipeline facilities, such as meter stations, compressor stations, or security features, would be restricted to the boundaries and pointed downwards.
- PAPL has minimized the construction workspace to what it believes would permit the safe installation of the 42-inch-diameter pipeline and implemented several HDDs to avoid and minimize impacts on wetlands, waterbodies, and forested areas along the route.
- PAPL would attempt to avoid construction during the primary migratory bird nesting season, March through August (in accordance with FWS recommendations). If, however, this is not possible, prior to construction, PAPL would coordinate with the FWS to identify specific MBTA species of concern and potential avoidance, surveys, or other measures to protect these migratory birds.
- PALNG understands Entergy would install “avian friendly” power poles that eliminates avian fatalities due to electrical contact at the structure.
- PALNG would immediately notify the FWS if a large number of bird strikes occur within the vicinity of the project site (such as powerline strikes) in order to develop additional avoidance and/or diversion measures necessary to prevent future impacts on migratory birds.

Additionally, PALNG would use nesting inhibitors (pennant flagging) in parking areas to discourage migratory birds from nesting in unsuitable areas. PALNG committed to using ground flares as opposed to elevated flares to minimize impacts on migratory birds. With the implementation of these mitigation measures, temporary flaring during construction and the occasional flaring during operation would not adversely or significantly impact migratory birds.

Construction and operation of the Liquefaction Project would result in the permanent loss of 808.0 acres of vegetated wildlife habitat, including open uplands and open wetlands. This habitat loss would directly impact the available nesting and foraging habitat for migratory birds. In addition, a total of 903.0 acres of open wetlands at the J.D. Murphree WMA and up to 1,095.4 acres of open wetlands at the SNNW Dredge Disposal Areas 8, 9A, and 9B would be affected due to dredge material disposal. While we acknowledge that placement of dredge material at the J.D. Murphree WMA would create about 1,268.8 acres of coastal marsh wetland, resulting in a beneficial impact on wildlife species associated with this habitat, the activity could also result in the mortality of migratory and nesting birds and their eggs at the WMA.

Although impacts may be advantageous for some species, construction and operation of the Texas Connector and Louisiana Connector Projects may result in bird species that use tree cavities for roosting suffering direct mortality during right-of-way clearing. Species that prefer large tracts of unbroken forest would be indirectly affected by clearing of forest habitat. In addition, nesting success may be reduced for one annual breeding cycle for adult birds that normally would breed in the area but would avoid it during construction activities. The slow regeneration of forested communities within the temporary right-of-way would result in a long-term reduction in forested habitat for species that use these communities; however, abundant similar habitats are available for wildlife adjacent to the project.

To reduce impacts on nesting birds during pipeline operation, temporary workspace and ATWS areas would be revegetated to preconstruction conditions. Routine vegetation mowing or clearing would not be conducted along the entire width of the permanent right-of-way more frequently than every 3 years, except for a corridor not exceeding 10 feet in width centered on the pipeline that would be cleared at a frequency necessary to maintain the right-of-way in an herbaceous state. Also, routine vegetation mowing or clearing would not occur during the migratory bird nesting season between April 15 and August 1.

PAPL would conduct surveys for rookeries prior to the start of construction and has committed to constructing outside of nesting periods at active rookeries and colonial nesting areas. If nesting wading bird colonies are identified within 300 meters (about 984 feet) of the project, construction activities would be conducted during the non-nesting period of September 1 to February 15 for these species. If colonies of gulls, terns, and/or skimmers are identified within 400 meters (about 1,312 feet) or brown pelicans are identified within 700 meters (about 2,297 feet) of the project, construction activities would be conducted during the non-nesting period of September 16 to April 1 for these species. If PAPL believes impacts on rookeries or nesting colonies are unavoidable, it would prepare and submit a *Migratory Bird Conservation Plan* to the FWS, TPWD, and LDWF for review and concurrence.

PAPL would perform bald eagle nest surveys prior to construction of the Texas Connector and Louisiana Connector Projects. If active nests are identified, PAPL would comply with buffers recommended in the FWS' National Bald Eagle Management Guidelines (FWS, 2007).

Pollinators

On June 20, 2014, President Barack Obama signed a Presidential Memorandum titled "Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators." According to the memorandum, "there has been a significant loss of pollinators, including honey bees, native bees, birds, bats, and butterflies, from the environment." The memorandum also states that, "given the breadth,

severity, and persistence of pollinator losses, it is critical to expand federal efforts and take new steps to reverse pollinator losses and help restore populations to healthy levels." In response to the Presidential Memorandum, the federal Pollinator Health Task Force published a National Strategy to Promote the Health of Honey Bees and Other Pollinators in May 2015. This strategy established a process to increase and improve pollinator habitat.

Pollinator habitat in and adjacent to the Projects area can be found in a variety of vegetation types, including open upland, open wetland, forested upland, and forested wetland as described in table 4.5-1. Common insect pollinators in the Projects area include various species of bees, butterflies, and moths. The temporary loss of this habitat would increase the rates of stress, injury, and mortality experienced by honey bees and other pollinators. In its June 7, 2017 letter, the FWS Louisiana Ecological Field Office requested that PAPL revegetate disturbed areas using native vegetation (seed mixes and live transplants) with regard to nectar producing species to facilitate pollinator species. PAPL and PALNG would consult with landowners and the NRCS to determine seed mixes for revegetation, some of which would restore and/or promote pollinator habitat.

4.6.2 Aquatic Resources

4.6.2.1 Existing Aquatic Resources

Aquatic habitat associated with waterbodies that would be affected by the Projects include the marine and estuarine habitats of the Port Arthur Canal adjacent to the Liquefaction Project, and the marine, estuarine, and freshwater habitats of the Texas Connector and Louisiana Connector Projects. Fifty-five (55) waterbodies would be crossed by the Texas Connector Project and 167 waterbodies would be crossed by the Louisiana Connector Project that support warmwater fisheries. Bottom sediments in these waterways are fine, consisting primarily of mud and silt (Gulf of Mexico Fishery Management Council [GMFMC], 1998), with a turbid water column. Salinity is probably the most important factor in determining the distribution and relative abundance of marine and estuarine organisms (NMFS, 1998). Tables 4.3.1-1 and 4.3.1-2 list the waterbodies affected by the Projects and table 4.6.21 identifies the representative fish species that occur within those waterbodies.

TABLE 4.6.2-1

Fisheries Species within the Waterbodies Affected by the Projects [a]

Waterbody/Common Name	Scientific Name	Common Name	Scientific Name
Sabine Lake, Sabine Neches Canal, Black Bayou, ICWW, Choupique Cutoff, Multiple Waterbodies [b]			
Alligator gar [d]	*Atractosteus spatula*	Mutton snapper	*Lutjanus analis*
Almaco jack	*Seriola rivoliana*	Nassau grouper	*Epinephelus striatus*
Anchor tilefish	*Caulolatilus intermedius*	Oyster [d]	*Crassostrea virginica*
Atlantic croaker [d]	*Micropogonias undulatus*	Pink shrimp	*Penaeus duorarum*
Banded rudderfish	*Seriola zonata*	Queen snapper	*Etelis oculatus*
Bay anchovy	*Anchoa mitchilli*	Red drum [c]	*Sciaenops ocellatus*
Black Drum [c]	*Pogonias cromis*	Red grouper	*Epinephelus morio*
Black grouper	*Mycteroperca bonaci*	Red hind	*Epinephelus guttatus*
Blackfin snapper	*Lutjanus buccanella*	Red snapper	*Lutjanus campechanus*
Blackline tilefish	*Caulolatilus cyanops*	Rock hind	*Epinephelus adscensionis*
Blue crab [d]	*Callinectes sapidus*	Royal Red shrimp	*Pleoticus robustus*
Blueline tilefish	*Caulolatilus microps*	Sand perch	*Diplectrum formosum*
Brown shrimp [c, d]	*Penaeus aztecus*	Sand trout [d]	*Cynoscion arenarius*
Channel catfish [d]	*Ictalurus punctatus*	Scamp grouper	*Mycteroperca phenax*
Cobia	*Rachycentron canadum*	Schoolmaster	*Lutjanus apodus*

TABLE 4.6.2-1 (cont'd)

Fisheries Species within the Waterbodies Affected by the Projects [a]

Waterbody/Common Name	Scientific Name	Common Name	Scientific Name
Dog Snapper	*Lutjanus jocu*	Sheepshead	*Archosargus probatocephalus*
Dwarf sand perch	*Diplectrum bivittatum*	Sheepshead minnow	*Cyprinodon variegatus*
Gag grouper	*Mycteroperca microlepis*	Silk snapper	*Lutjanus vivanus*
Gizzard shad	*Dorosoma cepedianum*	Silverside	*Menidia*
Golden tilefish	*Lopholatilus chamaeleonticeps*	Snowy grouper	*Epinephelus niveatus*
Goldface tilefish	*Caulolatilus chrysops*	Southern Flounder [d]	*Paralichthys albigutta*
Goliath Grouper	*Epinephelus itajara*	Spanish Mackerel	*Scomberomorus maculatus*
Grass shrimp [d]	*Palaemonetes pugio*	Speckled hind	*Epinephelus drummondhayi*
Gray Snapper [c]	*Lutjanus griseus*	Spot	*Leiostomus xanthurus*
Gray triggerfish	*Balistes capriscus*	Spotted gar	*Lepisosteus oculatus*
Greater amberjack	*Seriola dumerili*	Spotted Seatrout [d]	*Cynoscion nebulosis*
Gulf killifish	*Fundulus grandis*	Striped mullet [d]	*Mugil cephalus*
Hardhead catfish	*Ariopsis felis*	Vermilion snapper	*Rhomboplites aurorubens*
Hogfish	*Lachnolaimus maximus*	Warsaw grouper	*Epinephelus nigritus*
King Mackerel	*Scomberomorus cavalla*	Wenchman	*Pristipomoides aquilonaris*
Lane snapper [c]	*Lutjanus synagris*	Western mosquitofish	*Gambusia affinis*
Lesser amberjack	*Seriola fasciata*	White shrimp [c, d]	*Penaeus setiferus*
Longnose gar	*Lepisosteus osseus*	Yellowedge grouper	*Epinephelus flavolimbatus*
Mahogany snapper	*Lutjanus mahogoni*	Yellowfin grouper	*Mycteroperca venenosa*
Marbled grouper	*Epinephelus inermis*	Yellowmouth grouper	*Mycteroperca interstitialis*
Misty grouper	*Epinephelus mystacinus*	Yellowtail snapper	*Ocyurus chrysurus*
Multiple Waterbodies [b]			
Black bullhead	*Ameiurus melas*	Green sunfish	*Lepomis cyanellus*
Black crappie [d]	*Pomoxis nigromaculatus*	Largemouth bass [d]	*Micropterus salmoides*
Blackspotted topminnow	*Fundulus olivaceus*	Longear sunfish	*Lepomis megalotis*
Blackstripe topminnow	*Fundulus notatus*	Paddlefish	*Polyodon spathula*
Blue catfish [d]	*Ictalurus furcatus*	Red shiner	*Cyprinella lutrensis*
Bluegill [d]	*Lepomis macrochirus*	Redear sunfish	*Lepomis auritus*
Bowfin	*Amia calva*	Smallmouth buffalo	*Ictiobus bubalus*
Bullhead minnow	*Pimephales vigilax*	Spotted bass [d]	*Micropterus punctulatus*
Common carp	*Cyprinus carpio*	Warmouth	*Lepomis gulosus*
Flathead catfish [d]	*Pylodictis olivaris*	White bass	*Morone chrysops*
Golden shiner	*Notemigonus crysoleucas*	White crappie [d]	*Pomoxis annularis*
Grass carp	*Ctenopharyngodon idella*	Yellow bass [d]	*Morone mississippiensis*

[a] Lee et al., 1980; GMFMC, 2004; TPWD, 2017d.

[b] Vinton Waterway, Bayou Choupique, Houston River Canal, Houston River, Little River, West Fork Calcasieu River, Beckwith Creek, Hickory Branch, Indian Bayou Marsh Bayou, Barnes Creek, Clear Creek, Bear Creek, Bunchs Creek, Calcasieu River, Bayou Blue, Bayou Doza, Bayou Des Cannes, Bayou Nezpique, Coulee Valentine UNT, Bayou Mallet

[c] EFH-managed species.

[d] Common species associated with commercial and recreational fisheries.

Note: All named waterbodies include unnamed tributaries crossed by the Projects.

Liquefaction Project

The Liquefaction Project would be located within the Sabine Lake Watershed, which includes the Port Arthur Canal and its surrounding tributaries and estuaries. Within the Liquefaction Project area, habitat for aquatic resources present includes the Port Arthur Canal, Round Lake Canal, and Round Lake, and in

the areas surrounding the dredged material disposal and beneficial reuse sites (i.e., J.D. Murphree WMA, Dredge Disposal Areas 8, 9A, and 9B). The Port Arthur Canal and Round Lake Canal are classified by the TPWD as warmwater marine fisheries; Port Arthur Canal is also classified as EFH by NMFS and is further discussed in section 4.6.2. Port Arthur Canal and Round Lake Canal provide year-round warmwater habitat for aquatic resources. Direct impacts on Round Lake, which is in the project area, would be avoided during construction and operation of the Liquefaction Project.

Salinities in Port Arthur Canal range from 10 parts per thousand (ppt) to 30 ppt, consistent with the salinities in Sabine Lake and the SNWW at the Gulf of Mexico (greater than 30 ppt) (Tolan, 2007). They support a wide variety of commercial and recreational fisheries that are adapted to salinity fluctuations characteristic of Gulf Coast estuaries by providing foraging, nursery, migratory, and spawning habitat within Sabine Lake (TPWD, 2017d; GMFMC, 1998). Common fish and aquatic species caught during TPWD sampling between 1986 and 2013 are provided in table 4.6.2-1. The dominant recreational species in the Sabine Lake watershed (including the Port Arthur Canal) include Atlantic croaker, red drum, spotted sea trout, black drum, bull shark, and sand trout. In addition, red drum, black drum, white shrimp, brown shrimp, gray snapper, lane snapper, and bull shark are EFH-managed species found in this area (see section 4.6.2). Dominant commercial species include white and brown shrimp, oyster, blue crab, southern flounder, striped mullet, and grass shrimp (TPWD, 2017d).

Dredge material would be placed within an open area of degraded marsh habitat associated with the J.D. Murphree WMA, and within three existing dredge disposal areas (Dredge Disposal Areas 8, 9A, and 9B). The J.D. Murphree WMA site is surrounded by aquatic resources including the ICWW to the north, Shell Lake to the west, and Johnson Lake to the south. Dredge Disposal Areas 9A and 9B are surrounded by Taylor Bayou to the west and the ICWW to the south. Dredge Disposal Area 8 is surrounded by the Port Arthur Canal to the west and Sabine Lake to the east. Aquatic and fish species in these waterways are the same or similar to the species found within the Sabine Watershed, as all waterways discussed are hydrologically connected, and possesses many of the same physical water conditions (e.g., salinity, temperature).

Texas Connector and Louisiana Connector Projects

Texas Connector Project

The Texas Connector Project would cross 55 waterbodies, including the ICWW, Taylor Bayou, Hildebrandt Bayou, Gallier Canal, Neches River, and Sabine Pass (see appendix O). All waterbodies within the Texas and Louisiana portions of the Texas Connector Project area are designated as warm water marine fisheries by the TPWD and LDWF, respectively. Of these, the ICWW, Taylor Bayou, Hildebrandt Bayou, Neches River, and Sabine Pass are designated as EFH (see section 4.6.2). Further inland, where freshwater inflow from the Neches River, Sabine Pass, and other smaller tributaries occur, there is reduced mixing with marine waters and the fisheries become more estuarine and brackish. These waterbodies support a wide variety of commercial and recreational fisheries that are adapted to salinity fluctuations characteristic of Gulf Coast estuaries by providing foraging, nursery, migratory, and spawning habitat. Common commercial species include brown shrimp, white shrimp, grass shrimp, southern flounder, striped mullet, oyster species, and blue crab. Recreational species include Atlantic croaker, red drum, black drum, southern flounder, sand trout, and spotted seatrout (see table 4.6.2.1).

Life histories of many Gulf fish species are characterized as estuarine-dependent, typically spawning in the Gulf, allowing their larvae to be carried inshore by currents, or spawning in near shore estuarine environments (GMFMC, 1998). Juvenile fish generally remain in these estuarine nurseries to take advantage of the greater availability of food and protection that estuarine habitats offer. Upon reaching maturity, estuarine fishes either remain in the estuary, migrate to sea to spawn (then return to the estuary

between spawning), or migrate offshore to spend the rest of their lives in deeper waters (Marx and Herrnkind, 1986).

Small estuarine fish such as bay anchovy, sheepshead minnow, gulf killifish, hardhead catfish, and silversides spend their entire lives within the estuary, whereas adult southern flounder, spot, Atlantic croaker, sheepshead, and striped mullet seasonally occupy the estuary. Many other species spawn in more saline waters, but use the estuary as a juvenile nursery (Pattillo et al., 1997). While some coastal pelagic marine fishes such as *Carcarhinidae* (requiem sharks), *Scombridae* (mackerels and tunas), *Mugilidae* (mullets), and *Rachycentridae* (cobia) aren't reliant on estuarine environments for particular life stage development, they are reliant on the food web provided by the high productivity of estuaries (GMFMC, 1998)

The TPWD publishes and maintains the list of ecologically unique river and stream segments. Four waterbodies affected by the Texas Connector Project are listed as ecologically significant waters by the TPWD, including Taylor Bayou, Big Hill Bayou, Hillebrandt Bayou, and the Neches River. Table 4.6.2-2 identifies the waterbodies crossed by the pipelines and laterals that are listed by the TPWD as meeting the criteria to be classified as ecologically unique, including biological function, hydrological function, riparian conservation areas, high water quality/exceptional aquatic life/high aesthetic value, and threatened or endangered species/unique communities.

TABLE 4.6.2-2

Ecologically Significant Waterbodies Affected by the Texas Connector Project

Project Facility	Milepost	Waterbody Name	Criteria
Pipeline	2.5	Taylor Bayou	Biological Function: Freshwater marshes/ forested wetlands with significant habitat value Riparian Conservation Area: J.D. Murphree WMA
Pipeline	5.0	Big Hill Bayou	Biological Function: Fresh and intermediate coastal marshes with significant habitat value Riparian Conservation Area: J.D. Murphree WMA and part of the Great Texas Coastal Birding Trail; McFaddin National Wildlife Refuge
Pipeline	12.0	Hillebrandt Bayou	Riparian Conservation Area: J.D. Murphree WMA (Hillebrandt)
Pipeline	22.1	Neches River	Biological Function: Freshwater wetland with significant habitat values Riparian Conservation Area: Big Thicket National Preserve, Lower Neches River WMA, part of Great Texas Birding Trail High Water Quality Area/Exceptional Aquatic Life/High Aesthetic Value: Exceptional Aesthetic Value Threatened or Endangered Species/Unique Communities: Paddlefish sandbank pocketbook freshwater mussels, Texas heelsplitter freshwater mussels

Louisiana Connector Project

The Louisiana Connector Project would cross 167 waterbodies, including Sabine Lake. All waterbodies within the Texas and Louisiana portions of the Louisiana Connector Project area are designated as warm water marine fisheries by the TPWD and LDWF, respectively. Further inland, where freshwater inflow from the Neches River, Sabine Pass, and other smaller tributaries occur, there is reduced mixing with marine waters and the fisheries become more estuarine and brackish, ultimately becoming freshwater fisheries (Tolan, 2007).

These waterbodies support a wide variety of commercial and recreational fisheries that are adapted to salinity fluctuations characteristic of Gulf Coast waterbodies by providing foraging, nursery, migratory, and spawning habitat. Common fish and aquatic species are provided in table 4.6.2-1 and would be similar to the species found within the Texas Connector Project area. Common commercial species include brown

shrimp, white shrimp, grass shrimp, southern flounder, striped mullet, oyster species, and blue crab. Recreational species include Atlantic croaker, red drum, black drum, southern flounder, sand trout, and spotted seatrout (see table 4.6.2.1). Additionally, common freshwater recreational species include multiple catfish species, alligator gar, bluegill, crappie species, and bass species (TPWD, 2017d).

Small estuarine fish (e.g., minnow, killifish, catfish, and silversides) spend their entire lives within the estuary, whereas others seasonally occupy estuaries (e.g., flounder, mullet), and others use the estuarine as a spawning and/or juvenile nursery area, as discussed under the Texas Connector Project (Pattillo et al., 1997). While some coastal pelagic marine fishes such as *Carcarhinidae* (requiem sharks), *Scombridae* (mackerels and tunas), *Mugilidae* (mullets), and *Rachycentridae* (cobia) aren't reliant on estuarine environments for particular life stage development, they are reliant on the food web provided by the high productivity of estuaries (GMFMC, 1998). Non-estuarine dependent fishes include freshwater families including *Lepisosteidae* (gars), *Amiidae* (bowfins), *Ictaluridae* (catfishes), *Anguillidae* (freshwater eels), *Cyprinidae* (minnows and carp), and *Centrarchidae* (sunfishes, basses, and crappies) (Gosselink et al., 1979).

Oyster habitat occurs along the pipeline route and is managed by TPWD (management sections 12.015, 12.019, and 66.015) where the stocking of fish (including shellfish) is regulated in public waters of the State of Texas. There is also a TPWD-managed oyster restoration site within 1 mile of the project, as well as natural oyster reefs adjacent to the restoration site. Agency consultations with TPWD on April 18, 2016 recommend that a bathymetry and side-scan survey be conducted as part of an oyster assessment within Sabine Lake (both Texas and Louisiana portions) to document areas of potential impacts. PAPL conducted a bathymetry and side-scan survey in three separate visits in July, August, and September 2017, as well as an oyster resource assessment in September 2017. The results of the oyster assessment included approximately 2,078.4 lake bed acres representative of the project area's footprint, which identified a bottom substrate consisting primarily of moderately firm mud. About 409 sacks of marketable eastern oyster (*Crassostrea virginica*) were obtained where the project crosses the east side of Sabine Lake (MP 0.8 and within ATWS-JEF-006).

We received comments on the draft EIS from the TPWD expressing concern that construction of the Louisiana Connector Project pipeline could bury or smother a total of about 2.4 acres of oyster habitat within the Texas portion of the Sabine Lake crossing based on analysis of PAPL's proposed route and an oyster survey assessment dated October 2017. The TPWD noted that three oyster habitat areas consisting of 0.5-acre, 0.4-acre, and 0.4-acre patch reefs were identified in the 300-foot-wide temporary construction workspace east of the HDD exit site at MP 0.8. To avoid impacts on the oyster habitat areas, the TPWD recommended that PAPL relocate the HDD exit site about 768 feet northeast (Latitude 30.029614° North, Longitude 95.286616° West).

The TPWD also noted that two additional oyster habitat areas, 0.8 acre and 0.3 acre, are within the HDD pullback area identified as ATWS-JEF-006. To avoid impacts on these areas, the TPWD recommended that PAPL mark and treat these areas as vessel exclusion zones so that the pipeline and other equipment are not placed on or dragged over oyster habitat.

In response to the TPWD's comments, PAPL stated it is coordinating with the TPWD regarding its concerns about oyster resource impacts. PAPL noted that, based on oyster surveys conducted in September 2017, the "oyster habitat areas" are scattered shell deposits and not established oyster reef habitat. As an alternative to the relocation of the HDD exit site, as discussed above and recommended by the TPWD, PAPL proposes to provide mitigation for potential impacts on the oyster resources in the area, which may include one or more of the following:

- Providing compensation to the TPWD towards an oyster restoration project in the watershed.

- Providing suitable material for an oyster cultch plant within the lake to offset impacts.

- Re-seeding the temporary workspace after construction with live oysters or cultch material.

In accordance with the Commission's Procedures, PAPL would provide detailed plans for each HDD crossing for FERC review and approval prior to construction. If PAPL would need to modify its proposed HDD location as a result of consultations with the TPWD and to avoid oyster beds, it would be required to file a revised HDD crossing plan for FERC review and approval prior to construction.

The TPWD also expressed concern that vessel access, travel lanes, and associated activities (e.g., vessels carrying equipment on deck to workspaces or dragging pipes along the lake bottom) could potentially impact oyster habitat outside of the proposed temporary workspaces. To manage and reduce the impacts associated with these activities, the TPWD recommended that PAPL develop a vessel access route and plan, and coordinate the plan with the resource agencies, particularly the TPWD, so that an appropriate route(s) can be identified that would avoid oyster habitats. The TPWD also recommended that the plan include the following information:

- A map that identifies the travel lanes for each route in relation to the proposed temporary workspaces, the 50-foot-wide permanent right-of-way, and the pipeline's centerline. The map should also contain geographic coordinates (in decimal degrees) for each travel lane to include the vessel entry point, vessel exit point, and each angle (or bend).

- The designated access route(s) should be marked with reflective PVC pipe or other suitable material and with numeric labeling to assure that vessel operators can easily follow the access route.

- All channel markers should be inspected daily, and all missing markers replaced within 12 hours.

- A minimum 2.0-foot clearance should be established between the lake bottom and the vessel bottom for all vessel entries and exits.

- Vessel drafts should not exceed the minimum water depths within the project area and access route(s).

- Tide staffs should be placed at key points along the access route(s) for vessel operator reference and record keeping.

- Vessel operators should be required to log the draft of the vessel and the tide level prior to vessel movements.

- Any oyster habitat identified within the proposed pullback area, HDD exit location, and access route(s) should be protected with boom-type silt curtains.

- The applicant should submit pre-project and post-project bottom elevation surveys along the pipeline and access route(s) to verify that no prop/wheel-washing occurred as a result of the project. Transects should be spaced a maximum of 50 feet apart, with continual soundings taken along those transects. The applicant should take soundings along transects

located on the clearly marked access route right-of-way along the centerline and 200 feet on each side of the centerline. All survey results should be submitted to the USACE - Galveston District. A GPS plot of the route should be submitted with the survey results.

In response to the TPWD recommendations, PAPL committed to using sediment curtains as needed to minimize impacts on the oyster habitat areas; would mark the area; and would advise vessels to avoid water bottom impacts in the area to the maximum extent possible while maintaining safe operations. PAPL also noted that one access route from the SNWW into Sabine Lake would be used; however, it is over 11 miles north of the oyster habitat areas. While water bottom impacts are not anticipated from the use of the access route into Sabine Lake, PAPL would mark the proposed route in accordance with the recommendations by the TPWD. Also, vessel operators would record tide data and log the draft of the vessel as recommended by the TPWD.

Four waterbodies within the Louisiana portion of the Louisiana Connector Project are listed as System Rivers under the Louisiana Scenic Rivers Act of 1988, including Beckworth Creek (MP 64.1), Hickory Branch (MP 65.2), Barnes Creek (MP 79.2), and Whiskey Chitto Creek (MP 91.2). No waterbodies crossed by the Texas portion of the Louisiana Connector Project are listed as ecologically significant stream segments by the TPWD.

Nonjurisdictional Facilities

The nonjurisdictional facilities (e.g., highway, pipeline, and utility corridor) associated with the Liquefaction Project would affect the Port Arthur Canal and Round Lake Canal (see table 4.3.1-2). As discussed above, the TPWD classifies these waters as warm water marine fisheries, and common fish and aquatic species caught during TPWD sampling are listed in table 4.6.2-1.

4.6.2.2 Impacts and Mitigation

Liquefaction Facilities

Potential impacts on aquatic resources related to construction and operation of the Liquefaction Project would be associated with the Port Arthur Canal and Round Lake Canal, including increased turbidity due to dredging, increased in-water noise from pile driving, increased vessel traffic, the release of ballast water or hull fouling, alteration of light regimes, creation of habitat for encrusting species, alterations to stormwater drainage and increased stormwater runoff, alteration of wave energy, and inadvertent spills of hazardous materials. The water column is turbid, caused by the high sediment load of inflowing waters and disturbance of bottom sediments by wind-action and vessel traffic, especially in the Port Arthur Canal.

Dredging

As described in section 2.1.1.1, the Liquefaction Project requires installation of a MOF, the Pioneer Dock, and a marine berth and turning basin in the Port Arthur Canal. This would require initial dredging of about 7.8 million yd^3, including 67,600 yd^3 for the MOF, 508,000 yd^3 for the Pioneer Dock, 5.3 million yd^3 for the ship slip and berthing area, and 1.4 million yd^3 for the ship turning basin. Regular maintenance dredging is anticipated to remove 287,000 yd^3 each year at the berth, turning circle, and MOF for the life of the project, which we estimate to be 30 years for a liquefaction facility, for a total of about 8.6 million yd^3 of material removed. Authorization for this activity from the USACE or other applicable agency would be required at the time it occurs. Dredging would temporarily cause sediment suspension and turbidity temporarily, lowering the water quality within a localized area surrounding the dredged area. Increases in turbidity can adversely affect fish physiology and behavior, resulting in less healthy individuals, reductions in fecundity, reduced foraging habitat, and temporary emigration of fish out of the project area. Direct

effects on the physical environment would result in less sunlight absorbed throughout the water column, affecting the amount of photosynthesis by aquatic plants, dissolved oxygen in the water column, algae, and phytoplankton, ultimately affecting the food chain (Wilber and Clarke, 2001). PALNG would begin construction from the landward side, working its way into the Port Arthur Canal to minimize turbidity and sediment suspension, and would use wet dredging techniques to retain much of the entrained sediment.

Construction dredging would produce a turbidity plume that extends beyond the construction footprint, with the direction and size of the plume depending on tidal currents at the time of disturbance. Within the first few days after completion of dredging operations, the benthic community would be temporarily affected, where the species richness, species abundance, and biomass of the benthic community would be affected the through avoidance, and in limited instances, direct mortality. This would reduce the amount of prey available for aquatic species within the berthing area during construction but would overall create more open water habitat once operational, therefore, creating a net increase in aquatic habitat, including a net increase of the benthic community structure. Based on historic dredging of the Port Arthur Canal, polychaetes, oligochaetes, and other similar species would quickly re-colonize in the soft mud bottom of the disturbed areas following dredging through natural rapid population growth as these species take advantage of unoccupied space in newly exposed sediments. Also, increased turbidity would also be temporary during active dredging and localized to the immediate area surrounding the liquefaction facilities, and habitat would revert to pre-construction conditions after construction. The Port Arthur Canal generally has naturally high suspended sediment loads due to active dredging of the canal, and the existing vessel traffic. Therefore, while the increase in turbidity due to dredging of the work dock area would be significant for a short period of time compared to the existing environment, and the work would be temporary.

As previously mentioned, dredging material would be placed at the J.D. Murphree WMA and existing Dredge Disposal Areas 8, 9A, and 9B. About 2.4 million yd^3 would be transported from the Liquefaction Project site to the J.D. Murphree WMA, and an additional 4.9 million yd^3 would be placed in the dredge disposal areas. PALNG performed a Tier I Evaluation of Dredged Material for Beneficial Reuse in October 2017, which combined soil boring data from March 2004 coupled with an aerial review of the land use within the project area from 2014. The Tier I Evaluation determined that there would be no adverse impacts on the disposal sites from the dredged material, as the analytical results indicate that the soil within the liquefaction site fall below the Threshold Effect Limits, as described in more detail in section 4.2.1.6. Furthermore, the net increase of improved marsh habitat at the dredge disposal sites would provide a long-term benefit to the ecology of the estuary.

Potential impacts on aquatic resources from maintenance dredging include direct take and habitat modification as well as temporary increases in noise, turbidity, and suspended solid levels. These impacts would be similar to those described above for dredging during construction of the liquefaction facilities; however, impacts would be shorter in duration due to the reduced amount of material being removed from the recessed berthing area.

Because of previous disturbances as a result of similar projects in the area and the existing conditions in the SNWW (existing industrial port), activities associated with the Port Arthur Canal (shipping), PALNG's impact minimization measures (wet dredge and working landward), and the agency accepted turbidity analyses, the impacts on aquatic resources associated with dredging during construction and operation of the Liquefaction Project would be minor to moderate and permanent.

Pile Driving

Construction of the liquefaction facilities would require the installation of piles to support the proposed structures. As discussed in section 2.4.1, pile driving activities would take place 10 hours per

day, up to 6 days per week. In-water pile driving would be required to install the steel sheet pile bulkhead along the shoreline of the Port Arthur Canal and the steel pipe piles supporting the LNG loading platform as well as the breasting and mooring dolphins. Marine piles would be installed using hydraulic pile drivers as discussed in section 2.4.1. Based on information from PALNG, the facilities would require 779 pilings; construction of the Pioneer Dock at the Liquefaction Project site would require four pilings installed over a 3-month period, the MOF would require 103 pilings installed over a 10-month period, and the marine vessel berth would require 672 pilings installed over a 24-month period.

The primary impacts on aquatic species from pile driving activities would be avoidance of the area, stress, and mortality or injury due to the underwater sound pressure levels. Primary impacts on aquatic resource habitat would be a temporary change in species community structure from avoidance and mortality, and a loss of benthic species habitat directly under the location of the pile. PALNG estimates that the area affected by each pile would be 0.0003 acre; cumulatively this would equate to 0.02 acre at one berth area and 0.03 acre at the MOF. In addition, studies have shown that the sound waves from pile driving may result in injury or trauma to fish, sea turtles, and other animals with gas filled cavities, such as swim bladders, lungs, sinuses, and hearing structures (Abbott and Bing-Sawyer, 2002; Popper et al., 2005). Installation of the pilings for the dock could cause rapid concussive noise underwater, ultimately affecting the gas-filled membranes of aquatic species used for navigation. Depending on the sound frequency and intensity associated with this activity, it could cause a change in aquatic species behavior in proximity to the work dock area or could cause species to avoid the area.

NMFS is currently developing guidelines for determining sound pressure level thresholds for fish and marine mammals. The agency's interim guidelines use 150 decibels (dB) re: 1 microPascal (µPa) as the threshold for behavioral effects on fish species of particular concern, citing that noise levels as low as 120 dB re: 1 µPa can cause temporary behavior or physiological changes (startle and stress) that could decrease a fish's ability to avoid predators. The current interim thresholds for the onset of injury to fish are a peak sound pressure of 206 dB re: 1 µPa regardless of fish size, a cumulative sound pressure level of 187 dB re: 1 µPa for fish 2 grams or greater, and a cumulative sound pressure level of 183 dB re: 1 µPa for fish of less than 2 grams (NMFS, 2015a; Stadlar and Woodbury, 2009; ICF Jones and Stokes, 2012).

TABLE 4.6.2-3

NMFS Preliminary Sound Pressure Level Thresholds for Fish and Marine Species

Effect on Fish and Aquatic Species	Acoustic Thresholds
Behavioral and Physiological Effects	120-160 dB re: 1 µPa
Injury Onset (general)	180 – 190 re: 1 µPa
Injury Onset (fish <2 grams)	183 dB re: 1 µPa
Injury Onset (fish >2 grams)	187 dB re: 1 µPa
Injury to Mortality	206 dB re: 1 µPa

Construction noise levels underwater would be greatest during pile driving activities which are estimated to exceed 200 dB re: 1 µPa, and would attenuate rapidly with distance (Central Dredging Association, 2011); however, studies indicate that noise impacts may still exceed NMFS's threshold for behavioral effects (141 dB re: 1 µPa to 168 dB re: 1 µPa) even at 2 kilometers (1.2 miles) from the pile driving activities. Noise levels would be above the threshold for changes in fish behavior and these levels would exceed the threshold for injury or mortality on species.

PALNG would implement construction techniques that minimize noise effects on aquatic species, including pre-drilling pile holes, the use of a vibratory hammer, bubble curtains/cofferdams, and ramping driving activities. Pre-drilling pile holes would reduce the number of number of pile strikes that would be needed, therefore minimizing noise. Vibratory hammering would be used as geotechnical conditions allow,

and as able based on pile size, type, etc., and typically produces lower underwater sound pressures. The use of bubble curtains and cofferdams create a sound barrier between driving activities and the surrounding aquatic environment, providing noise abatement for aquatic species. Furthermore, PALNG would ramp pile driving activities by gradually increasing power and frequency over a period of time, which would allow sensitive aquatic species to depart the area before harmful underwater sound pressures are reached by the vibratory hammers.

Based on similar projects in the area, these species are expected to move out of the affected area temporarily during piling, and would be able to return once construction activities have ceased. Additionally, based on PALNG's noise mitigation measures, the impacts on aquatic species associated with pile driving during construction of the project would be minor and temporary.

Increased Vessel Traffic

The increase in barge traffic at and near the liquefaction facility during construction would result in increased erosion or sedimentation and noise in the area (Central Dredging Association, 2011). During construction, barges would remain when necessary to deliver materials or to facilitate maintenance dredging in the berthing area and MOF. Barge and vessel movements would not substantially increase shoreline erosion, benthic sediment disturbance, or prop scarring because the vessels are slow moving and do not create significant wakes. Some benthic sediment disturbance could occur when the barges were at the MOF, which would be short term, lasting through the initial months of construction. PALNG would minimize potential erosion of the shoreline by installing rip-rap along the shoreline, further preventing sedimentation to benthic organisms (TCEQ, 2003).

Underwater noise generated by large vessels calling on the work dock is estimated to be between 180 and 190 dB re: 1 µPa at 1 meter and would be greatest during vessel transport to the work dock (Central Dredging Association, 2011). Noise would attenuate at a faster rate during vessel movement, although species would be subjected to the noise for a short period of time as the vessels pass (Central Dredging Association, 2011). During project operation, vessels moored at the dock would produce noise during engine start up and if idling. Idling noise would be lower as the propeller would not be in use. Noise levels of vessels would be similar to the noise currently generated by vessels transiting the Port Arthur Canal (between 180 and 190 dB re: 1 µPa at 1 meter), and would contribute minimally to level of existing ambient noise (between 70 and 90 dB re: 1 µPa at 1 meter for busy shipping channels [Central Dredging Association, 2011]) once noise attenuation is factored in.

Based on these considerations, the impacts associated with increased barge traffic and noise on aquatic species would be consistent with current vessel traffic noise occurring in proximity to the liquefaction facilities. As a result, the impacts on aquatic species associated with increased vessel traffic during construction and operation of the project would be minor and temporary.

Hydrostatic Testing

Hydrostatic testing of the Liquefaction Facility would require approximately 87 million gallons of test water, which would be obtained from obtained the LNVA or the City of Port Arthur municipal water source and would be discharged into the Port Arthur Canal. After completion of hydrostatic testing, PALNG would discharge the hydrostatic test water to the Port Arthur Canal in accordance with its Texas RRC discharge permit and PALNG's *Environmental Plan* to minimize impacts on surface water. Hydrostatic testing of the liquefaction facility piping and tanks would result in a temporary, localized, and minor impact on surface waters.

Ballast Water and Hull Fouling

Traffic associated with construction and operation of the liquefaction facilities could affect aquatic habitat within the Port Arthur Canal by altering water quality from ballast water via changing the pH or temperature or causing a resuspension of sediment, or by altering the species composition of benthic organisms from hull fouling or introducing invasive species.

The aquatic species within the Port Arthur Canal are euryhaline (able to live in waters with a wide range of salinity) and are well adapted to natural variations within time and location of salinity and oxygen levels. In general, this adaptability and the ability for most aquatic species to move over a short distance to more suitable conditions prevents adverse impacts on aquatic species as a result of ballast water discharges. U.S. regulations require that all vessels equipped with ballast water tanks that enter or operate in U.S. waters maintain a vessel-specific ballast water management plan and assign responsibility to the master or appropriate official to understand and execute the ballast water management strategy for that vessel (33 CFR 151.2026), United Nations Convention on the Law of the Sea 1982, International Convention for the Prevention of Pollution from Ships 1973 and the 1978 Protocol (MARPOL 73/78), and Ballast Water Management for Control of Nonindigenous Species in WOUS CFR Title 33, Chapter I, Subchapter O, Part 151, Subpart D. Under these requirements, vessels must implement strategies to prevent the spread of exotic aquatic nuisance species in U.S. waters. These strategies include retaining ballast water on board, minimizing uptake or discharge at certain times or locations, and exchanging ballast water from coastal sources with mid-ocean seawater. Vessels that have operated outside of the U.S. EEZ must either retain their ballast water on board or undergo a mid-ocean (greater than 200 nautical miles from shore and at a water depth greater than 6,562 feet) ballast water exchange in accordance with applicable regulations. As such, ships calling on the liquefaction facilities would discharge all ballast water under USCG oversight and in accordance with federal regulations. Hull fouling could result in the deposition of invasive aquatic organisms, and sedimentation; however, these impacts would be minimized by following CFR 33, Chapter I, Subchapter O, Part 151, Subchapter (d), which limits the amount of ballast water a vessel can release based on the number of micro- and macroorganisms per cubic meter of ballast water in order to minimize the introduction of nuisance species into WOUS.

The number of additional vessels expected to visit the liquefaction site during operations is approximately 180 vessels per year, which is less than a one percent increase in current traffic patterns. Each vessel has a ballast water discharge and uptake capacity of 12 to 15 million gallons of sea water, with a rate of approximately 720,000 gallons per hour over a 10- to 16-hour timeframe.

Given the industrial activities within the Port Arthur Canal (shipping), along with implementation of the mandatory practices required by the U.S. regulations and the USCG, the effects of ballast water discharges on aquatic resources and water quality resulting from construction and operation of the Liquefaction Project would be minor and temporary.

Alteration of Light Regimes

During construction of the work dock, and particularly during operation, additional lighting within and near the Port Arthur Canal would be present at the liquefaction facility. Aquatic species in the area are generally acclimated to the current ambient light. Increased light could affect small organisms by causing minor disruptions to the food chain including changes in the vegetation community structure, and increased predation. Impacts on aquatic resources resulting from shading could include reduced plant growth and changed vegetation assemblages, which would affect the food chain, and modified animal behavior. Additionally, reduced natural light levels in areas due to new structures providing shading would occur where previously not experienced.

Increased light during construction activities at the liquefaction facility would be nominal since construction would occur during daylight hours. During project operation, lighting would be necessary in the berth, docks, and MOF areas; on adjacent buildings for safety and security purposes; and on vessels moored at the facility. However, aquatic species in the area are likely acclimated to the current ambient light and the industrial nature from the existing use of the Port Arthur Canal and most of the berth area would become new aquatic habitat that was previously land. Changes in light regimes resulting from construction and operation of the Liquefaction Project would have minor and temporary to permanent impacts on aquatic species.

Habitat for Encrusting Species

Habitat for encrusting species would be created by constructing the new dock structure and by installing rip-rap along the shoreline for erosion control. The project facilities would create an additional 50,000 square feet of new hard surfaces, including 20,000 square feet in the LNG vessel berthing area and 30,000 square feet in the MOF. The new encrusting species expected to inhabit the new area would be consistent with the existing biota and would permanently contribute to the biodiversity of Port Arthur Canal; Common encrusting species found in the Gulf of Mexico include the eastern oyster, hook mussel (*Ischadium recurvum*), and slipper shell (*Crepidula fornicate*). Construction would have a minor and temporary impact on habitat for encrusting species based on noise and turbidity, or the occasional smothering of individuals due to sedimentation. However, the additional hard surface for operational purposes would create a permanent and beneficial impact on aquatic species.

Stormwater Runoff

During and after construction, the conversion of land to impervious surface areas at the liquefaction facility site would result in an increased volume of stormwater runoff, which could create changes in salinity, temperature, and/or dissolved oxygen in the area surrounding discharges, as well as increased potential for contamination.

To reduce direct stormwater runoff, PALNG would create catch basins and water diversion structures in accordance with its Project-specific SWPPP and *Environmental Plan*. To reduce contamination to aquatic resources, PALNG would minimize direct fueling spills by including a hazardous material containment area in the fueling facility design, and would implement its *Spill Control Plan*, and *Environmental Plan*.

Based on PALNG's adoption of the SWPPP, containment area, and catch basins, impacts on aquatic species resulting from stormwater runoff (including contamination) during construction and operation of the Liquefaction Project would be minor and temporary, and would be limited to heavy precipitation events (more than 1 inch in 24 hours).

Alteration of Wave Energy

Changes to wave energy within the Liquefaction Project area would result from the installation of piers, pilings, and docks during construction, and increased vessel traffic during operation. Potential impacts from increased wave energy include erosion, increased turbidity, and sedimentation, which could alter the plant and animal composition as substrate regimes change.

The Port Arthur Canal has been previously altered with shoreline stabilization devices to minimize erosion, turbidity, and sedimentation to allow for heavy vessel traffic. To further minimize the potential for erosion and sedimentation resulting from project-related vessel traffic and construction activities, PALNG would install rip-rap along the shoreline of the Port Arthur Canal.

As a result of similar projects in the area and the existing conditions and activities associated with the Port Arthur Canal, along with PALNG's impact minimization measures, the impacts on aquatic species associated with changes to wave energy during construction and operation of the project would be negligible to minor and temporary (lasting as long as the vessels are in the area).

Inadvertent Spills

During construction and operation of the Liquefaction Project, spills or leaks of hazardous materials entering the Port Arthur Canal from construction equipment could have adverse impacts on aquatic resources. Impacts would be physical (smothering, substrate regime, etc.) or chemical (contaminants, toxic effects, bioaccumulation, etc.), and would disrupt aquatic species. The timing of the disruption to habitat and individuals would depend on the volume, location, material, and response time.

To minimize the potential for petroleum product spills during construction and operation, PALNG would implement the spill prevention and containment measures included in its *Environmental Plan* for the project. The implementation of these procedures would minimize response time and ensure appropriate cleanup actions are taken in the event of a spill.

Operations

Post-construction and operational impacts on aquatic resources would be minimal and primarily associated with periodic maintenance dredging in the berthing area, turning basin, and MOF. Maintenance dredging activities would most likely be performed using a conventional barge-mounted hydraulic cutter suction dredge and dredged materials would be deposited as agreed in consultation with the USACE, Texas, and Louisiana state agencies. Long-term maintenance dredging would be conducted in accordance with applicable federal or state regulations. Any permitting or agency coordination efforts would be conducted at the time of the maintenance activities to accommodate the current environmental or regulatory conditions and requirements at that time. At a minimum, on-going maintenance dredging would require coordination with and input from the USACE, NMFS, and FWS.

The SNWW is fourth in the nation for total cargo tonnage, and refineries in the area produce 60 percent of the Unites States' jet fuel and the majority of the United States' military fuel (SNND, 2017b) and sustains heavy vessel traffic. The increased ship traffic (about 180 LNG vessels per year) represents a less than a one percent increase in the total number of annual vessels in the project area, and would not result in a measurable increase in aquatic resources impacts nor would it represent a significant change to ongoing activities in the Port Arthur Canal. As such, impacts resulting from increased ship traffic to serve PALNG's liquefaction facilities would be temporary (experienced during the time in which the vessel is in transit) to permanent (vessel traffic would last for the life of the project) and minor.

Texas Connector and Louisiana Connector Projects

Construction and operation of the Texas Connector and Louisiana Connector Projects would be conducted using similar, industry-recognized methods and mitigation measures. As such, the following discussions apply to both pipeline projects. Differences in methods or mitigation measures are described separately as appropriate by project.

Construction of the Texas Connector and Louisiana Connector Projects would temporarily impact aquatic resources from activities such as waterbody crossings, removal of streamside vegetation, hydrostatic testing, and inadvertent spills. Operational impacts would be limited to an inadvertent release, increases in impervious surfaces and associated stormwater runoff, and the clearing of streamside vegetation for operation, otherwise, the operational activities would not affect aquatic resources.

Potential impacts on aquatic resources related to construction and operation of the projects would be associated with increased erosion and sedimentation due to open-cut waterbody crossings, inadvertent release of drilling mud during HDD crossings, physical or chemical water alterations from hydrostatic testing, entrainment from hydrostatic testing, and inadvertent spills. These impacts and their potential impacts on aquatic species are discussed in the following sections.

Waterbody Crossings

As detailed in section 4.3.1, PAPL proposes to cross 24 waterbodies using the HDD crossing method for the Texas Connector Project and 26 waterbodies using the HDD method for the Louisiana Connector Project. The HDD method, as described in section 2.4.3.1, would avoid direct impacts on the features it would cross. The remaining waterbodies associated with both projects would be crossed using the conventional bore, push-pull, or open-cut methods (see section 2.4.3). In addition, specialized construction methods would be implemented for construction of the Louisiana Connector Project within Sabine Lake, such as the S-lay method (see section 2.4.3.1).

As mentioned previously, installing the proposed pipelines using the HDD method would avoid or minimize impacts on fisheries, fish habitat, and other aquatic resources within and adjacent to waterbodies unless an inadvertent release of drilling mud were to occur. An inadvertent release of drilling mud into a stream would affect water quality and could impede fish movement, potentially resulting in stress, injury, and/or direct mortality of fish present in the vicinity of the release. If an inadvertent release occurs, PAPL would implement the corrective action and cleanup measures outlined in its *Inadvertent Release Plan* to minimize potential impacts on aquatic resources, including the installation of berms, silt fence, and/or hay bales to prevent silt-laden water from flowing into waterbodies, or, in the event of an in-water release, the use of temporary dams to isolate the drilling fluid and vacuum trucks to remove the released drilling mud.

The use of the open-cut crossing method would result in temporary loss or modification of aquatic habitat, increase in sedimentation and turbidity levels, and alteration of vegetative cover. The majority of fish present within the waterbody at the time of construction activities would likely be displaced to similar adjacent habitats up or down stream; however, stress, injury, or death of individual fish may occur. Benthic invertebrates, insects, and microorganisms would not be able to move out of the project areas and would result in injury or death of individuals and even populations, affecting the food chain as many macroinvertebrates and microorganisms serve as food sources for aquatic species. Increased suspended sediment and turbidity levels may cause degradation of benthic and spawning habitat and decreased dissolved oxygen levels within and downstream of the crossing location. This temporary increase in suspended solids would decrease rapidly following the completion of instream activities. The clearing of riparian vegetation during construction may reduce shade and cover until revegetation occurs, indirectly causing a temporary increase in water temperature in localized areas. Clearing would be adjacent to existing rights-of-way at 37 perennial waterbody crossings along the Texas Connector Project and at 63 perennial waterbody crossings along the Louisiana Connector Project, which would minimize changes in water temperature because much of the vegetation is already maintained.

The use of open-cut construction methods could have both direct and indirect impacts on aquatic resources. Direct impacts would include mortality, injury, or temporary displacement of the organisms living on, in, or near the waterbody bottom. Indirect impacts would include suspension of sediments in the water column, which could clog fish gills and obscure visual stimuli, and the redistribution of sediments that fall out of suspension, which could bury benthic and demersal species, resulting in mortality of eggs and other life stages. Benthic invertebrates and demersal (bottom-dwelling) fish species in or near the excavation area would be most affected. Open-cut construction would require clearing of streamside vegetation, resulting in reduced shading and increased water temperatures in some of the warmwater streams. However, stream bank clearing would be limited and mostly would occur adjacent to previously

cleared rights-of-way, and the impact on aquatic resources is expected to be minimal and downstream water temperatures would not be significantly increased. PAPL would minimize impacts on aquatic resources by using the HDD method at nearly 50 locations for both pipeline projects, which would avoid direct and indirect impacts on aquatic resources, and implementing an Inadvertent Release Plan in the event there is an inadvertent release of drilling mud.

In addition, PAPL would implement the measures outlined in its *Environmental Plan* to minimize impacts on waterbodies and aquatic resources during pipeline construction. These mitigation measures include reduced workspace areas near waterbodies, establishing buffers to prevent run-off from entering waterbodies, installing erosion control devices, and completion of instream construction activities within 24 or 48 hours, depending on crossing length. Once construction is complete, streambeds and banks would be restored to their preconstruction conditions and contours to the maximum extent practicable, which would aid in preventing erosion and minimize long-term impacts on aquatic resources.

During operation, PAPL would maintain a minimum 10-foot-wide permanent right-of-way to prevent plant roots from damaging the pipe. Due to the limited number of open-cut crossings, the implementation of HDD installation procedures, the reduction of construction workspace around waterbody crossings, and implementation of the mitigation measures described above, the projects would have minimal and localized impacts on aquatic resources.

Sabine Lake Construction

Construction within Sabine Lake would begin with an HDD entry point located at the Liquefaction Project site, where the trajectory would cross the Port Arthur Canal and resurface in Sabine Lake about 500 feet northeast of the HDD entry location (MP 0.8). The HDD exit point would be located at Shell Island (MP 18.1) and would be drilled from the shore into Lake Sabine (MP 17.5). In addition, the HDD method would be used in Sabine Lake to cross foreign pipelines between MPs 4.3 and 4.8.

Pipeline construction outside of the HDD areas in Sabine Lake would involve trenching and temporary stockpiling of excavated sediments adjacent to the pipeline trench. Construction of the pipeline within shallow lake would occur by trenching the lakebed via open cut or jetting, and implementing barge lay construction techniques. Once trenching is complete, the pipeline would be buried underneath the lakebed at a minimum depth of 4 feet. Single lengths of concrete coated steel pipe would be received from material barges, then are welded, inspected, and coated in a horizontal working plane (firing line) aboard a pipelay barge. The pipelay barge gradually releases the pipeline into the trench, until it reaches the touchdown point. About 1,403 acres of bottom sediments (EFH habitat) would be temporarily disturbed in Sabine Lake due to construction of the pipeline right-of-way, including ATWS associated with the HDDs. PAPL would mark oyster habitat areas and advise vessels to avoid water bottom impacts in these locations. Vessels would record tide level data and log vessel drafts as recommended by the TPWD. Silt curtains would also be used during construction to minimize potential impacts on oyster habitat.

Alteration of benthic community patterns could render the area of the pipeline right-of-way temporarily unavailable as feeding areas or habitat for fishes or other bottom feeding species. The duration of this impact would be for the length of construction activities plus benthic recolonization time, which is about 6 months or less to comply with NMFS EFH conservation measures, as discussed in section 4.6.3.2. For all aquatic species, any adverse environmental consequences would be minor due to the temporary increase in turbidity and suspended sediments. The greatest impacts would be from the turbidity created by the placement of the Louisiana Connector Project pipeline across Sabine Lake, but this impact would be localized and temporary. Effects on recreational and commercial fisheries would be minimal considering the temporary nature of the disturbance from pipeline construction activity. Based on PAPL's previous

proposal to cross Sabine Lake (2006), there would be no need for operational right-of-way clearing within Sabine Lake and, as such, no impacts on aquatic species from the operation of the pipeline.

PAPL continues to coordinate with the TPWD regarding potential impacts on oysters and their habitat. PAPL has proposed mitigation measures that include compensating the TPWD for an oyster restoration project within the same watershed, providing suitable material for oyster cultch, and reseeding temporary workspaces with live oysters or cultch material following construction. The TPWD has not yet responded to these proposed measures.

Increased Vessel Traffic

The increase of barges and delivery boats for the Louisiana Connector Project (described in section 2.4) would result in a short-term increase in vessel traffic, sedimentation, and noise in the area. During construction barges would only remain when necessary or to facilitate delivery of construction materials. Boat movements and the movements of support vessels and other supply vessels are not expected to substantially increase shoreline erosion, benthic sediment disturbance, or prop scarring in the immediate area, primarily because the vessels are slow moving and would not create substantial wakes. Some benthic sediment disturbance could occur during barges and tug delivery.

Underwater noise is discussed in section 4.6.2.2. Furthermore, Sabine Lake, the Port Arthur Canal, and the ICWW were specifically created to provide deepwater access for maritime commerce, and as such, the use of waterways by vessels to accommodate pipeline construction is consistent with the planned purpose and use of these active shipping channels. The increase in vessel traffic would be short-term and limited to construction, and associated impacts on aquatic resources due to increased shoreline erosion and resuspension of sediments would be negligible. Therefore, the Texas Connector and Louisiana Connector Projects would not have significant impacts on aquatic resources.

Hydrostatic Testing

The Texas Connector Project would require about 14.6 million gallons of water obtained from municipal sources, Taylor Bayou, and Hildebrandt Bayou (see table 4.3.2-5). Hydrostatic test water would be discharged into Sabine Pass and well-vegetated uplands. Hydrostatic testing of the Louisiana Connector Project pipeline, laterals, and tie-ins would require about 49.5 million gallons of water (see table 4.3.2-5); test water discharge locations would be identified prior to construction. In addition, about 16.8 million gallons and 4.4 million gallons of water would be obtained from municipal sources to test the HDD pipeline segments associated with the Texas Connector and Louisiana Connector Projects, respectively (see table 4.3.2-4). As required by the Commission's Procedures, PAPL would file a list identifying the final locations of all waterbodies proposed for use as a hydrostatic test water source or discharge location.

A 0.25-inch diameter mesh screen would be used over the intake hose to minimize entrainment during water withdrawals from surface waters. PAPL would not add any chemicals to the test water, would implement the hydrostatic testing measures outlined in its project-specific *Environmental Plan* (which includes the Commission's Procedures), and would adhere to the measures required by NPDES permits required for respective states. Discharges for the pipelines would be dissipated into their respective waterways to minimize the localized turbidity and minor changes of the salinity and temperature.

With the implementation of these measures, impacts on water quality due to hydrostatic testing would be temporary and minor.

Inadvertent Spills

Impacts on waterways and aquatic species as a result of an inadvertent spill of hazardous material during construction of the Texas Connector and Louisiana Connector Projects would be similar to those described for the Liquefaction Project described above. PAPL would implement the measures identified in its project-specific *Environmental Plans* to minimize response time and ensure appropriate cleanup actions are taken in the event of a spill. Therefore, impacts on aquatic resources from an inadvertent spill would be minimized to avoid causing a significant or adverse impact on aquatic species.

Stormwater Runoff

During and after construction, the conversion of land to impervious surface areas at the aboveground facilities would result in an increased volume of stormwater runoff, which could create changes in salinity, temperature, and/or dissolved oxygen in the area surrounding discharges, as well as increased potential for contamination. To reduce direct stormwater runoff, catch basins and water diversion structures would be used in accordance with the project-specific SWPP and *Environmental Plan*.

Operations

Post-construction or operational impacts on aquatic resources from the projects would be minor. Restoration of the vegetation along the rights-of-way and ATWS would minimize erosion potential relative to waterbodies. Minimal impact on fisheries is expected from maintenance mowing or manual removal of woody vegetation in the vicinity of the pipeline rights-of-way, as maintenance would be in accordance with the Commission's Plan and Procedures. Adherence to the Plan and Procedures would allow for the continued reestablishment of vegetation along the edges of the waterbodies minimizing long-term effects on the fisheries. Conservation measures outlined in the Procedures, consistent with federal and state requirements, would be implemented to avoid maintenance work within streams where adverse conditions would be created during spawning period(s).

Nonjurisdictional Facilities

Construction of the nonjurisdictional facilities would temporarily affect 0.6 acre of estuarine water column and estuarine mud/soft bottom EFH (Round Lake Canal), and additionally, the construction corridor parallels another tidally influenced (unnamed) canal to the west. Similar to the pipeline projects, construction impacts on aquatic resources could result from waterbody crossings, increased stormwater runoff, erosion and sedimentation, and the potential for an inadvertent spill. To minimize these impacts, PALNG would implement the measures described in its *Environmental Plan*.

4.6.3 Essential Fish Habitat

The MSA (16 USC 1801 et seq.) establishes procedures to identify, conserve, and enhance EFH for federally managed species. EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (16 USC 1802[10]). EFH designations apply to inshore marine and estuarine WOUS to the mixing zone at the upstream limit of saline intrusion. EFH designations do not apply to freshwater habitats.

Federal agencies that authorize, fund, or undertake activities that may impact EFH must consult with NMFS about potential impacts. Although NMFS has not established specific criteria for conducting EFH consultations, NMFS recommends consolidated EFH consultations with interagency coordination procedures required by other statutes, such as NEPA or the ESA, to reduce duplication and improve efficiency.

Generally, the EFH consultation process includes the following steps:

1. Notification – The action agency should clearly state the process being used for EFH consultations (e.g., incorporating EFH consultation into an EIS).

2. EFH Assessment – The action agency should prepare an EFH Assessment that includes both identification of affected EFH and an assessment of impacts. Specifically, the EFH Assessment should include the following:

    a. A description of the proposed action.

    b. An analysis of the effects (including cumulative effects) of the proposed action on EFH, managed fish species, and major prey species.

    c. The federal agency's views regarding the effects of the action on EFH.

    d. Proposed mitigation, if applicable.

3. EFH Conservation Recommendations – After reviewing the EFH Assessment, NMFS should provide recommendations to the action agency regarding measures that can be taken by that agency to conserve EFH.

4. Agency Response – The MSA requires the action agency to respond to NMFS within 30 days of receiving the recommendations. If the action agency cannot respond completely to the NMFS recommendations during this timeframe, the action agency may notify NMFS that a full response to the conservation recommendations would be provided by a specified completion date agreeable to all parties. The response must include a description of measures proposed by the agency to avoid, mitigate, or offset the impact of the activity on EFH. For any conservation recommendation that is not adopted, the action agency must explain its reason to NMFS for not following the recommendation.

As discussed during agency consultations between PAPL/PALNG and NMFS on July 24, 2015, NMFS recommended that, "…the EIS include sections titled "Essential Fish Habitat" and "Fishery Resources" which describe the potential impacts of the proposed project on the various categories of EFH and on marine fishery species within the project area. We have prepared the responsive sections of the EIS pursuant to EFH Guidelines (50 CFR 600.05 - 600.930) and agency consultations, and as such, the FERC requested that NMFS consider the draft EIS as the EFH Assessment.

The NMFS Southeast Region Habitat Conservation Division staff reviewed the EFH assessment included within the draft EIS for the Projects and by email dated October 5, 2018, concurred that "with the use of avoidance and minimization construction techniques as well as the wetlands restoration activities, the project would result in temporary and minimal impacts to EFH. Therefore, the EFH consultation required by the Magnuson-Stevens Fishery Conservation and Management Act is concluded and no further coordination with the NMFS is required." We agree.

4.6.3.1 Essential Fish Habitat within the Projects Area

NMFS was granted legislative authority to establish regional fishery management councils, each responsible for the proper management of resources within each council's respective geographic region. Fishery management councils develop regional FMP, which outline measures to ensure the proper management and harvest of the finfish and shellfish within these waters. All aspects of the Projects lie within jurisdiction of the GMFMC FMP. Although these Projects would not include the harvest of any of the species addressed in the FMP, the proposed project construction and operation could still affect the habitat for these species.

GMFMC data indicate that all marine and tidally influenced estuarine habitats within the Projects area are designated as EFH for six marine groups, including coastal migratory pelagic species, corals, red drum, reef fish, shrimp, and spiny lobster. The following categories of EFH occur within the Projects area and support EFH-managed species: EEM wetlands, estuarine water column, and estuarine mud/soft bottom. Correspondence with NMFS further indicates that the following federally managed EFH species occur within the Projects area outlined in table 4.6.3-1. Existing EFH and EFH-supported species that could be affected by the Projects are discussed below.

TABLE 4.6.3-1

EFH-Managed Species in the Projects Area

Project	Common Name	Scientific Name
Liquefaction Project	Red drum	*Sciaenops ocellatus*
	Gray snapper	*Lutjanus griseus*
	Lane snapper	*Lutjanus synagris*
	Brown shrimp	*Farfantepenaeus aztecus*
	White shrimp	*Litopenaeus setiferus*
	Bull shark	*Carcharhinus leucas*
Texas Connector Project	Red drum	*Sciaenops ocellatus*
	Gray snapper	*Lutjanus griseus*
	Lane snapper	*Lutjanus synagris*
	Brown shrimp	*Farfantepenaeus aztecus*
	White shrimp	*Litopenaeus setiferus*
	Bull shark	*Carcharhinus leucas*
Louisiana Connector Project	Red drum	*Sciaenops ocellatus*
	Gray snapper	*Lutjanus griseus*
	Lane snapper	*Lutjanus synagris*
	Brown shrimp	*Farfantepenaeus aztecus*
	White shrimp	*Litopenaeus setiferus*
	Spanish mackerel	*Scomberomorus maculatus)*
	Bull shark	*Carcharhinus leucas*
	Scalloped hammerhead shark	*Sphyrna lewini*
	Blacktip shark	*Carcharhinus limbatus*
	Lemon shark	*Negaprion brevirostris*
	Bonnethead shark	*Sphyrna tiburo*
	Atlantic sharpnose shark	*Rhizoprionodon terraenovae*

Existing EFH Resources

Estuarine emergent marsh EFH is present along the Texas Connector Project at MP 5.1 on the Northern Pipeline, at MP 2.6 and 7.2 on the Southern Pipeline, and at various locations along the Louisiana Connector Project (see table 4.6.3-2), and within the J.D. Murphree WMA and Dredge Disposal Area 8, as shown in figure 4.6.3-1 and table 4.6.3-2.

Estuarine mud/soft bottom and estuarine water column EFH occurs in the following areas, as shown on figure 4.6.3-1 and in table 4.6.3-2:

- Within the berthing area, Pioneer Dock, and MOF areas of the Liquefaction Project within the Port Arthur Canal.
- At the Round Lake Canal along the nonjurisdictional facilities relocation.
- Along the Texas Connector Project (at MPs 1.6, 2.4, 5.2, 10.2, 12.0, and 21.9 on the Northern Pipeline, and at MPs 2.4 and 6.2 on the Southern Pipeline).
- Along the Louisiana Connector Project within Port Arthur Canal, Sabine Lake, Sabine River, and the ICWW.

As discussed below, dredge materials from the construction of Liquefaction Project would be placed in these areas for beneficial reuse, including the restoration of estuarine emergent marsh habitat. While temporary impacts would be incurred to the dredge disposal sites (see section 4.6.3.2), there would be a net increase in estuarine emergent marsh habitat, including estuarine emergent marsh EFH. These areas are managed by third-party entities (TPWD and SNND, respectively); as such, applicable permitting, agency coordination, and mitigation for these areas are handled independently from PALNG and the Liquefaction Project.

EFH is not present along any pipeline laterals or within Dredge Disposal Areas 9A and 9B. Therefore, these facilities are not discussed further below.

EFH Types

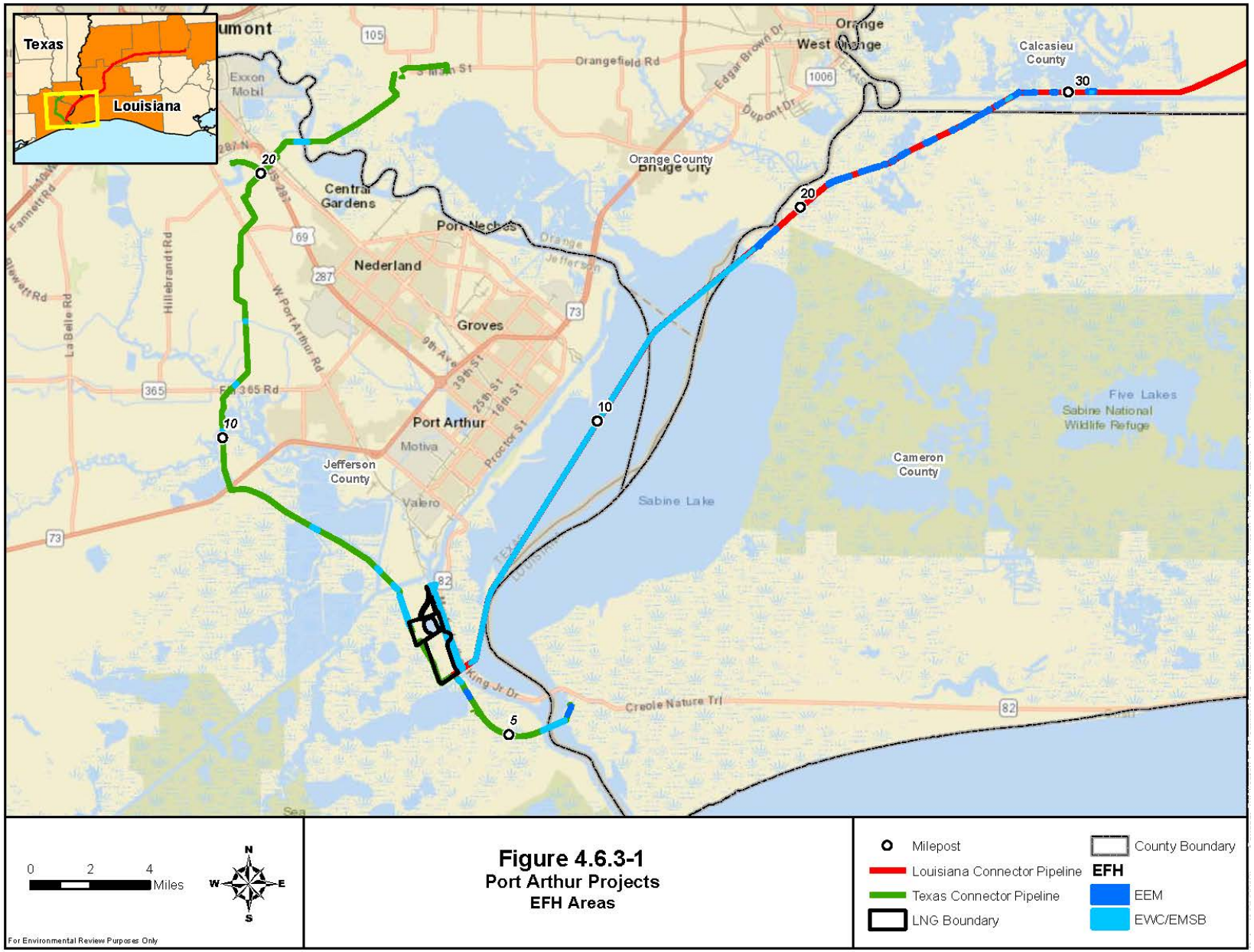
EEM EFH

EEM wetlands are among the most productive ecosystems on earth and serve as nursery habitats for the larval stages of many fish and invertebrate species (Teal and Teal, 1969; Odum et al., 1982). Estuarine wetlands are also important in the removal of contaminants, and act as a buffer to reduce the erosion of inland areas (Batzer and Sharitz, 2006). EEM wetlands that support EFH within the Projects area consist of saltgrass (*Distichlis spicata*), green bulrush (*Scirpus atrovirens*), and various cordgrasses (*Spartina spp*.).

Estuarine Water Column and Estuarine Mud/Soft Bottom and EFH

Estuarine water column and estuarine mud/soft bottom that support EFH within the Projects area are within Sabine Lake, the Port Arthur and Round Lake Canals, the ICWW, Taylor and Hildebrandt Bayous, and the Neches Rivers. The Sabine Lake estuary and surrounding waterbodies are naturally shallow with an average depth of 6 feet in Sabine Lake, and 13 to 24 feet in the Port Arthur Canal, ICWW, Taylor Bayou, Hildebrandt Bayou, and the Neches River. The USACE regularly dredges navigation channels to 40 feet through the lake, canals, bayous, and rivers to allow the passage of large ships through this area, so the side slopes at the edge of the navigation channels quickly transition from shallow to deep habitat (NOAA, 2017c).

Bottom sediments in these waterways are fine, consisting primarily of mud and silt (GMFMC, 1998). The water column is turbid, caused by the high sediment load of inflowing waters and disturbance of bottom sediments by wind-action and vessel traffic, especially in the Port Arthur Canal. Salinity is probably the most important factor in determining the distribution and relative abundance of marine and estuarine organisms (NMFS, 1998).


Texas
Louisiana
Exxon Mobil
Orangefield Rd
Orange
West Orange
Calcasieu County
Edgar Brown Dr
Dupont Dr
Orange County
Bridge City
Central Gardens
Port Neches
Nederland
Groves
Port Arthur
Motiva
Valero
Jefferson County
Cameron County
Five Lakes Sabine National Wildlife Refuge
Sabine Lake
Creole Nature Trl
Hillebrandt Rd
La Belle Rd
W Port Arthur Rd
9th Ave
39th St
25th St
16th St
Proctor St
FM 365 Rd
105
1006
69
287
73
365
82
5
10
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0 2 4 Miles
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For Environmental Review Purposes Only
Figure 4.6.3-1
Port Arthur Projects
EFH Areas
Milepost
Louisiana Connector Pipeline
Texas Connector Pipeline
LNG Boundary
County Boundary
EFH
EEM
EWC/EMSB

TABLE 4.6.3-2

EFH-Managed Species Within Tidally Influenced Waters and Wetlands Affected by the Projects

EFH Type	Project Location	EFH-Managed Species (Life Stage)
LIQUEFACTION PROJECT		
Estuarine Water Column & Estuarine Mud/ Soft Bottom	Berthing Area, MOF, Pioneer Dock	Red Drum (Larvae, Post-larvae, Early Juvenile, Adult) Gray Snapper (Adult) Lane Snapper (Early and Late Juvenile) Brown Shrimp (Early Juvenile) White Shrimp (Early Juvenile) Bull Shark (Early and Late Juvenile, Adult)
TEXAS CONNECTOR PROJECT		
Estuarine Water Column & Estuarine Mud/ Soft Bottom	MPs 2.4, 6.2 along the Southern Pipeline MPs 1.6, 2.4, 5.0, 10.2, 12.0, 13.2, 21.9 along the Northern Pipeline	Red Drum (Larvae, Post-larvae, Early Juvenile, Adult) Gray Snapper (Adult) Lane Snapper (Early and Late Juvenile) Brown Shrimp (Early Juvenile) White Shrimp (Early Juvenile) Bull Shark (Early and Late Juvenile, Adult)
Estuarine Emergent Marsh	MP 2.6 along the Southern Pipeline MP 5.2 along the Northern Pipeline	Red Drum (Larvae, Post-larvae, Early Juvenile, Adult) Gray Snapper (Adult) Brown Shrimp (Early Juvenile) White Shrimp (Early Juvenile)
LOUISIANA CONNECTOR PROJECT		
Estuarine Water Column & Estuarine Mud/ Soft Bottom	MPs 0.1, 0.6, 18.9, 28.0, 30.8	Red Drum (Larvae, Post-larvae, Early Juvenile, Adult) Gray Snapper (Adult) Lane Snapper (Early and Late Juvenile) Brown Shrimp (Early Juvenile) White Shrimp (Early Juvenile) Spanish Mackerel (Juvenile, Adult) Bull Shark (Early and Late Juvenile, Adult) Scalloped hammerhead shark (Early and Late Juvenile) Blacktip Shark (Early and Late Juvenile) Lemon Shark (Early and Late Juvenile) Bonnethead Shark (Early and Late Juvenile, Adult) Atlantic Sharpnose Shark (Early and Late Juvenile, Adult)
Estuarine Emergent Marsh	MPs 17.9, 19.1, 19.4, 20.3, 20.4, 20.6, 21.1, 21.2, 21.3, 21.5, 21.7, 21.9, 22.4, 22.7, 23.0, 23.2, 23.5, 23.8, 24.0, 24.7, 24.8, 24.9, 25.2, 25.8, 26.1, 26.2, 26.3, 26.5, 26.7, 27.2, 27.4, 27.5, 28.3, 28.5, 28.6, 28.7, 28.8, 29.4, 29.6, 30.0, 30.5, 30.6, 30.7, 30.9, 31.2, 31.5	Red Drum (Post-larvae, Early Juvenile, Adult) Gray Snapper (Adult) Brown Shrimp (Early Juvenile) White Shrimp (Early Juvenile) Spanish Mackerel (Juvenile, Adult)

EFH-Managed Species

The EFH-managed species that would be affected by the Projects include red drum, gray snapper, lane snapper, brown shrimp, white shrimp, and bull shark (Young, 2015). Additionally, the EFH-managed Spanish mackerel, scalloped hammerhead shark, blacktip shark, lemon shark, bonnethead shark, and Atlantic sharpnose shark may be present along the Louisiana Connector Project (Chastain and Cheatwood, 2017). Table 4.6.3-2 identifies by habitat type the EFH-managed species and their relevant life stages that would be affected by the Projects.

Red Drum

In the Gulf of Mexico, red drum occurs in a variety of habitats, ranging from water depths of about 130 feet offshore to very shallow estuarine waters. Red drum can tolerate salinities ranging from freshwater to highly saline. They commonly occur in nearly all estuaries of the Gulf of Mexico year-round where they are present over a variety of substrates, including sand, mud, and oyster reefs. Estuarine wetlands are especially important as nursery habitat for larval, juvenile, and sub-adult red drum, and provide prey habitat for juvenile red drum such as mysids, amphipods, and shrimp. Larger juveniles feed on crabs and fish; the most important prey items in the adult red drum diet are crustaceans, including shrimp and crabs, and fish. (GMFMC, 1998).

Gray Snapper

The gray snapper occurs on the shelf waters of the Gulf of Mexico and spawn offshore from June to August. Eggs are present June through September in pelagic areas after the summer spawn and post-larval gray snapper move into estuarine habitats (Burton, 2000). Juveniles and adults are demersal and occupy marine, estuarine, and riverine habitats, and may be found on tidal waterbodies, seagrass beds, or offshore near reefs (GMFMC, 1998).

Lane Snapper

The lane snapper occurs throughout the Gulf of Mexico shelf in depths ranging from 1 to 425 feet. Like the gray snapper, this species is demersal, occurring over all bottom types in various salinities. Spawning occurs offshore in March through September, where juveniles are commonly found inshore near seagrass beds. Nursery areas include the estuarine areas and shallow areas with soft/mud bottoms, where early- and late–stage juvenile utilize soft bottom substrates in estuaries for feeding and growth (GMFMC, 1998; GMFMC, 2016). Adults utilize a wide variety of habitats ranging from inshore to offshore, and soft bottom habitats to seagrass beds, to hard-bottom substrates (TPWD, 2018).

Brown Shrimp

Brown shrimp adults inhabit offshore marine environments where spawning takes place. The eggs are demersal, while the larvae are planktonic, and brown shrimp begin to migrate to estuarine habitats as post-larvae, migrating on flood tides at night from February through April. (GMFMC, 1998; U.S. Gulf of Mexico Fisheries Information, 2018). The juvenile stage occurs within estuarine habitats and post-larval and juvenile brown shrimp are common to highly abundant in all Gulf of Mexico estuaries from Apalachicola Bay in Florida to the Mexican border, although they are generally not present between December and February. The species is typically associated with shallow vegetated habitats, silty sand, and non-vegetated mud bottom where salinities range from 0 to 70 ppt. The densities of post-larval and juvenile brown shrimp are highest in marsh edge habitat and submerged vegetation. At maturity, the juveniles migrate back to ocean waters. Larval brown shrimp feed on phytoplankton and zooplankton; post-larvae feed on epiphytes, phytoplankton, and detritus; and juveniles and adults prey on polychaetes, amphipods, chironomid larvae, algae, and detritus (GMFMC, 1998).

White Shrimp

White shrimp eggs and larvae are common in nearshore marine waters. The eggs are demersal and the larvae are planktonic. Post-larvae migrate into estuarine habitats from May through November, with peaks occurring June through September. After entering the estuaries, post-larval white shrimp become benthic and typically inhabit shallow water estuarine habitats on muddy-sandy substrates with high organic detritus content or estuarine marsh habitats on a year-round basis. Densities of post-larval and juvenile white shrimp are usually highest in marsh edge and submerged aquatic vegetation habitats. Juveniles are common to highly abundant in all Gulf of Mexico estuaries; when they reach maturity, they migrate from estuarine habitats back to marine habitats in late August and September (Smithsonian Marine Station at Fort Pierce, 2018; GMFMC, 1998). Larval white shrimp feed on phytoplankton and zooplankton; post-larvae feed on epiphytes, phytoplankton, and detritus; and juveniles and adults prey on polychaetes, amphipods, chironomid larvae, algae, and detritus (South Carolina Department of Natural Resources, 2015).

Spanish Mackerel

Spanish mackerel are pelagic fish that spend much of their life cycle in the open waters of the Gulf of Mexico (North Carolina Department of Environmental Quality, 2018). This species spawns in the nearshore zone of the Gulf in water less than 180 feet in depth from July to September. As the nearshore waters warm throughout the summer, individuals migrate north, and may ascend estuaries; Juveniles are known to ascend into brackish water up to a minimum salinity of approximately 10 ppt (GMFMC, n.d.). The Sabine estuary serves as transient habitat for juvenile Spanish mackerel during the summer months where Spanish mackerel may be found in river mouths (North Carolina Department of Environmental Quality, 2018). This species is not dependent on unique physical habitat parameters, and may be found wherever oxygen, salinity, and temperature levels are adequate and where forage is available. In addition, the NMFS Estuarine Living Marine Resources database indicates that adults are rare (as described by NMFS abundance codes)[25] in the Projects area except from December through May, when they migrate out of the area. Juveniles are rare throughout the year, and eggs, larvae, and spawning adults not present.

Bull Shark

Bull sharks inhabit shallow coastal waters such as river mouths and bays, and are euryhaline organisms able tolerate marine salinities (greater than 30 ppt) to freshwater salinities (less than 0.5 ppt; Florida Museum of Natural History [FLMNH], 2018a). Bull sharks are dependent on estuarine habitats for nursery areas and are a highly migratory species known to travel long distances. Because of their migratory behavior, bull shark juveniles, neonates, and adults, and according to the TPWD, are often present within the SNWW (NMFS, 2015b; TPWD, 2018).

Scalloped Hammerhead Shark

Scalloped hammerhead sharks are a coastal pelagic species that are found within estuarine, inshore, and offshore habitats including continental and insular shelves as well as adjacent to deeper water (NMFS, 2017a; FLMNH, 2018b). This species of shark is known to spend time inshore during the day, and hunts

25 In the query results, the NOAA abundance codes are defined as follows:
5: Highly Abundant
4: Abundant
3: Common
2: Rare
0: Not Present

offshore at night in search of prey. Young scalloped hammerhead sharks aggregate in large schools, while adults either occur individually or aggregate in pairs or small schools (FLMNH, 2018b).

Blacktip Shark

Blacktip sharks are known to occur within estuarine river mouths, estuaries, and shallow coastal waters (National Geographic, 2017). The species is known to feed together in sexually segregated aggregations as juveniles and as adults. During mating season, the species typically intermixes sexes within schools, and often use warm equatorial waters (including the Gulf of Mexico) as nursery areas for juveniles (NMFS, 2017b).

Lemon Shark

Lemon sharks inhabit deeper waters during the day including the continental and insular shelves of the Gulf of Mexico, and occasionally adjacent offshore waters, and move inshore at night for foraging. This species typically prefers shallow subtropical water including closed bays, river mouths, and estuaries, and form aggregations based on size and sex (FLMNH, 2018c). Mating occurs in spring and summer months near shallow nursery areas (Sundstrom, 2015).

Bonnethead Shark

The bonnethead shark is a small coastal shark commonly found in shallow estuaries containing seagrass, as well as mud and sandy bottom substrates. They are very common in the southeast portion of the United States' coastal waters, especially near Florida, where seagrass beds provide foraging habitat and nursery for young (Cortés et al., 2016). As discussed in section 4.5.1.2, seagrasses have been extirpated from Sabine Lake.

Atlantic Sharpnose Shark

Atlantic sharpnose sharks are found off sandy beaches and estuaries with mud or sand substrates in warmer summer months, and migrate offshore in cooler winter months (Cortés, 2009; FLMNH, 2018d). Atlantic sharpnose sharks have been observed in sexually segregated groups during migrations from inland to offshore (FLMNH, 2018d). Enclosed estuarine environments support nursery habit for juveniles. While their hunting and prey patterns aren't well known, their preferred prey consists of teleosts and crustaceans (Cortés, 2009).

4.6.3.2 Impacts and Mitigation

Adverse impacts on EFH, as defined in 50 CFR 600.910(a), include any impact that reduces the quality and/or quantity of EFH. Adverse impacts may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions, including direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species, or their habitat. Table 4.6.3-3 identifies the EFH that would be affected by the Projects.

TABLE 4.6.3-3

EFH Affected by the Construction and Operation of the Projects [a]

Wetland Type	Wetland ID	MP	Crossing Method	Crossing Length (feet)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (yd^3)	Permanent Impacts (yd^3)	New Habitat Created (acres)
LIQUEFACTION PROJECT									
Estuarine Water Column	Port Arthur Canal	N/A	N/A	N/A	3.2	3.2	1,975,600	1,467,600	68.3
Estuarine Mud/Soft Bottom	Port Arthur Canal	N/A	N/A	N/A	3.2	3.2	1,975,600	1,467,600	68.3
Estuarine Emergent Marsh	J.D. Murphree WMA	N/A	N/A	N/A	903.0	0	0	0	1,268.8
			Liquefaction Project Subtotal[b]	**N/A**	**906.2[b]**	**3.2**	**1,975,600[b]**	**1,467,600[b]**	**1,268.8 (EEM) [b]**
									68.3 (EWC/EMSB)
NONJURISDICTIONAL FACILITIES									
Estuarine Water Column	Round Lake Canal	N/A	N/A	N/A	0.6	0	0	0	0
Estuarine Mud/Soft Bottom	Round Lake Canal	N/A	N/A	N/A	0.6	0	0	0	0
			Nonjurisdictional Facilities Subtotal[b]	**N/A**	**0.6**	**0**	**0**	**0**	**0**
TEXAS CONNECTOR PROJECT - NORTHERN PIPELINE									
Estuarine Emergent Marsh	North Route Wetland 31	5.1	HDD/Open-Cut	100	1.2	0	592	0	0
			Texas Connector Project - Northern Pipeline Subtotal	**100**	**1.2**	**0**	**592**	**0**	**0**
TEXAS CONNECTOR PROJECT - SOUTHERN PIPELINE									
Estuarine Emergent Marsh	South Route Wetland 19	2.6	HDD/Open-Cut	1,800	8.4	0	10,667	0	0
			Texas Connector Project - Southern Pipeline Subtotal	**1,800**	**8.4**	**0**	**10,667**	**0**	**0**
TEXAS CONNECTOR PROJECT - ACCESS ROADS									
Estuarine Emergent Marsh	South Route Wetland 21	2.8	N/A	900	0.8	0	4,000	0	0
			Texas Connector Project - Access Roads Subtotal	**900**	**0.8**	**0**	**4,000**	**0**	**0**
LOUISIANA CONNECTOR PROJECT - PIPELINE									
Estuarine Emergent Marsh	CAM-WL-001	18.1	HDD/Push-Pull	300.0	2.1	0.0	666.7	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-004	19.0	HDD/Push-Pull	975.9	3.9	0.0	2,168.7	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-005	19.6	Push-Pull	5,166.3	14.7	0.0	11,480.7	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-006	20.3	Push-Pull	0.0	0.8	0.0	0.0	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-007	20.6	Push-Pull	1,391.2	3.9	0.0	3,091.6	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-008	20.7	Push-Pull	1,173.7	3.5	0.0	2,608.2	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-009	21.0	Push-Pull	1,210.3	3.5	0.0	2,689.6	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-010	21.2	Push-Pull	561.1	1.7	0.0	1,247.0	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-012	21.3	Push-Pull	1,971.1	5.6	0.0	4,380.1	0.0	0.0
Estuarine Emergent Marsh	WR-CAM-02	21.5	Push-Pull	0.0	0.4	0.0	0.0	0.0	0.0

TABLE 4.6.3-3 (cont'd)

EFH Affected by the Construction and Operation of the Projects [a]

Wetland Type	Wetland ID	MP	Crossing Method	Crossing Length (feet)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (yd^3)	Permanent Impacts (yd^3)	New Habitat Created (acres)
Estuarine Emergent Marsh	CAM-WL-013	21.7	Push-Pull	1,084.3	3.0	0.0	2,409.6	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-014	21.9	Push-Pull/Open-Cut	1,290.8	7.1	0.0	2,868.4	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-015	22.4	Push-Pull	5.2	<0.1	0.0	11.6	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-016	22.4	Push-Pull	1,104.4	3.5	0.0	2,454.1	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-017	22.7	Push-Pull	544.3	1.6	0.0	1,209.5	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-018	23.0	Push-Pull	20.6	0.2	0.0	45.7	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-019	23.2	Push-Pull	889.5	2.5	0.0	1,976.7	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-020	23.5	Push-Pull	660.9	2.1	0.0	1,468.7	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-021	23.8	Push-Pull	166.7	0.5	0.0	370.4	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-022	24.0	Push-Pull	1,590.8	4.6	0.0	3,535.1	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-024	24.7	Push-Pull	0.0	0.2	0.0	0.0	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-025	24.7	Push-Pull	274.4	0.8	0.0	609.8	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-027	24.9	Push-Pull	101.5	4.4	0.0	225.5	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-028	25.2	Push-Pull	254.1	0.7	0.0	564.6	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-030	25.9	Push-Pull	1,094.8	3.1	0.0	2,432.9	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-031	26.1	Push-Pull	31.9	0.2	0.0	70.9	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-032	26.1	Push-Pull	65.6	0.2	0.0	145.8	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-034	26.1	Push-Pull	1,181.2	0.6	0.0	2,624.8	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-035	26.3	Push-Pull	1,181.2	1.4	0.0	2,624.8	0.0	0.0
Estuarine Emergent Marsh	CAM-WL-036	26.5	HDD/Push-Pull	1,181.2	0.1	0.0	2,624.8	0.0	0.0
Estuarine Emergent Marsh	CAL-WL-001	27.2	HDD/Push-Pull	1,508.0	3.4	0.0	3,351.2	0.0	0.0
Estuarine Emergent Marsh	CAL-WL-002	27.4	HDD/Push-Pull	0.0	0.0	0.0	0.0	0.0	0.0
Estuarine Emergent Marsh	CAL-WL-006	28.3	HDD/Push-Pull	1,179.6	4.3	0.0	2,621.4	0.0	0.0
Estuarine Emergent Marsh	CAL-WL-007	28.5	Push-Pull	0.0	0.4	0.0	0.0	0.0	0.0
Estuarine Emergent Marsh	CAL-WL-008	28.6	Push-Pull	0.0	0.1	0.0	0.0	0.0	0.0
Estuarine Emergent Marsh	CAL-WL-009	28.6	Push-Pull	100.1	0.2	0.0	222.4	0.0	0.0
Estuarine Emergent Marsh	CAL-WL-234	28.6	Push-Pull	0.0	0.3	0.0	0.0	0.0	0.0
Estuarine Emergent Marsh	CAL-WL-010	28.7	Push-Pull	294.6	0.4	0.0	654.6	0.0	0.0
Estuarine Emergent Marsh	CAL-WL-011	28.7	Push-Pull	4,888.7	13.1	0.0	10,863.8	0.0	0.0
Estuarine Emergent Marsh	CAL-WL-235	28.7	Push-Pull	0.0	1.0	0.0	0.0	0.0	0.0
Estuarine Emergent Marsh	CAL-WL-012	28.8	Push-Pull	131.3	0.2	0.0	291.8	0.0	0.0
Estuarine Emergent Marsh	CAL-WL-236	28.8	Pullback	0.0	3.1	0.0	0.0	0.0	0.0
Estuarine Emergent Marsh	CAL-WL-013	29.6	Push-Pull	4,757.4	13.8	0.0	10,572.0	0.0	0.0

TABLE 4.6.3-3 (cont'd)

EFH Affected by the Construction and Operation of the Projects [a]

Wetland Type	Wetland ID	MP	Crossing Method	Crossing Length (feet)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (yd^3)	Permanent Impacts (yd^3)	New Habitat Created (acres)
Estuarine Emergent Marsh	CAL-WL-015	30.5	HDD/Push-Pull	5,384.4	2.3	0.0	11,965.4	0.0	0.0
Estuarine Emergent Marsh	CAL-WL-16	30.7	HDD	0.0	0.3	0.0	0.0	0.0	0.0
Estuarine Emergent Marsh	CAL-WL-017	30.9	HDD/Push-Pull	3,740.2	11.9	0.0	8,311.5	0.0	0.0
Estuarine Mud/Soft Bottom	N/A	N/A	HDD/Push-Pull	109,613.9	1,403.0	0.0	243,586.4	0.0	0.0
Estuarine Water Column	N/A	N/A	HDD/Push-Pull	109,613.9	1,403.0	0.0	0.0	0.0	0.0
Louisiana Connector Project - Pipeline Subtotal[b]				**157,071.2**	**1,534.7**	**0.0**	**349,046.8**	**0.0**	**0.0**
LOUISIANA CONNECTOR PROJECT – VALVE STATIONS									
Estuarine Emergent Marsh	CAM-WL-004	19.2	N/A	50.0	0.1	0.1	0	150 .0	0
			Valve Station Subtotal	50.0	0.1	0.1	0	150.0	0
LOUISIANA CONNECTOR PROJECT - ACCESS ROADS									
Estuarine Emergent Marsh	N/A	N/A	N/A	N/A	5.2	1.2	6,388.8	1,984.40	0.0
Estuarine Mud/Soft Bottom	N/A	N/A	N/A	N/A	0.8	0.5	548.5	838.9	0.0
Estuarine Water Column	N/A	N/A	N/A	N/A	0.8	0.5	0.00	0.00	0.0
Access Roads Subtotal[b]				**N/A**	**6.0**	**1.7**	**6,937.3**	**2,823.3**	**0.0**
			Estuarine Emergent Marsh Subtotal		1,050.4	1.3	719,741.3	1,984.4	1,268.8
			Estuarine Mud/Soft Bottom Subtotal		1,407.6	3.7	2,219,734.9	1,468,438.9	68.3
			Estuarine Water Column Subtotal		1,407.6	3.7	1,975,600.0	1,467,600.0	68.3
			Projects Total		**2,458.0**	**4.9**	**2,939,476.2**	**1,470,423.3**	**1,337.1**

[a] Does not include EFH areas that are completely avoided by HDD or push-pull methods, including:

- Parts of Sabine Lake along the Texas Connector Project's Southern Pipeline and along the Louisiana Connector Project
- The Port Arthur Canal along the Louisiana Connector Project
- The ICWW along the Texas Connector and Louisiana Connector Projects
- Big Hill Bayou along the Texas Connector Project
- Taylor Bayou along the Texas Connector Project
- Hildebrandt Bayou along the Texas Connector Project
- Neches River along the Texas Connector Project

[b] The estuarine water column and estuarine mud/soft bottom habitats overlap vertically in the water column; therefore, spatial (horizontal, 2-dimensional) impact acreages for each habitat type are the same. These impacts were not double-counted when summing the subtotals or totals for each project or habitat type (i.e., the Nonjurisdictional Facilities impact 0.6 acre of EWC and 0.6 acre of EMSB habitat; however, the total impacts are only 0.6 acre, not 1.2 acres).

Liquefaction Project

Construction and operation of the Liquefaction Project would affect 3.2 acres of estuarine water column and estuarine mud/soft bottom EFH, which would result in temporary and permanent impacts (see table 4.6-3). Temporary impacts on EFH and EFH-managed species would result from construction dredging, pile driving, increased barge traffic, the release of ballast water or hull fouling, alteration of light regimes, stormwater runoff, and inadvertent spills, as discussed in section 4.6.2.2, and below. Permanent impacts on EFH and EFH-managed species would result from the direct removal of EFH, maintenance dredging, increased vessel traffic, the release of ballast water or hull fouling, or an accidental spill in the following text as discussed in section 4.6.2.2.

The Liquefaction Project would create 68.3 acres of additional open water habitat for aquatic species and EFH-managed species by dredging the berthing area and MOF, resulting in a net increase of estuarine mud/soft bottom and estuarine water column EFH. Additionally, the restoration of marsh habitat within the J.D. Murphree WMA would create an additional 1,268.8 acres of estuarine emergent marsh EFH offsite, and the installation of riprap along the shoreline would provide habitat for encrusting species (discussed below).

Dredging

Dredging would remove 3.2 acres of estuarine water column and estuarine mud/soft bottom EFH within the Port Arthur Canal. EFH-managed species including red drum, lane snapper, gray snapper, brown shrimp, and white shrimp could be present during active dredging. As described in section 4.6.2.2, dredging activities would cause sediment suspension and turbidity, which would lower the water quality within a localized area surrounding the dredged area for several hours. Increases in turbidity could adversely affect fish physiology and behavior, resulting in less healthy individuals, reductions in fecundity, and reduced foraging habitat.

Naturally occurring sedimentation would decrease the depth of the dredged areas over several years. Maintenance dredging of the recessed berthing area would be required during operation of the liquefaction facility to account for this natural sedimentation. As discussed in section 4.6.2.2, potential impacts on EFH from maintenance dredging include direct take and habitat modification as well as temporary increases in noise, turbidity, and suspended solid levels. Impacts from maintenance dredging would be smaller than the initial project construction dredging because of the smaller amount of material being removed from the recessed berthing area.

The dredge material from construction and operation (maintenance) activities would be placed at the J.D. Murphree WMA. The J.D. Murphree WMA would use this material to restore about 1,269 acres of estuarine emergent marsh habitat, thereby creating a net increase of about 1,266 acres of EFH. Additional volumes of dredged material would be placed at USACE-approved dredge disposal areas 8, 9A, or 9B.

Dredging and disposition of dredged material associated with the proposed Projects would permanently create additional EFH in the in the Port Arthur Canal and within the J.D. Murphree WMA. Individuals of EFH species could be killed during creation of this additional EFH; however, this permanent impact would be beneficial overall to EFH-protected species after construction is complete. We conclude that PALNG's impact minimization measures (see section 4.6.2.2) and creation of additional EFH would reduce the Liquefaction Project's adverse impacts on EFH and EFH-associated species during construction and operation to minor and temporary levels.

Pile Driving

Construction of the liquefaction facility would require the installation of piles to support the proposed structures. Details of pile-driving activities for the Liquefaction Project are discussed in sections 2.4 and 4.6.2.2. In summary, in-water pile driving would be required to install the steel sheet pile bulkhead, the steel pipe piles supporting the LNG loading platform, and the breasting and mooring dolphins. Based on information from PALNG, the facilities would require 779 pilings installed over a 24-month period that would take place 10 hours per day, up to 6 days per week.

The primary impacts on EFH and EFH-managed species would be similar to those described in our evaluation of aquatic resources (see section 4.6.2.2): avoidance of the area, stress, or injury due to the underwater sound pressure levels. NMFS is currently developing guidelines for determining sound pressure level thresholds for fish and marine mammals. The agency's interim guidelines use 150 dB re: 1 µPa as the threshold for behavioral effects on fish species of particular concern. As discussed in section 4.6.2.2, construction noise levels underwater would be greatest during pile driving activities and are estimated to exceed 200 dB re: 1 µPa.

PALNG would implement construction techniques that minimize noise effects on aquatic species, including pre-drilling pile holes, which would reduce the number of number of pile strikes needed; using a vibratory hammer, which typically produces lower underwater sound pressures; using bubble curtains/cofferdams, which create a sound barrier between pile-driving activities and the surrounding aquatic environment, providing noise abatement for aquatic species; and ramping driving activities, which would allow sensitive aquatic species to depart the area before harmful underwater sound pressures are reached by the vibratory hammers.

Based on similar projects, including Cameron Interstate Pipeline, LLC's Liquefaction Project and the Magnolia LNG and Lake Charles Expansion Projects, PALNG's noise mitigation measures, and existing conditions and activities associated with the Port Arthur Canal, these species are expected to move out of the affected area temporarily during pile driving, and would be able to return once construction activities have ceased. As a result, the impacts on EFH and EFH-associated species associated with pile driving during construction of the Liquefaction Project would be minor and temporary.

Increased Vessel Traffic

The increase in barge traffic at and near the Liquefaction Project during construction would result in increased erosion or sedimentation, and noise in the area, potentially affecting EFH and EFH-managed species. As described in section 4.6.2.2, barges during construction would remain when necessary to deliver materials or to facilitate maintenance dredging in the berthing area and MOF. Barge and vessel movements would not substantially increase shoreline erosion or benthic sediment disturbance because the vessels are slow moving and do not create significant wakes. Some benthic sediment disturbance could occur when the barges are at the MOF, which would be short term, lasting through the initial months of construction. PALNG would minimize potential erosion of the shoreline by installing rip-rap along the shoreline, further preventing sedimentation to benthic organisms. Additionally, PALNG would implement a *Restoration Plan*, to ensure that EFH areas have been restored following construction.

Based on these considerations, the impacts associated with increased barge traffic and noise on EFH and EFH-associated species would be consistent with current vessel traffic noise occurring in proximity to the liquefaction facilities and minor as the increase of barge traffic represents a less than one percent increase. As a result, the impacts on EFH and EFH-associated species associated with increased vessel traffic during construction and operation of the Liquefaction Project would be minor and temporary.

Ballast Water and Hull Fouling

Traffic associated with construction and operation of the liquefaction facility could affect EFH within the Port Arthur Canal by altering water quality from ballast water via changing the pH, salinity, or temperature, causing a resuspension of sediment; or by altering the species composition of benthic organisms from the introducing invasive species from ballast water discharges and hull fouling (see section 4.6.2.2).

The number of additional vessels expected to visit the liquefaction site (approximately 180 vessels per year) is less than a 1 percent increase in current traffic patterns. Each vessel has a ballast water discharge and uptake capacity of 12 to 15 million gallons of sea water, with a rate of approximately 720,000 gallons per hour over a 10- to 16-hour timeframe.

Given the existing conditions and activities within the Port Arthur Canal, along with implementation of the mandatory practices required by U.S. regulations and the USCG as described in section 4.6.2.2, the effects of ballast water discharges on four ambient water quality parameters (temperature, pH, dissolved oxygen, and salinity), the resulting impact on EFH from construction and operation of the Liquefaction Project would be minor and temporary.

Alteration of Light Regimes

During construction of the work dock, and particularly during operation, additional lighting within and near the Port Arthur Canal would be present at the liquefaction facility. EFH-managed species in the area are generally acclimated to the current ambient light; however, increased light could affect small organisms by causing minor disruptions to the food chain including changes in the vegetation community structure (photosynthesis), behavioral changes (light cues), and increased predation. Impacts on EFH resulting from shading could include reduced plant growth and changed vegetation assemblages (reduced photosynthesis), which would affect the food chain; and from modified animal behavior. Additionally, reduced natural light levels in areas due to new structures providing shading would occur where previously not experienced.

As described in section 4.6.2.2, impacts on EFH and EFH-managed species would be similar to that of general aquatic species (temporary and minor changes to light and shading during construction, as well as nominal increases in lighting during operation for safety, security, and mooring purposes). EFH-managed species are likely acclimated to the current ambient light and the industrial nature from the existing use of the Port Arthur Canal. As a result, changes in light regimes resulting from construction and operation of the Liquefaction Project would have minor to moderate and temporary to permanent impacts on EFH-managed species.

Habitat for Encrusting Species

Habitat for encrusting species would be created by constructing the new dock structure and by installing rip-rap along the shoreline for erosion control. Much of Port Arthur Canal is covered in hard substrate, and the project facilities would create 50,000 square feet of new hard surfaces (see section 4.6.2.2). The new encrusting species expected to inhabit the new area would be consistent with the existing biota and would permanently contribute to the biodiversity of Port Arthur Canal, including EFH. The increased habitat for encrusting species would not have any adverse significant impacts on aquatic species (see section 4.6.2.2).

Stormwater Runoff

During and after construction, the conversion of land to impervious surface areas at the liquefaction facility site would result in an increased volume of stormwater runoff, which could create changes in salinity, temperature, and/or dissolved oxygen in the area surrounding discharges, as well as increased potential for contamination within EFH areas. Stormwater impacts and minimization measures are discussed in section 4.6.2.2, where impacts on EFH and EFH-managed species would be similar to that of general aquatic resources.

Based on PALNG's adoption of these measures, impacts on EFH and EFH-managed species resulting from stormwater runoff during construction and operation of the Liquefaction Project would be minor and temporary.

Alteration of Wave Energy

Changes to wave energy within the Liquefaction Project area would result from the installation of piers, pilings, and docks during construction, and increased vessel traffic during operation. Potential impacts on EFH and EFH-managed species would be similar to general aquatic resources, which is discussed in section 4.6.2.2, from increased wave energy include erosion, increased turbidity, and sedimentation, which could alter the plant and animal composition as substrate regimes change.

As a result of similar projects in the area and the existing conditions and activities associated with the Port Arthur Canal, along with PALNG's impact minimization measures (see section 4.6.2.2), the impacts on EFH and EFH-associated species associated with changes to wave energy during construction and operation of the Liquefaction Project would be negligible to minor and temporary.

Inadvertent Spills

During construction and operation of the Liquefaction Project, spills or leaks of hazardous materials entering the Port Arthur Canal from construction equipment could have adverse impacts on EFH. Impacts and minimization measures on EFH would be similar to the impacts on general aquatic resources: physical (smothering, substrate regime, etc.) or chemical (contaminants, toxic effects, bioaccumulation, etc.). Mitigation measures are described in section 4.6.2.2, and the implementation of these procedures would minimize response time and ensure appropriate cleanup actions are taken in the event of a spill.

Pipeline Projects

Construction and operation of the Texas Connector and Louisiana Connector Projects would be conducted using industry-recognized methods and mitigation measures. As such, the following discussions apply to both pipeline projects. Differences in methods or mitigation measures are described separately as appropriate by project.

Regarding the Texas Connector Project, construction of the Northern Pipeline would affect 1.2 acres of estuarine emergent marsh EFH; construction of the Southern Pipeline would affect 8.4 acres of estuarine emergent marsh EFH; and access roads would temporarily affect 0.8 acre of estuarine emergent marsh EFH (see table 4.6.3-2). ESS EFH is crossed at MP 7.1 along the Southern Pipeline but would be avoided using the HDD method.

Regarding the Louisiana Connector Project, pipeline construction would affect 1,534.7 acres of EFH, including 131.7 acres of estuarine emergent marsh EFH and 1,403.0 acres of estuarine water column and mud/soft bottom EFH (see table 4.6.3-2). The Louisiana Connector Project would temporarily affect 6.0 acres of EFH for access roads during construction including 5.2 acres of estuarine emergent marsh and

0.8 acre of estuarine water column and estuarine mud/soft bottom (see table 4.6.3-2). Operation of the Louisiana Connector Project for access roads would permanently affect 1.7 acres of EFH – 1.2 acres of estuarine emergent marsh and 0.5 acre of estuarine water column and estuarine mud/soft bottom (see table 4.6.3-2). Operation of the Louisiana Connector Project would also result in 0.1 acre of estuarine emergent EFH impacts from a permanent placement of the MLV at MP 19.2. Several EFH areas would be avoided by implementing the HDD method along the route, including parts of Sabine Lake and the ICWW.

Temporary impacts on EFH and EFH-managed species could result from waterbody crossings, hydrostatic testing activities, or the accidental spill of petroleum or LNG.

Wetland and Waterbody Crossings with Designated EFH

Along the Texas Connector Project, PAPL would cross designated estuarine mud/soft bottom and water column EFH waterbodies along the Northern Pipeline using the HDD method to avoid 11.3 acres of EFH impacts. In addition, one estuarine emergent marsh crossing at MP 5.1 would be partially crossed using the HDD method and the open-cut method, resulting in 1.2 acres of estuarine emergent marsh impacts. PAPL would cross designated estuarine mud/soft bottom and water column EFH waterbodies along the Southern Pipeline using the HDD method to avoid 1.4 acres of EFH impacts. One designated estuarine emergent marsh EFH location along the Southern Pipeline at MP 2.6 would be partially crossed using HDD and the open-cut methods, and would result in 8.4 acres of estuarine emergent marsh EFH impacts.

Along the Louisiana Connector Project, PAPL would implement HDD crossings where feasible along EFH-designated waterbodies, and would HDD EEM wetland habitats as feasible, avoiding 25.6 acres of EFH habitat within the Project area. In areas where HDD construction is not feasible (i.e., due to crossing length constraints), typical open cut (dry-ditch and wet-ditch), flume crossing, or dam and pump methods would be used. Specialized construction methods would be implemented for construction of the Louisiana Connector Project within Sabine Lake, including the S-lay method (see table 4.3-2 and sections 2.4.3.1 and 4.6.2.2).

Impacts on EFH resulting from the open-cut method would be similar to the impacts associated with other open-cut waterbody crossings: increased turbidity and sedimentation. Also, vegetation clearing for construction would result in reduced shading along waterbody banks and increased water temperature. To reduce impacts on EFH, PAPL would install erosion and sediment controls in accordance with its *Environmental Plan*[26] to minimize sedimentation into the waterbody. Restoration would be achieved using the wetland and waterbody restoration procedures as outline in PAPL's *Environmental Plan*, and would be completed within 6 months to avoid permanent EFH impacts. PAPL would restore EFH areas beginning during the final grading phase, which would include reestablishing vegetation communities. Based on our consultations with NMFS on October 5, 2017, reestablishment of 80 percent vegetation cover within disturbed EFH areas within one year of restoration would be considered complete. If the vegetation within the impacted EFH areas does not achieve the revegetation criteria set forth by NMFS, PAPL would develop a mitigation plan in coordination with NMFS and USACE offices. During operation, PAPL would minimize impacts on riparian vegetation along EFH waterways by maintaining a 25-foot-wide strip of vegetation between the pipeline and waterbody.

Construction of the Louisiana Connector Project within Sabine Lake would involve the S-Lay or Barge Lay method, which begins with an HDD entry point at the Liquefaction Project, open-cutting the lake floor of Sabine Lake, and finalizing at an HDD exit point on the shore of Shell Island, and would be

26 *Environmental Plans* for the Texas Connector Project and Louisiana Connector Project were filed on December 12, 2017 and October 16, 2017, respectively. These plans can be found on the FERC eLibrary website using Accession Numbers 20171212-5147 (Texas Connector Project) and 20171016-5210 (Louisiana Connector Project).

drilled into Lake Sabine. Sections 2.4.3 describes the construction methods. The impacts on EFH would be similar to those of general aquatic resources described in section 4.6.2.2.

Based on the use of the HDD crossing method at most EFH crossings, the installation of erosion and sediment controls, and implementing the restoration measures identified in the PAPL's *Environmental Plan*, impacts on EFH and EFH-managed species from construction and operation of the Texas Connector and Louisiana Connector Projects would be minor to moderate and temporary.

Hydrostatic Testing

As discussed in section 4.6.2.2, hydrostatic testing of the pipeline would require water to be withdrawn from waterbodies and municipal sources, and water would be discharged into waterbodies or at upland locations within the compressor stations (see table 4.3.1-5). PAPL would implement minimization measures on EFH and EFH-managed species by using a 0.25-inch diameter mesh screen over the intake hose to minimize entrainment during water withdrawals. Additionally, discharges into waterbodies would be dissipated into their respective waterways to minimize the localized turbidity and minor changes of the salinity and temperature. PAPL would not add any chemicals to the test water and would adhere to the measures required by NPDES permits. As such, impacts on EFH or EFH-managed species from hydrostatic testing would/be minor and temporary.

Inadvertent Spills

Impacts on EFH waterways and EFH-managed species from an inadvertent spill of hazardous material during the project would be similar to those described for the Liquefaction Project and as described in section 4.6.2.2. PAPL would implement the measures identified in its project-specific SPCC Plan to minimize response time and ensure appropriate cleanup actions are taken in the event of a spill.

Nonjurisdictional Facilities

Construction/relocation of the nonjurisdictional facilities would temporarily affect 0.6 acre of estuarine water column and estuarine mud/soft bottom EFH (Round Lake Canal); the construction corridor parallels another tidally influenced (unnamed) canal to the west. Similar to the pipeline projects, construction impacts on EFH could result from increased stormwater runoff, erosion and sedimentation, and the potential for an inadvertent spill. To minimize these impacts, PALNG would implement the measures described in its *Environmental Plan*. As such, construction of the nonjurisdictional facilities would be minimized.

Applicant-Proposed EFH Conservation Measures

As discussed above, PALNG and PAPL would implement several measures to avoid or minimize impacts on EFH, based, in part, on some preliminary conservation measures recommended by NMFS, which include the following:

- Use of the HDD method.
- Implementation of an *Inadvertent Release Plan*.
- Restoration of EFH areas within 6 months to avoid permanent impacts.
- Adherence to NPDES permit requirements.

- Implementation of measures in the project-specific *Environmental Plans*, which includes the Commission's Plan and Procedures and a SPCC Plan.

In addition, PALNG and PAPL would implement a variety of mitigation measures to minimize impacts on EFH and the species that use them. These include the following:

- Waterbody restoration: PALNG and PAPL would re-establish original contours and monitor affected waterbodies following construction, as well as restore any levees or barriers that were removed as part of the construction activities.

- Erosion and sedimentation control. PALNG and PAPL would implement BMPs to control erosion and sediment as part of a project-specific SWPPP.

- Riparian restoration. Maintenance of the permanent right-of-way would be limited to a 10-foot-wide corridor, allowing the stream bank to revegetate to pre-construction conditions.

- Contamination control. Herbicides would not be used within 100 feet of any waterbody without the consent of the land manager or a state agency.

- Wetland and Waterbody Mitigation. PAPL would coordinate with NMFS and USACE to properly mitigate for permanent EFH impacts if the vegetation within the impacted EFH areas does not achieve the revegetation criteria set forth by NMFS within a year.

- Creation of EFH at berth area and beneficial reuse of wetland habitat at the J.D. Murphree WMA.

As mentioned above, NMFS may respond to our EFH Assessment with additional Conservation Recommendations. We (as well as PALNG and PAPL) will assess any such measures at that time. In accordance with the MSA, we will provide a written response regarding to what extent any such Conservation Recommendations can or will be implemented.

4.6.3.3 Conclusions

As a non-federal party assisting the FERC in meeting its obligations under the MSA, PALNG and PAPL coordinated with NMFS on October 29, 2015 and on July 24, 2015 regarding impacts on EFH. During the call, NMFS indicated that the Liquefaction Project and Texas Connector Project would not have significant impacts on EFH, provided the applicant addresses the EFH Conservation Measures, including the use of HDD crossing methods, the implementation of an *Inadvertent Release Plan*, wetland and waterbody restoration, and wetland and waterbody mitigation as applicable.

The creation of historic emergent wetlands within the J.D. Murphree WMA would offset the adverse impacts on estuarine mud/soft bottom and water column EFH at the Liquefaction Project, resulting in long-term benefits to wetlands near the Liquefaction Project. The additional adverse impacts on EFH-designated waterbodies and wetlands associated with Liquefaction Project would further be mitigated by using a combination of the USACE's in-lieu fee program and by purchasing wetland mitigation credits. PALNG would also restore any EFH impacted areas within 6 months from final grading activities, thus, avoiding permanent impacts on EFH. Additionally, the EFH created at the Liquefaction Project's berth would offset the construction impacts on EFH habitat by creating an open-water estuarine habitat for EFH-listed species, and increase biodiversity in conjunction with the habitat for encrusting species. Habitat for encrusting species would be created by installing rip-rap along the shoreline to minimize erosion and sedimentation, and to promote habitat for encrusting species which would promote biodiversity in the vicinity.

PAPL would avoid 12.7 acres of EFH along the Texas Connector Project by crossing EFH-designated wetlands and waterbodies using HDD installation methods for the Texas Connector Project. Of the 10.4 acres impacted, PAPL would restore any EFH impacted areas within 6 months, thus, avoiding permanent impacts on EFH. Any unavoidable impacts on EFH would be mitigated for through USACE wetland mitigation.

PAPL would avoid 25.6 acres of EFH by crossing EFH-designated wetlands and waterbodies using HDD installation methods for the Louisiana Connector Project. Of the 1,540.8 acres impacted, PAPL would restore EFH-impacted areas within 6 months, thus, avoiding permanent impacts on EFH. Any unavoidable impacts on EFH would be mitigated for through USACE wetland mitigation.

Maintenance-related operational impacts on EFH would be limited to a 10-foot-wide right-of-way within estuarine wetlands. Trees more than 15 feet in height, should they occur within 15 feet of the pipeline right-of-way, may be cut and removed.

Due to the relatively small area of EFH impacted by the Projects (the recessed berthing area, MOF, and Pioneer Dock), which cumulatively represents 5 percent of the total acreage within the canal; the increase in the amount of estuarine water column habitat created during construction of the berthing area, MOF, and Pioneer Dock; the increased habitat for encrusting species; avoidance of designated-EFH crossings by HDD installations; preliminary coordination with NMFS; and adherence to wetland and waterbody restoration methods per the *Environmental Plan*; the Projects would not have a significant or adverse impact on EFH.

As previously stated, the NMFS Southeast Region Habitat Conservation Division has concurred that the Projects would result in temporary and minimal impacts on EFH, and that no further EFH consultation is required.

4.7 THREATENED, ENDANGERED, AND OTHER SPECIAL STATUS SPECIES

4.7.1 Regulatory Requirements and Species Identification

Special status species are afforded protection by law, regulation, or policy by state and federal agencies. Special status species generally include federally listed species that are protected under the ESA, species proposed or petitioned for listing under the ESA, are considered as candidates for such listing by the FWS or NMFS, or are species that are state-listed as threatened, endangered, or have been given other state designations.

4.7.1.1 Federal

Federal agencies are required by section 7 of the ESA (Title 19 USC Part 1536[c]), as amended (1978, 1979, and 1982), to ensure that any actions authorized, funded, or carried out by the agencies do not jeopardize the continued existence of a federally listed threatened or endangered species, or result in the destruction or adverse modification of designated critical habitat for a federally listed species. The FWS, which is responsible for terrestrial and freshwater species, and NMFS, which is responsible for most marine species, jointly administer the law and share jurisdiction over sea turtles and some anadromous fish species. As the lead federal agency for the Projects, the FERC is required to consult with the FWS and NMFS to determine whether federally listed threatened or endangered species or designated critical habitat are found near the Projects area, and determine the proposed action's potential effects on those species or their critical habitats.

For actions involving major construction activities with the potential to affect listed species or designated critical habitats, the FERC is required to report its findings to the FWS and NMFS in a BA. A BA may be undertaken as part of a federal agency's compliance with the requirements of section 102 of NEPA (42 USC 4332). If the FERC determines that an action is likely to adversely affect a species, formal consultation is required. In response, the FWS and/or NMFS would issue a Biological Opinion (BO) as to whether or not the federal agency action would likely jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. The BO would include binding and/or discretionary recommendations to reduce impacts to an acceptable level as well as an Incidental Take Statement for those actions that may affect, but would not jeopardize the continued existence of ESA listed species or destroy or adversely modify designated critical habitat.

We considered the potential effects of the Projects on proposed species and habitats so that section 7 consultation could be facilitated in the event one or more of these species become listed before or during construction. Should a federally listed, proposed, petitioned, or candidate species be identified during construction that has not been previously identified during field surveys or assessed through consultation, and project activities could adversely affect the species, the applicants are required to suspend the construction activity and notify the Commission and FWS of the potential affect. The construction activity could not resume until the Commission completes its consultation with the FWS.

We have determined that the Projects *may affect, but would not adversely affect* federally listed species and their designated critical habitats. As discussed below, we have received concurrence from the NMFS for all species under its jurisdiction, and have received concurrence from the FWS for five of the six species under its jurisdiction. Thus, section 7 consultation is complete for those species. To assist with finalizing informal section 7 consultation for the remaining species (American chaffseed), we requested that the FWS consider the draft EIS as our official BA for the Projects. This consultation is ongoing.

4.7.1.2 State

In addition to federal law, Texas and Louisiana have passed laws to protect state-listed threatened and endangered species. The state-specific regulations include the following:

- Texas – Chapter 68 of the Texas Parks and Wildlife Code protects species considered to be threatened with extinction within Texas. Per section 68.015, no person may capture, trap, take, or kill, or attempt to capture, trap, take, or kill, endangered fish or wildlife.

- Louisiana – Title 56 of the Louisiana Revised Statutes as well as relevant rules and regulations adopted by the Louisiana Wildlife and Fisheries Commission and the Secretary of the Department of Wildlife and Fisheries includes regulations to provide for the conservation of endangered or threatened species. With respect to any endangered species of wildlife, it is unlawful, except as provided in subsection G of Title 56, section 1904, for any person subject to the jurisdiction of this state to export or take any such species from the state; or possess, process, sell or offer for sale, deliver, carry transport or ship, by any means whatsoever, any such species. With respect to threatened or endangered species of native plant, it is unlawful, except as provided in subsection I of Title 56, section 1904, for any person subject to the jurisdiction of the state to willfully destroy or harvest any such species growing on the private land of another without first obtaining the written permission of the landowner or legal representative of the landowner; or willfully destroy or harvest any such species on any public land without a permit from the LDWF and written permission from the agency owning the land.

4.7.2 Action Areas

4.7.2.1 FERC-Jurisdictional Facilities

The action area (as defined in section 7(a)(2) of the ESA) considered in this section includes all areas of the Projects: the onshore and offshore (i.e., Port Arthur Canal) components of the Liquefaction Project (including the placement of dredge material at the J.D. Murphree WMA[27]); the onshore and offshore (i.e., Port Arthur Canal and Sabine Lake) pipeline routes; aboveground facilities including compressor stations, meter stations, and MLV facilities; water vessel transit routes (i.e., associated with construction activities in Port Arthur Canal and Sabine Lake); and all associated onshore and offshore temporary workspaces (see section 2.1). Areas beyond the footprint of the Projects that could be affected by project activities (i.e., construction activities causing sediments to be transported outside the Projects area) were also considered part of the action area.

4.7.2.2 Nonjurisdictional Facilities

As discussed in section 2.1.4, nonjurisdictional facilities related to the Projects and considered in this analysis include the 295-foot-wide right-of-way associated with the relocation of SH 87, pipelines, and utilities that would all be located within the liquefaction facility boundary, as well as an electric power supply to serve the proposed compressor station on the Louisiana Connector Project. In addition, based on consultation with NMFS, the increase in vessel traffic (about three to four vessels would call on the liquefaction facility per week) is integral to the Liquefaction Project objective; therefore, we consider the potential environmental impacts associated with the increase in vessel traffic in this EIS. These impacts

27 As discussed in section 2.1 and associated with the Liquefaction Project, dredge material removed from the Port Arthur Canal would also be deposited at Dredge Disposal Areas 8, 9A, and 9B; however, these are existing dredge disposal areas that have been previously authorized by the USACE and used as disposal areas for the maintenance dredging of Port Arthur Canal; therefore, these areas are not discussed further in this section.

are discussed further in sections 4.7.3.6, 4.7.3.7, 4.7.3.8, and 4.7.3.9 for giant manta ray, sea turtles, the West Indian manatee, and whales, respectively.

4.7.3 Federally Listed Species

Review of the FWS' Environmental Conservation Online System – Information for Planning and Consultation identified 11 federally listed threatened or endangered species under FWS jurisdiction that are known to occur in the Projects area: least tern, piping plover, red knot, red-cockaded woodpecker, American chaffseed, West Indian manatee, and five sea turtle species (onshore nesting habitat) (FWS, n.d.-a, n.d.-b). Review of NMFS' lists of threatened or endangered species in Texas and Louisiana identified 16 federally listed species under NMFS jurisdiction that are known to occur in the Projects area: 4 whale species, 5 sea turtle species (marine habitat), 3 fish species, and 4 coral species (NMFS, n.d.-a, n.d.-b, n.d.-c).

To assist in compliance with section 7(a)(2) of the ESA, PAPL and PALNG, acting as the FERC's non-federal representative, initiated informal consultation with the Texas FWS on October 30, 2017. By letter dated June 8, 2018, the Texas Coastal Ecological Services Field Office concurred with the determination made by PAPL and PALNG that the Projects were *not likely to adversely affect* the piping plover, red knot, and least tern. By letter dated October 3, 2018, we requested that the Texas Coastal Ecological Services Field Office concur with our determination for the West Indian manatee. The Texas Coastal Ecological Services Field Office responded by letter on December 12, 2018, concurring with this determination provided that PALNG and PAPL implement the measures outlined in section 4.7.3.9 for the portions of the Projects in Texas (FWS, 2018b). In its supplemental filing dated December 17, 2018, PALNG and PAPL committed to implement the measures for the portions of the Projects in Texas. Thus, consultation with the Texas Coastal Ecological Services Field Office is complete.

In addition, PAPL contacted the Louisiana Ecological Services Office of the FWS (Louisiana FWS) on March 23, 2016, regarding federally listed threatened or endangered species potentially occurring in or near the Texas Connector Project area in Louisiana. The Louisiana FWS responded on April 19, 2016, stating that the Texas Connector Project would have *no effect* on federal trust resources under its jurisdiction and concluded that this finding fulfills the requirements under section 7(a)(2) of the ESA. In a letter dated June 26, 2017, the Louisiana FWS confirmed that its April 19, 2016 *no effect* determination for the Texas Connector Project is still valid.

Regarding the Louisiana Connector Project, PAPL contacted the Louisiana Ecological Services Offices of the FWS on March 31, 2017, regarding federally listed threatened or endangered species potentially occurring in or near the Louisiana Connector Project area. The Louisiana FWS identified three federally listed threatened or endangered species known to occur in the Louisiana Connector Project area (West Indian manatee, red-cockaded woodpecker, and American chaffseed) in its July 7, 2017 letter. PAPL sent a habitat assessment and request for concurrence for the red-cockaded woodpecker on February 26, 2018. The Louisiana FWS responded on March 21, 2018, concurring that the Louisiana Connector Project was *not likely to adversely affect* the red cockaded woodpecker, and on August 9, 2018, that the Louisiana Connector Project was *not likely to adversely affect* the West Indian manatee. We agree with these conclusions. Surveys for the American chaffseed have not been completed due to lack of access. Consultation with the Louisiana FWS is ongoing for the American chaffseed.

One additional species, the eastern black rail, was proposed for listing as threatened by the FWS on October 9, 2018 and could be present in Louisiana and Texas.

To assist in compliance with section 7(a)(2) of the ESA, PAPL and PALNG, acting as the FERC's non-federal representative, initiated informal consultation with NMFS on February 27, 2018, for federally listed threatened or endangered species potentially occurring in or near the Projects area. By letter dated August 29, 2018, the NMFS concurred that the Projects were *not likely to adversely affect* sea turtles (five

species) or the fin, sei, and sperm whales. The NMFS also added that the Projects were *not likely to adversely affect* the recently listed giant manta ray, the North Atlantic right whale, blue whale, and the proposed Bryde's whale. We agree. Thus, ESA section 7 consultation for the Projects is complete for all species under NMFS' jurisdiction.

Because ESA consultation with the FWS is ongoing for the American chaffseed, and may be necessary for the proposed eastern black rail, and to ensure that PALNG and PAPL do not begin construction until section 7 consultation is complete, **we recommend that:**

- **PALNG and PAPL should not begin construction of the Projects until:**

  a. All outstanding biological surveys are completed and filed with the FERC;

  b. The FERC staff completes any necessary ESA section 7 consultation, including conference for the proposed eastern black rail, with the FWS; and

  c. PALNG and PAPL have received written notification from the Director of OEP that construction and/or use of mitigation (including implementation of conservation measures) may begin.

Of the 26 species considered for the Projects, we determined that the Projects would have *no effect* on 7 (either species or critical habitat) due to the distance of their primary habitat from the Projects area or the absence of individuals observed during field surveys. A summary of these species and our justification for *no effect* determinations is provided in appendix O.

Our analysis of the potential for the Projects to impact the remaining 19 federally listed and proposed species or their critical habitat and our determination of effect for each are discussed in the following sections and listed in table 4.7.3-1. Species that are not federally listed but are protected by the Marine Mammal Protection Act of 1972 (MMPA) are further discussed in section 4.7.5. Migratory birds and bald eagles are discussed in section 4.6.1.3.

4.7.3.1 Piping Plover

The piping plover is federally listed as threatened and state-listed as threatened in Texas and Louisiana. There are three locations where piping plovers nest in North America: the shorelines of the Great Lakes, the shores of rivers and lakes in the Northern Great Plains, and along the Atlantic Coast (FWS, 2001b). In the fall, plovers migrate south and winter primarily along Gulf Coast beaches from Florida to Mexico, along the Atlantic Coast from North Carolina to Florida, and on Caribbean islands (TPWD, n.d.-a). Wintering piping plovers in Texas prefer bare or very sparsely vegetated tidal mudflats, sand flats, or algal flats – areas that are periodically covered with water and then exposed either by tides or wind. Most of the plovers that winter on the Texas coast are found in the lower Laguna Madre, where tidal flats are extensive and productive (TPWD, n.d.-b). Piping plovers feed on insects, spiders, and crustaceans. Tidal flats formed at the base of jetties and tidal passes are also important feeding areas, especially along the upper Texas coast (TPWD, n.d.-a). Threats to this species include habitat loss and degradation, particularly of coastal beaches, and nest disturbance and predation.

TABLE 4.7.3-1

Federally Listed Species Potentially Occurring in the Vicinity of the Projects

Common Name *Scientific Name*	Federal Status[a] – Parish/County[b]	State Status[c]– Parish/County[b]	Project Area Where Species May Occur			Suitable Habitat within Project Area?	Determination of Effect and Comments
			Liquefaction	TX Connector	LA Connector		
BIRDS							
Piping plover [d, e, f, g, h, i] *Charadrius melodus*	T – OR, JE, CAM	T – JE, OR, CAM	X	X		Liquefaction Project - foraging habitat present. Texas Connector Project - foraging habitat present, however, it would be largely avoided by HDD. Not anticipated to occur in the Louisiana portions of the project area. Louisiana Connector Project – Liquefaction Project would remove any suitable foraging habitat in Texas before the Louisiana Connector Project would begin. Not anticipated to occur in the Louisiana portions of the project area.[j]	Not Likely to Adversely Affect Concurrence from FWS received on June 8, 2018; consultation complete.
Red knot [d, e, f, g, h, i] *Calidris canutus*	T – OR, JE, CAM	-	X	X		Liquefaction Project - foraging habitat present. Texas Connector Project - foraging habitat present, however, it would be largely avoided by HDD. Not anticipated to occur in the Louisiana portions of the project area. Louisiana Connector Project – Liquefaction Project would remove any suitable foraging habitat in Texas before the Louisiana Connector Project would begin. Not anticipated to occur in the Louisiana portions of the project area.[j]	Not Likely to Adversely Affect Concurrence from FWS received on June 8, 2018; consultation complete.
Least tern [d, h] *Sternula antillarum*	E – OR, CAM	-	X[k]	X[k]	X[k]	Species has utilized newly cleared and/or graveled areas as nesting sites in recent history in TX; therefore, suitable nesting habitat would be present within the Liquefaction Project area and the Texas portions of the Texas Connector Project and Louisiana Connector Project. Not anticipated to occur in the Louisiana portions of the project area.[j]	Not Likely to Adversely Affect Concurrence from FWS received on June 8, 2018; consultation complete.
Red-cockaded woodpecker [d, e, l, m] *Picoides borealis*	E – CAL, BE, AL, EV	E – AL, BE, CAL, EV			X	Suitable foraging is present; no nesting habitat identified during surveys.	Not Likely to Adversely Affect; Concurrence from FWS received on March 21, 2018; consultation complete.
Eastern black rail *Laterallus jamaicensis jamaicensis*	PT – TX, LA	R-JE	X	X	X	Suitable foraging and breeding habitat present.	Conference on species ongoing.
PLANTS							
American chaffseed [e, l, m] *Schwalbea americana*	E – AL, BE	-			X	None identified during surveys; however, surveys are pending in areas with no access.	Surveys outstanding; consultation ongoing.
FISH							
Giant manta ray [n] *Manta birostris*	T – Gulf of Mexico	-	X			Offshore areas of the Gulf of Mexico along the LNG vessel transit routes used for migration and feeding.	Not Likely to Adversely Affect Concurrence from NMFS received on August 29, 2018; consultation complete.
MARINE REPTILES							
Green sea turtle [e, f, g, i, n, o] *Chelonia mydas*	T - JE	T – JE	X		X	Liquefaction Project – foraging and transit habitat present in SNWW. LNG vessel transit routes in the Gulf of Mexico would cross critical habitat (LOGG-S-02, *Sargassum* habitat). Texas Connector – foraging and transit habitat present in SNWW; however, would be avoided by HDD. Louisiana Connector – foraging and transit habitat present in Sabine Lake.	Not Likely to Adversely Affect Concurrence from NMFS received on August 29, 2018; consultation complete.
Hawksbill sea turtle [e, f, g, i, n, o] *Eretmochelys imbricate*	E – JE, CAM	T- JE	X		X		Not Likely to Adversely Affect Concurrence from NMFS received on August 29, 2018; consultation complete.

TABLE 4.7.3-1 (cont'd)

Federally Listed Species Potentially Occurring in the Vicinity of the Projects

Common Name *Scientific Name*	Federal Status[a] – Parish/County[b]	State Status[c]– Parish/County[b]	Project Area Where Species May Occur			Suitable Habitat within Project Area?	Determination of Effect and Comments
			Liquefaction	TX Connector	LA Connector		
Kemp's ridley sea turtle [e, f, g, i, n, o] *Lepidochelys kempii*	E – JE, CAM	E- JE	X		X		Not Likely to Adversely Affect Concurrence from NMFS received on August 29, 2018; consultation complete.
Leatherback sea turtle [e, f, g, i, n, o] *Dermochelys coriacea*	E – JE, CAM	E - JE	X		X		Not Likely to Adversely Affect Concurrence from NMFS received on August 29, 2018; consultation complete.
Loggerhead sea turtle [e, f, i, n, o] *Caretta*	T – JE, CAM CH – Gulf of Mexico	T - JE	X X		X		Not Likely to Adversely Affect (Species) Not Likely to Adversely Affect (Critical Habitat) Concurrence from NMFS received on August 29, 2018; consultation complete.
MARINE/AQUATIC MAMMALS							
West Indian manatee [e, g, i, l] *Trichechus manatus*	T – JE, OR, CAL, CAM	E - CAM	X		X	Liquefaction – foraging and transit habitat present in SNWW. TX Connector – foraging and transit habitat present in SNWW, but would be avoided by HDD. LA Connector – foraging and transit habitat present in Sabine Lake and SNWW; however, SNWW impacts would be avoided via HDD.	Not Likely to Adversely Affect Concurrence from Louisiana FWS received on August 9, 2018; consultation with Texas Coastal Ecological Services Field Office is ongoing.
Sei whale [n, o, p] *Balaenoptera borealis*	E	-	X			Offshore areas of the Gulf of Mexico along the LNG vessel transit routes used for migration and feeding.	Not Likely to Adversely Affect Concurrence from NMFS received on August 29, 2018; consultation complete.
Fin whale [n, o, p] *Balaenoptera physalus*	E	-	X				Not Likely to Adversely Affect Concurrence from NMFS received on August 29, 2018; consultation complete.
Sperm whale [n, o, p] *Physeter microcephalus*	E	-	X				Not Likely to Adversely Affect Concurrence from NMFS received on August 29, 2018; consultation complete.
North Atlantic right whale [n, p] *Eubalaena glacialis*	E		X				Not Likely to Adversely Affect Concurrence from NMFS received on August 29, 2018; consultation complete.
Blue whale [n, p] *Balaenoptera musculus*	E		X				Not Likely to Adversely Affect Concurrence from NMFS received on August 29, 2018; consultation complete.

TABLE 4.7.3-1 (cont'd)

Federally Listed Species Potentially Occurring in the Vicinity of the Projects

Common Name *Scientific Name*	Federal Status[a] – Parish/County[b]	State Status[c] – Parish/County[b]	Project Area Where Species May Occur			Suitable Habitat within Project Area?	Determination of Effect and Comments
			Liquefaction	TX Connector	LA Connector		
Bryde's whale [n, o, p] *Balaenoptera edeni*	P		X				Not Likely to Adversely Affect Concurrence from NMFS received on August 29, 2018; consultation complete.

a Federal status includes: Endangered (E), Threatened (T), Proposed (P), Candidate (C), Delisted (DL), Recovery (R), and Critical Habitat (CH).
b State status includes: Endangered (E), Threatened (T), and Rare (R).
c Parishes/counties include Cameron (CAM), Calcasieu (CAL), Beauregard (BE), Allen (AL), Evangeline (EV), and St. Landry (STL) Parishes, Louisiana; Jefferson (JE) and Orange (OR) Counties, Texas.
d Species protected under the MBTA (see section 4.6.1.3).
e Species identified by review of FWS Environmental Conservation Online System Information Planning and Conservation (IPaC): **https://ecos.fws.gov/ipac**
f Species identified by review of TPWD Annotated County Lists of Rare Species: http://tpwd.texas.gov/gis/rtest/
g Species identified as potentially occurring within the Texas Connector Project area by TPWD (letter dated May 9, 2016).
h Species identified as potentially occurring within the Liquefaction and Texas Connector Project areas by Texas FWS (letter dated June 8, 2018).
i Species identified as potentially occurring within the Louisiana Connector Project area by TPWD (letter dated May 8, 2017).
j Based on correspondence from Louisiana FWS (letter dated July 7, 2017 and September 14, 2017 conference call).
k Listed on FWS IPaC website as potentially occurring in Orange County and requiring consideration only if the project is wind-related within the migratory route. However, because this species has used large construction areas that are newly cleared/graveled as nesting sites in recent history in Texas, those potential impacts are considered in this section.
l Species identified as potentially occurring within the Louisiana Connector Project area by Louisiana FWS (letter dated July 7, 2017).
m Species identified as potentially occurring within the Louisiana Connector Project area by LDWF (letter dated June 12, 2017).
n Species identified as potentially occurring within the Liquefaction Project area by NMFS (letter dated August 29, 2018).
o Species identified by review of NMFS Species and Critical Habitat website: http://sero.nmfs.noaa.gov/protected_resources/section_7/threatened_endangered/index.html
p Species also protected under the MMPA (see section 4.7.5).

According to FWS county occurrence information, the piping plover is known or expected to occur in Jefferson and Orange Counties, Texas and Cameron Parish, Louisiana. During winter, this species could be present along the Texas shorelines near the Project areas. Piping plovers could transit through the Texas portions of the Liquefaction, Texas Connector Project, and Louisiana Connector Projects area during construction; however, they likely would avoid the area because of the high level of activity. The Louisiana FWS indicated in its July 7, 2017 letter, and in a conference call on September 14, 2017 that it did not anticipate this species to occur in the Louisiana portions of the Texas Connector or Louisiana Connector Projects, and therefore, would have *no effect* on the species in Louisiana.

Potential project-related direct and indirect impacts on piping plovers in the Texas project areas include removal of foraging habitat, noise, and other disturbances that may alter behavior and spatial and temporal distribution of this species. To adequately minimize potential project-related impacts on the piping plover, PAPL and PALNG would implement the following mitigation measures:

- PAPL and PALNG would employ biological monitors to survey the project area prior to construction to ensure no piping plovers are present. If present, PALNG and/or PAPL would notify the FWS office and coordinate specific mitigation. Per our recommendation above, PAPL and/or PALNG would not be authorized to commence or continue with construction until FERC completed any necessary section 7 consultation with the FWS.

- HDD technology would be used on the Texas Connector and Louisiana Connector Projects to avoid impacts on large waterbodies and their shorelines.

- Pipeline corridors would be returned to pre-existing conditions following construction.

- Any temporary lighting associated with the pipeline construction would be restricted to the boundaries of the pipeline corridor and associated staging areas and pointed downwards.

- Any permanent lighting needed for the liquefaction facility and pipeline would be restricted to the boundaries and pointed downward towards these sites. This includes security lighting for the facility and pipeline meter stations, pump stations, or security features.

By letter dated October 30, 2017, PALNG and PAPL, acting as our non-federal representative, determined that the Texas portions of the Projects *may affect, but are not likely to adversely affect* the piping plover. The Texas FWS responded in a June 8, 2018 letter to PALNG that it concurs with this determination (FWS, 2018a). We agree. Thus, section 7 consultation for this species is complete.

4.7.3.2 Red Knot

The red knot is a federally listed threatened shorebird. The red knot migrates annually between its breeding grounds in the Canadian Arctic and several wintering regions, including the Southeast United States, the Northeast Gulf of Mexico, northern Brazil, and Tierra del Fuego at the southern tip of South America (FWS, 2014). Outside of breeding season, it is found primarily in intertidal, marine habitats, especially near coastal inlets, estuaries, and bays (Cornell Lab of Ornithology, 2017). Red knots feed on small clams, mussels, snails and other invertebrates, swallowing their prey whole (FWS, 2005). Red knots may be particularly vulnerable to climate change, which is likely to affect the arctic tundra ecosystem where the red knots breed; coastal habitats due to rising sea levels; food resources throughout the bird's range; and storm and weather patterns (FWS, 2015).

According to FWS county occurrence information, the red knot is known or expected to occur in Jefferson and Orange Counties, Texas and Cameron Parish, Louisiana. During winter, this species could

forage along shorelines, herbaceous wetlands, and mudflats within the Texas portions of the Liquefaction, Texas Connector, and Louisiana Connector Projects area. Red knots could transit through the area during construction; however, they likely would avoid the area because of the high level of activity. The Louisiana FWS stated in its July 7, 2017 letter, and in a call on September 14, 2017 that it did not anticipate this species to occur in the Louisiana portions of the Texas Connector or Louisiana Connector Projects, and therefore, would have *no effect* on the species in Louisiana.

Potential project-related direct and indirect impacts on the red knot in the Texas portions of the Projects include removal of potential foraging habitat, noise, and other disturbances that may alter behavior and spatial and temporal distribution of this species. To adequately minimize potential project-related impacts on the red knot, PAPL and PALNG would implement the mitigation measures as discussed above for the piping plover.

By letter dated October 30, 2017, PALNG and PAPL, acting as our non-federal representative, determined that the Texas portions of the Projects *may affect, but are not likely to adversely affect* the red knot. The Texas FWS responded in a June 8, 2018 letter to PALNG that it concurs with this determination (FWS, 2018a). We agree. Thus, section 7 consultation for this species is complete.

4.7.3.3 Least Tern

There are three subspecies of the least tern recognized in the United States (TPWD, n.d.-c). The subspecies are identical in appearance and are segregated on the basis of separate breeding ranges. The Eastern or Coastal Least Tern (*Sterna antillarum antillarum*), which is not federally listed as endangered or threatened, breeds along the Atlantic coast from Maine to Florida and west along the Gulf coast to south Texas. The California Least Tern (*Sterna antillarum browni*), federally listed as endangered since 1970, breeds along the Pacific coast from central California to southern Baja California. The endangered Interior Least Tern (*Sterna antillarum athalassos*) breeds inland along the Missouri, Mississippi, Colorado, Arkansas, Red, and Rio Grande River systems (TPWD, n.d.-c). Although these subspecies are generally recognized, recent evidence indicates that terns hatched on the Texas coast sometimes breed inland. Some biologists speculate that the interchange between coastal and river populations is greater than once thought. Interior least terns breed in the areas noted above, they winter along coastal areas of Central and South America and the Caribbean Islands; however, not a lot is known about their wintering areas (TPWD, n.d.-c). Least terns nest on barren to sparsely vegetated sandbars along rivers, sand and gravel pits, lake and reservoir shorelines, and occasionally gravel rooftops (TPWD, n.d.-c). They hover over and dive into standing or flowing water to catch small fish (TPWD, n.d.-c). Dams, reservoirs, water diversions and other changes to river systems have eliminated most historic least tern nesting habitat (FWS, 2018c). Recreational activities on rivers and sandbars disturb nesting least terns, causing them to abandon their nests (FWS, 2018c).

According to FWS county occurrence information, the least tern is known or expected to occur in Orange County, Texas and need only be considered if the project is wind-related within the migratory route (FWS, n.d.-b). However, based on additional correspondence with the Texas FWS, because natural nesting sites have become scarce, least terns have utilized manmade sites that are newly cleared/graveled (e.g., LNG sites) for nesting in recent history (TPWD, n.d.; FWS, 2018d). Therefore, potential impacts from the construction of the Projects in Jefferson County are also addressed in this section. The Louisiana FWS stated in its July 7, 2017 letter to PAPL and in a call on September 14, 2017 that it did not anticipate this species to occur in the Louisiana portions of the Texas Connector or Louisiana Connector Projects, and therefore, would have *no effect* on the species in Louisiana.

Potential project-related direct and indirect impacts on the least tern in the Texas portions of the Projects include reduced foraging opportunities in areas of elevated sediments where in-water work occurs;

direct mortality by construction equipment and nest abandonment due to human disturbance, if nesting birds are present; and other disturbances such as noise and artificial lighting that may alter behavior and spatial and temporal distribution of this species. To adequately minimize potential project-related impacts on the least tern, PAPL and PALNG would implement the mitigation measures committed to for the piping plover and would also install nesting inhibitors (i.e., pennant flagging) in parking areas at the liquefaction site to discourage nesting during construction.

By letter dated October 30, 2017, PALNG and PAPL, acting as our non-federal representative, determined that the Texas portions of the Projects *may affect, but are not likely to adversely affect* the least tern. The Texas FWS responded in a June 8, 2018 letter to PALNG that it concurs with this determination (FWS, 2018a). We agree. Thus, section 7 consultation for this species is complete.

4.7.3.4 Red-cockaded Woodpecker

The red-cockaded woodpecker is federally listed as endangered and state-listed as endangered in Louisiana. Red-cockaded woodpeckers were once considered common throughout the longleaf pine ecosystem, which covered approximately 90 million acres before European settlement (FWS, 2016b). Historical population estimates are 1 million to 1.6 million "groups," the family unit of red-cockaded woodpeckers (FWS, 2016b). The birds historically inhabited the open pine forests of the southeast from New Jersey, Maryland, and Virginia to Florida, west to Texas and north to portions of Oklahoma, Missouri, Tennessee, and Kentucky (FWS, 2016b). The longleaf pine ecosystem initially disappeared from much of its original range because of early (1700s) European settlement, widespread commercial timber harvesting and the naval stores/turpentine industry (1800s) (FWS, 2016b). Early to mid-1900 commercial tree farming, urbanization, and agriculture contributed to further declines. Much of the current habitat is also very different in quality from historical pine forests in which red-cockaded woodpeckers evolved. Today, many southern pine forests are young and an absence of fire has created a dense pine/hardwood forest (FWS, 2016b).

The red-cockaded woodpecker's habitat consists of mature pine forests. Longleaf pines (*Pinus palustris*) are most commonly preferred, but other species of southern pine are also acceptable (FWS, 2016b). Red-cockaded woodpeckers excavate cavities in pine trees for roosting and nesting. While other woodpeckers bore out cavities in dead trees where the wood is rotten and soft, the red-cockaded woodpecker is the only one that excavates cavities exclusively in living pine trees, generally those at least 60 years old (FWS, 2016b). The older pines favored by the red-cockaded woodpecker often suffer from a fungus called red heart disease, which attacks the center of the trunk, causing the inner wood, the heartwood, to become soft. Cavity excavation takes 1 to 6 years (FWS, 2016b).

The aggregate of cavity trees is called a cluster and may include 1 to 20 or more cavity trees on 3 to 60 acres (FWS, 2016b). The average cluster is about 10 acres (FWS, 2016b). Cavity trees that are being actively used have numerous, small resin wells which exude sap (FWS, 2016b). The typical territory for a group ranges from about 125 to 200 acres, but observers have reported territories running from a low of around 60 acres, to an upper extreme of more than 600 acres (FWS, 2016b). The size of a particular territory is related to both habitat suitability and population density (FWS, 2016b).

Foraging habitat is located within 0.5 mile of the cluster and comprises of pine and pine-hardwood stands (i.e., 50 percent or more of the dominant trees are pines) that are at least 30 years of age and have a moderately low average basal area (40 to 80 square feet per acre is preferred) (FWS, 2017a).

Dying and recently dead pines are an important foraging resource for red-cockaded woodpeckers (Ligon, 1968; Hooper and Lennartz, 1981; Schaefer, 1996; Bowman, et al., 1997). Pines infested with or recently killed and vacated by southern pine beetles may be an especially important, though unpredictable,

food source in shortleaf and loblolly habitats (Schaefer, 1996). Red-cockaded woodpeckers feed on southern pine beetles themselves, especially pupae in the bark (FWS, 2003). The birds also feed on adults and larvae of secondary attackers to beetle-infested trees, such as long-horned beetles (*Cerambycidae*) and metallic wood-boring beetles (*Buprestidae*) (FWS, 2003).

Potential project-related direct and indirect impacts on the red-cockaded woodpecker include removal of foraging and breeding habitat, noise, and other disturbances that may alter behavior and spatial and temporal distribution of this species.

According to FWS parish occurrence information, the red-cockaded woodpecker is known or expected to occur in Calcasieu, Beauregard, Allen, and Evangeline Parishes, Louisiana. PAPL conducted a habitat assessment for potential nesting and foraging habitat for the red-cockaded woodpecker within the Louisiana Connector Project area based on the habitat criteria included in the FWS' Red-cockaded Woodpecker Recovery Plan. Although no cluster trees or red-cockaded individuals were observed by PAPL during the habitat assessment, potential foraging habitat was identified near MPs 69, 79.5, and 80.2 along the Louisiana Connector Project route. In a letter dated July 7, 2017, the Louisiana FWS requested that PAPL complete surveys for the presence of red-cockaded woodpecker cavity trees within 0.5 mile of any suitable nesting or foraging habitat identified within the project area.

PAPL provided the Louisiana FWS with red-cockaded woodpecker survey results from a previous project at MP 69, which indicated that no cavity trees are present within 0.5 mile of the project area. PAPL met with the Louisiana FWS and LDWF on January 11, 2018, to discuss methodology and the areas that would be surveyed in proximity to MPs 79.5 and 80.2. As a result of the meeting, it was determined that PAPL would conduct surveys for nesting clusters within 0.5 mile of MPs 79.5 and 80.2, excluding areas of recent timber harvest, and also excluding those tracts managed under the Red-cockaded Woodpecker Safe Harbor Agreement with LDWF, as LDWF confirmed there are no known current or historical occurrences of individuals or cavity trees within the Safe Harbor tracts.

PAPL conducted a pedestrian survey on January 19 and 22, 2018, in accordance with the protocol outlined in the FWS 2003 Red-cockaded Woodpecker Recovery Plan. Approximately 43 of the 118 acres proposed for survey were not accessible due to landowner restrictions; however, PAPL observed potential habitat and conducted visual and audible surveys to the extent possible from adjacent property boundaries. No red-cockaded woodpecker individuals were visually or audibly detected, and no cavity trees were observed in the area surveyed. On February 26, 2018, PAPL submitted the results of the surveys (suitable foraging habitat but no individuals or nesting habitat) to the FWS and requested concurrence that the Louisiana Connector Project is *not likely to adversely affect* the red-cockaded woodpecker.

In a letter dated March 21, 2018, the Louisiana FWS confirmed its review of the survey report and concurred that the Louisiana Connector Project is *not likely to adversely affect* the red-cockaded woodpecker. In an e-mail dated February 27, 2018, the LDWF confirmed its review of the survey report and also agreed with the determination made by PAPL for the red-cockaded woodpecker on the Louisiana Connector Project. We agree. Thus, section 7 consultation for this species is complete.

4.7.3.5 Eastern Black Rail

On October 9, 2018, the FWS proposed the eastern black rail for listing as threatened under the ESA, with a final rule anticipated no later than October 2019 (83 FR 50610). Under the ESA, federal agencies are required to confer with the FWS on agency actions that may be likely to jeopardize a proposed species. The FWS would typically finalize or withdraw the listing about 12 months after the proposal depending on comments received; ESA protections become effective 30 days after the final listing rule is published.

Eastern black rails are found in a variety of salt, brackish, and freshwater marsh habitats that can be tidally or non-tidally influenced. Within these habitats, the birds occupy relatively high elevations along heavily vegetated wetland gradients, with soils that are moist or flooded to a shallow depth (83 FR 50610). Eastern black rails require dense vegetation cover that allows movement underneath the canopy. Plant structure is considered more important than plant species composition in predicting habitat suitability for the subspecies (83 FR 50610). Occupied habitat tends to be primarily composed of fine-stemmed emergent plants (rushes, grasses, and sedges) with high stem densities and dense canopy cover (83 FR 50610). However, when shrub densities become too high, the habitat becomes less suitable for eastern black rails. Soils are moist to saturated (occasionally dry) and interspersed with or adjacent to very shallow water (1 to 6 centimeters) (83 FR 50610).

Black rails in Texas use tidal salt marshes along the barrier islands and the mainland fringe, as well as drier coastal prairie. The coastal prairie is a small remnant of an earlier widespread ecosystem and continues to be threatened by grazing and agricultural conversion (Watts, 2016). Texas is a black rail crossroad making it difficult to differentiate breeders from winter residents from migrants. The upper Texas coast has a long history of black rail records that are concentrated within national wildlife refuges and state wildlife management areas (Watts, 2016).

Louisiana is not currently known to support a breeding black rail population (Watts, 2016). There are no confirmed breeding records and historic observations during the breeding season are rare. Western Louisiana supports the eastern extent of the coastal wetlands and prairie that black rails are known from in Texas. Most historic and recent records are from the Broussard Beach area of Cameron Parish that lies within this system, which is approximately 25 miles from the Louisiana Connector Project in Cameron Parish (Watts, 2016).

Primary threats to the eastern black rail include habitat loss due to continued alteration and loss of wetland habitats, land management practices that result in fire suppression (or inappropriately timed fire application that may cause direct mortalities), grazing, haying and mowing, and impounding of wetlands (FWS, 2018e). In addition, projected sea level rise and associated tidal flooding, increased temperatures, decreased precipitation, increased drought and severe weather events producing flooding or changes in wildfire frequency and intensity are all likely to have significant impacts on eastern black rail populations and their habitat (FWS, 2018e).

Dredging of material in the Port Arthur Canal would occur during construction of the Liquefaction Project. This material would be placed at four locations: existing Dredge Disposal Areas 8, 9, and 9A, and at the J.D. Murphree WMA. The proposed dredging and disposal would affect an additional 6,071 acres of land, and includes the beneficial reuse of dredge material to create about 1,269 acres of coastal marsh wetland.

PALNG and PAPL's consultations with the TPWD regarding review of the Texas portions of the Liquefaction and Texas Connector Projects identified the eastern black rail as a state rare species (see section 4.7.4). Per recommendations from the TPWD, PALNG and PAPL have committed to the following measures to minimize impacts on state-listed and rare birds in Texas (including the eastern black rail):

- Whenever possible, PALNG and PAPL would construct within habitat outside the primary nesting season (February 1 to July 15).
- For any activities occurring within the nesting season, PALNG and PAPL would employ a biological monitor to survey suitable habitat prior to construction.

- Any state-listed or rare birds identified foraging within the project area would not be disturbed and would be allowed to leave the project area on their own volition before project activities would be allowed to commence.

- In accordance with TPWD recommendations, if any nests are identified during pre-construction surveys, a 25-foot buffer would be applied to the nest, and project activities would not be allowed within the buffer until after the young have fledged.

The eastern black rail is proposed for listing as federally threatened and may become listed prior to or during construction. Should the eastern black rail be listed, PALNG and PAPL would be required to contact the FWS in accordance with our recommendation in section 4.7.3 above, which would allow FERC to complete any necessary section 7 consultation. Specifically, PALNG and PAPL would be required to:

- Consult with the FWS to determine if any proposed facilities could impact the eastern black rail or its habitat and file the results of this consultation to the FERC. State agencies may also have information on this species if the species is protected by state law.

- If surveys are required, file with the FERC any correspondence with the FWS about proper survey protocol (including time of year for surveying) for the species or its habitat and the results of the surveys conducted.

- Describe any measures the applicant would adopt to avoid, minimize, or mitigate impacts on the eastern black rail. Include any measures that may also create habitat for the eastern black rail. Any comments from the FWS regarding these measures should also be filed with the FERC.

4.7.3.6 American Chaffseed

Federally listed as an endangered plant species, the American chaffseed is a tall perennial herb in the snapdragon family that can be identified by its two-inch-long, purplish-yellow, tubular flowers (FWS, 2016a). The plant, a partial parasite on the roots of other plants, grows to a height of 12 to 24 inches at the time of flowering in the spring. Its leaves are alternate, lance-shaped to elliptic, and its flowers are borne singularly on short stalks (FWS, 2016a). The fruit is a long, narrow capsule enclosed in a sac-like structure (FWS, 2016a). Flowering occurs from April to June in the south and from June to mid-July in the north. Fruits mature from early summer in the south to October in the north (FWS, 2016a).

The American chaffseed grows on "pimple mounds" in the longleaf pine flatwoods of Allen and Beauregard Parishes in southwestern Louisiana (FWS, 2016a). American chaffseed occurs in fire-maintained longleaf pine flatwoods and savannas (FWS, 2017b). Often it is found in transition zones between peaty wetlands and xeric (dry) sandy soils (FWS, 2017b). American chaffseed habitat has been described as open grass-sedge systems in moist acidic sandy loams or sandy peat loams (FWS, 2017b). Historically, this species occurred along the coast from Massachusetts to Louisiana and inland to Kentucky and Tennessee. Currently, this species occurs in seven states along the coast: New Jersey, North Carolina, South Carolina, Georgia, Alabama, Florida, and Louisiana (FWS, 2017b). A major threat to this species is the decline in prescribed burning throughout the Atlantic and Gulf coasts (FWS, 2016a).

According to FWS county occurrence information, the American chaffseed is known or expected to occur in Beauregard and Allen Parishes, Louisiana. PAPL conducted pedestrian surveys for American chaffseed individuals during the flowering period within potentially suitable habitat where access was granted; no individuals were found. Additional surveys are pending where it appears appropriate habitat

may be present, but complete survey access has not been granted. Because the American chaffseed may be present in these unsurveyed areas, **we recommend that:**

- **Prior to construction of the Louisiana Connector Project, PAPL should conduct surveys for the American chaffseed on the remaining no-access parcels with potential habitat. If the American chaffseed is found, PAPL should incorporate methods to avoid impacts on the American chaffseed. PAPL should file with the Secretary and the Louisiana FWS both the survey results and PAPL's proposed avoidance measures.**

Based on the results of surveys conducted to date and our recommendation to avoid impacts on any plants discovered during surveys, we conclude that the Louisiana Connector Project *may affect, but is not likely to adversely affect* the American chaffseed. As per our previous recommendation in section 4.7.3, if surveys discover this species and indicate that the Louisiana Connector Project is likely to adversely affect the American chaffseed, FERC would complete formal consultation with the FWS prior to authorizing construction of the pipeline. By letter dated October 3, 2018, we requested that the Louisiana FWS concur with our determination for the American chaffseed. By email dated November 1, 2018, the Louisiana FWS responded "we are in agreement with the draft EIS for this proposal that ESA consultation for the American chaffseed is ongoing. When the surveys for the American chaffseed are complete, the survey results should be submitted to our office and we will respond accordingly." Thus, consultation with the Louisiana FWS is ongoing for the American chaffseed.

4.7.3.7 Giant Manta Ray

Federally listed as a threatened fish species, the giant manta ray is found worldwide in tropical, subtropical, and temperate bodies of water and is commonly found offshore, in oceanic waters, and near productive coastlines (NMFS, n.d.-d). The giant manta ray is a migratory species and a seasonal visitor along productive coastlines with regular upwelling, in oceanic island groups, and near offshore pinnacles and seamounts. The timing of these visits varies by region and seems to correspond with the movement of zooplankton, current circulation and tidal patterns, seasonal upwelling, seawater temperature, and possibly mating behavior (NMFS, n.d.-d). The most significant threat to the giant manta ray is overutilization for commercial purposes. Giant manta rays are both targeted and caught as bycatch in a number of global fisheries throughout their range (NMFS, n.d.-d).

Giant manta rays inhabit the Gulf of Mexico and are known to congregate in the Flower Garden Banks National Marine Sanctuary approximately 130 miles off the coast of Texas. This species is more surface-oriented than most fish, and the increased traffic within the Gulf of Mexico due to LNG vessel transit to and from the liquefaction site could pose an increased risk to the giant manta ray from vessel strikes (NMFS, 2018). However, the proposed action is estimated to result in an increase of 0.038 percent of overall shipping transits throughout the Gulf of Mexico. Therefore, the potential for the increased vessel traffic to result in an increase in giant manta ray vessel strikes is highly unlikely, and therefore, discountable (NMFS, 2018).

In an August 29, 2018 letter, the NMFS determined that because PALNG would adhere to the NMFS-issued mitigation guidelines for vessel strikes, the Liquefaction Project *may affect, but is not likely to adversely affect* the giant manta ray. We agree. Thus, section 7 consultation for this species is complete.

4.7.3.8 Sea Turtles

Sea turtles are found throughout the tropical and subtropical seas of the world where they occur at or near the surface of the water. All species found in U.S. waters are listed as threatened or endangered

under the ESA and are under the shared jurisdiction of the FWS and NMFS (NMFS, 2017c). The major threats to sea turtle populations are destruction and alteration of nesting and feeding beaches, incidental capture in commercial and recreational fisheries, entanglement in marine debris, and vessel strikes (NMFS, 2017c).

Five species of federally listed sea turtles could occur within the SNWW, Sabine Lake, and along the LNG vessel transit routes in the Gulf of Mexico, including the green, hawksbill, Kemp's ridley, leatherback, and loggerhead sea turtles. Suitable nesting habitat for sea turtles is not available near the Liquefaction Project area, and sea turtles have not been documented in the upstream area of Port Arthur Canal where the Liquefaction facility would be constructed (NMFS, 2018). Further, the highly altered habitat conditions in this portion of Port Arthur Canal do not support the features necessary for sea turtle foraging (e.g., sea grasses or prey species) (NMFS, 2018). Therefore, the following discussion is specific to the portion of the Texas Connector Project that crosses the SNWW via HDD, the portion of the Louisiana Connector Project within Sabine Lake,[28] and the LNG vessel transit routes in the Gulf of Mexico that would be used during operation of the liquefaction site. In addition, the LNG vessel transit routes would cross designated critical habitat for the loggerhead sea turtle. Species-specific discussions are presented below.

Green Sea Turtle

The green sea turtle is federally listed as threatened (North Atlantic and South Atlantic Distinct Population Segments) (NMFS, 2018). In U.S. Atlantic and Gulf of Mexico waters, green turtles are found in inshore and nearshore waters from Texas to Massachusetts, the U.S. Virgin Islands, and Puerto Rico (NMFS, 2016a). Adult females migrate from foraging areas to mainland or island nesting beaches and may travel hundreds or thousands of kilometers each way (NMFS, 2016a). After emerging from the nest, hatchlings swim to offshore areas, where they are believed to live for several years, feeding close to the surface on a variety of pelagic plants and animals (NMFS, 2016a). Once the juveniles reach a certain age/size range, they leave the pelagic habitat and travel to nearshore foraging grounds (NMFS, 2016a). Once they move to these nearshore benthic habitats, adult green turtles are almost exclusively herbivores, feeding on sea grasses and algae (NMFS, 2016a). Suitable nesting habitat for this species is not available near the Texas Connector and Louisiana Connector Projects area; however, green sea turtles could potentially occur within the SNWW and Sabine Lake during foraging and along the LNG vessel transit routes in the Gulf of Mexico.

Atlantic Hawksbill Sea Turtle

The Atlantic hawksbill sea turtle is federally listed as endangered. Hawksbills frequent rocky areas, coral reefs, shallow coastal areas, lagoons or oceanic islands, and narrow creeks and passes. They are seldom seen in water deeper than 65 feet (FWS, 2018f). Hatchlings are often found floating in masses of sea plants, and nesting may occur on almost any undisturbed deep-sand beach in the tropics (FWS, 2018f). Adult females can climb over reefs and rocks to nest in beach vegetation (FWS, 2018f). Hawksbill sea turtles prefer to feed on sponges and other invertebrates, and algae (NMFS, 2014). Suitable nesting habitat for this species is not available near the Texas Connector and Louisiana Connector Projects area; however, Atlantic hawksbill sea turtles could potentially occur within the SNWW and Sabine Lake during foraging and along the LNG vessel transit routes in the Gulf of Mexico.

28 The portion of Louisiana Connector Project that would cross Port Arthur Canal via HDD occurs near the proposed Liquefaction Project facility and, therefore, is not suitable habitat for sea turtles.

Kemp's Ridley Sea Turtle

The Kemp's ridley sea turtle is the smallest of the sea turtles found in the Gulf of Mexico and is federally listed as endangered. Adult and sub-adult habitat consists primarily of neritic zones, which typically contain muddy or sandy bottoms where prey can be found (NMFS, 2017d). Their diet consists mainly of swimming crabs, but may also include fish, jellyfish, and an array of mollusks (NMFS, 2017d). Newly emerged hatchlings inhabit a much different environment than adult turtles (NMFS, 2017d). After emerging from the nest, hatchlings enter the water and must swim quickly to escape nearshore predators (NMFS, 2017d). Juveniles of many species of sea turtles have been known to associate with floating *Sargassum* seaweed, using the *Sargassum* as an area of refuge, rest, and/or food (NMFS, 2017d). In a study conducted between 2004 and 2007, immature Kemp's ridley sea turtles were tracked to document their movement patterns, primarily during warmer months. The results showed the turtles exhibited preferences for tidal passes, bays, coastal lakes, and nearshore waters, including documentation of an immature Kemp's ridley sea turtle in Sabine Lake in 2007 (Seney and Landry, 2011). Although nesting occurs mainly in Mexico from May to July, Kemp's ridley sea turtles also nest in small numbers along the Gulf Coast, mostly in southern Texas (NMFS, 2017d). Suitable nesting habitat for this species is not available near the Texas Connector and Louisiana Connector Projects area; however, Kemps' ridley sea turtles could potentially occur within the SNWW and Sabine Lake during foraging, and along the LNG vessel transit routes in the Gulf of Mexico.

Leatherback Sea Turtle

The leatherback sea turtle is federally listed as endangered. Leatherbacks are the most migratory and wide ranging of sea turtle species. They are commonly known as pelagic (open ocean) animals, but they also forage in coastal waters (NMFS, 2016b). They feed mainly on jellyfish, salps, and pyrsomes, and mate in the waters adjacent to nesting beaches and along migratory corridors (NMFS, 2016b). Found worldwide, their primary nesting beaches in the Atlantic are on the northern coast of South America and at various locations around the Caribbean. A few nest in Florida and on the Gulf of Mexico coastline in Mexico (National Park Service [NPS], 2015). One leatherback nest was found at Padre Island National Seashore in 2008 (NPS, 2015). Prior to this, the most recent nesting records in Texas were from the 1920s and 1930s at what later became Padre Island National Seashore (NPS, 2015). The Padre Island National Seashore, which is approximately 250 miles from the Projects area, is the only location in Texas where leatherback nests have been recorded (NPS, 2015). After nesting, female leatherbacks migrate from tropical waters to more temperate latitudes, which support high densities of jellyfish prey in the summer (NMFS, 2016b). Suitable nesting habitat for this species is not available near the Texas Connector and Louisiana Connector Projects area; however, leatherback sea turtles could potentially occur within the SNWW and Sabine Lake during foraging and along the LNG vessel transit routes in the Gulf of Mexico.

Loggerhead Sea Turtle

The loggerhead sea turtle is federally listed as threatened. Loggerheads nest on ocean beaches, generally preferring high energy, relatively narrow, steeply sloped, coarse-grained beaches (NMFS, 2017e). Immediately after hatchlings emerge from the nest, they move to the surf, swim, and are swept through the surf zone, and continue swimming away from land for up to several days (NMFS, 2017e). Post-hatchling loggerheads take up residence in areas where surface waters converge to form local downwellings. These areas are often characterized by accumulations of floating material, such as seaweed (for example, *Sargassum* sp.) (NMFS, 2017e). Loggerheads feed on hard-shelled prey such as whelks and conch (NMFS, 2017e). Somewhere between 7 to 12 years old, oceanic juveniles migrate to nearshore coastal areas (neritic zone) and continue maturing until adulthood (NMFS, 2017e). To a large extent, these habitats overlap with the juvenile stage, the exception being most of the bays, sounds, and estuaries along the Atlantic and Gulf coasts of the United States from Massachusetts to Texas, which are infrequently used by adults (NMFS,

2017e). Suitable nesting habitat for this species is not available near the Texas Connector and Louisiana Connector Projects area; however, loggerhead sea turtles could potentially occur within the SNWW and Sabine Lake during foraging and along the LNG vessel transit routes in the Gulf of Mexico. Designated critical habitat for the loggerhead sea turtle is discussed separately below.

Sea Turtle Species Impacts and Mitigation

As noted above, no suitable nesting habitat for sea turtles is present at the Texas Connector or Louisiana Connector Projects area or LNG vessel transit routes, although some foraging and transit habitat for these species is present within these areas.

Potential impacts on sea turtles related to construction of the Texas Connector Project would be associated with the portion of the project that crosses the SNWW via HDD, and impacts on sea turtles related to construction of the Louisiana Connector Project would be associated with Sabine Lake. Potential construction-related impacts would include increased turbidity due to dredging, increased vessel traffic, inadvertent release of drilling mud, and inadvertent spills of hazardous materials. These potential impacts are further discussed in section 4.6.2.2.

An increase in turbidity would be produced by the placement of the Louisiana Connector Project pipeline across Sabine Lake, but this impact would be localized and temporary. Sediment would likely be deposited immediately adjacent to the trench, potentially affecting benthic habitat along the construction corridor. This disturbance could increase the levels of stress, injury, and mortality of benthic species that may serve as food for sea turtles. However, any effects on sea turtles or their foraging success would be insignificant as these benthic-dwelling species are acclimated to high turbidity levels and frequent disturbance due to the dynamic nature of Sabine Lake (i.e., currents, wave/tidal action, and storm frequency) (NMFS, 2018). Further, these natural forces would be expected to redistribute the disturbed sediments, quickly restoring the natural equilibrium of the lakebed.

Sea turtles are highly mobile and would be expected to move away from construction activities (NMFS, 2018). During in-water construction in Sabine Lake, PAPL would follow the *Sea Turtle and Smalltooth Sawfish Construction Conditions* (NMFS, 2006b) to reduce the risk of sea turtles being injured or killed by construction equipment or vessels.

In the event of an inadvertent release during HDD activities, PAPL would implement the corrective action and cleanup measures outlined in its Inadvertent Release Plan to minimize potential impacts on aquatic resources, the use of temporary dams to isolate the drilling fluid and vacuum trucks to remove the released drilling mud.

The increased traffic within the SNWW, Sabine Pass, and Gulf of Mexico due to LNG vessel transit to and from the liquefaction site could pose an increased risk to sea turtles from vessel strikes (NMFS, 2016c). Vulnerability to collision with an LNG vessel would be greatest while sea turtles feed, swim, and rest near the surface of the water. LNG vessels operating within the U.S. EEZ in the Gulf of Mexico are generally slower and generate more noise than typical large vessels and would be more readily avoided by sea turtles (NMFS, 2016c; 2018). Additionally, LNG vessels push a considerable bow wave when underway on the open ocean because of their design and large displacement tonnage. This wave pushes water, flotsam, and other small objects (such as sea turtles) away from the vessel (NMFS, 2006a). LNG transit vessels (LNG vessels and LNG barges) would also use well-traveled shipping lanes. In total, LNG transit vessels could make up to 180 trips to the liquefaction facility per year (approximately 3 to 4 carriers per week), which would result in an estimated increase of 0.038 percent of overall shipping transits throughout the Gulf of Mexico (NMFS, 2018). When compared to the annual large vessel traffic to the local ports in the vicinity of the proposed liquefaction site (i.e., Galveston Bay, Sabine Pass, and Calcasieu

Pass), the increase in vessel traffic associated with operation of the Liquefaction Project would result in an estimated increase of 0.3 percent in the local area (NMFS, 2018). Based on this, the potential for vessel traffic associated with operation of the Liquefaction Project to result in an increase in sea turtle vessel strikes is highly unlikely, and therefore, discountable (NMFS, 2018).

To further minimize the potential for vessel strikes, PALNG would provide LNG vessel captains with the NMFS-issued document entitled *Vessel Strike Avoidance Measures and Reporting for Mariners* (NMFS, 2008), which outlines collision avoidance measures. In addition, although the likelihood of a fuel spill or release of hazardous materials at sea would be extremely remote, the carrier would implement spill prevention procedures and clean-up measures (see appendix F).

PALNG, acting as our non-federal representative, determined that based on the sea turtles' characteristics and habitat requirements; and because PALNG and PAPL would adhere to the NMFS-issued mitigation guidelines for vessel strikes and in-water construction noted above; and would implement spill prevention procedures and clean-up measures, the Liquefaction Project and Texas Connector and Louisiana Connector Projects *may affect, but are not likely to adversely affect* the green, hawksbill, Kemp's ridley, leatherback, and loggerhead sea turtles. The NMFS responded on August 29, 2018, that it concurs with this determination (NMFS, 2018). We agree. Thus, section 7 consultation for these species is complete.

Loggerhead Sea Turtle – Designated Critical Habitat

On August 11, 2014, the NMFS issued a final rule designating critical habitat for the Northwest Atlantic Ocean Distinct Population Segment of the loggerhead sea turtle within the Atlantic Ocean and the Gulf of Mexico (79 FR 39855). Specific areas for designation include 38 occupied marine areas within the range of the Northwest Atlantic Ocean Distinct Population Segment. These areas contain one or a combination of habitat types: nearshore reproductive habitat, winter area, breeding areas, constricted migratory corridors, and/or *Sargassum* habitat. The LNG vessel transit routes in the Gulf of Mexico would cross the *Sargassum* habitat type.

The NMFS describes the physical or biological features of loggerhead *Sargassum* habitat as developmental and foraging habitat for young loggerheads where surface waters form accumulations of floating material, especially *Sargassum*. The NMFS has identified the following primary constituent elements as habitat features necessary to support *Sargassum* habitat (79 FR 12572):

(i) Convergence zones, surface-water downwelling areas, the margins of major boundary currents (Gulf Stream), and other locations where there are concentrated components of the *Sargassum* community in water temperatures suitable for the optimal growth of *Sargassum* and inhabitance of loggerheads.

(ii) *Sargassum* in concentrations that support adequate prey abundance and cover.

(iii) Available prey and other material associated with *Sargassum* habitat including, but not limited to, plants and cyanobacteria and animals native to the *Sargassum* community such as hydroids and copepods.

(iv) Sufficient water depth and proximity to available currents to ensure offshore transport (out of the surf zone), and foraging and cover requirements by *Sargassum* for post-hatchling loggerheads, i.e., greater than 10 meters depth.

The increase in vessel traffic associated with the Liquefaction Project may affect primary constituent elements (ii) and (iii) of loggerhead critical habitat (NMFS, 2018). Although the LNG transit

vessels could drive through the *Sargassum*, the vessel tracks resulting from these activities are not expected to scatter *Sargassum* mats or the organisms within those mats to the point of affecting the functionality of the loggerhead critical habitat primary constituent elements (NMFS, 2018). The wakes and surface water disruption associated with the vessels may temporarily disturb *Sargassum* mats; however, any potential disturbance would not be expected to result in measurable effects to the distribution, size, or composition of mats or their ability to support loggerheads or their prey resources (NMFS, 2018).

PALNG, acting as our non-federal representative, determined that the increased LNG vessel traffic associated with operation of the Liquefaction Project *may affect, but is not likely to adversely affect* designated loggerhead turtle critical habitat. The NMFS responded on August 29, 2018, that it concurs with this determination (NMFS, 2018). We agree. Thus, section 7 consultation for loggerhead critical habitat is complete.

4.7.3.9 West Indian Manatee

The West Indian manatee is federally listed as threatened. Manatees live in marine, brackish, and freshwater systems in coastal and riverine areas throughout their range (FWS, 2017c). Preferred habitats include areas near the shore featuring underwater vegetation like seagrass and eelgrass. Manatees feed along grass bed margins with access to deep water channels, where they flee when threatened (FWS, 2017c). Manatees can be found throughout Florida for most of the year (FWS, 2017c). However, they cannot tolerate temperatures below 68 °F for extended periods of time, and during the winter months these cold temperatures keep the population concentrated in peninsular Florida (FWS, 2017c). During the summer manatees expand their range, and on rare occasions are seen as far north as Rhode Island on the Atlantic coast and as far west as Texas on the Gulf coast (FWS, 2017c). Manatees may travel hundreds of miles during a year's time, preferring to travel along channels and shorelines (FWS, 2017c).

Manatees are extremely rare in Texas although near the turn of the 19th - 20th century they apparently were not uncommon in the Laguna Madre (Davis and Schmidly, 1994). Texas records also include specimens from Cow Bayou, near Sabine Lake, Copano Bay, the Bolivar Peninsula, and the mouth of the Rio Grande River (Davis and Schmidly, 1994). In 2012, multiple manatees were observed near Galveston, Texas (Rice 2012). The greatest threats to manatee survival are collisions with boats and, in Florida, loss of warm water habitat (FWS, 2008b). The manatee often rests suspended just below the water's surface with only the snout above water, leaving it vulnerable to encounters with boats (FWS, 2008b).

The West Indian manatee was identified as potentially occurring in Jefferson and Orange Counties, Texas and Calcasieu and Cameron Parishes, Louisiana (FWS, n.d.-a; n.d.-b; 2017d). Although their presence within the Liquefaction and Louisiana Connector Projects area is unlikely, increased traffic within the SNWW due to LNG vessel transit to and from the liquefaction site, and increased vessel traffic and in-water work required to install the Sabine Lake portion of the Louisiana Connector Project could pose an increased risk to manatees from vessel strikes. As described in section 4.7.3.5, PALNG would provide LNG vessel captains with a NMFS-issued guidance document that outlines collision avoidance measures to minimize impacts on manatee from vessel strikes.

In a letter dated July 7, 2017, regarding the Louisiana Connector Project, the Louisiana FWS provided the following recommendations to minimize impacts on the West Indian manatee, which PAPL has agreed to implement for the Louisiana Connector Project:

- During in-water work in areas that potentially support manatees, all personnel associated with the project should be instructed about the potential presence of manatees, manatee speed zones, and the need to avoid collisions with and injury to manatees. All personnel should be advised that there are civil and criminal penalties for harming, harassing, or

killing manatees, which are protected under the MMPA of 1972 and the ESA. Additionally, personnel should be instructed not to attempt to feed or otherwise interact with the animal, although passively taking pictures or video would be acceptable.

- All on-site personnel would be responsible for observing water-related activities for the presence of manatees. The following measures are recommended to minimize potential impacts to manatees in areas of their potential presence:
  - All work, equipment, and vessel operation should cease if a manatee is spotted within a 50-foot radius (buffer zone) of the active work area. Once the manatee has left the buffer zone on its own accord (manatees must not be herded or harassed into leaving), or after 30 minutes have passed without additional sightings of manatees in the buffer zone, in-water work can resume under careful observation for manatees.
  - If a manatee is sighted in or near the project area, all vessels associated with the project should operate at "no wake/idle" speeds within the construction area and at all times while in waters where the draft of the vessel provides less than a four-foot clearance from the bottom. Vessels should follow routes of deep water whenever possible.
  - If used, siltation or turbidity barriers should be properly secured, made of material in which manatees cannot become entangled, and be monitored to avoid manatee entrapment or impeding their movement.
  - Temporary signs concerning manatees should be posted prior to and during all in-water project activities and removed upon completion. Each vessel involved in construction activities should display at the vessel control station or in a prominent location, visible to all employees operating the vessel, a temporary sign (at least 8.5 by 11 inches) reading language similar to the following: "CAUTION BOATERS: MANATEE AREA/IDLE SPEED IS REQUIRED IN CONSTRUCTION AREA AND WHERE THERE IS LESS THAN FOUR FOOT BOTTOM CLEARANCE WHEN MANATEE IS PRESENT." A second temporary sign measuring 8.5 by 11 inches should be posted at a location prominently visible to all personnel engaged in water-related activities and should read language similar to the following: "CAUTION: MANATEE AREA/EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION."
  - Collisions with, injury to, or sightings of manatees should be reported immediately to the Louisiana FWS ([337] 291-3100), the LDWF, Natural Heritage Program ([225] 765-2821), and the Texas Coastal Ecological Service (Donna Anderson [281] 212-1505). Provide the nature of the call (report of an incident, manatee sighting, etc.); time of the incident/sighting; and the approximate location, including the latitude and longitude coordinates, if possible.

PALNG and PAPL, acting as our non-federal representative, determined that the Liquefaction Project and Louisiana Connector Project *may affect, but are not likely to adversely affect* the West Indian manatee. Based on PAPL's commitment to implement the measures above for the Louisiana Connector Project, the Louisiana Ecological Services Field Office of the FWS responded on August 9, 2018, that it concurs with this determination (FWS, 2018g). We agree also.

By letter dated October 3, 2018, we requested that the Texas Coastal Ecological Services Field Office concur with our determination for the West Indian manatee. The Texas Coastal Ecological Services Field Office responded by letter on December 12, 2018, that it concurs with this determination, provided that PALNG and PAPL implement the measures outlined above for the portions of the Projects in Texas (FWS, 2018b). In its supplemental filing dated December 17, 2018, PALNG and PAPL committed to implement the measures above for the portions of the Projects in Texas. Thus, section 7 consultation for the West Indian manatee is complete.

4.7.3.10 Whales

Whales are long-lived marine mammals that occur throughout the world's oceans. They can be divided into two main groups: toothed whales and baleen whales. Feeding morphology and prey are the major differences between these groups. Many species of whales migrate extremely long distances to take advantage of seasonal food resources or calm wintering grounds for rearing young. Whales generally utilize warm tropical waters during winter months when the polar seas are cold and ice covered, though some species will stay in these regions year-round. Whales could use the offshore areas of the Gulf of Mexico along the LNG vessel transit routes for migration and feeding. Given the lack of impacts on marine habitat from the Texas Connector and Louisiana Connector Projects, the following discussion is specific to the LNG vessel traffic associated with operation of the Liquefaction Project.

The sperm whale is a toothed whale that inhabits the deeper waters of the world's oceans throughout the year, where they feed primarily on squid and other deep-sea creatures (NMFS, 2017f). Migrations are not as distinct as other species and are thought to primarily follow food resources (NMFS, 2017f). Sperm whales are present in the northern Gulf of Mexico in all seasons, but are more common during the summer months (NMFS, 2017f). The sperm whale is the only federally listed whale that is known to commonly occur in the Gulf of Mexico (NMFS, 2017f).

The baleen whales, including the fin, sei, North Atlantic right, blue, and Bryde's whales are identified by NMFS as occurring within the southeast region (NMFS, 2012; 2018). With the exception of the Bryde's whale, these whales are not commonly found in the Gulf of Mexico, but could occur within the area during migrations or other movements (NMFS, 2015b; 2015c). Feeding is not expected in or around the Gulf of Mexico as these species usually feed on zooplankton and small fish aggregations during summer months in the northern Atlantic Ocean or off the U.S. West Coast (NMFS, 2015b; 2015c; NMFS n.d.-e). The Bryde's whale has a wide distribution and occur in tropical, subtropical, and warm temperate waters around the world. Some populations of Bryde's whales migrate with the seasons, moving away from the equator during the summer and towards the equator during the winter (NMFS, n.d.-f). The Gulf of Mexico Bryde's whale has been consistently located in the northeastern Gulf of Mexico, along the continental shelf break between 100 and 400 meters depth. They are the only resident baleen whale in the Gulf of Mexico (NMFS, n.d.-g). Bryde's whales in the Gulf of Mexico are distinct from other Bryde's whales worldwide in that they are vulnerable to many stressors and threats, including vessel strikes, ocean noise, and whaling outside the United States. The Gulf of Mexico subspecies is also threatened by oil and gas activities, as well as oil spills and cleanup. Scientists believe that there are fewer than 100 Gulf of Mexico Bryde's whales (NMFS, n.d.-g).

The increased traffic within the Gulf of Mexico due to LNG vessel transit to and from the liquefaction site could pose an increased risk to whales from vessel strikes, and impacts would be similar to those discussed for sea turtles in section 4.7.3.7. According to NMFS, the sperm whale is the most abundant whale occurring in the Gulf of Mexico, and is the only whale with a measurable injury rate due to vessel strikes in the area. Based on data compiled from the International Whaling Commission Ship Strike Database (International Whaling Commission, 2014), and supplemented with data from Carillo and Ritter (2010), there is an estimated average of two sperm whale strikes per year throughout the entire Gulf

of Mexico, with total annual ship transits of approximately 964,316 trips. As noted in section 4.7.3.7, LNG transit vessels could make up to 180 round trips to the liquefaction facility per year (totaling 360 one-way trips per year). This would result in an average of 0.000747 sperm whale strikes per year, or one sperm whale every 1,321 years (NMFS, 2018). Given that the life of the proposed facility is estimated at 50 years, the potential for the proposed action to result in a sperm whale strike in the Gulf of Mexico is highly unlikely, and would be even less likely for the other whale species in the area and is therefore discountable (NMFS, 2018). Further, PALNG proposes to provide LNG vessel captains with a NMFS-issued guidance document that outlines collision avoidance measures to be implemented to minimize the likelihood of a vessel strike.

In an August 29, 2018 letter, the NMFS determined that because the potential effects to federally listed and proposed whales would be discountable, and because PALNG would adhere to the NMFS-issued mitigation guidelines for vessel strikes, the Liquefaction Project *may affect, but is not likely to adversely affect* federally listed and proposed whales. We agree. Thus, section 7 consultation for these species is complete.

4.7.4 State-Listed and Special Status Species

PALNG and PAPL consulted with Texas and Louisiana state resource agencies to identify state-listed and special status species that could potentially occur within the Projects area. State-listed or rare species that are also federally listed or proposed are discussed in section 4.7.1 and are not discussed again in this section.

Appendix P describes the range and habitat where state-listed and special status species are typically found. Most impacts on state-listed and special status species are a function of the type of habitat disturbed (habitat association), the length of time necessary for important habitat characteristics to be restored, species mobility, species dependence on specific habitat features, or species disturbance tolerance. Of the species listed in appendix P, eight are not expected to be affected by the Projects because suitable habitat does not exist in the Projects area, there would not be a direct impact on the species' forage species, and/or there are no roosting/breeding sites in the Projects area. These species are marked (*) and are not discussed further in this section.

4.7.4.1 Texas

As shown in appendix P, PALNG and PAPL's consultations with TPWD regarding review of the Liquefaction and Texas Connector Projects for potential impacts on species and resources of concern identified 18 state-listed threatened and endangered species (6 birds, 1 mammals, 4 reptiles, 6 mussels, 1 fish), and 16 state rare species (5 birds, 2 mammals, 1 reptile, 1 invertebrate, 4 plants, 2 fish, and 1 amphibian) that may occur within the projects area in Texas (TPWD, 2016; 2017d). PALNG and PAPL did not observe any of these state-listed threatened, endangered, or rare species during surveys. State-listed or rare species that are also federally listed are discussed in section 4.7.1 and are not discussed in this section (with the exception of the federally proposed eastern black rail). The Texas portion of the Louisiana Connector Project would be limited to workspace associated with the HDD, beginning within the proposed liquefaction site (which would largely be cleared of vegetation, converted to mixed industrial use, prior to construction of the Louisiana Connector Project) and exiting in Sabine Lake. Therefore, no impacts on the state-listed species identified by the TPWD (TPWD, 2017e) are anticipated, and the Texas portion of the Louisiana Connector Project is not discussed further in this section.

To mitigate for potential impacts on state-listed species, PALNG and PAPL would educate workers on all sensitive habitats and wildlife species prior to construction. PALNG and/or PAPL (specified below)

have committed to the following measures to minimize impacts on Texas state-listed threatened and endangered species as a result of the Liquefaction and/or Texas Connector Projects:

- Birds (see section 4.6.1.3 for additional discussion of migratory birds)
    - Whenever possible, PALNG and PAPL would construct within state-listed bird habitat outside the primary nesting season (February 1 to July 15).
    - For any activities occurring within the nesting season, PALNG and PAPL would employ a biological monitor to survey suitable habitat prior to construction.
        - Any state-listed birds identified foraging within the project area would not be disturbed and would be allowed to leave the project area on their own volition before project activities would be allowed to commence.
        - In accordance with TPWD recommendations, if any state-listed species nests are identified during pre-construction surveys, a buffer (100 meters for raptors, 25 feet for all other birds) would be applied to the nest, and project activities would not be allowed within the buffer until after the young have fledged.
- Rafinesque's big eared bat –
    - PALNG and PAPL would attempt to perform any tree clearing outside of the young-rearing period (May – October). If clearing outside of this period is not possible, PAPL would employ a qualified biologist to survey suitable habitat within the Texas Connector Project area and flag any tree cavities. If suitable habitat is identified, PAPL would conduct species-specific surveys in accordance with TPWD recommendations. If the Rafinesque's big-eared bat is determined to be present within the project area, PAPL would maintain a 100-foot buffer around the suitable habitat and would not conduct activities within this buffer until after the pups have left the roost.
- Alligator snapping turtle –
    - If alligator snapping turtles are observed by PALNG or PAPL, they would not be disturbed and would be allowed to leave the project area on their own.
- Northern scarlet snake and timber rattlesnake –
    - PAPL would employ a biological monitor to survey suitable habitat prior to construction. If northern scarlet snakes or timber rattlesnakes are found, they would be allowed to leave the site safely on their own, or would be transported by a permitted individual approximately 100 to 200 yards away, and not to exceed 1 mile from the initial encounter location.
- Mussels –
    - TPWD recommended that habitat for state-listed mussel species be protected and recommended that potentially impacted waterways within the range of state-listed mussels be assessed for rare mussel habitat; and if suitable habitat is identified, mussel surveys should be conducted if construction would be conducted in waters associated with mussels (TPWD, 2016; 2017a). PAPL conducted a desktop habitat

assessment for mussels in the Texas Connector Project area and has committed to crossing suitable mussel habitat via HDD or push-pull methods. In an e-mail dated November 13, 2017, TPWD concurred with PAPL's desktop habitat assessment and agreed that utilization of the HDD or push-pull method in conjunction with an HDD contingency plan and SWPPP would adequately minimize potential impacts on state-listed mussel species (TPWD, 2017f). As is discussed in section 4.3.2.2, in accordance with the Commission's Procedures, PAPL is required to provide a contingency plan for each crossing in the event the HDD is unsuccessful and how the abandoned drill hotel would be sealed, if necessary. PAPL prepared a preliminary HDD Contingency Plan that describes measures PAPL would implement in the event of the HDD is unsuccessful. PAPL stated that it would finalize the HDD Contingency Plan with the selected contractor and the final plan would be incorporated into construction compliance documents. In addition, and also further discussed in section 4.3.2.2, to minimize surface water impacts, PAPL would implement the construction and mitigation measures described in PAPL's *Environmental Plan*, which includes the Commission's Procedures.

To mitigate for potential impacts on state rare species, PALNG and PAPL would educate workers on all sensitive habitats and wildlife species prior to construction. PALNG and/or PAPL (project specified below) have committed to the following measures to minimize impacts on Texas state rare species:

- Birds –
    - PALNG and PAPL would implement the same measures noted above for state-listed birds.
- Southeastern myotis bat –
    - Although suitable roosting habitat is not anticipated in the Liquefaction and Texas Connector Projects area, PALNG and PAPL would attempt to clear trees outside of the young-rearing period for this species. If that were not possible, PAPL would implement the same measures as noted above for the Rafinesque's big-eared bat.
- Plains spotted skunk –
    - If any plains spotted skunks are observed during the Liquefaction or Texas Connector Projects, they would be undisturbed and allowed to leave the Project area safely.
- Texas diamondback terrapin –
    - If the Texas diamondback terrapin is observed, PALNG and PAPL would protect them with buffers until they leave the area or could be safely relocated by a permitted individual.
- Bay skipper –
    - Any bay skippers observed would be allowed to leave the Texas Connector Project area safely on their own.

- Southern crawfish frog –
    - Any southern crawfish frogs observed by PAPL during construction would be allowed to leave the project area safely on their own.
- American eel –
    - PALNG and PAPL would implement a variety of measures to minimize impacts on aquatic habitats and the species that use them (which would include eels), such as: utilizing the HDD crossing method at numerous waterbodies, installation of erosion and sediment controls, and implementing restoration measures identified in PALNG and PAPL's *Environmental Plans*. These measures are further discussed in sections 4.6.2.2 and 4.6.3.

4.7.4.2 Louisiana

According to the LDWF, no impacts on rare, threatened, or endangered species or critical habitats within Louisiana's boundaries are anticipated for the Louisiana portion of the Texas Connector Project (LDWF, 2016). PAPL's consultation with the LDWF regarding review of the Louisiana portion of the Louisiana Connector Project for potential impacts on species and resources of concern identified nine rare species (one bird, one mussel, one crustacean, and six plants) that may occur within the project area (LDWF, 2017b). None of the rare species identified by the LDWF were observed during field surveys. As noted in appendix P, suitable habitat for the sandbank pocketbook occurs within Whiskey Chitto Creek; however, impacts on this species would be minimized by use of the HDD crossing method at this waterbody.

The LDWF recommended that PAPL use BMPs to minimize impacts on the crested caracara and recommended that PAPL protect habitat for the old prairie crawfish by avoiding disturbances such as water pollution, siltation, and the construction of dams. While PAPL has not developed any project-specific BMPs for this purpose, it would implement its *Environmental Plan* to minimize impacts on habitats crossed by the Louisiana Connector Project. Although the LDWF did not provide specific recommendations for the six rare plant species identified as potentially occurring in the Louisiana Connector Project area, PAPL has stated that it would further consult with LDWF prior to construction to determine if additional surveys for rare plant species would be necessary.

4.7.4.3 General Impacts and Mitigation

Impacts on state-sensitive species would typically be similar to those described for general vegetation communities and wildlife populations, as discussed in sections 4.5 and 4.6, respectively; migratory birds, as discussed in section 4.5.3; and aquatic species, as discussed in section 4.6.1.3. Terrestrial wildlife, such as mammals, reptiles, amphibians, and invertebrates could be subject to mortality or displacement during clearing and could lose habitat within the Projects area. Birds could be affected by loss of nesting or foraging habitat during clearing for the Projects, and they could be disturbed by human activity. Sensitive plants could also be lost during clearing and grading, and adjacent suitable habitat degraded due to changes in hydrology, soil compaction, or light, among other factors. Fish and freshwater mussel species could be affected by increased suspended sediment and turbidity levels and decreased dissolved oxygen levels within and downstream of the crossing location. The majority of fish present within the waterbody at the time of construction activities would likely be displaced to similar adjacent habitats up or down stream; however, stress, injury, or death of individual fish may occur. Construction activities could also introduce or encourage the spread of invasive and noxious plant species, further degrading suitable habitat for plants and wildlife species.

The generalized impacts described above would largely be avoided or adequately minimized through implementation of the PALNG and PAPL's proposed measures and additional measures that we recommend. PALNG and PAPL would implement the measures outlined in its *Environmental Plan*, which includes the Commission's Plan and Procedures, to minimize impacts on waterbodies and aquatic resources during pipeline construction. These mitigation measures include reduced workspace areas near waterbodies, establishing buffers to prevent run-off from entering waterbodies, installing erosion control devices, and completion of instream construction activities within 24 or 48 hours, depending on crossing length. Once construction is complete, streambeds and banks would be restored to their preconstruction conditions and contours to the maximum extent practicable, which would aid in preventing erosion and minimize long-term impacts on aquatic resources. In addition, installing the proposed pipelines using the HDD method would avoid or minimize impacts on fisheries, fish habitat, and other aquatic resources within and adjacent to waterbodies unless an inadvertent release of drilling mud were to occur. An inadvertent release of drilling mud into a stream would affect water quality and could impede fish movement, potentially resulting in stress, injury, and/or direct mortality of fish present near the release. If an inadvertent release occurs, PALNG and PAPL would implement the corrective action and cleanup measures outlined in its *HDD Contingency Plan* to minimize potential impacts on aquatic resources (see appendix F), including the installation of berms, silt fence, and/or hay bales to prevent silt-laden water from flowing into waterbodies, or in the event of an in-water release, the use of temporary dams to isolate the drilling fluid and vacuum trucks to remove the released drilling mud.

Implementation of these plans would decrease the potential for erosion, restore pre-construction contours, increase the potential for successful revegetation of habitats, and prevent or control the spread of weeds. We determined that, given the nature of the species present and the measures that would be implemented as part of the Projects, impacts on state-sensitive species would be avoided or appropriately minimized. Although, due to the time associated with the re-establishment of most vegetation types in the Project area, impacts would also be long term to permanent.

4.7.5 Marine Mammal Protection Act Species

Marine mammals are federally protected under the MMPA. The MMPA established, with limited exceptions, a moratorium on the "taking" of marine mammals in waters or on lands under U.S. jurisdiction. The act further regulates, with certain exceptions, the "take" of marine mammals on the high seas by persons, vessels, or other conveyances subject to the jurisdiction of the United States.

PALNG, as the non-federal representatives to the FERC, conducted informal consultation with NMFS Office of Protected Species regarding marine mammals occurring in Liquefaction Project area that are protected under the MMPA of 1972. Given the lack of impacts on marine habitat from the Texas Connector and Louisiana Connector Projects, the following discussion is specific to the Liquefaction Project.

The primary threat to marine mammals resulting from LNG vessels would be an increased risk of vessel strikes during operation. LNG vessels operating within the SNWW and in the Gulf of Mexico are generally slower and generate more noise than typical large vessels, and would be more readily avoided by marine mammals. Additionally, LNG ships push a considerable bow wave when underway on the open ocean because of their design and large displacement tonnage. This wave pushes water, flotsam, and other small objects (e.g., dolphins) away from the vessel (NMFS, 2006a). LNG vessels would use established and well-traveled shipping lanes. As described in section 4.7.3, PALNG proposes to provide LNG vessel captains with a NMFS-issued guidance document that outlines collision avoidance measures to be implemented to minimize the likelihood of a vessel strikes. Based on PALNG's proposed use of existing, highly traveled shipping lanes and proposed mitigation measure, we determined that construction and operation of the Liquefaction Project would not result in significant adverse impacts on marine mammals.

4.8 LAND USE, RECREATION, AND VISUAL RESOURCES

4.8.1 Existing Land Use Impacts and Mitigation

4.8.1.1 Liquefaction Project

The Liquefaction Project would affect four general land use types, including open land, developed land, forest/woodlands, wetlands, and open water. The definitions of each land use type are as follows:

- Open Land: non-agricultural fields, and open land in the early stages of succession.
- Developed: roads, railroads, and utility corridors (pipelines and powerlines). Areas of low and highly developed industrial/commercial uses.
- Forest/Woodlands: mixed hardwood and evergreen forests.
- Wetlands: PEM, EEM, and PSS wetland types.
- Open Water: Port Arthur Canal.

Liquefaction Facilities

Construction and operation impacts on land use resulting from the Liquefaction Project would require the following: 1) permanent fill of wetlands to create industrial land; 2) conversion of open and developed land to industrial land and roads/transportation use; 3) conversion of open and developed land to open water; and 4) dredging of materials within existing open water (i.e., Port Arthur Canal). Other impacts on land uses would include grading, clearing, and other site preparation construction activities; temporary disturbance caused by increased truck traffic from hauling heavy equipment and machinery; use of temporary construction areas, including laydown, office, and parking areas; and placement of dredge material at four disposal areas (J.D. Murphree WMA and SNND Dredge Disposal Areas 8, 9A, and 9B). Construction of the liquefaction facilities would temporarily affect 948.0 acres, including 86.9 acres of open land, 24.3 acres of developed, 758.3 acres of wetland, and 78.5 acres of open water (see table 4.8.1-1). Impacts on wetlands at the liquefaction site are discussed further in section 4.4.

TABLE 4.8.1-1

Land Use Types Affected by Construction and Operation of the Liquefaction Project (in acres)

	Open Land		Developed		Forest/Woodland		Wetlands [c]		Open Water		Total	
Facility/Component	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.
Liquefaction Facilities [a]	86.9	82.3	24.3	24.3	--	--	758.3	725.7	78.5	65.8	948.0	898.1
Dredge Disposal/Beneficial Reuse Areas												
J.D. Murphree WMA	--	--	--	--	--	--	97.4	97.4	1,812.9	1,812.9	1,910.3	1,910.3
WMA Dredge Pipeline			--	--	--	--	--	--	16.6	0.0	16.6	0.0
Sabine Neches Area 8	146.9	146.9	36.1	36.1	93.6	93.6	2,710.4	2,710.4	614.4	614.4	3,601.3	3,601.3
Sabine Neches Area 9A	--	--	--	--	--	--	175.6	175.6	<0.1	<0.1	175.6	175.6
Sabine Neches Area 9B	--	--	--	--	10.3	10.3	354.5	354.5	--	--	364.9	364.9
Dredge Pipelines	0.1	0.0	0.1	0.0	--	--	0.5	0.0	1.8	0.0	2.5	0.0
Nonjurisdictional Facilities [b]	2.6	1.1	4.7	1.7	--	--	112.5	42.4	1.2	0.0	121.0	45.2
Liquefaction Project Total	**236.5**	**230.3**	**65.2**	**62.1**	**103.9**	**103.9**	**4,209.2**	**4,106.0**	**2,525.4**	**2,493.1**	**7,140.2**	**6,995.4**

[a] Liquefaction facilities include those described in section 2.1.1. Included with these totals is the South Compressor Station associated with the Texas Connector Project, which would permanently affect 25.0 acres of wetland.

[b] Nonjurisdictional facilities include those described in section 2.1.4.1.

[c] See section 4.4.2 and table 4.4.2-1 for detailed wetland impacts based on field surveys and PALNG's and PAPL's applications with the USACE.

Note: Addends may not sum due to rounding.

To facilitate construction and operations, PALNG would construct an access road and haul road/berm within the mixed-use areas of the project. The access road would permanently affect 1.3 acres and the haul road/berm would permanently affect 80.2 acres. The permanent access road would result in the conversion of existing open land to developed land for roads/transportation use. The haul road would be constructed along existing utility corridors, and the planned SH 87 relocation and be similar to land uses in that area.

PALNG would also temporarily use an existing access road (AR-S-2) on land owned by Jefferson County and the TPWD (Jefferson Central Appraisal District, 2017). PAPL proposes to widen/regrade the road resulting in 0.8 acre of impact (see sections 4.8.2 and 4.8.6). The proposed access road and haul road/berm are further discussed in section 2.4.1.1.

Following construction of the liquefaction facilities, disturbed areas not converted to industrial, developed land or stabilized with rock or gravel would be restored to preconstruction conditions in accordance with PALNG's *Environmental Plan*,[29] which includes the Commission's Plan and Procedures, or remain open during operations. As described in more detail in section 2.1.1, permanent liquefaction facilities include the marine facilities (two loading berths and a turning basin, MOF, and Pioneer Dock), liquefaction trains, LNG storage tanks, vaporization system, vapor handling system, hazard detection and response systems, and other facility components (electrical systems, water system, nitrogen vaporizers, fuel gas system, gas metering system, etc.). Operations would permanently affect 898.1 acres (see table 4.8.1-1 and section 4.8.2.1). Of the total area affected, 725.7 acres of wetlands and 65.8 acres of open water would be permanently filled to build the liquefaction facilities. Additionally, dredging activities associated with construction of the marine facilities would result in periodic impacts on open water. Public use of open water would be prohibited during construction of the marine facilities, and during routine maintenance dredging. Wetland and open water impacts are discussed in sections 4.4 and 4.3, respectively. Construction of the liquefaction facilities would result in a conversion of the existing land use to industrial use. However, due to the open and industrial use of adjacent land and the previously disturbed nature of the surrounding area, impacts on land use from the Liquefaction Project would be minor.

Dredge Disposal Areas

J.D. Murphree WMA

Construction of the marine facilities would require dredging 7.8 million yd^3 of material from the Port Arthur Canal. About 2.4 million yd^3 of this dredged material would be disposed of in a 1,900-acre area in the J.D. Murphree WMA (Salt Bayou Unit 16) to restore about 1,264 acres of tidally influenced coastal marsh habitat. See section 4.4 for a discussion on the proposed wetland restoration. The planned disposal site on the WMA is currently wetland, open water, and open land.

PALNG would use a temporary, above ground 30-inch-diameter pipeline to transport the dredged material from the liquefaction site to the WMA disposal areas. The dredge pipeline would be routed along existing field roads, within the canals south of Lost Lake, and would cross wetlands and open land. The temporary pipeline would be in place for up to 6 months.

Table 4.8.1-1 lists the impacts on land uses associated with the dredge material disposal areas and dredge pipelines. Overall, impacts on land uses at the WMA resulting from the place of dredge material would be permanent and beneficial.

29 The *Environmental Plan* for the Liquefaction Project was filed on November 29, 2016 and can be found on the FERC eLibrary website using Accession Number 20161129-5254.

SNND Areas 8, 9A, and 9B

The remaining 4.9 million yd^3 of dredged material from construction of the marine facilities would be disposed of at the existing Dredge Disposal Areas 8, 9A, and 9B, which are owned by the SNND. The disposal sites encompass 4,141.8 acres of land, and have been previously authorized by the USACE and used as disposal areas for the maintenance dredging of the Port Arthur Canal. The disposal of dredged material to accommodate the marine facilities would affect up to 146.9 acres of open land, 36.1 acres of developed, 103.9 acres of forest/woodland, 3,240.5 acres of wetland, and 614.4 acres of open water (see table 4.8.1-1) at the disposal sites.

PALNG would transport the dredged material from the liquefaction site to the SNND disposal areas using a temporary, aboveground 30-inch-diameter pipeline. The dredge pipeline would be placed within the Texas Connector Project's Northern Pipeline right-of-way and would cross wetlands, open land, and the ICWW to transport material to Dredge Disposal Areas 9A and 9B. A second dredge pipeline would extend from the LNG Berth area and cross the Port Arthur Canal/SNWW to transport material to Dredge Disposal Area 8. Section 2.1.1 provides further discussion on methods PALNG would use to cross the ICWW and the Port Arthur Canal/SNWW.

Table 4.8.1-1 lists the impacts on land uses associated with the dredge material disposal areas and dredge pipelines. Overall, impacts on land uses at the SNND disposal areas resulting from the place of dredge material would be permanent and consistent with their current use.

4.8.1.2 Texas Connector Project

The Texas Connector Project would affect eight general land use types, including agricultural land, open land, forest/woodland, residential land, industrial/commercial land, roads/transportation, wetlands, and open water. The definitions of each land use type are as follows[30]:

- Agricultural: active cultivated cropland and specialty crop production, including rice, and fruit and nut tree orchards.
- Open Land: non-forested rangeland, pasture, non-agricultural fields, prairie, and open land in the early stages of succession.
- Forest/Woodland: mixed hardwood and evergreen forests.
- Residential: rural and urban developed residential yards, subdivisions, and planned new developments, including single and multiple family dwellings.
- Industrial/Commercial: electric power or gas utility stations, manufacturing or industrial plants, landfills, mines, quarries, and commercial or retail facilities.
- Roads/Transportation: roads, railroads, and utility corridors (pipelines and powerlines) that are crossed by the Texas Connector Project.
- Wetlands: PEM, EEM, PSS, ESS, PUB, and PFO wetland types.
- Open Water: lakes, ponds, streams, canals, and major waterbodies greater than 100 feet wide.

30 The land use categories identified in this EIS reflect those as characterized and grouped/combined by PAPL in its application to FERC for the proposed Texas Connector Project, which in some instances differ from the land use categories or groups used for the Liquefaction Project and Louisiana Connector Project.

Construction of the Texas Connector Project would temporarily affect 664.8 acres of land, including 106.9 acres of agricultural land, 146.1 acres of open land, 2.5 acres of forest/woodland, 10.3 acres of residential, 96.1 acres of industrial/commercial, 40.3 acres of roads/transportation, 238.4 acres of wetland, and 24.2 acres of open water (see table 4.8.1-2). Operation of the project would permanently affect 186.1 acres of land.

Pipeline Facilities and Laterals

During construction of the Texas Connector Project, the Northern and Southern Pipelines would require, in general, a 100- to 125-foot-wide temporary right-of-way (including ATWS areas) as described in section 2.2.2.1. Construction of the pipelines would temporarily affect 408.2 acres of land (including ATWS areas) (see table 4.8.1-2). Following construction, a 50-foot-wide permanent right-of-way would be maintained for operation of the pipeline facilities, except for in wetlands, as discussed further below and in section 4.4. Operation of the Northern and Southern Pipelines would permanently affect 110.6 acres.

About 14.7 miles (43.0 percent) of the pipeline rights-of-way would be collocated with (i.e., overlap or abut) existing utility rights-of-way such as other pipelines. Appendix L lists locations where the construction right-of-way would be collocated with other existing utility rights-of-way.

Construction of the seven proposed laterals (see table 2.1.2-1) would require, in general, a 100- to 125-foot-wide temporary right-of-way (including ATWS areas), as described in section 2.2.2.1. Construction of the laterals would temporarily affect 49.9 acres of land (including ATWS areas) (see table 4.8.1-2). About 3.8 miles (80.9 percent) of the lateral rights-of-way would be collocated with existing utility rights-of-way. Following construction, a 50-foot-wide permanent right-of-way would be maintained for operation of the laterals, except for wetlands, as discussed below and in section 4.4. Operation of the laterals would permanently affect 12.8 acres.

In general, constructing and operating the Texas Connector Project would result in temporary to permanent land use impacts. The effects of pipeline construction on agricultural land, open land, rangeland, residential land, and industrial/commercial land would be minor and temporary to short term as a result of clearing existing vegetation, standing or row crops, and landscaping; ground disturbance from grading, creating the pipeline trench, backfilling the pipeline trench; and increased equipment traffic associated with construction activities. Impacts would include temporary loss of land use, disturbance of the visual landscape, increased noise and dust from construction equipment, and increased local traffic congestion.

PAPL would implement its *Environmental Plan*, which includes the Commission's Plan and Procedures, to minimize land use impacts during construction. PAPL would coordinate with landowners during construction and maintain landowner access to fields, storage areas, field access roads, structures, and other agricultural areas as well as maintain irrigation and drainage systems crossed by the right-of-way. Drain tiles are not thought to be present in the area, but if any are found to be damaged during construction, PAPL would immediately mark the locations of damaged tiles, assess all drainage tile systems within the area of disturbance, and replace or repair all tiles to preconstruction conditions or better. A sufficient depth of cover would be used in areas where drain tiles are planned to avoid interference with the drain tile system. If irrigation lines are damaged during construction, PAPL would complete repairs within one week of identifying the damaged irrigation system.

TABLE 4.8.1-2

Land Use Types Affected by Construction and Operation of the Texas Connector Project (in acres)

	Agricultural		Open Land		Forest/ Woodland		Residential		Industrial/ Commercial		Roads/ Transportation		Wetlands [b]		Open Water		Project Totals	
State, Facility	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.
LOUISIANA																		
Pipeline Facilities																		
South Pipeline																		
Pipeline Right-of-Way	--	--	0.2	0.1	--	--	--	--	1.0	1.0	--	--	1.6	0.7	0.1	--	2.9	1.8
ATWS	--	--	0.3	--	--	--	--	--	3.2	--	--	--	0.9	--	0.8	--	5.2	--
KMPL Lateral																		
Pipeline Right-of-Way	--	--	--	--	--	--	--	--	--	--	--	--	1.3	0.5	--	--	1.3	0.5
ATWS	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	--	--	0.5	--
Aboveground Facilities																		
KMPL Meter Station	--	--	--	--	--	--	--	--	--	--	--	--	3.0	3.0	--	--	3.0	3.0
Access Roads	--	--	0.2	0.2	--	--	--	--	0.6	--	0.8	0.4	1.1	0.3	0.8	0.3	3.4	1.2
Pipe/Contractor Yards	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Louisiana Total	**--**	**--**	**0.7**	**0.3**	**--**	**--**	**--**	**--**	**4.8**	**1.0**	**0.8**	**0.4**	**8.4**	**4.5**	**1.7**	**0.3**	**16.4**	**6.5**
TEXAS																		
Pipeline Facilities																		
Southern Pipeline																		
Pipeline Right-of-Way	--	--	3.8	1.0	0.2	0.1	--	--	<0.1	<0.1	<0.1	<0.1	30.6	12.7	5.8	2.3	40.5	16.1
ATWS	--	--	0.8	--	--	--	--	--	--	--	0.1	--	4.0	--	2.7	--	7.6	--
Northern Pipeline																		
Pipeline Right-of-Way	57.0	23.0	52.8	17.3	0.7	<0.1	3.1	3.1	1.8	1.8	0.7	0.7	120.6	45.6	5.4	1.2	242.1	92.7
ATWS	9.6	--	18.4	--	1.1	--	4.1	--	32.7	--	1.8	--	41.4	--	0.9	--	110.0	--
NGPL Lateral																		
Pipeline Right-of-Way	--	--	--	--	--	--	--	--	--	--	--	--	3.4	1.3	--	--	3.4	1.3
ATWS	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	--	--	0.6	--
HPL Lateral																		
Pipeline Right-of-Way	--	--	0.7	0.5	--	--	--	--	<0.1	<0.1	--	--	--	--	--	--	0.8	0.5
ATWS	--	--	--	--	--	--	--	--	0.2	--	--	--	<0.1	--	--	--	0.3	--
TETCO Lateral																		
Pipeline Right-of-Way	--	--	1.8	0.7	--	--	--	--	--	--	--	--	--	--	--	--	1.8	0.7
ATWS	--	--	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--
FGT Lateral																		
Pipeline Right-of-Way	--	--	16.0	4.4	<0.1	<0.1	--	--	1.9	0.7	--	--	2.6	0.9	0.1	0.1	20.7	6.0
ATWS	--	--	2.3	--	--	--	--	--	0.1	--	--	--	0.4	--	<0.1	--	2.7	--
GTS/CIPCO Lateral																		
Pipeline Right-of-Way	--	--	3.6	1.2	0.1	<0.1	--	--	1.4	0.5	--	--	3.1	1.5	2.3	0.8	10.6	4.2
ATWS	--	--	1.9	--	0.3	--	--	--	1.0	--	--	--	1.7	--	1.6	--	6.6	--

TABLE 4.8.1-2 (cont'd)

Land Use Types Affected by Construction and Operation of the Texas Connector Project (in acres)

	Agricultural		Open Land		Forest/ Woodland		Residential		Industrial/ Commercial		Roads/ Transportation		Wetlands		Open Water		Project Totals	
State, Facility	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.
NGPL Lateral to Existing Meter Station																		
Pipeline Right-of-Way	--	--	<0.1	<0.1	--	--	--	--	0.1	--	--	--	0.5	0.2	--	--	0.6	0.2
ATWS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aboveground Facilities																		
North Compressor Station	39.2	39.2	1.1	1.1	--	--	--	--	--	--	--	--	<0.1	<0.1	<0.1	<0.1	40.4	40.4
South Compressor Station [a]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NGPL Meter Station	--	--	--	--	--	--	--	--	3.0	3.0	--	--	--	--	--	--	3.0	3.0
HPL Meter Station	--	--	3.0	3.0	--	--	--	--	--	--	--	--	--	--	--	--	3.0	3.0
TETCO Meter Station	--	--	2.8	2.8	--	--	--	--	--	--	--	--	--	--	--	--	2.8	2.8
FGT Meter Station	--	--	3.0	3.0	--	--	--	--	--	--	--	--	--	--	--	--	3.0	3.0
GTS/CIPCO Meter Station	--	--	0.0	0.0	--	--	2.8	2.8	--	--	--	--	--	--	--	--	2.8	2.8
GTS/CIPCO Pig Launcher/ Receiver	--	--	0.2	0.2	--	--	--	--	--	--	--	--	--	--	--	--	0.2	0.2
MLV Site	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.1
Access Roads	0.9	--	13.3	0.5	<0.1	0.0	0.4	0.4	24.5	1.0	36.5	0.6	21.0	0.1	3.6	<0.1	100.2	2.6
Pipe/Contractor Yards	--	--	19.8	--	--	--	--	--	24.6	--	0.3	--	<0.1	--	0.1	--	44.8	--
Texas Total	**106.9**	**62.4**	**145.4**	**35.7**	**2.5**	**0.2**	**10.3**	**6.3**	**91.4**	**7.1**	**39.5**	**1.4**	**230.0**	**62.3**	**22.5**	**4.4**	**648.5**	**179.6**
Project Total	**106.9**	**62.4**	**146.1**	**36.0**	**2.5**	**0.2**	**10.3**	**6.3**	**96.1**	**8.1**	**40.3**	**1.7**	**238.4**	**66.8**	**24.2**	**4.7**	**664.8**	**186.1**

[a] Land use types affected by the South Compressor Station are listed in table 4.8.1-1.

[b] See section 4.4.2 and table 4.4.2-1 for detailed wetland impacts based on field surveys and PALNG's and PAPL's applications with the USACE.

Note: Addends may not sum due to rounding.

Based on acreage, the land use type most affected by the Texas Connector Project would be wetlands of various types. Impacts on wetlands are discussed in more detail in section 4.4.2. Impacts on upland forest/woodland represent the fewest impact acreage of the land use categories, but would include the removal of trees within the construction right-of-way and at ATWS, aboveground facility sites, and new or modified access roads. Post-construction maintenance of the permanent right-of-way would prevent the reestablishment of trees.

Following construction, forest/woodland outside of the permanent right-of-way, aboveground facility sites, and new permanent access roads would be restored in accordance with PAPL's project-specific *Environmental Plan*. It is expected that the reestablishment of forest areas that resemble preconstruction conditions would take at least 30 years, depending on the age of trees removed and the species of trees that are regenerated or replanted. The fragmenting effects of the maintained right-of-way would be permanent. Compensation for tree loss would be determined during easement negotiations between the applicant and the landowner.

Also following construction, all temporary workspaces would be restored to preconstruction conditions according to the procedures outlined in PAPL's *Environmental Plan*. Most land uses retained as permanent right-of-way would generally be allowed to revert to their former use, and landowners would have use of the permanent right-of-way, except for forest/woodland within the permanent right-of-way, as discussed below.

The entire permanent right-of-way in upland areas would be maintained in an herbaceous/scrub-shrub vegetated state. To facilitate pipeline inspection, operation, maintenance, and emergency response access, a 50-foot-wide operational right-of-way would be maintained along the pipelines and laterals, which would be maintained free of trees. Also, certain activities such as the construction of permanent structures, including houses, house additions, trailers, tool sheds, garages, poles, patios, pools, septic tanks, or other objects not easily removable, or the planting of trees, would be prohibited within the permanent right-of-way. Maintenance activities would be conducted in accordance with PAPL's *Environmental Plan*. Routine vegetation mowing or clearing over the full width of the permanent right-of-way in uplands would not be done more frequently than every 3 years. However, in wetlands and in accordance with the Commission's Procedures, a corridor not exceeding 10 feet in width centered on the pipeline may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state.

Impacts on most land uses, except forest/woodland, would be minor and temporary, occurring only during the construction period and in designated work areas. Impacts resulting from tree removal in temporary construction workspaces would be long term due to the time it takes for trees to become reestablished, while impacts along the operational right-of-way would be permanent due to the loss and conversion of forested lands to a maintained herbaceous state. It is expected that the reestablishment of forest areas that resemble preconstruction conditions would take at least 30 years, depending on the age of trees removed and the species of trees that are regenerated or replanted.

Aboveground Facilities

Construction and operation of aboveground facilities for the Texas Connector Project would affect 55.2 acres of land. The North and South Compressor Stations would affect 64.2 acres of land for construction and operation. The South Compressor Station would be constructed and operated within the Liquefaction Project boundaries, affecting 25.0 acres. Table 4.8.1-2 lists the land use impacts associated with PAPL's aboveground facilities for the Texas Connector Project. As a result, construction and operation of new aboveground facilities would result in minor to moderate and temporary to permanent impacts on land use as a result of site clearing and facility installation activities at each site. Aboveground facilities are further described in section 2.2.2.2.

Access Roads

A total of 22.7 miles of access roads would be required for construction of the pipeline facilities. Most roads used to access the project would be existing federal or state highways, or locally or privately owned roads. PAPL proposes to use 7 permanent access roads and 40 temporary access roads. Of the 40 temporary access roads, 4 would be newly constructed and 36 would require expansion or regrading. The new and expanded temporary roads would impact 103.6 acres of land. Construction of access roads would primarily affect roads/transportation (99.5 percent), followed by less than 1 percent of combined forest/woodland, open land, wetland, and open water. Of the seven permanent access roads, four would be newly constructed, two are existing and would require expansion/regrading, and one is partially existing and would require expansion/regrading. Generally, access roads would be up to 40 feet wide. Permanent access roads would impact 3.8 acres of land. Appendix E lists the proposed temporary and permanent access roads and their required improvements. Access roads are also discussed in section 2.2.2.3.

Following construction, access roads not permanently maintained for operations and aboveground facility access would be restored in accordance with PAPL's project-specific *Environmental Plan* and any agency and landowner requirements. Permanent impacts on land use would result from converting the existing land use to industrial/commercial land at each site.

Access roads would result in short-term to permanent impacts on land uses, depending on if they are needed for temporary or permanent use, but these impacts would be minor given the relatively small number of new (four) and/or permanent access roads (seven) required to support construction and operation of the project.

Contractor Yards

To support construction activities, PAPL would use a total of three contractor yards on a temporary basis. Contractor yards would temporarily impact 44.8 acres of open land, industrial/commercial, roads/ transportation, wetland, and open water. Use of these yards would result in temporary (limited to the time of use for construction activities) and minor impacts as they would be restored to preconstruction conditions. Contractor yards are further described in section 2.2.2.4. Table 4.8.1-2 lists the land use impacts associated with contractor yards.

4.8.1.3 Louisiana Connector Project

The Louisiana Connector Project would affect eight general land use types, including agricultural land, open land, forest/woodland, silviculture, rangeland, residential land, industrial/commercial land, and open water. Table 4.8.1-3 summarizes the acreage of each land use type that would be affected by construction and operation of the Louisiana Connector Project. The definitions of each land use type are as follows[31]:

- Agricultural: cultivated or rotated cropland, orchards, vineyards, or hay fields. The typical crops found in the project area include rice and crawfish which are predominant along the route;

- Open Land: non-forested lands and PEM, EEM, and PSS wetlands used for open space or pasture;

31 The land use categories identified in this EIS reflect those as characterized and grouped/combined by PAPL in its application to FERC for the proposed Louisiana Connector Project, which in some instances differ from the land use categories or groups used for the Liquefaction Project and Texas Connector Project.

- Forest/woodland: wooded lands not being used for specific commercial purposes, consisting of deciduous and coniferous types, including but not limited to forested wetland (PFO) areas and state forest land;

- Silviculture: wooded lands being managed for forest products (e.g., pine plantations, sugar maple stands, or tree nurseries);

- Rangeland: non-forested lands primarily used for grazing;

- Residential: residential yards, residential subdivisions, and planned new residential developments;

- Industrial/Commercial: electric power or gas utility stations, manufacturing or industrial plants, mines, quarries, commercial or retail facilities and roads;

- Open Water: water crossings greater than 100 feet, including Sabine Lake.

Construction of the Louisiana Connector Project would temporarily affect 2,807.0 acres of land, including 413.6 acres of agricultural land, 809.7 acres of open land, 374.5 acres of forest/woodland, 343.4 acres of silviculture, 89.0 acres of rangeland, 23.3 acres of residential, 86.2 acres of industrial/commercial, and 667.3 acres of open water (see table 4.8.1-3). Operation of the project would permanently affect 771.0 acres.

Pipeline Facilities and Laterals

During construction, the pipelines would require, in general, a 125-foot-wide temporary right-of-way, and a 300-foot right-of-way for in-water construction in Sabine Lake, as described in section 2.2.3.1. Construction of the pipelines would temporarily affect 2,241.0 acres of land (including ATWS areas). Following construction, a 50-foot-wide permanent right-of-way would be maintained for operation of the pipeline facilities, except for wetlands as discussed in sections 4.8.1.1 and 4.4. Operation of the pipelines would permanently affect 694.0 acres.

About 667.3 acres of open water would be included in the construction right-of-way, the majority of which is associated with Sabine Lake. Construction within the open water portion of Sabine Lake would be conducted using a variety of construction methods. The HDD method would be used to minimize shoreline impacts and to cross foreign pipelines beneath the lake bed. Areas outside the HDD areas would be excavated and trenched along the right-of-way to lay the pipe. Spoil from the pipeline trench would be temporarily side-cast within the construction right-of-way. Impacts on open water (Sabine Lake) would be short term, although, as described in sections 4.3.2 and 4.6.2, lake construction would result in sediment turbidity and impacts on aquatic species. Prior to and during construction, PAPL would minimize impacts on commercial and recreational vessels on Sabine Lake by publishing notifications and construction corridor maps in local newspapers; posting signs at boat access facilities; affixing warning signs to construction vessels; posting warning signs on temporary poles along the construction right-of-way; and illuminating the construction workspace with safety lighting. During construction, commercial and recreational vessels would temporarily be excluded from the immediate construction area. Following construction, the pipeline trench would be backfilled and the lake bed would be allowed to return to its original contours. Operation of the pipeline would not affect Sabine Lake as there would be no need for operation right-of-way clearing within Sabine Lake. Short-term, minor adverse impacts on vessel traffic and recreational fishing would occur, as discussed in sections 4.9.6.2 and 4.8.6, respectively.

About 95.4 miles (72.9 percent) of the right-of-way would be collocated with (i.e., overlap or abut) existing utility rights-of-way such as pipelines and trails. Appendix L lists locations where the construction right-of-way would be collocated with other existing utility rights-of-way.

Construction of the 24 laterals and tie-ins (see table 2.1.3-1) would require, in general, a 100- to 125-foot-wide temporary right-of-way (including ATWS areas) as described in section 2.2.3.1. Construction of the laterals would temporarily affect 3.1 acres of land (including ATWS areas) (see table 4.8.1-3). Following construction, a 50-foot-wide permanent right-of-way would be maintained for operation of the laterals, except for wetlands as discussed in sections 4.8.1.1 and 4.4. Operation of the laterals would permanently affect 1.3 acres.

Based on acreage, the land use type most affected by the Louisiana Connector Project would be open land, followed by agricultural land. Pipeline construction on open land, agricultural land, silviculture and forest land, rangeland (similar to open land), residential land, and industrial/ commercial land would result in the same temporary to permanent impacts on land uses described in section 4.8.1.2 for the Texas Connector Project.

Silvicultural land crossed by the Louisiana Connector Project includes pine plantations (primarily loblolly pine). Forest land crossed includes deciduous and coniferous trees. About 222.7 acres of silvicultural land (14.0 percent) and 358.2 acres (22.0 percent) of forest land would be impacted during construction of the pipeline, laterals, and tie-ins. Impacts would include the removal of trees within the construction right-of-way and at ATWS, aboveground facility sites, and new or modified access roads. Post-construction maintenance of the permanent right-of-way would prevent the reestablishment of trees.

Following construction, land uses outside of the permanent right-of-way, aboveground facility sites, and new permanent access roads would be restored in accordance with PAPL's *Environmental Plan* and landowner agreements. Compensation for tree loss would be determined during easement negotiations between the applicant and the landowner.

Aboveground Facilities

Construction of aboveground facilities for the Louisiana Connector Project would affect 78.2 acres of land. Of this total, 67.5 acres of land would be permanently retained for operation. PAPL proposes to construct one new compressor station at MP 96.3 in Allen Parish, Louisiana. Land use at the compressor station is privately owned pine plantation (silviculture), forest/woodland, and open land. The compressor station would temporarily impact 54.0 acres of land, and would permanently convert 45.1 acres of land into industrial/commercial land use during operation. Table 4.8.1-3 lists the land use impacts associated with PAPL's aboveground facilities for the Louisiana Connector Project. As a result, construction and operation of new aboveground facilities would result in minor to moderate and temporary to permanent impacts on land use as a result of site clearing and facility installation activities at each site. Aboveground facilities are further described in section 2.2.3.2.

TABLE 4.8.1-3

Land Use Types Affected by Construction and Operation of the Louisiana Connector Project (in acres)

	Agricultural		Open Land		Forest/ Woodland		Silviculture		Rangeland		Residential		Industrial/ Commercial		Open Water		Project Totals	
State/ Facility/Component	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.
LOUISIANA																		
Pipeline Facilities [a]																		
Pipeline Right-of-Way	235.5	95.6	635.1	263.9	302.7	129.1	202.7	73.9	19.9	8.1	19.6	7.7	4.1	3.5	62.7	19.1	1,482.2	600.8
ATWS	12.1	--	63.0	0.0	55.5	--	20.0	--	1.1	0.0	2.7	0.0	0.5	0.0	4.0	0.0	158.8	--
Laterals	2.7	1.2	0.1	0.1	<0.1	--	<0.1	<0.1	--	--	--	--	--	--	--	--	2.9	1.3
ATWS	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--
Aboveground Facilities																		
Compressor Station [a]	--	--	0.8	0.1	4.4	0.3	48.6	44.7	--	--	--	--	--	--	0.2	--	54.0	45.1
Meter Station Facilities																		
TETCO Meter Station	--	--	0.2	0.1	--	--	3.0	3.0	--	--	--	--	--	--	--	--	3.2	3.1
TGP Meter Station	3.3	3.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.3	3.1
EGAN Meter Station	0.9	0.6	2.5	2.5	--	--	--	--	--	--	--	--	--	--	--	--	3.3	3.1
Pine Prairie Meter Station	3.8	3.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.8	3.3
Texas Gas Meter Station	2.9	2.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.9	2.7
ANR Meter Station	3.5	3.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.5	3.2
CGT Meter Station	3.3	3.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.3	3.1
Holbrook Pig Launcher/Receiver	--	--	0.3	0.3	--	--	0.1	0.1	--	--	--	--	--	--	--	--	0.4	0.4
Mainline Valves																		
MLV #1	--	--	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.1
MLV #2	--	--	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.1
MLV #3	--	--	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.1
MLV #4	--	--	--	--	0.1	0.1	--	--	--	--	--	--	--	--	--	--	0.1	0.1
MLV #5	--	--	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.1
MLV #6	--	--	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.1
MLV #7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.1
MLV #8	--	--	--	--	0.1	0.1	--	--	--	--	--	--	--	--	--	--	0.1	0.1
MLV #9	<0.1	<0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.1	<0.1
Access Roads	10.2	0.4	101.1	5.6	9.8	0.9	8.7	0.6	0.9	--	1.1	0.0	12.7	0.6	0.6	0.1	144.9	8.2
Contractor Yards																		
LY-CAL-02	8.3	--	6.0	--	--	--	--	--	67.2	--	--	--	--	--	--	--	81.5	--
LY-BEA-01	58.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	58.7	--
LY-ALL-02	--	--	0.3	--	--	--	60.3	--	--	--	--	--	--	--	--	--	60.6	--
LY-STL-01	68.1	--	--	--	1.9	--	--	--	--	--	--	--	--	--	--	--	70.0	--
Louisiana Total	**413.6**	**113.3**	**809.6**	**272.7**	**374.5**	**130.4**	**343.4**	**122.4**	**89.0**	**8.1**	**23.3**	**7.7**	**17.2**	**4.1**	**67.5**	**19.2**	**2,138.0**	**677.8**

TABLE 4.8.1-3 (cont'd)

Land Use Types Affected by Construction and Operation of the Louisiana Connector Project (in acres)

State/ Facility/Component	Agricultural		Open Land		Forest/ Woodland		Silviculture		Rangeland		Residential		Industrial/ Commercial		Open Water		Project Totals	
	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.
TEXAS																		
Pipeline Facilities																		
Pipeline Right-of-Way [b]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	575.0	93.2	575.0	93.2
ATWS [b]	--	--	0.1	--	--	--	--	--	--	--	--	--	--	--	24.8	--	24.9	--
Aboveground Facilities																		
Centana Meter Station [b]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PALNG Meter Station [b]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Access Roads [b]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Contractor Yards																		
LY-JEF-01	--	--	--	--	--	--	--	--	--	--	--	--	69.0	--	--	--	69.0	--
Texas Total	**--**	**--**	**0.1**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**69.0**	**--**	**599.8**	**93.2**	**668.9**	**93.2**
Louisiana Connector Project Total	**413.6**	**113.3**	**809.7**	**272.7**	**374.5**	**130.4**	**343.4**	**122.4**	**89.0**	**8.1**	**23.3**	**7.7**	**86.2**	**4.1**	**667.3**	**112.4**	**2,807.0**	**771.0**

[a] The nonjurisdictional powerline to the compressor station is discussed in section 2.1.

[b] Impacts associated with the Centana Meter Station, PALNG Meter Station, associated tie-in facilities, access roads, and pipeline construction workspace that are located within the Liquefaction Project boundary are included in table 4.8.1-1.

Note: Addends may not sum due to rounding.

Access Roads

PAPL proposes to use 154 access routes, including 137 access roads and 17 water access routes. Of these, 19 would require permanent improvements, 62 would be used during construction and then restored, and 56 would require minimal or no improvements. The access roads would temporarily impact 144.9 acres of land. Construction of access roads would primarily affect open land, industrial/commercial land, forest/woodland, and agricultural land. Generally, access roads would be up to 40 feet wide. Permanent access roads would impact 8.2 acres of land. Appendix E lists the proposed temporary and permanent access roads and their required improvements. Access roads are also discussed in section 2.2.3.3.

Following construction, access roads not permanently maintained for operations and aboveground facility access would be restored in accordance with PAPL's project-specific *Environmental Plan* and any agency and landowner requirements. Permanent impacts on land use would result from converting the existing land use to industrial/commercial land at each site.

Access roads would result in short-term to permanent impacts on land uses, depending on if they are needed for temporary or permanent use, but these impacts would be minor given the relatively small number of new and/or permanent access roads (19) required to support construction and operation of the project.

Contractor Yards

To support construction activities, PAPL would use a total of five contractor yards on a temporary basis. Contractor yards would temporarily impact 339.7 acres of privately owned land. Use of these yards would result in temporary (limited to the time of use for construction activities) and minor impacts as they would be restored to preconstruction conditions following construction. Contractor yards are further described in section 2.2.3.4. Table 4.8.1-3 lists the land use impacts associated with contractor yards.

4.8.1.4 Nonjurisdictional Facilities

Nonjurisdictional facilities associated with the Liquefaction Project include the rerouting of the existing SH 87, various utility lines, and pipelines. PALNG would relocate these facilities to the western boundary of the Liquefaction Project. The relocated facilities would require a new 295-foot-wide temporary and permanent right-of-way, which includes 120 feet for SH 87 and 175 feet for the various utility lines and pipelines. The relocation of these facilities would follow an existing 100-foot-wide transmission corridor (see figure 2.1.1-1). The relocated length of SH 87 would be 3.6 miles.

Relocating SH 87, the various utility lines, and pipelines to the western boundary of the Liquefaction Project site would temporarily affect 121.0 acres and permanently affect 45.2 acres (see table 4.8.1-1). Impacts from construction and operation would mainly affect wetlands and transportation/ developed land. Temporary and permanent impacts on wetlands would be similar to those described for the pipeline facilities in section 4.8.1.1. All disturbed areas would be revegetated and restored in accordance with the *Environmental Plan*, except for the paved road surfaces, which would result in the conversion of wetlands to roads/transportation land.

4.8.2 Roadways and Railroads

In addition to the access roads used during construction and operation, the Projects would cross 213 roads and 6 railroads. Of these, 58 roads and 2 railroads would be crossed using the bore method, 74 roads and 2 railroads would be crossed using the HDD method, 79 roads would be crossed using the open-

cut and upland methods, and 2 roads would be crossed using the push-pull method. A description of each crossing method is provided in section 2.4.3.3.

4.8.2.1 Liquefaction Project

PALNG proposes to remove the existing J.D. Murphree WMA access road and construct an alternative access road that would connect to the relocated SH 87 (see figure 2.1.1-1). The new gravel access road would impact about 0.9 acre of PEM wetland. Additionally, recreational users of the J.D. Murphree WMA, Keith Lake, and the SNWW would be temporarily restricted from using the relocated SH 87 during equipment crossings. As such, construction and operation of the Liquefaction Project would result in a temporary to short-term but minor impact on roads and railroads.

4.8.2.2 Texas Connector and Louisiana Connector Projects

Appendix O lists the roads and railroads crossings and crossing methods proposed for the Texas Connector and Louisiana Connector Projects. Project-related impacts on roads and railroads would be temporary to short term and minor. Most paved roads and railroads would be crossed by the HDD or bore method, and unimproved or gravel roads would be crossed using the open-cut method. Potential effects associated with roadway crossings include temporary disruption of traffic flow, disturbance of existing underground utilities (e.g., water and sewer lines), and hindrance of emergency vehicle access. In areas where traffic volumes are high or other circumstances (e.g., congested areas) exist, PAPL would obtain the assistance of law enforcement to ensure traffic flow and the safety of pedestrians and vehicles. PAPL would obtain the necessary permits to access, modify, and/or work within road rights-of-way in coordination with the Texas and Louisiana state and county/parish transportation departments. Construction debris and mud would be kept off paved roads at access points used by construction equipment. As such, construction and operation of the Liquefaction Project would result in a temporary to short-term but minor impact on roads and railroads. See section 4.9 for a discussion on transportation and traffic-related impacts.

4.8.3 Landowner and Easement Requirements

Pipeline operators must obtain easements from landowners to construct and operate natural gas facilities, or acquire the land on which the facilities would be located. Easements can be temporary, granting the operator the use of the land during construction (e.g., for temporary workspace, access roads, pipe/contractor yards), or permanent, granting the operator the right to operate and maintain the facilities after construction. PAPL would need to acquire long-term easements and/or special use permits to construct and operate the new project facilities. These authorizations would convey temporary and permanent rights-of-way to PAPL for construction and operation of the Texas Connector and Louisiana Connector Projects.

An easement agreement between a company and a landowner typically specifies compensation for losses resulting from construction, including losses of non-renewable and other resources, damages to property during construction, and restrictions on existing uses that would not be permitted on the permanent right-of-way after construction. The easement would give the company the right to construct, operate, and maintain the pipeline, and establish a permanent right-of-way. Landowners would be compensated for the use of their land through the easement negotiation process.

If an easement cannot be negotiated with a landowner and the pipeline projects have been certificated by FERC, then PAPL may use the right of eminent domain granted to it under section 7(h) of the NGA and the procedure set forth under the Federal Rules of Civil Procedure (Rule 71A) to obtain the areas needed for construction and operation. PAPL would still be required to compensate the landowner for the right-of-way and for any damages incurred during construction; however, the level of compensation

would be determined by a court according to state or federal law. In either case, the landowner would be compensated for the use of the land. While no federal lands would be affected by the pipeline projects, it should be noted that eminent domain does not apply to lands under federal ownership or lands under tribal ownership.

4.8.4 Land Ownership

4.8.4.1 Liquefaction Project

The land portion of the Liquefaction Project site is owned entirely by an affiliate of PALNG. The Port Arthur Canal, which is where dredging would occur, is managed by the SNND. PALNG has entered into a lease agreement with the SNND for use of Dredge Disposal Areas 9A and 9B, but a lease agreement regarding Dredge Disposal Area 8 is pending. PALNG is negotiating a surface water agreement with the TPWD to use the J.D. Murphree WMA as a site for placement of dredge material.

The Liquefaction Project's facilities would be within the jurisdictions of Jefferson County and the City of Port Arthur, Texas. Jefferson County does not have any land use zoning requirements in this area; however, the City of Port Arthur has zoned a majority of the Liquefaction Project area for Industrial uses, and a small area south of the boat ramp as Agricultural (City of Port Arthur, 2017).

4.8.4.2 Texas Connector and Louisiana Connector Projects

Table 4.8.4-1 summarizes land ownership affected by the Texas Connector and Louisiana Connector Projects. Tribal lands crossed include lands held in trust by the United States for the Coushatta Tribe of Louisiana. Highway 10 is the only known federally managed land crossed by the Louisiana Connector Project.

TABLE 4.8.4-1

Summary of Land Ownership for the Texas Connector and Louisiana Connector Projects

Ownership	Crossing Length (miles) [a]	Percent of Total Projects Length
Local/State	22.6	13.3
Federal [b]	< 0.1	0.0
Private Lands	146.6	86.2
Tribal Lands (MPs 98.1 to 99.1)	0.8	0.5
Projects Total	**170.1**	**100.0**

[a] Includes laterals.
[b] Interstate Highway 10.
Note: Addends may not sum due to rounding.

4.8.4.3 Nonjurisdictional Facilities

The relocation of SH 87 and adjacent pipelines and utilities would occur on land owned by an affiliate of PALNG. Following construction, the land would be transferred to the TDOT and respective owners and operators of the pipelines and utilities, which would be responsible for the maintenance and operation of these facilities.

4.8.5 Existing Residences and Planned Developments

4.8.5.1 Liquefaction Project

The closest residence to the Liquefaction Project is about 1.3 miles away and would not be directly or indirectly affected by the project. In addition, there are two projects that are planned near the Liquefaction Project including the Golden Pass and Sabine Pass LNG Terminals with associated pipelines.

Based on PALNG's consultations with Jefferson County, and Port Arthur zoning maps, there are no planned residential or commercial developments in the project area (City of Port Arthur, 2017). Recently completed commercial developments are discussed further in section 4.13.

4.8.5.2 Texas Connector and Louisiana Connector Projects

Based on PAPL's field and civil surveys, there are 4 residences and 7 structures within 50 feet of proposed construction workspace areas associated with the Texas Connector Project, and 17 residences and 7 structures within 50 feet of construction workspace areas associated with the Louisiana Connector Project. Table 4.8.5-1 lists the locations and distances of residences and structures from the projects' centerlines and workspaces.

TABLE 4.8.5-1

Residences and Structures within 50 Feet of the Construction Work Areas Associated with the Texas Connector and Louisiana Connector Projects

Project/State/County or Parish/Structure Type	Milepost	Distance from Construction Work Area (feet)	Distance from Pipeline Centerline (feet)
TEXAS CONNECTOR PROJECT			
Southern Pipeline			
Texas/Orange County			
Residence	0.3 on FGT Lateral	16.0	51.0
Residence	0.3 on FGT Lateral	33.0	68.0
Outbuilding	0.3 on FGT Lateral	33.0	123.0
Residence	0.5 on FGT Lateral	38.0	133.0
Shed	0.5 on FGT Lateral	31.0	121.0
Northern Pipeline			
Texas/Jefferson County			
Barn [a]	17.2	0.0	54.8
Barn [a]	17.2	0.0	25.1
Texas/Orange County			
Barn	26.2	26.0	117.0
Residence	26.4	12.0	42.0
Pool	26.4	25	55
Barn	26.3	52	81
Residence	26.3	53	94
LOUISIANA CONNECTOR PROJECT			
Calcasieu Parish			
Barn/Warehouse	40.8	46	81
Residence	45.0	49	149
Barn/Warehouse [a]	42.5	0	0
Residence	46.8	50	173
Residence	52.3	49	120
Residence	56.6	9	39
Residence	56.6	44	84

TABLE 4.8.5-1 (cont'd)

Residences and Structures within 50 Feet of the Construction Work Areas Associated with the Texas Connector and Louisiana Connector Projects

Project/State/County or Parish/Structure Type	Milepost	Distance from Construction Work Area (feet)	Distance from Pipeline Centerline (feet)
Allen Parish			
Residence	89.5	47	139
Residence	89.6	31	61
Residence	90.9	32	128
Residence	97.0	31	126
Shed	97.0	5.9	92
Shed [a]	97.0	0	13
Residence	99.7	37	157
Residence	99.8	13	77
Garage	99.8	9.5	77
Residence	103.7	5	74
St. Landry Parish			
Shed [a]	120.8	0	0
Residence	120.9	50	90
Residence	120.9	0	44
Residence	120.9	45	85
Residence	120.9	42	146
Residence	123.4	0	22
Shed	123.4	14	84

[a] Structure to be removed during construction, pending landowner approval.

Structures within 50 feet of the construction work area would likely experience effects of construction and operation of the projects. In general, as the distance to the construction work area increases, the impacts on residences decrease. In residential areas, typically the greatest impacts associated with construction and operation of a pipeline are related to temporary disturbances during construction, and the presence of the permanent right-of-way, which prevents the construction of permanent structures within the right-of-way.

Temporary construction impacts on residential areas could include inconvenience caused by noise and dust generated by construction equipment, personnel, and trenching of roads or driveways; traffic congestion; ground disturbance of lawns; removal of trees, landscaped shrubs, or other vegetative screening between residences and/or adjacent rights-of-way; potential damage to existing septic systems or wells and other utilities; and removal of aboveground structures such as fences, sheds, playgrounds, or trailers from within the right-of-way.

Before mobilizing any equipment, PAPL would stake the limits of disturbance and the centerline of the pipeline. Affected landowners would be notified 7 days prior to trench excavation commences.

PAPL would use special construction methods designed for working in residential areas. These special construction methods are described in section 2.4, and specific methods to be used on an individual property are shown on PAPL's site-specific RCPs (see below). PAPL would implement the following

general measures to minimize construction-related impacts on all residences and other structures within 50 feet of the construction right-of-way:

- Attempt to maintain, where feasible, a minimum distance of 25 feet between any residence and the edge of the construction work area.
- Install safety fence at the edge of the construction right-of-way for 100 feet on either side of a residence.
- Fence the boundary of the construction work area to ensure that construction equipment and materials, including the spoil pile, remain within the construction work area.
- Weld and install pipeline as quickly as possible to minimize the amount of time a neighborhood is affected by construction.
- Attempt to preserve mature trees, vegetative screens, and landscaping within the construction work area, unless the trees and landscaping interfere with the installation techniques or present unsafe working conditions.
- Backfill the trench after the pipe is installed, or temporarily place steel plates over the trench.
- Restore all lawn areas and landscaping within the construction work area, excluding mature trees within the permanent pipeline easement, immediately following backfilling the trench.
- Complete final cleanup, grading, and installation of permanent erosion control devices within 10 days after backfilling the trench.

PAPL would minimize noise during non-daylight hours and within 1 mile of residences or other NSAs. Residential landscapes impacted during construction would be restored according to landowner agreements.

PAPL has also developed site-specific RCPs to inform affected landowners of proposed measures to minimize disruption and to maintain access to the residences within 25 feet of the construction work area (see appendix F). These site-specific construction plans include a dimensioned drawing depicting the residence in relation to the pipeline construction; workspace boundaries; the proposed permanent right-of-way; trees to be avoided; and nearby residences, structures, roads, and miscellaneous features (other utilities, sewer, etc.). We have reviewed the site-specific RCPs and find them acceptable.

No known septic systems have been identified, but PAPL would work with the landowner to avoid these systems if they are encountered.

Following construction, all residential areas would be restored to preconstruction conditions to the extent possible, or as specified in written landowner agreements. Landowners would continue to have use of the right-of-way provided such use does not interfere with the easement rights granted to PAPL for construction and operation of the pipeline system. For example, no structures would be allowed on the permanent right-of-way, including houses, decks, playgrounds, tool sheds, garages, poles, guy wires, catch basins, swimming pools, trailers, leaching fields, septic tanks, or any other objects not easily removed. As shown on its site-specific RCPs and table 4.8.5-1, PAPL would remove several structures currently present over the pipeline route. PAPL would work with landowners to relocate these structures to an off-right-of-

way location. Because of the increased potential for construction of the projects to disrupt these residences, and as stated earlier, we encouraged the owners of these parcels to provide us comments on PAPL's proposal to relocate these structures during the draft EIS comment period. No comments were received.

To ensure impacts on residences and commercial areas are addressed, PALNG and PAPL would develop a grievance and resolution plan as part of its Implementation Plan. The grievance and resolution plan would identify a toll-free phone number and email address through which landowners, agencies, and the public can contact a project representative with questions, concerns, and complaints during construction, restoration, and operation of the Projects. PALNG and PAPL would provide a timeframe in which a project representative would respond. In the event PALNG's or PAPL's response is not satisfactory to the landowner, agency, or public, they would have the opportunity to contact FERC's Landowner Helpline. We conclude that implementation of PALNG's and PAPL's mitigation measures, including the construction methods in residential areas and commercial facilities, the site-specific RCPs, and grievance and resolution process, along with our recommendation to consult with landowners regarding structure removal or relocation, impacts on residential and commercial areas would be minimized or mitigated.

Based on PAPL's consultations with Orange and Jefferson Counties, and the Cities of Port Arthur and Beaumont, there are no planned residential or commercial developments in the Texas Connector Project area. One planned industrial development is a modification and expansion of the Golden Pass LNG Project. The Golden Pass LNG Project is 0.3 mile from the NGPL Meter Station along the Southern Pipeline. Although the main project was completed in 2010, it was recently approved for an expansion by the FERC. The metering station and pig launcher/receiver along the Texas Connector Project's Southern Pipeline at MP 7.6 is adjacent to the planned expansion of the Sabine Pass LNG facility in Cameron Parish. The impacts associated with the Golden Pass LNG Project expansion, Sabine Pass LNG facility, and recently completed commercial developments are discussed further in section 4.13.

Based on PAPL's consultations with the Calcasieu Parish Planning and Development Board and St. Landry Parish Public Works, there are no planned residential development projects within 0.25 mile of the Louisiana Connector Project in Calcasieu and St. Landry Parishes.

Driftwood has proposed to construct a 96-mile-long feed gas pipeline through Louisiana to deliver gas to the proposed Driftwood LNG facility on the west bank of the Calcasieu River, south of Lake Charles, Louisiana. As currently designed and proposed, the Driftwood Pipeline Project would parallel PAPL's Louisiana Connector Project between MPs 45.4 and 54.5 in Calcasieu Parish, and at MP 116 in Evangeline Parish. The impacts associated with the Driftwood Pipeline Project are discussed further in section 4.13, and an alternative taking into account the two pipelines is discussed in section 3.4.2.

4.8.5.3 Nonjurisdictional Facilities

There are no residences or commercial developments or structures near the nonjurisdictional facilities. The closest residence is about 1.3 miles from the road, pipeline, and utility corridor. Based on review of existing Jefferson County land use and zoning geographic information systems interactive maps, there are no planned residential or commercial developments within or adjacent to the relocated highway, pipelines, and utility corridor (Jefferson Central Appraisal District, 2017).

4.8.6 Recreation and Special Interest Areas

Based on consultations with local agencies and review of public databases and maps, the Projects would not cross or affect any of the following designated areas:

- National Wild and Scenic Rivers System

- National Trails System
- Wilderness Areas designated under the Wilderness Act
- State or local designated trails
- National or state forests
- National Natural Landmarks
- Public game management areas
- Nature preserves
- Golf courses or other recreational facilities

The Projects would, however, affect or be within 0.25 mile of a WMA, state-designated wild and scenic rivers, and other general recreational activities, as discussed further below.

One of the primary concerns when crossing a designated recreation or special interest area is the impact of construction on the purpose for which the area was established (e.g., the recreational activities, public access, resources the area aims to protect). Construction would alter visual aesthetics by removing existing vegetation and disturbing soils. Construction would also generate dust and noise, which could be a nuisance to recreational users. Construction could also interfere with or diminish the quality of the recreational experience by affecting wildlife movements or disturbing trails. Direct project impacts on recreational and special interest areas occurring outside of forested land (including managed tree plantations) would be minor and limited to the period of active construction, which typically would last only several days to several weeks in any one area. These impacts would be minimized by implementing PALNG's and PAPL's project-specific *Environmental Plan*.

To ensure public safety and a safe working environment for project personnel, it may be necessary to limit access to designated recreation or special interest areas during construction. These impacts would be limited to the time of active construction and would cease when construction is complete. PALNG and PAPL would work with the landowners and land-managing agency of the recreation and special interest areas to avoid, minimize, or mitigate impacts on these areas, as requested and discussed further by area below. PALNG and PAPL would attempt to maintain access to the areas during construction of the pipeline, and if necessary, would compensate the landowner(s) for the value of any lost resources. PALNG and PAPL would also coordinate with land managing agencies and private landowners regarding the best way to inform the public of planned construction activities and/or to coordinate the timing of construction activities. Public notification measures could include signage on recreation area access routes, website notifications, and targeted mailings.

Following construction, most open land uses would be able to revert to their former uses. Forest land affected by the temporary construction right-of-way and ATWS areas would experience long-term impacts because of the time required to restore the woody vegetation to its preconstruction condition (at least 30 years). Further, the placement of aboveground facilities and permanent access roads, as well as forest land within the operational right-of-way, would experience permanent impacts as a result of a land use and vegetation type conversion.

The landscape of the states crossed by Projects provide ample opportunities for public enjoyment of dispersed recreation including fishing, boating, birding, wildlife viewing, photography, hiking, biking,

and hunting. Seasonal hunting recreation opportunities in these areas would be temporarily affected by construction activities. For example, construction of the pipeline may affect hunting activities on private land if the hunting season is within the construction time frame. To minimize conflicts with hunting, PALNG and PAPL would notify and coordinate with landowners and managers prior to construction. Operation of the Projects would not interfere with most recreational activities.

The following sections describe specific recreational and special interest areas that would be crossed by or within 0.25 mile of the Projects. Based on the impacts identified and mitigation measures PALNG and PAPL would implement, the Projects would not result in significant or adverse impacts on recreational or special interest areas. Visual impacts on recreational and special interest areas that are designated for their scenic value are discussed in section 4.8.8.

4.8.6.1 Liquefaction Project

The Liquefaction Project area does not include developed recreational areas; however, the site may be used for hunting and fishing due to its location adjacent to the J.D. Murphree WMA and Port Arthur Canal.

J.D. Murphree WMA and Round Lake

Although it is outside the immediate Liquefaction Project boundaries, the J.D. Murphree WMA would be indirectly affected by the construction and operation liquefaction facilities, and directly affected by dredge disposal activities and relocation of the WMA access road. The J.D. Murphree WMA encompasses 24,498 acres of fresh, intermediate, and brackish water coastal marsh along the upper coast of Texas, and is owned and managed by the TPWD. The WMA includes Round Lake and portions of Keith Lake. Recreational activities on the WMA include fishing; wildlife viewing; and waterfowl, feral hog, and alligator hunting (TPWD, 2017g). The WMA also provides half-day public waterfowl hunts that attract as many as 175 hunters per day.

Round Lake, which is also within the J.D. Murphree WMA, would be surrounded by the Liquefaction Project but avoided. Round Lake is a designated No Hunt Zone (TPWD, 2017h), and is frequented by local and migratory birds, and attracts birders as discussed in section 4.6.1.3. Indirect impacts on recreationalists visiting the WMA and Round Lake during construction of the liquefaction facilities would include construction and equipment noise.

About 1,900 acres of the J.D. Murphree WMA would be used for the disposal of dredge material. The disposal area would be west of Lost Lake and the liquefaction facilities, in an area generally surrounded by Shell, Johnson, and Keith Lakes, and the ICWW. A portion of the dredge material would be used to restore 1,264 acres of degraded wetland marsh habitat within the WMA. Truck traffic and large equipment associated with the hauling and spreading of dredge material would create noise, dust, and visual intrusions for recreational users of the WMA, particularly near Lost Lake. Disposal activities may create temporary use restrictions near the disposal area and could deter recreational users from recreating nearby. All disturbed areas outside of the disposal area would be restored to previous conditions. Recreation would be permanently restricted at the disposal site.

As mentioned in section 4.8.2.1, PALNG would relocate the existing WMA access road and construct an alternative access road that would connect to the relocated SH 87. The TPWD requested PALNG avoid construction within the WMA during periods of high public use, which are typically mid-September, and November through January. If construction is unavoidable during these times, PALNG would be required to compensate TPWD for the lost recreational opportunities (TPWD, 2017i). PALNG

has committed to coordinate with the TPWD to determine mitigation measures for any lost recreational opportunities.

Keith Lake

Keith Lake, which is partially within the J.D. Murphree WMA, is about 0.1 mile southwest of the liquefaction facility. Keith Lake is open for fishing year-round, and commercial crabbing is permitted (TPWD, 2017g). PALNG sold a portion of its land north of Keith Lake to Jefferson County for the construction of a boat ramp and parking area that would provide access to Keith Lake and the J.D. Murphree WMA. The boat launch ramp is less than 0.1 mile from the facility site. Recreational users in the WMA would be affected during construction from the dust and noise created by increased truck traffic and machinery. In addition, PAPL would temporarily use an existing access road (AR-S-2) to access project workspace areas. PAPL proposes to widen/regrade the road resulting in 0.8 acre of impact (see section 4.8.2). Impacts from dust and noise would be minor and temporary, lasting only the duration of construction. Boating and fishing opportunities and access to Keith Lake and the boat launch ramp would not be impacted by construction or operation.

Port Arthur Canal

Recreational boating and fishing in the Port Arthur Canal would also be affected during dredging, excavating, increased ship and barge traffic, and hauling of dredge material to accommodate the liquefaction facilities (e.g., MOF, ship berths). Dredging activities in the Port Arthur Canal could result in access restrictions in certain areas for fishing and boating. Impacts would be minor and temporary, lasting only the duration it takes for ships and barges to clear the area, and consistent with other LNG and industrial facilities along the Port Arthur Canal. Access would be permanently restricted in the immediate areas surrounding the facilities for safety. Construction, ship and barge traffic, and access restrictions would be in effect in site-specific areas but would not affect access to other areas along the canal. Project-related impacts on the canal are further discussed in sections 4.3.2 (waterbodies) and 4.9.6.1.

4.8.6.2 Texas Connector Project

The Northern Pipeline would cross the J.D. Murphree WMA at four locations between MPs 1.5 and 1.6 (Salt Bayou Unit), MPs 4.5 and 6.0 (Big Hill Unit), MPs 10.2 and 10.5 (Hillebrandt Unit), and MPs 11.6 and 11.7 (Hillebrandt Unit). The Southern Pipeline would cross the WMA at two locations between MPs 0.1 and 0.9 and MPs 2.4 and 2.5. To reduce impacts resulting from construction activities, PAPL would use the HDD method to cross the WMA, which would avoid the need for vegetation clearing, soil grading, and maintenance activities between the HDD entry and exit points. ATWS associated with an HDD point at MP 5.1 would temporarily affect about 2.0 acres of wetlands in the WMA. The active HDD would be visible and heard by recreational users. Recreation opportunities may be limited near construction areas; however, impacts would be minor and temporary. Where parallel to the WMA between MPs 0.0 and 1.5 along the Northern Pipeline and between MPs 0.0 and 3.1 along the Southern Pipeline, PAPL would maintain a 100-foot buffer between the construction workspace and the WMA boundary. PAPL would coordinate with the TPWD prior to construction to identify any additional site-specific restoration measures requested by the WMA. Following construction, ATWS on the WMA would be restored in accordance with PAPL's *Environmental Plan* and TPWD easement requirements. Recreational use of the WMA would be allowed to continue during project operations.

The HDD construction method would be implemented at waterbody crossings used for recreational fishing, boating, and waterfowl hunting, which would reduce noise and dust and disturbance of existing vegetation near waterbody banks. This includes the Sabine Neches Waterway, Taylor Bayou, Sabine Pass,

and the waterway that provides access from the Port Arthur Canal to Keith Lake. Access for boating, fishing, and hunting would be maintained throughout construction at HDD crossings.

The South Compressor Station would be about 0.7 mile east of Lost Lake and 0.3 mile west of Round Lake. Like Round Lake, Lost Lake is a designated No Hunt Zone (TPWD, 2017h). Access to the lakes for recreation would not be restricted and aesthetic impacts from the presence of the compressor station would be minor due to similar existing industrial facilities east of the compressor station.

The NGPL Meter Station would be about 0.1 mile east of Keith Lake, which would result in similar impacts on recreation as the compressor station. All other meter stations and pig/launcher receivers would be sited in areas where recreation is not anticipated or affected.

4.8.6.3 Louisiana Connector Project

No public hunting or game management areas would be crossed by the Louisiana Connector Project. Private property managed for hunting would be crossed between MPs 65.5 and 67.2. This property is managed in cooperation with the LDWF for a variety of wild game species including deer, hogs, turkey, and pheasant. Land use at this crossing is forest and wetland, and is actively managed for pulp wood production. Pipeline construction would likely occur during the spring and summer hunting seasons. An affiliate of PAPL has constructed through the project area as recently as 2016 and, like past practices, would work with landowners and hunting clubs to avoid potential conflicts with the hunting activities. As such, pipeline construction is expected to have minor to negligible impacts on hunting opportunities.

Sabine National Wildlife Refuge

The Sabine NWR is a 125,790-acre wildlife refuge adjacent to the northeast and east shore of Sabine Lake. Sabine NWR occupies the marshes between Calcasieu and Sabine Lakes and is managed to provide habitat for migratory waterfowl and other birds, and to preserve and enhance coastal marshes for wildlife and fish (FWS, 2017). Sabine National Wildlife Refuge is 0.2 mile from the Louisiana Connector Project at MP 17.4 in Cameron Parish. During construction near this area, noise from construction activities may disturb wildlife and hunting activities; however, impacts on this area are expected to be short term and minor. Construction and operation of the pipeline facilities would have no direct impact on the refuge.

State Wild and Scenic Rivers

The System Rivers was developed for preserving, protecting, developing, reclaiming, and enhancing the wilderness qualities, scenic beauties, and ecological regimes of certain free-flowing Louisiana streams. The LDWF administers the System Rivers (Louisiana State Legislature, 2017).

The Louisiana Connector Project would cross four state-designated scenic rivers in Louisiana: Beckwith Creek, Hickory Branch, Barnes Creek, and Whiskey Chitto Creek. PAPL proposes to cross the rivers using the HDD method. We have included draft versions of the available site-specific crossing plans in appendix J.

The Louisiana Connector Project would cross Beckwith Creek at MP 64.1 in Calcasieu Parish. At this location, the state of Louisiana classifies Beckwith Creek as a scenic river from it headwaters to the west fork of the Calcasieu River in Beauregard and Calcasieu parishes (LDWF, 2017a). The HDD entry and exit points would affect silviculture and open land on both sides of the river.

The Louisiana Connector Project would cross Hickory Branch at MP 65.3 in Calcasieu Parish. At this location, Hickory Branch is classified as a scenic river from its headwaters to the West Fork of the

Calcasieu River (LDWF, 2017a). The HDD entry and exit points and ATWS would affect open land and forest/woodland on both sides of the river.

The Louisiana Connector Project would cross Barnes Creek at MP 79.2 in Allen Parish. At this location, Barnes Creek is classified as a scenic river from Louisiana SH 27 to the Calcasieu River in Allen and Beauregard Parishes (LDWF, 2017a). The HDD entry and exit points would affect forest/woodland on both sides of the river.

The Louisiana Connector Project would cross Whiskey Chitto Creek at MP 91.2 in Allen Parish. At this location, Whiskey Chitto Creek is classified as a state scenic river from the boundary of Fort Polk Military Reservation (Lookout Road) to its entrance into the Calcasieu River (LDWF, 2017a). The HDD entry and exit points and ATWS would affect open land and forest/woodland on both sides of the river.

Direct impacts on each waterbody would be avoided as a result of the HDD crossing method. However, recreational users may experience temporary visual and noise impacts associated with construction personnel and equipment, as well as HDD activities, including tree removal within the HDD entry and exit points and ATWS. Also, as a result of the HDD method, tree clearing and vegetation maintenance within the permanent right-of-way on either side of the crossing would not be necessary, thus avoiding permanent visual impacts on recreational users. The ATWS associated with the HDD crossing would result in minor and temporary tree removal. In addition, as discussed in section 4.3.2.2, there is the potential during the drilling process for an inadvertent release of drilling mud. To minimize potential impacts on water quality in the event of an inadvertent release of drilling mud, PAPL would implement its *HDD Contingency Plan* (included within PAPL's *Environmental Plan*). Measures to prevent or control an inadvertent release of drilling mud include installing perimeter controls to contain any inadvertent release of drilling mud.

Following construction, ATWS areas would be restored to preconstruction conditions, and recreational users of the scenic river would not be affected by operations.

State Scenic Byways

State Scenic Byways crossed by the Louisiana Connector Project include the Myths and Legends Byway at MP 96.9 and the Zydeco Cajun Prairie Scenic Byway at MP 123.8.

The Louisiana Connector Project would cross U.S. Highway 165 (Myths and Legends Byway) at MP 96.9 using the HDD method. This 181-mile-long byway begins in southwestern Louisiana at the Texas state line and travels through mostly flat land originally settled by the Atakapa and Coushatta Indians. Recreational activities along the Myths and Legends Byway includes nature hiking and viewing, historic places, cultural centers, wildlife viewing, hiking, biking, fishing, and horseback and ATV riding (Louisiana Office of Tourism, 2017a). Land use on either side of the byway crossing consists of open land, residential, and forest/woodland.

The Louisiana Connector Project would cross SH 29 (Zydeco Cajun Prairie Byway) at MP 123.8 using the bore method. Recreational activities along this byway include community and historic/cultural centers, wildlife viewing, and visiting natural areas such as wilderness wetlands and prairies (Zydeco Cajun Prairie Scenic Byway Commission, 2017). Land use on either side of the byway crossing consists of agricultural land.

At each crossing, direct impacts would be avoided due to the use of the bore or HDD method; however, scenic travelers may experience temporary visual and noise impacts associated with construction personnel and equipment, as well as bore activities. Also, as a result of the bore or HDD, tree clearing and

vegetation maintenance within the permanent right-of-way on either side of the crossing would not be necessary, thus avoiding permanent visual impacts on scenic travelers. Following construction, ATWS areas would be restored to preconstruction conditions, and recreational users of the scenic byways would not be affected by operations.

Port Arthur Canal

The Louisiana Connector Project would cross the Port Arthur Canal between MPs 0.2 and 0.5 by HDD. The Port Arthur Canal is primarily used for navigation, but also supports recreational boating and fishing on Keith Lake, Lost Lake, Blind Lake, and Sabine Lake. Because the canal would be crossed using the HDD method, which avoids direct impacts on the features it crosses between the entry and exit points, construction and operation of the project would not affect commercial and recreational fishing boats in the Port Arthur Canal.

Sabine Lake

The Louisiana Connector Project would cross Sabine Lake between MPs 0.7 and 17.9 using various construction methods, as described in section 2.4.3.1. Sabine Lake is a 98-square-mile lake that was formed by the Neches and Sabine Rivers. Sabine Lake, through its 5-mile-long Sabine Pass, drains about 50,000 square miles of Texas and Louisiana into the Gulf of Mexico (Texas State Historical Association, 2017). Recreational uses of the lake include sailing, boating, fishing, crabbing, and wildlife viewing (Pleasure Island Commission, 2017).

Construction of the proposed pipelines in Sabine Lake would temporarily affect commercial and recreational fishing boats near the construction work areas (further details are provided in section 4.8.1.3), including our determination of impact on Sabine Lake.

CC Road Savannas

The Nature Conservancy's CC Road Savannas conservation easements are within 0.25 mile of the Louisiana Connector Project near MP 81.5 in Allen Parish. The CC Road Savannas conservation easements encompass 1,486 acres, and include the CC Road Savanna Preserve, which is a 477-acre property that contains some of the best remaining examples of wet longleaf pine flatwood savanna in southwestern Louisiana. The conservation easements and Preserve include important native species and plant communities, and serve as a platform to demonstrate restoration and management of longleaf pine flatwood savanna. There are no developed trails within the CC Road Savannas conservation easements or the Preserve (The Nature Conservancy, 2017). Opportunities for wildlife and forest viewing are provided by the existing roadways.

Direct effects would not occur on areas within 0.25 mile of the Louisiana Connector Project and outside of the construction right-of-way. Indirect impacts from noise and visual impacts are not expected because the preserve does not provide recreational opportunities beyond viewing opportunities along existing roadways. Additionally, the presence of a permanent pipeline right-of-way would be similar to the existing visual conditions surrounding the conservation easements, which includes roads and other utility rights-of-way between MPs 79.5 and 81.5 and MPs 82.6 and 85.6. PAPL would implement the measures outlined in its project-specific *Environmental Plan* to prevent disturbance to off-site areas.

U.S. Highway 171/Louisiana's Western Corridor

The Louisiana Connector Project would cross U.S. Highway 171 (part of Louisiana's Western Corridor) at MP 70.7 using the bore method. Louisiana's Western Corridor travels from Lake Charles to

Shreveport and offers travelers a self-guided tour to places such as Sam Houston Jones State Park, the Whisky Chitto, Fort Polk, Barksdale Airforce Base, Kisatche National Forest, the Toledo Bend Reservoir and the Mansfield Commemorative Area (Lake Charles Convention & Visitors Bureau, 2017).

4.8.6.4 Nonjurisdictional Facilities

Construction and relocation of SH 87, pipelines, and utilities would result in minor and temporary impacts on fishing and boating along the Port Arthur Canal, particularly at the beginning and end of the right-of-way where the right-of-way ties into the existing SH 87, which is about 0.1 mile from the canal. Access to the canal would be maintained and all disturbed areas would be restored to preconstruction conditions according to the PALNG's *Environmental Plan* or landowner requirements.

4.8.7 Contaminated Sites

Based on PALNG's and PAPL's review of federal and state regulatory databases to identify known and potential water and soil contamination, landfills, and hazardous waste sites, there are no known sources of soil or groundwater contamination within 0.25 mile of the Louisiana Connector Project. There are, however, three mapped sites within 0.25 mile of the Texas Connector and Liquefaction Projects. The three sites are discussed in more detail below:

- Site 1 is about 0.1 mile east of the proposed HPL Meter Station at MP 1.0 on the Northern Pipeline. The site was identified on the Texas Closed Landfill list and was documented as closed in 1985.

- Site 2 is about 0.2 mile southeast of MP 20.5 on the Northern Pipeline. The site was identified on the Texas Aboveground Storage Tank and the Texas Underground Storage Tank databases as being a watercraft refueling facility.

- Site 3 is about 0.1 mile northwest of the proposed KMLP Meter Station at MP 7.6 on the Southern Pipeline. The site was identified on the LDEP's air permit and NPDES discharge list.

See section 4.2.1.6 for additional details on soil contamination and EPA recommendations for the Liquefaction Project.

The Projects would also cross waterbodies that are listed under section 303(d) of the CWA for various contaminants. As discussed in section 4.3.1.1, a soil and sediment analysis would be conducted according to the EPA recommendations (see section 4.2.1.6) for the liquefaction site and all dredge materials placed on the J.D. Murphree WMA. The Texas Connector Project would cross the Taylor Bayou and Hillebrandt Bayou, which are listed under section 303(d) for the presence of dioxin, PCBs, and bacteria. Both waterbodies would be crossed using the HDD method. The Louisiana Connector Project would cross 14 waterbodies that are listed under section 303(d) for various contaminants. These waters include the Sabine-Neches Canal and Sabine Lake in Texas; and Bayou des Cannes, Nezpique Bayou, Bayou Blue, Calcasieu River, Barnes Creek, Marsh Bayou, Indian Bayou, Hickory Branch, Beckwith Creek, Little River, Houston River, and Sabine Lake in Louisiana. PAPL would cross these waterbodies using the HDD method except for Bayou Blue, Marsh Bayou, and Indian Bayou, which would be crossed using the open-cut method. Additionally, Sabine Lake would be crossed using the HDD and S-lay methods.

Should contaminated media (i.e., soil or groundwater) be encountered during construction, PALNG and PAPL would implement their respective project-specific *Unanticipated Hazardous Waste Discovery Plan*. As outlined in the plan, the contractor(s) would stop work in the area, restrict access to the site, and

notify the Projects' EI and the Supervisor of Environmental, Health, and Safety Division. A qualified consultant would conduct site-specific testing to determine the extent and nature of the contamination. Depending on the results of the analysis, PALNG and PAPL would develop a site-specific plan to evaluate site avoidance, exposure minimization, and cleanup options. The plan would include methods for handling the specific waste, hauling, manifesting, disposal, and site stabilization and restoration. We reviewed PALNG's and PAPL's *Unanticipated Hazardous Waste Discovery Plans* and find them acceptable.

4.8.8 Visual Resources

"Visual resources" refers to the composite of basic terrain features, geologic features, hydrologic features, vegetation patterns, and anthropogenic features that influence the visual appeal of an area for residents or visitors. The Projects would cross federal, state, county, tribal, and privately owned lands that encompass a wide range of visual resources and landscapes. The Projects could alter these existing visual resources in several ways, including construction activity and equipment that may temporarily alter viewsheds, alteration of existing vegetation patterns during right-of-way maintenance, and permanent alterations to the viewshed at and near aboveground facilities. The significance of these visual impacts would be primarily dependent upon the quality of the current viewshed, the degree of alteration of that view, the number of potential viewers, and the perspective of the viewer.

4.8.8.1 Liquefaction Project

Construction and operation of the Liquefaction Project would result in a permanent impact on the visual landscape of the area. Construction of the liquefaction facilities would result in temporary visual impacts associated with heavy truck and equipment traffic and dredging operations. Temporary impacts would be greatest on views from SH 87 and SH 82, the J.D. Murphree WMA, Pleasure Island, and the Port Arthur Canal. Impacts would be minor based on being consistent with the existing industrial land use in the area and impacts would last only the duration of construction, which is expected to be 5 years.

The tops of the three LNG storage tanks would be about 256 feet above grade, which would create a strong vertical visual contrast across a relatively flat existing landscape. The ship berths, offloading facilities, and utility buildings would permanently alter the existing viewshed. The storage tanks and liquefaction facilities would not be screened and would also result in long-term and moderate visual impacts on views from the eastern edge of the J.D. Murphree WMA. Impacts on views for those traveling on SH 87 and SH 82, and those visiting Pleasure Island or the Port Arthur Canal would be relatively minor due to existing industrial facilities surrounding and northeast of the project area.

4.8.8.2 Texas Connector and Louisiana Connector Projects

The Texas Connector and Louisiana Connector Projects do not cross wilderness areas designated by the Wilderness Act, National Wild and Scenic Rivers, or National Scenic byways. The Louisiana Connector would, however, cross state scenic rivers and byways, as discussed below. Existing visual conditions in the pipeline projects areas include flat, open, and brackish water marsh lands, patches of trees, short grasses, open fields, waterbodies, vertical buildings and structures, and utility corridors.

Pipeline Facilities

Visual impacts associated with construction and operation of the rights-of-way and ATWS would include the disturbance or removal of existing vegetation and individual trees along the rights-of-way and the presence of construction vehicles and equipment. Visual impacts would be greatest from the residences within 50 feet of the rights-of-way, where the pipeline route crosses existing roads, and forested areas that could be seen by passing motorists. The clearing of trees in forested areas to accommodate the construction

right-of-way and ATWS would result in long-term visual impacts due to the time it takes for trees to become reestablished.

PAPL would collocate the pipelines and laterals with existing utility rights-of-way along 113.8 miles, which would reduce the extent of new disturbance and visual impacts. Visual impacts would also be reduced by using the HDD and push-pull construction method at several roadway, waterbody, and wetland crossings, which minimizes the removal of vegetation and visual contrasts across the landscape. The pipeline facilities would not create strong visual contrasts across the landscape due to previous ground disturbance associated with existing utility rights-of-way. The presence of a permanent pipeline right-of-way would be similar to the existing visual conditions in the project area, which includes roads and other utility rights-of-way and commercial and industrial facilities. Apart from forest land, which would not be reestablished within the 50-foot-wide permanent right-of-way, PAPL would restore all disturbed areas to preconstruction conditions according to its *Environmental Plan* or landowner requirements.

State Scenic Rivers

The LDWF Scenic Rivers System was developed for preserving, protecting, developing, reclaiming, and enhancing the wilderness qualities, scenic beauties, and ecological regimes of certain free-flowing Louisiana streams. Certain activities are prohibited on designated Natural and Scenic Rivers, including channelization, clearing and snagging, channel realignment, reservoir construction, and the commercial cutting of trees within 100 feet of the ordinary low water mark. Scenic River Permits are required for all activities on or near System Rivers that may impact the ecological integrity, scenic beauty, or wilderness qualities of those rivers (LDWF, 2017a). Table 4.8.8-1 lists the designated state scenic rivers crossed by the Louisiana Connector Project.

TABLE 4.8.8-1

Designated State Scenic Rivers Crossed by the Louisiana Connector Project

Waterbody Name	Milepost	Scenic Conditions	Proposed Crossing Method
Beckwith Creek	64.1	Dense forest/woodland along each bank.	HDD
Hickory Branch	65.3	Dense forest/woodland along each bank.	HDD
Barnes Creek	79.2	Dense silvicultural land along each bank.	HDD
Whiskey Chitto Creek	91.2	Dense forest/woodland along each bank, with areas of open land along the existing utility right-of-way and the eastern bank.	HDD

During construction, recreational users may experience temporary visual impacts associated with personnel, equipment, and HDD activities. As a result of using the HDD crossing method, direct impacts such as in-stream work and vegetation clearing adjacent to state scenic waterbodies would be avoided, and recreational uses of the state scenic rivers would not be affected by operations. Because the HDD method would be used to cross the rivers, tree clearing would not be required within 100 feet of the ordinary low water mark. Tree clearing would be necessary within the ATWS areas associated with the HDD entry and exit sites, which are typically a few hundred feet away from the feature crossing. Following pipeline installation, all disturbed areas would be seeded and revegetated as soon as possible to reduce visual impacts from construction in accordance with PAPL's *Environmental Plan*.

Scenic Byways

The National Scenic Byways Program is part of the DOT's FHA, which designates roads as National Scenic Byways or All-American Roads based on their archaeological, cultural, historic, natural, recreational, and scenic qualities. As part of the National Scenic Byways Program, the Louisiana Scenic

Byways Program was created to identify a distinctive collection of roads and their stories to recognize, educate, preserve, and enhance the visitor experience, and to promote sustainable economic and tourism development opportunities. The Louisiana Byways Program is managed by the Louisiana Office of Tourism (Louisiana Office of Tourism, 2017b). State Scenic Byways crossed by the Louisiana Connector Project include the Myths and Legends Byway at MP 96.9, and the Zydeco Cajun Prairie Scenic Byway at MP 123.8.

PAPL would cross the scenic byways using the bore and HDD methods, which would reduce impacts on the surface of the roadbed. The boring and HDD equipment, tree clearing for ATWS, and construction personnel may result in short- to long-term impacts on the viewshed for those traveling along the byways. Visual impacts would be minimal, localized, and intermittent, lasting only for the time it takes a traveler to cross the byway and for construction to occur (typically a few weeks at any given location). If trees are cleared adjacent to the road, the impact would be temporary in areas of temporary workspace, but permanent in areas that are maintained for the life of the project. All disturbed areas would be restored to original conditions according to PAPL's *Environmental Plan*, with the exception of permanently maintained areas which would be restored, but as a maintained right-of-way.

Aboveground Facilities

Compressor Stations

The North and South Compressor Stations associated with the Texas Connector Project would consist of maintenance and control buildings, utility systems, above- and below-ground piping, lighting structures, wire fencing, and other mechanical and electrical systems. Visual characteristics at the North Compressor Station are flat, consisting of open land to the west and north, and a small area of trees and open land to the east. Mansfield Ferry Road and four residences are to the south of the site. The closest residence is about 100 feet east of the proposed compressor station site, with some natural screening provided by trees. The greatest visual impacts would be for those residences south of the compressor station and for motorists traveling on Mansfield Ferry Road. The South Compressor Station would be about 0.7 mile east of Lost Lake and 0.3 mile west of Round Lake, and would result in permanent visual impacts for those visiting the lakes and traversing relocated SH 87. Impacts would be permanent but minor due to similar visual contrasts from existing industrial facilities near the compressor station.

The Louisiana Connector Project Compressor Station would be west of Lyles, in Allen Parish, near the eastern end of the pipeline at MP 96.3, and consist of maintenance and control buildings, utility systems, above- and below-ground piping, lighting structures, wire fencing, and other mechanical and electrical systems. Visual characteristics at the proposed compressor station site mainly consist of densely forested silviculture land (pine plantation). The compressor station site is bound by Green Oak Cemetery Road on the south, an existing utility right-of-way on the north, an existing unimproved road on the east, and silviculture land on the west (and Contractor Yard LY-ALL-01). The compressor station would be 0.3 mile from the Myths and Legends Scenic Byway (U.S. Highway 165). The closest residence is about 500 feet east of the compressor station site. The area between the residence and compressor station is densely forested, and would provide some screening. Compressor Station buildings would be between 12 and 35 feet tall.

As mentioned in section 4.8.1, land within the compressor station site would be permanently converted to industrial/commercial land use. Lighting would be directed toward the facilities to minimize glare on surrounding areas. The greatest visual impacts would be for motorists traveling on Green Oak Cemetery Road. Visual impacts would be minimized due to the forested area that would remain between the compressor station and the residence, and retention of some forested areas within the compressor station site boundary. Motorists traveling north on the Myths and Legends Scenic Byway may be able to see

portions of the compressor station; however, because the area between the compressor station site and the byway is densely forested, and local topography is relatively flat, visual impacts would not be significant.

Meter Stations

The NGPL Meter Station would be about 0.1 mile from Keith Lake and about 0.5 mile from an existing industrial facility, which would create a permanent but minor visual impact for those visiting the lake. Impacts would be minor due to similar industrial structures east of the meter station. The HPL Meter Station would require the clearing of an upland forest area, which would result in permanent but minor visual impacts due to previously cleared areas to the north and west. The TETCO Meter Station would be about 0.1 south and east of two residences and west of several buildings, structures, and open land. Visual impacts from residences would be permanent but minor as the views would be screened by existing trees and vegetation. The FGT Meter Station would be less than 0.1 mile west of an existing cleared area with buildings and structures and 0.1 mile south of South Main Street. The meter station would be consistent with existing visual conditions and impacts would be minor for motorists traveling on South Main Street. The GTS/CIPCO and KMLP Meter Stations would be adjacent to industrial facilities, which would be consistent with existing visual conditions and result in minor visual impacts.

The CGT Meter Station (MP 130.9) would be 0.1 mile east of a residence. Based on PAPL's noise analysis for the meter stations, the CGT Meter Station requires noise mitigation. PAPL has committed to implementing noise mitigation measures to reach a 55-decible day-night equivalent level at all NSAs located within 0.5 mile of the CGT Meter Station. Land use surrounding the CGT Meter Station is agricultural, and because PAPL would not enclose or paint the structure to blend in with the surroundings, the meter station would be visible to motorists traveling on nearby roads and the residence. Noise impacts and mitigation are discussed further in section 4.11.

Mainline Valves and Pig Launchers/Receivers

Only a small portion of valve equipment would extend above the ground; however, these areas would be fenced and gated. Therefore, the valves may have visual impacts when located near roads and houses, if without landscape or vegetation screening. Valves near roadways may be visible to motorists. However, given their small size, it is unlikely that impacts on motorists' view would be significant.

The mainline valve at MP 15.3 along the Northern Pipeline would be south of Knauth Road and west of Herbert Road within the permanent right-of-way near a previously cleared area. Only a small portion of valve equipment would extend above the ground; however, the area would be fenced and gated. Valves near roadways may be visible to motorists; however, given their small size, it is unlikely that impacts on motorists' view would be significant.

Pig launchers and receivers would generally be installed within the footprint of the compressor stations or M&R stations. These structures are smaller and less visible than the other aboveground facilities and would have minor visual impact.

Access Roads

PALNG and PAPL propose to construct temporary and permanent access roads to access project workspaces. Construction of temporary access roads would result in similar impacts on visual resources as those described for the pipeline facilities. Most temporary access roads would be along existing roads and rights-of-way in areas that have been previously disturbed. PAPL would limit the removal of trees and vegetation to only that required to safely travel along the roads. When construction of the right-of-way is complete, all temporary roads would be restored to original contours and disturbed areas would be reseeded according to project-specific *Environmental Plans* or landowner requirements. Visual impacts from access

roads would be temporary and insignificant. New access roads in forested areas associated with operation of the project would represent a permanent visual impact. Visual impacts would be similar to those described in section 4.8.2 for pipeline facilities in forested areas**.**

A potential for visual impact would be realized for visitors of the J.D. Murphree WMA and nearby lakes, including users of the Keith Lake boat ramp, during construction of the new access roads at MP 2.9 and MP 3.7 along the South Pipeline, which are adjacent to these features. When construction of the right-of-way is complete, all temporary roads would be restored to original contours and disturbed areas would be reseeded according to PAPL's *Environmental Plan.*

Contractor Yards

PAPL would require ten contractor yards to store project equipment, vehicles, and machinery during construction. PAPL is proposing to use previously disturbed, developed, or open lands to reduce the extent of clearing and grading required for these sites. Summaries of land use types affected by contractor yards are provided in tables 4.8.1-2 and 4.8.1-3.

Contractor yards may initially create minor visual impacts in localized areas from clearing, grading, and filling. Impacts on visual resources would be the greatest on contractor yards where tree clearing is required, and where residences are near with minimal screening. Following construction, all contractor yards would be revegetated and restored to preconstruction conditions in accordance with PAPL's *Environmental Plan* or landowner requirements. This would eliminate visual impacts as vegetation becomes established.

4.8.8.3 Nonjurisdictional Facilities

Construction associated with relocating SH 87, pipelines, and utilities would result in a similar range of impacts as the construction of pipeline facilities. Visual resources in the area have been previously altered by tree clearing to support operation of existing electric powerlines and utility rights-of-way and construction and operation of roads and industrial facilities. While construction and operation of the nonjurisdictional facilities would contribute to additional visual impacts, they would be consistent with surrounding conditions and not significant.

4.8.9 Coastal Zone Management

The CZMA is intended to "preserve, protect, develop, and where possible, to restore or enhance" the nation's coastal zone (16 U.S.C. 1452, section 303 [1] and [2]). To participate in the CZMP, a state/commonwealth is required to prepare a management plan for approval by the U.S. Department of Commerce, NOAA, Office for Coastal Management (OCM). Once the OCM approves a plan, the state/commonwealth program gains "Federal Consistency" or jurisdiction. This means that federal actions (including actions requiring federally issued licenses or permits) that take place within a state's/commonwealth's coastal zone must be found to be consistent with state/commonwealth coastal policies before the federal action can take place.

As listed in section 1.5, PAPL is required to file documentation verifying it has received all applicable authorizations required under federal law. The FERC would not approve construction until all federal authorizations, including a consistency determination with the CZMA, have been granted.

4.8.9.1 Liquefaction Project

Based on a review of the TCMP's Coastal Zone Maps, all liquefaction facilities and components occur within the Texas Coastal Zone Management Area administered by the TGLO. The inland boundary of the CZMA mostly follows Interstate 10 north of Port Arthur, and the offshore boundary is about 10.4 miles off the coast of the Gulf of Mexico. The liquefaction facilities would be sited along the Port Arthur Canal, about 1.6 miles west of the inland CZMA boundary in Jefferson County.

The TGLO reviews federal actions to ensure consistency with the TCMP (TGLO, 2017). A consistency determination is performed through both the CWA by the USACE section 404 process and the Texas RRC through the section 401 Water Quality Certification process. PALNG submitted its application and request for consistency review as part of its USACE section 404/10 permit application on November 28, 2016, and submitted a revised application on November 13, 2017. PALNG would continue to coordinate with the TGLO and USACE regarding the coastal zone management consistency review and determination for the Liquefaction Project.

To ensure the project is consistent with the CZMA, **we recommend that:**

- **Prior to construction of the Liquefaction Project, PALNG should file with the Secretary documentation of concurrence from the USACE and TGLO that the Liquefaction Project is consistent with the CZMA.**

4.8.9.2 Texas Connector and Louisiana Connector Projects

Along the Texas Connector Project, the entire Northern Pipeline and associated aboveground facilities and a portion of the Southern Pipeline between MPs 0.0 and 6.4 fall within the Texas CZMA. In addition, about 1.2 miles of the Southern Pipeline and associated aboveground facilities between MPs 6.4 and 7.6 fall within the Louisiana Cameron Parish CZMA.

Along the Louisiana Connector Project, the pipeline and associated ATWS would fall within the CZMA between MPs 0.0 and 16.7 in Texas. In Louisiana, the pipeline and associated ATWS would fall within the CZMA between MPs 16.7 and 42.3.

In Texas, the CZMA is administered by the TGLO. In Louisiana, the CZMA is administered by the OCM of the LDNR. The OCM regulates development activities and manages resources within the coastal zone to determine compliance with the Coastal Resources Program (LDNR, 2017b).

For the Texas Connector Project, PAPL submitted its application and request for consistency review as part of its USACE section 404/10 permit application on February 6, 2017. For the Louisiana Connector Project, PAPL submitted its application and request for consistency review as part of its USACE section 404/10 permit application on October 13, 2017. PAPL states it will continue to coordinate with the USACE, TGLO, and Louisiana Office of Coastal Management regarding the coastal zone management consistency review and determination for the Texas Connector and Louisiana Connector Projects.

To ensure the Texas Connector and Louisiana Connector Projects are consistent with the CZMA, **we recommend that:**

- **Prior to construction of the Texas Connector and Louisiana Connector Projects, PAPL should file with the Secretary documentation of concurrence from the USACE, TGLO, and Louisiana Office of Coastal Management that the Texas Connector Project and Louisiana Connector Project are consistent with the CZMA.**

4.8.9.3 Nonjurisdictional Facilities

The nonjurisdictional facilities would be within the Texas Coastal Zone Management Area and similar to the liquefaction facilities, PALNG would coordinate with the USACE and TGLO regarding the coastal zone management consistency review and determination for the Liquefaction Project.

4.9 SOCIOECONOMICS

Construction and operation activities could impact socioeconomic conditions in the Projects area. Some potential effects are related to the number of construction workers that would work on the Projects and their impact on population, public services, and temporary housing during construction. Other potential effects include alteration of population levels or local demographics, increased employment opportunities, increased demand for housing and public services, tourism and transportation impacts, and an increase in government revenue associated with sales and payroll taxes. Potential impacts related to construction include increased road and marine traffic and disruption of normal traffic patterns. Increased property tax revenue, increased job opportunities, and increased income associated with local construction employment are potential effects of the Projects.

The socioeconomic study area considered for the analysis of the Liquefaction Project and the nonjurisdictional facilities includes Jefferson and Orange Counties, Texas as well as the communities of Beaumont, Groves, Nederland, Port Arthur, and Port Neches, all of which are in Jefferson County. The socioeconomic study area considered for the analysis of the Texas Connector Project includes Jefferson and Orange Counties, Texas; Cameron Parish, Louisiana; and the communities of Beaumont, Groves, Nederland, Port Arthur, and Port Neches, all of which are in Jefferson County. The socioeconomic study area considered for the analysis of the Louisiana Connector Project includes Allen, Beauregard, Calcasieu, Cameron, Evangeline, and St. Landry Parishes, Louisiana; Jefferson and Orange Counties, Texas; and the communities of Port Arthur, Texas and Sulphur, Lake Charles, Kinder, and Eunice, Louisiana.

For certain resources such as population and housing, we considered the combined impacts of the Projects on a study area defined as Cameron Parish, Louisiana and Orange and Jefferson Counties, Texas. Combined impacts were considered during overlapping peak construction phases where each project's peak workforce would be working in the study area, therefore creating an increase in the study area's population that would then create impacts on population and housing resources. Nonjurisdictional facilities were not considered in our combined impacts analysis, as construction of these facilities are scheduled to conclude prior to or following the influx of the Projects' peak workforce.

4.9.1 Population

4.9.1.1 Liquefaction Project

In 2016, the combined population of Jefferson and Orange Counties totaled 339,643. The population of the five largest communities in proximity to the Liquefaction Project (which represents over 65 percent of the population of the study area) ranges in population from 12,809 in Port Neches to 118,299 in Beaumont. Table 4.9.1-1 presents existing population levels and trends for counties and communities in the Liquefaction Project study area.

TABLE 4.9.1-1

Existing Population Levels and Trends for the Liquefaction Project Socioeconomic Study Area

Location	2000 Population [a]	2010 Population [b]	2016 Population Estimate [c]	Population Density (persons/sq. mi) (2010) [b]	Population Change 2000 - 2016	Population Change 2010 - 2016
UNITED STATES	281,421,906	308,745,538	323,127,513	87.4	14.8	4.7
TEXAS	20,851,820	25,145,561	27,862,596	96.3	33.6	10.8
Jefferson County	252,051	252,273	254,679	287.9	1.0	1.0
Orange County	84,966	81,837	84,964	245.3	0.0	3.8
City of Beaumont	113,866	118,296	118,299	1,428.7	3.9	-0.0

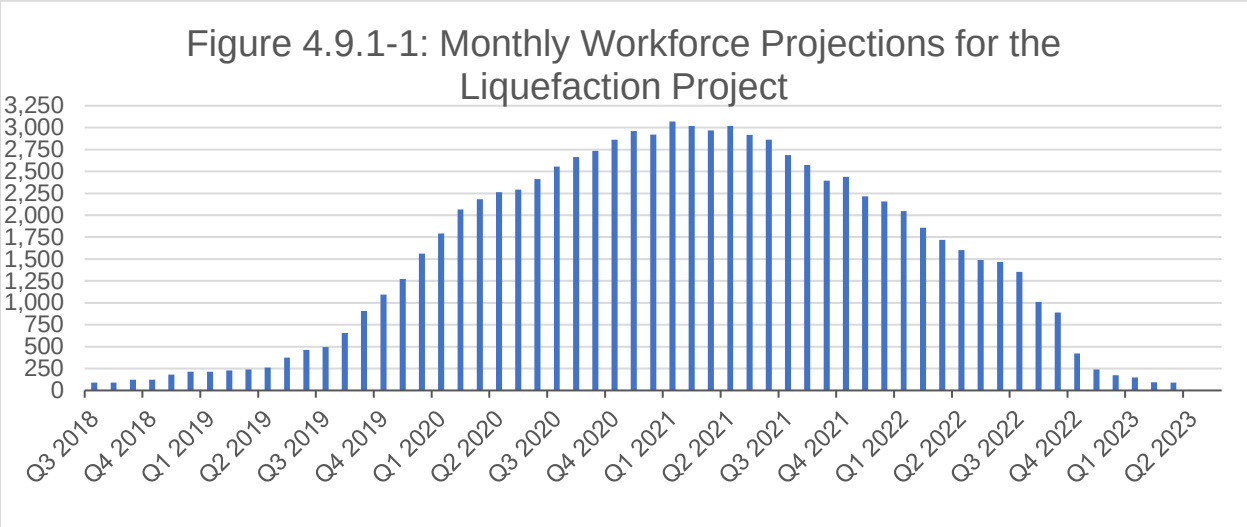
TABLE 4.9.1-1 (cont'd)

Existing Population Levels and Trends for the Liquefaction Project Socioeconomic Study Area

Location	2000 Population [a]	2010 Population [b]	2016 Population Estimate [c]	Population Density (persons/sq. mi) (2010) [b]	Population Change 2000 - 2016	Population Change 2010 - 2016
City of Groves	15,733	16,144	15,758	3,120.5	0.2	-2.4
City of Nederland	17,422	17,547	17,294	3,073.9	-0.7	-1.4
City of Port Arthur	57,755	53,818	55,427	699.8	-4.0	3.0
City of Port Neches	13,601	13,040	12,809	1,511.0	-5.8	-1.8

[a] Source: U.S. Census Bureau, 2000.
[b] Source: U.S. Census Bureau, 2010.
[c] Source: U.S. Census Bureau, 2016.

Construction of the Liquefaction Project would take place over a 60-month period. Figure 4.9.1-1 shows the estimated monthly construction workforce for the Liquefaction Project and assumes a third quarter of 2018 start date for demonstration purposes; however, construction work would begin only after the receipt of all applicable permits and authorizations. The spikes in construction workforce would shift to the start date/year realized if the project is approved.



Population impacts resulting from the Liquefaction Project are expected to last about 3 years. These impacts are considered temporary given they would last only for the duration of construction. Given the existing populations of the counties, parish, and cities in the study area, the impacts are expected to be minor. The effect on the population would be equal to the total number of non-local construction workers (i.e., workers living outside a 150-mile radius of the project location) plus any family members accompanying them. PALNG estimates the peak construction workforce, to occur in month 32, would be about 3,000 workers. PALNG estimates that up to 20 percent of the construction workforce could be hired locally (i.e., from Jefferson and Orange Counties in Texas and Cameron Parish, Louisiana), 20 percent would commute daily from outside the project area (i.e., the Beaumont-Port Arthur Metropolitan Statistical Area), and 60 percent would be non-local (i.e., traveling more than 150 miles), relocating to the area for the length of their employment. Therefore, a maximum of 1,800 workers would relocate to the area. If each of the non-local workers brought their families, the resulting population influx would be a maximum

of 4,554 people[32] relocating to the study area. Although it is unlikely that all workers would relocate with families, this addition would represent a 2 and 6 percent increase in the population of Jefferson and Orange Counties, respectively.

After construction, 200 permanent jobs would be created at the liquefaction facility. This would be a small increase for the population of Jefferson County, and PALNG anticipates that 70 percent (140 persons) of the permanent employees would be hired locally.

4.9.1.2 Texas Connector and Louisiana Connector Projects

Texas Connector Project

In 2016, the total county/parish population in the Texas Connector Project study area is 346,525. The population of the five largest communities in proximity to the Texas Connector Project range in population from 12,809 in Port Neches to 118,299 in Beaumont. These five communities represent over 63 percent of the population of the study area. Table 4.9.1-2 presents existing population levels and trends for the counties, parish, and communities in the Texas Connector Project study area.

TABLE 4.9.1-2

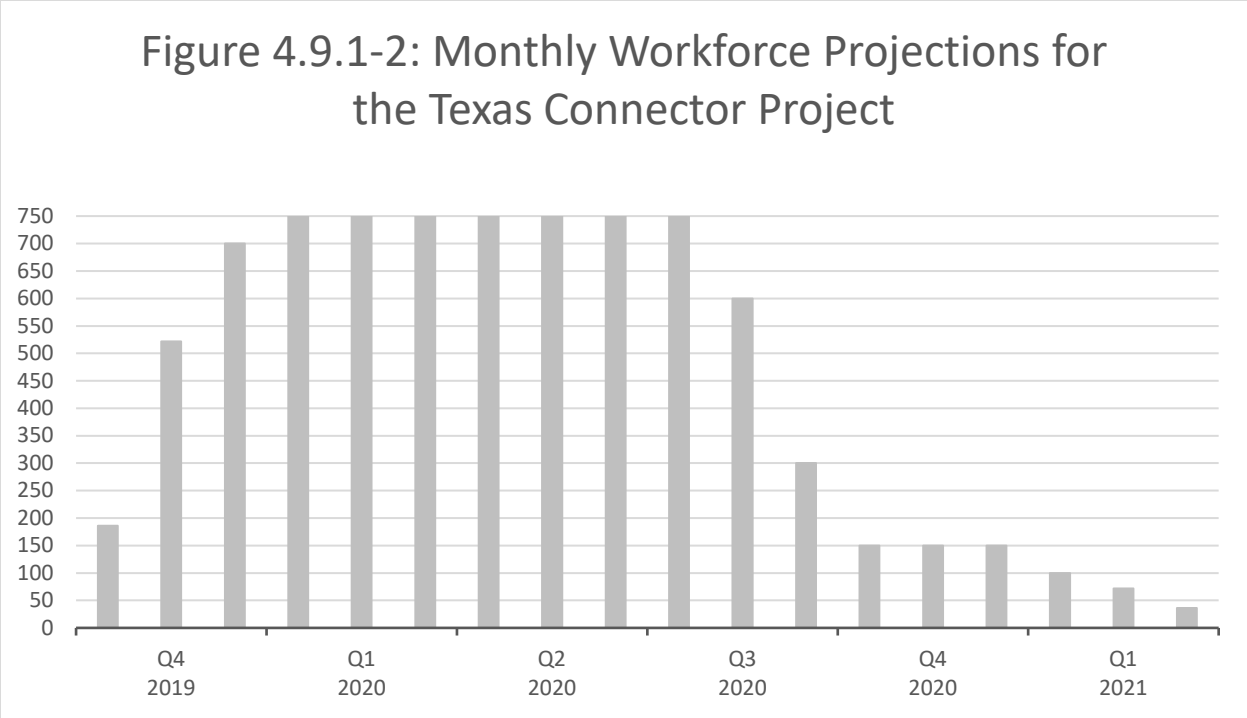
Existing Population Levels and Trends for the Texas Connector Project Socioeconomic Study Area

Location	2000 Population [a]	2010 Population [b]	2016 Population Estimate [c]	Population Density (persons/sq. mi) (2010) [b]	Population Change 2000 - 2016	Population Change 2010 - 2016
UNITED STATES	281,421,906	308,745,538	323,127,513	87.4	14.8	4.7
TEXAS	20,851,820	25,145,561	27,862,596	96.3	33.6	10.8
Jefferson County	252,051	252,273	254,679	287.9	1.0	1.0
Orange County	84,966	81,837	84,964	245.3	0.0	3.8
City of Beaumont	113,866	118,296	118,299	1,428.7	3.9	-0.0
City of Groves	15,733	16,144	15,758	3,120.5	0.2	-2.4
City of Nederland	17,422	17,547	17,294	3,073.9	-0.7	-1.4
City of Port Arthur	57,755	53,818	55,427	699.8	-4.0	3.0
City of Port Neches	13,601	13,040	12,809	1,511.0	-5.8	-1.8
LOUISIANA	4,468,976	4,533,372	4,681,666	104.9	4.8	3.3
Cameron Parish	9,991	6,839	6,882	5.3	-31.1	0.6

[a] Source: U.S. Census Bureau, 2000.
[b] Source: U.S. Census Bureau, 2010.
[c] Source: U.S. Census Bureau, 2016.

Construction of the Texas Connector Project would take place over an 18-month period. Figure 4.9.1-2 shows the estimated monthly construction workforce for the Texas Connector Project. While it assumes a fourth quarter of 2019 start date for demonstration purposes, construction work would begin only after the receipt of all applicable permits and authorizations. The spikes in construction workforce would shift to the start date/year realized if the project is approved.

32 This estimate was calculated assuming an average household size of 2.53 persons based on the average household size in Jefferson County (U.S. Census, 2016).



The Northern and Southern Pipelines, lateral pipelines, and associated facilities (i.e., compressor and meter stations, MLV, and pig launchers and receivers) would be constructed at the same time and PAPL estimates the average monthly construction workforce for the project would be 623 workers who would be dispersed along the length of the proposed pipeline routes. PAPL estimates that about 30 workers (4.38 percent) would be hired locally and the remaining 593 workers would be non-local, relocating to the area for the length of their employment.

Population impacts resulting from the Texas Connector Project are expected to be temporary and, given the increase relative to the existing populations of the counties, parish, and cities in the study area, minor. The effect on the population would be equal to the total number of non-local construction workers (i.e., outside of Jefferson and Orange Counties in Texas and Cameron Parish, Louisiana) plus any family members accompanying them. Pipeline construction is mobile and of a short duration, and most non-local workers would not travel with their families to study area, thus minimizing temporary impacts on the local populations. PAPL estimates the average monthly construction workforce would be 623 workers and the peak construction workforce, to occur in months 4 through 10, would be about 750 workers. PAPL estimates that 4.8 percent of the construction workforce could be hired locally (i.e., from Jefferson and Orange counties in Texas and Cameron Parish, Louisiana), and the remaining 95 percent would be non-local, relocating to the area for the length of their employment. Therefore, an average of 593 and a maximum of 714 workers would relocate to the area. If each of the non-local workers brought their families, the resulting population influx would be on average 1,500 and a maximum of 1,806 people[33] relocating to the study area. Although it is unlikely that all workers would relocate with families, this addition would represent an average of a 0.4 percent and a maximum of 0.5 percent increase in the population of Jefferson and Orange Counties and Cameron Parish. Any temporary increase in population would be distributed throughout the study area and would not have a permanent impact on any one population.

33 This estimate was calculated assuming an average household size of 2.53 persons based on the average household size in Jefferson County (U.S. Census, 2016).

After construction, 20 permanent employees would be employed during operations of the pipeline and associated facilities. This would be a minor increase for the population of the study area, and PAPL anticipates that about 20 percent (four persons) of the permanent employees would be hired locally.

Louisiana Connector Project

In 2016, the total population of the counties and parish in the Louisiana Connector Project study area was 727,329. The population of the largest communities in proximity to the Louisiana Connector Project range in population from 2,436 in Kinder to 76,848 in Lake Charles. These communities represent about 23 percent of the population of the study area. Table 4.9.1-3 presents existing population levels and trends for the parishes, counties, and communities in the Louisiana Connector Project study area.

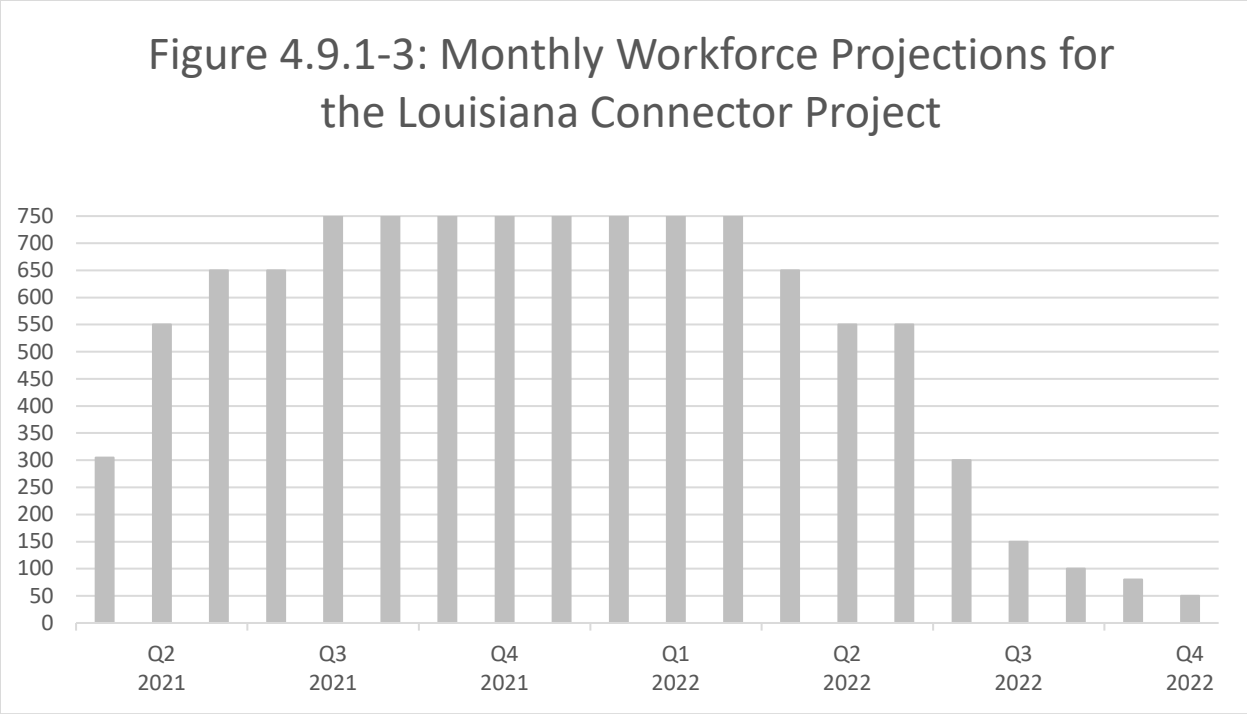
TABLE 4.9.1-3

Existing Population Levels and Trends for the Louisiana Connector Project Socioeconomic Study Area

Location	2000 Population [a]	2010 Population [b]	2016 Population Estimate [c]	Population Density (persons/sq. mi) (2010) [b]	Population Change 2000 - 2016	Population Change 2010 - 2016
UNITED STATES	**281,421,906**	**308,745,538**	**323,127,513**	**87.4**	**14.8**	**4.7**
TEXAS	**20,851,820**	**25,145,561**	**27,862,596**	**96.3**	**33.6**	**10.8**
Jefferson County	252,051	252,273	254,679	287.9	1.0	1.0
Orange County	84,966	81,837	84,964	245.3	0.0	3.8
City of Port Arthur, Texas	57,755	53,818	55,427	374.3	-4.0	3.0
LOUISIANA	**4,468,976**	**4,533,372**	**4,681,666**	**104.9**	**4.8**	**3.3**
Allen Parish	25,440	25,764	25,684	33.8	1.0	-0.3
Beauregard Parish	32,986	35,654	36,927	30.8	11.9	3.6
Calcasieu Parish	183,577	192,768	200,601	181.2	9.3	4.1
Cameron Parish	9,991	6,839	6,882	5.3	-31.1	0.6
Evangeline Parish	34,434	33,984	33,709	51.3	-2.1	-0.8
St. Landry Parish	87,700	83,384	83,883	90.3	-4.4	0.6
City of Sulphur, Louisiana	20,512	20,410	20,272	2,010.8	-1.2	-0.7
City of Lake Charles, Louisiana	71,757	71,993	76,848	1,603.4	7.0	6.7
City of Kinder, Louisiana	2,148	2,477	2,436	448.3	13.4	-1.7
City of Eunice, Louisiana	11,499	10,398	10,279	2,023.4	-10.6	-1.1

[a] U.S. Census Bureau, 2000.
[b] U.S. Census Bureau, 2010.
[c] U.S. Census Bureau, 2016.

Construction of the Louisiana Connector Project would take place over a 17-month period for the pipeline portion of the project and a 21-month period for the construction of the compressor station. Figure 4.9.1-3 shows the estimated monthly construction workforce for the Louisiana Connector Project. While it assumes a second quarter of 2021 start date for demonstration purposes, construction work would begin only after the receipt of all applicable permits and authorizations. The spikes in construction workforce would shift to the start date/year realized if the project is approved.



The pipeline and compressor stations would be constructed simultaneously, and PAPL estimates the average monthly construction workforce for the project would be 600 workers who would be dispersed along the length of the pipeline route, and that 150 workers would be required for construction at the compressor station locations. PAPL estimates that 150 to 300 workers (about 20 to 40 percent of the total workforce, estimated at 750 workers during peak construction) would be hired locally (i.e., from within the study area parishes and counties), and the remaining 450 to 600 workers would be non-local, relocating to the area for the length of their employment.

Population impacts resulting from the Louisiana Connector Project are expected to be temporary and, given the increase relative to the existing populations of the parishes, counties, and communities in the study area, minor. The effect on the population would be equal to the total number of non-local construction workers plus any family members accompanying them. Pipeline construction is mobile and of a short duration, and in our experience most non-local workers would not travel with their families to study area, thus minimizing temporary impacts on the local populations. PAPL estimates the average monthly construction workforce would be 600 workers and the peak construction workforce, to occur in months 5 through 12, would be about 750 workers. PAPL estimates that between 20 and 40 percent of the construction workforce could be hired locally and the remaining 60 to 80 percent would be non-local, relocating to the area for the length of their employment. Therefore, an average of between 360 (off-peak) and 480 (peak) workers, and a maximum of between 450 (off-peak) and 600 (peak) workers, would relocate to the area. If each of the non-local workers brought their families, the resulting population influx would be on average between 954 (off-peak) and 1,272 (peak) people and a maximum of 1,193 (off-peak) and 1,590 (peak) people[34] relocating to the study area. Although it is unlikely that all workers would relocate with families, this addition would represent an average of between 0.1 and 0.2 percent and a maximum of a 0.3 percent increase in the population of the study area. Any temporary increase in population would be distributed throughout the study area and would not have a permanent impact on any one population.

34 This estimate was calculated assuming an average household size of 2.65 persons based on the average household size in the study area.

After construction, ten permanent employees would be employed during operations of the pipeline and associated facilities. This would be a minor increase for the population of the study area, and PAPL anticipates that about 20 to 40 percent (two to four persons) of the permanent employees would be hired locally.

4.9.1.3 Nonjurisdictional Facilities

Relocation of SH 87, pipelines, and utilities is estimated to take place over a 20-month period. PALNG estimates 150 construction workers would be needed for the duration of the relocation activities. PALNG estimates that about 50 percent of the construction workforce (75 workers) would be hired locally (i.e., from within the project study area). Population impacts resulting from the SH 87, pipeline, and utility relocation are expected to be temporary and, given the increase relative to the existing populations of the counties and cities in the study area, minor. Any temporary increase in population would be distributed throughout the study area and would not have a permanent impact on any one population. Following the relocation activities, personnel from TDOT and the respective pipeline and utility owner and operator would permanently maintain these facilities.

4.9.1.4 Combined Projects Impacts on Population

Assuming all permits and authorizations are received when anticipated, the Projects are expected to have their peak workforce requirements at roughly the same time, from the fourth quarter of 2019 through the first quarter of 2022. At the peak, anticipated for the third quarter of 2020, a combined workforce of over 3,230 workers would be needed. The could represent a population increase of less than 1 percent to the entire study area. Where the Projects would overlap the greatest geographically, in Cameron Parish and Orange and Jefferson Counties, this would be an increase of 1 percent to the population. Based on the populations of the counties/parishes and cities study area, in the event some construction workers and families do temporarily relocate to the area, the increase in population would not be significant. In addition, any temporary increase in population would be distributed throughout the study area and would not have a permanent impact on any one population.

4.9.2 Economy and Employment

4.9.2.1 Liquefaction Project

Table 4.9.2-1 provides select employment and income statistics for the Liquefaction Project study area.

TABLE 4.9.2-1

Existing Economic Conditions for the Liquefaction Project Study Area

Location	Per Capita Income (U.S. Dollars)	Civilian Labor Force	Top Three Industries [a]	Unemployment Rate
UNITED STATES	$28,930	158,897,824	R, P, M	8.3
TEXAS	$26,999	13,006,330	E, R, P	7.0
Jefferson County	$24,154	113,186	E, M, R	8.8
Orange County	$25,489	38,866	E, M, R	8.4
City of Beaumont	$24,803	54,963	E, R, M	8.5
City of Groves	$24,650	7,428	E, M, C	11.7
City of Nederland	$32,295	9,114	E, M, P	6.1

TABLE 4.9.2-1 (cont'd)

Existing Economic Conditions for the Liquefaction Project Study Area

Location	Per Capita Income (U.S. Dollars)	Civilian Labor Force	Top Three Industries [a]	Unemployment Rate
City of Port Arthur	$18,464	23,855	E, C, M	11.5
City of Port Neches	$30,905	6,433	E, M, R	6.4

Source: U.S. Census Bureau, 2016.

[a] Industries are defined under the 2012 North American Industry Classification System (NAICS) and abbreviated as follows: **C** = Construction; **E** = Educational, Health and Social Services; **M** = Manufacturing; **P** = Professional, Scientific, Management, Administrative, and Waste Management Services; **R** = Retail Trade.

The top three industries in the Liquefaction Project study area are educational, health and social services; manufacturing; and retail trade. The total civilian workforce in Jefferson and Orange Counties is 152,052. The civilian workforce in the five largest communities in proximity to the Liquefaction Project ranges from 6,433 in Port Neches to 54,963 in Beaumont. Over 66 percent of the civilian workforce in the study area resides in the five communities identified (U.S. Census Bureau, 2016).

At $24,154 and $25,489, respectively, both Jefferson and Orange Counties have per capita incomes below the average for the State of Texas. The per capita incomes of the communities in the study area range from $18,464 in Port Arthur to $32,295 in Nederland. Additionally, the unemployment rates in both Jefferson and Orange Counties, at 8.8 and 8.4, respectively, are below the state rate. Unemployment rates in the communities in the study area range from 6.1 in Nederland to 11.7 in Groves.

Tourism opportunities in the Liquefaction Project study area include federal, state, and local special interest areas discussed in section 4.8.6 as well as tourist attractions and general recreation areas located throughout the study area. Tourists drawn to the project area experience opportunities such as fishing, hunting, kayaking, beaches, and golfing. Examples of tourist activities in the study area include Walter Umphrey State Park, J.D. Murphree WMA, Sabine Pass Battleground State Historical Park, and the Texas Point National Wildlife Refuge. While visits to the recreational and special interest areas in the study area occur year-round, the peak tourism season typically occurs in the spring. Travel-related spending supports local economies in the study area, and there are businesses in and around the study area that are dependent on year-round as well as seasonal tourists.

Travel- and tourism-related spending in the Liquefaction Project study area totaled about $597 million in 2016, and 7,130 jobs in the study area were attributed to travel-generated employment. Table 4.9.2-2 provides an overview of the economic impacts of travel-related spending in the counties in the Liquefaction Project study area.

TABLE 4.9.2-2

Tourism Economy in the Liquefaction Project Study Area

Location	Travel and Tourism Spending ($ millions) (2016)	Tourism-Supporting Jobs (2016)	Job Earnings ($ millions) (2016)	Local/State Tax Revenue ($ millions)
TEXAS				
Jefferson County	489.1	5,970	125.2	8.3/28.4
Orange County	108.0	1,160	27.6	1.45/6.6

Sources: Dean Runyan Associates, 2017; University of New Orleans, 2017

The influx of construction workers would be limited to the time of construction. The demand for temporary housing by non-local workers is not expected to exceed the available number of hotels, motels, and campground units in the study area, but accommodations in the study area could experience some minor limited availability, particularly during planned construction periods that overlap with the peak tourism season in the project area. Section 4.9.4 discusses impacts on housing (including hotel/motel/campground rentals).

Construction of the Liquefaction Project would add temporary employment opportunities to the study area and the greater region. This would result in a minor, temporary decrease in the unemployment rate in the Liquefaction Project study area.

In addition to direct hires, it is reasonable to expect that construction of the Liquefaction Project would result in several temporary, indirect jobs as purchases for goods and services would increase along with the influx of the construction workforce to the project area. Indirect employment, including hiring additional staff in the retail and service industries to accommodate the increase in demand for food, clothing, lodging, gasoline, and entertainment, would have a temporary stimulating effect on local economies. These indirect jobs would represent a temporary, minor increase in employment opportunities in the study area.

Payroll taxes would be collected from workers employed in the construction of the Liquefaction Project, resulting in additional beneficial, short-term effects. PALNG estimates that payroll spending would be $783 million during the construction phase (of which, $156 million would go to the local construction workforce) and $36 million annually during the operational phase. PALNG estimates that during construction $369 million would be spent locally on the purchase of material goods and services, and operations would produce an estimated annual regional expenditure of $200 million. The increase in economic activity resulting from spending during construction would result in a temporary, positive economic impact in the Liquefaction Project study area.

Operation of the Liquefaction Project would add 200 permanent jobs. These jobs would create more employment opportunities and result in indirect economic benefits to the study area as the workers spend their salaries in the community, producing permanent, minor economic benefits to the local economy and employment in the project area.

4.9.2.2 Texas Connector and Louisiana Connector Projects

Texas Connector Project

Table 4.9.2-3 provides select employment and income statistics for the Texas Connector Project study area.

TABLE 4.9.2-3

Existing Economic Conditions for the Texas Connector Project Study Area

Location	Per Capita Income (U.S. Dollars)	Civilian Labor Force	Top Three Industries [a]	Unemployment Rate
UNITED STATES	$28,930	158,897,824	R, P, M	8.3
TEXAS	$26,999	13,006,330	E, R, P	7.0
Jefferson County	$24,154	113,186	E, M, R	8.8
Orange County	$25,489	38,866	E, M, R	8.4
City of Beaumont	$24,803	54,963	E, R, M	8.5
City of Groves	$24,650	7,428	E, M, C	11.7
City of Nederland	$32,295	9,114	E, M, P	6.1

TABLE 4.9.2-3 (cont'd)

Existing Economic Conditions for the Texas Connector Project Study Area

Location	Per Capita Income (U.S. Dollars)	Civilian Labor Force	Top Three Industries [a]	Unemployment Rate
City of Port Arthur	$18,464	23,855	E, C, M	11.5
City of Port Neches	$30,905	6,433	E, M, R	6.4
LOUISIANA	$24,981	2,194,199	E, R, A	8.1
Cameron Parish	$29,679	3,283	E, Ag, R	6.3

[a] Industries are defined under the 2012 NAICS and abbreviated as follows: **A** = Arts, Entertainment, and Recreation, and Accommodation and Food services; **Ag** = Agriculture, Forestry, Fishing, and Hunting, and Mining; **C** = Construction; **E** = Educational, Health and Social Services; **M** = Manufacturing; **P** = Professional, Scientific, Management, Administrative, and Waste Management Services; **R** = Retail Trade.

Source: U.S. Census Bureau, 2016.

The top three industries in the Texas Connector Project study area are the same as those identified in the Liquefaction Project study area – educational, health and social services; manufacturing; and retail trade. The total civilian workforce in Texas Connector Project study area is 155,335. The civilian workforce in the five largest communities in proximity to the Texas Connector Project ranges from 6,433 in Port Neches to 54,963 in Beaumont. Over 65 percent of the civilian workforce in the study area resides in the five communities identified in table 4.9.2-3.

The economic characteristics of the Texas Connector Project study area are the same as the Liquefaction Project study area, apart from the addition of Cameron Parish. Cameron Parish has a per capita income of $29,679, which is higher than that of the State of Louisiana. Further, the unemployment rate in Cameron Parish, 6.3 percent, is almost 2 percent lower than the unemployment rate for the state.

Tourism opportunities in the Texas Connector Project study area include federal, state, and local special interest areas discussed in section 4.8.6 as well as tourist attractions and general recreation areas located throughout the study area. Examples of tourist activities in the study area include festivals such as Mardi Gras; Big Thicket National Preserve; Sea Rim State Park; Atchafalaya National Heritage Area; Cameron Prairie National Wildlife Refuge; the Sabine Lake National Wildlife Reserve in Cameron Parish, Louisiana, which attracts 300,000 visitors annually to participate in hiking, fishing, boating, camping, and hunting activities (FWS, 2016c); the Creole Nature Trail in Cameron and Calcasieu Parishes, Louisiana; and miles of scenic U.S. Byways (Lake Charles Convention & Visitors Bureau, 2017). While visits to the recreational and special interest areas in the study area occur year-round, the peak tourism season typically occurs in the spring. Tourists drawn to the project area experience opportunities such as fishing, hunting, kayaking, beaches, and golfing. Travel-related spending supports local economies in the study area, and there are businesses in and around the study area that are dependent on year-round as well as seasonal tourists.

Travel- and tourism-related spending in the Texas Connector Project study area totaled about $599.5 million in 2016, and 7,160 jobs in the study area were attributed to travel-generated employment. Table 4.9.2-4 provides an overview of the economic impacts of travel-related spending in the counties and parishes in the Texas Connector Project study area.

TABLE 4.9.2-4

Tourism Economy in the Louisiana Connector Project Study Area

Location	Travel and Tourism Spending ($ millions) (2016)	Tourism-Supporting Jobs (2016)	Job Earnings ($ millions) (2016)	Local/State Tax Revenue ($ millions)
TEXAS				
Jefferson County	489.1	5,970	125.2	8.3/28.4
Orange County	108.0	1,160	27.6	1.45/6.6
LOUISIANA				
Cameron Parish	2.4	30	0.9	<0.1/0.2

Sources: Dean Runyan Associates, 2017; University of New Orleans, 2017

The influx of construction workers would be limited to the time of construction and dispersed across the Texas Connector Project study area throughout the construction period. The demand for temporary housing by non-local workers is not expected to exceed the available number of hotels, motels, and campground units in the study area, but accommodations in the study area could experience some minor limited availability, particularly during planned construction periods that overlap with the peak tourism season in the project area. Section 4.9.4 discusses impacts on housing (including hotel/motel/campground rentals).

Construction of the Texas Connector Project would add a small number (about 30) of temporary employment opportunities to the study area. This would result in a minor, temporary decrease in the unemployment rate in the Texas Connector Project study area. The impact of indirect jobs in the study area would be the same as discussed for the Liquefaction Project.

Payroll taxes would be collected from workers employed in the construction of the Texas Connector Project, resulting in additional beneficial, short-term effects. PAPL estimates that payroll spending would be $89.8 million during the construction phase (of which, it is anticipated that $17.9 million would go to the local construction workforce) and operation would produce an estimated total annual payroll of $48 million. PAPL estimates that during construction, $18 million would be spent locally on the purchase of material goods and services and an estimated annual regional expenditure of $2.7 million during operation. The increase in economic activity resulting from spending during construction would result in a temporary, positive economic impact in the Texas Connector Project study area.

Operation of the Texas Connector Project would add 20 permanent jobs. These jobs would add more employment opportunities and would result in indirect economic benefits to the study area as the workers spend their salaries in the community, producing permanent, minor economic benefits to the local economy and employment in the Texas Connector Project area.

Louisiana Connector Project

Table 4.9.2-5 provides select employment and income statistics for the Louisiana Connector Project study area.

TABLE 4.9.2-5

Existing Economic Conditions for the Louisiana Connector Project Study Area

Location	Per Capita Income (U.S. Dollars)	Civilian Labor Force	Top Three Industries [a]	Unemployment Rate
UNITED STATES	$28,930	158,897,824	R, P, M	8.3
TEXAS	$26,999	13,006,330	E, R, P	7.0
Jefferson County	$24,154	113,186	E, M, R	8.8
Orange County	$25,489	38,866	E, M, R	8.4
City of Port Arthur	$18,464	23,855	E, M, C	11.5
LOUISIANA	$24,981	2,194,199	E, R, A	8.1
Allen Parish	$19,868	9,073	E, A, Pu	8.9
Beauregard Parish	$22,961	15,155	E, R, M	5.7
Calcasieu Parish	$25,005	94,684	E, A, R	8.3
Cameron Parish	$29,679	3,283	E, Ag, R	6.3
Evangeline Parish	$18,484	12,254	E, R, Ag	10.4
St. Landry Parish	$19,156	33,190	E, R, C	6.1
City of Sulphur, Louisiana	$22,724	8,901	M, R, C	8.6
City of Lake Charles	$23,932	36,664	E, R, A	9.5
City of Kinder	$16,979	1,062	A, E, Pu	7.4
City of Eunice	$17,486	4,412	E, R, O	7.0

Source: U.S. Census Bureau, 2016.

[a] Industries are defined under the 2012 NAICS and abbreviated as follows: **A** = Arts, Entertainment, and Recreation, and Accommodation and Food services; **Ag** = Agriculture, Forestry, Fishing, and Hunting, and Mining; **C** = Construction; **E** = Educational, Health and Social Services; **M** = Manufacturing; **O** = Other Services, except Public Administration; **P** = Professional, Scientific, Management, Administrative, and Waste Management Services; **Pu** = Public Administration; **R** = Retail Trade.

The top three industries in the Louisiana Connector Project study area are the same as those identified in the Liquefaction and Texas Connector Projects study areas – educational, health and social services; manufacturing; and retail trade. The total civilian workforce in Louisiana Connector Project study area is 319,691. The civilian workforce in the communities in proximity to the Louisiana Connector Project ranges from 1,062 in Kinder to 36,664 in Lake Charles. Over 23 percent of the civilian workforce in the study area resides in the communities identified in table 4.9.2-5.

The per capita incomes of the parishes in the study area range from $18,484 in Evangeline Parish to $29,679 in Cameron Parish. Two of the six parishes in the study area (Calcasieu and Cameron) have per capita incomes above the average for the State of Louisiana. Unemployment rates in the parishes in the study area range from 5.7 in Beauregard to 10.4 in Evangeline. Three of the six parishes in the study area (Allen, Calcasieu, and Evangeline) have unemployment rates above the state rate. At $24,154 and $25,489, respectively, both Jefferson and Orange Counties have per capita incomes below the average for the State of Texas. Additionally, the unemployment rates in both Jefferson and Orange Counties, at 8.8 and 8.4, respectively, are below the state rate.

Tourism opportunities in the Louisiana Connector Project study area are similar to those described for the Texas Connector Project and includes the Coushatta Casino Resort. Travel- and tourism-related spending in the Louisiana Connector Project study area totaled about $1.3 billion in 2016, and 17,830 jobs in the study area were attributed to travel-generated employment. Table 4.9.2-6 provides an overview of the economic impacts of travel-related spending in the counties and parishes in the Louisiana Connector Project study area. Impacts on tourism from the Louisiana Connector Project would be similar to those described above for the Texas Connector Project.

TABLE 4.9.2-6

Tourism Economy in the Louisiana Connector Project Study Area

Location	Travel and Tourism Spending ($ millions) (2016)	Tourism-Supporting Jobs (2016)	Job Earnings ($ millions) (2016)	Local/State Tax Revenue ($ millions)
TEXAS				
Jefferson County	489.1	5,970	125.2	8.3/28.4
Orange County	108.0	1,160	27.6	1.45/6.6
LOUISIANA				
Allen Parish	11.0	160	4.2	0.4/1.0
Beauregard Parish	25.4	360	9.7	0.9/2.3
Calcasieu Parish	645.8	9,140	247.2	23.3/59.4
Cameron Parish	2.4	30	0.9	<0.1/0.2
Evangeline Parish	5.1	70	1.9	0.2/0.5
St. Landry Parish	66.1	940	25.3	2.4/6.1

Sources: Dean Runyan Associates, 2017; University of New Orleans, 2017

The Louisiana Connector Project would impact farms and businesses focused on rice, crawfish fields, and silviculture. According to the USDA's Louisiana Crop Production Report (2016), rice is the fourth largest crop in the state with about 435,000 acres dedicated to the resource. While the project would affect these areas, PAPL would compensate landowners for loss of crops or timber during construction and for subsequent years as agreed upon with the landowner. In addition, the project would cross Sabine Lake, which is used for both recreational and commercial fishing. Of the 90,000-acre lake, the project would affect less than 1 percent of the total area.

Construction of the Louisiana Connector Project would add a small number (between 150 and 300) of temporary employment opportunities to the study area. This would result in a minor, temporary decrease in the unemployment rate in the Louisiana Connector Project study area.

Payroll taxes would be collected from workers employed in the construction of the Louisiana Connector Project, resulting in additional beneficial, short-term effects. PAPL estimates that payroll spending would be $108 million during the construction phase (of which, it is anticipated that $22 million would go to the local construction workforce) and estimated $1.2 million annually during operation. PAPL estimates that during construction, $116 million would be spent locally on the purchase of material goods and services of a total of $224 million in expenditures on goods and services during construction. The increase in economic activity resulting from spending during construction would result in a temporary, positive economic impact in the Louisiana Connector Project study area.

Operation of the Louisiana Connector Project would add 10 permanent jobs. These jobs would add more employment opportunities and would result in indirect economic benefits to the study area as the workers spend their salaries in the community, producing permanent, minor economic benefits to the local economy and employment in the Louisiana Connector Project area.

4.9.2.3 Nonjurisdictional Facilities

The SH 87, pipelines, and utilities relocation would add 75 temporary local construction jobs to the study area during the 20-month construction period. This would result in a minor, temporary decrease in the unemployment rate in the study area. Similar to the Projects, it is reasonable to expect that the construction of the nonjurisdictional facilities would result in a few temporary, indirect jobs as purchases for goods and services would increase along with the influx of the construction workforce to the project

area. The increase in economic activity resulting from spending during construction of the nonjurisdictional facilities would result in a temporary, positive economic impact in the study area.

4.9.2.4 Combined Projects Impacts on Economy and Employment

The Projects are expected to have a temporary, minor, and beneficial impact on the economy and employment during construction based on the creation of over 4,300 jobs, local expenditures estimated to be over $500 million, and payroll taxes associated with these positions estimated to be about $908 million. Operation of the Projects would create 230 new, permanent jobs. In addition to direct hires, it is reasonable to expect that construction of the Projects would result in many temporary, indirect jobs as purchases for goods and services would increase along with the influx of the construction workforce to the Projects area. Indirect employment, including hiring additional staff in the retail and service industries to accommodate the increase in demand for food, clothing, lodging, gasoline, and entertainment, would have a temporary stimulating effect on local economies. These indirect jobs would represent a temporary, minor, and beneficial increase in employment opportunities in the Projects area.

4.9.3 Local Taxes and Government Revenue

PALNG estimates that $369 million would be spent on direct local expenditures during construction of the Liquefaction Project. The estimated $783 million in payroll would increase the federal government's income tax revenues.

PAPL estimates that $18 million would be spent on direct local expenditures during construction of the Texas Connector Project. The estimated $89.8 million in payroll would increase the federal government's income tax revenues.

PAPL estimates that $116 million would be spent on direct local expenditures during construction of the Louisiana Connector Project. The estimated $108 million in payroll would increase the federal government's income tax revenues.

This would generate increased federal, state, and local tax revenue in counties and parishes where the Projects would be located. Expenditures on goods and services by construction workers and their families would also generate increased tax revenues. This increase in tax revenue would be a minor, temporary, and positive impact on tax revenue in the study area.

Operation of the Liquefaction, Texas Connector, and Louisiana Connector Projects would result in a minor, long-term increase in sales tax revenue from expenditures made locally on materials, goods, and services. PALNG expects that $24 million would be spent annually on local purchases from project operations. PAPL expects that $2.7 million and $250,000 would be spent annually on local purchases during operation of the Texas Connector and Louisiana Connector Projects, respectively.

4.9.4 Housing

4.9.4.1 Liquefaction Project

Housing statistics for the Liquefaction Project study area are listed in table 4.9.4-1. The study area has 88 hotels, motels, and RV parks along with over 42,000 rental housing units. Of the 42,000 rental housing units in the study area, 78 percent are in the five largest communities in proximity to the Liquefaction Project.

TABLE 4.9.4-1

Available Housing in the Liquefaction Project Study Area

Location	Total Housing Units [a]	Owner Occupied [a]	Renter Occupied [a]	Median Gross Rent ($) [a]	Rental Vacancy Rate (%) [a]	Vacant Housing Units	Hotels and Motels [b, d]	Campgrounds /RV Parks [c, d]
UNITED STATES	133,351,840	74,712,091	42,214,214	$928	6.4	16,425,535	--	--
TEXAS	10,305,607	5,693,770	3,455,426	$882	7.8	1,156,411	--	--
Jefferson County	106,857	58,939	34,556	$761	9.8	13,362	50	20
Orange County	35,952	24,507	7,547	$748	7.8	3,898	15	3
City of Beaumont	52,822	26,365	19,828	$765	10.8	6,629	--	--
City of Groves	6,830	4,554	1,698	$810	3.9	578	--	--
City of Nederland	7,910	5,415	1,781	$862	6.8	714	--	--
City of Port Arthur	23,912	11,637	8,169	$704	10.2	4,106	--	--
City of Port Neches	5,414	3,753	1,241	$878	12.0	420	--	--

[a] U.S. Census Bureau, 2016.
[b] Yellow Pages, 2017.
[c] Beaumont Convention & Visitors Bureau, 2017.
[d] City hotel, motel, campground, and RV park data for communities are accounted for in the county totals.
Note: Inventory of hotels, motels, and campgrounds was collected at county-level only.

The availability of housing in the study area may fluctuate during local and seasonal events as well as due to demand on housing from other industries. The rental vacancy rates in Jefferson and Orange Counties are 9.8 and 7.8, respectively. The rental vacancy rates in the five communities identified range from a low of 3.9 percent in Groves to a high of 12 percent in Port Neches.

PALNG estimates that about 60 percent of the workforce would be non-local. That equates to 1,800 non-local workers at peak construction placing demand on local temporary housing in the Liquefaction Project study area. Using a conservative estimate of 25 units per hotel/motel or campground, of which there are 88, we estimate that there are at least 2,200 rooms/sites available in the study area. Given the rental vacancy rates in the counties and communities in the study area) and number of hotel/motel rooms available in study area, the increased demand caused by the influx of the non-local construction workforce may cause a shortage in temporary housing availability in the Project area.

The influx of non-local construction workers to the study area would result in a minor, temporary increase in the demand for rental housing and/or hotel/motel rooms and campground sites. The Liquefaction Project could have a short-term positive impact on the area rental industry through increased demand and higher rates of occupancy; however, no significant impacts on local housing markets are expected. Increased demand in the study area could benefit the proprietors of the local motels, hotels, and other rental units through increased revenue. While the project could increase competition (and cost) for short-term housing and could decrease housing availability for local renters or residents, the demand for temporary housing by non-local workers is not expected to exceed the available number of hotels, motels, and campground units in the study area.

The increase in demand for short-term housing from non-local construction workers during the construction of the Liquefaction Project would be temporary and minor. In addition, we conclude the estimated 60 non-local employees needed during operations would not have a noticeable impact on housing resources in the study area.

4.9.4.2 Texas Connector and Louisiana Connector Projects

Texas Connector Project

Housing statistics for the Texas Connector Project study area are listed in table 4.9.4-2. At least 92 hotels, motels, and campgrounds along with over 42,300 rental housing units are within the study area. Of the 42,300 rental housing units in the study area, 77 percent are in the five largest communities in proximity to the Pipeline Project.

TABLE 4.9.4-2

Available Housing in the Texas Connector Project Study Area

Location	Total Housing Units [a]	Owner Occupied [a]	Renter Occupied [a]	Median Gross Rent ($) [a]	Rental Vacancy Rate (%) [a]	Vacant Housing Units	Hotels and Motels [b, e]	Campgrounds/ RV Parks [c, d, e]
UNITED STATES	133,351,840	74,712,091	42,214,214	$928	6.4	16,425,535	--	--
TEXAS	10,305,607	5,693,770	3,455,426	$882	7.8	1,156,411	--	--
Jefferson County	106,857	58,939	34,556	$761	9.8	13,362	50	20
Orange County	35,952	24,507	7,547	$748	7.8	3,898	15	3
City of Beaumont	52,822	26,365	19,828	$765	10.8	6,629	--	--
City of Groves	6,830	4,554	1,698	$810	3.9	578	--	--
City of Nederland	7,910	5,415	1,781	$862	6.8	714	--	--
City of Port Arthur	23,912	11,637	8,169	$704	10.2	4,106	--	--
City of Port Neches	5,414	3,753	1,241	$878	12.0	420	--	--
LOUISIANA	1,999,855	1,136,709	591,210	$788	8.1	271,936	--	--
Cameron Parish	3,524	2,369	239	$727	13.1	916	2	2

[a] U.S. Census Bureau, 2016.
[b] Yellow Pages, 2017.
[c] Cameron Parish Tourist Commission, 2017.
[d] Beaumont Convention & Visitors Bureau, 2017.
[e] City hotel, motel, campground, and RV park data for communities are accounted for in the county and parish totals.
Note: Inventory of hotels, motels, and campgrounds was collected at parish- and county-level only.

The availability of housing in the study area may fluctuate during local and seasonal events as well as due to demand on housing from other industries. The rental vacancy rates in the Texas Connector Project study area are the same as that of the Liquefaction Project study area apart from Cameron Parish with a rental vacancy rate of 13.1.

PAPL estimates that about 95 percent of the workforce needed for the Texas Connector Project would be non-local. That equates to 714 non-local workers at peak construction placing demand on local temporary housing in the study area. Using a conservative estimate of 25 units per hotel/motel or campground, of which there are 92, we estimate that there are at least 2,300 rooms/sites available in the study area. Given the rental vacancy rates in the parish, counties, and communities in the study area and number of hotel/motel rooms available in study area, there are sufficient vacant housing units to meet the increase in demand caused by the influx of the non-local construction workforce.

The influx of non-local construction workers to the study area would result in a minor, temporary increase in the demand for rental housing and/or hotel/motel rooms and campground sites. The Texas Connector Project could have a short-term positive impact on the area rental industry through increased demand and higher rates of occupancy; however, no significant impacts on local housing markets are

expected. Increased demand in the study area could benefit the proprietors of the local motels, hotels, and other rental units through increased revenue. While the project could increase competition (and cost) for short-term housing and could decrease housing availability for local renters or residents, the demand for temporary housing by non-local workers is not expected to exceed the available number of hotels, motels, and campground units in the study area.

The increase in demand for short-term housing from non-local construction workers during the construction of the Texas Connector Project would be temporary and minor. In addition, the estimated 16 non-local employees needed during operations would not have a noticeable impact on housing resources in the study area.

Louisiana Connector Project

Housing statistics for the Louisiana Connector Project study area are listed in table 4.9.4-3. At least 175 hotels, motels, and campgrounds along with over 84,503 rental housing units are within the study area.

TABLE 4.9.4-3

Available Housing in the Louisiana Connector Project Study Area

Location	Total Housing Units [a]	Owner Occupied [a]	Renter Occupied [a]	Median Gross Rent ($) [a]	Rental Vacancy Rate (%) [a]	Vacant Housing Units	Hotels and Motels [b, c, d]	Campgrounds/ RV Parks [d, d, f, g]
UNITED STATES	133,351,840	74,712,091	42,214,214	$928	6.4	16,425,535	--	--
TEXAS	10,305,607	5,693,770	3,455,426	$882	7.8	1,156,411	--	--
Jefferson County	106,857	58,939	34,556	$761	9.8	13,362	50	20
Orange County	35,952	24,507	7,547	$748	7.8	3,898	15	3
City of Port Arthur	23,912	11,637	8,169	$704	10.2	4,106	--	--
LOUISIANA	1,999,855	1,136,709	591,210	$788	8.1	271,936	--	--
Allen Parish	9,781	5,983	2,044	$522	6.6	1,754	22	4
Beauregard Parish	15,201	10,050	3,102	$669	6.3	2,049	10	3
Calcasieu Parish	84,954	51,678	23,647	$758	9.0	9,629	85	7
Cameron Parish	3,524	2,369	239	$727	13.1	916	2	2
Evangeline Parish	14,815	7,895	4,059	$539	7.3	2,861	4	1
St. Landry Parish	36,047	21,374	9,309	$593	9.2	5,364	0	0
City of Sulphur	9,053	5,484	2,615	$744	10.5	701	--	--
City of Lake Charles	32,469	16,325	12,615	$753	10.9	4,407	--	--
City of Kinder	1,137	544	466	$642	11.2	119	--	--
City of Eunice	4,578	2,242	1,904	$601	9.4	549	--	--

[a] U.S. Census Bureau, 2000, 2010, 2016; City-Data.com, 2015.
[b] Yellow Pages, 2017.
[c] HotelMotels.info, 2017
[d] Local hotel, motel, campground, and RV park data for communities are accounted for in the county and parish totals.
[e] Cameron Parish Tourist Commission, 2017.
[f] Beaumont Convention & Visitors Bureau, 2017.
[g] Louisiana Trip Planner, 2017
Note: Inventory of hotels, motels, and campgrounds was collected at parish- and county-level only.

The availability of housing in the study area may fluctuate during local and seasonal events as well as due to demand on housing from other industries. The rental vacancy rates in the parishes in the Louisiana

Connector Project area range from a low of 6.3 percent in Beauregard to a high of 13.1 percent in Cameron. The rental vacancy rates in Jefferson and Orange Counties are 9.8 and 7.8, respectively.

PAPL estimates that about 60 to 80 percent of the workforce needed for the Louisiana Connector Project would be non-local. That equates to 450 to 600 non-local workers at peak construction placing demand on local temporary housing in the Louisiana Connector Project study area. Using a conservative estimate of 25 units per hotel/motel or campground, of which there are 228 dispersed throughout the project area, we estimate that there are at least 5,700 rooms/sites available in the study area. Given the rental vacancy rates in the parishes, counties, and communities in the study area and number of hotel/motel rooms available in study area, there are sufficient vacant housing units to meet the increase in demand caused by the influx of the non-local construction workforce.

The influx of non-local construction workers to the study area would result in a minor, temporary increase in the demand for rental housing and/or hotel/motel rooms and campground sites. The Louisiana Connector Project could have a short-term positive impact on the area rental industry through increased demand and higher rates of occupancy; however, no significant impacts on local housing markets are expected. Increased demand in the study area could benefit the proprietors of the local motels, hotels, and other rental units through increased revenue. While the project could increase competition (and cost) for short-term housing and could decrease housing availability for local renters or residents, the demand for temporary housing by non-local workers is not expected to exceed the available number of hotels, motels, and campground units in the study area.

The increase in demand for short-term housing from non-local construction workers during the construction of the Louisiana Connector Project would be temporary and minor. In addition, the estimated 8 non-local employees needed during operations would not have a noticeable impact on housing resources in the study area.

4.9.4.3 Nonjurisdictional Facilities

PALNG estimates that about 50 percent of the workforce for construction of the nonjurisdictional facilities would be non-local. That equates to 75 non-local workers for the 20-month construction period placing demand on local temporary housing in the study area. Similar to the Liquefaction Project, there are sufficient vacant housing units to meet the increase in demand caused by the influx of the non-local construction workforce. The influx of non-local construction workers to the study area would result in a minor, temporary increase in the demand for rental housing and/or hotel/motel rooms and campground sites.

4.9.4.4 Combined Projects Impacts on Housing

The influx of non-local construction workers to the Projects study area would result in a minor to moderate, temporary increase in the demand for rental housing and/or hotel/motel rooms and campground sites. The Projects could have a short-term positive impact on the area rental industry through increased demand and higher rates of occupancy; however, no significant impacts on local housing markets are expected. Increased demand in the study area could benefit the proprietors of the local motels, hotels, and other rental units through increased revenue; however, it could increase competition (and cost) for short-term housing and could decrease housing availability for tourists, recreationalists, and local renters or residents. While some construction activity would be conducted during the peak tourism season (discussed in section 4.9.2), sufficient temporary housing is still likely to be available for tourists; however, it may be more difficult to find (particularly on short notice) and/or more expensive to secure. Based on the large number of accommodations in the Projects study area and surrounding areas, rental housing

accommodations along with hotels, motels, and campgrounds, would be sufficient to house the non-local construction workforce without significantly impacting or displacing tourists or local renters and residents.

4.9.5 Public Services

4.9.5.1 Liquefaction Project

Public services in the Liquefaction Project study area are summarized in table 4.9.5-1.

TABLE 4.9.5-1

Public Services Available in Liquefaction Project Study Area [a]

Location	Fire Departments	Nearest Distance to Mainline/ Facility (miles)	Police/Sheriff Departments	Nearest Distance to Mainline/ Facility (miles)	Hospitals	Nearest Distance to Mainline/ Facility (miles)
TEXAS						
Beaumont	12	21	1	21	4	21
Groves	1	11	1	11	1	10
Nederland	1	13	1	13	1	11
Sabine Pass	1	5	0	N/A	0	N/A
Port Arthur	7	5	1	5	2	8
Port Neches	1	13	1	13	0	N/A

N/A – not applicable

[a] Sources:
U.S. Bureau of Justice Statistics 2008 *Census of State and Local Law Enforcement Agencies*
https://apps.usfa.fema.gov/registry/summary
https://fire-departments.org
http://co.jefferson.tx.us/
http://www.co.orange.tx.us/
http://portarthurfd.com/about.php
http://www.parishofcameron.net
https://tea.texas.gov
http://www.countyoffice.org/police-department/

The project area is included within the Sabine Neches Chiefs Association, a mutual aid group serving the South East Texas community whose emergency assistance plan provides the community or member plant in need of assistance with equipment, manpower, area mobilization, and communications (Sabine Neches Chiefs Association, 2018). PALNG would develop an Emergency Response Plan (ERP) in coordination with local emergency response officials, and the facility would have a first responder group that supports local services to respond to incidents at the liquefaction terminal, thus reducing the need for local public service assistance. Based on the total number and location of police departments, mutual aid programs, and PALNG's ERP, the project would have a minor impact on the daily public service infrastructure in the vicinity of the Liquefaction Project.

PALNG anticipates that 200 permanent jobs would be created at the liquefaction facility, of which 60 are expected to be non-local hires that relocate to the Project area with their families. The addition of 60 families, or 152 people, would represent a negligible increase in the local population. In addition, as mentioned above, PALNG would implement an ERP developed in coordination with local officials in the event of an emergency during project operations. Therefore, we conclude that operations of the Liquefaction Project would have a negligible, long-term impact on the availability of public services.

4.9.5.2 Texas Connector and Louisiana Connector Projects

Texas Connector Project

Public services in the Texas Connector Project study area are summarized in table 4.9.5-2.

TABLE 4.9.5-2

Public Services Available in the Texas Connector Project Study Area [a]

Location	Fire Departments	Nearest Distance to Mainline/ Facility (miles)	Police/Sheriff Departments	Nearest Distance to Mainline/ Facility (miles)	Hospitals	Nearest Distance to Mainline/ Facility (miles)
TEXAS						
Beaumont	12	21	1	21	4	21
Groves	1	11	1	11	1	10
Nederland	1	13	1	13	1	11
Sabine Pass	1	5	0	N/A	0	N/A
Port Arthur	7	5	1	5	2	8
Port Neches	1	13	1	13	0	N/A
LOUISIANA						
Cameron Parish	1	10	5	Varies	1	30

[a] Sources:
U.S. Bureau of Justice Statistics 2008 *Census of State and Local Law Enforcement Agencies*
https://apps.usfa.fema.gov/registry/summary
https://fire-departments.org
http://co.jefferson.tx.us/
http://www.co.orange.tx.us/
http://portarthurfd.com/about.php
http://www.parishofcameron.net
https://tea.texas.gov
http://www.countyoffice.org/police-department/

Based on the total number and location of police, fire departments, and hospitals in the study area, there appears to be adequate public service infrastructure in the vicinity of the Texas Connector Project to accommodate the temporary needs of the non-local construction workforce and long-term needs of non-local operations workers, while not compromising services to residents. Therefore, we conclude that construction of the Texas Connector Project would have little or no short-term impact on the availability of local community facilities and services such as police, fire, and medical due to the short duration of the small influx of the non-local construction workforce relative to the current population of the study area.

PAPL anticipates that 20 permanent jobs would be created for operation of the pipeline and aboveground facilities, of which 16 are expected to be non-local hires that relocate to the project area with their families. The addition of 16 families (or 40 people) would represent a negligible increase in the local population. Therefore, we conclude that operations of the Texas Connector Project would have a negligible, long-term impact on the availability of public services.

Louisiana Connector Project

Public services in the Louisiana Connector Project study area are summarized in table 4.9.5-3.

TABLE 4.9.5-3

Public Services Available in the Louisiana Connector Project Study Area [a]

Location	Fire Departments	Nearest Distance to Mainline/ Facility (miles)	Police/Sheriff Departments	Nearest Distance to Mainline/ Facility (miles)	Hospitals	Nearest Distance to Mainline/ Facility (miles)
TEXAS						
City of Port Arthur	1	5	1	4	1	6
LOUISIANA						
City of Sulphur	1	<1	1	1	1	2
City of Lake Charles	1	8	2	12	3	9
City of Kinder	1	3	1	3	1	2
City of Eunice	1	2	1	2	1	2

[a] Sources:
LDE, 2017
USACOPS, 2017a, 2017b, 2017c, 2017d, 2017e, 2017f, 2017g
Beauregard Parish Police Jury, 2017
Calcasieu Parish Policy Jury, 2017
Cameron Parish Police Jury, 2017
County Office, 2017
USA Fire & Rescue, 2017
AHD, 2017a, 2017b
TDSHS, 2016
AdvancED, 2015

Based on the total number and location of police departments, fire departments, and hospitals in the study area, there appears to be adequate public service infrastructure in the vicinity of the Louisiana Connector Project to accommodate the temporary needs of the non-local construction workforce and long-term needs of non-local operations workers, while not compromising services to residents. Therefore, we conclude that construction of the Louisiana Connector Project would have little or no short-term impact on the availability of local community facilities and services such as police, fire, and medical due to the short duration of the small influx of the non-local construction workforce relative to the current population of the study area.

PAPL anticipates that 10 permanent jobs would be created for operation of the pipeline and aboveground facilities, of which 6 to 8 are expected to be non-local hires that relocate to the project area with their families. The addition of 6 to 8 families (or 15 to 20 people) would represent a negligible increase in the local population. Therefore, operations of the Louisiana Connector Project would have a negligible, long-term impact on the availability of public services.

4.9.5.3 Nonjurisdictional Facilities

PALNG estimates 75 non-local construction workers would be hired for the duration of the activities associated with the relocation of SH 87, pipelines, and utilities. Any temporary increase in population would be distributed throughout the study area and would not have a permanent impact on any one population. Based on the total number and location of public services throughout the study area, there

appears to be adequate public service infrastructure in the vicinity to accommodate the temporary needs of the non-local construction workforce while not compromising services to residents.

4.9.5.4 Combined Projects Impacts on Public Services

Assuming all applicable permits and authorizations are received when anticipated, the Projects are expected to have their peak workforce requirements at roughly the same time, from the fourth quarter of 2019 through the first quarter of 2022. At the peak, anticipated for the third quarter of 2020, a combined workforce of over 3,230 workers would be needed. This would be an increase of 1 percent to the population of Cameron Parish and Orange and Jefferson Counties, where the Projects would overlap the most geographically. Based on the total number and location of public services, there appears to be adequate public service infrastructure near the Projects to accommodate the temporary needs of the non-local construction workforce and long-term needs of non-local operations, while not compromising services to residents. In addition, any temporary increase in population would be distributed throughout the study area and would not have a permanent impact on public services in any one location.

4.9.6 Transportation and Traffic

4.9.6.1 Liquefaction Project

Roadway Transportation

Highway access to the Liquefaction Project would be provided via SH 87 with traffic to the site passing through the Premcor Refinery and the intersection of SH 87 and SH 82. Construction vehicles and equipment accessing the project site may result in temporary impacts on local traffic. PALNG estimates that during peak construction just over 3,000 workers would be traveling to the project site via personal vehicle or bus. The liquefaction facility site would have 500 parking spaces available and, therefore, it is estimated that about 650 workers[35] would commute directly to the site daily. An estimated 48 buses would transport the remaining 2,350 workers to and from the site from an offsite parking lot. PALNG has identified four potential parking areas near the project site where workers would park and meet shuttle buses to then be transported to the site. In total, it is estimated that vehicles and buses would make trips two times per day during peak travel times at peak construction associated with the movement of the construction workforce to and from the project site.

Ground-based deliveries would occur throughout the 60-month construction period. At the peak of material and equipment delivery (month 11), PALNG estimates 6,900 deliveries per month to the project site. On average, 2,562 material deliveries per month would be made to the site throughout the construction period. When possible, ground-based deliveries would be made during off-peak hours to minimize congestion and impacts on roadways in the Liquefaction Project study area.

During operation of the project, PALNG estimates 30 trucks or tanker trucks would transport commodities (e.g., liquid nitrogen, condensate product, etc.) to or from the facility per week. An additional tanker truck of diesel fuel would come to and from the facility on a bi-weekly basis.

AECOM, on behalf of PALNG, conducted a traffic impact analysis focusing on impacts on the intersection of SH 87 and SH 82 due to traffic associated with the construction and operation of the Liquefaction Project. The analysis found the intersection of SH 87 and SH 82 to currently be operating at

35 This assumes the 500 parking spaces would be utilized by 500 construction worker vehicles at a vehicle occupancy rate of 1.3.

a level of service[36] (LOS) B. An intersection with a LOS B indicates there is stable traffic flow with a high degree of freedom to select speed and operating conditions but with some influence from other users. The traffic analysis found the intersection of SH 87 and SH 82 remained at a LOS B after considering the workforce and ground-based delivery traffic projected to occur at the project site during construction and operation (LDWF, 2016). Because the LOS on the roads in the project study area would remain at current acceptable levels of service, the impacts on the roadways would be minor and temporary.

To minimize and mitigate potential impacts on transportation, PALNG would develop a Transportation Plan as part of its project-specific Implementation Plan. We agree that a transportation plan outlining the measures PALNG would adopt to manage vehicle traffic during construction of the project considering peak travel times and emergency services would mitigate for project-related impacts. Therefore, **we recommend that:**

- **Prior to construction of the Liquefaction Project, PALNG should file with the Secretary its Transportation Plan for the Liquefaction Project, for review and written approval by the Director of OEP. The plan should include personnel training; permitting requirements; consultations conducted with local and state agencies; and how access to/from the work site by personnel, equipment, and materials would be managed on a daily basis throughout construction.**

Marine Transportation

As described in section 2.1.1, PALNG would construct a MOF along the western shore of the Port Arthur Canal and north of the liquefaction facility to support the transfer of construction materials delivered by barge. Marine traffic would access the MOF along the SNWW, which is already used for over 125 million tons of cargo shipments annually (SNND, 2017b).

During construction, PALNG estimates between 100 and 200 deliveries would be needed per month during the first 25 months of construction, or three to six barges per day. These trips would not cause significant impact when compared to the total amount of traffic in the SNWW.

In addition to commercial barge traffic, there is also traffic associated with commercial offshore fishing vessels. Commercial fishing traffic in the SNWW is minor (USACE, 2011). Recreational fishing also occurs along the SNWW. The impacts of construction on marine traffic in the SNWW would be minor and temporary to short-term, concentrated during the first 25 months of project construction.

As a result of measures and methods described in this section, construction activities related to the Liquefaction Project would result in minor and temporary to short-term impacts on transportation infrastructure lasting the duration of project construction. During operation of the project, PALNG estimates 180 transits of LNG vessels per year from the liquefaction facility. The impacts of operation of the Liquefaction Project on marine traffic in the SNWW would be minor and permanent.

4.9.6.2 Texas Connector and Louisiana Connector Projects

The Texas Connector Project is primarily easily accessible via local roads and highways in the study area, namely U.S. Highway 96 and SH 73. The Louisiana Connector Project is primarily easily accessible via local roads and highways in the study area, namely Interstate Highway 10 and SH 27, 171, and 165 in Louisiana, and SH 87 in Texas. The Projects may temporarily impact transportation and traffic

36 LOS, as defined by the Federal Highway Administration, is a measure of a road's operating conditions and reflects the relative ease of traffic flow on a scale of A to F, with a free-flowing intersection or roadway being rated LOS A and highly congested conditions rated LOS F (Federal Highway Administration, 2017).

across and within roadways during construction due to an increase in vehicle traffic associated with the commuting of the construction workforce to the project area and the movement of construction vehicles and delivery of equipment and materials to the construction work areas.

PAPL estimates a total of 3,120 vehicles trips per week for the Texas Connector Project along the length of the pipeline route during the 12-month construction period. Of this number, 600 heavy truck trips and 2,520 commuter trips are anticipated. PAPL estimates a total of 626 vehicles trips per week for the Louisiana Connector Project along the length of the pipeline route during the 21-month construction period. Of this number, 91 heavy truck trips and 535 commuter trips are anticipated. Construction activities in the Project study areas would result in temporary effects on local transportation infrastructure and vehicle traffic, including disruptions from increased transportation of construction materials, equipment and workforce; disruptions from construction of pipeline facilities at or across existing roads; and damage to local roads caused by heavy machinery.

The Texas Connector and Louisiana Connector Projects would cross the paved or roads and railroads via bore, resulting in little to no disruption to traffic or road impacts. Lightly traveled and unimproved rural dirt roads would be crossed using the open-cut method, usually requiring temporary road closures and/or detours. Where detours are infeasible, one road lane would be left open to maintain traffic flow. Most open-cut crossings would be resurfaced after a few days of completion. Traffic control measures would be employed as necessary to ensure safety of local traffic. Additionally, PAPL would schedule work within roadways to avoid commuter traffic and impacts on school bus routes, to the extent practicable.

Based on the small number of new, locally based permanent employees associated with the Texas Connector and Louisiana Connector Projects, the additional operations workforce would result in a negligible impact on the local transportation infrastructure and traffic. During project operations, the number and types of vehicles and equipment necessary to attend to maintenance activities would be dependent on the type of activity but would be significantly less than pipeline construction.

Specific to the Louisiana Connector Project, water routes would also be used to access portions of the upland right-of-way and Sabine Lake construction. Based on PAPL's alignment sheets for the project, the ICWW would be used to provide equipment and materials access to portions of the construction right-of-way between approximate MPs 26 and 34.

Vessels used to access Sabine Lake would consist of digging and backfill barges, pipelaying barges, pipe transportation barges, HDD barges, and tug boats. More specifically, PAPL states that construction across Sabine Lake is estimated to require:

- two digging barges;
- two backfill barges;
- two barges to transport pipe segments from the contractor yard to the pipelay barges with a total of one combined trip per day; and
- nine other construction support vessels including tug boats, port-o-let, and crew boat.

Sabine Lake is regularly accessed by similar types of activities and the project would impact a relatively small percentage (less than 1 percent) of the entire lake area. Project-related impacts would primarily affect barges and smaller recreational vessels. To mitigate for potential impacts on other vessels in Sabine Lake, PAPL stated that the pipeline would be installed using barges mobilized with tug boats.

This procedure would minimize impacts resulting from construction operations. Furthermore, although not specified, it is likely that PAPL would conduct lake construction similar to other projects in the area by, for example, providing project-specific details to the USCG such as the timing of, and areas in which, water-based construction would occur, as well as the types of vessels that would be used. PAPL would post notifications in the local newspapers prior to and during construction, including maps outlining construction corridors to be avoided; erect signs about the project at boat launch facilities used to access Sabine Lake; and place warning signs to construction vessels indicating safe distances to be maintained. In addition, PAPL would place PVC poles displaying warning signs along the right-of-way boundary and install safety lighting to illuminate the work area. PAPL would also be required to comply with all navigation rules and regulations in the project vicinity.

As a result of measures and methods described in this section, we conclude that construction and operation activities related to the Texas Connector and Louisiana Connector Projects would result in minor and temporary to short-term impacts on transportation infrastructure and traffic.

4.9.6.3 Nonjurisdictional Facilities

SH 87 provides the only land access route to the community of Sabine Pass, and we received comments that this road regularly experiences flooding due to tidal action and storm surge, prohibiting access by commuters, tourists, and other travelers. Commenters indicate relocating SH 87 farther inland and improving the road, as proposed by PALNG, would help alleviate these issues and allow better traffic flow to and from Sabine Pass.

Construction of the nonjurisdictional facilities may temporarily impact transportation and traffic across and within roadways during construction due to an increase in vehicle traffic associated with the commuting of the construction workforce to the project area and the movement of construction vehicles and delivery of equipment and materials to the construction work areas. Traffic control measures, such as flagmen and signs, would be employed as necessary to ensure safety of local traffic. Additionally, the current SH 87 would remain open until the relocated SH 87 is completed.

As a result of measures and methods described in this section, construction activities related to the nonjurisdictional facilities would result in minor and temporary to short-term impacts on transportation infrastructure.

4.9.6.4 Combined Projects Impacts on Transportation and Traffic

Construction activities in the Projects study area would result in temporary effects on local transportation infrastructure and vehicle traffic, including disruptions from increased transportation of construction equipment, materials, and workforce; disruptions from construction of pipeline facilities at or across existing roads; and damage to local roads caused by heavy machinery and materials. To minimize and mitigate potential impacts, PALNG would prepare a transportation plan for managing vehicle traffic during construction of the Liquefaction Project, which would mitigate for impacts considering peak travel times and emergency services. To further minimize and mitigate potential impacts, PALNG and PAPL would limit construction activities to between 7:00 a.m. and 10:00 p.m. Therefore, workers would travel to and from the site earlier and later in the day, outside of peak traffic hours, thus minimizing their contribution to traffic congestion. Operation of the Projects would require a total 230 personnel, which would not significantly increase the number of vehicles already accessing the Projects area. As a result of measures and methods described in this section, construction and operation activities related to the Projects would result in minor and temporary to short-term impacts on transportation infrastructure and traffic.

4.9.7 Property Values

4.9.7.1 Liquefaction Project

Potential impacts on the value of a tract of land depends on many factors, including size, the values of adjacent properties, presence of other industrial facilities or pipelines, the current value of the land, and the extent of development and other aspects of current land use.

The proposed location for the Liquefaction Project is about 4 miles south of the city of Port Arthur, an active port and the location of a large portion of the nation's oil refining capacity. The closest residential areas are 4 miles north in Port Arthur and 6 miles southeast in Sabine Pass. Given the proximity of the Liquefaction Project to residential areas and the historical presence of industry in the area, it is unlikely that there would be any adverse effects on property values of nearby residences.

4.9.7.2 Texas Connector and Louisiana Connector Projects

The effect that a pipeline easement may have on property value is a damage-related issue that would be negotiated between the parties during the easement acquisition process, which is designed to provide fair compensation to the landowner for the right to use the property for pipeline construction and operation. Appraisal methods used to value land are typically based on objective characteristics of the property and any improvements. The impact a pipeline could have on a property's value would depend on many factors including the size of the tract, the values of adjacent properties, the presence of other utilities, the current value of the land, and the current land use. Subjective valuation is generally not considered in appraisals. A potential purchaser of property may decide to purchase land based on his or her planned use. An industrial user might find the pipeline (i.e., a potential source of energy for an industrial plant) preferable; a farmer looking for land for grazing or cropland may or may not find it objectionable. If the presence of a pipeline renders a planned use infeasible, it is possible that a potential purchaser would decide not to purchase the property; however, each potential purchaser has different criteria and differing capabilities to purchase land.

Property taxes for a piece of property are generally based on the actual use of the land. Construction of the pipeline would not change the general use of the land but would preclude construction of aboveground structures on the permanent right-of-way. If a landowner believes that the presence of a pipeline easement impacts the value of his or her land, resulting in an overpayment of property taxes, he or she could appeal the issue of the assessment and subsequent property taxation to the local property tax agency.

4.9.8 Environmental Justice

For projects with major aboveground facilities, FERC regulations (18 CFR 380.12[g][1]) direct us to consider the impacts on human health or the environment of the local populations, including impacts that would be disproportionately high and adverse for minority and low-income populations. Additionally, during project scoping, we received comments requesting that the EIS identify the impacts of the Projects on minority and low-income populations (see section 1.3.1).

The EPA's Environmental Justice Policies (which are directed, in part, by Executive Order 12898: *Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations*) focus on enhancing opportunities for residents to participate in decision making. The EPA (2011) states that Environmental Justice involves meaningful involvement so that: "1) potentially affected community residents have an appropriate opportunity to participate in decisions about a proposed activity that would affect their environment and/or health; 2) the public's contributions can influence the regulatory agency's

decision; 3) the concerns of all participants involved would be considered in the decision-making process; and 4) the decision-makers seek out and facilitate the involvement of those potentially affected." CEQ also has called on federal agencies to actively scrutinize a number of important issues with respect to environmental justice (CEQ, 1997).

As part of our NEPA review, we have evaluated potential environmental justice impacts related to the Projects taking into account the following:

- The racial and economic composition of affected communities.
- Public participation strategies, including community or tribal participation in the process.

All public documents, notices, and meetings for the Projects were made available to the public during our review of the Projects. PALNG and PAPL met with many different stakeholders during the initial development of the Projects. These efforts involved open houses with the affected communities and local authorities. PALNG and PAPL also established, and are maintaining, a project website to share project information with the public.

PALNG and PAPL also used the FERC's Pre-filing Process (see section 1.3). One of the major goals of this process is to increase public awareness and encourage public input regarding every aspect of the Projects (e.g., design, siting, routing, environmental concerns and impacts) before an application is filed. As part of this process, FERC staff participated in PALNG's and PAPL's open houses and hosted FERC scoping sessions to receive input from the public about the Projects. Interested parties have had, and will continue to be given, opportunities to participate in the NEPA review process. To date, this included the opportunity to participate in the public scoping meetings within the project area to identify concerns and issues that should be covered in the EIS, and the opportunity to submit written comments about the Projects to the FERC. Stakeholders also had the opportunity to review the draft EIS and provide comments directly to the FERC staff in person (during scheduled comment sessions) or in writing via mail or internet. As described section 1.3.2, all three methods were used to provide comments.

Based on published EPA guidance concerning environmental justice reviews (2011), we used a three-step approach to conduct our review of the Projects. These steps are to:

1. determine the existence of minority and low-income populations;
2. determine if resource impacts are high and adverse; and
3. determine if the impacts fall disproportionately on environmental justice populations.

For the purposes of this review, a low-income population exists when the percentage of all persons living below the poverty level is more than the percentage for the state where the census tract is located. Also, for the purpose of this review, minority population exists when:

1. the total racial minorities in a U.S. Census Bureau-defined census tract (U.S. Census Bureau, 2016) are more than 50 percent of the tract's population;
2. the percentage of a racial minority in a census tract is "meaningfully greater"[37] than in the comparison group;

37 "Meaningfully greater" is defined in this analysis when minority or ethnic populations are at least 10 percentage points more than in the comparison group, which was the county/parish in which the census tract was located.

3. the total ethnic minorities in a census tract are more than 50 percent of the tract's population; and

4. the percentage of ethnic minorities in a census tract is meaningfully greater than in the comparison group.

Racial and ethnic minorities include: African American/Black, Native American or Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, two or more races, and other races; and the Hispanic or Latino ethnicity.

4.9.8.1 Liquefaction Project

Two unique census tracts are within a 0.5-mile radius of the Liquefaction Project. In Texas and Louisiana, minorities comprise 25.2 and 37.2 percent of the total population respectively. The percentage of minorities in the census tracts within 0.5 miles of the Liquefaction Project are 5.4 to 7.8 percent. Neither of the two census tracts within 0.5 mile of the Liquefaction Project have a minority population greater than the minority population of their respective county or parish (41.8 percent in Jefferson County and 37.2 percent in Cameron Parish).

To restate, for this analysis, a low-income population exists when the percent of all persons living below the poverty level is greater than the percent of persons below poverty level for the state where the census tract is located. Neither census tract within 0.5 mile of the Liquefaction Project has a low-income population meaningfully greater than that of the respective state.

Neither of the census tracts identified within 0.5 mile of the Liquefaction Project has an identified environmental justice community. Therefore, construction and operation of the Liquefaction Project would not have a disproportionately high adverse effect on minority or low-income populations.

4.9.8.2 Texas Connector and Louisiana Connector Projects

Texas Connector Project

Eight unique census tracts are within a 0.5-mile radius of the centerline of the pipeline and within a radius around each compressor station that extends to the nearest NSA. Of these, one tract, Census Tract 113.02 in Cameron County, Texas qualifies as a minority population for Black/African-American based on the definitions above and is considered meaningfully greater than that of the state levels. As such, this tract is considered an environmental justice community.

The Texas Connector Project would result in negligible to minor negative impacts and minor positive impacts on socioeconomic characteristics and economies in the project area. As discussed throughout this EIS, potentially adverse environmental effects associated with the project would be minimized or mitigated, as applicable. Although the racial composition of one census tract traversed by the project show some deviations from state-level statistics, there is no evidence that the project would cause a disproportionate share of adverse environmental or socioeconomic impacts on any racial, ethnic, or socioeconomic group.

Louisiana Connector Project

Twenty-two (22) unique census tracts are within a 0.5-mile radius of the centerline of the pipeline (116, 51, 203, 224, 9607, 27, 23, 32, 34, 22.01, 29, 28, 33, 9702.01, 9505, 9504, 9501, 9607, 9608, 9503, 9508, 9505) and within a radius around each compressor station that extends to the nearest NSA (9505).

Of these, one tract, Census Tract 51 in Jefferson County, Texas qualifies as a minority and low-income population based on the definitions above and is considered meaningfully greater than that of the state levels (see table 4.9.8-1). Census Tract 203 in Orange County, Texas; and Louisiana Census Tracts 28 in Calcasieu Parish; 9501 in Allen Parish; 9607 and 9608 in St. Landry Parish; and 9503 and 9508 in Evangeline Parish have poverty levels above that of the state level (see table 4.9.8-1). As such, these tracts are considered environmental justice communities.

Similar to the Texas Connector Project, the Louisiana Connector Project would result in negligible to minor negative impacts and minor positive impacts on socioeconomic characteristics and economies in the project area. Potentially adverse environmental effects associated with the project would be minimized or mitigated, as applicable. Although the racial and economic composition of the counties and parishes traversed by the project and census tracts within 0.5 mile of the project show some deviations from state-level statistics, there is no evidence that the project would cause a disproportionate share of adverse environmental or socioeconomic impacts on any racial, ethnic, or socioeconomic group.

4.9.8.3 Combined Projects Impacts on Environmental Justice

The primary project-related health issue would be the risk associated with an unanticipated failure at the liquefaction terminal, pipelines, or compressor stations. Section 4.12 discusses the localized risks to public safety that could result from a pipeline failure and describes how applicable safety regulations and standards would minimize the potential for these risks. Because the Projects generally would be in and traverse sparsely populated areas, the number of persons who would be at risk of injury due to a failure would be low; and there is no evidence that such risk would be disproportionately borne by any racial, ethnic, or socioeconomic group. Therefore, construction and operation of the Projects would not have a disproportionately high adverse effect on minority or low-income populations.

TABLE 4.9.8-1

Race, Ethnicity, and Poverty Data by Census Tract for the Louisiana Connector Project

State/ Census Tract, County or Parish	White	Black/ African-American	American Indian or Alaskan Native	Asian	Native Hawaiian/ Pacific Islander	Some Other Race	Two or More Races	Hispanic (any Race)	Total Minority	Below Poverty Level
TEXAS	70.4%	11.9%	0.7%	3.8%	0.1%	10.5%	2.7%	37.6%	54.7%	15.5%
Census Tract 51, Jefferson County, Texas	8.3%	**89.1%**	0.0%	0.1%	0.0%	1.4%	1.2%	2.9%	**92.7%**	**33.1%**
Census Tract 203, Orange County, Texas	83.7%	10.5%	0.4%	0.7%	0.0%	3.0%	1.7%	6.7%	19.7%	**32.4%**
LOUISIANA	62.6%	32.0%	0.7%	1.6%	<0.1%	1.5%	1.6%	4.3%	39.7%	19.1%
Census Tract 28, Calcasieu Parish, Louisiana	89.7%	6.3%	0.4%	0.3%	0.2%	0.8%	2.2%	3.7%	12.7%	**29.8%**
Census Tract 9501, Allen Parish, Louisiana	95.4%	2.1%	1.2%	0.1%	0.1%	0.3%	0.8%	1.0%	5.2%	**19.5%**
Census Tract 9607, St. Landry Parish, Louisiana	58.7%	37.1%	0.5%	0.1%	0.0%	2.0%	1.7%	2.1%	42.2%	**21.0%**
Census Tract 9608, St. Landry Parish, Louisiana	75.7%	21.0%	0.4%	0.3%	0.0%	0.9%	1.7%	0.9%	24.8%	**20.7%**
Census Tract 9503, Evangeline Parish, Louisiana	78.1%	14.9%	0.4%	0.5%	0.0%	4.6%	1.6%	8.1%	25.6%	**19.9%**
Census Tract 9508, Evangeline Parish, Louisiana	65.9%	32.2%	0.2%	0.1%	0.0%	0.6%	1.1%	1.5%	34.7%	**24.3%**

4.10 CULTURAL RESOURCES

Section 106 of the NHPA, as amended, requires the FERC to take into account the effects of its undertakings on properties listed or eligible for listing on the NRHP, and to afford the ACHP an opportunity to comment on the undertaking. PALNG and PAPL, as non-federal parties, are assisting the FERC in meeting our obligations under section 106 and the implementing regulations at 36 CFR 800 by preparing the necessary information, analyses, and recommendations, as authorized by 36 CFR 800.2(a)(3).

Construction and operation of the Projects could potentially affect historic properties (i.e., cultural resources listed or eligible for listing on the NRHP). Historic properties could include prehistoric or historic archaeological sites, districts, buildings, structures, and objects, as well as locations with traditional value to Native Americans or other groups. Such historic properties generally must possess integrity of location, design, setting, materials, workmanship, feeling, and association, and must meet one or more of the criteria specified in 36 CFR 60.4. Direct effects could include destruction or damage to all, or a portion, of an historic property. Indirect effects could include the introduction of visual, atmospheric, or audible elements that affect the setting or character of a historic property.

4.10.1 Cultural Resources Surveys

4.10.1.1 Liquefaction Project

PALNG contacted the Texas State Historic Preservation Office (SHPO) on May 19, 2015, regarding the need for cultural resources investigations on about 2,900 acres of property owned by PALNG, which includes the proposed liquefaction facility. PALNG recommended that the entire 2,900-acre area, which also includes the nonjurisdictional SH 87 and pipeline and utility relocation corridors, was previously disturbed and that no cultural resource survey be required. On June 2, 2015, the Texas SHPO concurred that no historic properties would be affected by the Liquefaction Project within the 2,900-acre property. We concur.

PALNG contacted the Texas SHPO regarding the turning basin within the SNWW, Dredge Disposal Areas 9A and 9B, and a dredge disposal area within the J.D. Murphree WMA. The Texas SHPO responded on August 24, 2017, that no historic properties would be affected. We concur.

PALNG has not yet provided information to or comments from the Texas SHPO concerning proposed Dredge Disposal Area 8.

4.10.1.2 Texas Connector and Louisiana Connector Projects

Texas Connector Project

PAPL surveyed a 300-foot-wide corridor along 39.5 miles of the Northern and Southern Pipelines and six laterals, with expansions of the corridor, as needed, for crossing waterbodies or manmade features. PAPL also surveyed a 100-foot-wide corridor centered on proposed access roads; three contractor yards; and the entire footprint of the proposed compressor stations, meter stations, and MLV sites. The area examined for historic aboveground architectural resources includes those areas within 164 feet of the proposed pipeline Project's facilities. PAPL provided the resulting Phase I Cultural Resources Survey reports to the FERC and Texas and Louisiana SHPOs, for their respective states.

Texas

Cultural resources surveys for archaeological and architectural resources have been completed for 83.3 percent of the Northern Pipeline and 50.6 percent of the Southern Pipeline in Texas. Surveys were

completed for the North Compressor Station, three contractor yards, and the HPL, FGT, and GTS/CIPCO Meter Stations. The historic aboveground survey resulted in the identification of one cemetery and five historic standing structures that have been assessed as not eligible for the NRHP. The structures represent residential dwellings dating from the early- to mid-twentieth century. The Granger Family Cemetery was identified within the Northern Pipeline survey corridor. No new archaeological resources have been identified to date; however, three previously recorded sites (41JF84, 41JF91, and 41OR89) have not been assessed for NRHP eligibility as they extend into parcels where landowners have denied survey permission, or the sites were submerged at time of survey.

In a letter dated September 16, 2016, the Texas SHPO concurred with the Phase I Cultural Resources Survey report's recommendation that PAPL maintain a 25-foot buffer zone between the Granger Family Cemetery and the construction workspace to prohibit inadvertent encroachment on this property. The Texas SHPO also requested surveys be completed for the three previously recorded sites (41JF84, 41JF91, and 41OR89) that have not been assessed for NRHP eligibility. PAPL provided a plan to avoid the Granger Family Cemetery that included a 25-foot fenced buffer on the eastern and western property boundaries; however, while the cemetery would be avoided and preserved in place, the pipeline would be within 25 feet of the cemetery boundary. In a letter dated July 28, 2017, the Texas SHPO requested mechanical scraping of the proposed buffer area to confirm cemetery boundaries. PAPL has not yet provided results of the additional investigations to FERC or Texas SHPO.

In a letter dated November 2, 2018, the Texas SHPO concurred with the Phase I Cultural Resources Survey report's NRHP assessment of not eligible for five newly identified historic architecture resources.

The proposed South Compressor Station, two access roads, and 1.8 miles of the Northern Pipeline are situated within the 2,900-acre Liquefaction Project property. As discussed in section 4.10.1.1, this area was reviewed by the Texas SHPO and it was determined that no historic properties would be affected by the project.

PAPL provided a Phase I report summarizing the survey results for portions of the Southern Pipeline that only cross the J.D. Murphree WMA. No archaeological sites or architectural resources were identified during survey of the J.D. Murphree WMA. On September 13, 2016, the Texas SHPO concurred with the Phase I report's recommendations that no historic properties within the areas surveyed would be affected by the Texas Connector Project. We concur also.

Workspace for the Northern Pipeline, GTS/CIPCO Lateral, GTS/CIPCO Meter Station, and two access roads on the Texas Connector Project are located within the National Register Historic District of the Lucas Gusher, Spindletop Oil Field (NR# 66000818), which is also a National Historic Landmark. Following construction of the Northern Pipeline and GTS/CIPCO Lateral, the workspace would be restored to preconstruction conditions, except where trees are cleared over the permanent right-of-way. The GTS/CIPCO Meter Station would be a permanent aboveground facility that would change the visual landscape of the area. AR-N-19 is an existing gravel road that would be widened/regraded for temporary use then later restore to preconstruction conditions and AR-GTS-2 would be a permanent access road to the GTS/CIPCO Meter Station.

PAPL would survey the remaining Northern Pipeline, laterals, TETCO and NGPL Meter Stations, and access roads and submit the results of surveys, as well as address impacts on the Historic District, in future survey reports.

Louisiana

Cultural resources surveys for archaeological or architectural resources have been completed for 92.5 percent of the Southern Pipeline in Louisiana; no cultural resources were identified. On September

12, 2016, the Louisiana SHPO concurred with the Phase I's recommendations that no historic properties within the areas surveyed would be impacted by the Texas Connector Project.

PAPL would survey the remaining Southern Pipeline, KMLP Lateral, and KMLP Meter Station, and submit the results of surveys in future survey reports.

Louisiana Connector Project

PAPL surveyed a corridor ranging from 225 to 325 feet wide along 131 miles of the Louisiana Connector Project's pipeline, with expansions of the corridor as needed for crossing waterbodies or manmade features. Of this, 113.3 miles would be constructed on land and 17.6 miles would extend across Sabine Lake. PAPL also surveyed a 32.8-foot-wide corridor centered on 125 proposed access roads; 5 contractor yards; 1 compressor station site, 8 interconnects and 1 meter station; 9 MLV sites; and 4 pig launcher/receiver facilities. The area examined for historic aboveground architectural resources included those areas within 164 feet of the proposed project's facilities. PAPL provided the resulting Phase I Cultural Resources Survey report to the FERC and Louisiana SHPO. On October 17, 2018, after issuance of the draft EIS, PAPL also provided the report to the Coushatta Tribe of Louisiana.

Texas

The Centana and PALNG Meter Stations, the HDD entry pad, and temporary workspace are within the 2,900-acre Liquefaction Project property. As discussed in section 4.10.1.1, this area was reviewed by the Texas SHPO and it was determined that no historic properties would be affected by the project. PAPL recommended that no survey was required for the remaining onshore land in Texas. On May 15, 2017, the Texas SHPO concurred that no cultural resources surveys would be required for the terrestrial portion of the Project in Texas. We concur also.

PAPL completed a submerged cultural resources survey of a 1-mile, 600-foot-wide corridor along the offshore portion of the Louisiana Connector Project across Sabine Lake in Texas and provided the resulting report to the FERC and Texas SHPO. A total of 61 magnetic anomalies and 44 side scan sonar contacts were identified. On December 22, 2017 and February 9, 2018, the Texas SHPO requested additional information on magnetometer targets 21, 37, 57, and 59. PAPL has not yet provided the requested information to the Texas SHPO or to FERC.

Louisiana

PAPL completed 58 percent of the terrestrial cultural resources surveys for the Louisiana Connector Project corridor, compressor station, access roads, contractor yard, valve sites, and ATWS. A total of 2,366.5 acres was surveyed. Two newly recorded archaeological sites, nine historic architectural properties, and four cemeteries were identified. The two newly recorded sites, consisting of an historic artifact scatter (16AL51) and an abandoned railroad grade (16BE108), have been assessed as not eligible for the NRHP. In addition, seven previously recorded resources (16AL1, 16AL48, 16AL49, 16CM23, 16CU28, 16CU31, and 16EV13) had been identified as within or immediately adjacent to the pipeline survey corridor or associated facilities. Of these, no artifacts or evidence of intact cultural deposits were recovered at sites 16AL1, 16AL48, 16CU31, and 16EV13 within the construction area, and have been assessed as not eligible for the NRHP. PAPL has not assessed sites 16AL49, 16CM23, and 16CU28 for NRHP eligibility as they extend into parcels in which the landowners have denied survey permission; PAPL would complete surveys at these sites once access becomes available. In a letter dated December 14, 2017, the Louisiana SHPO concurred. In a letter dated December 11, 2018, the Coushatta Tribe of Louisiana commented on the report, indicating it identified significant omissions and inaccuracies in the report's account of tribal history relating to the project corridor. The tribe also disagreed that sites 16AL1 and 16AL48 were not eligible,

and felt they should be considered unknown or unassessed. PAPL has not yet addressed the tribe's comments on the report.

The historic architectural properties represent three farmstead complexes, four residential buildings, and two collapsed structures. PAPL recommended that eight of these historic architectural properties were not eligible for the NRHP, and one (#49-00011) would require further evaluation. PAPL confirmed that Resource #49-00011 would be avoided by the project. PAPL recommended that the four historic/modern Euro-American cemeteries would not be directly affected by Project activities as all three would be avoided by the construction workspace. Due to proximity of the pipeline corridor to the Creel and Green Oak Cemeteries, PAPL would institute a 50-foot buffer zone (e.g., install exclusion fencing) to prohibit inadvertent encroachment on these properties; the Cemetiere de Colteau is situated along an access road and no encroachment is anticipated, while the Kinder McRill Memorial Cemetery is located south of the pipeline construction corridor and would not be affected. In its December 14, 2017 letter, the Louisiana SHPO concurred with these recommendations.

On August 17, 2018, PAPL submitted a Phase I archaeological report providing results of survey across Coushatta Tribe of Louisiana Trust Lands, including the TGP Meter Station and approximately 0.9 mile of pipeline corridor. A total of 13.5 acres was surveyed on Trust Lands. The Louisiana SHPO concurred with no historic properties affected on September 14, 2018. In a letter dated August 30, 2018, the Coushatta Tribe of Louisiana provided comments on the report, but concurred that no further archaeological survey was needed, and indicated monitoring would be required.

PAPL would survey the remaining pipeline corridor, contractor yard LY-CAl-01, ANR Meter Station, and 50 access roads, and submit the results of surveys in future survey reports.

PAPL completed a submerged cultural resources survey of 17.6-mile, 600-foot-wide corridor along the offshore portion of the Louisiana Connector Project across Sabine Lake in Louisiana and provided the resulting report to the FERC and Louisiana SHPO. A total of 157 magnetic anomalies and 32 side scan sonar contacts were identified. Analysis resulted in the recommendation that no submerged cultural resources nor relic geomorphic features with the potential for archaeological deposits were present. In a letter dated December 15, 2017, the Louisiana SHPO concurred that no historic properties would be impacted by this portion of the Project. We concur also.

4.10.2 Unanticipated Discovery Plan

PALNG and PAPL provided a plan for Texas and Louisiana to the FERC and the Louisiana SHPO, which would be implemented if cultural resources or human remains are encountered during construction of the Projects. The plan also provides for the notification of Native American tribes in the event of any discovery. We requested revisions to the plan. During an October 16, 2018 meeting, the Coushatta Tribe of Louisiana requested changes to PAPL's *Unanticipated Discoveries Plan* and, in a November 19, 2018 letter, the tribe indicated it was working with the applicant to revise the plan. On January 15, 2019, PAPL filed a revised plan (FERC Accession No. 20190116-5005). We have reviewed the revised plan and found it requires revision, as the revised plan currently provides construction recommencement authority to Tribal Historic Preservation Officers (THPO) on non-tribal lands. **Therefore, we recommend that:**

- **Prior to construction of the Louisiana Connector Project in Louisiana, PAPL should file with the Secretary, for review and written approval by the Director of OEP, a revised *Unanticipated Discoveries Plan* that clarifies that THPO construction recommencement authorization is only applicable to Coushatta Tribe of Louisiana tribal trust lands.**

PAPL would need to submit its revised *Unanticipated Discoveries Plan* to the Louisiana SHPO. PALNG and PAPL would also provide their *Unanticipated Discoveries Plans* to the Texas SHPO.

4.10.3 Native American Consultation

4.10.3.1 Liquefaction Project and Texas Connector Project

On June 24, 2015, we sent our NOI for the Projects to eight federally recognized Native American tribes, including Alabama-Coushatta Tribe of Texas; Choctaw Nation of Oklahoma; Coushatta Tribe of Louisiana; Jena Band of Choctaw Indians; Kickapoo Traditional Tribe of Texas; Mississippi Band of Choctaw Indians; Tonkawa Tribe of Oklahoma; and Tunica-Biloxi Indian Tribe of Louisiana. On November 10, 2015, we sent follow-up letters to these same tribes. The Choctaw Nation of Oklahoma requested initiation of consultation with FERC and a copy of the technical report on August 8, 2015. PAPL submitted the Phase I report to the tribe on March 17, 2017. No further responses have been received to date.

In addition, PALNG and PAPL or its contractor, AECOM, separately contacted the tribes that might attach cultural or religious significance to cultural resources in the Projects' area, as summarized below.

In a letter dated April 28, 2015, PALNG contacted three federally recognized Native American tribes and offered an opportunity to identify traditional properties or provide comments about the Liquefaction Project, including the Alabama-Coushatta Tribe of Texas; Kickapoo Traditional Tribe of Texas; and Tonkawa Tribe of Oklahoma. No responses have been received to date.

In a letter dated March 31, 2015, PAPL contacted eight Native American tribes and offered an opportunity to identify traditional properties or provide comments about the Texas Connector Project, including the Alabama-Coushatta Tribe of Texas; Choctaw Nation of Oklahoma; Coushatta Tribe of Louisiana; Jena Band of Choctaw Indians; Kickapoo Traditional Tribe of Texas; Mississippi Band of Choctaw Indians; Tonkawa Tribe of Oklahoma; and Tunica-Biloxi Indian Tribe of Louisiana.

The Choctaw Nation of Oklahoma requested shapefiles from PAPL on the Louisiana portion of the Texas Connector Project, which were provided on May 21, 2015. On June 22, 2015, the tribe requested a copy of the technical report from PAPL to enable an evaluation of the Project and its potential impacts on archaeological and human remains. As mentioned above, the Phase I report was submitted by PAPL to the tribe on March 17, 2017. On November 6, 2018, the Choctaw Nation of Oklahoma requested a copy of the EIS, a copy of the cultural resources survey, and shapefiles for the project. As mentioned above, the survey report and shapefiles were provided previously, and the Choctaw Nation of Oklahoma was on the distribution list for the *Notice of Availability of the Draft Environmental Impact Statement for the Proposed Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector* (see appendix A). No additional responses from Native American tribes has been received.

4.10.3.2 Louisiana Connector Project

On May 25, 2017, we sent our NOI for the Project to ten federally recognized Native American tribes, including Alabama-Coushatta Tribe of Texas; Apache Tribe of Oklahoma; Chitimacha Tribe of Louisiana; Choctaw Nation of Oklahoma; Coushatta Tribe of Louisiana; Jena Band of Choctaw Indians; Jicarilla Apache Nation; Mescalero Apache Tribe; Mississippi Band of Choctaw Indians; and Tunica-Biloxi Indian Tribe of Louisiana. On October 5, 2017, we sent follow-up letters to these same tribes. On November 20, 2017, the Choctaw Nation of Oklahoma requested that PAPL provide the tribe with shapefiles of the Louisiana Connector Project and copies of cultural resources survey reports. In a June 21,

2018 letter, the Coushatta Tribe of Louisiana requested government-to-government consultation and a meeting. No other responses have been received to date.

As noted in section 4.8.4.2, the Louisiana Connector Project would cross about 0.8 mile of lands held in trust by the United States for the Coushatta Tribe of Louisiana. The Coushatta Tribe of Louisiana has centuries-long historical, cultural, and religious ties to the area in and around the Louisiana Connector Project. In the 16th century, the Coushatta people moved from their villages in the Tennessee River and Guntersville Basin areas south to join the Creek Confederacy. In 1797 the majority of the Coushatta people migrated from Alabama to present-day Acadia, Evangeline, St. Landry, Allen, Jefferson Davis, and Calcasieu Parishes, which are within the PAPL project corridor, eventually settling in Calcasieu River Drainage Basin, Sabine River Basin, Lower Trinity River Basin, and Mermentau River Basin (including Bayou Nezpique). They lived in multiple villages throughout this area, occupied seasonal hunting camps, raised their children, buried their dead, and worshipped in numerous places along this route. The Coushatta Tribe has identified archaeological sites and traditional cultural properties throughout the Sabine, Calcasieu, and Houston River valleys, along Sabine Lake, along the Creole Trail, and throughout Bayou Blue, Bayou Nezpique, and Bayou Cannes. The Coushatta Tribe of Louisiana has stated that there exists a significant and strong likelihood that project construction would disturb and irreversibly destroy Tribal cultural resources. A comprehensive account of the Coushatta Tribe of Louisiana's history and nexus to the land at issue was provided in a comment filed by the tribe on November 19, 2018 (see appendix T).

We attended a meeting on June 13, 2017, hosted by the Coushatta Tribe of Louisiana and PAPL to discuss the status of cultural resources surveys and to offer the Tribe an opportunity to identify traditional properties or provide comments about the Louisiana Connector Project. The Coushatta Tribe of Louisiana requested a traditional cultural properties survey be performed.

PAPL separately contacted seven tribes on May 19, 2017, that might attach cultural or religious significance to cultural resources in the Project area, including the Alabama-Coushatta Tribe of Texas; Chitimacha Tribe of Louisiana; Choctaw Nation of Oklahoma; Coushatta Tribe of Louisiana; Jena Band of Choctaw Indians; Mississippi Band of Choctaw Indians; and Tunica-Biloxi Indian Tribe of Louisiana. The Choctaw Nation of Oklahoma, in an email dated June 26, 2017, requested shapefiles and a copy of the technical report from PAPL on the Louisiana Connector Project to enable an evaluation of the Project and its potential impacts on archaeological and human remains, which was provided on September 12, 2017. Follow-up letters were submitted to six tribes (Alabama-Coushatta Tribe of Texas; Chitimacha Tribe of Louisiana; Coushatta Tribe of Louisiana; Jena Band of Choctaw Indians; Mississippi Band of Choctaw Indians; and Tunica-Biloxi Indian Tribe of Louisiana) on July 19, 2017. On August 5, 2017, PAPL sent an email to the Coushatta Tribe of Louisiana requesting an opportunity to discuss the traditional cultural properties survey process. The tribe responded on the same day and indicated the Project would be discussed further with tribal leadership. PAPL indicated that it employed Coushatta tribal members to participate in surveys on tribal lands, and that it was willing to employ monitors on Coushatta tribal lands during construction. PAPL has committed to incorporate changes to the *Unanticipated Discoveries Plan* at the request of the Coushatta Tribe. No additional responses have been received.

On August 17, 2018, PAPL submitted a Phase I archaeological report providing results of survey across Coushatta Tribe of Louisiana Trust Lands to the Coushatta Tribe of Louisiana. The Tribe provided comments on August 30, 2018, which were addressed on October 17, 2018. The Coushatta Tribe of Louisiana concurred with no historic properties affected on November 15, 2018.

In addition, we communicated with the Coushatta Tribe of Louisiana in June and August 2018 and arranged to meet with the tribe in October 2018. The Coushatta Tribe of Louisiana filed a Motion to Intervene with the FERC and PAPL on October 31, 2018, requesting tribal representation during consideration of the Certificate of Public Convenience and Necessity for the Louisiana Connector Project,

as the project would traverse tribal trust lands and has the potential to affect lands that are historically, culturally, and religiously significant to the Coushatta Tribe of Louisiana.

In November 2018, PAPL met with the Coushatta Tribe of Louisiana to discuss the environmental and cultural resources surveys conducted on tribal trust lands. On January 15, 2019, PAPL filed a revised *Unanticipated Discoveries Plan (For Project Facilities within the State of Louisiana)* that was developed with the Coushatta Tribe of Louisiana.

4.10.4 Compliance with Section 106 of the NHPA

4.10.4.1 Liquefaction Project

The process of complying with section 106 of the NHPA has not been completed for the Liquefaction Project. To ensure that the FERC's responsibilities under the NHPA and its implementing regulations are met, **we recommend that**:

- **PALNG should not begin construction of facilities and/or use of staging, storage, or temporary work areas and new or to-be-improved access roads associated with the Liquefaction Project until:**

  a. PALNG files with the Secretary the outstanding information for Dredge Disposal Area 8 and the Texas SHPO's comments on the information;

  b. PALNG files any required survey report and the Texas SHPO's comments on the report;

  c. the ACHP is afforded an opportunity to comment on the undertaking if historic properties would be adversely affected; and

  d. the FERC staff reviews and the Director of OEP approves any cultural resources report, and notifies PALNG in writing that construction may proceed.

All material filed with the Commission that contains location, character, and ownership information about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering "CUI//PRIV- DO NOT RELEASE."

4.10.4.2 Texas Connector and Louisiana Connector Projects

The process of complying with section 106 of the NHPA has not been completed for the Texas Connector and Louisiana Connector Projects. PAPL has not completed cultural resources surveys and NRHP evaluations, and consultation with the Texas and Louisiana SHPOs and the Coushatta Tribe of Louisiana THPO is not yet complete.

To ensure that the FERC's responsibilities under the NHPA and its implementing regulations are met for the Texas Connector and Louisiana Connector Projects, **we recommend that:**

- **PAPL should not begin construction of facilities and/or use of staging, storage, or temporary work areas and new or to-be-improved access roads associated with the Texas Connector and Louisiana Connector Projects until:**

a. PAPL files with the Secretary all outstanding survey reports, evaluation reports, special studies, and any required avoidance/treatment plans, and the Texas and Louisiana SHPOs' and the Coushatta Tribe of Louisiana THPO's comments (as applicable) on these;

b. the ACHP is afforded an opportunity to comment if historic properties would be adversely affected; and

c. the FERC staff reviews and the Director of OEP approves the cultural resources reports, studies, and plans, and notifies PAPL in writing that treatment plans/mitigation measures (including archaeological data recovery) may be implemented and/or construction may proceed.

All materials filed with the Commission containing location, character, and ownership information about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering "CUI//PRIV – DO NOT RELEASE."

4.11 AIR QUALITY AND NOISE

4.11.1 Air Quality

Temporary air emissions would be generated during project construction, which would occur over a period of 5 years and across two states; however, most air emissions associated with the Projects would result from the long-term operation of the new liquefaction facilities and compressor stations. Construction and operation air emissions and mitigation measures are discussed in section 4.11.1.3.

4.11.1.1 Existing Air Quality

Regional Climate

The regional climate in the Projects area is a modified marine climate influenced by a predominant onshore flow of tropical marine air from the Gulf of Mexico (TWDB, 1983). During onshore flow events, the area experiences a subtropical, humid climate. In summer, sea breezes help to moderate temperatures. General climate conditions are comparable across the Projects area, which includes Jefferson and Orange Counties, Texas and Cameron, Calcasieu, Beauregard, Allen, Evangeline, and St. Landry Parishes, Louisiana.

Based on 1981 to 2010 climate data from the NOAA, temperatures at the Port Arthur SE Regional Airport in Port Arthur, Texas usually range from a monthly maximum average of 92.2 °F in August to a minimum monthly average of 43.2 °F in January. Mean annual precipitation falling at the Port Arthur SE Regional Airport is 60.5 inches, while monthly average precipitation ranges from a minimum of 3.2 inches in April to a maximum of 7.1 inches in June. Recorded temperatures and rainfall are similar at the Lake Charles Regional Airport in Calcasieu Parish, Louisiana and the Lafayette Regional Airport in Lafayette Parish, Louisiana. Severe weather, including thunderstorms, tornadoes, and hurricanes, occur occasionally in the area. The average annual snowfall is less than 0.1 inch. Winds in the area are generally from the south, with average wind speeds around 15 mph. Wind direction can vary by season: during spring (February through May) winds are from the south through southeast; in summer (June through August) winds are mainly from the south and frequently from the southeast and southwest; during fall (September through November) winds are from the south counterclockwise through north; and in winter (December through January) winds are predominantly from the north and frequently from the south-southeast and north-northeast (TCEQ, 2017).

Ambient Air Quality Standards

Ambient air quality is protected by federal and state regulations. The EPA has established National Ambient Air Quality Standards (NAAQS) for "criteria pollutants" to protect human health and welfare.[38] These criteria pollutants are ground-level ozone, carbon monoxide (CO), nitrogen oxides (NO_X), sulfur dioxide (SO_2), fine particulate matter (i.e., inhalable particulate matter [PM] with an aerodynamic diameter less than or equal to 10 microns [PM_{10}] and less than or equal to 2.5 microns [$PM_{2.5}$]), and airborne lead. Ozone is not emitted into the atmosphere from an emissions source but develops as a result of a chemical reaction between NO_X and volatile organic compounds (VOC) in the presence of sunlight; therefore, NO_X and VOCs are often referred to as ozone precursors and are regulated to control the potential for ozone formation. The NAAQS include primary standards that are designed to protect human health, including the health of "sensitive" individuals such as children, the elderly, and those with chronic respiratory problems. The NAAQS also include secondary standards designed to protect public welfare, including visibility, vegetation, animal species, economic interests, and other concerns not related to human health.

38 NAAQS are available at: https://www.epa.gov/criteria-air-pollutants/naaqs-table

The LDEQ and the TCEQ have adopted the NAAQS. The TCEQ has also established 30-minute average property line standards for SO_2 and H_2S in 30 Texas Administrative Code (TAC) 112.

Hazardous air pollutants (HAP), also known as toxic air pollutants or air toxics, are specific pollutants that are known or suspected to cause cancer (carcinogens) or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. There are no national air quality standards for HAPs but their emissions are limited through permit thresholds and technology standards.

The EPA now defines air pollution to include the mix of six long-lived and directly emitted greenhouse gases (GHG), finding that the presence of the following GHGs in the atmosphere may endanger public health and welfare through climate change: CO_2, methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. As with any fossil-fuel fired project or activity, the Projects would contribute GHG emissions. The principle GHGs that would be produced by the Projects are CO_2, CH_4, and N_2O. No fluorinated gases would be emitted by the Projects. GHG emissions are quantified and regulated in units of carbon dioxide equivalents (CO_2e). The CO_2e takes into account the global warming potential (GWP) of each GHG. The GWP is a ratio relative to CO_2 of a particular GHG's ability to absorb solar radiation as well its residence time within the atmosphere. Thus, CO_2 has a GWP of 1, CH_4 has a GWP of 25, and N_2O has a GWP of 298.[39] In compliance with EPA's definition of air pollution to include GHGs, we have provided estimates of GHG emissions for construction and operation, as discussed throughout this section. Impacts from GHG emissions (i.e., climate change) are discussed in more detail in section 4.13.2.3.

Existing Air Quality and Attainment Status

Air quality control regions (AQCR) are areas established by the EPA and local agencies for air quality planning purposes, which are managed through State Implementation Plans that describe how the NAAQS would be achieved and maintained. The AQCRs are intra- and interstate regions, such as large metropolitan areas, where improvement of the air quality in one portion of the AQCR requires emission reductions throughout the AQCR. Each AQCR or smaller portion within an AQCR (such as a county or multiple counties) is designated, based on compliance with the NAAQS, as "attainment," "unclassifiable," "maintenance," or "nonattainment" on a pollutant-by-pollutant basis. Areas in compliance, or below the NAAQS, are designated as attainment, while areas not in compliance, or above the NAAQS, are designated as nonattainment. Areas that were previously designated as nonattainment and have since demonstrated compliance with the NAAQS are designated as maintenance for a period of time (normally 20 years after the effective date of attainment); this time period assumes that the area remains in compliance with the standard. Maintenance areas may be subject to more stringent regulatory requirements similar to nonattainment areas to ensure continued attainment of the NAAQS. Areas without sufficient data available are designated as unclassifiable and are treated as attainment areas.

To maintain a status of attainment, measures must be taken to track emissions data for all criteria pollutants. The TCEQ has established a maximum allowable emission level of 100 tons per year (tpy) for VOCs and NO_X, which are precursors for ozone, on projects within areas classified as maintenance. According to 40 CFR 93.153(b)(1), conformity determination thresholds for VOC and NO_X for marginal nonattainment are 100 tpy. See related discussion under General Conformity in section 4.11.1.2.

The Projects would be constructed in the Southern Louisiana-Southeast Texas Interstate AQCR 106. Jefferson and Orange Counties, Texas are within the Beaumont-Port Arthur area. As of November 19, 2010, the area is classified as attainment for all criteria pollutants. Construction emissions from the

39 These GWPs are based on a 100-year time period. We have selected their use over other published GWPs for other timeframes because these are the GWPs that the EPA has established for reporting of GHG emissions and air permitting requirements. This allows for a consistent comparison with these regulatory requirements.

Project could occur within the Houston-Galveston-Brazoria (HGB) area, which is classified as a marginal nonattainment area for the 2008 8-hour ozone standard (EPA, 2017). The remainder of the counties and parishes in AQCR 106 are classified as unclassifiable/attainment. See table 4.11.1-1 below for more details.

TABLE 4.11.1-1

Project Components and NAAQS Attainment Status by County

Project Components	County/Parish, State	AQCR	Attainment Status
Liquefaction Project, South Compressor Station, NGPL meter station, GTS Meter Station, PALNG meter station, Centana meter station, three mainline valves, Louisiana Connector Pipeline, and Texas Connector Pipeline	Jefferson County, TX	106 – Southern Louisiana-Southeast Texas Interstate	Attainment
North Compressor Station, FGT Meter Station, HPL Meter Station, TETCO meter station, FGT meter station, mainline valve, Louisiana Connector Pipeline, and Texas Connector Pipeline	Orange County, TX		Attainment
KMLP Meter Station, one mainline valve, Louisiana Connector Pipeline, and Texas Connector Pipeline	Cameron Parish, LA		Attainment
Three mainline valves and Louisiana Connector Pipeline	Calcasieu Parish, LA		Attainment
One mainline valve and Louisiana Connector Pipeline	Beauregard Parish, LA		Attainment
Louisiana Connector Project's compressor station, TETCO Meter Station, TGP Meter Station, three mainline valves, and Louisiana Connector Pipeline	Allen Parish, LA		Attainment
Egan Meter Station, Pine Prairie Meter station, TGT Meter Station, ANR Meter Station, one mainline valve, and Louisiana Connector Pipeline	Evangeline Parish, LA		Attainment
TGP Meter Station and Louisiana Connector Pipeline	St. Landry Parish, LA		Attainment
Delivery and transport of some construction materials	Chambers, TX Liberty, TX Harris, TX	HGB	Marginal nonattainment area for the 2008 8-hour ozone standard

The EPA as well as state and local agencies have established a network of ambient air quality monitoring stations to measure and track the background concentrations of criteria pollutants across the United States. To characterize the existing ambient air quality for the Projects, available data were gathered from air quality monitoring stations that are nearest to the Projects sources of operational emissions. The most recent validated data from these monitoring sites are presented in table 4.11.1-2, which compares the monitored data with the appropriate NAAQS standard for each criteria pollutant. All monitored data are below the NAAQS. Note that the Texas Connector Project's South Compressor Station is proposed to be constructed and operated in the Liquefaction Project's site boundaries and, as such, air quality impacts associated with the South Compressor Station are included with the Liquefaction Project.

TABLE 4.11.1-2

Ambient Air Quality Concentrations Representative of the Projects Areas

Facility/Pollutant	Averaging Period	Rank	2014	2015	2016	3-year average	Units	Monitor Number [a]	NAAQS
LIQUEFACTION PROJECT									
SO_2	1-Hour	99%	150.1	166.4	191.5	169.4	µg/m^3	482450011	196
PM_{10}	24-Hour	2nd	91	69	80	80	µg/m^3	482011039	150
$PM_{2.5}$	24-Hour	98%	20.1	29.7	17.6	22.5	µg/m^3	482450021	35
$PM_{2.5}$	Annual	Mean	8.7	10.7	7.8	9.1	µg/m^3	482450021	12
NO_2	Annual	Average	13.5	13.2	12.0	12.9	ppb	482450628	53
NO_2	1-Hour	98%	32.6	29.4	27.5	29.8	ppb	482450628	100
CO	8-Hour	2nd	0.4	0.5	0.4	0.4	ppm	482451035	9
CO	1-Hour	2nd	0.6	0.7	0.6	0.6	ppm	482451035	35
O_3	8-Hour	4th	0.067	0.074	0.063	0.1	ppm	482451035	0.070
TEXAS CONNECTOR PROJECT NORTH COMPRESSOR STATION									
SO_2	1-Hour	99%	16	16.6	12	14.9	ppb	482450009	75
PM_{10}	24-Hour	2nd	80.5	66	42	62.8	µg/m^3	220550007	150
$PM_{2.5}$	24-Hour	98%	15	15	18	16.0	µg/m^3	220190009	35
$PM_{2.5}$	Annual	Mean	6.9	7.3	7.6	7.3	µg/m^3	220190009	12
NO_2	Annual	Maximum	4.75	4.7	4.35	4.6	ppb	483611001	53
NO_2	1-Hour	98%	44	37	40	40.3	ppb	483611001	100
CO	8-Hour	2nd	0.4	0.5	0.4	0.4	ppm	482451035	9
CO	1-Hour	2nd	0.6	0.7	0.6	0.6	ppm	482451035	35
O_3	8-Hour	4th	0.067	0.074	0.063	0.1	ppm	482451035	0.070
LOUISIANA CONNECTOR PROJECT COMPRESSOR STATION									
SO_2	1-Hour	99%	33	33	34	33.3	ppb	220190008	75
PM_{10}	24-Hour	2nd	80.5	66	42	62.8	µg/m^3	220550007	150
$PM_{2.5}$	24-Hour	98%	15	15	18	16	µg/m^3	220190009	35
$PM_{2.5}$	Annual	Mean	6.9	7.3	7.6	7.3	µg/m^3	220190009	12
NO_2	Annual	Maximum	5.09	6.32	6.38	5.93	ppb	220190008	53
NO_2	1-Hour	98%	30	37	40	35.7	ppb	220190008	100
CO	8-Hour	2nd	1.3	1.2	1.1	1.2	ppm	220330009	9
CO	1-Hour	2nd	4.9	2.1	2.1	3.0	ppm	220330009	35
O_3	8-Hour	4th	0.067	0.072	0.065	0.068	ppm	220190002	0.070

[a] 220330009 – 1061-A Leesville Ave, Baton Rouge, LA
220190008 – 2646 John Stine Road, Westlake, LA
220550007 – 700 Cajundome, Lafayette, LA
220190009 – 2284 Paul Bellow Road, Vinton, LA
220190002 – Highway 27 and Highway 108, Carlyss, LA
482450009 - 1086 Vermont Avenue; Beaumont, TX
483611001 - 2700 Austin Ave; West Orange, TX
482451035 - 1800 N. 18th Street; Nederland, TX
482450011 – West 800 El Vista Rd, Port Arthur, TX
482011039 – 4514 ½ Durant St, Deer Park, TX
482450021 – 2200 Jefferson Dr., Port Arthur, TX
482450628 – 2210 Eastex Freeway, Beaumont, TX
482451035 – 1800 N. 18th Street, Nederland, TX

ppb = parts per billion
µg/m^3 = microgram per cubic meter
ppm = parts per million
O_3 = ozone

4.11.1.2 Regulatory Requirements for Air Quality

The CAA is the basic federal statute governing air pollution in the United States. We have summarized the applicable requirements below.

General Conformity

The General Conformity Rule was developed to ensure that federal actions in nonattainment and maintenance areas do not impede states' attainment of the NAAQS. A conformity determination must be conducted by the lead federal agency if a federal action's construction and operation activities are likely to result in generating direct and indirect emissions that would exceed the conformity applicability threshold level of the pollutant(s) for which an air basin is designated as nonattainment or maintenance. Conforming activities or actions should not, through additional air pollutant emissions:

- cause or contribute to new violations of the NAAQS in any area;
- increase the frequency or severity of any existing violation of any NAAQS; or
- delay timely attainment of any NAAQS or interim emission reductions.

The General Conformity Rule entails both an applicability analysis and a subsequent conformity determination, if applicable. According to the conformity regulations, emissions from sources that are subject to any Nonattainment New Source Review (NNSR) or PSD permitting/licensing (major or minor) are exempt and are deemed to have conformed. A General Conformity Determination must be completed when the total direct and indirect emissions of a project would equal or exceed the specified pollutant thresholds on a calendar year basis for each nonattainment or maintenance area.

As discussed previously and presented in table 4.11.1-1, the Project area is in attainment; therefore, general conformity requirements do not apply. However, general conformity could potentially apply to the HGB area associated with the Liquefaction Project, which is classified as a marginal nonattainment area for ozone. All non-permitted emissions that would occur within the HGB area were considered in the general conformity applicability analysis. Table 4.11.1-3 provides the results of the general conformity applicability review for the Liquefaction Project.

TABLE 4.11.1-3

General Conformity Applicability Analysis for Construction Emissions Associated Project [a]

Source Category	NO_X (tpy)	VOC (tpy)
Nonroad Equipment	--	< 45.7
Onroad Vehicles	40.22[b]	< 7.6
Construction Fugitive Dust	--	--
Roadway Fugitive Dust	--	--
Tug Boats	31.15	< 1.71
Construction Totals	**71.37**	**< 55.0**
General Conformity Threshold	**100**	**100**

N/A = Not Applicable

[a] Construction is anticipated to take place over a 5-year period. Non-permitted emissions were calculated for each of the five construction years. Values reported here are the maximum annual emissions occurring in the HGB 8-hour ozone nonattainment area. For NO_x, the maximum emissions occur in Construction Year 1. For VOC, maximum emissions occur in Construction Year 2.

[b] On-road emissions include emissions from 20 percent of the expected commuter vehicles. PAPL does not expect any truck deliveries to pass through the HGB nonattainment area for the Texas Connector and Louisiana Connector Projects.

Based on the results, the emissions that would occur in nonattainment or maintenance areas would not exceed the general conformity applicability thresholds for any criteria pollutant in a single calendar year. Therefore, general conformity does not apply to the Liquefaction Project.

New Source Review/Prevention of Significant Deterioration

New Source Review (NSR) is a pre-construction permitting program designed to protect air quality when air pollutant emissions are increased either through the modification of existing sources or through the construction of a new source of air pollution. In areas with good air quality, NSR ensures that the new emissions do not degrade the air quality, which is achieved through the implementation of the PSD permitting program or state minor permit programs. In addition, NSR ensures that any large, new, or modified industrial source uses air pollution control technology. Air permitting of stationary sources has been delegated to each state. Based on the operating emissions, an NSR permit would be required for the Liquefaction Project's facilities but not for the Texas Connector and Louisiana Connector Projects' compressor stations. Once a facility is subject to PSD, the following requirements apply:

- Installation of Best Available Control Technology (BACT).
- Air quality monitoring and modeling analyses to ensure that a project's incremental increase of emissions would not cause or contribute to a violation of any NAAQS or PSD air quality increment.
- Notification to the federal land manager of nearby Class I areas and modeling if applicable.
- A growth, soil, and vegetation, and visibility analysis.
- Public comment on the permit.

BACT is an emissions limitation that is based on the maximum degree of control that can be achieved. It is a case-by-case decision that considers energy, environmental, and economic impact. BACT can be add-on control equipment or modification of production processes or methods. This includes fuel cleaning or treatment and innovative fuel combustion techniques. BACT may be a design, equipment, work practice, or operational standard if imposition of an emissions standard is infeasible. As part of the Liquefaction Project PSD application, Port Arthur completed a BACT assessment for NO_X, CO, VOC, PM, PM_{10}, $PM_{2.5}$, SO_2, and GHGs, the results of which were incorporated into subsequent facility emission calculations.

The air quality monitoring and modeling analysis involves an assessment of existing air quality, which may include ambient monitoring data and air quality dispersion modeling results, as well as predictions, using dispersion modeling, of ambient concentrations that would result from the proposed Projects and any associated future growth. There are no Class I areas (designated under the CAA to receive special protection) within 62 miles of the Liquefaction Project; therefore, an additional PSD Class I analysis is not required.

Most states, including Texas and Louisiana, have been delegated authority by the EPA to implement federal air quality regulations. PALNG submitted an air quality application to TCEQ for the Liquefaction Project's facilities in accordance with federal and state requirements, including the NSR/PSD requirements listed above. Each state permitting agency is responsible for determining the facilities applicable under each permit. On February 17, 2016, TCEQ issued permits 131769, PSDTX1456, and GHGPSDTX134, granting PALNG authorization to construct and operate the liquefaction facilities.

New Source Performance Standards

The EPA promulgates New Source Performance Standards (NSPS) that establish emission limits and fuel, monitoring, notification, reporting, and recordkeeping requirements for new or significantly modified stationary source types or categories.

Subpart A (*General Provisions*) would apply generally to the Project. The auxiliary boilers at the liquefaction facilities would be subject to NSPS Subpart Db (*Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units)*, which sets emission standards for NO_X, PM, and SO_2. The liquid condensate tanks at the liquefaction facilities would be subject to Subpart Kb (*Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels)*, which sets emission standards for VOC. Subpart VVa, *Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry*, sets VOC emission limits and leak detection requirements and would apply to the closed vent system at the liquefaction facilities. The deethanizer and debutanizer columns at the liquefaction facilities would be subject to Subpart NNN, *Standards of performance for VOC Emissions from Synthetic Organic Chemical Manufacturing Industry Distillation Operations*, which sets emissions standards for VOC. The standby generators and firewater pump engines associated with the Liquefaction Project and the standby generators at the Texas Connector Project's North Compressor Station and the Louisiana Connector Project's compressor station would be subject to Subpart IIII (*Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [CI ICE])*, which sets emission standards, reporting and recordkeeping requirements, and requirements for fuel, compliance, and testing. Subpart KKKK, *Standards of Performance for Stationary Combustion Turbines*, regulates emissions of NO_X and SO_2 and would apply to the power generation combustion turbines associated with the Liquefaction Project, the Texas Connector Project's North Compressor Station, and the Louisiana Connector Project's compressor station. Subpart OOOOa, *Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution*, establishes emission standards and compliance schedules for the control of VOCs and SO_2, which would apply to the collection of fugitive emissions components at the Texas Connector Project's North and South Compressor Stations and the Louisiana Connector Project's compressor station.

For the Liquefaction Project, PALNG would comply with Subparts A, Db, Kb, VV, NNN, IIII, and KKKK, including the applicable emission limits and monitoring, reporting, and testing requirements of those subparts. For the Texas Connector and Louisiana Connector Projects, PAPL would comply with Subparts A, IIII, KKKK, and OOOOa, including the applicable emission limits and monitoring, reporting, and testing requirements of those subparts.

National Emissions Standards for Hazardous Air Pollutants

The CAA Amendments established a list of 189 HAPs, resulting in the promulgation of National Emission Standards for Hazardous Air Pollutants for Source Categories (NESHAPs). NESHAPs regulate HAP emissions from stationary sources by setting emission limits, monitoring, testing, recordkeeping, and notification requirements. Subpart A (*General Provisions)* would apply generally to the Projects. PALNG and PAPL would comply with the requirements of Subpart A. Subpart ZZZZ (*National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*) would apply to the emergency fire pump engine and emergency electrical power generators associated with the Liquefaction Project and the emergency electrical power generators at the Texas Connector Project's North Compressor Station and the Louisiana Connector Project's compressor station. PALNG and PAPL would be subject to all applicable Subpart ZZZZ monitoring, recordkeeping, and reporting requirements, and/or would comply with NESHAPs Subpart ZZZZ by complying with NSPS Subpart IIII requirements.

Title V Operating Permit

Title V is an operating permit program run by each state. Because the potential to emit at the new liquefaction facilities, Texas Connector Project's North Compressor Station, and Louisiana Connector Project's compressor station would be above the Title V thresholds, the three facilities would be subject to Title V permitting requirements. PALNG was issued permit numbers 131769, PSDTX1456, and GHGPSHTX134 on February 17, 2016. PAPL proposes to submit an air permit application for the Texas Connector's North Compressor Station six months before the start of construction. PAPL submitted a permit application to LDEQ on September 22, 2017, for the Louisiana Connector's compressor station. This permit was issued on March 29, 2018.

The minimal emissions from the electric-driven South Compressor Station (associated with the Texas Connector Project) and each meter station would not be subject to Title V permitting requirements.

Greenhouse Gas Reporting Rule

The EPA established the final Mandatory Greenhouse Gas Reporting Rule, requiring the reporting of operational GHG emissions from applicable sources that emit greater than or equal to 25,000 metric tons of CO_2e in 1 year. Recent additions to the Reporting Rule effective for calendar year 2016 require reporting of GHG emissions generated during operation of natural gas pipeline transmission systems, including blowdown emissions, equipment leaks, and vent emissions at compressor stations, as well as blowdown emissions between compressor stations. The applicability of the reporting rule would apply to PALNG's and PAPL's entire system.

Although the rule does not apply to construction emissions, we have provided GHG construction emission estimates as CO_2e for accounting and disclosure purposes in section 4.11.1.3 and tables 4.11.1-3, 4.11.1-4, and 4.11.1-5. Operational GHG emission estimates for the Projects are presented as CO_2e in section 4.11.1.3. Based on the emission estimates presented, actual GHG emissions from operation of the Liquefaction Project, Texas Connector Project's North and South Compressor Stations, and Louisiana Connector Project's compressor station, which are each considered as a separate stationary source, have the potential to exceed the 25,000-metric tpy reporting threshold for the Mandatory Reporting Rule. Therefore, if the actual operational emissions from the Liquefaction Project and the compressor stations, or the PAPL system are greater than 25,000 metric tpy, PALNG and/or PAPL would be required to report GHG emissions.

State Air Quality Requirements

PALNG and PAPL would be required to obtain air quality permits from the applicable air permitting authority for the Liquefaction Project, the Texas Connector Project's North Compressor Station, and the Louisiana Connector Project's compressor station. Air quality rules in Texas and Louisiana are outlined in the TAC and the Louisiana Administrative Code (LAC), respectively. State air quality regulations that would establish emission limits or other restrictions that may be in addition to those required under federal regulations are summarized below.

In addition to PSD and NNSR permitting requirements, Texas administers its own operating permitting requirements. Specific types of processes are permitted under the Permit By Rule (PBR) within Chapter 106 of the TAC. The Texas Connector Project's North Compressor Station would be regulated under PBR 106.352(l) for Oil and Gas Handling Production Facilities and PBR 106.512 for Stationary Engines and Turbines. A concrete batch plant would operate during the first two years of construction of the Liquefaction Project. PALNG would be required to apply for and receive a Standard Permit for Concrete Batch Plants, as regulated under Texas Health and Safety Code Sec. 382.05199. As of the

issuance of this final EIS, the final design of the proposed meter stations associated with the Texas Connector and Louisiana Connector Projects has not been completed. Calculations of operational emissions are based on a standard template subject to minor changes during final design. PAPL commits to complying with all state regulations applicable to the meter stations.

Louisiana administers its own operating permitting program under LAC Title 33 Part III Chapter 5. The Louisiana Connector Project's compressor station would be required to secure a Title V operating permit prior to construction. PAPL submitted a Title V air permit application to the LDEQ on September 22, 2017.

The Projects' Texas facilities would also be subject to Texas state regulations codified in TAC Title 30, Part I including, but not limited to, the following:

- Chapter 101 – General Rules
- Chapter 111 – Control of Air Pollution from Visible Emissions and Particulate Matter
- Chapter 112 – Control of Air Pollution from Sulfur Compounds
- Chapter 113 – Control of Air Pollution From Toxic Materials
- Chapter 114 – Control of Air Pollution From Motor Vehicles
- Chapter 115 – Control of Air Pollution From Volatile Organic Compounds
- Chapter 116 – Control of Air Pollution by Permits For New Construction or Modification
- Chapter 117 – Control of Air Pollution From Nitrogen Compounds
- Chapter 118 – Control of Air Pollution Episodes
- Chapter 122 – Federal Operating Permits

The Projects' Louisiana facilities would be subject to Louisiana state regulations codified in LAC Title 33, Part 3 including, but not limited to, the following:

- LAC 33:III:1103 – (Impairment of Visibility on Public Roads Prohibited) prevents emissions from passing onto roads and causing an impairment of visibility
- LAC 33:III:1109.C – (Control of Air Pollution from Outdoor Burning) establishes requirements and exceptions for open burning
- LAC 33:III:1305 – (Control of Fugitive Emission of Particulate Matter [PM])
- LAC 33:III:1311 and 1313 – (Emission Limits [PM])
- LAC 33:III:2111 – Pumps and Compressors
- LAC 33:III:2113 – Housekeeping

4.11.1.3 Air Quality Impacts and Mitigation

Construction Emissions

Construction of the Projects would result in temporary increases of pollutant emissions from the use of diesel- and gas-fueled equipment, blowdown and purging activities, and surface coating and abrasive blasting operations, as well as temporary increases in fugitive dust emissions from earth/roadway surface disturbance. The first two construction years at the Liquefaction Project would also include emissions from the temporary concrete batch plant. PALNG has committed to acquiring and abiding by the Texas concrete batch plant permit[40], which has specific emission requirement.

Indirect emissions would be generated from vehicles associated with construction workers traveling to and from work sites. The volume of fugitive dust generated would be dependent upon the area disturbed and the type of construction activity, along with the soil's silt and moisture content, wind speed, and the nature of vehicular/equipment traffic. Construction of the Liquefaction Project would take over 5 years, while the Texas Connector and Louisiana Connector Projects would be constructed over 2 and 3 years, respectively. Construction at aboveground facilities and the use of construction support areas would take place over several months at specific locations, while pipeline construction at any given location would generally last from 6 to 10 weeks.

Construction emissions for the Projects are presented in tables 4.11.1-4 through 4.11.1-6.[41] The following assumptions and protocols were used in the emissions estimates:

- For both the Texas Connector Project and Louisiana Connector Project, combustion emissions from on-road vehicles (e.g., delivery and material removal vehicles) and non-road construction equipment operation were estimated using the EPA Motor Vehicle Emission Simulator model, which estimates emissions for on-road and non-road vehicles and equipment based on the anticipated types of non-road equipment and their associated levels of use. For the Liquefaction Project and Texas Connector Project, fugitive particulate emissions of PM_{10} and $PM_{2.5}$ were calculated using the EPA AP-42 recommended emission factors for heavy construction equipment, combined with estimates of the extent and duration of active surface disturbance during construction

- For the Louisiana Connector Project, fugitive particulate emissions of PM_{10} and $PM_{2.5}$ were calculated using factors from the *WRAP Fugitive Dust Handbook*.

- For all the Projects, GHG emissions were estimated from non-road construction equipment using factors from the *2016 Climate Registry Default Emission Factors*. HAP emissions from non-road construction equipment were estimated using EPA AP-42 factors.

- Specific to the Liquefaction Project, tug boats would be used to transport barges carrying construction materials to Liquefaction Project site. Criteria emissions from tug boats were estimated using emission factors for Tier 2 engines from the EPA's *Current Methodologies in Preparing Mobile Source Port-Related Emission Inventories*, while GHG emissions were calculated using 40 CFR 98.

40 TCEQ standard permit for concrete batch plants: https://www.tceq.texas.gov/permitting/air/newsourcereview/mechanical/cbp.html

41 Detailed emission calculations were provided in PALNG's application for the Liquefaction Project and PAPL's application for the Texas Connector Project (formerly referred to as the Port Arthur Pipeline Project), each filed with FERC on November 29, 2016; PAPL's application for the Louisiana Connector Project, filed with FERC on October 16, 2017; and PALNG's and PAPL's responses to our data requests and supplemental filings.

TABLE.4.11.1-4

Estimated Construction Emissions from the Liquefaction Project

Source [a]	NO_X	CO	VOC	PM_{10}	$PM_{2.5}$	SO_2	HAPs	CO_2e
	(total tons during 5 years of construction activities)							
Construction Equipment	712.20	8,097.70	178.60	32.60	31.80	0.97	2.05	105,332.00
Concrete Batch Plant	9.86	8.92	0.74	3.28	1.80	0.02	-- [c]	-- [c]
Delivery of Construction Supplies [b]	178.37	131.15	7.08	8.20	7.96	8.58	--[c]	18,170.00
Commuting Construction Workers and Onroad Delivery Vehicles	320.70	448.80	48.70	18.00	17.30	0.63	5.37	51,641.00
Fugitive Dust from Material Transfers and Road Traffic	-- [c]	-- [c]	-- [c]	4,620.00	863.50	-- [c]	-- [c]	-- [c]
Liquefaction Project Totals	**1,221.10**	**8,686.6**	**235.12**	**4,682.10**	**922.36**	**10.20**	**7.42**	**175,143**

[a] Construction emissions from the SH 87 relocation are included in the emission calculations for all sources.

[b] Delivery of supplies by barges supported by tug boats.

[c] No emissions data.

TABLE.4.11.1-5

Estimated Construction Emissions from the Texas Connector Project

Source	NO_X	CO	VOC	PM_{10}	$PM_{2.5}$	SO_2	HAPs	CO_2e
	(total tons during 2 years of construction activities)							
Emissions from Construction Equipment								
Texas Connector Compressor Stations	17.91	9.31	1.87	1.36	1.33	0.03	9.54E-02	2,463
Texas Connector Meter Stations	1.80	1.20	0.24	0.18	0.18	0.00	9.45E-03	246
Texas Connector Pipeline Spread	68.28	19.59	4.66	3.76	3.65	0.08	3.19E-01	9,029
Tailpipe Emissions from Commuting Construction Workers and Onroad Delivery Vehicles								
Texas Connector Compressor Stations	3.46	12.65	0.86	0.42	0.38	0.02	1.5.E-01	1499
Texas Connector Meter Stations	0.67	1.96	0.16	0.05	0.06	0.00	2.40E-02	236
Texas Connector Pipeline Spread	31.217	37.42	4.70	3.30	4.30	0.07	7.14E-01	7,486
Estimated Fugitive Emissions of Particulate Matter from Material Transfers and Road Traffic								
Texas Connector Compressor Stations, Meter Stations, and Pipeline	--	--	--	287.32	43.11	--	--	--
Texas Connector Project Totals	**123.34**	**82.13**	**12.49**	**296.39**	**53.01**	**0.2**	**1.16**	**20,959**

TABLE.4.11.1-6

Estimated Construction Emissions from the Louisiana Connector Project

Source	NO_X	CO	VOC	PM_{10}	$PM_{2.5}$	SO_2	HAPs	CO_2e
	(total tons during 3 years of construction activities)							
Emissions from Construction Equipment								
Louisiana Connector Compressor Station	1.83	6.80	0.39	0.11	0.11	0.01	1.00E-02	566
Louisiana Connector Meter Stations	13.96	7.09	1.44	0.68	0.68	0.02	1.30E-02	621
Louisiana Connector Pipeline Spread	45.75	33.07	5.90	2.56	2.56	0.12	3.90E-01	18,739
Tailpipe Emissions from Commuting Construction Workers and Onroad Delivery Vehicles								
Louisiana Connector Compressor Station	0.58	0.47	0.02	0.02	0.02	0.00	3.12E-03	181
Louisiana Connector Meter Stations and Pipeline Spread	2.50	1.48	0.11	0.07	0.06	0.01	1.00E-02	1,778
Estimated Fugitive Emissions of Particulate Matter from Material Transfers and Road Traffic								
Louisiana Connector Compressor Station	--	--	--	55.08	5.50	--	--	--
Louisiana Connector Meter Stations and Pipeline	--	--	--	402.95	47.26	--	--	--
Louisiana Connector Project Totals	**64.62**	**48.91**	**7.86**	**461.47**	**56.19**	**0.16**	**4.26E-01**	**21,885**

PALNG and PAPL would implement measures to control fugitive dust emissions. Each company prepared separate project-specific *Fugitive Dust Control Plans*, which were included with their respective FERC application. PALNG and PAPL would implement emission reduction measures such as water suppression, covering truckloads during transit, limiting on-site vehicle speed, paving or grading of roadways, and removing track-out on public roads. We reviewed the *Fugitive Dust Control Plans* and found them acceptable.

Construction equipment would be operated only on an as-needed basis to minimize the combustion emissions from diesel and gasoline engines. For the Louisiana Connector Project, PAPL would reduce emissions from surface coating and abrasive blasting by purchasing shop-coated components, using non-VOC surface coating materials, and using a sand substitute to reduce PM emissions from sand blasting. Onshore and offshore construction equipment would comply with the following state and federal emissions reduction programs, as applicable:

- Texas Low Emissions Diesel Program
- GHG Emission Standards for Medium- and Heavy-Duty Engines and Vehicles (Phases I and II)
- National Clean Diesel Campaign
- Cross-State Air Pollution Rule
- Clean Air Interstate Rule
- Tier 3 Vehicle / Fuel Standards
- Heavy-Duty Highway Diesel Rule
- Locomotive and Marine Compression-Ignition Engine Standards
- Annex VI of the International Convention for the Prevention of Pollution from Ships treaty

PALNG may conduct open burning as a means of vegetation disposal. If open burning is verified to occur at some point, PALNG and PAPL would be required to secure the appropriate approvals from TCEQ and LDEQ.

Each train of the liquefaction terminal would be brought on line sequentially over a period of 6-12 months. During this period, simultaneous construction, commissioning, and operational emissions would occur. These overlapping emissions would likely be in excess of the modeled operational emissions (see table 4.11.1-10, below) during these months. During the period of simultaneous commissioning, construction, and operation, the high level of emissions may result in exceedances of the NAAQS in the industrial vicinity of the liquefaction terminal.

Most construction-related emissions on the pipeline projects would be temporary and localized and would dissipate with time and distance from areas of active construction. Further, construction emissions along the pipelines would subside once construction is complete. During construction, emissions would transition to operating emissions and would overlap with operating emissions for six months to one year. During this period, there may elevated impacts on the liquefaction terminal's industrial neighbors. Based on the mitigation measures outlined in PALNG's and PAPL's Fugitive Dust Control Plan, PAPL's commitment to obtain the applicable air permits and adhere to air quality regulations, and the temporary

nature of pipeline construction, we conclude that construction of the pipeline projects would not have a significant impact on air quality.

Operational Emissions

Most of the operational emissions from the Projects would result from the liquefaction facilities, the gas-fired North Compressor Station (associated with the Texas Connector Project), and the gas-fired Louisiana Connector Compressor Station. Texas Connector Project's South Compressor Station would be electric-driven and therefore not generate combustion-related emissions. However, all aboveground facilities, including the compressor stations, meter stations components, and mainline valves, and the pipeline would generate fugitive emissions of natural gas.

The Louisiana Connector's compressor station would consist of combustion sources including four turbines, four heaters, and two diesel-fired emergency generator engines. The Texas Compressor Station's North Compressor Station will consist of combustion sources including three turbines, three heaters, and two diesel-fired emergency generator engines. The turbines at the North Compressor Station (Texas Connector Project) and Louisiana Connector Project's compressor station would incorporate SoLoNOX (i.e., dry low NO_X or lean pre-mix) combustors to control NO_X emissions.

PALNG proposes to construct two liquefaction trains. Each train would contain one propane and one mixed refrigerant refrigeration compressor turbine. Each of the trains would be equipped with an Acid Gas Removal Unit. Emissions from the Removal Unit would be controlled using thermal oxidizers. LNG will be stored in three storage tanks and loaded onto marine vessels for export at the marine berthing area. Other emissions sources at the proposed facility include a marine flare, a ground flare, diesel engine-driven standby generators and firewater pumps, equipment leak fugitives, fixed roof storage tanks, truck loading, and combustion turbine generators for self-generation of electrical power. Mobile sources include those associated with two marine berths including shipboard engines used to power the LNG vessels and assist tugs that will operate within a 500-yard radius of the docking point. Equipment at the liquefaction facilities would incorporate BACT controls, including low-NO_X burners on the refrigeration turbines, thermal oxidizers, and fuel gas preheaters; low-NO_X burners with selective catalytic reduction technology on the power generation turbines; limited hours of operation and the use of ultra-low sulfur fuel in emergency generators; good combustion practices on all combustion equipment; a leak detection and repair program; a closed vent system on condensate storage tanks and pressurized tanks for storage of LNG, aqueous ammonia, propylene, and ethylene; and thermal oxidizers with destruction efficiency of 99.9 percent for VOC and sulfur compounds.

Air pollutant emissions from operation of the proposed liquefaction facilities and compressor stations were calculated using emissions factors from vendor data, the EPA's Compilation of Air Pollutant Emission Factors (AP-42), and 40 CFR 98. Fugitive gas emissions were estimated using emission factors from the Interstate Natural Gas Association of America and TCEQ. Emissions from blowdowns were included for the North Compressor Station (Texas Connector Project) and Louisiana Connector Project's compressor station; no blowdown facilities would be constructed at the liquefaction site. The potentials to emit from the liquefaction facilities, compressor stations, pipeline and meter stations are summarized in table 4.11.1-7.

TABLE 4.11.1-7

Operational Emissions from the Projects

Facility Description	NO_X	CO	VOC	SO_2	$PM/PM_{10}/PM_{2.5}$	CO_2e
	(tpy)					
LIQUEFACTION PROJECT						
Stationary Emissions Sources from the Liquefaction Project						
Refrigeration Compressor Turbines (4)	556.8	946.36	43.44	10.4	168.6	2,018,068
Generator Combustion Turbines (9)	253.89	277.56	35.37	16.92	79.56	1,412,208
Fire Water Pumps (5)	2.2	1.25	0.15	0.0028	0.05	260
Standby Generators (3)	7.11	4.17	0.51	0.0087	0.24	828
Thermal Oxidizers (2)	15.76	21.62	4.22	0.38	1.96	892,994
Gas Turbine Preheater (2)	1.64	2.74	0.18	0.04	0.24	3,898
Marine Flare	26.11	52.13	0.69	0	0.01	26,022
Ground Flare	348.97	586.35	23.29	0.06	0.22	304,396
Storage Tanks (13)	--	--	1.63	--	--	--
Equipment Fugitives	--	--	21.68	--	--	--
Subtotal	**1,212**	**1,892**	**131**	**29**	**251**	**4,658,674**
Mobil Emissions Sources from the Liquefaction Project						
LNG Vessels	163.02	329.54	2.78 [a]	26.54	22.34	3,772 [a]
Assist Tugboats	8.99	14.46	0.55 [a]	1.24	0.195	741 [a]
Subtotal	**172.01**	**344.00**	**3.33** [a]	**27.78**	**22.54**	**4,514** [a]
Liquefaction Project Totals	1,384	2,236	134	57	274	4,663,188
TEXAS CONNECTOR PROJECT						
North Compressor Station						
Gas Turbines (3)	94.94	106.06	11.42	1.14	14.19	207,496
Fuel Gas Heaters (3)	-	6.75	0.09	-	-	418
Diesel Engines (2)	0.50	0.18	0.12	0.00	0.00	50
Tanks (3)	-	-	0.36	-	-	64
Fugitive Emissions	-	-	0.00	-	-	-
Condensate Loadout	-	-	3.55	-	-	-
Subtotal	**95.46**	**112.97**	**15.96**	**1.15**	**14.20**	**208,070**
South Compressor Station	-	-	-	-	-	657
North and South Pipeline Segments and Laterals	-	-	0.001	-	-	3,491
Meter stations (6)	-	-	0.12	-	-	360.6
Texas Connector Project Totals	**95.46**	**112.97**	**16.08**	**1.15**	**14.20**	**212,579**

TABLE 4.11.1-7 (cont'd)

Operational Emissions from the Projects

Facility Description	NO_X	CO	VOC	SO_2	$PM/PM_{10}/PM_{2.5}$	CO_2e
	(tpy)					
LOUISIANA CONNECTOR PROJECT						
Louisiana Connector Compressor Station						
Gas Turbines (4)	158.26	163.96	60.01	4.20	26.6	315,284
Fuel Gas Heaters (4)	1.44	1.12	0.64	0.01	0.08	1,332
Diesel Engines (2)	0.62	0.18	0.62	0.00	0.01	87
Tanks (5)	-	-	0.81	-	-	2,252
Fugitive Emissions	-	-	0.05	-	-	-
Condensate Loadout	-	-	0.68	-	-	-
Subtotal	**160.32**	**165.26**	**62.82**	**4.21**	**26.68**	**318,955**
Louisiana Connector Mainline Pipeline	-	-	0.004	-	-	11,798
Meter stations (8)	-	-	0.16	-	-	412
Louisiana Connector Project Totals	**160.32**	**165.26**	**62.98**	**4.21**	**26.68**	**331,165**
TOTALS	**1,639.78**	**2,514.23**	**209.90**	**62.36**	**314.88**	**5,190,208**

[a] Values are estimated based on similar projects and facilities.

Air Modeling of Compressor Stations

To evaluate the air quality impacts of operational emissions from the compressor stations, PAPL performed air quality modeling analyses for the Texas Connector Project's North Compressor Station, and the Louisiana Connector Project's compressor station. The Texas Connector Project's South Compressor Station would be electric-driven, and therefore no modeling was conducted for that station. Background pollutant concentrations were estimated using existing ambient monitoring data for the region. Data were obtained from representative air quality monitoring stations to characterize the background air quality for each compressor station and are presented in table 4.11.1-2. The background monitors were determined based on proximity and general representativeness of the monitoring sites to each of the aboveground facilities.

Modeling for the Texas Connector Project's North Compressor Station was performed using the EPA-approved air dispersion model AERMOD Version 15181. Modeling for the Louisiana Connector Project's compressor station used AERMOD Version 16216r. PAPL conducted a screening analysis to determine whether operating emissions of SO_2, NO_2, CO, PM_{10}, or $PM_{2.5}$ would cause a significant impact. If the impacts are determined to be significant, a refined modeling analysis is required to determine the cumulative impact of the facility.

PAPL completed its screening analysis by modeling operating emissions from the compressor stations to determine the maximum ground level concentrations for each pollutant. As shown in table 4.11.1-8, the screening results for the Texas Connector Project's North Compressor Station indicate that SO_2, NO_2 (annual), CO, PM_{10}, and $PM_{2.5}$ are below their respective PSD modeling significant impact levels (SIL); therefore, further modeling was not required. However, the 1-hour NO_2 exceeded the corresponding SIL. As also shown in table 4.11.1-8, the screening results for the Louisiana Connector Project's compressor station indicate that SO_2, NO_2 annual, CO, and $PM_{2.5}$ (annual) are below their respective SILs. The 1-hour NO_2, 24-hour $PM_{2.5}$, and 24-hour PM_{10} exceeded their SILs.

TABLE 4.11.1-8

Significant Impact Analysis for Operating Emissions from the Texas Connector and Louisiana Connector Projects' Compressor Stations

Facility/ Pollutant	Averaging Period	Year	Maximum Modeled Concentration ($\mu g/m^3$)	SIL ($\mu g/m^3$)	Below SIL? (Yes or No)
TEXAS CONNECTOR PROJECT NORTH COMPRESSOR STATION					
SO_2	1-hour	2012	0.56	10	Yes
NO_2	1-hour	2012	37.8	7.5	No
	Annual	2012	0.96	1	Yes
CO	1-hour	2012	1,783.53	2,000	Yes
	8-hour	2012	307.8	500	Yes
$PM_{2.5}$	24-hour	2012	0.91	1.2	Yes
	Annual	2012	0.03	0.3	Yes
PM_{10}	24-hour	2012	2.18	5	Yes
LOUISIANA CONNECTOR PROJECT COMPRESSOR STATION					
SO_2	1-hour	2012-2016	0.99	10	Yes
NO_2	1-hour	2012-2016	47.1	7.5	No
	Annual	2012-2016	0.87	1	Yes
CO	1-hour	2012-2016	114	2,000	Yes
	8-hour	2012-2016	46	500	Yes
$PM_{2.5}$	24-hour	2012-2016	5.5	1.2	No
	Annual	2012-2016	0.15	0.3	Yes
PM_{10}	24-hour	2012-2016	6.3	5	No

$\mu g/m^3$ = microgram per cubic meter

For pollutants which are above the SIL, a full impact (cumulative) modeling analysis was required. The cumulative analysis was completed for each pollutant and averaging period based on EPA rulemaking by combining background concentrations with the model results and comparing to the NAAQS. Table 4.11.1-8 presents the results of the refined modeling analysis. These results indicate that the Texas Compressor Station's North Compressor Station's 1-hour NO_2 emissions would not contribute to a violation of the corresponding NAAQS. As shown in table 4.11.1-9, results of the full impact analysis indicate that the Louisiana Connector Project's compressor station's 24-hour $PM_{2.5}$, and 24-hour PM_{10} emissions would not contribute to a violation of the corresponding NAAQS. However, the results exceeded the NAAQS for 1-hour NO_2. The cumulative model results include emissions from the Louisiana Connector Project's compressor station, ambient background concentration, and emissions from off-site sources within 70 kilometers. PAPL used the MAXDCONT setting in AERMOD to determine the contributions of the Louisiana Connector Project's compressor station at each receptor. The maximum contribution of the compressor station to an exceedance of the NAAQS is 4.29 $\mu g/m^3$. This value is below the SIL of 7.5 $\mu g/m^3$. Therefore, the Louisiana Connector Project's compressor station would not significantly contribute to a violation of the 1-hour NO_2 NAAQS.

TABLE 4.11.1-9

Summary of NAAQS Full Impact Analysis for the Texas Connector and Louisiana Connector Projects' Compressor Stations

Facility/ Pollutant	Averaging Period	Maximum Modeled Result (ug/m^3) [a]	Background Value (ug/m^3)	Modeled Result + Background Concentration (ug/m^3)	NAAQS [b] ($\mu g/m^3$)
TEXAS CONNECTOR PROJECT NORTH COMPRESSOR STATION					
NO_2	1-hour	30.3	75.8	106.1	188
LOUISIANA CONNECTOR PROJECT COMPRESSOR STATION					
NO_2	1-hour	165.4	67.1	232	188
PM2.5	24-hour	3.3	16.0	19.3	35
PM10	24-hour	4.5	62.8	67.3	150

[a] Maximum cumulative impact = (maximum predicted impact) + (background concentration)

[b] The form for each pollutant/averaging period (i.e., H1H, H4H, and H8H) is based on EPA rulemaking. https://www.epa.gov/criteria-air-pollutants/naaqs-table

$\mu g/m^3$ = microgram per cubic meter

Air Modeling of the Liquefaction Project

To evaluate the air quality impacts of operational emissions from the Liquefaction Project, PALNG performed an air quality modeling analysis which included land-based stationary source and mobile marine emissions. Background pollutant concentrations were obtained from representative air quality monitoring stations to characterize the background air quality for the area and are presented in table 4.11.1-2. The background monitors were determined based on proximity and general representativeness of the monitoring sites to each of the aboveground facilities.

Modeling for the Liquefaction Project was completed using the EPA's AERMOD Version 16216r. PALNG conducted a screening analysis to determine whether operating emissions of SO_2, NO_2, CO, PM_{10}, or $PM_{2.5}$ would cause a significant impact. If the impacts are determined to be significant, a refined modeling analysis was required to determine the cumulative impact of the facility.

PALNG completed its screening analysis by modeling operating emissions from the stationary liquefaction facilities and mobile marine sources to determine the maximum ground level impacts for each

pollutant. As shown in table 4.11.1-10, the screening results indicate that SO_2 (annual), CO, and $PM_{2.5}$ (annual) emissions are below their respective SILs; therefore, further modeling was not required. However, the SO_2 (1-hour, 3-hour, 24-hour), NO_2 (1-hour), $PM_{2.5}$ (24-hour) and PM_{10} (24-hour) emissions exceeded the corresponding SIL, so a full impact (cumulative) modeling analysis was required.

TABLE 4.11.1-10

Significant Impact Analysis for Operating Emissions from the Liquefaction Project's Stationary and Mobile Sources

Facility/ Pollutant	Averaging Period	Year	Maximum Modeled Concentration (µg/m³)	SIL (µg/m³)	Below SIL? (Yes or No)
LOUISIANA CONNECTOR PROJECT COMPRESSOR STATION					
SO_2	1-hour	2011-2015	12.2	7.8	No
	3-hour	2011-2015	55.4	25	No
	24-hour	2011-2015	9.72	5	No
	Annual	2011-2015	0.4	1	Yes
NO_2	1-hour	2011-2015	60.2	7.5	No
	Annual	2011-2015	1.62	1	No
CO	1-hour	2011-2015	1192	2,000	Yes
	8-hour	2011-2015	311	500	Yes
$PM_{2.5}$	24-hour	2011-2015	7.35	1.2	No
	Annual	2011-2015	0.26	0.3	Yes
PM_{10}	24-hour	2011-2015	8.17	5	No

µg/m³ = microgram per cubic meter

Cumulative modeling includes emissions from the liquefaction facilities stationary sources and mobile marine sources, off-site sources within 50 kilometers and ambient background concentrations. These results are compared to the NAAQS. Table 4.11.1-11 presents the results of the refined modeling analysis.

TABLE 4.11.1-11

Summary of NAAQS Full Impact Analysis for the Liquefaction Project's Stationary and Mobile Sources

Facility/ Pollutant	Averaging Period	Maximum Modeled Result [a, b] (ug/m³)	Background Value (ug/m³)	Modeled Result + Background Concentration (ug/m³)	NAAQS [b] (µg/m³)
LIQUEFACTION PROJECT					
SO_2	1-hour	23.4	169.4	193	196
	3-hour	45.5	224.2	270	1,300
	24-hour	8.84	60.1	69	365
NO_2	1-hour	220.4	56.0	276	188
	Annual	2.53	22.6	25	100
$PM_{2.5}$	24-hour	15.0	22.5	38	35
PM_{10}	24-hour	12.6	80.0	93	150

[a] Maximum Modeled Result includes stationary and mobile sources from the Liquefaction Project as well as nearby sources.

[b] The form for each pollutant/averaging period (i.e., H1H, H4H, and H8H) is based on EPA rulemaking. https://www.epa.gov/criteria-air-pollutants/naaqs-table

µg/m³ = microgram per cubic meter

As also shown in table 4.11.1-10, results exceeded the NAAQS for 1-hour NO_2 and 24-hour $PM_{2.5}$. PALNG used the MAXDCONT setting in AERMOD to determine the contributions of the Liquefaction Project at each receptor with an exceedance. For NO_2 (1-hour), the maximum contribution of the Liquefaction Project is 0.11 µg/m^3 which is below the SIL of 7.5 µg/m^3. For $PM_{2.5}$ (24-hour), the maximum contribution of the Liquefaction Project is 0.10 µg/m^3 which is below the SIL of 35 µg/m^3. Therefore, the Liquefaction Project would not significantly contribute to a violation of the 1-hour NO_2 or the 24-hour $PM_{2.5}$ NAAQS.

Operation of the Projects would result in air quality impacts, particularly in the vicinity of the Liquefaction Project, the Texas Connector Project North Compressor Station, and the Louisiana Connector Project Compressor Station. However, modeled values of each facilities potential-to-emit, indicate that operation of the Projects would not result in or significantly contribute to an exceedance of the NAAQS.

4.11.2 Noise

Construction and operation of the Projects may affect overall noise levels in the Projects area. The ambient sound level of a region is defined by the total noise generated within the specific environment and is comprised of natural and man-made sounds. At any location, both the magnitude and frequency of environmental noise may vary considerably over the course of a day and throughout the week. This variation is caused in part by changing weather conditions and the effect of seasonal vegetation cover.

Two measurements used by some federal agencies to relate the time-varying quality of environmental noise to its known effects on people are the equivalent sound level (L_{eq}) and the day-night sound level (L_{dn}). The L_{eq} is a sound level over a specific time period corresponding to the same sound energy as measured for an instantaneous sound level assuming it is a constant noise source. Sound levels are perceived differently, depending on the length of exposure and time of day. The L_{dn} takes into account the time of day and duration the noise is encountered. Specifically, in calculation of the L_{dn}, late night and early morning (10:00 p.m. to 7:00 a.m.) noise exposures are increased by 10 dBA to account for people's greater sensitivity to sound during nighttime hours. Due to the 10 A-weighted decibels (dBA) nighttime penalty added prior to calculation of the L_{dn}, for a facility to meet the 55 dBA L_{dn} limit, the facility must be designed such that the constant 24-hour noise level does not exceed an L_{eq} of 48.6 dBA at any NSA. The A-weighted scale is used because human hearing is less sensitive to low and high frequencies than to mid-range frequencies.

Table 4.11.2-1 demonstrates the relative dBA noise levels of common sounds measured in the environment and industry. As a point of reference, a person's threshold of perception for a noticeable change in loudness is about 3 dBA, whereas a 5 dBA change is clearly noticeable and a 10 dBA change is perceived as either twice or half as loud.

TABLE 4.11.2-1

Sound Levels (dBA) and Relative Loudness [a]

Description of Sound	Sound Level (dBA)
Threshold of pain	140
Jet taking off (200-foot distance)	130
Operating heavy equipment	120
Night club with music	110
Construction site	100
Boiler room	90
Freight train (100-foot distance)	80
Classroom chatter	70

TABLE 4.11.2-1 (cont'd)

Sound Levels (dBA) and Relative Loudness [a]

Description of Sound	Sound Level (dBA)
Conversation (3-foot distance)	60
Urban residence	50
Soft whisper (5-foot distance)	40
North rim of Grand Canyon	30
Silent study room	20
Threshold of hearing (1,000 hertz)	0

[a] Adapted from 1999 OSHA Technical Manual, Chapter 5: Noise (chapter last updated August 15, 2013)

4.11.2.1 Federal Noise Regulations

In 1974, the EPA published its *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. This document provides information for state and local governments to use in developing their own ambient noise standards. The EPA has indicated that an L_{dn} of 55 dBA protects the public from indoor and outdoor activity interference. We have adopted this criterion and used it to evaluate the potential noise impacts from the proposed Projects at pre-existing NSAs such as schools, hospitals, and residences. At locations where existing ambient noise exceeds the 55 dBA threshold, Commission guidelines require the project-related noise increase to be below 10 dBA at any NSA. In addition, Commission regulations state that operation of project facilities may not result in any perceptible increase in vibration at any NSA.

4.11.2.2 State and Local Noise Regulations

The City of Port Arthur noise standard limits noise according to zoning district (e.g., residential, commercial, industrial) (Municipal Code Corporation [MCC], 2016a). The Liquefaction Project and Texas Connector Project's South Compressor Station are within the City of Port Arthur's jurisdiction and are zoned industrial. NSAs affected by these projects are in residential zones. As such, noise standards differ in areas zoned industrial versus areas zoned residential. The applicable City of Port Arthur noise standard for the NSAs in residential areas would limit project-generated noise to no greater than 57 dBA during the day (7 a.m. to 10 p.m.) and 52 dBA at night (10 p.m. to 7 a.m.). Construction-related noise is exempt from this standard provided that such activities do not take place during nighttime hours (MCC, 2016a). These noise standards are less restrictive than our noise criteria of 55 dBA L_{dn} and 48.6 dBA L_{eq}.

Cameron and Evangeline Parishes, Louisiana have qualitative nuisance regulations in place to prevent disturbance of the peace (MCC, 2015, 2016b). No other local noise ordinances applicable to the Projects area were identified. If additional local noise ordinances are identified through local permitting processes, PALNG and PAPL would address them during consultations with the local government.

Absent an applicable state or local noise level limit and, because the City of Port Arthur noise level limits are above the FERC noise criteria, our more stringent noise criterion of 55 dBA or no more than a 10 dBA increase over existing noise levels was used to evaluate the Projects' compliance with noise regulatory requirements.

4.11.2.3 Construction Noise Impacts and Mitigation

Noise would be generated during construction of the liquefaction facilities, pipeline, and aboveground facilities for the Projects. Noise levels would be highest in the immediate vicinity of construction activities and would diminish with distance from the work area. These impacts would be localized and temporary. The changing number and type of construction equipment at construction sites would result in varying levels of noise. Construction activities associated with the Projects would be performed with standard heavy equipment such as track-excavators, backhoes, cranes, bulldozers, dump trucks, boring equipment, and cement trucks. Noise would also be generated by trucks and other light vehicles traveling in and near areas under construction. Construction would generally not affect nighttime noise levels as it would be limited to 7 a.m. to 10 p.m., except for pile driving, HDD activities, and specific, limited construction activities such as tie-ins and hydrostatic testing.

Surface topography, vegetation cover, wind, and weather conditions would also affect the distance that construction-related noise would extend from the workspace. Tall, dense vegetation and rolling topography typically attenuates noise when compared to less vegetated, open land. Typically, the most prevalent sound source during construction would be the internal combustion engines used to power the construction equipment. Pile driving would be the most prominent source of construction noise during construction of the Liquefaction Project. Table 4.11.2-2 provides estimated noise levels (50 feet from the source) for typical construction equipment.

TABLE 4.11.2-2

Noise Levels of Major Construction Equipment [a]

Equipment Type	Sound Level at 50 Feet (dBA)
Trucks	85
Crane	85
Roller	85
Bulldozers	85
Pickup Trucks	55
Backhoes	80
Grader	85
Portable generators	84
Jackhammer	89
Pumps	81
Horizontal Boring Hydraulic Jack	82

[a] Federal Highway Administration, 2011

Liquefaction Project

Construction of the Liquefaction Project, which would also encompass the Texas Connector Project's South Compressor Station, would take about 45 months and would occur 6 days a week, 7 a.m. to 10 p.m. Table 4.11.2-6 depicts the distance and direction to the nearest NSAs, which are located 1.6 miles away. The noise levels associated with operation of construction equipment at the liquefaction site are expected to be less than 42 dBA at the nearest NSA. In addition to typical construction equipment, a concrete batch plant would be used at the site. The concrete batch plant would operate intermittently for a total of 3,120 hours over 2 years. The maximum noise from the concrete batch plant would be 57 dBA, which would be reduced to less than 42 dBA at the nearest NSA.

Pile-driving activities would also be required as part of the Liquefaction Project construction. Pile driving would take place for about 3 months during construction of the Pioneer Dock, 4 months during

construction of the MOF, 16 months during construction of the berths, and 15 to 19 months during construction of the main liquefaction facilities. PALNG states that pile-driving activities would take place 10 hours per day, 6 days a week. The maximum noise from pile driving could reach 60 dBA at the nearest NSA; however, pile driving would only occur during daylight hours. As discussed in section 4.11.2.2, the City of Port Arthur's (where the Liquefaction Project is located) noise standard for the NSAs in residential areas would limit project-generated noise to no greater than 57 dBA during the day (7 a.m. to 10 p.m.) and 52 dBA at night (10 p.m. to 7 a.m.); however, construction-related noise is exempt from this standard provided that such activities do not take place during nighttime hours (MCC, 2016a).

Texas Connector and Louisiana Connector Projects

Construction equipment noise levels would typically be about 90 dBA at 50 feet when equipment is operating at full load, which could be heard by people in nearby buildings. However, most pipeline construction noise would be localized. PAPL would construct the pipelines between the hours of 7 a.m. to 10 p.m. Some discrete activities (e.g., HDDs, hydrostatic testing, tie-ins, and purging/packing the pipeline) may require 24 hours of activity for limited periods of time; however, these activities would be temporary to short term. Due to the temporary, transitory, and localized nature of pipeline construction, we conclude that pipeline construction noise would not have a significant impact on nearby landowners.

Construction of the compressor stations, meter stations, MLVs, and pig launchers/receivers associated with the Texas Connector and Louisiana Connector Projects would occur over a period of several weeks to several months and would take place between the hours of 7 a.m. to 10 p.m. 6 days a week. Table 4.11.2-7 includes the distance and direction to NSAs within 0.5 mile of the North and South Compressor Stations (Texas Connector Project) and Louisiana Connector Project compressor station, respectively. Table 4.11.2-8 depicts the distance and direction to the NSAs within 0.5 mile of the KMLP, NGPL, GTS/CIPCO, FGT, HPL, TETCO, Centana, Egan, Pine Prairie, TGT, ANR, CGT, and TGP Meter Stations, respectively. Noise impacts associated with construction of the meter stations would be temporary. Construction equipment used for the Louisiana Connector Project would operate with functional mufflers, would be in good repair, and would only occur during the hours of 7 a.m. to 10 p.m.

Ambient sound levels near the Louisiana Connector Project's compressor station is 57 dBA, which is higher than our recommended 55 dBA. PAPL performed an acoustical analysis to determine the noise level attributable to the construction of the Louisiana Connector Project's compressor station. During some construction activities, noise levels at the nearest NSA to each station would be 58 dBA, which would exceed our 55 dBA L_{dn} criterion. However, due to the high ambient noise levels at the NSAs, the project-related noise impacts would be about 1 dBA above existing noise levels, which is a barely perceptible change in noise. Based on the analysis above, the temporary nature of construction, and compliance with the 55 dBA L_{dn} criterion, we conclude that construction noise at the aboveground facility sites would not have a significant impact on nearby NSAs.

Horizontal Directional Drills

The Texas Connector and Louisiana Connector Projects include HDDs that would generate continuous noise at drill entry and exit points at specific locations. HDD activities in any one area could last from several weeks to several months depending on the length of the drill and the hardness of the substrate being drilled. Table 4.11.2-3 lists the estimated noise levels anticipated on NSAs based on HDD activities and the estimated durations of the drill.

TABLE 4.11.2-3

Estimated Noise Levels for HDD Entry and Exit Sites Along the Texas Connector and Louisiana Connector Projects

Project/HDD Segment MPs (Entry to Exit Site)	Estimated Duration (days)	Distance (feet) and Direction to Closest NSA to HDD Entry	Distance (feet) and Direction to Closest NSA to HDD Exit	Ambient L_{dn} (entry/exit) (dBA)	Calculated L_{dn} Attributable to HDD (entry/exit) (dBA)	HDD Operations + Ambient L_{dn} (entry/exit) (dBA)	Change in the Sound Level (entry/exit) (dB)
TEXAS CONNECTOR PROJECT							
Southern Pipeline							
1.0 - 0.1	44	None	None				
2.2 - 2.5	19	None	2,500/NE	54.0	36.4	54.1	0.1
2.9 - 3.7	43	None	2,000/NW	46.2	38.6	49.9	0.7
7.0 - 6.0	50	None	None				
7.5 - 7.1	19	None	None				
Northern Pipeline							
2.6 - 1.5	53	None	None				
5.2 - 4.1	53	None	None				
5.2 - 6.2	49	None	None				
8.9 - 8.2	32	None	None				
10.9 - 10.0	44	None	None				
11.6 - 12.2	32	1,900/W	None	48.1	50.4	52.4	4.3
13.0 - 13.3	15	None	None				
14.2 - 14.4	14	None	None				
17.5 - 18.1	28	2,200/S	None	52.8	48.8	54.2	1.4
18.5 - 18.2	18	None	None				
19.0 - 18.6	19	None	None				
20.2 - 19.6	30	1,900/E	None	63.3	49.4	63.5	0.2
20.8 - 20.3	27	None	1,800/SE	63.3	39.7	63.3	0.0
21.6 - 22.4	39	None	None				
23.7 - 22.9	34	None	None				
25.2 - 24.6	31	None	None				
GTS Lateral							
0.8 - 0.5	17	None	2,500/N	61.6	37.9	61.6	0.0
0.8 - 1.1	17	None	None				
FGT Lateral							
1.2 - 0.8	22	400/S	900/E	49.9/49.9	68.1/46.8	68.2/51.6	18.2/1.7

TABLE 4.11.2-3 (cont'd)

Estimated Noise Levels for HDD Entry and Exit Sites Along the Texas Connector and Louisiana Connector Projects

Project/HDD Segment MPs (Entry to Exit Site)	Estimated Duration (days)	Distance (feet) and Direction to Closest NSA to HDD Entry	Distance (feet) and Direction to Closest NSA to HDD Exit	Ambient L_{dn} (entry/exit) (dBA)	Calculated L_{dn} Attributable to HDD (entry/exit) (dBA)	HDD Operations + Ambient L_{dn} (entry/exit) (dBA)	Change in the Sound Level (entry/exit) (dB)
LOUISIANA CONNECTOR PROJECT (MILEPOST)							
0.0 - 0.8	TBD [a]	None	1,850/SW	52	50	54	2
4.3 - 4.8		None	None				
18.1 - 17.5		None	None				
18.2 - 19.2		None	None				
27.2 - 26.5		None	None				
27.5 – 28.3		None	None				
30.9 - 30.6		None	None				
38.7 – 39.1		1,000/NE	1,600/NW	47	58	58	<10*
40.5 – 40.2		950/NW	1,500/NW	47	58	58	<10
42.5 – 42.0		1,800	None	52	53	56	4
47.9 – 47.5		700/NW	500/N	52	62	62	<10
48.5 – 48.2		700/NW	680/NW	52	62	62	<10
50.0 – 50.3		None	None				
54.6 – 54.8		1,600/N	850/NW	47	53	54	7
56.8 - 57.4		500/SE	2,300/SW	52	65	65	<10
60.2 – 59.7		1,700/SW	450/E	57	56	60	3
60.5 – 60.8		2,600/NW	None	52	48	53	1
63.9 - 64.3		None	None				
65.0 – 65.4		None	None				
79.4 – 78.8		430/NE	None	47	66	66	19
91.1 – 91.2		1,100/NW	1,900/W	57	58	61	4
94.7 – 94.5		None	1,900/NW	47	48	51	4
96.9 – 96.7		350/E	430/NE	57	68	68	<10
110.1 – 109.9		850/SE	1,800/SE	47	60	68	<10
110.3 – 110.6		900/SW	975/SW	47	61	61	<10
119.0 – 119.2		2,500/S	2,100/NE	47	49	51	4

[a] This information has not been provided for the Louisiana Connector Project. Therefore, we are recommending below that the duration for each HDD be provided prior to construction.

Typical equipment used at HDD entry sites includes:

- drilling rig and engine-driven hydraulic power unit;
- engine-driven mud pump(s) and engine-driven generator set(s);
- mud mixing/cleaning equipment;
- mobile equipment including a crane, backhoe, front loader, forklift, and/or trucks(s);
- frac tanks; and
- engine-driven lights.

Noise associated with HDD exit sites could result from use of the following equipment:

- Backhoe, side boom, and/or truck(s).
- Engine-driven generator and pump.
- Engine-driven lights.

In order to reduce HDD impacts on occupants of NSAs to an L_{dn} of 55 dBA, PAPL would use noise mitigation measures, which may include temporary noise barriers or tents around the workspace; temporary noise barriers or tents around individual units; exhaust silencers on generators, pumps, or the hydraulic power unit; and the use of low-noise generators. Homeowners of NSAs would be notified of HDD activity via telephone, email, or in person at least 48 hours prior to commencing HDD activities and may be offered voluntary compensation and relocation. To ensure that HDD-related noise would not have a significant impact on local residents, **we recommend that:**

- **Prior to construction of HDDs at MPs 19.6 and 20.3 along the Texas Connector Project's Northern Pipeline; MP 0.5 along the GTS Lateral; MP 0.8 along the FGT Lateral; and MPs 38.7, 40.5, 42.5, 47.9, 48.5, 56.8, 60.2, 79.4, 91.1, 96.9, 110.1, and 110.3 along the Louisiana Connector Project where HDD-related noise could exceed the Commission's sound level criterion at the closest NSA, PAPL should file with the Secretary, for review and written approval by the Director of OEP, an HDD noise mitigation plan to reduce the projected noise level attributable to the proposed drilling operations at nearby NSAs. During drilling operations, PAPL should implement the approved plan, monitor noise levels, and make all reasonable efforts to restrict the noise attributable to the drilling operations to no more than an L_{dn} of 55 dBA at the NSAs or 10 dBA above background where nighttime ambient noise is above 55 dBA L_{dn}.**

Because of the distance of the liquefaction facilities from NSAs, the temporary nature of pipeline construction activities, and our HDD noise condition, we conclude that no significant noise impacts are anticipated from construction of the proposed Projects.

4.11.2.4 Operations Noise Impacts and Mitigation

Liquefaction Project

PALNG performed noise impact evaluations that consider the regular, operational noise produced by all significant sound sources associated with the proposed Liquefaction Project that could impact the

sound contribution at nearby NSAs. Prominent sound sources include the liquefaction trains, compressors, turbines, power generation units, and cooling fans.

No blowdown activities would take place at the liquefaction facilities during normal operations; however, the liquefaction terminal would produce periodic noise from alarms associated with the marine loading and unloading operations. These warning alarms are governed by 33 CFR 127.207(b) and (c) and must have "… a minimum 1/3 octave band sound pressure level at 1 meter of 125 decibels" and must be "audible for 1 mile in all directions." Alarms such as these are generally tested on a weekly basis and would be audible at NSAs.

PALNG's noise evaluation, performed using the SoundPLAN software, accounted for terrain, meteorological effects, building shielding effects, and ground propagation and incorporates reductions due to the proposed noise controls. Noise mitigation includes the use of enclosures for the power generation turbines, silencers on the exhaust outlet and air intake, acoustic lagging on inter-compressor piping, and a flood protection berm. Table 4.11.2-4 shows the estimated noise impact at the nearest NSAs due to the full load operation of the Liquefaction Project.

TABLE 4.11.2-4

Estimated Noise Levels for the Liquefaction Project During Facility Operations

Nearest NSA	Distance (miles)/Direction	Ambient Sound Level (dBA L_{dn})	Facilities Operation (dBA L_{dn})	Facilities + Ambient L_{dn} (dBA)	Change in Ambient Sound Level (dB)
M1 (Res., Martin Luther King, Jr. Drive)	0.95 / E	64	54	64.4	0.4
M2 (Res., west side of ship channel)	1.4 / SE	56	46	56.4	0.4

[a] Existing sound level at the NSA from measured ambient sound data reported in the "Port Arthur Liquefaction Project – Baseline Noise Assessment and Noise Impact Analysis" report prepared September 2, 2016 by AECOM.

The results of the acoustical analyses indicate that the sound contribution of operation of the liquefaction facilities would not exceed our 55 dBA L_{dn} criterion at the nearest NSAs during operation, and the change in ambient sound would be below 3 dBA (the threshold at which most people perceive a difference in loudness). In addition, the nearest NSAs would be able to hear alarms at the liquefaction terminal, but this noise would be limited in duration and is not expected more than weekly. Therefore, operation of the Liquefaction Project would not have a significant effect on the ambient sound level.

To ensure that the actual noise levels resulting from operation of the Liquefaction Project are not significant, **we recommend that:**

- **PALNG should file a full power load noise survey with the Secretary no later than 60 days after placing each Liquefaction Project train in service. If the noise attributable to the operation of the equipment at the liquefaction facilities exceeds 55 dBA L_{dn} at the nearest NSA, within 60 days PALNG should modify operation of the liquefaction facilities or install additional noise controls until a noise level below 55 dBA L_{dn} at the NSA is achieved. PALNG should confirm compliance with the above requirement by filing a second noise survey with the Secretary no later than 60 days after it installs the additional noise controls.**

In addition, **we recommend that:**

- **PALNG and PAPL should file noise surveys with the Secretary no later than 60 days after placing the entire Liquefaction Project facility, including the South Compressor Station associated with the Texas Connector Project, into service. If a full load condition noise survey is not possible, PALNG and PAPL should provide an interim survey at the maximum possible horsepower load within 60 days of placing the Liquefaction Project facility and South Compressor Station into service and provide the full load survey within 6 months. If the noise attributable to operation of the equipment at the Liquefaction Project facility and South Compressor Station exceeds 55 dBA L_{dn} at the nearest NSA under interim or full horsepower load conditions, PALNG and PAPL should file a report on what changes are needed and should install the additional noise controls to meet the level within 1 year of the in-service date. PALNG and PAPL should confirm compliance with the above requirement by filing an additional noise survey with the Secretary no later than 60 days after it installs the additional noise controls.**

Texas Connector and Louisiana Connector Projects

PAPL performed noise impact evaluations that considered the noise produced by all sound sources associated with the Texas Connector Project's North Compressor Station and the Louisiana Connector Project's compressor station that could impact the sound level at nearby NSAs. No noise analysis was performed for the Texas Connector Project's South Compressor Station since it would be electric-driven with minimal noise generated.

Prominent sound sources at the North Compressor Station include the turbine-driven compressor units, scrubbers, unit and station blowdowns, gas cooling equipment, system utilities, and aboveground gas piping. The noise evaluation incorporates reductions due to distance, ground absorption, and from the proposed noise controls. Noise mitigation for the compressor equipment includes the use of compressor enclosures and silencers on the exhaust outlet and air intake. Table 4.12.2-5 shows the estimated noise impact at the nearest NSAs due to the full load operation of North Compressor Station as well as the distance and direction to the nearest NSA from each compressor station.

TABLE 4.11.2-5

Estimated Noise Levels for the Texas Connector and Louisiana Connector Projects' Compressor Stations

Project/Nearest NSA	Distance (feet)/Direction	Ambient Sound Level (dBA L_{dn})	Station Operation (dBA L_{dn})	Station + Ambient L_{dn} (dBA)	Change in Ambient Sound Level (dB)
TEXAS CONNECTOR PROJECT NORTH COMPRESSOR STATION					
House on Moore Road	600/E	60	55	61	1
LOUISIANA CONNECTOR PROJECT COMPRESSOR STATION AND TETCO METER STATION					
House on Lyles Road	1,100/SE	64	54.1	64.4	0.4
House on Hwy 165	1,650/E	70.6	51.6	70.7	0.1
House on Green Oak Cemetery Road	1,300/SE	64.0	54.5	64.5	0.5
House on Green Oak Road	2,700/NW	60.6	53.2	61.3	0.7

[a] Existing station sound level at the NSA from measured ambient sound data reported in the "Port Arthur Pipeline Project – Northern Compressor Station Noise Impact Analysis" report prepared August 26, 2016 by AECOM.

Major sound sources at the Louisiana Connector Project's compressor station include the turbine-driven compressor units, gas cooling equipment, lube oil coolers, the TETCO meter station, unit and station blowdowns, and aboveground gas piping. The noise evaluation, performed using the CadnaA software, incorporates reductions due to distance, air absorption, partial ground absorption, shielding from buildings, and the proposed noise controls. The analysis included sound reflections off the ground and buildings. Noise mitigation for the Louisiana Connector Projects' compressor station includes acoustically treated compressor enclosures, silencers on the exhaust outlet and air intake, and acoustically treated wall and roof fan openings. Table 4.11.2-7 shows the estimated noise impact at the nearest NSAs due to the full load operation of compressor station.

The results of the acoustical analyses indicate that the sound contribution of the compressor stations would not exceed our 55 dBA L_{dn} criterion at the nearest NSAs during operation. Additionally, the change in ambient sound for both stations is below the 3-dBA threshold at which most people perceive a difference in loudness. Therefore, operation of the Texas Connector Project North Compressor Station and Louisiana Connector Project's compressor station may not have a noticeable effect on the ambient sound level at the nearby NSAs.

To ensure that the actual noise levels resulting from operation of the Texas Connector Project's North Compressor Station and Louisiana Connector Project's compressor station are as predicted, **we recommend that:**

- **PAPL should file a noise survey with the Secretary no later than 60 days after placing the Texas Connector Project's North Compressor Station and Louisiana Connector Project's compressor station in service. If a full load condition noise survey is not possible, PAPL should instead file an interim survey at the maximum possible horsepower load and file the full load survey within 6 months. If the noise attributable to the operation of all of the equipment at any station under interim or full horsepower load exceeds 55 dBA L_{dn} at any nearby NSA, PAPL should file a report on what changes are needed and should install the additional noise controls to meet the level within 1 year of the in-service date. PAPL should confirm compliance with the 55 dBA L_{dn} requirement by filing a second noise survey with the Secretary no later than 60 days after it installs the additional noise controls.**

Meter Stations

PAPL completed a noise analysis for each of its proposed meter stations. Table 4.11.2-6 summarizes the results, and shows the distance and direction of the nearest NSA to each meter station.

TABLE 4.11.2-6

Estimated Noise Levels at Nearest NSAs to the Texas Connector and Louisiana Connector Projects' Meter Stations

Project/Meter Station	Distance (feet)/ Direction	Ambient L_{dn} (dBA)	Estimated L_{dn} due to Meter Station (dBA)	Meter Station L_{dn} + Ambient L_{dn} (dBA)	Change in Ambient Sound Level (dB)
TEXAS CONNECTOR PROJECT					
KMLP Meter Station	6,666/W	60	36	60	0
NGPL Meter Station	913/NE	60	53	61	1
GTS/CIPCO Meter Station	3,071/NE	60	43	60	0
FGT Meter Station	539/N	60	48[b]	60	0
HPL Meter Station	344/N	60	52[b]	61	1
LOUISIANA CONNECTOR PROJECT [a]					
PALNG Meter Station	NA				

TABLE 4.11.2-6 (cont'd)

Estimated Noise Levels at Nearest NSAs to the Texas Connector and Louisiana Connector Projects' Meter Stations

Project/Meter Station	Distance (feet)/ Direction	Ambient L_{dn} (dBA)	Estimated L_{dn} due to Meter Station (dBA)	Meter Station L_{dn} + Ambient L_{dn} (dBA)	Change in Ambient Sound Level (dB)
Centana Meter Station	2,600/E	52	40	52	0
Egan Meter Station	NA				
Pine Prairie Meter Station	NA				
TGT Meter Station	1,500/N	47	49	51	4
ANR Meter Station	2,400/SE	47	42	48	1
CGT Meter Station	300/E	47	53[b]	54	6
TGP Meter Station	1,800/SW	52	46	53	1

[a] The TETCO Meter Station is included in the North Compressor Station noise analysis.
[b] Includes mitigation (24-gauge steel building enclosure).

Based on the above analysis and adherence to our noise criterion of 55 dBA L_{dn} (including station blowdowns), we conclude that the noise resulting from operation of the meter stations would not have a noticeable impact on the ambient sound level at most nearby NSAs and would not represent a significant impact on any nearby NSA.

4.12 RELIABILITY AND SAFETY

4.12.1 LNG Facility Reliability, Safety, and Security Regulatory Oversight

LNG facilities handle flammable and sometimes toxic materials that can pose a risk to the public if not properly managed. These risks are managed by the companies owning the facilities, through selecting the site location and plant layout as well as through suitable design, engineering, construction, and operation of the LNG facilities. Multiple federal agencies share regulatory authority over the LNG facilities and the operator's approach to risk management. The safety, security, and reliability of PALNG's Liquefaction Project would be regulated by the DOT, USCG, and FERC.

In February 2004, the DOT, USCG, and FERC entered into an Interagency Agreement to ensure greater coordination among these three agencies in addressing the full range of safety and security issues at LNG terminals, including terminal facilities and LNG vessel operations, and maximizing the exchange of information related to the safety and security aspects of LNG facilities and related marine operations. Under the Interagency Agreement, FERC is the lead federal agency responsible for the preparation of the analysis required under NEPA for impacts associated with terminal construction and operation. The DOT and USCG participate as cooperating agencies but remain responsible for enforcing their regulations covering LNG facility siting, design, construction, and operation. All three agencies have some oversight and responsibility for the inspection and compliance during the LNG facility's operation.

The DOT establishes and has the authority to enforce the federal safety standards for the siting, construction, operation, and maintenance of onshore LNG facilities, as well as for the siting of marine cargo transfer systems at waterfront LNG facilities, under the Natural Gas Pipeline Safety Act (49 USC. 1671 *et seq.*). The DOT's LNG safety regulations are codified in 49 CFR 193, which prescribes safety standards for LNG facilities used in the transportation of gas by pipeline that are subject to federal pipeline safety laws (49 USC 60101 *et seq.*), and 49 CFR 192. On August 31, 2018, the DOT and FERC signed a MOU regarding methods to improve coordination throughout the LNG permit application process for FERC jurisdictional LNG facilities. In the MOU, the DOT agreed to issue a LOD stating whether a proposed LNG facility would be capable of complying with location criteria and design standards contained in Subpart B of Part 193. The Commission committed to rely upon the DOT determination in conducting its review of whether the facilities would be consisted with the public interest. The issuance of the LOD does not abrogate the DOT's continuing authority and responsibility over a proposed project's compliance with Part 193 during construction and future operation of the facility. The DOT's conclusion on the siting and hazard analysis required by Part 193 would be based on preliminary design information which may be revised as the engineering design progresses to final design. DOT regulations also contain requirements for the design, construction, installation, inspection, testing, operation, maintenance, and contingency plans for LNG facilities, which would be completed during later stages of the Liquefaction Project. If the project is constructed and becomes operational, the liquefaction facilities would be subject to the DOT's inspection program to ensure compliance with the requirements of 49 CFR 193.

The USCG has authority over the safety of an LNG terminal's marine transfer area and LNG marine traffic, as well as security plans for the entire LNG terminal and LNG marine traffic. The USCG regulations for LNG facilities are codified in 33 CFR 105 and 33 CFR 127. As a cooperating agency, the USCG assists the FERC staff in evaluating whether an applicant's proposed waterway would be suitable for LNG marine traffic and whether the terminal facilities would be operated in accordance with 33 CFR 105 and 33 CFR 127. If the facilities are constructed and become operational, the facilities would be subject to the USCG inspection program to ensure compliance with the requirements of 33 CFR 105 and 33 CFR 127.

FERC authorizes the siting and construction of LNG facilities under the NGA and delegated authority from the DOE. FERC requires standard information to be submitted to perform safety and

reliability engineering reviews. FERC's filing regulations are codified in 18 CFR 380.12 (m) and (o), and requires each applicant to identify how its proposed design would comply with the DOT's siting requirements of 49 CFR 193 Subpart B. The level of detail necessary for this submittal requires the applicant to perform substantial front-end engineering review of the complete project. The design information is required to be site-specific and developed to the extent that further detailed design would not result in significant changes to the siting considerations, basis of design, operating conditions, major equipment selections, equipment design conditions, or safety system designs. As part of the review required for a FERC order, we use this information from the applicant to assess whether the proposed facilities would have a public safety impact and to suggest additional mitigation measures for the Commission to consider for incorporation as conditions in the order. If the facilities are approved and the suggested mitigation measures are incorporated into the order as conditions, FERC staff would review material filed to satisfy the conditions of the order and conduct periodic inspections throughout construction and operation.

In addition, the Energy Policy Act of 2005 requires FERC to coordinate and consult with the U.S. Department of Defense (DOD) on the siting, construction, expansion, and operation of LNG terminals that would affect the military. On November 21, 2007, the FERC and the DOD (http://www.ferc.gov/legal/mou/mou-dod.pdf) entered into a MOU formalizing this process. In accordance with MOU, the FERC sent a letter to the DOD on June 25, 2015 requesting their comments on whether the planned project could potentially have an impact on the test, training, or operational activities of any active military installation. On July 28, 2015, the FERC received a response letter from the DOD Siting Clearinghouse stating that PALNG Project would have a minimal impact on military training and operations conducted in Cameron Parish, Louisiana and Jefferson and Orange Counties, Texas.

4.12.2 DOT Safety Regulatory Requirements and 49 CFR 193 Subpart B Determination

Siting the LNG facilities, as defined in 49 CFR 193, with regard to ensuring that the proposed site selection and location would not pose an unacceptable level or risk to public safety is required by DOT's regulations in 49 CFR 193, Subpart B. The Commission's regulations under 18 CFR 380.12 (o) (14) require PALNG to identify how the proposed design complies with the siting requirements in DOT regulations under 49 CFR 193, Subpart B. The scope of DOT's siting authority under 49 CFR 193 applies to LNG facilities used in the transportation of gas by pipeline subject to the federal pipeline safety laws and 49 CFR 192.[42]

DOT reviews the information and criteria submitted by PALNG to demonstrate compliance with the safety standards prescribed in 49 CFR 193 Subpart B and issues a LOD to the Commission on whether the proposed facilities would meet the DOT siting standards. The LOD will evaluate the hazard modeling results and endpoints used to establish exclusion zones, as well as PALNG's evaluation on potential incidents and safety measures incorporated in the design or operation of the facility specific to the site that have a bearing on the safety of plant personnel and the surrounding public. The LOD will serve as one of the considerations for the Commission to deliberate in its decision to authorize, with or without conditions, or deny an application.

The requirements in 49 CFR 193 Subpart B state that an operator or government agency must exercise legal control over the activities as long the facility is in operation that can occur within an "exclusion zone," defined as the area around an LNG facility that could be exposed to specified levels of thermal radiation or flammable vapor in the event of a release of LNG or ignition of LNG vapor. Approved mathematical models must be used to calculate the dimensions of these exclusion zones. The siting requirements specified in NFPA 59A (2001), an industry consensus standard for LNG facilities, are

42 49 CFR 193.2001(b)(3), Scope of part, excludes any matter other than siting provisions pertaining to marine cargo transfer systems between the LNG vessel and the last manifold (or in the absence of a manifold, the last valve) located immediately before a storage tank.

incorporated into 49 CFR 193 Subpart B by reference, with regulatory preemption in the event of conflict. The following sections of 49 CFR 193 Subpart B specifically address siting requirements:

- Section 193.2051, Scope, states that each LNG facility designed, replaced, relocated or significantly altered after March 31, 2000, must be provided with siting requirements in accordance with Subpart B and NFPA 59A (2001). In the event of a conflict with NFPA 59A (2001), the regulatory requirements in Part 193 prevail.

- Section 193.2057, Thermal radiation protection, requires that each LNG container and LNG transfer system have thermal exclusion zones in accordance with section 2.2.3.2 of NFPA 59A (2001).

- Section 193.2059, Flammable vapor-gas dispersion protection, requires that each LNG container and LNG transfer system have a dispersion exclusion zone in accordance with sections 2.2.3.3 and 2.2.3.4 of NFPA 59A (2001).

- Section 193.2067, Wind forces, requires that shop fabricated containers of LNG or other hazardous fluid containers less than 70,000 gallons must be designed to withstand wind forces based on the applicable wind load data in ASCE 7 (2005). All other LNG facilities must be designed for a sustained wind velocity of not less than 150 mph unless the DOT Administrator finds a lower wind speed is justified or the most critical combination of wind velocity and duration for a 10,000-year mean return interval.

As stated in section 193.2051, LNG facilities must meet the siting requirements of NFPA 59A (2001), Chapter 2, and include but may not be limited to:

- NFPA 59A (2001) section 2.1.1(c) requires consideration of protection against forces of nature.

- NFPA 59A (2001) section 2.1.1(d) requires that other factors applicable to the specific site that have a bearing on the safety of plant personnel and surrounding public be considered, including an evaluation of potential incidents and safety measures incorporated in the design or operation of the facility.

- NFPA 59A (2001) section 2.2.3.2 requires provisions to minimize the damaging effects of fire from reaching beyond a property line, and requires provisions to prevent a radiant heat flux level of 1,600 British thermal units per square foot hour (Btu/ft^2-hr) from reaching beyond a property line that can be built upon. The distance to this flux level is to be calculated with LNGFIRE3 or with models that have been validated by experimental test data appropriate for the hazard to be evaluated and that have been approved by DOT.

- NFPA 59A (2001) 2.2.3.4 requires provisions to minimize the possibility of any flammable mixture of vapors from a design spill from reaching a property line that can be built upon and that would result in a distinct hazard. Determination of the distance that the flammable vapors extend is to be determined with DEGADIS or approved alternative models that take into account physical factors influencing LNG vapor dispersion. [43]

43 DOT has approved two additional models for the determination of vapor dispersion exclusion zones in accordance with 49 CFR 193.2059: FLACS 9.1 Release 2 (Oct. 7, 2011) and PHAST-UDM Version 6.6 and 6. 7 (Oct. 7, 2011).

Taken together, 49 CFR 193 Subpart B and NFPA 59A (2001) require that flammable LNG vapors either from an LNG tank impoundment or from a design spill do not extend beyond areas in which the operator or a government agency legally controls all activities. Furthermore, consideration of other hazards which may affect the public or plant personnel must be evaluated as prescribed in NFPA 59A (2001) section 2.1.1(d).

Title 49 CFR 193 Subpart B and NFPA 59A (2001) also specify three radiant heat flux levels which must be considered for LNG storage tank spills for as long as the facility is in operation:

- 1,600 Btu/ft^2-hr - This level can extend beyond the plant property line that can be built upon but cannot include areas that are used for outdoor assembly by groups of 50 or more persons; [44]
- 3,000 Btu/ft^2-hr - This level can extend beyond the plant property line that can be built upon but cannot include areas that contain assembly, educational, health care, detention or residential buildings or structures; [45] and
- 10,000 Btu/ft^2-hr - This level cannot extend beyond the plant property line that can be built upon. [46]

The requirements for design spills from process or transfer areas are more stringent. For LNG spills, the 1,600 Btu/ft^2-hr flux level cannot extend beyond the plant property line onto a property that can be built upon.

In addition, section 2.1.1 of NFPA 59A (2001) requires that factors applicable to the specific site with a bearing on the safety of plant personnel and the surrounding public must be considered, including an evaluation of potential incidents and safety measures incorporated into the design or operation of the facility. DOT has indicated that potential incidents, such as vapor cloud explosions and toxic releases should also be considered to comply with Part 193 Subpart B.[47]

On March 20, 2018, the DOT provided a letter to FERC staff regarding its preliminary review of the information filed by PALNG that stated it had no objection to the design spill methodologies being used for the selection of leakage sources to meet the requirements of 49 CFR 193 Subpart B.[48] In addition, the DOT's letter also stated that the associated vapor dispersion results extend beyond the boundary of the

44 The 1,600 Btu/ft2-hr flux level is associated with producing pain in less than 15 seconds, first degree burns in 20 seconds, second degree burns in approximately 30-40 seconds, 1% mortality in approximately 120 seconds, and 100% mortality in approximately 400 seconds, assuming no shielding from the heat, and is typically the maximum allowable intensity for emergency operations with appropriate clothing based on average 10 minute exposure.

45 The 3,000 Btu/ft2-hr flux level is associated with producing pain in less than 5 seconds, first degree burns in 5 seconds, second degree burns in approximately 10-15 seconds, 1% mortality in approximately 50 seconds, and 100% mortality in approximately 180 seconds, assuming no shielding from the heat, and is typically the critical heat flux for piloted ignition of common building materials (e.g., wood, PVC, fiberglass, etc.) with prolonged exposures.

46 The 10,000 Btu/ft2-hr flux level is associated with producing pain in less than 1 seconds, first degree burns in 1 seconds, second degree burns in approximately 3 seconds, 1% mortality in approximately 10 seconds, and 100% mortality in approximately 35 seconds, assuming no shielding from the heat, and is typically the critical heat flux for unpiloted ignition of common building materials (e.g., wood, PVC, fiberglass) and degradation of unprotected process equipment after approximate 10 minute exposure and to reinforced concrete after prolonged exposure.

47 The US DOT PHMSA's "LNG Plant Requirements: Frequently Asked Questions" item H1, https://www.phmsa.dot.gov/pipeline/liquified-natural-gas/lng-plant-requirements-frequently-asked-questions, accessed Aug 2018.

48 March 20, 2018 letter "Re: Port Arthur LNG Liquefaction Project, FERC Docket CP17-20" from Kenneth Lee to Rich McGuire. Filed in Docket Number CP17-20-000 on March 22, 2018. Accession Number 20180322-3040.

proposed Liquefaction Project and into an area belonging to the TPWD (i.e., the J.D. Murphree WMA). The DOT noted that PALNG is working with the TPWD to secure a land use agreement to satisfy the requirements for Part 193. In addition, as an alternative, PALNG could apply for a special permit from the DOT for any measures that would provide equal or greater level of safety as the DOT's exclusion zone regulations or relocate facilities such that the TPWD areas would not be within exclusion zone areas.

On August 31, 2018, FERC and DOT signed an MOU regarding methods to improve coordination throughout the LNG permit application process for FERC jurisdictional LNG facilities. On December 20, 2018, the DOT issued a LOD to the Commission on 49 CFR 193 Subpart B regulatory requirements, which was filed with the Commission as part of the consolidated record for the Project to be one of the considerations for the Commission to deliberate in its decision to authorize, with or without modification or conditions, or deny an application.[49] The LOD provides DOT PHMSA's analysis and conclusions regarding 49 CFR 193 Subpart B regulatory requirements.

The DOT's conclusion on the siting and hazard analysis required by Part 193 would be based on preliminary design information which may be revised as the engineering design progresses to final design. DOT regulations also contain requirements for the design, construction, installation, inspection, testing, operation and maintenance, and contingency plans for LNG facilities, which would be completed during later stages of the Liquefaction Project. If the facilities are approved and constructed, final compliance with the requirements of 49 CFR 193 Subpart B will be subject to the DOT's inspection and enforcement programs.

4.12.3 USCG Safety Regulatory Requirements and Letter of Recommendation

4.12.3.1 LNG Marine Carrier Historical Record

Since 1959, ships have transported LNG without a major release of cargo or a major accident involving an LNG vessel. There are more than 370 LNG vessels in operation routinely transporting LNG between more than 100 import/export terminals currently in operation worldwide. Since U.S. LNG terminals first began operating under FERC jurisdiction in the 1970s, there have been thousands of individual LNG vessel arrivals at terminals in the U.S. For more than 40 years, LNG shipping operations have been safely conducted in U.S. ports and waterways.

A review of the history of LNG maritime transportation indicates that there has not been a serious accident at sea or in a port which resulted in a spill due to rupturing of the cargo tanks. However, insurance records, industry sources, and public websites identify a number of incidents involving LNG vessels, including minor collisions with other vessels of all sizes, groundings, minor LNG releases during cargo unloading operations, and mechanical/equipment failures typical of large vessels. Some of the more significant occurrences, representing the range of incidents experienced by the worldwide LNG vessel fleet, are described below:

- **El Paso Paul Kayser** grounded on a rock in June 1979 in the Straits of Gibraltar during a loaded voyage from Algeria to the United States. Extensive bottom damage to the ballast tanks resulted; however, no cargo was released because no damage was done to the cargo tanks. The entire cargo of LNG was subsequently transferred to another LNG vessel and delivered to its U.S. destination.

49 December 20, 2018, letter "Re: Port Arthur LNG LLC Project, Docket No. CP17-20-000, 49 CFR, Part 193, Subpart B, Siting – Letter of Determination" from Massoud Tahamtani to Rich McGuire. Filed in Docket Number CP17-20-000 on December 21, 2018. FERC eLibrary accession number 20181221-3061.

- **Tellier** was blown by severe winds from its docking berth at Skikda, Algeria in February 1989 causing damage to the loading arms and the LNG vessel and shore piping. The cargo loading had been secured just before the wind struck, but the loading arms had not been drained. Consequently, the LNG remaining in the loading arms spilled onto the deck, causing fracture of some plating.

- **Mostefa Ben Boulaid** had an electrical fire in the engine control room during unloading at Everett, Massachusetts. The ship crew extinguished the fire and the ship completed unloading.

- **Khannur** had a cargo tank overfill into the LNG vessel's vapor handling system on September 10, 2001, during unloading at Everett, Massachusetts. Approximately 100 gallons of LNG were vented and sprayed onto the protective decking over the cargo tank dome, resulting in several cracks. After inspection by the USCG, the Khannur was allowed to discharge its LNG cargo.

- **Mostefa Ben Boulaid** had LNG spill onto its deck during loading operations in Algeria in 2002. The spill, which is believed to have been caused by overflow rather than a mechanical failure, caused significant brittle fracturing of the steelwork. The LNG vessel was required to discharge its cargo, after which it proceeded to dock for repair.

- **Norman Lady** was struck by the USS Oklahoma City nuclear submarine while the submarine was rising to periscope depth near the Strait of Gibraltar in November 2002. The 87,000 m3 LNG vessel, which had just unloaded its cargo at Barcelona, Spain, sustained only minor damage to the outer layer of its double hull but no damage to its cargo tanks.

- **Tenaga Lima** grounded on rocks while proceeding to open sea east of Mopko, South Korea due to strong current in November 2004. The shell plating was torn open and fractured over an approximate area of 20 by 80 feet, and internal breaches allowed water to enter the insulation space between the primary and secondary membranes. The LNG vessel was refloated, repaired, and returned to service.

- **Golar Freeze** moved away from its docking berth during unloading on March 14, 2006, in Savannah, Georgia. The powered emergency release couplings on the unloading arms activated as designed, and transfer operations were shut down.

- **Catalunya Spirit** lost propulsion and became adrift 35 miles east of Chatham, Massachusetts on February 11, 2008. Four tugs towed the LNG vessel to a safe anchorage for repairs. The Catalunya Spirit was repaired and taken to port to discharge its cargo.

- **Al Gharrafa** collided with a container ship, Hanjin Italy, in the Malacca Strait off Singapore on December 19, 2013. The bow of the Al Gharrafa and the middle of the starboard side of the Hanjin were damaged. Both ships were safely anchored after the incident. No loss of LNG was reported.

- **Al Oraiq** collided with a freight carrier, Flinterstar, near Zeebrugge, Belgium on October 6, 2015. The freight carrier sank, but the Al Oraiq was reported to have sustained only minor damage to its bow and no damage to the LNG cargo tanks. According to reports, the Al Oraiq took on a little water but was towed to the Zeebrugge LNG terminal where its cargo was unloaded using normal procedures. No loss of LNG was reported.

- **Al Khattiya** suffered damage after a collision with an oil carrier off the Port of Fujairah on February 23, 2017. Al Khattiya had discharged its cargo and was anchored at the time of the incident. A small amount of LNG was retained within the LNG vessel to keep the cargo tanks cool. The collision damaged the hull and two ballast tanks on the Al Khattiya, but did not cause any injury or water pollution. No loss of LNG was reported.

4.12.3.2 LNG Carrier Safety Regulatory Oversight

The USCG exercises regulatory authority over LNG vessels under 46 CFR 154, which contains the United States safety standards for self-propelled vessels carrying bulk liquefied gases. The LNG vessels visiting the proposed facility would also be constructed and operated in accordance with the IMO *Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk* and the *International Convention for the Safety of Life at Sea*. All LNG vessels entering U.S. waters are required to possess a valid IMO Certificate of Fitness and either a USCG Certificate of Inspection for U.S. flag vessels or a USCG Certificate of Compliance for foreign flag vessels. These documents certify that the LNG vessel is designed and operated in accordance with both international standards and the U.S. regulations for bulk LNG vessels under Title 46 CFR 154.

The LNG vessels that would deliver or receive LNG to or from the proposed liquefaction facilities would also need to comply with various U.S. and international security requirements. The IMO adopted the *International Ship and Port Facility Security Code* in 2002. This code requires both ships and ports to conduct vulnerability assessments and to develop security plans. The purpose of the code is to prevent and suppress terrorism against ships; improve security aboard ships and on shore; and reduce the risk to passengers, crew, and port personnel on board ships and in port areas. All LNG vessels, as well as other cargo vessels (e.g., 500 gross tons and larger), and ports servicing those regulated vessels, must adhere to the IMO standards. Some of the IMO requirements for ships are as follows:

- Ships must develop security plans and have a Vessel Security Officer.
- Ships must have a ship security alert system to transmit ship-to-shore security alerts identifying the ship, its location, and an indication of whether the security of the ship is under threat or has been compromised.
- Ships must have a comprehensive security plan for international port facilities, focusing on areas having direct contact with ships.
- Ships must have equipment onboard to help maintain or enhance the physical security of the ship.

In 2002, the MTSA was enacted by the U.S. Congress and aligned domestic regulations with the maritime security standards of the *International Ship and Port Facility Security Code* and the *Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk* and the *International Convention for the Safety of Life at Sea*. The USCG's regulations in 33 CFR 104 require vessels to conduct a vessel security assessment and develop a vessel security plan that addresses each vulnerability identified in the vessel security assessments. All LNG vessels servicing the facility would have to comply with the MTSA requirements and associated regulations while in U.S. waters.

The USCG also exercises regulatory authority over LNG facilities that affect the safety and security of port areas and navigable waterways under Executive Order 10173; the Magnuson Act (50 USC section 191); the Ports and Waterways Safety Act of 1972, as amended (33 USC section 1221, et seq.); and the MTSA of 2002 (46 USC section 701). The USCG is responsible for matters related to navigation safety,

LNG vessel engineering and safety standards, and all matters pertaining to the safety of facilities or equipment located in or adjacent to navigable waters up to the last valve immediately before the receiving tanks. The USCG also has authority for LNG FSP review, approval, and compliance verification as provided in Title 33 CFR 105.

The USCG regulations in 33 CFR 127 apply to the marine transfer area of waterfront facilities between the LNG vessel and the last manifold or valve immediately before the receiving tanks. 33 CFR 127 applies to the marine transfer area for LNG of each new waterfront facility handling LNG and to new construction in the marine transfer areas for LNG of each existing waterfront facility handling LNG. The scope of the regulations includes the design, construction, equipment, operations, inspections, maintenance, testing, personnel training, firefighting, and security of the marine transfer area of LNG waterfront facilities. The safety systems, including communications, emergency shutdown (ESD), gas detection, and fire protection, must comply with the regulations in 33 CFR 127. Under 33 CFR 127.019, PALNG would be required to submit two copies of its Operations and Emergency Manuals to the USCG COTP for examination.

Both the USCG regulations under 33 CFR 127 and FERC regulations under 18 CFR 157.21, require an applicant who intends to build an LNG terminal facility to submit a Letter of Intent to the USCG no later than the date that the owner/operator initiates pre-filing with FERC, but, in all cases, at least 1 year prior to the start of construction. In addition, the applicant must submit a WSA to the COTP with the LOI.

The Preliminary WSA provides an initial explanation of the port community and the proposed facility and transit routes. It provides an overview of the expected impacts LNG operations may have on the port and the waterway. Generally, the Preliminary WSA does not contain detailed studies or conclusions. This document is used by the COTP to begin his or her evaluation of the suitability of the waterway for LNG marine traffic. The Preliminary WSA must provide an initial explanation of the following:

- Port characterization.
- Characterization of the LNG facility and the LNG vessel route.
- Risk assessment for maritime safety and security.
- Risk management strategies.
- Resource needs for maritime safety, security, and response.

A Follow-On WSA must be provided no later than the date the owner/operator files an application with FERC, but in all cases at least 180 days prior to transferring LNG. The Follow-on WSA must provide a detailed and accurate characterization of the LNG facility, the LNG vessel route, and the port area. The Follow-on WSA provides a complete analysis of the topics outlined in the Preliminary WSA. It should identify credible security threats and navigational safety hazards for the LNG marine traffic, along with appropriate risk management measures and the resources (i.e., federal, state, local, and private sector) needed to carry out those measures. Until a facility begins operation, applicants must also annually review their WSAs and submit a report to the COTP as to whether changes are required. This document is reviewed and validated by the USCG and forms the basis for the agency's LOR to the FERC.

In order to provide the USCG COTPs/Federal Maritime Security Coordinators, members of the LNG industry, and port stakeholders with guidance on assessing the suitability of a waterway for LNG

marine traffic, the USCG has published a Navigation and Vessel Inspection Circular – *Guidance on Assessing the Suitability of a Waterway for Liquefied Natural Gas (LNG) Marine Traffic* (NVIC 01-11).

NVIC 01-11 directs the use of the three concentric Zones of Concern, based on LNG vessels with a cargo carrying capacity up to 265,000 m^3, used to assess the maritime safety and security risks of LNG marine traffic. The Zones of Concern are:

- Zone 1 – impacts on structures and organisms are expected to be significant within 500 meters (1,640 feet). The outer perimeter of Zone 1 is approximately the distance to thermal hazards of 37.5 kW/m^2 (12,000 Btu/ft^2-hr) from a pool fire.

- Zone 2 – impacts would be significant but reduced, and damage from radiant heat levels are expected to transition from severe to minimal between 500 and 1,600 meters (1,640 and 5,250 feet). The outer perimeter of Zone 2 is approximately the distance to thermal hazards of 5 kW/m^2 (1,600 Btu/ft^2-hr) from a pool fire.

- Zone 3 – impacts on people and property from a pool fire or an un-ignited LNG spill are expected to be minimal between 1,600 meters (5,250 feet) and a conservative maximum distance of 3,500 meters (11,500 feet or 2.2 miles). The outer perimeter of Zone 3 should be considered the vapor cloud dispersion distance to the lower flammability limit from a worst case un-ignited release. Impacts to people and property could be significant if the vapor cloud reaches an ignition source and burns back to the source.

Once the applicant submits a complete Follow-On WSA, the USCG reviews the document to determine if it presents a realistic and credible analysis of the public safety and security implications from LNG marine traffic both in the waterway and when in port.

As required by its regulations (33 CFR 127.009), the USCG is responsible for issuing a LOR to the FERC regarding the suitability of the waterway for LNG marine traffic with respect to the following items:

- Physical location and description of the facility.

- The LNG vessel's characteristics and the frequency of LNG shipments to or from the facility.

- Waterway channels and commercial, industrial, environmentally sensitive, and residential areas in and adjacent to the waterway used by LNG vessels en route to the facility, within 25 kilometers (15.5 miles) of the facility.

- Density and character of marine traffic in the waterway.

- Locks, bridges, or other manmade obstructions in the waterway.

- Depth of water.

- Tidal range.

- Protection from high seas.

- Natural hazards, including reefs, rocks, and sandbars.

- Underwater pipes and cables.
- Distance of berthed LNG vessels from the channel and the width of the channel.

The USCG may also prepare an LOR Analysis, which serves as a record of review of the LOR and contains detailed information along with the rationale used in assessing the suitability of the waterway for LNG marine traffic.

4.12.3.3 PALNG's Waterway Suitability Assessment

On March 17, 2015, PALNG submitted a LOI and a Preliminary WSA to the COTP, Marine Safety Unit Port Arthur to notify the USCG that it proposed to construct an LNG export terminal. In order to assess the safety and security aspects of the Liquefaction Project, the COTP Marine Safety Unit Port Arthur consulted with various safety and security working groups, including the Area Maritime Security Committee, Harbor Safety Committee, state and local government representatives, and local emergency response groups. PALNG submitted a Follow-On WSA to the USCG on July 14, 2015.

4.12.3.4 LNG Carrier Routes and Hazard Analysis

As described in PALNG's WSAs, an LNG vessel's transit to the terminal would begin at the SNWW, where it would enter the pilot boarding station located approximately 20 miles offshore in the Gulf of Mexico. The LNG vessel then would travel 20 miles north to the entrance of the shipping channel. From here, the LNG vessel would transit approximately 6 nautical miles towards Sabine Lake, before turning left to enter the Port Arthur Ship Canal. Once in the Port Arthur Ship Canal, the LNG vessel would transit approximately 4.3 nautical miles to reach its final destination at PALNG's Facility. LNG vessels would return to sea by reversing their travel. Pilotage is compulsory for foreign vessels and U.S. vessels under registry in foreign trade when in U.S. waters. All deep draft ships currently entering the shared waterway would employ a U.S. pilot. The National Vessel Movement Center in the U.S. would require a 96-hour advance notice of arrival for deep draft vessels calling on U.S. ports. During transit, LNG vessels would be required to maintain voice contact with controllers and check in on designated frequencies at established way points.

NVIC 01-11 references the "Zones of Concern" for assisting in a risk assessment of the waterway. As LNG vessels proceed along the intended transit route, no hospitals, cultural centers, city centers, or military installations would be located within any of the three zones of concern. Hazard Zone 1 encompasses the Sabine Pass community and single residences as well as a USCG station, the Cheniere Sabine Pass LNG facility, and the Golden Pass LNG facility. Hazard Zone 2 encompasses the same locations as Hazard Zone 1. Hazard Zone 3 is a wider zone that encompasses the same locations as Hazard Zones 1 and 2 as well as the Sabine Pass High School.

The areas impacted by the three different hazard zones are illustrated for accidental and intentional events in figures 4.12-1 and 4.12-2, respectively.



Accidental Sandia Hazard Zone 1 (0-250m)
Accidental Sandia Hazard Zone 2 (250-750m)
Accidental Sandia Hazard Zone 3 (750-1700m)

Figure 4.12.1-1 Accidental Hazard Zones along LNG Carrier Route



Intentional Sandia Hazard Zone 1 (0-500m)
Intentional Sandia Hazard Zone 2 (500-1600m)
Intentional Sandia Hazard Zone 3 (1600-3500m)

Figure 4.12-2 Intentional Hazard Zones along LNG Carrier Route

4.12.3.5 Coast Guard Letter of Recommendation and Analysis

In a letter dated September 11, 2015, the USCG issued an LOR and LOR Analysis to FERC stating that the Sabine Neches River Ship Channel would be considered suitable for accommodating the type and frequency of LNG marine traffic associated with the Liquefaction Project. The LOR was based on full implementation of the strategies and risk management measures identified by the USCG to PALNG in its WSA.

Although PALNG has suggested mitigation measures for responsibly managing the maritime safety and security risks associated with LNG vessel marine traffic, the necessary vessel traffic and/or facility control measures may change depending on changes in conditions along the waterway. The USCG regulations in 33 CFR 127 require that applicants annually review WSAs until a facility begins operation. The annual review and report to the USCG would identify any changes in conditions, such as changes to the port environment, the liquefaction facility, or the LNG vessel route, that would affect the suitability of the waterway. Accordingly, PALNG submitted its annual WSA update on September 19, 2017 and the USCG determined that the annual review met the requirements of 33 CFR 127.

The USCG's LOR is a recommendation, regarding the current status of the waterway, to the FERC, the lead agency responsible for siting the on-shore liquefaction facility. Neither the USCG nor the FERC has authority to require waterway resources of anyone other than the applicant under any statutory authority or under the ERP or the Cost Sharing Plan. As stated in the LOR, the USCG would assess each transit on a case by case basis to identify what, if any, safety and security measures would be necessary to safeguard the public health and welfare, critical infrastructure and key resources, the port, the marine environment, and the LNG vessel.

Under the Ports and Waterways Safety Act, the Magnuson Act, the MTSA, and the Security and Accountability For Every Port Act, the COTP has the authority to prohibit LNG transfer or LNG vessel movements within his or her area of responsibility if he or she determines that such action is necessary to protect the waterway, port, or marine environment. If the Liquefaction Project is approved and if appropriate resources are not in place prior to LNG vessel movement along the waterway, then the COTP would consider at that time what, if any, vessel traffic and/or facility control measures would be appropriate to adequately address navigational safety and maritime security considerations.

4.12.4 LNG Facility Security Regulatory Requirements

The security requirements for the proposed Liquefaction Project are governed by 33 CFR 105, 33 CFR 127, and 49 CFR 193 Subpart J. Title 33 CFR 105, as authorized by the MTSA, requires all terminal owners and operators to submit a Facility Security Assessment (FSA) and a FSP to the USCG for review and approval before commencement of operations of the proposed project facilities. PALNG would also be required to control and restrict access, patrol and monitor the plant, detect unauthorized access, and respond to security threats or breaches under 33 CFR 105. Some of the responsibilities of the applicant include, but are not limited to:

- designating a Facility Security Officer with a general knowledge of current security threats and patterns, security assessment methodology, vessel and facility operations, conditions, security measures, emergency preparedness, response, and contingency plans, who would be responsible for implementing the FSA and FSP and performing an annual audit for the life of the Liquefaction Project;

- conducting a FSA to identify site vulnerabilities, possible security threats and consequences of an attack, and facility protective measures; developing a FSP based on the

FSA, with procedures for: responding to transportation security incidents; notification and coordination with federal, state, and local authorities; prevention of unauthorized access; measures to prevent or deter entrance with dangerous substances or devices; training; and evacuation;

- defining the security organizational structure with facility personnel with knowledge or training in current security threats and patterns; recognition and detection of dangerous substances and devices, recognition of characteristics and behavioral patterns of persons who are likely to threaten security; techniques to circumvent security measures; emergency procedures and contingency plans; operation, testing, calibration, and maintenance of security equipment; and inspection, control, monitoring, and screening techniques;

- implementing scalable security measures to provide increasing levels of security at increasing maritime security levels for facility access control, restricted areas, cargo handling, LNG vessel stores and bunkers, and monitoring; ensuring that the Transportation Worker Identification Credential (TWIC) program is properly implemented;

- ensuring coordination of shore leave for LNG vessel personnel or crew change out as well as access through the facility for visitors to the LNG vessel;

- conducting drills and exercises to test the proficiency of security and facility personnel on a quarterly and annual basis; and

- reporting all breaches of security and transportation security incidents to the National Response Center.

Title 33 CFR 127 has requirements for access controls, lighting, security systems, security personnel, protective enclosures, communications, and emergency power. In addition, an LNG facility regulated under 33 CFR 105 and 33 CFR 127 would be subject to the TWIC Reader Requirements Rule issued by the USCG on August 23, 2016. This rule requires owners and operators of certain vessels and facilities regulated by the USCG to conduct electronic inspections of TWICs (e.g., readers with biometric fingerprint authentication) as an access control measure. The final rule would also include recordkeeping requirements and security plan amendments that would incorporate these TWIC requirements. The implementation of the rule was first proposed to be in effect by August 23, 2018. In a subsequent notice issued on June 22, 2018, USCG indicated delaying the effective date for certain facilities by 3 years, until August 23, 2021. On August 2, 2018, the President of the United States signed into law the TWIC Accountability Act of 2018 (H.R. 5729). This prohibits the USCG from implementing the rule requiring electronic inspections of TWICs until after the Department of Homeland Security (DHS) has submitted a report to the Congress. Although the implementation of this rule has been postponed, the company may need to consider the rule when developing access control and security plan provisions for the facility.

Title 49 CFR 193 Subpart J also specifies security requirements for the onshore components of LNG terminals, including requirements for conducting security inspections and patrols, including a liaison with local law enforcement officials, design and construction of protective enclosures, lighting, monitoring, alternative power sources, and warning signs.

If the Liquefaction Project is authorized, constructed and operated, compliance with the security requirements of 33 CFR 105, 33 CFR 127, and 49 CFR 193 Subpart J would be subject to the respective USCG and DOT inspection and enforcement programs.

PALNG provided preliminary information on these security features and indicated additional details would be completed in the final design. We recommend in section 4.12.6 that PALNG provide final design details on these security features, for review and approval, that demonstrate lighting coverage adequately cover the perimeter of the site and interior of the terminal in accordance with PALNG's specification and reference to API 540, including lighting along the site perimeter and along paths/roads of access and egress; demonstrate camera coverage adequately cover the perimeter of the plant and interior of plant, including a camera be provided at the top of each LNG storage tank, within pretreatment areas, within liquefaction areas, within truck transfer areas, within marine transfer areas, and buildings; demonstrate fencing set back from exterior structures and vegetation, and from interior hazardous piping and equipment by at least 10 feet; provide vehicle barriers and design details at controlled access points. Furthermore, in accordance with the February 2004 Interagency Agreement among FERC, DOT, and USCG, FERC staff would collaborate with USCG and DOT on the Liquefaction Project's security features.

4.12.5 FERC Engineering and Technical Review of the Preliminary Engineering Designs

4.12.5.1 LNG Facility Historical Record

The operating history of the U.S. LNG industry has been free of safety-related incidents resulting in adverse effects on the public or the environment with the exception of the October 20, 1944, failure at an LNG plant in Cleveland, Ohio. The 1944 incident in Cleveland led to a fire that killed 128 people and injured 200 to 400 more people.[50] The failure of the LNG storage tank was due to the use of materials not suited for cryogenic temperatures. LNG migrated through streets and into underground sewers due to inadequate spill impoundments at the site. Current regulatory requirements ensure that proper materials suited for cryogenic temperatures are used in the design and that spill impoundments are designed and constructed properly to contain a spill at the site. To ensure that this potential hazard would be addressed for proposed LNG facilities, we evaluate the preliminary and final specifications for suitable materials of construction and for the design of spill containment systems that would properly contain a spill at the site.

Another operational accident occurred in 1979 at the Cove Point LNG plant in Lusby, Maryland. A pump electrical seal located on a submerged electrical motor LNG pump leaked causing flammable gas vapors to enter an electrical conduit and settle in a confined space. When a worker switched off a circuit breaker, the flammable gas ignited, causing severe damage to the building and a worker fatality. With the participation of the FERC, lessons learned from the 1979 Cove Point accident led to changes in the national fire codes to better ensure that the situation would not occur again. To ensure that this potential hazard would be addressed for proposed facilities that have electrical seal interfaces, we evaluated the preliminary designs and recommend in section 4.12.6 that PALNG provide, for review and approval, the final design details of the electrical seal design at the interface between flammable fluids and the electrical conduit or wiring system, details of the electrical seal leak detection system, and the details of a downstream physical break (i.e., air gap) in the electrical conduit to prevent the migration of flammable vapors.

On January 19, 2004, a blast occurred at Sonatrach's Skikda, Algeria, LNG liquefaction plant that killed 27 and injured 56 workers. No members of the public were injured. The investigation suggested that a cold hydrocarbon leak occurred at Liquefaction Train 40 and was introduced into a high-pressure steam boiler by the combustion air fan. An explosion developed inside the boiler firebox, which subsequently triggered a larger explosion of the hydrocarbon vapors in the immediate vicinity. The resulting fire damaged the adjacent liquefaction process and liquid petroleum gas separation equipment of Train 40, and spread to Trains 20 and 30. Although Trains 10, 20, and 30 had been modernized in 1998 and 1999, Train 40 had been operating with its original equipment since start-up in 1981. To ensure that

50 For a description of the incident and the findings of the investigation, see "U.S. Bureau of Mines, Report on the Investigation of the Fire at the Liquefaction, Storage, and Regasification Plant of the East Ohio Gas Co., Cleveland, Ohio, October 20, 1944," dated February 1946.

this potential hazard would be addressed for proposed facilities, we evaluate the preliminary design for mitigation of flammable vapor dispersion and ignition in buildings and combustion equipment to ensure they are adequately covered by hazard detection equipment that could isolate and deactivate any combustion equipment whose continued operation could add to or sustain an emergency. We also recommend in section 4.12.6 that PALNG provide, for review and approval, the final design drawings of hazard detection equipment, including the location and elevation of all detection equipment, instrument tag numbers, type and location, alarm indication locations, and shutdown functions of the hazard detection equipment.

On March 31, 2014, a detonation occurred within a gas heater at Northwest Pipeline Corporation's LNG peak-shaving plant in Plymouth, Washington.[51] This internal detonation subsequently caused the failure of pressurized equipment, resulting in high velocity projectiles. The plant was immediately shut down, and emergency procedures were activated, which included notifying local authorities and evacuating all plant personnel. No members of the public were injured, but one worker was sent to the hospital for injuries. As a result of the incident, the liquefaction trains and a compressor station located onsite were rendered inoperable. Projectiles from the incident also damaged the control building that was located near the pre-treatment facilities and penetrated the outer shell of one of the single containment LNG storage tanks. All damaged facilities were ultimately taken out of service for repair. The accident investigation showed that an inadequate purge after maintenance activities resulted in a fuel-air mixture remaining in the system. The fuel-air mixture auto-ignited during startup after it passed through the gas heater at full operating pressure and temperature. To ensure that this potential hazard would be addressed for proposed facilities, FERC staff recommends in section 4.12.6 that PALNG provide a plan for purging, for review and approval, which addresses the requirements of the American Gas Association *Purging Principles and Practice* and to provide justification if not using an inert or non-flammable gas for purging. In evaluating such plans, we would assess whether the purging could be done safely based on review of other plans and lessons learned from this and other past incidents. If a plan proposes the use of flammable mediums for cleaning, dry-out or other activities, we would evaluate the plans against other recommended and generally accepted good engineering practices, such as NFPA 56, *Standard for Fire and Explosion Prevention during Cleaning and Purging of Flammable Gas Piping Systems*.

We also recommend in section 4.12.6 that PALNG provide for review and approval operating and maintenance plans, including safety procedures, prior to commissioning. In evaluating such plans, we would assess whether the plans cover all standard operations, including purging activities associated with startup and shutdown. Also, in order to prevent other sources of projectiles from affecting occupied buildings and storage tanks, we recommend in section 4.12.6 that PALNG incorporate mitigation measures into their final design with supportive information, for review and approval, that demonstrates it would mitigate the risk of a pressure vessel burst or boiling liquid expanding vapor explosion (BLEVE) from occurring.

FERC requires an applicant to provide safety, reliability, and engineering design information as part of its application, including hazard identification studies and front-end-engineering-design (FEED) information for a proposed project. FERC staff evaluates this information with a focus on potential hazards from within and nearby the site, including external events, which may have the potential to cause damage or failure to the Liquefaction Project facilities, and the engineering design and safety and reliability concepts of the various protection layers to mitigate the risks of potential hazards.

The primary concerns are those events that could lead to a hazardous release of sufficient magnitude to create an offsite hazard or interruption of service. In general, FERC staff considers an acceptable design

51 For a description of the incident and the findings of the investigation, see Root Cause Failure Analysis, Plymouth LNG Plant Incident Investigation under CP14-515.

to include various layers of protection or safeguards to reduce the risk of a potentially hazardous scenario from developing into an event that could impact the offsite public. These layers of protection are generally independent of one another so that any one layer would perform its function regardless of the initiating event or failure of any other protection layer. Such design features and safeguards typically include:

- a facility design that prevents hazardous events, including the use of inherently safer designs; suitable materials of construction; adequate design margins from operating limits for process piping, process vessels, and storage tanks; adequate design for wind, flood, seismic, and other outside hazards;

- control systems, including monitoring systems and process alarms, remotely-operated control and isolation valves, and operating procedures to ensure that the facility stays within the established operating and design limits;

- safety instrumented prevention systems, such as safety control valves and ESD systems, to prevent a release if operating and design limits are exceeded;

- physical protection systems, such as appropriate electrical area classification, proper equipment and building spacing, pressure relief valves, spill containment, and cryogenic, overpressure, and fire structural protection, to prevent escalation to a more severe event;

- site security measures for controlling access to the plant, including security inspections and patrols, response procedures to any breach of security, and liaison with local law enforcement officials; and

- onsite and offsite emergency response, including hazard detection, hazard control equipment, firewater systems, and coordination with local first responders, to mitigate the consequences of a release and prevent it from escalating to an event that could impact the public.

We believe the inclusion of such protection systems or safeguards in a plant design can minimize the potential for an initiating event to develop into an incident that could impact the safety of the offsite public. The review of the engineering design for these layers of protection is initiated in the application process and carried through to the next phase of the proposed project in final design if authorization is granted by the Commission.

The reliability of these layers of protection is informed by occurrence and likelihood of root causes and the potential severity of consequences based on past incidents and validated hazard modeling. As a result of the continuing engineering review, FERC staff recommends mitigation measures and continuous oversight to the Commission for consideration to include as conditions in the Order. If a facility is authorized and recommendations are adopted as conditions to the Order, FERC staff would continue its engineering review through final design, construction, commissioning, and operation.

Process Design

In order to liquefy natural gas, most liquefaction technologies require that the feed gas stream be pre-treated to remove components that could freeze out and clog the liquefaction equipment or would otherwise be incompatible with the liquefaction process or equipment, including mercury, H_2S, CO_2, water, and heavy hydrocarbons. For example, mercury is typically limited to concentrations less than 0.01 micrograms per normal cubic meter because it can cause embrittlement and corrosion resulting in catastrophic failure of equipment.

The inlet gas would be conditioned to remove solids and water droplets and for pressure regulation prior to entering feed gas pretreatment processes. Once the inlet gas is conditioned, the feed gas would enter the mercury removal system consisting of mercury adsorber(s) to reduce the mercury concentration in the feed gas. Once the mercury is removed, the feed gas would enter an acid gas removal unit consisting of a CO_2 absorber and amine regeneration unit to reduce the H_2S and CO_2 present in the feed gas. The H_2S would further be reduced using a H_2S scavenger bed. The gas leaving the scavenger unit would be sent to a thermal oxidizer, where any remaining traces of H_2S and hydrocarbons would be incinerated. Water would be removed from the feed gas by a dehydration unit using molecular sieve beds to prevent hydrate formation in downstream equipment.

A Heavy Hydrocarbon Removal Unit would be used to extract the heavy hydrocarbons from the feed gas. The resulting heavy hydrocarbon stream would be stabilized and sent to the condensate storage tank and removed by truck.

After the heavy hydrocarbons and other impurities are removed, the feed gas would be pre-cooled by thermal exchange with propane and further cooled using a mixed refrigerant stream to condense the natural gas into a liquid at -260°F. The Liquefaction Project expects to utilize a liquefaction process designed and optimized by Air Products and Chemicals Inc. The mixed refrigerant process stream is comprised of a mixture of nitrogen, CH_4, ethane, and propane designed to achieve the liquefaction temperature. Refrigerants required for the liquefaction process would be unloaded from trucks and stored onsite for initial filling and use, as needed, for make-up. Propane and ethane refrigerant make-up storage vessels would be provided for both of the liquefaction trains. The truck loading/unloading facility would serve to unload make-up refrigerants brought to the site and would also load condensate product stored onsite.

After cooling the natural gas into its liquid form, this LNG would be transferred to the three full-containment LNG storage tanks. During export operations, LNG stored within the LNG storage tanks would be sent out through multiple in-tank pumps (the pump discharge piping would penetrate through the roof and is an inherently safer design when compared to penetrating the side of an LNG storage tank) and would be routed through a marine transfer line and multiple liquid marine transfer arms connected to an LNG marine vessel. In order to keep the marine transfer line cold between LNG export cargoes, an LNG recirculation line would keep the marine transfer line cold and avoid cool down prior to every LNG marine vessel loading operation. The LNG transferred to the LNG marine vessel would displace vapors from the marine vessel, which would be sent back through a vapor marine transfer arm, a vapor return line, and back to LNG storage tanks. Once loaded, the LNG ship would be disconnected and leave for export.[52]

In addition, the Liquefaction Project would include many utilities and associated auxiliary equipment. The major auxiliary systems required for the operation of the liquefaction facility include fuel gas, hot oil, flares, instrument and utility air supply, water supply, demineralized water, nitrogen, and backup power. Furthermore, hot oil would be used to provide the heat demand to the plant users, molecular sieve regeneration, amine regeneration, and deethanizer and debutanizer reboilers. There are two types of proposed flare systems, including ground flares and an elevated marine flare stack. The ground flares would be designed to handle the vent gases from the process areas associated with the liquefaction operations, while the elevated marine flare stack would be designed to control vent gases associated with the LNG storage tanks and LNG ship vapor return from the ship during unloading and cooldown operation. Diesel would be stored in dedicated tanks for their respective equipment, which includes essential firewater pumps and three diesel generators. Electric power would be generated on-site but would be located outside the storm levee and would require using eight of nine gas turbine driven generators. Liquid nitrogen vaporizers

52 PALNG has not identified specific LNG export destinations for the proposed Project. LNG from the Terminal may be exported to any importing terminal throughout the world for which PALNG has authorization to export from DOE.

would be used to supply gaseous nitrogen for various uses in the plant including pre-commissioning and start-up. In addition, aqueous ammonia would be used in the selective catalytic removal process to reduce the NO_x emissions from the self-generation power turbines proposed as part of the Liquefaction Project.

The failure of process equipment could pose potential harm if not properly safeguarded through the use of appropriate engineering controls and operation. PALNG would install process control valves and instrumentation to safely operate and monitor the facilities. Alarms would have visual and audible notification in the control room to warn operators that process conditions may be approaching design limits. Operators would have the capability to take action from the control room to mitigate an upset. PALNG would develop facility operation procedures after completion of the final design; this timing is fully consistent with accepted industry practice. PALNG would design their control systems and human machine interfaces to meet the International Society for Automation (ISA) Standards 5.3, 5.5, 60.1, 60.3, 60.4, and 60.6, and other standards and recommended practices. FERC staff recommends in section 4.12.6 that PALNG provide more information, for review and approval, on the operating and maintenance procedures, including safety procedures, hot work procedures and permits, abnormal operating conditions procedures, and personnel training prior to commissioning. We would evaluate these procedures to ensure that an operator can operate and maintain all systems safely, based on benchmarking against other operating and maintenance plans and comparing against recommended and generally accepted good engineering practices, such as American Institute of Chemical Engineers, *Guidelines for Writing Effective Operating and Maintenance Procedures*. In addition, FERC staff recommends in section 4.12.6 that PALNG tag and label instrumentation and valves, piping, and equipment and provide car-seals/locks to address human factor considerations and improve facility safety and prevent incidents. We also recommend in section 4.12.6 that PALNG develop and implement an alarm management program, for review and approval to ensure the effectiveness of the alarms. FERC staff would evaluate the alarm management program against recommended and generally accepted good engineering practices, such as ISA Standard 18.2.

In the event of a process deviation, ESD valves and instrumentation would be installed to monitor, alarm, shutdown, and isolate equipment and piping during process upsets or emergency conditions. The Liquefaction Project would have an ESD system to initiate closure of valves and shutdown of the process during emergency situations. Safety-instrumented systems would comply with ISA Standard 84.01 and other recommended and generally accepted good engineering practices. However, it is unclear as to whether the Liquefaction Project would have the ability to shut down the entire facility via a single plant-wide ESD command. A single plant-wide shutdown is common among jurisdictional LNG facilities at FERC, including sister facilities of PALNG owned by Sempra. To address reliability concerns of false trips, a plant wide shutdown button is often safeguarded from inadvertent actuation by necessitating multiple actions by the operator and have redundancies built in the circuitry with supervisory alarms that would not trip the entire plant on a failure. Given the uncertainty as to whether PALNG would include a single plant wide shutdown button or not, FERC staff recommends in section 4.12.6 that PALNG provide details of the ESD system, for review and approval, including whether a plant-wide ESD button with proper sequencing and reliability is present or whether another system exists that is demonstrated through a human reliability analysis to provide a means to quickly and reliably shutdown the entire plant. We also recommend in section 4.12.6 that PALNG file information, for review and approval, on the final design, installation, and commissioning of instrumentation and ESD equipment to ensure appropriate cause-and-effect alarm or shutdown logic and enhanced representation of the ESD system in the plant control room and throughout the plant.

In developing the FEED, PALNG conducted a hazard identification review to identify potential hazards (both safety and environmental) associated with the proposed facility location, site layout, process design, marine operations, simultaneous operations, and construction. A more detailed hazard and operability review (HAZOP) analysis would be performed by PALNG during the final design to identify the major process hazards that may occur during the operation of the facilities. The HAZOP study would

be intended to address hazards of the process, engineering and administrative controls and would provide a qualitative evaluation of a range of possible safety, health, and environmental consequences that may result from the process hazard, and identify whether there are adequate safeguards (e.g., engineering and administrative controls) to prevent or mitigate the risk from such events. Where insufficient engineering or administrative controls were identified, recommendations to prevent or minimize these hazards would be generated from the results of the HAZOP review. FERC staff recommends in section 4.12.6 that PALNG file the HAZOP study on the completed final design for review and approval. We would evaluate the HAZOP to ensure all systems and process deviations are addressed appropriately based on likelihood, severity and risk values with commensurate layers of protection in accordance with recommended and generally accepted good engineering practices, such as American Institute of Chemical Engineers, *Guidelines for Hazard Evaluation Procedures*. We also recommend in section 4.12.6 that PALNG file the resolutions of the recommendations generated by the HAZOP review for evaluation and approval by FERC staff. Once the design has been subjected to a HAZOP review, the design development team would track, manage, and keep records of changes in the facility design, construction, operations, documentation, and personnel. PALNG would evaluate these changes to ensure that the safety, health, and environmental risks arising from these changes are addressed and controlled based on its management of change procedures. If FERC staff's recommendations are adopted into the Commission Order, resolutions of the recommendations generated by the HAZOP review would be monitored by FERC staff. We also recommend in section 4.12.6 that PALNG file all changes to their FEED for review and approval by FERC staff. However, major modifications could require an amendment or new proceeding.

If a project is authorized and constructed, PALNG would install equipment in accordance with its design. FERC staff recommends in section 4.12.6 that that project facilities be subject to construction inspections and that PALNG provide, for review and approval, commissioning plans, procedures and commissioning demonstration tests that would verify the performance of equipment. In addition, FERC staff recommends in section 4.12.6 that PALNG provide semi-annual reports that include abnormal operating conditions and planned facility modifications. Furthermore, FERC staff recommends in section 4.12.6 that the project facilities be subject to regular inspections throughout the life of the facilities to verify that equipment is being properly maintained and to verify basis of design conditions, such as feed gas and sendout conditions, do not exceed the original basis of design.

Mechanical Design

PALNG provided codes and standards for the design, fabrication, construction and installation of piping and equipment and specifications for the facility. The design specifies materials of construction and ratings suitable for the pressure and temperature conditions of the process design. Piping would be designed, fabricated, assembled, erected, inspected, examined, and tested in accordance with the ASME Standards B31.3, B31.5, B36.10, and B36.19. Valves and fittings would be designed to standards and recommended practices such as API Standards 600, 602, 607, and 609; ASME Standards B16.5, B16.10, B16.20, B16.25, and B16.34; and ISA Standard 75.08.01. Portions of the facility regulated under 33 CFR 127 for the marine transfer system, including piping, hoses, and loading arms should also be tested in accordance with 33 CFR 127.407.

Pressure vessels would be designed, fabricated, inspected, examined, and tested in accordance with ASME Boiler and Pressure Vessel Code (BPVC) section VIII per 49 CFR 193 Subparts C, D, and E, and by incorporation NFPA 59A (2001). Heat exchangers would be designed to ASME BPVC section VIII standards; API Standards 660 and 661; and the Tubular Exchanger Manufacturers Association standards. Fired heaters would be specified and designed to standards and recommended practices, such as API Standards 535, 556 and 560. Rotating equipment would be designed to standards and recommended practices, such as API Standards 610, 613, 614, 616, 617, 670, 671, 675, 676, and 682; and ASME Standards B73.1 and B73.2.

The LNG storage tank must be design, fabricated, tested, and inspected in accordance with 49 CFR 193 Subpart D, NFPA 59A (2001 and 2006), and API Standard 620. In addition, PALNG would design, fabricate, test, and inspect the full containment LNG storage tank in accordance with API Standard 625 and American Concrete Institute Standard 376. Other low-pressure storage tanks such as the amine, and condensate storage tanks, would be designed, inspected, and maintained in accordance with the API Standards 650 and 653.

Pressure and vacuum safety relief valves and flares would be installed to protect the storage containers, pressure vessels, process equipment, and piping in the event of an unexpected vapor release or uncontrolled pressure excursion. The safety relief valves would be designed to handle process upsets and thermal expansion, per NFPA 59A (2001), ASME Standard B31.3, and ASME BPVC section VIII; and would be designed in accordance with API Standards 520, 521, 526, 527, and 2000; and other recommended and generally accepted good engineering practices. In addition, the operator should verify the set pressure of the pressure relief valves meet the requirements in 33 CFR 127.407. FERC staff recommends in section 4.12.6 that PALNG provide final design information on pressure and vacuum relief devices, for review and approval, to ensure that the final sizing, design, and installation of these components are adequate and in accordance with the standards reference and other recommended and generally accepted good engineering practices. In addition, we recommend in section 4.12.6 that PALNG install thermal relief valves in certain piping segments that can be isolated by valves.

Although many of the codes and standards were described or listed as ones the project would meet, PALNG did not make reference to all codes and standards required by regulations or that are recommended and generally accepted good engineering practices and there were inconsistencies among the codes and standards provided in the list, specifications, and data sheets. In addition, the list included codes and standards that did not seem applicable (e.g., ASME B31.4, ASME B31.5). Therefore, we recommend in section 4.12.6 that PALNG provide the final specifications for all equipment and a cross referenced list of all referenced codes and standards for review and approval.

If the project is authorized and constructed, PALNG would install equipment in accordance with its design and FERC staff would verify equipment nameplates to ensure equipment is being installed based on the approved design. In addition, FERC staff would conduct construction inspections including reviewing quality assurance and quality control plans to ensure construction work is being performed according to proposed project specifications, procedures, codes and standards. FERC staff recommends in section 4.12.6 that PALNG provide semi-annual reports that include equipment malfunctions and abnormal maintenance activities. In addition, FERC staff recommends in section 4.12.6 that the project facilities be subject to inspections throughout the life of the facility to verify that the plant equipment is being properly maintained.

Hazard Mitigation Design

If operational control of the facilities were lost and operational controls and ESD systems failed to maintain the Liquefaction Project within the design limits of the piping, containers, and safety relief valves, a release could potentially occur. FERC regulations under 18 CFR 380.12 (o) (1) through (4) require applicants to provide information on spill containment, spacing and plant layout, hazard detection, hazard control, and firewater systems. In addition, 18 CFR 380.12 (o) (7) require applicants to provide engineering studies on the design approach and 18 CFR 380.12 (o) (14) requires applicants to demonstrate how they comply with 49 CFR 193 and NFPA 59A. As required by 49 CFR 193 Subpart I and by incorporation section 9.1.2 of NFPA 59A (2001), fire protection must be provided for all DOT-regulated LNG plant facilities based on an evaluation of sound fire protection engineering principles, analysis of local conditions, hazards within the facility, and exposure to or from other property. NFPA 59A (2001) also requires a fire protection evaluation to determine the type, quantity, and location of hazard detection and hazard control,

passive fire protection, ESD and depressurizing systems, and emergency response equipment, training, and qualifications. All facilities, once constructed, must comply with the requirements of 49 CFR 193 Subpart I and would be subject to the DOT's inspection and enforcement programs. However, NFPA 59A (2001) also indicates the wide range in size, design, and location of LNG facilities precludes the inclusion of detailed fire protection provisions that apply to all facilities comprehensively and includes subjective performance-based language on where ESD systems and hazard control are required and does not provide any additional guidance on placement or selection of hazard detection equipment and provides minimal requirements on firewater. Therefore, FERC staff evaluated the proposed spill containment and spacing, hazard detection, ESD and depressurization systems, hazard control, firewater coverage, structural protection, and onsite and offsite emergency response to ensure they would provide adequate protection of the LNG facilities as described more fully below.

PALNG performed a preliminary fire protection evaluation to ensure that adequate mitigation would be in place, including spill containment and spacing, hazard detection, ESD and depressurization systems, hazard control, firewater coverage, structural protection, and onsite and offsite emergency response. FERC staff recommends in section 4.12.6 that PALNG provide a final fire protection evaluation for review and approval, and to provide more information on the final design, installation, and commissioning of spill containment, hazard detection, hazard control, firewater systems, structural fire protection, and onsite and offsite emergency response procedures for review and approval.

Spill Containment

In the event of a release, sloped areas at the base of storage and process facilities would direct a spill away from equipment and into the impoundment system. This arrangement would minimize the dispersion of flammable vapors into confined, occupied, or public areas and minimize the potential for heat from a fire to impact adjacent equipment, occupied buildings, or public areas if ignition were to occur.

Title 49 CFR 193.2181 under Subpart C specifies that each impounding system serving an LNG storage tank must have a minimum volumetric liquid capacity of 110 percent of the LNG tank's maximum design liquid capacity for an impoundment serving a single tank, unless surge is accounted for in the impoundment design. All facilities, once constructed, must comply with the requirements of 49 CFR 193 Subpart C and would be subject to the DOT's inspection and enforcement programs. For full containment LNG tanks, we also consider it prudent to provide a barrier to prevent liquid from flowing to an unintended area (i.e., outside the plant property). The purpose of the barrier is to prevent liquid from flowing off the plant property and does not define containment or an impounding area for thermal radiation or flammable vapor exclusion zone calculations or other code requirements already met by sumps and impoundments throughout the site. PALNG proposes three full-containment LNG storage tanks for which the outer tank wall would serve as the impoundment system. FERC staff verified that the LNG storage tank's outer concrete wall would have a liquid capacity of at least 110 percent of the inner LNG tank's maximum liquid capacity. In addition, PALNG would also install a berm (i.e., 20-foot storm surge barrier) around the LNG storage tank area to prevent liquid in the storage tank area from flowing off-site in the event of an outer tank failure.

PALNG proposes to install a LNG Spill Impoundment Basin #1 located between the LNG storage tanks (T-2002 and T-2001) that would collect a spill from the process area of Liquefaction Trains 1 and 2, the main pipe rack, and a portion of the jetty loading line located at the northwest corner of the south berth. PALNG proposes to install another LNG Impoundment Basin #2 located at the north marine berth area that would collect a potential spill from the remaining portion of the north jetty LNG loading line. PALNG would also provide a Refrigerant Impoundment Basin designed to contain a spill from the refrigerant storage tanks with a capacity to exceed the volume of largest refrigerant storage tank. The Liquefaction Project would also have a Condensate Storage Tank Impoundment designed to contain a spill from the

condensate storage tanks with a capacity of 110 percent of one of the condensate tank's volumetric capacity. PALNG would also include an Amine Spill Impoundment that would be sized for 100 percent of one amine tank's volumetric capacity. PALNG would also include a Hot Oil Spill Impoundment that would be sized for 130 percent of the hot oil tank's volumetric capacity. Lastly, the Liquefaction Project proposes a Diesel Storage Tank Impoundment that would collect a spill from the diesel tank area.

Under NFPA 59A (2001) section 2.2.2.2, the capacity of impounding areas for vaporization, process, or LNG transfer areas must equal the greatest volume that can be discharged from any single accidental leakage source during a 10-minute period or during a shorter time period based upon demonstrable surveillance and shutdown provisions acceptable to the DOT. All facilities, once constructed, must comply with the requirements of 49 CFR 193 Subpart C and would be subject to the DOT's inspection and enforcement programs. As part of our preliminary engineering review, we evaluate impoundment systems to ensure they would be sized based on the largest flow capacity from a single pipe for 10 minutes or the capacity of the largest vessel served, whichever is greater. In addition, FERC staff recommends in section 4.12.6 that PALNG provide additional information on the final design of the impoundment systems for review and approval.

PALNG indicated that all piping, hoses, and equipment that could produce a hazardous liquid spill would be provided with spill collection and/or spill conveyance systems. In the Application, PALNG indicated that the stormwater pumps would be automatically operated by level control and interlocked using low temperature detectors to prevent pumps from operating if LNG is present. PALNG also stated that smaller sump pumps would be used to routinely discharge small amounts of rainwater that collects in the sump in accordance with all applicable permits. PALNG would need to verify that the sump pumps meet the automatic shutdown controls and water removal requirements specified in 49 CFR 193 Subpart C. If the facilities are approved and constructed, final compliance with the requirements of 49 CFR 193 Subpart C would be subject to the DOT's inspection and enforcement programs.

If a project is authorized and constructed, PALNG would install spill impoundments in accordance with its design and FERC staff would verify during construction inspections that the spill containment system including dimensions, and slopes of curbing and trenches, and volumetric capacity matches final design information. In addition, FERC staff recommends in section 4.12.6 that project facilities be subject to regular inspections throughout the life of the facility to verify that impoundments are being properly maintained.

Spacing and Plant Layout

The spacing of vessels and equipment between each other, from ignition sources, and to the property line would need to meet the requirements of 49 CFR 193 Subparts C, D, and E, which incorporate NFPA 59A (2001). NFPA 59A (2001) includes requirements for spacing and plant layout further references NFPA Standards 30, NFPA 58, and NFPA 59 for additional spacing and plant layout requirements. If the facilities are approved and constructed, final compliance with the requirements of 49 CFR 193 would be subject to the DOT's inspection and enforcement programs.

In addition, FERC staff evaluated the spacing to determine if there could be cascading damage and identify what fire protection measures may be necessary to reduce the risk of cascading damage. A pool fire at the proposed LNG Impoundment Basin #1 located between LNG storage tanks (T-2002 and T-2001) would result in high radiant heats at both adjacent LNG storage tanks, elevated piperacks and troughs. In addition, we note that radiant heats greater than 3,000 Btu/ft^2-hr level from an impoundment fire could impact adjacent process equipment, refrigerant storage vessels, process vessels, and pipe racks. FERC staff also note that thermal radiation levels from a T-2003 tank roof top fire could potentially impact the adjacent buildings (i.e., hazardous chemical storage building and maintenance storage yard). To mitigate against a

LNG roof top fire, a condensate tank containment fire, and jet fires within the plant, PALNG proposes thermal radiation mitigation measures to prevent cascading events in the design, including fire-safe ESD valves with fire resistant instrument and power cabling, depressurizing valves on large volume lines, fire and gas detectors, fire proofing of structural steel columns supporting critical equipment, deluge systems, low expansion foam systems, and fire monitors and hydrants. However, details of these systems would be done in final design. FERC staff recommends in section 4.12.6 that PALNG provide the final design of these thermal mitigation measures, for review and approval, to demonstrate cascading events would be mitigated. In addition, FERC staff recommends in section 4.12.6 that PALNG provide an analysis, for review and approval, demonstrating the adjacent tank can withstand the radiant heat from a tank roof fire or adjacent tank roof fire.

To address impacts to plant buildings from fires or explosions, FERC staff recommends in section 4.12.6 that PALNG conduct a facility siting study, for review and approval, to assess the external fire and explosion risks for all buildings routinely occupied by plant personnel. In addition, *Guidelines for Evaluating Process Plant Buildings for External Explosions and Fires* (Center for Chemical Process Safety of the American Institute of Chemical Engineers, 1996) and API 752 provide guidance on identifying and evaluating explosion and fire impacts to plant buildings and occupants resulting from events external to the buildings. Furthermore, to minimize risk for flammable or toxic vapor ingress into buildings, FERC staff recommends in section 4.12.6 that PALNG conduct a technical review of facility, for review and approval, to identify all combustion/ventilation air intake equipment and the distances to any possible flammable gas or toxic release; and verify that these areas would be adequately covered by hazard detection devices that would isolate or shut down any combustion or heating ventilation and air conditioning equipment whose continued operation could add to or sustain an emergency. FERC staff also recommend in section 4.12.6 that project facilities be subject to periodic inspections during construction to verify flammable/toxic gas detection equipment is installed in heating, ventilation and air condition intakes of buildings at appropriate locations. In addition, FERC staff recommends in section 4.12.6 that project facilities be subject to regular inspections throughout the life of the facilities to continue to verify that flammable/toxic gas detection equipment installed in building air intakes function as designed and are being maintained and calibrated.

If the project is authorized, PALNG would finalize the plot plan, and FERC staff recommends in section 4.12.6 that PALNG provide any changes for review and approval to ensure capacities and setbacks are maintained. If the facilities are constructed, PALNG would install equipment in accordance with the spacing indicated on the plot plans, and FERC staff recommends in section 4.12.6 that project facilities be subject to periodic inspections during construction to verify equipment is installed in appropriate locations and the spacing is met in the field. In addition, FERC staff recommends in section 4.12.6 that project facilities be subject to regular inspections throughout the life of the facilities to continue to verify that equipment setbacks from other equipment and ignition sources are being maintained during operations.

Ignition Controls

PALNG's plant areas would be designated with an appropriate hazardous electrical classification and process seals commensurate with the risk of the hazardous fluids being handled in accordance with NFPA 59A (2001), 70, 497, and API RP 500. All facilities, once constructed, must comply with the requirements of 49 CFR 193 and would be subject to the DOT's inspection and enforcement programs, which require compliance, by incorporation by reference, with NFPA 59A (2001) and NFPA 70. Depending on the risk level, these areas would either be classified as Class 1 Division 1, Class 1 Division 2, or non-classified. Electrical equipment located in these areas would be designed such that in the event a flammable vapor is present, the equipment would have a minimal risk of igniting the vapor. FERC staff evaluated the PALNG electrical area classification drawings to verify that companies would meet these electrical area classification requirements in NFPA 59A, 70, 497, and API RP 500. If the project is authorized, PALNG would finalize the electrical area classification drawings and would describes changes

made from the FEED design. FERC staff recommends in section 4.12.6 that PALNG file the final design of the electrical area classification drawings for review and approval. If facilities are constructed, PALNG would install appropriately classed electrical equipment, and FERC staff recommends in section 4.12.6 that project facilities be subject to periodic inspections during construction for FERC staff to spot check electrical equipment and verify equipment is installed per classification and are properly bonded or grounded in accordance with NFPA 70. In addition, FERC staff recommends in section 4.12.6 that project facilities be subject to regular inspections throughout the life of the facility to ensure electrical equipment is maintained (e.g., bolts on explosion proof equipment properly installed and maintained, panels provided with purge, etc.), and electrical equipment are appropriately de-energized and locked out and tagged out when being serviced.

In addition, submerged electrical motor pumps and instrumentation would be equipped with electrical process seals, and instrumentation in accordance with NFPA 59A (2001) and NFPA 70. FERC staff recommends in section 4.12.6 that PALNG provide, for review and approval, final design drawings showing process seals installed at the interface between a flammable fluid system and an electrical conduit or wiring system that meet the requirements of NFPA 59A (2001) and NFPA 70. In addition, FERC staff recommends in section 4.12.6 that PALNG file, for review and approval, details of an air gap or vent equipped with a leak detection device that should continuously monitor for the presence of a flammable fluid, alarm the hazardous condition, and shut down the appropriate systems. In addition, FERC staff recommends in section 4.12.6 that project facilities be subject to regular inspections throughout the life of the facility to ensure electrical process seals for submerged electrical motor pumps continue to conform to NFPA 59A and NFPA 70 and that air gaps are being properly maintained.

Hazard Detection, Emergency Shutdown, and Depressurization Systems

PALNG would also install hazard detection systems to detect cryogenic spills, flammable and toxic vapors, and fires. The hazard detection systems would alarm and notify personnel in the area and control room to initiate an ESD, depressurization, or initiate appropriate procedures, and would meet NFPA Standard 72, ISA Standard 12.13, and other recommended and generally accepted good engineering practices. However, we note that PALNG did not make reference to ISA 12.13 publications, which provide performance requirements for flammable/combustible gas detectors. Additionally, PALNG did not include a specification for hazard detection in Appendix T of the Application. Therefore, FERC staff recommends in section 4.12.6 that PALNG provide specifications, for review and approval, of the final design of fire safety specifications, including hazard detection, hazard control, and firewater systems.

FERC staff also evaluated the adequacy of the hazard detection equipment type, location, and layout to ensure adequate coverage to detect cryogenic spills, flammable and toxic vapors, and fires near potential release sources (i.e., pumps, compressors, sumps, trenches, flanges, and instrument and valve connections). FERC staff also reviewed the fire and gas cause and effect matrices to evaluate the detectors that would initiate an alarm, shutdown, depressurization, or other action based on the FEED. FERC staff recommends in section 4.12.6 that PALNG provide additional information, for review and approval, on the final design of all hazard detection systems (e.g., manufacturer and model, elevations, etc.) and hazard detection layout drawings. If the project is authorized and constructed, PALNG would install hazard detectors according to its specifications, and FERC staff recommends in section 4.12.6 that project facilities be subject to periodic inspections during construction to verify hazard detectors and ESD pushbuttons are appropriately installed per approved design and functional based on cause and effect matrixes prior to introduction of hazardous fluids. In addition, FERC staff recommends in section 4.12.6 that project facilities be subject to regular inspections throughout the life of the facility to verify hazard detector coverage and functionality is being maintained and are not being bypassed without appropriate precautions.

Hazard Control

If ignition of flammable vapors occurred, hazard control devices would be installed to extinguish or control incipient fires and releases, and would meet NFPA 59A (2001); NFPA 10, 12, 15, 17, and 2001; API 2218, and 2510A; as well as other recommended and generally accepted good engineering practices. FERC staff evaluated the adequacy of the number and availability of handheld, wheeled, and fixed fire extinguishing devices throughout the site based on the FEED. FERC staff also generally evaluated whether the spacing of the fire extinguishers meet NFPA 10. In addition, FERC staff generally evaluate whether clean agent systems would be installed in all electrical switchgear, and instrumentation buildings systems in accordance with NFPA 2001 and CO_2 systems in gas turbine enclosures in accordance with NFPA 12. In addition, FERC staff recommends in section 4.12.6 that PALNG file additional information on the final design of these systems, for review and approval, where details are yet to be determined (e.g., manufacturer and model, elevations, flowrate, capacities, etc.) and where the final design could change as a result of these details or other changes in the final design of the Liquefaction Project. If the project is authorized and constructed, PALNG would install hazard control equipment, and FERC staff recommends in section 4.12.6 that project facilities be subject to periodic inspections during construction to verify hazard control equipment is installed in the field and functional prior to introduction of hazardous fluids. In addition, FERC staff recommends in section 4.12.6 that project facilities be subject to regular inspections throughout the life of the facility to verify in the field that hazard control coverage and functionality is being properly maintained and inspected.

Passive Cryogenic and Fire Protection

If a fire could not be separated, controlled, or extinguished to limit fire exposures or cryogenic releases onto facility components to insignificant levels, passive fire protection (e.g., fireproofing structural steel) would be provided to prevent failure of structural supports of equipment and pipe racks. The structural fire protection would comply with NFPA 59A (2001) and other recommended and generally accepted good engineering practices. FERC staff evaluated whether passive cryogenic and fire protection is applied to pressure vessels and structural supports to facilities that could be exposed to cryogenic liquids or to radiant heats of 4,000 Btu/ft^2-hr or greater from fires with durations that could result in failures[53] and that they are specified in accordance with recommended and generally accepted good engineering practices with a fire protection rating commensurate to the radiant heat and duration. In addition, FERC staff recommends in section 4.12.6 that PALNG provide additional information on the final design of these systems, for review and approval, where details are yet to be determined (e.g., calculation of structural fire protection materials, thicknesses, etc.) and where the final design could change as a result of these details or other changes in the final design of the Liquefaction Project. It was unclear as to whether PALNG would incorporate cryogenic protection or use materials of construction that would protect equipment and structural supports that could potentially be exposed to cryogenic releases or fires. Therefore, FERC staff recommends in section 4.12.6 that PALNG file drawings and specifications, for review and approval, for the structural passive protection systems to protect equipment and supports from cryogenic releases and fires.

If the project is authorized and constructed, PALNG would install structural cryogenic and fire protection according to its design, and FERC staff recommends in section 4.12.6 that project facilities be subject to periodic inspections during construction to verify structural cryogenic and fire protection is properly installed in the field as designed prior to introduction of hazardous fluids. In addition, FERC staff

53 Pool fires from impoundments are generally mitigated through use of ESDs, depressurization systems, structural fire protection, and firewater, while jet fires are primarily mitigated through the use of ESDs, depressurization systems, and firewater without structural fire protection.

recommends in section 4.12.6 that project facilities be subject to regular inspections throughout the life of the facility to continue to verify that passive protection is being properly maintained.

Firewater Systems

PALNG would also provide firewater systems, including remotely operated firewater monitors, sprinkler systems, fixed water spray systems, and firewater hydrants and hoses for use during an emergency to cool the surface of storage vessels, piping, and equipment exposed to heat from a fire. These firewater systems would be designed to meet NFPA 59A (2001), 13, 15, 20, 22, and 24 requirements. FERC staff evaluates the adequacy of the general firewater or foam system coverage and verifies the appropriateness of the associated firewater demands of those systems and worst-case fire scenarios to size the firewater and foam pumps. PALNG provided firewater coverage drawings for the firewater monitors, but did not provide coverage for the fire hydrants. Furthermore, the firewater coverage circles were not centered on the elevated monitors by the marine berths and it was not explained why the drawings had concentric circles. Where coverage circles intersect pipe racks, large vessels or process equipment, the firewater coverage could be blocked, and the coverage circles should be modified to account for obstructions during the final design. Therefore, FERC staff recommends in section 4.12.6 that PALNG complete and document the firewater monitor and hydrant coverage test to verify that actual coverage area from each monitor and hydrant as shown on facility plot plan(s).

FERC staff also assessed whether the reliability of the firewater pumps and firewater source or onsite storage volume are appropriate. In addition, FERC staff recommends in section 4.12.6 that PALNG file an updated fire protection evaluation performed on the final design, for review and approval, where details are yet to be determined (e.g., manufacturer and model, nozzle types, etc.) and where the final design could change as a result of these details or other changes in the final design of the Liquefaction Project. If the project is authorized and constructed, PALNG would install the firewater and foam systems as designed, and FERC staff recommends in section 4.12.6 that project facilities be subject to periodic inspections during construction and that companies provide results of commissioning tests to verify the firewater and foam systems are installed and functional as designed prior to introduction of hazardous fluids. In addition, FERC staff recommends in section 4.12.6 that project facilities be subject to regular inspections throughout the life of the facility to ensure firewater and foam systems are being properly maintained and tested.

Geotechnical and Structural Design

PALNG provided geotechnical and structural design information for its facilities to demonstrate the site preparation and foundation designs would be appropriate for the underlying soil characteristics and to ensure the structural design of the Liquefaction Project facilities would be in accordance with federal regulations, standards, and recommended and generally accepted good engineering practices. The application focuses on the resilience of the Liquefaction Project facilities against natural hazards, including extreme geological, meteorological, and hydrological events, such as earthquakes, tsunamis, seiche, hurricanes, tornadoes, floods, rain, ice, snow, regional subsidence, sea level rise, landslides, wildfires, volcanic activity, and geomagnetism.

Geotechnical Evaluation

FERC regulations under 18 CFR 380.12 (h) (3) require geotechnical investigations to be provided. In addition, FERC regulations under 18 CFR 380.12 (o) (14) require an applicant to demonstrate compliance with regulations under 49 CFR 193 and NFPA 59A (2001). All facilities, once constructed, must comply with the requirements of 49 CFR 193 and would be subject to the DOT's inspection and enforcement programs. DOT regulations incorporated by reference NFPA 59A (2001). NFPA 59A (2001) section 2.1.4 requires soil and general investigations of the site to determine the design basis for the facility.

However, no additional requirements are set forth in 49 CFR 193 or NFPA 59A on minimum requirements for evaluating existing soil site conditions or evaluating the adequacy of the foundations, therefore FERC staff evaluated the existing site conditions, geotechnical report, and proposed foundations to ensure they are adequate for the LNG facilities as described below.

PALNG contracted Fugro to conduct geotechnical investigations to evaluate the existing soil site conditions and proposed foundation design for the Liquefaction Project. The existing site elevation ranges from +1 feet to +8 feet NAVD88. The site would be cleared, grubbed, and prepared using standard earthmoving and compaction equipment. Site preparation would result in a final grade elevation being raised from +1 to +8 feet to +6.5 (excluding the MOF) to +13 feet (including the MOF) NAVD88 with between 2 feet 6 inches and 13 feet of fill added across the site, depending on the location. The offshore berth area would be dredged to -45 feet MLLW. On the canal side, the berm crest elevation would be a post-settlement height of +20.6 feet NAVD88, and on all land sides, the floodwall crest elevation would be a post-settlement height of +17.0 feet NAVD88 to protect the facilities from storm surge as discussed in more detail later in this section. The fill material would consist of various layers, including two different layers of fill placed in lifts specified in the Geotechnical Engineering Report and would be compacted to 90 to 98 percent of maximum dry density for standard proctor tests in accordance with ASTM D698 depending on location. Alternatively, cement stabilization is provided as an alternative to one of the layers of fill for improving the soil conditions and bearing capacity.

Fugro conducted 11 soil borings to depths ranging from 100 feet to 300 feet below existing grade, 12 cone penetration tests (CPT) to depths ranging from 100 feet to 167 feet (or to refusal) below existing grade, and 7 seismic cone penetration tests (SCPT) to depths ranging from 153 feet to 165 feet below existing grade. Additionally, three (3) previous geotechnical investigations completed between 2004 and 2015 consisted of a total of 71 soil borings and 19 CPTs. Over 15 different tests were conducted on 486 recovered soil samples, including classification tests (water content, Atterberg liquid and plastic limits, sieve tests), compression tests, consolidation tests, shear tests, organic content tests, corrosion potential tests (pH, sulfate, chloride, electrical resistivity) in general accordance with pertinent ASTM standards. FERC staff evaluated the geotechnical investigation to ensure the adequacy in the number, coverage, and types of the geotechnical borings, CPTs, SCPTs, and other tests, and found them to more than adequately cover all major facilities, including the marine facilities, LNG storage tanks, liquefaction areas, pretreatment areas, flare system, buildings, power generation, and berms. FERC staff will continue its review of the results of the geotechnical investigation to ensure foundation designs are appropriate prior to construction of final design and throughout the life of the facilities.

Based on the test borings conducted, the site is composed of approximately 0 to 25 feet of surficial soil consisting of unconsolidated very soft, soft, and silty clay underlain by firm to very stiff clays and silty clay from 25 to 160 feet below ground surface; very dense sand, silty sands, and sandy silts from 160 to 180 feet below ground surface; and stiff to very stiff clays from depths of 180 feet to over 200 feet below ground surface. Corrosion tests indicate there is a very high potential for corrosion of steel based on electrical resistivity results (chloride ion concentration generally indicated high and pH generally indicated mild corrosion potential), and a mild to several deterioration of concrete based on sulfate ion concentrations depending on location within the site. Based on these results, the Liquefaction Project has considered potential for corrosion and concrete degradation in the design.

Based on the subsurface conditions, shallow foundations would be suitable for some lightly loaded structures; however, for heavier structures in areas with these types of soil conditions, the LNG storage tanks, liquefaction blocks, and many associated structures would require deep foundations. Therefore, PALNG is proposing to use driven precast square concrete piles, displacement cast-in-place concrete piles, or driven steel pipe piles for facilities including, but not limited to: loading facilities and trestles, LNG storage tanks, LNG booster pumps, gas turbines, pre-treatment and liquefaction equipment, compressors,

and blowers. Piles are proposed to be embedded between 80 and 160 feet below grade, depending on the equipment being supported, pile spacing, pile type, and pile diameter. Grade-supported slabs would only be used for light structures insensitive to total and/or differential vertical movements.

Subsidence is the sudden sinking or gradual downward settling of land with little or no horizontal motion, caused by movements on surface faults or by subsurface mining or pumping of oil, natural gas, or ground water. The results of PALNG's geotechnical investigation at the Liquefaction Project site indicate that subsurface conditions are generally suitable for the proposed facilities, if adequate site preparation, foundation design, and construction methods are implemented. Because subsidence is a recognized concern in the area of the Liquefaction Project, PALNG proposes to install all key liquefaction facilities on piles, including but not limited to: loading facilities and trestles, LNG storage tanks, LNG booster pumps, gas turbines, pre-treatment and liquefaction equipment, and all compressors and blowers. PALNG would monitor foundations and other critical facilities to ensure they are maintained within acceptable limits. Site preparation activities would be monitored to ensure adherence to the geotechnical design. Surface subsidence would be controlled by potential use of lime stabilization of the fill materials during placement and compaction with monitoring settlement and systematic reworking, as needed. Foundations would be constructed with pile supports to protect equipment and interconnecting piping from differential movement. Earthen containment embankments would be earth-supported and constricted with wide bases (using 2 horizontal to 1 vertical or 3 horizontal to 1 vertical slopes, depending on height) to ensure stability. Earth-supported elements, such as the storm surge barrier and plant roads, would require periodic maintenance to mitigate the long-term effects of settlements and differential movements. Because site-specific geotechnical mitigation has been incorporated into the Liquefaction Project (e.g., pile-supported foundations) in accordance with NFPA 59A (2001) and where applicable, NFPA 59A (2006), subsidence would not be a significant hazard to the proposed facilities.

Dredging would occur to create the marine berth area to achieve the proposed final grade of -45 feet MLLW. The existing shoreline of the SNWW would be excavated, dredged, and sloped during construction. To prevent slumping of the dredged slope, maintain the berthing line position, and provide structural integrity support to the landside facilities, the excavated shoreline would be reinforced with rip-rap armoring. The proposed rip-rap armoring would minimize the potential for erosion where the shoreline would be excavated.

The results of PALNG's geotechnical investigation at the project site indicate that subsurface conditions are generally suitable for the proposed facilities, if proposed site preparation, foundation design, and construction methods are implemented appropriately.

Structural and Natural Hazard Evaluation

FERC regulations under 18 CFR 380.12 (m) requires applicants to address the potential hazard to the public from failure of facility components resulting from accidents or natural catastrophes, evaluate how these events would affect reliability, and describe the design features and procedures that would be used to reduce potential hazards. In addition, 18 CFR 380.12 (o) (14) require an applicant to demonstrate how they would comply with 49 CFR 193 and NFPA 59A. In addition, all facilities, once constructed, must comply with the requirements of 49 CFR 193 and would be subject to the DOT's inspection and enforcement programs. DOT regulations under 49 CFR 193 have some specific requirements on designs to withstand certain loads from natural hazards and also incorporates by reference NFPA 59A (2001 and 2006) and ASCE 7-05 and ASCE 7-93 via NFPA 59A (2001). Once constructed, all facilities would be subject to the DOT's inspection and enforcement program.

In addition, the facilities would be constructed to the requirements in the 2012 International Building Code (IBC), ASCE 7-05, and ASCE 7-10. These standards require various structural loads to be

applied to the design of the facilities, including live (i.e., dynamic) loads, dead (i.e., static) loads, and environmental loads. FERC staff also evaluated potential the engineering design to withstand impacts from natural hazards, such as earthquakes, tsunamis, seiche, hurricanes, tornadoes, floods, rain, ice, snow, regional subsidence, sea level rise, landslides, wildfires, volcanic activity, and geomagnetism. FERC staff recommends in section 4.12.6 that PALNG file final design information (e.g., drawings, specifications, and calculations) and associated quality assurance and quality control procedures with the documents reviewed, approved, and stamped and sealed by a professional engineer of record registered in the state of Texas. If a project is authorized and constructed, the company would install equipment in accordance with its final design. In addition, FERC staff recommends in section 4.12.6 that PALNG file, for review and approval, settlement results during hydrostatic tests of the LNG storage containers and periodically thereafter to verify settlement is as expected and does not exceed the applicable criteria in API 620, API 625, API 653, and ACI 376.

Earthquakes, Tsunamis, and Seiche

Earthquakes and tsunamis have the potential to cause damage from shaking ground motion and fault ruptures. Earthquakes and tsunamis often result from sudden slips along fractures in the earth's crust (i.e., faults) and the resultant ground motions caused by those movements, but can also be a result of volcanic activity or other causes of vibration in the earth's crust. The damage that could occur as a result of ground motions is affected by the type/direction and severity of the fault activity and the distance and type of soils the seismic waves must travel from the hypocenter (or point below the epicenter where seismic activity occurs). To assess the potential impact from earthquakes and tsunamis, PALNG evaluated historic earthquakes along fault locations and their resultant ground motions.

The USGS maintains a database containing information on surface and subsurface faults and folds in the United States that are believed to be sources of earthquakes of greater than 6.0 magnitude occurring during the past 1.6 million years (Quaternary Period).[54] The location of the Liquefaction Project is within the Gulf Coast Basin geologic tectonic province. The Gulf Coast Basin is characterized as having thick sedimentary rocks above basement rock structures. The province's sedimentary strata thickens toward the south, with salt domes and relatively shallow listric growth faults that run parallel to the Gulf of Mexico Coastline and extend outside of Texas. Movement within the fault system has been classified as a general creep as opposed to the breaking of rocks, which is often associated with earthquake events (Stevenson and McCulloh, 2001). Salt domes are prevalent throughout the Gulf Coast Basin and are characterized by having a system of faults arranged in a circular pattern around them (Gagliano, 1999).

PALNG conducted a site-specific seismic risk analysis for the Liquefaction Project, involving field investigations and subsequent data evaluation. PALNG's *Seismic and Fault Studies* report includes the examination of growth faults in the region of the Liquefaction Project area. These growth fault systems have previously been assessed by the USGS as not being capable of generating significant earthquakes, and these faults have not previously been considered as seismogenic sources. While growth faults are not a source of seismic hazard for the Liquefaction Project site, there may be a potential source of surface deformation. And while the presence of faults can require special consideration, the presence or lack of faults identified near the site does not define whether earthquake ground motions can impact the site because ground motions can be felt large distances away from an earthquake hypocenter depending on number of factors.

To address the potential ground motions at the site, DOT regulations in 49 CFR 193.2101 under Subpart C require that field-fabricated LNG tanks must comply with section 7.2.2. of NFPA 59A (2006) for seismic design. NFPA 59A (2006) requires LNG storage tanks to be designed to continue safely

54 USGS. Earthquake Hazards Program. Quaternary Fault and Fold Database of the United States. Available at: https://earthquake.usgs.gov/hazards/qfaults/ Accessed August 2018

operating with earthquake ground motions at the ground surface at the site that have a 10 percent probability of being exceeded in 50 years (475 year mean return interval), termed the operating basis earthquake (OBE). In addition, DOT regulations in 49 CFR 193.2101 under Subpart C require that LNG tanks be designed to have the ability to safely shutdown when subjected to earthquake ground motions which have a 2 percent probability of being exceeded in 50 years (2,475 year mean return interval) at the ground surface at the site (termed the safe shutdown earthquake [SSE]). DOT regulations in 49 CFR 193.2101 under Subpart C also incorporate by reference of NFPA 59A (2001) Chapter 6, which require piping systems conveying flammable liquids and flammable gasses with service temperatures below -20 °F, be designed as required for seismic ground motions. The facilities, once constructed, would be subject to the DOT's inspection and enforcement programs.

In addition, FERC staff recognizes this leaves a gap for hazardous fluid piping with service temperatures at -20 °F and higher and equipment other than piping and LNG storage containers. We also recognize the current FERC regulations under Title 18 CFR 380.12 (h) (5) continues to incorporate NBSIR 84-2833. NBSIR 84-2833 provides guidance on classifying stationary storage containers and related safety equipment as Category I and classifying the remainder of the LNG project structures, systems, and components as either Category II or Category III, but does not provide specific guidance for the seismic design requirements for them. Absent any other regulatory requirements, this guidance recommends that other LNG project structures classified as Seismic Category II or Category III be seismically designed to satisfy the Design Earthquake and seismic requirements of the ASCE 7-05 in order to demonstrate there is not a significant impact on the safety of the public. ASCE 7-05 is recommended as it is a complete American National Standards Institute (ANSI) consensus design standard, its seismic requirements are based directly on the NEHRP Recommended Provisions, and it is referenced directly by the IBC. Having a link directly to the IBC and ASCE 7 is important to accommodate seals by the engineer of record because the IBC is directly linked to state professional licensing laws while the NEHRP Recommended Provisions are not.

The geotechnical investigations of the existing site indicate the site is classified as Site Class E[55] in accordance with ASCE 7-05 and in accordance with IBC 2009 based on a site average shear wave velocity that ranged between 360 and 643 feet per second (Fugro, 2017a) in the upper 100 feet of strata. Sites with soil conditions of this type could experience significant amplifications of surface earthquake ground motions. However, due to the absence of a major fault in proximity to the site and lower ground motions, the seismic risk to the site is considered low.

Fugro performed a site-specific seismic hazard study for the site. The study concluded that the site would have an OBE PGA of 0.042 g, a SSE PGA of 0.116 g, a 0.2-second design spectral acceleration value of 0.164 g, a 1.0-second design spectral acceleration at the site of 0.118 g and a Design Earthquake of 0.064 g (Fugro, 2017a). FERC staff independently evaluated the OBE PGA, SSE PGA, 0.2-second design spectral acceleration, and 1.0-second design spectral accelerations for the site using the USGS Earthquake Hazards Program Seismic Design Maps[56] and Unified Hazard[57] tools for all occupancy categories (I through IV). FERC believes the SSE PGA, OBE PGA, and 5 percent-damped spectral design accelerations used by PALNG are acceptable. These ground motions are relatively low compared to other locations in the United States. Based on the design ground motions for the site and the importance of the facilities, the facility seismic design is assigned Seismic Category I for LNG containers, systems required for isolation of LNG containers, and systems required for safe shutdown or fire protection. Seismic

55 There are six different site classes in ASCE 7-05, A through F, that are representative of different soil conditions that impact the ground motions and potential hazard ranging from Hard Rock (Site Class A), Rock (Site Class B), Very dense soil and soft rock (Site Class C), Stiff Soil (Site Class D), Soft Clay Soil (Site Class E), to soils vulnerable to potential failure or collapse, such as liquefiable soils, quick and highly sensitive clays, and collapsible weakly cemented soils (Site Class F).

56 https://earthquake.usgs.gov/designmaps/us/application.php

57 https://earthquake.usgs.gov/hazards/interactive/

Category 2 structures include facilities and systems not included in Category 1 required for safe plant operation, which include LNG liquefaction trains, inlet facilities, pre-treatment area(s), power generation area(s), fuel gas system, interconnecting piping systems, metering systems, LNG pumps, and other items. Seismic Category 3 includes all other facilities that are not included in Categories 1 and 2, including administration buildings, dock service equipment, waste treatment plant, and incoming electrical power supply.

ASCE 7-05 also requires determination of the Seismic Design Category based on the Occupancy Category (or Risk Category in ASCE7-10 and 7-16) and severity of the earthquake design motion. The Occupancy Category (or Risk Category) is based on the importance of the facility and the risk it poses to the public.[58] FERC staff has identified the project as a Seismic Design Category B based on the ground motions for the site and an Occupancy Category (or Risk Category) of III, this seismic design categorization would appear to be consistent with the 2009 IBC and ASCE 7-05 (and ASCE 7-10).

Seismic events can also result in soil liquefaction in which saturated, non-cohesive soils temporarily lose their strength/cohesion and liquefy (i.e., behave like viscous liquid) as a result of increased pore pressure and reduced effective stress when subjected to dynamic forces such as intense and prolonged ground shaking. Areas susceptible to liquefaction may include saturated soils that are generally sandy or silty. Typically, these soils are located along rivers, streams, lakes, and shorelines or in areas with shallow groundwater. The site-specific geotechnical investigations indicate the presence of layers of silty sands and sandy silts that are dense to very dense. These sand layers could be liquefiable under sufficiently strong ground motions. However, due to the low seismicity of the region, the potential for soil liquefaction to occur is low. In addition, PALNG would address possible issues relating to the potential for soil liquefaction and loss of soil strength by using piles in the foundation design. Should soil improvement be required to counteract soil liquefaction, PALNG would utilize ground improvement techniques (e.g., cementitious strengthening).

Seismic events in waterbodies can also cause tsunamis or seiches by sudden displacement of the sea floors in the ocean or standing water. Tsunamis and seiche may also be generated from volcanic eruptions or landslides. Tsunami wave action can cause extensive damage to coastal regions and facilities. The Terminal site's low-lying position would make it potentially vulnerable were a tsunami to occur. There is little evidence that the northern Gulf of Mexico is prone to tsunami events, but the occurrence of a tsunami is possible. Two did occur in the Gulf of Mexico in the early 20th century and had wave heights of 3 feet or less (USGS, 2009), which is not significantly higher than the average breaking wave height of 1.5 feet (Owen, 2008). Hydrodynamic modeling conducted off the coast of south Texas in 2004 indicated that the maximum tsunami run-up could be as high as 12 feet above mean sea level. No earthquake generating faults have been identified that are likely to produce tsunamis, despite recorded seismic activity in the area.

The potential for tsunamis associated with submarine landslides is more likely a source in the Gulf of Mexico and remains a focus of government research (USGS, 2009). PALNG's *Seismic and Fault Study*

58 ASCE 7-05 defines Occupancy Categories I, II, III, and IV. Occupancy Category I represents facilities with a low hazard to human life in even of failure, such as agricultural facilities; Occupancy Category III represents facilities with a substantial hazard to human life in the event of failure or with a substantial economic impact or disruption of day to day civilian life in the event of failure, such as buildings where more than 300 people aggregate, daycare facilities with facilities greater than 150, schools with capacities greater than 250 for elementary and secondary and greater than 500 for colleges, health care facilities with 50 or more patients, jails and detention facilities, power generating stations, water treatment facilities, telecommunication centers, hazardous facilities that could impact public; Occupancy Category IV represents essential facilities, such as hospitals, fire, rescue, and police stations, emergency shelters, power generating stations and utilities needed in an emergency, aviation control towers, water storage and pump structures for fire suppression, national defense facilities, and hazardous facilities that could substantially impact public; and Occupancy Category II represents all other facilities. ASCE 7-10 changed the term to Risk Categories I, II, III, and IV with some modification.

report included a Tsunami Hazard Assessment for the Liquefaction Project area. There are four main submarine landslide hazard zones in the Gulf of Mexico including the Northwest Gulf of Mexico, Mississippi Canyon and Fan, the Florida Escarpment, and the Campeche Escarpment (USGS, 2009). Based on modeling and limited historical data, it is estimated that tsunamis generated from landslides would be more than 2 feet and less than 13 feet. These tsunami run-up elevations are significantly less than the hurricane design storm surge elevations discussed below, so any tsunami hazard has been considered in design.

Hurricanes, Tornadoes, and other Meteorological Events

Hurricanes, tornadoes, and other meteorological events have the potential to cause damage or failure of facilities due to high winds and floods, including failures from flying or floating debris. To assess the potential impact from hurricanes, tornadoes, and other meteorological events, PALNG evaluated such events historically. The severity of these events is often determined on the probability that they occur and are sometimes referred to as the average number years that the event is expected to re-occur, or in terms of its mean return/recurrence interval.

Because of its location, the Liquefaction Project site would likely be subject to hurricane force winds during the life of the project. PALNG states that all project facilities would be designed to withstand a 183-mph 3-second gust. A 183 mph 3-second gust would convert to a sustained wind speed of 150 mph, using the Durst Curve in ASCE 7-05 or using a 1.23 gust factor recommended for offshore winds at a coast line in World Meteorological Organization, *Guidelines for Converting between Various Wind Averaging Periods in Tropical Cyclone Conditions*. These wind speeds are equivalent to approximately 14,000-year mean return interval or 0.36 percent probability of exceedance in a 50-year period for the site, based on whether ASCE 7-05 wind speed return period conversions. The 183 mph 3-second gust equates to a strong Category 4 Hurricane using the Saffir-Simpson scale (130-156 mph sustained winds, 166-195 mph 3-second gusts). PALNG must meet 49 CFR 193.2067 under Subpart B for wind load requirements. In accordance with the MOU, the DOT will evaluate in its LOD whether an applicant's proposed project meets the DOT siting requirements under Subpart B. If the project is constructed and becomes operational, the facilities would be subject to the DOT's inspection and enforcement programs. Final determination of whether the facilities are in compliance with the requirements of 49 CFR 193 would be made by the DOT staff.

However, as noted in the limitation of ASCE 7-05, tornadoes were not considered in developing basic wind speed distributions. This leaves a potential gap in potential impacts from tornadoes. Therefore, FERC staff evaluated the potential for tornadoes. Appendix C of ASCE 7-05 makes reference to American Nuclear Society 2.3 (1983 edition), *Standard for Estimating Tornado and Extreme Wind Characteristics at Nuclear Power Sites*. This document has since been revised in 2011 and reaffirmed in 2016 and is consistent with NUREG/CR-4461, Tornado Climatology of the Contiguous U.S. Rev. 2 (NUREG2007). These documents provide maps of a 100,000-mean-year return period for tornadoes using 2° latitude and longitude boxes in the region to estimate a tornado striking within 4,000-ft of an area. Figures 5-8 and 8-1 from NUREG/CR-4461 indicate a 100,000-year-maximum tornado wind speeds would be approximately 140 mph 3-second gusts for the project site location. Later editions of ASCE 7 (ASCE 7-10 and ASCE 7-16) make reference to International Code Council 500, Standard for Design and Construction of Storm Shelters, for 10,000-year tornadoes. However, the International Code Council 500 maps were conservatively developed based on tornadoes striking regions and indicate a 200 mph 3-second gust for a 10,000-year event, which is higher than the 140 mph 3-second gust in American Nuclear Society 2.3 and NUREG/CR-4461. As a result, FERC staff believes the use of a of 150 mph sustained wind speed, 183 mph 3-second gust, is adequate for the LNG storage tanks and conservative from a risk standpoint for the other LNG facilities.

ASCE 7 also recognizes the facility would be in a windborne debris region. Windborne debris has the potential to perforate equipment and the LNG storage tanks if not properly designed to withstand such impacts. The potential impact is dependent on the equivalent projectile wind speed, characteristics of projectile, and methodology or model used to determine whether penetration or perforation would occur. Unfortunately, no criteria are provided in 49 CFR 193 or ASCE 7 for these specific parameters. However, NFPA 59A (2016) recommends CEB 187 be used to determine projectile perforation depths. In order to address the potential impact, FERC staff recommends in section 4.12.6 that PALNG provide a projectile analysis, for review and approval, to demonstrate that the outer concrete impoundment wall of a full-containment LNG tank could withstand wind borne projectiles prior to construction of the final design. The analysis should detail the projectile speeds and characteristics and method used to determine penetration or perforation depths. FERC staff would compare the analysis and specified projectiles and speeds using established methods, such as CEB 187, and DOE and Nuclear Regulatory Commission guidance.

In addition, FERC staff evaluated historical tropical storm, hurricane, and tornado tracks in the vicinity of the project facilities using data from the DHS Homeland Infrastructure Foundation Level Data and NOAA Historical Hurricane Tracker.[59,60] Between 1865 and August 2017, 45 hurricanes and tropical storms made landfall within 60 miles of the Liquefaction Project site (NOAA, 2017a), including Unnamed Hurricane (Category 1) in 1886, Hurricane Audrey (Category 3) in 1957, and Hurricane Rita (Category 5) in 2005,[61] which all made landfall within 30 miles of Port Arthur, Texas and produced significant storm surges, with maximum heights greater than 12 feet AMSL (Needham and Keim, 2012).[62] In addition, in 2008, Hurricane Ike (Category 4)[63] made landfall east of Houston, Texas and continued northwest toward Port Arthur, resulting in water height of 14.5 feet (NOAA, 2009; LSU, 2013). On August 30, 2017, Hurricane Harvey (Category 4) made landfall near Cameron, Louisiana. The Port Arthur area received 26 inches of rain in 24 hours, with a storm total of over 47 inches, resulting in widespread flooding, and is being considered a 500-year or 1,000-year storm event. NOAA reported that the maximum storm surge near Port Arthur was between 3 and 5 feet (NOAA, 2017b). PALNG would be designed to withstand 183 mph 3 second gusts and flood elevations of historical events.

Potential flood levels may also be informed from the FEMA Flood Insurance Rate Maps, which identifies Special Flood Hazard Areas (base flood) that have a 1 percent probability of exceedance in 1 year to flood (or a 100 year mean return interval) and moderate flood hazard areas that have a 0.2 percent probability of exceedance in 1 year to flood (or a 500 year mean return interval). According to the FEMA National Flood Insurance Rate Maps (FEMA, 2013) for Jefferson County, Texas, the 100-year Base Flood Elevation for the Liquefaction Project site is 12 feet in reference to the National Geodetic Vertical Datum of 1929 and 12.04 feet in reference to the NAVD88. We also recognize that a 500-year flood event has been recommended as the basis of design for critical infrastructure in publications, including ASCE 24, *Flood Resistant Design and Construction*. Therefore, we believe it is good practice to design critical energy infrastructure to withstand 500-year event from a safety and reliability standpoint for both SWEL and wave crests. PALNG has proposed to design the project to withstand a 500-year flood event. Furthermore, we

59 DHS. Homeland Infrastructure Foundation Level Data. Available at: https://hifld-geoplatform.opendata.arcgis.com/. Accessed August 2018.

60 NOAA. Historical Hurricane Tracker. Available at: https://coast.noaa.gov/hurricanes/. Accessed August 2018.

61 Global and Regional Sea Level Rise Scenarios for the United States. U.S. Department of Commerce. National Ocean and Atmospheric Administration. National Ocean Service Center for Operational Oceanographic Products and Services. January 2017.

62 Global and Regional Sea Level Rise Scenarios for the United States. U.S. Department of Commerce. National Ocean and Atmospheric Administration. National Ocean Service Center for Operational Oceanographic Products and Services. January 2017.

63 Global and Regional Sea Level Rise Scenarios for the United States. U.S. Department of Commerce. National Ocean and Atmospheric Administration. National Ocean Service Center for Operational Oceanographic Products and Services. January 2017.

believe the use of intermediate values from NOAA for sea level rise and subsidence is more appropriate for design and higher projections are more appropriate for planning in accordance with NOAA 2017,[64] which recommends defining a central estimate or mid-range scenario as baseline for shorter-term planning, such as setting initial adaptation plans for the next two decades and defining upper bound scenarios as a guide for long-term adaptation strategies and a general planning envelope.

The entire Liquefaction Project site would be enclosed for flood protection by construction of earthen levees on the channel and land sides. The channel-side earthen levee height is designed to a 500-year SWEL of 14.0 feet NAVD88, a 500-year wave of 5.9 feet (rounded to 6.0 feet for the purposes of levee sizing), 0.6 feet of sea level rise and subsidence, and 1.6 feet of expected settlement, yielding an initial crest height of 22.2 feet with a final post-settlement height not lower than 20.6 feet. The land-side earthen levee height is designed to a combined 100-year SWEL, 100-year wave, and sea level rise height of 17.0 feet, and 2.0 feet of expected settlement, yielding an initial crest height of 19.0 feet with a final post-settlement crest height not lower than 17.0 feet. In addition, given the uncertainty in levee settlement, PALNG would periodically monitor and maintain the crest elevation of the levee to be no less than 20.6 feet NAVD88 on the channel side and no less than 17.0 feet NAVD88 on the land side.

We generally evaluate the design against a 500-year SWEL with a 500-year wave crest and sea level rise and subsidence. Using maximum envelope of water (MEOW) storm surge inundation maps generated from the Sea, Lake, and Overland Surge from Hurricanes model developed by NOAA National Hurricane Center, a 500-year event would equate to a Category 2 Hurricane and approximately 3-9 feet MEOW.[65] This is lower than indicated in the 500-year FEMA maps. In addition, while NOAA seems to provide higher resolution of topographic features, it limits its SLOSH maps to storm surge levels at high tide above 9 feet. As a result, FERC staff evaluated the storm surge against other sources using SLOSH maps that indicate a similar upper range of 8-10 feet MEOW for Category 2 Hurricanes, and also indicated 13-16 feet MEOW for Category 3 Hurricanes, 16-20 feet MEOW for Category 4 Hurricanes, and 20-25 feet MEOW for Category 5 Hurricanes.[66] This data suggests that PALNG design may withstand Category 3 or 4 Hurricane storm surge SWEL equivalent to 1,000 to 10,000 year mean return intervals. In addition, wave heights would likely impact the channel side, but would not reach the landward side. We also would expect the sea level rise to be closer to the 1.21 feet intermediate projection provided by NOAA. As a result of the SLOSH data and NOAA sea level rise projections, we would expect the berm to be at least 20.1 feet on the channel side and 14.2 feet on the landward side post settlement. However, given the uncertainty in the 500-year SWEL data, 500-year wave data, SLOSH maps, sea level rise and subsidence projections, and settlement projections and uncertainties, we agree that the 20.6 feet and 17.0 feet post settlement levee would provide adequate protection of the PALNG site and should be periodically monitored and maintained to assure the crest elevation would not be lower than 20.6 feet NAVD88 on the channel side and 17.0 feet NAVD88 on the land side. We also recommend in section 4.12.6 that PALNG provide the monitoring and maintenance plan that has been reviewed, approved, stamped and sealed by a professional engineer of record registered in the state of Texas.

The Texas and Louisiana Gulf Coast area is experiencing the highest rates of coastal erosion and wetland loss in the United States (Ruple, 1993). The average coastal erosion rates is -1.2 meters per year between 2000 and 2012 along the Texas coastal shoreline, with the area between Sabine Pass and Rollover Pass experiencing a shoreline loss rate of -4.7 meters per year between 2000 and 2012 (McKenna, 2014).

64 Global and Regional Sea Level Rise Scenarios for the United States. U.S. Department of Commerce. National Ocean and Atmospheric Administration. National Ocean Service Center for Operational Oceanographic Products and Services. January 2017.

65 U.S. Department of Commerce. NOAA. National Hurricane Center. National Storm Surge Hazard Maps. Available at: https://www.nhc.noaa.gov/nationalsurge/#pop. Accessed August 2018.

66 Masters. J. Weather Underground. Storm Surge Inundation Maps for the U.S. Coast. Available at:https://www.wunderground.com/hurricane/surge_images.asp. Accessed August 2018.

Shoreline erosion could occur at the Liquefaction Project site and along the opposite shoreline as a result of waves, currents, and vessel wakes. To prevent erosion, new revetment in the form of sheet piling and rip rap would be installed on the water side of the storm protection berm. Even though shoreline erosion is a concern at the site, the proposed mitigation measures would minimize erosion and scour impacts.

Landslides and other Natural Hazards

Due to the low relief across the PALNG site, there is little likelihood that landslides or slope movement at the site would be a realistic hazard. Landslides involve the downslope movement of earth materials under force of gravity due to natural or human causes. The Liquefaction Project area has low relief which reduces the possibility of landslides.

Volcanic activity is primarily a concern along plate boundaries on the West Coast and Alaska and also Hawaii. Based on FERC staff review of maps from USGS[67] and DHS[68] of the nearly 1,500 volcanoes with eruptions since the Holocene period (in the past 10,000 years) there are no known active or historic volcanic activity within approximately 700 miles away across the Gulf of Mexico in Los Atlixcos, Mexico.

Geomagnetic disturbances (GMD) may occur due to solar flares or other natural events with varying frequencies that can cause geomagnetically induced currents, which can disrupt the operation of transformers and other electrical equipment. USGS provides a map of GMD intensities with an estimated 100 year mean return interval.[69] The map indicates the PALNG site could experience GMD intensities of 70-100 nano-Tesla with a 100 year mean return interval. However, PALNG would be designed such that if a loss of power were to occur the valves would move into a fail-safe position. In addition, PALNG is an export facility that does not serve any U.S. customers.

External Impact Review

To assess the potential impact from external events, FERC staff conducted a series of reviews to evaluate transportation routes, land use, and activities within the facility and surrounding the Liquefaction Project site, and the safeguards in place to mitigate the risk from events, where warranted. FERC staff coordinated the results of the reviews with other federal agencies to assess potential impacts from vehicles and rail; aircraft impacts to and from nearby airports and heliports; pipeline impacts from nearby pipelines; impacts to and from adjacent facilities that handle hazardous materials under the EPA's Risk Management Plan (RMP) regulations and power plants, including nuclear facilities under the Nuclear Regulatory Commission regulations. Specific mitigation of impacts from use of external roadways, rail, helipads, airstrips, or pipelines are also considered as part of the engineering review done in conjunction with the NEPA review.

FERC staff uses a risk-based approach to assess the potential impact of the external events and the adequacy of the mitigation measures. The risk-based approach uses data based on the frequency of events that could lead to an impact and the potential severity of consequences posed to the Liquefaction Project site and the resulting consequences to the public beyond the initiating events. The frequency data is based on past incidents and the consequences are based on past incidents and/or hazard modeling of potential failures.

67 United States Geological Survey. U.S. Volcanoes and Current Activity Alerts. Available at: https://volcanoes.usgs.gov/index.html. Accessed August 2018.

68 Department of Homeland Security. Homeland Infrastructure. Foundation-Level data (HIFLD). Natural Hazards. hifld-geoplatform.opendata.arcgis.com. accessed Aug 2018

69 United States Geological Survey. Magnetic Anomaly Maps and Data for North America. Available at: https://mrdata.usgs.gov/magnetic/map-us.html#home. Accessed August 2018.

Road

FERC staff generally reviews whether any truck operations would be associated with the project and whether any existing roads would be located near the site. FERC staff uses this information to evaluate whether the project and any associated truck operations could increase the risk along the roadways and subsequently to the public and whether any pre-existing unassociated vehicular traffic could adversely increase the risk to the project site and subsequently increase the risk to the public. In addition, all facilities, once constructed, must comply with the requirements of 49 CFR 193 and would be subject to the DOT's inspection and enforcement programs. DOT regulations under 49 CFR 193.2155(a) (5) (ii) under Subpart C require that structural members of an impoundment system must be designed and constructed to prevent impairment of the system's performance reliability and structural integrity as a result of a collision by or explosion of a tank truck that could reasonably be expected to cause the most severe loading if the liquefaction facility adjoins the right-of-way of any highway. Similarly, NFPA 59A (2001), section 8.5.4, requires transfer piping, pumps, and compressors to be located or protected by barriers so that they are safe from damage by rail or vehicle movements. However, the DOT regulations and NFPA 59A (2001) requirements do not indicate what collision(s) or explosion(s) could reasonably be expected to cause the most severe loading. FERC staff evaluated consequence and frequency data from these events to evaluate these potential impacts.

FERC staff evaluated the risk of the truck operations based on the consequences from a release, incident data from the DOT Federal Highway Administration, National Highway Traffic Safety Administration, and PHMSA, and frequency of trucks and proposed mitigation to prevent or reduce the impacts of a vehicular incident from PALNG.

Unmitigated consequences under worst case weather conditions from catastrophic failures of trucks proposed at the site generally can range from 200-2,000 feet for flammable vapor dispersion, 850-1,500 feet for radiant heat of 5kW/m^2 from fireballs, and 275-350 feet for radiant heat of 5kW/m^2 from jet fires with projectiles from BLEVEs possibly extending farther. These values are also close to the distances provided by DOT Federal Highway Administration for designating hazardous material trucking routes (0.5 mi for flammable gases for potential impact distance) and DOT PHMSA for emergency response (0.5-1 mi for initial evacuation and 1 mi for potential BLEVEs for flammable gases).[70] Unmitigated consequences under average ambient conditions from releases of 1,000 gallons through a 1-inch hole would result in much more modest distances ranging from 25-200 feet for flammable vapor dispersion, and 75-175 feet for jet fires.

Incident data indicates hazardous material incidents are very infrequent (4e-3 incidents per lane-mile per year) and nearly 75-80 percent of hazardous material vehicular incidents occur during unloading and loading operations while the other 20-25 percent occur while in transit or in transit storage. In addition, approximately 99 percent of releases are 1,000 gallons or less and catastrophic events that would spill 10,000 gallons or more make up less than 0.1 percent of releases. In addition, less than 1 percent of all reportable hazardous material incidents with spillage result in injuries and less than 0.1 percent of all reportable hazardous material incidents with spillage result in fatalities.

During operation of the project, PALNG estimates 30 trucks or tanker trucks would transport commodities (e.g., liquid nitrogen, condensate product, etc.) to or from the facility each week. Diesel trucks would come to and from the facility on a bi-weekly basis. This would result in approximately 1,586 trucks or tanker trucks that would transport hazardous fluids to or from the site each year. PALNG would relocate the existing SH 87 to the western side of the proposed site. SH 87 would remain a two-lane highway with a speed limit of 65 miles per hour. PALNG also proposes to install a 17 feet high storm levee that would

70 USGS. Earthquake Hazards Program. Quaternary Fault and Fold Database of the United States. Available at: https://earthquake.usgs.gov/hazards/qfaults/ Accessed August 2018

separate SH 87 from the process equipment and piping within the liquefaction facility. Distances from external roads to the berm is approximately 400 feet with another approximate 100 feet to equipment. FERC staff did not identify any other major highways or roads within close proximity to piping or equipment containing hazardous materials at the site that would not be protected by the berm to raise concerns of direct impacts from a vehicle impacting the site. The berm and separation distances would also provide some protection from flammable vapor dispersion and radiant heats. While we believe the berm would provide adequate protection from most potential accidental and intentional vehicle impacts, FERC staff recommends in section 4.12.6 that PALNG file specifications and drawings of vehicle barriers at the access points, for review and approval, to further mitigate accidental and intentional vehicle impacts. In addition, FERC staff recommends in section 4.12.6 that PALNG file an evaluation, for review and approval, on the need to install turning lanes to minimize the risk of incidents from hazardous material truck and other vehicle incidents entering and exiting the facility from SH 87. In addition, while FERC staff could find information on the protection of fire hydrants, FERC staff could not locate information in the application indicating that PALNG would install guard rails, bollards, stop signs, speed limits, etc. that would be located internal to the liquefaction facility to protect equipment containing hazardous fluids and safety related equipment. Therefore, FERC staff recommends in section 4.12.6 that PALNG provide final design information, for review and approval, on internal road and vehicle protections, (e.g., guard rails, barriers, and bollards) to protect transfer piping, pumps, and compressors, etc. and to ensure that they are located away from roadway or protected from damage by vehicle movements.

With the implementation of our recommendations, we conclude the proposed project would not pose a significant risk or significant increase in risk to the public due to vehicle impacts as a result of the potential consequences, incident data, and frequency of trucks.

Rail

FERC staff generally reviews whether any rail operations would be associated with the project and whether any existing rail lines would be located near the site. FERC staff uses this information to evaluate whether the project and any associated rail operations could increase the risk along the rail line and subsequently to the public and whether any pre-existing unassociated rail operations could adversely increase the risk to the PALNG site and subsequently increase the risk to the public. In addition, all facilities, once constructed, must comply with the requirements of 49 CFR 193 and would be subject to the DOT's inspection and enforcement programs. DOT regulations under 49 CFR 193.2155 (a) (5) (ii) under Subpart C states if the LNG facility adjoins the right-of-way of any railroad, the structural members of an impoundment system must be designed and constructed to prevent impairment of the system's performance reliability and structural integrity as a result of a collision by or explosion of a train or tank car that could reasonably be expected to cause the most severe loading. Section 8.5.4 of NFPA 59A (2001), incorporated by reference in 49 CFR 193, requires transfer piping, pumps, and compressors to be located or protected by barriers so that they are safe from damage by rail or vehicle movements. However, the DOT regulations and NFPA 59A (2001) requirements do not indicate what collision(s) or explosion(s) could reasonably be expected to cause the most severe loading. Therefore, FERC staff evaluated consequence and frequency data from these events to evaluate these potential impacts. There would be no rail transportation associated with the Liquefaction Project.

FERC staff evaluated the risk of the truck operations based on the consequences from a release, incident data from the DOT Federal Rail Administration and DOT PHMSA, and frequency of rail operations nearby PALNG.

Unmitigated consequences under worst case weather conditions from catastrophic failures of rail cars containing various flammable products generally can range from 300-3,000 feet for flammable vapor dispersion, 1,250-2,100 feet for radiant heat of 5kW/m^2 from fireballs, and 450 -575 feet for radiant heat of

5kW/m^2 from jet fires with projectiles from BLEVEs possibly extending farther. These values are also close to the distances provided by DOT PHMSA for emergency response (0.5-1 mi for initial evacuation and 1 mi for potential BLEVEs for flammable gases).[71] Unmitigated consequences under average ambient conditions from releases of 1,000 gallons through a 1-inch hole would result in much more modest distances ranging from 25-200 feet for flammable vapor dispersion, and 75-175 feet for jet fires.

Incident data indicates hazardous material incidents are very infrequent (6e-3 incidents per rail-mile per year). In addition, approximately 95 percent of releases are 1,000 gallons or less and catastrophic events that would spill 30,000 gallons or more make up less than 1 percent of releases. In addition, less than 1 percent of hazardous material incidents result in injuries and less than 0.1 percent of hazardous material incidents result in fatalities.

The closest rail line is located adjacent to SH 87 near the West Port Arthur Bridge approximately 3 miles away that services the adjacent chemical facilities (KMTEX, etc.). This would be farther than the consequence distances under worst case weather conditions and events. In addition, the position of the rail operations would be to the north of the Liquefaction Project and in closer proximity to populated areas than the liquefaction facilities.

Therefore, we conclude the proposed project would not pose a significant risk or significant increase in risk to the public due to nearby rail as a result of the potential consequences, incident data, and distance and position of the closest rail lines serving other industrial facilities relative to the populated areas to the north of the liquefaction facilities and industrial facilities.

Air

FERC staff generally reviews whether any aircraft operations would be associated with the project and whether any existing aircraft operations would be located near the site. FERC staff uses this information to evaluate whether the project and any associated aircraft operations could increase the risk to the public and whether any pre-existing unassociated aircraft operations could adversely increase the risk to the project site and subsequently increase the risk to the public. In addition, all facilities, once constructed, must comply with the requirements of 49 CFR 193 and would be subject to the DOT's inspection and enforcement programs. DOT regulations under 49 CFR 193.2155 (b) under Subpart C require an LNG storage tank must not be located within a horizontal distance of one mile from the ends, or 1/4 mile from the nearest point of a runway, whichever is longer and that the height of LNG structures in the vicinity of an airport must comply with DOT FAA requirements. In addition, FERC staff evaluated the risk of an aircraft impact from nearby airports. There would be no aircraft associated with the Liquefaction Project (e.g., helipads) that would warrant a review that would increase the risk to the public from aircraft operations.

The closest airport to the Liquefaction Project site is the Vaughn Farm Airport located approximately 6.1 miles away. FERC staff also identified 4 other airports within a 20-mile radius from the proposed site: Jack Brooks Regional Airport located 11.4 miles away, Kelley Crop Service Airport located 17.1 miles away, Wilber Farms Airport located 18.0 miles away, and Chesson Airport located 19.3 miles away. These are all farther than the 0.25-mile distance referenced in DOT regulations.

The DOT FAA regulations in 14 CFR 77 require PALNG to provide a notice to the FAA of its proposed construction. This notification should identify all equipment that are more than 200 feet above ground level or lesser heights if the facilities are within 20,000 feet of an airport (at 100:1 ratio or 50:1 ratio depending on length of runway) or within 5,000 feet of a helipad (at 100:1 ratio). In addition, mobile

71 USGS. Earthquake Hazards Program. Quaternary Fault and Fold Database of the United States. Available at: https://earthquake.usgs.gov/hazards/qfaults/ Accessed August 2018

objects, including the LNG vessel that would be above the height of the highest mobile object that would normally traverse it would require notification to DOT FAA. The FAA aeronautical study would identify which structures and mobile objects exceed obstruction standards and would indicate if the identified structures would be a hazard to air navigation. Based on this study, FAA would issue a determination for each structure and mobile object that exceeds the obstruction standards.

On December 17, 2018 PALNG filed to FERC the letter of determination of aeronautical study from the FAA. The aeronautical study revealed that the permanent and temporary structures (LNG Storage Tanks, Temporary Cranes and LNG Vessel) do not exceed obstruction standards and would not be a hazard to air navigation provided they are marked/lighted in accordance with FAA Advisory circular 70/7460-1 L Change 2, Obstruction Marking and Lighting. Also, the aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, the aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds the temporary structures will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures. Based upon the results of FAA's review, we conclude that the proposed Liquefaction Project would not pose a hazard to air navigation provided they are marked/lighted in accordance with FAA guidance.

In addition, FERC staff analyzed existing aircraft operation frequency data based on the airports identified above and their proximity to the LNG storage tanks and process areas, the type and frequency of aircraft operations, take-off and landing directions, and the non-airport flight paths using the DOE Standard, DOE-STD-3014-2006, *Accident Analysis for Aircraft Crash into Hazardous Facilities*. Based upon that review, FERC staff does not believe the proposed Liquefaction Project would pose a significant risk as a result of the proximity of the project to the airports.

With the implementation of our recommendations, we conclude that the proposed project would not pose a significant risk or significant increase in risk to the public due to nearby aircraft operations as a result of the potential consequences, incident data, and distance and position of the closest aircraft operations relative to the populated areas north of the LNG terminal.

Pipelines

FERC staff generally reviews whether any pipeline operations would be associated with the project and whether any existing pipelines would be located near the site. FERC staff uses this information to evaluate whether the project and any associated pipeline operations could increase the risk to the pipeline facilities and subsequently to the public and whether any pre-existing unassociated pipeline operations could adversely increase the risk to the project site and subsequently increase the risk to the public. In addition, pipelines associated with this project must meet DOT regulations under 49 CFR 192 and are discussed in section 4.12.2. All facilities, once constructed, must comply with the requirements of 49 CFR 192 and 49 CFR 193 and would be subject to the DOT's inspection and enforcement programs. FERC staff evaluated the risk of a pipeline incident impacting the Liquefaction Project and the potential of cascading damage increasing the risk to the public based on the consequences from a release, incident data from the DOT PHMSA, and proposed mitigation to prevent or reduce the impacts of a pipeline incident from PALNG.

PALNG identified five pipelines located adjacent to SH 87. The pipelines would either be relocated or abandoned in connection with the development of the project and adequately marked during construction of the Liquefaction Project. FERC staff evaluated the potential risk from an incident from the pipelines and their potential impacts. Based on the proposed re-route, marking, and damage prevention measures

and based on an evaluation of the potential likelihood of pipeline incidents and potential consequences from a pipeline incident, FERC staff does not believe the proposed project would significantly increase the risk to the public beyond existing risk levels that are present from the pipelines.

Therefore, we conclude the proposed project would not pose a significant increase in risk to the public as a result of the potential consequences from the pipelines in the vicinity of the Liquefaction Project, the frequency of pipeline incidents, and the proposed mitigation to prevent and reduce the impacts of a pipeline incident from PALNG.

Hazardous Material Facilities and Power Plants

FERC staff reviewed whether any EPA RMP regulated facilities handling hazardous materials and power plants were located near the site to evaluate whether the facilities could adversely increase the risk to the project site and whether the project site could increase the risk to the EPA RMP facilities and power plants and subsequently increase the risk to the public.

There were no adjacent facilities handling hazardous materials or power plants identified adjacent to the site. FERC staff also evaluated whether any EPA RMP regulated facilities would be located near the proposed site and if these facilities could adversely increase the risk to the PALNG site and whether the Liquefaction Project could increase the risk to the EPA RMP facilities and power plants and subsequently increase the risk to the public. The closest facility handling hazardous materials would be the KMCO Port Arthur facility located approximately 2.8 miles north of the LNG storage tanks. In addition, the Golden Pass LNG terminal would be located approximately 2.8 miles southeast of the LNG storage tanks. The closest power plant identified was a gas power plant at a refinery approximately 4 miles north of the facility and the closest nuclear power plant is over 100 miles away.

Given the distances and locations of the facilities relative to the populated areas of the Port Arthur and Sabine Pass communities, we conclude the proposed project would not pose a significant increase in risk to the public or that the hazardous material facilities and power plants would pose a significant risk to the project and subsequently to the public.

Onsite and Offsite Emergency Response Plans

As part of its application, PALNG indicated that it would develop a comprehensive ERP with local, state, and federal agencies and emergency response officials to discuss the Liquefaction Project. PALNG would continue these collaborative efforts during the development, design, and construction of the Project. The emergency procedures would provide for the protection of personnel and the public as well as the prevention of property damage that may occur as a result of incidents at the project facilities. The facility would also provide appropriate personnel protective equipment to enable operations personnel and first responder access to the area.

As required by 49 CFR 193.2509 under Subpart F, PALNG would need to prepare emergency procedures manuals that provide for: a) responding to controllable emergencies and recognizing an uncontrollable emergency; b) taking action to minimize harm to the public including the possible need to evacuate the public; and c) coordination and cooperation with appropriate local officials. Specifically, 49 CFR 193.2509(b)(3) requires "Coordinating with appropriate local officials in preparation of an emergency evacuation plan…," which sets forth the steps required to protect the public in the event of an emergency, including catastrophic failure of an LNG storage tank. DOT regulations under 49 CFR 193.2905 under Subpart J also require at least two access points in each protective enclosure to be located to minimize the escape distance in the event of emergency.

33 CFR 127.307 also requires the development of emergency manual that incorporates additional material, including LNG release response and ESD procedures, a description of fire equipment, emergency lighting, and power systems, telephone contacts, shelters, and first aid procedures. In addition, 33 CFR 127.207 establishes requirements for warning alarm systems. Specifically, 33 CFR 127.207(a) requires that the LNG marine transfer area to be equipped with a rotating or flashing amber light with a minimum effective flash intensity, in the horizontal plane, of 5000 candelas with at least 50 percent of the required effective flash intensity in all directions from 1.0 degree above to 1.0 degree below the horizontal plane. Furthermore, 33 CFR 127.207(b) requires the marine transfer area for LNG to have a siren with a minimum 1/3-octave band sound pressure level at l meter of 125 dB referenced to 0.0002 microbars. The siren must be located so that the sound signal produced is audible over 360 degrees in a horizontal plane. Lastly, Title 33 CFR 127.207 (c) requires that each light and siren must be located so that the warning alarm is not obstructed for a distance of 1.6 km (1 mile) in all directions. The warning alarms would be required to be tested in order to meet 33 CFR 127. PALNG would be required to meet the warning alarms requirements specified in 33 CFR 127.207.

In accordance with the EPAct 2005, FERC must also approve an ERP covering the terminal and ship transit prior to construction. Section 3A(e) of the NGA, added by section 311 of the EPAct 2005, stipulates that in any order authorizing an LNG terminal, the Commission must require the LNG terminal operator to develop an ERP in consultation with the USCG and state and local agencies. The final ERP would need to be evaluated by appropriate ERPs and officials. Section 3A (e) of the NGA (as amended by EPAct 2005) specifies that the ERP must include a Cost-Sharing Plan that contains a description of any direct cost reimbursements the applicant agrees to provide to any state and local agencies with responsibility for security and safety at the LNG terminal and in proximity to LNG marine carriers that serve the facility. The Cost-Sharing Plan must specify what the LNG terminal operator would provide to cover the cost of the state and local resources required to manage the security of the LNG terminal and LNG marine carrier, and the state and local resources required for safety and emergency management, including:

- direct reimbursement for any per-transit security and/or emergency management costs (for example, overtime for police or fire department personnel);
- capital costs associated with security/emergency management equipment and personnel base (for example, patrol boats, firefighting equipment); and
- annual costs for providing specialized training for local fire departments, mutual aid departments, and emergency response personnel; and for conducting exercises.

The cost-sharing plan must include the LNG terminal operator's letter of commitment with agency acknowledgement for each state and local agency designated to receive resources.

PALNG described the ERP that would be developed to addresses emergency events and potential release scenarios in the Application. The ERP would include public notification, protection, and evacuation. As part of FEED, FERC staff evaluate the initial draft of the emergency response procedures to assure that it covers the hazards associated with the Liquefaction Project. In addition, FERC staff recommends in section 4.12.6 that PALNG provide additional information, for review and approval, on development of updated ERPs prior to initial site preparation. We also recommend in section 4.12.6 that PALNG file three-dimensional drawings, for review and approval, that demonstrate there is a sufficient number of access and egress locations. If this project is authorized and constructed, PALNG would coordinate with local, state, and federal agencies on the development of an ERP and cost sharing plan. FERC staff recommends in section 4.12.6 that PALNG provide periodic updates on the development of these plans for review and approval, and ensure they are in place prior to introduction of hazardous fluids.

In addition, FERC staff recommends in section 4.12.6 that project facilities be subject to regular inspections throughout the life of the facility and would continue to require companies to file updates to the ERP.

4.12.6 Recommendations from FERC Preliminary Engineering and Technical Review

Based on our preliminary engineering and technical review of the reliability and safety of the Liquefaction Project, FERC staff recommends the following mitigation measures to the Commission for consideration to incorporate as possible conditions to an order. These recommendations would be implemented prior to initial site preparation, prior to construction of final design, prior to commissioning, prior to introduction of hazardous fluids, prior to commencement of service, and throughout the life of the facility to enhance the reliability and safety of the facility and to mitigate the risk of impact on the public.

- **Prior to construction of final design, PALNG should file with the Secretary the following information, stamped and sealed by the professional engineer-of-record, registered in Texas:**

  a. site preparation drawings and specifications;

  b. LNG terminal structures and foundation design drawings and calculations (including prefabricated and field constructed structures);

  c. seismic specifications for procured equipment; and

  d. quality control procedures to be used for civil/structural design and construction.

  In addition, PALNG should file, in its Implementation Plan, the schedule for producing this information.

- **Prior to commencement of service, PALNG should file with the Secretary a monitoring and maintenance plan, stamped and sealed by the professional engineer-of-record registered in Texas, for the perimeter levee which ensures the crest elevation relative to mean sea level will be maintained for the life of the facility considering berm settlement, subsidence, and sea level rise.**

Information pertaining to the following specific recommendations should be filed with the Secretary for review and written approval by the Director of OEP, or the Director's designee, within the timeframe indicated by each recommendation. Specific engineering, vulnerability, or detailed design information meeting the criteria specified in Order No. 833 (Docket No. RM16-15-000), including security information, should be submitted as critical energy infrastructure information pursuant to 18 CFR 388.113. See *Critical Electric Infrastructure Security and Amending Critical Energy Infrastructure Information*, Order No. 833, 81 Fed. Reg. 93,732 (December 21, 2016), FERC Stats. & Regs. 31,389 (2016). Information pertaining to items such as offsite emergency response, procedures for public notification and evacuation, and construction and operating reporting requirements would be subject to public disclosure. All information should be filed **a minimum of 30 days** before approval to proceed is requested.

- **Prior to initial site preparation, PALNG should file an overall project schedule, which includes the proposed stages of the commissioning plan.**

- **Prior to initial site preparation, PALNG should file quality assurance and quality control procedures for construction activities.**

- **Prior to initial site preparation, PALNG should file procedures for controlling access during construction.**

- **Prior to initial site preparation, PALNG should develop an ERP (including evacuation) and coordinate procedures with the USCG; state, county, and local emergency planning groups; fire departments; state and local law enforcement; and appropriate federal agencies. This plan should include at a minimum:**

  a. designated contacts with state and local emergency response agencies;

  b. scalable procedures for the prompt notification of appropriate local officials and emergency response agencies based on the level and severity of potential incidents;

  c. procedures for notifying residents and recreational users within areas of potential hazard;

  d. evacuation routes/methods for residents and public use areas that are within any transient hazard areas along the route of the LNG marine transit;

  e. locations of permanent sirens and other warning devices; and

  f. an "emergency coordinator" on each LNG vessel to activate sirens and other warning devices.

  PALNG should notify the FERC staff of all planning meetings in advance and should report progress on the development of its ERP at 3-month intervals.

- **Prior to initial site preparation, PALNG should file a Cost-Sharing Plan identifying the mechanisms for funding all project-specific security/emergency management costs that would be imposed on state and local agencies. This comprehensive plan should include funding mechanisms for the capital costs associated with any necessary security/emergency management equipment and personnel base. PALNG should notify FERC staff of all planning meetings in advance and should report progress on the development of its Cost Sharing Plan at 3-month intervals.**

- **Prior to construction of final design, PALNG should file change logs that list and explain any changes made from the FEED provided in PALNG's application and filings. A list of all changes with an explanation for the design alteration should be filed and all changes should be clearly indicated on all diagrams and drawings.**

- **Prior to construction of final design, PALNG should file information/revisions pertaining to PALNG' response numbers 9, 11, 18, 19, 24, 28, 29, 30-33, 34, 36-41, 43-46, 54-55 of its January 29, 2018 filing and 52 and 57 of its February 7, 2018 filing, which indicated features to be included or considered in the final design.**

- **Prior to construction of final design, PALNG should file a plot plan of the final design showing all major equipment, structures, buildings, and impoundment systems.**

- **Prior to construction of final design, PALNG should file three-dimensional plant drawings to confirm plant layout for maintenance, access, egress, and congestion.**

- **Prior to construction of final design, PALNG should file drawings of the storage tank piping support structure and support of horizontal piping at grade including pump columns, relief valves, pipe penetrations, instrumentation, and appurtenances.**

- **Prior to construction of final design, PALNG should file a complete specification and drawings of the proposed LNG tank design and installation.**

- **Prior to construction of final design, PALNG should file an up-to-date equipment list, process and mechanical data sheets, and specifications. The specifications should include:**

  a. building specifications (control buildings, electrical buildings, compressor buildings, storage buildings, pressurized buildings, ventilated buildings, blast resistant buildings);

  b. mechanical specifications (piping, valve, insulation, rotating equipment, heat exchanger, storage tank and vessel, other specialized equipment);

  c. electrical and instrumentation specifications (power system specifications, control system specifications, safety instrument system [SIS] specifications, cable specifications, other electrical and instrumentation specifications); and

  d. security and fire safety specifications (security, passive protection, hazard detection, hazard control, firewater).

- **Prior to construction of final design, PALNG should file a list of all codes and standards and the final specification document number where they are referenced.**

- **Prior to construction of final design, PALNG should file up-to-date process flow diagrams (PFDs) and piping and instrument diagrams (P&IDs) including vendor P&IDs. The PFDs should include heat and material balances. The P&IDs should include the following information:**

  a. equipment tag number, name, size, duty, capacity, and design conditions.

  b. equipment insulation type and thickness.

  c. storage tank pipe penetration size and nozzle schedule.

  d. valve high pressure side and internal and external vent locations.

  e. piping with line number, piping class specification, size, and insulation type and thickness.

  f. piping specification breaks and insulation limits.

  g. all control and manual valves numbered.

h. relief valves with size and set points.

i. drawing revision number and date.

- **<u>Prior to construction of final design</u>, PALNG should file P&IDs, specifications, and procedures that clearly show and specify the tie-in details required to safely connect subsequently constructed facilities with the operational facilities.**

- **<u>Prior to construction of final design</u>, PALNG should file a car seal philosophy and a list of all car-sealed and locked valves consistent with the P&IDs.**

- **<u>Prior to construction of final design</u>, the engineering, procurement, and construction contractor should verify that the recommendations from the FEED Hazard Identification are complete and consistent with the requirements of the final design as determined by the engineering, procurement, and construction contractor.**

- **<u>Prior to construction of final design</u>, PALNG should file a HAZOP review prior to issuing the P&IDs for construction. A copy of the review, a list of the recommendations, and actions taken on the recommendations should be filed.**

- **<u>Prior to construction of final design</u>, PALNG should file the safe operating limits (upper and lower), alarm and shutdown set points for all instrumentation (e.g., temperature, pressures, flows, and compositions).**

- **<u>Prior to construction of final design</u>, PALNG should file cause-and-effect matrices for the process instrumentation, fire and gas detection system, and ESD system for review and approval. The cause-and-effect matrices should include alarms and shutdown functions, details of the voting and shutdown logic, and set points.**

- **<u>Prior to construction of final design</u>, PALNG should file an evaluation of ESD valve closure times. The evaluation should account for the time to detect an upset or hazardous condition, notify plant personnel, and close the ESD valve.**

- **<u>Prior to construction of final design</u>, PALNG should file an evaluation of dynamic pressure surge effects from valve opening and closure times and pump operations.**

- **<u>Prior to construction of final design</u>, PALNG should demonstrate that hazardous fluid piping and piping nipples 2 inches or less in diameter are designed to withstand external loads, including vibrational loads in the vicinity of rotating equipment and operator live loads in areas accessible by operators.**

- **<u>Prior to construction of final design</u>, PALNG should specify that all drains from high pressure hazardous fluid systems are equipped with double isolation and bleed valves.**

- **<u>Prior to construction of final design</u>, PALNG should file electrical area classification drawings.**

- **<u>Prior to construction of final design</u>, PALNG should file drawings and details of how process seals or isolations installed at the interface between a flammable fluid system**

and an electrical conduit or wiring system meet the requirements of NFPA 59A (2001).

- **Prior to construction of final design, PALNG should file details of an air gap or vent installed downstream of process seals or isolations installed at the interface between a flammable fluid system and an electrical conduit or wiring system. Each air gap should vent to a safe location and be equipped with a leak detection device that should continuously monitor for the presence of a flammable fluid, alarm the hazardous condition, and shut down the appropriate systems.**

- **Prior to construction of final design, PALNG should include layout and design specifications of the pig trap, inlet separation and liquid disposal, inlet/send-out meter station, and pressure control.**

- **Prior to construction of final design, PALNG should specify that piping and equipment that may be cooled with liquid nitrogen will be designed for liquid nitrogen temperatures, with regard to allowable movement and stresses.**

- **Prior to construction of final design, PALNG should include LNG tank fill flow measurement with high flow alarm.**

- **Prior to construction of final design, PALNG should include BOG flow, tank density profile, and temperature profile measurement for each tank.**

- **Prior to construction of final design, PALNG should file the structural analysis of the LNG storage tank and outer concrete impoundment wall to demonstrate they are designed to withstand all loads and combinations.**

- **Prior to construction of final design, PALNG should file an analysis of the structural integrity of the outer containment of the full containment storage tanks when exposed to a roof tank top fire or adjacent tank top fire.**

- **Prior to construction of final design, PALNG should file the sizing basis and capacity for the final design of the flares and/or vent stacks as well as the pressure and vacuum relief valves for major process equipment, vessels, and storage tanks.**

- **Prior to construction of final design, PALNG should file detailed cooldown plans showing the piping flow paths, valve alignment, and instruments used to monitor the initial cooldown and filling of the LNG storage tanks.**

- **Prior to construction of final design, PALNG should file detailed procedures for import of LNG during the initial cooldown of the LNG storage tanks including detailed P&IDs with flow paths and valve alignment showing the position of valves and lockout/tagout devices.**

- **Prior to construction of final design, PALNG should file an evaluation on the need to install fixed toxic gas detection to detect H_2S releases from loss of containment from the acid gas piping system and potential release points (i.e., vents, relief valves, vent stacks, and thermal oxidizer stack).**

- **Prior to construction of final design, PALNG should file process simulation results for the deethanizer, depropanizer depressurized conditions to ensure the associated deethanizer, deepropanizer, reboiler, piping, and other associated equipment are adequately designed for settle out and upset conditions to prevent brittle facture of piping and associated equipment.**

- **Prior to construction of final design, PALNG should file an evaluation assessing the minimum design metal temperature and material of construction needed for the deethanizer, depropanizer, reboiler, and piping during upset/settleout conditions.**

- **Prior to construction of final design, PALNG should include provisions to maintain stability and pressure of the regenerator in the event that the H2S scavenger or thermal oxidizer are unavailable (e.g., change out, maintenance, startup, etc.).**

- **Prior to construction of final design, PALNG should include a thermal relief valve between the propane shutoff valves (XV-30687 and XV0-30686) to protect piping.**

- **Prior to construction of final design, PALNG should include a thermal relief valve between the ethane shutoff valves (XV0-30729 and XV0-30731) to protect piping.**

- **Prior to construction of final design, PALNG should include provisions to prevent cryogenic fluids accumulated in the dry flare knockout drum from reaching the wet flare knockout drum, which are connected by the dry flare knockout drum drain line to the blow case purge to the wet flare knockout drum.**

- **Prior to construction of final design, PALNG should include details of the flare knockout drum heater and detailed procedures for draining flare knockout drums to a safe location.**

- **Prior to construction of final design, PALNG should file detailed calculations for the flow rate of the jockey pumps accounting for flow rate losses due to leaks or when drain valves are opened to ensure that system losses do not exceed the specified design flow rate of the jockey firewater pumps.**

- **Prior to construction of final design, PALNG should file an evaluation of the need to install pressure relieving protection for flammable liquid piping segments (i.e., refrigerants, liquid hydrocarbons, condensate products) that can be isolated by valves in the event of a fire.**

- **Prior to construction of final design, PALNG should specify that all ESD valves will be equipped with open and closed position switches connected to the Distributed Control System (DCS)/SIS.**

- **Prior to construction of final design, PALNG should file a drawing showing the location of the ESD buttons. ESD buttons should be easily accessible, conspicuously labeled, and located in an area which would be accessible during an emergency.**

- **Prior to construction of final design, PALNG should file drawings and specifications for vehicle barriers at each facility entrance for access control.**

- **<u>Prior to construction of final design</u>, PALNG should file an evaluation of the need to install turning lanes to minimize the risk of hazardous material truck and other vehicle incidents entering and exiting the facility from SH 87.**

- **<u>Prior to construction of final design,</u> PALNG should file an evaluation of the need for installing internal road vehicle protections (e.g., guard rails, barriers, and bollards) to protect transfer piping, pumps, and compressors, etc. and to ensure that they are located away from roadway or protected from inadvertent damage from vehicles.**

- **<u>Prior to construction of final design</u>, PALNG should file a projectile analysis for review and approval to demonstrate that the outer concrete impoundment wall of a full-containment LNG tank could withstand windborne projectiles. The analysis should detail the projectile speeds and characteristics and method used to determine penetration or perforation depths.**

- **<u>Prior to construction of final design</u>, PALNG should file security camera, intrusion detection, and lighting drawings. The security camera drawings should show the location, areas covered, and features of the camera (fixed, tilt/pan/zoom, motion detection alerts, low light, mounting height, etc.) to verify camera coverage of the entire perimeter with redundancies for cameras interior to the facility to enable rapid monitoring of the LNG plant. The intrusion detection drawings should show or note the location of the intrusion detection to verify it covers the entire perimeter of the LNG plant. The lighting drawings should show the location, elevation, type of light fixture, and lux levels of the lighting system.**

- **<u>Prior to construction of final design</u>, PALNG should file the details of the ESD system, including whether a plant-wide ESD button with proper sequencing and reliability would be installed or whether another system would be installed that is demonstrated through a human reliability analysis to provide a means to quickly and reliably shutdown the entire plant.**

- **<u>Prior to construction of final design</u>, PALNG should file an updated fire protection evaluation of the proposed facilities. A copy of the evaluation, a list of recommendations and supporting justifications, and actions taken on the recommendations should be filed.**

- **<u>Prior to construction of final design</u>, PALNG should file spill containment system drawings with dimensions and slopes of curbing, trenches, impoundments, and capacity calculations considering any foundations and equipment within impoundments, as well as the sizing and design of the down-comer that would transfer spills from the tank top to the ground-level impoundment system. The spill containment drawings should show containment for all hazardous fluids from the largest flow from a single line for 10 minutes or from the largest vessel or otherwise demonstrate spill containment would not significantly reduce the flammable vapor dispersion or radiant heat consequences of a spill.**

- **<u>Prior to construction of final design</u>, PALNG should specify the material of construction for the curbed areas, trenches, and impoundments as insulated concrete or otherwise demonstrate insulated concrete would not significantly reduce the flammable vapor dispersion or radiant heat consequences of a spill.**

- **<u>Prior to construction of final design</u>, PALNG should file an analysis of the localized hazards to operators from a potential liquid nitrogen release and should also provide spill containment and low oxygen detectors to mitigate liquid nitrogen releases.**

- **<u>Prior to construction of final design</u>, PALNG should file complete drawings and a list of the hazard detection equipment. The drawings should clearly show the location and elevation of all detection equipment and demonstrate potential releases resulting in an offsite impact could be detected by at least two detectors to allow for shutdown in less than 10 minutes. The list should include the instrument tag number, type and location, alarm indication locations, and shutdown functions of the hazard detection equipment.**

- **<u>Prior to construction of final design</u>, PALNG should file a list of alarm and shutdown set points for all hazard detectors that account for the calibration gas of the hazard detectors when determining the lower flammable limit set points for CH_4, propane, butane, ethane, and condensate.**

- **<u>Prior to construction of final design</u>, PALNG should file a list of alarm and shutdown set points for all hazard detectors that account for the calibration gas of hazard detectors when determining the set points for toxic components such as aqueous ammonia, natural gas liquids and H_2S.**

- **<u>Prior to construction of final design</u>, PALNG should file a technical review of facility design that:**

  a. identifies all combustion/ventilation air intake equipment and the distances to any possible flammable gas or toxic release; and

  b. demonstrates that these areas are adequately covered by hazard detection devices and indicates how these devices would isolate or shutdown any combustion or heating ventilation and air conditioning equipment whose continued operation could add to or sustain an emergency.

- **<u>Prior to construction of the final design,</u> PALNG should file a building siting assessment to ensure plant buildings that are occupied or critical to the safety of the LNG plant are adequately protected from potential hazards involving fires and vapor cloud explosions.**

- **<u>Prior to construction of final design</u>, PALNG should file a drawing that includes smoke detection in occupied buildings.**

- **<u>Prior to construction of final design</u>, PALNG should file a drawing that includes hazard detection equipment suitable to detect high temperatures and smoldering combustion products in electrical buildings and control room buildings.**

- **<u>Prior to construction of final design</u>, PALNG should file a drawing that includes clean agent systems in the electrical switchgear and instrumentation buildings**.

- **<u>Prior to construction of final design</u>, PALNG should file facility plan drawings and a list of the fixed and wheeled dry-chemical, hand-held fire extinguishers, and other**

hazard control equipment. Plan drawings should clearly show the location by tag number and elevation of all fixed, wheeled, and hand-held extinguishers and demonstrate travel distances are along normal paths of access and egress and in compliance with NFPA 10, 15, and 17. The list should include the equipment tag number, type, capacity, equipment covered, discharge rate, and automatic and manual remote signals initiating discharge of the units.

- **Prior to construction of final design, PALNG should file facility plan drawings showing the proposed location of the firewater and any foam systems. Plan drawings should clearly show the location of firewater and foam piping, post indicator valves, and the location and area covered by, each monitor, hydrant, hose, water curtain, deluge system, foam system, water-mist system, and sprinkler. The drawings should demonstrate that each process area, fire zone, or other sections of piping with several users can be isolated with post indicator valves and that firewater coverage is provided by at least two monitors or hydrants with sufficient firewater flow to cool exposed surfaces subjected to a fire. Drawings should also include piping and instrumentation diagrams of the firewater and foam systems.**

- **Prior to construction of final design, PALNG should file detailed calculations to confirm that the final fire water volumes would be accounted for when evaluating the capacity of the impoundment system during a spill and fire scenario.**

- **Prior to construction of final design, PALNG should specify that the firewater flow test meter is equipped with a transmitter and that a pressure transmitter is installed upstream of the flow transmitter. The flow transmitter and pressure transmitter should be connected to the DCS and recorded.**

- **Prior to construction of final design, PALNG should specify that the firewater pump shelter is designed with a removable roof for maintenance access to the firewater pumps.**

- **Prior to construction of final design, PALNG should file calculations for the firewater spray systems sized to provide cooling for mitigation of boiling-liquid-expanding-vapor explosions.**

- **Prior to construction of final design, PALNG should evaluate the fire water required for foam generation in calculating the total fire water required for 2 hours of supply.**

- **Prior to construction of final design, PALNG should file drawings and specifications for the structural passive protection systems to protect equipment and supports from cryogenic releases.**

- **Prior to construction of final design, PALNG should file a detailed quantitative analysis to demonstrate that adequate thermal mitigation would be provided for each significant component within the 4,000 BTU/ft2-hr zone from an impoundment, or provide an analysis that evaluates the consequences of pressure vessel bursts and BLEVEs. Trucks at the truck transfer station should be included in the analysis. Passive mitigation should be supported by calculations for the thickness limiting temperature rise and active mitigation should be justified with calculations**

demonstrating flow rates and durations of any cooling water to mitigate the heat absorbed by the vessel.

- **Prior to construction of final design, PALNG should file an evaluation of the voting logic and voting degradation for hazard detectors.**

- **Prior to commissioning, PALNG should file a detailed schedule for commissioning through equipment startup. The schedule should include milestones for all procedures and tests to be completed: prior to introduction of hazardous fluids and during commissioning and startup. PALNG should file documentation certifying that each of these milestones has been completed before authorization to commence the next phase of commissioning and startup will be issued.**

- **Prior to commissioning, PALNG should file detailed plans and procedures for: testing the integrity of onsite mechanical installation; functional tests; introduction of hazardous fluids; operational tests; and placing the equipment into service.**

- **Prior to commissioning, PALNG should file a plan for clean-out, dry-out, purging, and tightness testing. This plan should address the requirements of the American Gas Association's Purging Principles and Practice, and should provide justification if not using an inert or non-flammable gas for clean-out, dry-out, purging, and tightness testing.**

- **Prior to commissioning, PALNG should file the procedures for pressure/leak tests which address the requirements of ASME BPVC section VIII and ASME B31.3. The procedures should include a line list of pneumatic and hydrostatic test pressures.**

- **Prior to commissioning, PALNG should file the operation and maintenance procedures and manuals, as well as safety procedures, hot work procedures and permits, abnormal operating conditions reporting procedures, simultaneous operations procedures, and management of change procedures and forms.**

- **Prior to commissioning, PALNG should tag all equipment, instrumentation, and valves in the field, including drain valves, vent valves, main valves, and car-sealed or locked valves.**

- **Prior to commissioning, PALNG should file a plan to maintain a detailed training log to demonstrate that operating staff has completed the required training.**

- **Prior to commissioning, PALNG should equip the LNG storage tank and adjacent piping and supports with permanent settlement monitors to allow personnel to observe and record the relative settlement between the LNG storage tank and adjacent piping. The settlement record should be reported in the semi-annual operational reports.**

- **Prior to introduction of hazardous fluids, PALNG should develop and implement an alarm management program to reduce alarm complacency and maximize the effectiveness of operator response to alarms.**

- **Prior to introduction of hazardous fluids, PALNG should file results of the LNG storage tank hydrostatic test and foundation settlement results. At a minimum, foundation settlement results should be provided thereafter annually.**

- **Prior to introduction of hazardous fluids, PALNG should complete and document all pertinent tests (Factory Acceptance Tests, Site Acceptance Tests, Site Integration Tests) associated with the DCS and SIS that demonstrates full functionality and operability of the system.**

- **Prior to introduction of hazardous fluids, PALNG should complete and document a firewater pump acceptance test and firewater monitor and hydrant coverage test. The actual coverage area from each monitor and hydrant should be shown on facility plot plan(s).**

- **Prior to introduction of hazardous fluids, PALNG should complete and document a pre-startup safety review to ensure that installed equipment meets the design and operating intent of the facility. The pre-startup safety review should include any changes since the last hazard review, operating procedures, and operator training. A copy of the review with a list of recommendations, and actions taken on each recommendation, should be filed.**

- **PALNG shall file a request for written authorization from the Director of OEP prior to unloading or loading the first LNG commissioning cargo. After production of first LNG, PALNG should file weekly reports on the commissioning of the proposed systems that detail the progress toward demonstrating the facilities can safely and reliably operate at or near the design production rate. The reports should include a summary of activities, problems encountered, and remedial actions taken. The weekly reports should also include the latest commissioning schedule, including projected and actual LNG production by each liquefaction train, LNG storage inventories in each storage tank, and the number of anticipated and actual LNG commissioning cargoes, along with the associated volumes loaded or unloaded. Further, the weekly reports should include a status and list of all planned and completed safety and reliability tests, work authorizations, and punch list items. Problems of significant magnitude should be reported to the FERC within 24 hours.**

- **Prior to commencement of service, PALNG should label piping with fluid service and direction of flow in the field, in addition to the pipe labeling requirements of NFPA 59A (2001).**

- **Prior to commencement of service, PALNG should provide plans for any preventative and predictive maintenance program that performs periodic or continuous equipment condition monitoring.**

- **Prior to commencement of service, PALNG should develop procedures for offsite contractors' responsibilities, restrictions, and limitations and for supervision of these contractors by PALNG staff.**

- **Prior to commencement of service, PALNG should notify the FERC staff of any proposed revisions to the security plan and physical security of the plant.**

- **Prior to commencement of service, PALNG should file a request for written authorization from the Director of OEP. Such authorization would only be granted following a determination by the USCG, under its authorities under the Ports and Waterways Safety Act, the Magnuson Act, the MTSA of 2002, and the Safety and Accountability For Every Port Act, that appropriate measures to ensure the safety and security of the facility and the waterway have been put into place by PALNG or other appropriate parties.**

In addition, the following recommendations should apply throughout the life of the Port Arthur liquefaction facility:

- **The facility should be subject to regular FERC staff technical reviews and site inspections on at least an annual basis or more frequently as circumstances indicate. Prior to each FERC staff technical review and site inspection, PALNG should respond to a specific data request including information relating to possible design and operating conditions that may have been imposed by other agencies or organizations. Up-to-date detailed P&IDs reflecting facility modifications and provision of other pertinent information not included in the semi-annual reports described below, including facility events that have taken place since the previously submitted semi-annual report, should be submitted.**

- **Semi-annual operational reports should be filed with the Secretary to identify changes in facility design and operating conditions; abnormal operating experiences; activities (e.g., ship arrivals, quantity and composition of imported and exported LNG, liquefied and vaporized quantities, boil off/flash gas); and plant modifications, including future plans and progress thereof. Abnormalities should include, but not be limited to, unloading/loading/shipping problems, potential hazardous conditions from offsite vessels, storage tank stratification or rollover, geysering, storage tank pressure excursions, cold spots on the storage tanks, storage tank vibrations and/or vibrations in associated cryogenic piping, storage tank settlement, significant equipment or instrumentation malfunctions or failures, non-scheduled maintenance or repair (and reasons therefore), relative movement of storage tank inner vessels, hazardous fluids releases, fires involving hazardous fluids and/or from other sources, negative pressure (vacuum) within a storage tank, and higher than predicted boil off rates. Adverse weather conditions and the effect on the facility also should be reported. Reports should be submitted within 45 days after each period ending June 30 and December 31. In addition to the above items, a section entitled "Significant Plant Modifications Proposed for the Next 12 Months (dates)" should be included in the semi-annual operational reports. Such information would provide the FERC staff with early notice of anticipated future construction/maintenance at the LNG facilities.**

- **In the event the temperature of any region of any secondary containment, including imbedded pipe supports, becomes less than the minimum specified operating temperature for the material, the Commission should be notified within 24 hours and procedures for corrective action should be specified.**

- **Significant non-scheduled events, including safety-related incidents (e.g., LNG, condensate, refrigerant, or natural gas releases; fires; explosions; mechanical failures; unusual over pressurization; and major injuries) and security-related incidents (e.g., attempts to enter site, suspicious activities) should be reported to the**

FERC staff. In the event that an abnormality is of significant magnitude to threaten public or employee safety, cause significant property damage, or interrupt service, notification should be made immediately, without unduly interfering with any necessary or appropriate emergency repair, alarm, or other emergency procedure. In all instances, notification should be made to the FERC staff within 24 hours. This notification practice should be incorporated into the liquefaction facility's emergency plan. Examples of reportable hazardous fluids-related incidents include:

a. fire;

b. explosion;

c. estimated property damage of $50,000 or more;

d. death or personal injury necessitating in-patient hospitalization;

e. release of hazardous fluids for 5 minutes or more;

f. unintended movement or abnormal loading by environmental causes, such as an earthquake, landslide, or flood, that impairs the serviceability, structural integrity, or reliability of an LNG facility that contains, controls, or processes hazardous fluids;

g. any crack or other material defect that impairs the structural integrity or reliability of an LNG facility that contains, controls, or processes hazardous fluids;

h. any malfunction or operating error that causes the pressure of a pipeline or LNG facility that contains or processes hazardous fluids to rise above its maximum allowable operating pressure (or working pressure for LNG facilities) plus the build-up allowed for operation of pressure-limiting or control devices;

i. a leak in an LNG facility that contains or processes hazardous fluids that constitutes an emergency;

j. inner tank leakage, ineffective insulation, or frost heave that impairs the structural integrity of an LNG storage tank;

k. any safety-related condition that could lead to an imminent hazard and cause (either directly or indirectly by remedial action of the operator), for purposes other than abandonment, a 20 percent reduction in operating pressure or shutdown of operation of a pipeline or an LNG facility that contains or processes hazardous fluids;

l. safety-related incidents from hazardous fluids transportation occurring at or en route to and from the LNG facility; or

m. an event that is significant in the judgment of the operator and/or management even though it did not meet the above criteria or the guidelines set forth in an LNG facility's incident management plan.

In the event of an incident, the Director of OEP has delegated authority to take whatever steps are necessary to ensure operational reliability and to protect human life, health, property, or the environment, including authority to direct the liquefaction facility to cease operations. Following the initial company notification, the FERC staff would determine the need for a separate follow-up report or follow up in the upcoming semi-annual operational report. All company follow-up reports should include investigation results and recommendations to minimize a reoccurrence of the incident.

4.12.7 Conclusions on LNG Facility and Carrier Reliability and Safety

As part of the NEPA review and NGA determinations, Commission staff assesses the potential impact to the human environment in terms of safety and whether the proposed facilities would operate safely, reliably, and securely.

As a cooperating agency, the DOT assists the FERC by determining whether PALNG's proposed design would meet the DOT's 49 CFR 193 Subpart B siting requirements. The DOT reviewed information submitted by PALNG and on March 20, 2018, provided a letter to FERC staff stating that the DOT had no objection to PALNG's methodology to comply with the 49 CFR 193 Subpart B siting requirements for the proposed LNG liquefaction facilities, but would need to resolve legal control of exclusion zones. DOT would provide a LOD on the project's compliance with 49 CFR 193 Subpart B, which includes legal control of exclusion zones. This would be provided to the Commission as further consideration to the Commission on its decision and final action on the project application. If the facility is authorized and constructed, the facility would be subject to the DOT's inspection and enforcement program and final determination of whether a facility is in compliance with the requirements of 49 CFR 193 would be made by the DOT staff.

As a cooperating agency, the USCG also assisted the FERC staff by reviewing the proposed LNG terminal and the associated LNG vessel traffic. The USCG reviewed a WSA submitted by PALNG that focused on the navigation safety and maritime security aspects of LNG vessel transits along the affected waterway. On September 11, 2015, the USCG issued a LOR to FERC staff indicating the Sabine Neches Ship Channel would be considered suitable for accommodating the type and frequency of LNG marine traffic associated with the Liquefaction Project, based on the WSA and in accordance with the guidance in the USCG's NVIC 01-11. If the Liquefaction Project is authorized and constructed, the facilities would be subject to the USCG's inspection and enforcement program to ensure compliance with the requirements of 33 CFR 105 and 33 CFR 127.

FERC staff conducted a preliminary engineering and technical review of the Liquefaction Project, including potential external impacts based on the site location. Based on this review, we are recommending a number of mitigation measures to be implemented prior to initial site preparation, prior to construction of final design, prior to commissioning, prior to introduction of hazardous fluids, prior to commencement of service, and throughout life of the facility, to enhance the reliability and safety of the facility. Based on our external impact analysis and preliminary evaluation of the engineering design, and with the incorporation of our recommended mitigation measures and oversight, we conclude that the Liquefaction Project's design would include acceptable layers of protection or safeguards that would reduce the risk of a potentially hazardous scenario from developing into an event that could impact the offsite public.

4.12.8 Pipeline Safety Standards

The transportation of natural gas by pipeline involves some incremental risk to the public due to the potential for an accidental release of natural gas. The greatest hazard is a fire or explosion following a major pipeline rupture.

CH_4, the primary component of natural gas, is colorless, odorless, and tasteless. It is not toxic, but is classified as a simple asphyxiate, possessing a slight inhalation hazard. If breathed in high concentration, oxygen deficiency can result in serious injury or death. To increase safety and make the CH_4 detectable by odor, PAPL would add a chemical odorant, such as Mercaptan, that produces the familiar "natural gas smell."

CH_4 has an auto-ignition temperature of 1,000 °F and is flammable at concentrations between 5.0 percent and 15.0 percent in air. At atmospheric temperatures, CH_4 is buoyant and disperses rapidly in air. An unconfined mixture of CH_4 and air is not explosive; however, it may ignite if there is an ignition source. A flammable concentration within an enclosed space in the presence of an ignition source can explode.

The DOT is mandated to provide pipeline safety under 49 U.S.C. 601. The DOT's PHMSA administers the national regulatory program to ensure the safe transportation of natural gas and other hazardous materials by pipeline. PHMSA develops safety regulations and other approaches to risk management that ensure safety in the design, construction, testing, operation, maintenance, and emergency response of pipeline facilities. Many of the regulations are written as performance standards that set the level of safety to be attained and allow the pipeline operator to use various technologies to achieve safety. The DOT pipeline standards are published in 49 CFR 190-199. PAPL has stated each project's facilities would be designed, constructed, operated, and maintained in accordance with Part 192, which specifically addresses the minimum federal safety standards for transportation of natural gas by pipeline.

PHMSA ensures that people and the environment are protected from the risk of pipeline incidents. This work is shared with state agency partners and others at the federal, state, and local level. The DOT provides for a state agency to assume all aspects of the safety program for intrastate facilities by adopting and enforcing, at a minimum, the federal standards. A state may also act as DOT's agent to inspect interstate facilities within its boundaries; however, DOT is ultimately responsible for enforcement actions.

Under a *Memorandum of Understanding on Natural Gas Transportation Facilities* (Memorandum) dated January 15, 1993, between the DOT and FERC, the DOT has the exclusive authority to promulgate federal safety standards used in the transportation of natural gas. Section 157.14(a)(9)(vi) of FERC's regulations require that an applicant certify that it would design, install, inspect, test, construct, operate, replace, and maintain the facility for which a Certificate is requested in accordance with federal safety standards and plans for maintenance and inspection, or certify that it has been granted a waiver of the requirements of the safety standards by the DOT in accordance with section 3(e) of the Natural Gas Pipeline Safety Act. FERC accepts this certification and does not impose additional safety standards other than DOT standards. If the Commission becomes aware of an existing or potential safety problem, there is a provision in the Memorandum to promptly alert the DOT. The Memorandum also provides for referring complaints and inquiries made by state and local governments and the public involving safety matters related to pipelines under the Commission's jurisdiction. FERC also participates as a member of DOT's Technical Pipeline Safety Standards Committee, which determines if proposed safety regulations are reasonable, feasible, and practicable.

The DOT also defines area classifications, based on population density near pipeline facilities, and specifies more rigorous safety requirements for populated areas. The class location unit is an area that extends 220 yards on either side of the centerline of any continuous 1-mile length of pipeline. The four area classifications are defined below:

Class 1 – Location with 10 or fewer buildings intended for human occupancy.

Class 2 – Location with more than 10 but less than 46 buildings intended for human occupancy.

Class 3 – Location with 46 or more buildings intended for human occupancy or where the pipeline lies within 100 yards of any building, or small well-defined outside area occupied by 20 or more people on at least 5 days a week for 10 weeks in any 12-month period.

Class 4 – Location where buildings with four or more stories aboveground are prevalent.

Class locations representing more populated areas require higher safety factors in pipeline design, testing, and operation. For example, pipelines constructed on land in Class 1 locations must be installed with a minimum depth of cover of 30 inches in normal soil and 18 inches in consolidated rock. Class 2, 3, and 4 locations, as well as drainage ditches of public roads and railroad crossings, require a minimum cover of 36 inches in normal soil and 24 inches in consolidated rock.

Class locations also specify the maximum distance to a sectionalizing block valve (i.e., 10.0 miles in Class 1, 7.5 miles in Class 2, 4.0 miles in Class 3, and 2.5 miles in Class 4 locations). Part 192.179 specifies the maximum distance from a point on a pipeline to a sectionalizing block valve: each point on a pipeline in a Class 1 location must be within 10 miles of a block valve. In Class 2 locations, the distance is 7.5 miles; in Class 3 and 4 locations, the distance is 4 and 2.5 miles respectively. Pipe wall thickness and pipeline design pressures, hydrostatic test pressures, MAOP, inspection and testing of welds, and frequency of pipeline patrols and leak surveys also must conform to higher standards in more populated areas.

Pipe wall thickness and pipeline design pressures; hydrostatic test pressures; MAOP; inspection and testing of welds; and frequency of pipeline patrols and leak surveys must also conform to higher standards in more populated areas. Class locations for the pipeline projects have been determined based on the relationship of the pipeline centerline to other nearby structures and manmade features (see table 4.12.8-1).

TABLE 4.12.8-1

Lengths of Area Classifications Crossed by the Texas Connector and Louisiana Connector Projects

Project/Facility	Class 1 (miles)	Class 2 (miles)	Class 3 (miles)
TEXAS CONNECTOR PROJECT			
Northern Pipeline	0.0-15.4	25.6-26.6	15.4-15.5
	15.5-20.3		20.3-20.5
	20.5-25.6		
Southern Pipeline	0.0-2.3		2.3-2.6
	2.6-6.9		6.9-7.6
FGT Lateral	1.0-1.8	0.0-1	1.8-1.8
GTS Lateral	0.0-0.9		0.9-1.0
	1.0-1.3		
HPL Lateral	0.0-1.0		
KMLP Lateral			0.0-0.1
NGPL Lateral	0.0-0.2		
NGPL Lateral to Existing Meter Station	0.0-<0.1		
TETCO Lateral	<0.1-0.1	0.0-<0.1	
Texas Connector Project Total	**35.2**	**2.0**	**1.5**
LOUISIANA CONNECTOR PROJECT			
Mainline	0.0-40.1	40.1-42.1	44.9-46.0
	42.1-44.2	44.2-44.9	51.6-51.9

TABLE 4.12.8-1 (cont'd)

Lengths of Area Classifications Crossed by the Texas Connector and Louisiana Connector Projects

Project/Facility	Class 1 (miles)	Class 2 (miles)	Class 3 (miles)
	48.9-50.3	46.0-48.9	
	53.2-54.6	50.3-51.6	
	57.7-59.8	51.9-53.2	
	60.3-75.5	54.6-57.7	
	77.5-79.2	59.8-60.3	
	80.6-88.6	75.5-77.5	
	91.2-96.1	79.2-80.6	
	98.1-98.7	88.6-91.2	
	100.8-102.8	96.1-98.1	
	104.4-120.0	98.7-100.8	
	122.0-122.8	102.8-104.4	
	124.6-130.9	120.0-122.0	
		122.8-124.6	
Centana Tie-In	0.0-0.1		
CS Lateral		0.0-<0.1	
TETCO Tie-In		0.0-<0.1	
TGP Lateral and Tie-In	0.0-<0.0		
EGAN Lateral and Tie-In	0.0-0.1		
Pine Prairie Lateral and Tie-In	0.0-0.1		
Texas Gas Lateral and Tie-In	0.0-0.1		
ANR Lateral and Tie-In	0.0-<0.1		
CGT Tie-In	0.0-<0.1		
Louisiana Connector Project Total	**102.6**	**27.3**	**1.4**

[a] The straight-line distance between consecutive mileposts may be greater than or less than 5,280 feet due to the adoption of route alternatives and variations. The mileposts should be considered as reference points only.

Most of the pipeline routes would be within a Class 1 area. Therefore, in these locations for example, the pipeline would be constructed to meet the Class 1 standards of a minimum coverage of 30 inches in normal soil and 18 inches in consolidated rock. If a subsequent increase in population density adjacent to the right-of-way results in a change in class location for the pipelines, PAPL would reduce the MAOP or replace the segment with pipe of sufficient grade and wall thickness, if required to comply with DOT requirements for the new class location.

In 2002, Congress passed an act to strengthen the nation's pipeline safety laws. The Pipeline Safety Improvement Act of 2002 (HR 3609) was passed by Congress on November 15, 2002 and signed into law by the President in December 2002. Since December 17, 2004, gas transmission operators are required to develop and follow a written integrity management program that contains all the elements described in 49 CFR 192.911 and addresses the risks on each covered transmission pipeline segment. Specifically, the law requires pipeline operators to establish an integrity management program which applies to all high consequence areas (HCA). The DOT (68 FR 69778, 69 FR 18228, and 69 FR 29903) defines HCAs as they relate to the different class zones, potential impact circles, or areas containing an identified site as defined in 49 CFR 192.903.

The OPS published a series of rules from August 6, 2002, to May 26, 2004, (69 FR 29903) that defines HCAs where a gas pipeline accident could do considerable harm to people and their property and require an integrity management program to minimize the potential for an accident. This definition satisfies, in part, the Congressional mandate in 49 USC 60109 for OPS to prescribe standards that establish criteria for identifying each gas pipeline facility in a high-density population area.

The HCAs may be defined in one of two ways. In the first method, an HCA includes any of the following:

- Current Class 3 and 4 locations.
- Any area in Class 1 or 2 where the potential impact radius[72] is greater than 660 feet and there are 20 or more buildings intended for human occupancy within the potential impact circle.[73]
- Any area in Class 1 or 2 where the potential impact circle includes an identified site.

An "identified site" is an outside area or open structure that is occupied by 20 or more persons on at least 50 days in any 12-month period; a building that is occupied by 20 or more persons on at least 5 days a week for any 10 weeks in any 12-month period; or a facility that is occupied by persons who are confined, are of impaired mobility, or would be difficult to evacuate.

In the second method, an HCA includes any area within a potential impact circle that contains either of the following:

- 20 or more buildings intended for human occupancy.
- An identified site.

Once a pipeline operator has determined the HCAs along its pipeline, it must apply the elements of its integrity management program to those sections of the pipeline within HCAs. DOT regulations specify the requirements for the integrity management plan in Subpart O of Part 192, Gas Transmission Pipeline Integrity Management.

Table 4.12.8-2 lists the HCAs for the pipeline projects, which have been determined based on the relationship of the pipeline centerline to nearby structures and identified sites. No HCAs are found along the HPL Lateral associated with the Texas Connector Project or any lateral associated with the Louisiana Connector Project.

72 The potential impact radius is calculated as the product of 0.69 and the square root of the MAOP of the pipeline in pisg multiplied by the square of the pipeline diameter in inches.

73 The potential impact circle is a circle of radius equal to the potential impact radius.

TABLE 4.12.8-2

High Consequence Areas Crossed by the Texas Connector and Louisiana Connector Projects

Project/Facility	Begin Milepost	End Milepost	Length (miles)
TEXAS CONNECTOR PROJECT			
Northern Pipeline	15.4	16.0	0.6
	20.2	21.2	1.0
	21.5	21.7	0.2
	21.7	22.2	0.5
Southern Pipeline	2.3	2.7	0.4
	3.2	3.7	0.5
	6.8	7.6	0.8
FGT Lateral	1.5	1.6	0.1
	1.8	1.8	<0.1
GTS Lateral	0.0	0.1	0.1
	0.8	1.3	0.5
KMLP Lateral	0.0	0.1	0.1
NGPL Lateral	0.1	0.2	0.1
NGPL Lateral to Existing Meter Station	0.0	<0.1	<0.1
TETCO Lateral	0.0	0.1	0.1
Texas Connector Project Total			**5.0**
LOUISIANA CONNECTOR PROJECT			
Mainline	44.9	46.0	1.1
	51.6	51.9	0.3
Louisiana Connector Project Total			**1.4**

[a] The straight-line distance between consecutive mileposts may be greater than or less than 5,280 feet due to the adoption of route alternatives and variations. The mileposts should be considered as reference points only.

The pipeline and aboveground facilities would be designed, constructed, operated, and maintained in accordance with the DOT's Minimum Federal Safety Standards in 49 CFR 192. The general construction methods that PAPL would implement to ensure the safety of the projects are described in section 2.4, including welding, inspection, and integrity testing procedures.

Under 49 CFR 192.615, each pipeline operator also must establish an emergency plan that includes procedures to minimize the hazards in a natural gas pipeline emergency. PAPL would develop and implement an ERP that would be used for the entire system. Key elements of the plan would include procedures for the following:

- Receiving, identifying, and classifying emergency events, gas leakage, fires, explosions, and natural disasters.
- Establishing and maintaining communications with local fire, police, and public officials, and coordinating emergency response.
- Emergency system shutdown and safe restoration of service.
- Making personnel, equipment, tools, and materials available at the scene of an emergency.
- Protecting people first and then property, and making them safe from actual or potential hazards.

In accordance with DOT regulations, the proposed pipelines would be regularly inspected for leakage as part of scheduled operations and maintenance, including the following:

- Physically walking and inspecting the pipeline corridors periodically.

- Conducting fly-over inspections of the right-of-way as required.
- Inspecting valves and maintaining compressor engines.
- Conducting leak surveys at least once every calendar year or as required by regulations.

During inspections, employees would look for signs of unusual activity on the right-of-way and would immediately respond to assess the nature of the activity and remedy with prescribed corrective action.

In addition to the DOT-required surveys described previously, PAPL would monitor its pipeline system from its existing Gas Control Center. This control center monitors the pipeline system with sophisticated computer and telecommunications equipment that can detect fluctuations and control flows. Using this equipment, the control center can detect pressure drops along the pipelines and stop the flow of gas to the problem area by isolating sections along the pipe. The control center operates 24 hours a day, 7 days a week.

To prevent corrosion, the new pipelines and laterals would be cathodically protected[74] through a rectifier with a deep well anode system (see section 2.6). PAPL personnel would check the voltage and amperage at regular intervals as well as the pipe-to-soil potentials and rectifiers. In addition, annual surveys would be completed, as described above.

Pipeline markers identifying the owner of the pipe and a 24-hour telephone number would be placed for "line of sight" visibility along the entire pipeline length, except in active agricultural crop locations and in waterbodies in accordance with DOT requirements.

Safety standards specified in Part 192 require that each operator establish and maintain liaison with appropriate fire, police, and public officials to learn the resources and responsibilities of each organization that may respond to a natural gas pipeline emergency, and to coordinate mutual assistance in responding to emergencies. The operator must also establish a continuing education program to enable customers, the public, government officials, and those engaged in excavation activities to recognize a gas pipeline emergency and report it to appropriate public officials.

PAPL's operating personnel would also attend training for emergency response procedures and plans. During construction of the pipelines, PAPL would continue to implement the measures in its ERP associated with the existing pipelines. PAPL would review and revise its ERP prior to placing the new facilities in operation.

PAPL would also meet with public authorities and local emergency planning entities, which include fire departments, police departments, first responders, excavators, and public officials, to review plans and would work with these entities to communicate the specifics about the pipeline facilities in the area and the need for emergency response including community notification in the event of an incident. PAPL would also meet periodically with the groups to review the plans and revise its plans when necessary. Key components of this liaison program consist of the following:

1. Periodic safety training.
2. Special informational meetings and training at the request of the Parish or County.

74 Cathodic protection is a technique to reduce corrosion (rust) of the natural gas pipeline that includes the use of an induced current and/or a sacrificial anode that corrodes preferentially.

3. Periodic literature distribution listing emergency telephone numbers and other pertinent data.

To enable PAPL to quickly establish contact with police or fire departments and public officials in the event of an emergency at any location on the pipeline system, a current listing of their telephone numbers will be maintained. This listing is reviewed on a periodic basis and necessary revisions are made. Local emergency planning personnel would be involved in any operator-simulated emergency exercises and post-exercise critiques, if conducted. PAPL would use all available, reasonable, and relevant means to support the pipeline and facilities if an emergency occurs.

PAPL would establish and maintain liaison with appropriate fire, police, and public officials in a variety of ways. PAPL's annual communications would accomplish the following:

- Ascertain how the officials may be able to assist PAPL during an emergency, including the determination of jurisdiction and/or responsibility with resources that may be involved in a response to an emergency.
- Acquaint the officials with how PAPL responds to an emergency on its pipeline system.
- Notify the officials of the types of pipeline emergencies for which they may be contacted.
- Inform them how PAPL, in working with their departments, will cooperate in mutually assisting in protecting life or property during an emergency.
- Inform them of the purpose of pipeline markers and the information contained on them.
- Inform them of the pipeline location information and the availability of the National Pipeline Mapping System;

PAPL's communications with local emergency responders may involve individual meetings, group meetings, or direct mailings.

4.12.9 Pipeline Accident Data

The DOT requires all operators of natural gas transmission pipelines to notify the National Response Center at the earliest practicable moment following the discovery of an incident and to submit a report within 20 days to the PHMSA. Incidents are defined as any leaks that involve any of the following:

- Death or personal injury requiring hospitalization.
- Property damage, including cost of gas lost, of more than $50,000, in 1984 dollars.[75]
- A release of 5 barrels or more of a highly volatile liquid or 50 barrels or more of other liquid.
- An unintended fire or explosion.

Incidents may also include events that are significant in the judgment of the operator, even though they did not meet the criteria above. During the 20-year period from 1997 through 2016, a total of 1,035

75 $50,000 in 1984 dollars is equivalent to $120,111 in 2017 (Bureau of Labor Statistics, 2017).

significant incidents were reported on the more than 315,000 total miles of natural gas transmission pipelines nationwide.

Additional insight into the nature of service incidents may be found by examining the primary factors that caused the failures. Table 4.12.9-1 provides a distribution of the causal factors as well as the number of each incident by cause from 1997 to 2016.

The dominant causes of pipeline incidents from 1997 to 2016 were corrosion, excavation, and pipeline material, weld, or equipment failure, constituting 69.0 percent of all significant incidents. The pipelines included in the data set in table 4.12.9-1 vary widely in terms of age, diameter, and level of corrosion control. Each variable influences the incident frequency that may be expected for a specific segment of pipeline.

TABLE 4.12.9-1

Natural Gas Transmission Pipeline Significant Incidents by Cause (1997-2016) [a]

Cause	Number of Incidents	Percentage
Corrosion [b]	183	17.7
Excavation	193	18.6
Pipeline material, weld, or equipment failure	338	32.7
Natural force damage	86	8.3
Outside Force [c]	63	6.1
Incorrect operation	42	4.1
All other causes [d]	130	12.6
Total	**1,035**	**100**

[a] All data gathered from PHMSA Serious Incident files, February 2017.
[b] Includes third-party damage.
[c] Fire, explosion, vehicle damage, previous damage, intentional damage.
[d] Miscellaneous causes or other unknown causes.
Source: DOT, 2016a.

The frequency of significant incidents is strongly dependent on pipeline age. Older pipelines have a higher frequency of corrosion incidents because corrosion is a time-dependent process. Jones et al. (1986) compared reported incidents with the presence or absence of cathodic protection and protective coatings. The results of that study, summarized in table 4.12.9-2, indicated that corrosion control was effective in reducing the incidence of failures caused by external corrosion. The use of both an external protective coating and a cathodic protection system, required on all pipelines installed after July 1971, significantly reduces the corrosion rate compared to unprotected or partially protected pipe. The data also indicate that cathodically protected pipe without a protective coating has a higher corrosion rate than unprotected pipe. This anomaly reflects the retrofitting of cathodic protection to actively corroding spots on pipes.

TABLE 4.12.9-2

Incidents Caused by External Corrosion and Level of Protection (1970 through June 1984)

Corrosion Control	Incidents per 1,000 Miles per Year (percent)
None – bare pipe	0.42
Cathodic protection only	0.97
Coated only	0.40
Coated and cathodic protection	0.11

Source: Jones et al., 1986

Older pipelines also have a higher frequency of outside forces incidents partly because their location may be less well known and less well marked than newer lines. In addition, the older pipelines contain a disproportionate number of smaller diameter pipelines, which are more easily crushed or broken by mechanical equipment or earth movements.

According to the data in table 4.12.9-1, outside force, excavation, and natural forces were the causes in 33.0 percent of significant pipeline incidents from 1997 to 2016. These result from the encroachment of mechanical equipment such as bulldozers and backhoes; earth movements due to soil settlement, washouts, or geological hazards; and weather effects such as winds, storms, and thermal strains; and willful damage. Table 4.12.9-3 provides a breakdown of outside force incidents by cause.

TABLE 4.12.9-3

Outside Forces Incidents by Cause [a] (1997-2016)

Cause	Number of Incidents	Percent of All Incidents
Third party excavation damage	154	47.0
Operator/Contractor excavation damage	24	7.3
Unspecified excavation damage/Previous damage	4	1.2
Heavy Rain/Floods	25	7.6
Earth Movement	28	8.5
Lightning/Temperature/High Winds	24	7.3
Natural force	9	2.7
Vehicle (not engaged with excavation)	34	10.4
Fire/Explosion	9	2.7
Previous mechanical damage	5	1.5
Fishing or maritime activity	1	0.3
Intentional damage	1	0.3
Unspecified/Other outside force	10	3.0
Total	**328**	**100**

[a] Excavation, Outside Force, and Natural Force from table 4.12.9-1.

Source: DOT, 2016a.

Since 1982, operators have been required to participate in "One Call" public utility programs in populated areas to minimize unauthorized excavation activities near pipelines. The One Call program is a service used by public utilities and some private sector companies (e.g., oil pipelines and cable television) to provide preconstruction information to contractors or other maintenance workers on the underground location of pipes, cables, and culverts. PAPL would participate in the One Call systems for both Texas and Louisiana.

4.12.10 Impact on Public Safety

The service incident data summarized in table 4.12.9-1 include pipeline failures of all magnitudes with widely varying consequences. Table 4.12.10-1 presents the average annual fatalities that occurred on natural gas transmission lines between 2005 and 2016. The data have been separated into employees and nonemployees to better identify a fatality rate experienced by the public. Fatalities among the public averaged one per year over the 12-year period from 2005 to 2016.

Most fatalities from natural gas pipelines are associated with local distribution pipelines. These pipelines are not regulated by FERC; they distribute natural gas to homes and businesses after transportation through interstate transmission pipelines. In general, these distribution lines are smaller-diameter pipes and/or plastic pipes that are more susceptible to damage. In addition, local distribution systems do not have

large rights-of-way and pipeline markers common to FERC-regulated interstate natural gas transmission pipelines.

TABLE 4.12.10-1

Injuries and Fatalities – Natural Gas Transmission Pipelines (2005-2016)

	Injuries		Fatalities	
Year	Employees	Public	Employees	Public
2005	3	2	0	0
2006	2	1	2	1
2007	6	1	1	1
2008	3	2	0	0
2009	4	7	0	0
2010 [a]	3	58	0	10
2011	1	0	0	0
2012	1	6	0	0
2013	0	2	0	0
2014	1	0	1	0
2015	1	13	4	2
2016	2	1	2	1

[a] All of the public injuries and fatalities in 2010 were due to the Pacific Gas and Electric pipeline rupture and fire in San Bruno, California on September 9, 2010.

Source: DOT, 2016b.

The nationwide totals of accidental fatalities from various anthropogenic and natural hazards are listed in table 4.12.10-2 to provide a relative measure of the industry-wide safety of natural gas transmission pipelines. Direct comparisons between accident categories should be made cautiously, however, because individual exposures to hazards are not uniform among all categories. As indicated in table 4.12.10-2, the number of fatalities associated with natural gas facilities is much lower than the fatalities from natural hazards such as lightning, tornados, floods, earthquakes, etc.

TABLE 4.12.10-2

Nationwide Accidental Deaths [a]

Type of Accident	Annual No. of Deaths
All accidents	136,053
Motor vehicle	35,398
Poisoning	42,032
Falls	31,959
Drowning	3,406
Fire, smoke inhalation, burns	2,701
Floods [b]	176
Lightning [b]	27
Tornado [b]	36
Natural gas distribution lines [c]	11
Natural gas transmission pipelines [c]	2

[a] All data, unless otherwise noted, reflects 2014 statistics from: U.S. Department of Health and Human Services, CDC, National Center of Health Statistics, National Vital Statistics System, 2017.

[b] Reflects 2015 statistics from: U.S. Department of Commerce, NOAA, National Weather Service, 2017.

[c] 20-year average, 1997-2016. DOT, 2016c; d.

The available data show that natural gas transmission pipelines continue to be a safe, reliable means of energy transportation. From 1997 to 2016, there were an average of 52 significant incidents and 2 fatalities per year. The number of significant incidents distributed over the more than 315,000 miles of natural gas transmission pipelines indicates the risk is low for an incident at any given location. The rate of total fatalities for the nationwide natural gas transmission lines in service is 0.01 per year per 1,000 miles of pipeline. Using this rate, implementing the proposed 38.8-mile-long project might result in a fatality (either an industry employee or a member of the public) on the pipeline every 2,578 years. The operation of the project would represent only a slight increase in risk to the nearby public.

4.12.11 Terrorism and Security Issues

Safety and security concerns have changed the way pipeline operators as well as regulators must consider terrorism, both in approving new projects and in operating existing facilities. The DHS is tasked with the mission of coordinating the efforts of all executive departments and agencies to detect, prepare for, prevent, protect against, respond to, and recover from terrorist attacks within the United States. Among its responsibilities, the DHS oversees the Homeland Infrastructure Threat and Risk Analysis Center, which analyzes and implements the National Critical Infrastructure Prioritization Program that identifies and lists Tier 1 and Tier 2 assets. The Tier 1 and Tier 2 lists are key components of infrastructure protection programs and are used to prioritize infrastructure protection, response, and recovery activities. The Commission, in cooperation with other federal agencies, industry trade groups, and interstate natural gas companies, is working to improve pipeline security practices, strengthen communications within the industry, and extend public outreach in an ongoing effort to secure pipeline infrastructure.

The Commission, like other federal agencies, is faced with a dilemma in how much information can be offered to the public while still providing a significant level of protection to the facility. Consequently, the Commission has taken measures to limit the distribution of information to the public regarding facility design to minimize the risk of sabotage. Facility design and location information has been removed from FERC's website to ensure that sensitive information filed as Critical Energy Infrastructure Information is not readily available to the public (Docket No. RM06-23-000, issued October 30, 2007 and effective as of December 14, 2007).

The likelihood of future acts of terrorism or sabotage occurring at the PAPL facilities, or at any of the myriad natural gas pipeline or energy facilities throughout the United States, is unpredictable given the disparate motives and abilities of terrorist groups. Further, the Commission, in cooperation with other federal agencies, industry trade groups, and interstate natural gas companies, is working to improve pipeline security practices, strengthen communications within the industry, and extend public outreach in an ongoing effort to secure pipeline infrastructure.

In accordance with the DOT surveillance requirements, PAPL would incorporate air and ground inspection of its proposed facilities into its inspection and maintenance program. Security measures at the new aboveground facilities would include secure fencing.

Despite the ongoing potential for terrorist acts along any of the nation's natural gas infrastructure, the continuing need for the construction of these facilities is not eliminated. Given the continued need for natural gas conveyance and the unpredictable nature of terrorist attacks, the efforts of the Commission, the DOT, and the Office of Homeland Security to continually improve pipeline safety would minimize the risk of terrorist sabotage of the project to the maximum extent practical, while still meeting the nation's natural gas needs. Moreover, the unpredictable possibility of such acts does not support a finding that these particular projects should not be constructed.

4.12.12 Nonjurisdictional Facilities

We received comments stating that tidal action and storm surge causes regular flooding on SH 87, which can block the only land access for residents and emergency services to the Sabine Pass community. We conclude that relocating SH 87 farther inland as part of the Liquefaction Project would provide more consistent access to Sabine Pass and improve the opportunity for emergency response.

4.13 CUMULATIVE IMPACTS

In accordance with NEPA, we considered the cumulative impacts of the Projects when combined with other projects or actions in the area. Cumulative impacts represent the incremental effects of a proposed action when added to impacts associated with past, present, or reasonably foreseeable future projects, regardless of what agency or person undertakes such other actions. Although the individual impact of each separate project may be minor, the additive or synergistic effects of multiple projects could be significant. Consistent with CEQ guidelines, we have aggregated past actions that helped shape the environment into what it is today into our discussion of the affected environment in section 4.0. Therefore, present and reasonably foreseeable future actions are discussed in this section.

This cumulative impacts analysis uses an approach consistent with the methodology set forth in relevant guidance (CEQ, 1997, 2005; EPA, 1999). Under these guidelines, inclusion of actions within the analysis is based on identifying commonalities between the impacts that would result from the Projects and the impacts likely to be associated with other potential projects.

The geographic scope for each resource is unique and is generally more localized for somewhat stationary resources such as geological and soil resources; more expansive for resources with a large geographic area, such as visual impacts and air emissions; and based on jurisdictional boundaries for resources such as socioeconomics and public lands. We evaluated cumulative impacts from a geographical perspective recognizing that the proximity of other actions to the Projects is a major predictor of where cumulative impacts would most likely result. In general, the closer another action is to the Projects, the greater the potential for cumulative impacts. Table 4.13-1 summarizes the resource-specific geographic boundaries considered in this analysis and the justification for each. Actions occurring outside these geographical boundaries were generally not evaluated because their potential to contribute to a cumulative impact diminishes with increasing distance from the Projects.

TABLE 4.13-1

Geographic Scope by Resource for Cumulative Impacts Associated with the Projects

Resource	Geographic Scope	Justification for Geographic Scope
Soils and Surficial Geology	Construction workspaces	Impacts on soils and surficial geology would be highly localized and would not be expected to extend beyond the area of direct disturbance associated with the Projects.
Groundwater, Surface Water, Wetlands, Aquatic Resources, Essential Fish Habitat	Hydrologic unit code (HUC) 10 watersheds	Impacts on groundwater and surface water resources could reasonably extend throughout a HUC-10 watershed (i.e., a detailed hydrologic unit that can accept surface water directly from upstream drainage areas, and indirectly from associated surface areas such as remnant, noncontributing, and diversions to form a drainage area with single or multiple outlet points, as could the related impacts on aquatic resources and fisheries.
Vegetation, Wildlife, Special Status Species	HUC-10 watersheds	Consideration of impacts within a HUC-10 watershed sufficiently accounts for impacts on vegetation and wildlife (including special status species) that would be directly affected by construction activities and for indirect impacts such as changes in habitat availability and displacement of transient species.
Land Use	Construction workspaces (land use) and within 0.25 mile of the Projects (recreation)	Impacts on general land uses would be restricted to the construction workspaces and the immediate surrounding vicinity up to 0.25 mile where indirect impacts could occur.
Visual Resources	Within 5 miles of the Liquefaction Project and within 0.5 mile of the Texas Connector and Louisiana Connector Projects	Assessing the impact based on the viewshed allows for the impact to be considered with any other feature that could have an effect on visual resources.

TABLE 4.13-1 (cont'd)

Geographic Scope by Resource for Cumulative Impacts Associated with the Projects

Resource	Geographic Scope	Justification for Geographic Scope
Socioeconomics	County and/or Parish	The geographic scope of potential impact for socioeconomics was considered to include the counties and parishes affected by the Projects where most workers would be expected to reside during construction and operation of the Projects. Affected counties and parishes would experience the greatest impacts associated with employment, housing, public services, transportation, traffic, property values, economy and taxes, and environmental justice.
Cultural Resources	Overlapping impacts within the project footprint (direct) and within 164 feet of Projects (indirect)	The impact area for direct effects (physical) includes areas subject to ground disturbance, while for indirect effects (visual or audible) it includes aboveground ancillary facilities or other project elements that are visible from historic properties in which the setting contributes to their NRHP eligibility.
Air Quality – Construction[a]	Within 0.25 mile of the Projects pipeline components, and AQCR focused around the liquefaction facility and compressor stations	Air emissions during construction would be limited to vehicle and construction equipment emissions and dust, and would be localized to the Projects construction sites.
Air Quality – Operations[a]	50 kilometers (about 31.1 miles) from the Liquefaction Project, the Texas Connector South Compressor Station, and the Louisiana Connector Project's compressor station	We adopted the distance used by the EPA for cumulative modeling of large PSD sources during permitting (40 CFR 51, appendix W) which is a 50-kilometer radius. Impacts on air quality beyond 50 kilometers (31.1 miles) would be *de minimis*.
Noise – Construction	NSAs within 0.25 mile of any construction and within 0.5 mile of the liquefaction facility, compressor stations, HDDs, and pile driving.	Areas in the immediate proximity of pipeline or aboveground facility construction activities would have the potential to be affected by construction noise. NSAs within 0.5 mile of an HDD or pile driving could be cumulatively affected if other projects had a concurrent impact on the NSA.
Noise – Operations	NSAs within 1 mile of a noise-emitting permanent aboveground facility.	Noise from the Projects' permanent aboveground facilities could result in cumulative noise impacts on NSAs within 1 mile.
Reliability and Safety	Area adjacent to and vicinity of Liquefaction Project. Within 660 feet of the pipeline centerline. General vicinity of the Projects for emergency services.	Reliability and safety impacts would be localized and would not be expected to extend far beyond the disturbance areas associated with the Projects.

[a] We note that GHGs do not have a localized geographic scope. GHG emissions from the project combine with projects all over the planet to increase CO_2, methane and other GHG concentrations in the atmosphere.

To avoid unnecessary discussions of insignificant impacts and projects, and to adequately address and accomplish the purposes of this analysis, the cumulative impacts analysis for the Projects was conducted using the following guidelines.

Projects and activities included in this analysis are generally those of comparable magnitude or nature of impact as the Projects and impact the same resources as the Projects. As such, this would include other utility projects of a similar linear nature. For the most part, this is possible when other projects are within the same general location as the Projects (i.e., within one or more of the cumulative impacts area listed in table 4.13-1). The effects of more distant projects generally are not assessed because their impacts would typically diminish with distance and, thus, would not significantly contribute to impacts in the Projects area. Certain exceptions may be made where a resource is regionally or nationally rare or unique and where concern for a cumulative impact is substantial. For example, an exception is air quality, which can affect larger areas; thus, the geographic scope for air quality is larger than that of other resources (see table 4.13-1 and the associated discussion regarding resource-specific geographic scopes). Per EPA

guidelines, project-specific analyses are usually conducted on the scale of counties, forest management units, or installation boundaries, whereas cumulative effects analysis should be conducted on the scale of human communities, landscapes, watersheds, or airsheds. The analysis also includes the proposed nonjurisdictional facilities associated with the Projects (see section 2.1.4).

The future timeframe within which another planned or proposed project could result in a cumulative impact relative to the Projects depends in part on whether the impacts are temporary, short term, long term, or permanent. Once the effects cease, there is no longer a cumulative effect associated with the Projects. As discussed in the preceding environmental analysis, most Projects impacts are temporary or short term. Notable exceptions are forest clearing and operational air emissions, which may be long term or permanent. PALNG and PAPL would request to place the facilities into service following a determination that restoration is proceeding satisfactorily. Past projects, including roads and waterways, electric transmission lines, pipelines, agriculture, and commercial and residential development, have and continue to cumulatively affect the lands that would be affected by the Projects. Impacts from older projects (completed 5 or more years ago) are considered to have been mitigated over time, with the disturbed environment having become part of the baseline character of the region described in the affected environment for each resource. Therefore, projects completed 5 or more years ago are not considered ongoing contributors to cumulative impacts unless they have ongoing operational impacts (e.g., air emissions, discharges) with potential to contribute to a cumulative impact on air quality.

We have also considered how concurrent (present) and reasonably foreseeable future projects would contribute further to the cumulative impact of past projects (i.e., baseline conditions) and the Projects. The potential for cumulative impacts associated with the Project would be greatest during the construction phase for the pipelines and throughout construction and operation for the liquefaction facilities. The potential long-term cumulative impacts associated with the operation of the Project and other actions (i.e., cumulative impacts extending well beyond the period of construction of the project) would include effects related to wetland fill, channel dredging, and noise and air emissions from the liquefaction facilities. For these resources, we expanded the temporal range of our cumulative impact analysis.

Both positive cumulative impacts (i.e., new jobs and tax revenues) and negative cumulative impacts (i.e., contribution to ongoing air emissions) were identified in the analysis. Where we determined that a potential for cumulative impacts exist, we quantified the impacts to the extent practicable. However, in some cases the potential impacts can only be described qualitatively. This is particularly the case for projects in the planning stages, which may be contingent on economic conditions, availability of financing and/or the issuance of permits; or projects for which there is a lack of available information.

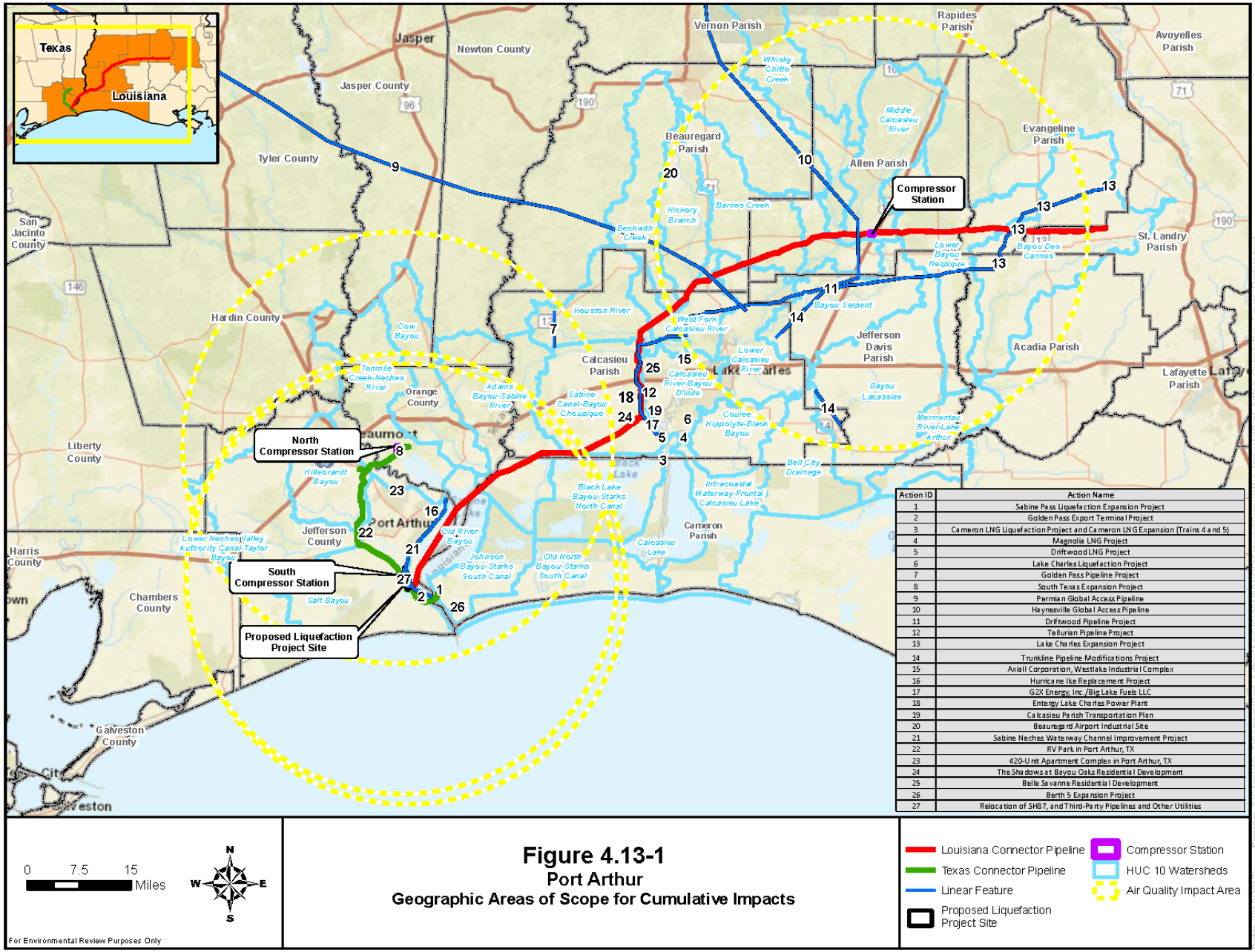
Regarding the cumulative impacts area, the United States is divided and subdivided into successively smaller hydrologic units that are a geographic area representing part of all of a surface drainage basin, a combination of drainage basins, or a distinct hydrologic feature. The unit used for our analysis in this EIS is referred to as HUC-10, or watershed (USGS, 2016; USGS, 2017). A HUC-10 level watershed is an area of land where all streams and rainfall drain into a common outlet such as the outflow of a reservoir, mouth of a bay, or any point along a stream channel. The watershed consists of surface water (e.g., lakes, streams, reservoirs, wetlands) and all the underlying groundwater. Watersheds are important because the flow and quality of water are affected by natural and human-induced activities happening in the surface land above. Each watershed tends to be 40,000 to 250,000 acres in size. While there are other hydrologic units, such as HUC-8 (or a sub-basin), we determined the HUC-8 was too large in scope (448,000-acre areas) relative to the impacts associated with the Projects. The HUC-12 (or a sub-watersheds) is more discrete (10,000- to 40,000-acre areas) and generally is an appropriate scope for evaluation of cumulative impacts for most natural gas infrastructure projects; however, for the proposed Projects, we opted to use the larger HUC-10 watershed conservatively.

Because surface activities can affect the connectivity of resources within a watershed, we determined that HUC-10 level watersheds crossed by the Projects are appropriate to determine the suitable geographic scope for several resources including groundwater, surface water, wetlands, vegetation, wildlife, aquatic resources, EFH, and special status species. As such, other past, present, and reasonably foreseeable projects that fit the criteria discussed above (comparable magnitude, timeframe, and resource impacts) and overlap with the HUC-10 watersheds crossed by the Projects could contribute to cumulative impacts on these resources.

As shown on figure 4.13-1, the Liquefaction Project would be within the Salt Bayou HUC-10 watershed. The Texas Connector Project would cross the Salt Bayou, Old River Bayou, Johnson Bayou Starks South Canal, LNVA Canal-Taylor Bayou, Hillebrandt Bayou, and Tenmile Creek-Neches River HUC-10 watersheds. The Louisiana Connector Project would cross the Salt Bayou, Old River Bayou, Adams Bayou-Sabine River, Sabine Canal-Bayou Choupique, Houston River, West Fork Calcasieu River, Lower Calcasieu River, Barnes Creek, Whisky Chitto Creek, Middle Calcasieu River, Lower Bayou Nezpique, and Bayou Des Cannes HUC-10 watersheds.

The relatively large geographic scope used in this analysis, such as HUC-10 watersheds, was based on scaling to the size of the Projects, which extend for a combined 165.0 miles of new pipeline across two states (Texas and Louisiana). The area associated with the 19 HUC-10 watersheds crossed by the Projects represent a combined total of about 2.6 million acres. The Projects account for about 6,919.7 acres of impacts on these watersheds. This equates to the Projects impacting a small percentage (less than 1 percent) of the total area associated with the HUC-10 watersheds.

Our cumulative impacts analysis takes a hard look at the potential impacts of other actions as described in relevant guidance. NEPA requires reasonable forecasting, but an agency is not required to engage in speculative analysis or to do the impractical, if not enough information is available to permit meaningful consideration. The scope of the cumulative impact assessment depends in part on the availability of information about other projects. For this assessment, other projects were identified from information provided by the PALNG and PAPL; field reconnaissance; internet research; FERC staff's knowledge of other planned, pending, and ongoing jurisdictional natural gas projects; and communications with federal, state, and local agencies. The impacts were quantified to the extent practicable where cumulative impacts were potentially indicated. In most cases, the potential impacts could be described qualitatively but not quantitatively. These estimates were typically derived from our approximation of project boundaries as interpreted from publicly available project descriptions, maps, and aerial photography. Much of the publicly available information identified only the parcels on which development would or may occur, and did not include details about how each site would be developed (i.e., which portions of a parcel would be affected, and which portions would remain unchanged). Therefore, for the purpose of our analysis, we assumed the entire parcel would be developed. In many cases, estimating quantities is not reasonable and the impact can only be described qualitatively. This is particularly the case where there is a lack of publicly available information concerning other actions, for projects that are in the planning stage or are contingent upon economic conditions, availability of financing, publicly available information, or the issuance of permits.



Action ID	Action Name
1	Sabine Pass Liquefaction Expansion Project
2	Golden Pass Export Terminal Project
3	Cameron LNG Liquefaction Project and Cameron LNG Expansion (Trains 4 and 5)
4	Magnolia LNG Project
5	Driftwood LNG Project
6	Lake Charles Liquefaction Project
7	Golden Pass Pipeline Project
8	South Texas Expansion Project
9	Permian Global Access Pipeline
10	Haynesville Global Access Pipeline
11	Driftwood Pipeline Project
12	Tellurian Pipeline Project
13	Lake Charles Expansion Project
14	Trunkline Pipeline Modifications Project
15	Axiall Corporation, Westlake Industrial Complex
16	Hurricane Ike Replacement Project
17	G2X Energy, Inc./Big Lake Fuels LLC
18	Entergy Lake Charles Power Plant
19	Calcasieu Parish Transportation Plan
20	Beauregard Airport Industrial Site
21	Sabine Neches Waterway Channel Improvement Project
22	RV Park in Port Arthur, TX
23	420-Unit Apartment Complex in Port Arthur, TX
24	The Shadows at Bayou Oaks Residential Development
25	Belle Savanne Residential Development
26	Berth 5 Expansion Project
27	Relocation of SH87, and Third-Party Pipelines and Other Utilities

Figure 4.13-1
Port Arthur
Geographic Areas of Scope for Cumulative Impacts

4.13.1 Projects and Activities Considered

With respect to past actions, CEQ guidance (2005) allows agencies to adopt a broad, aggregated approach without "delving into the historical details of individual past actions," which is the approach we have taken here. The current regional landscape in the Projects area, which supports significant industrial and commercial components as well as existing infrastructure, forms the environmental baseline described in other sections of this EIS and against which the impacts of reasonably foreseeable future actions are considered. Reasonably foreseeable projects that might cause cumulative impacts in combination with the Projects include projects that are approved, proposed, or planned. For FERC-regulated projects, proposed projects are those for which the proponent has submitted a formal application to FERC, and planned projects are projects that are either in pre-filing or have been announced, but have not been formally proposed or filed at FERC. Planned projects also include projects not under FERC's jurisdiction that have been identified through publicly available information such as press releases, internet searches, and PALNG's and PAPL's communications with local agencies.

Table 4.13.1-1 lists the projects and activities we considered in this cumulative impact analysis based on information available at the time this EIS went to print. For each project, the table includes the location, a brief description, distance from the nearest aspect of the Projects, status or timeframe, and resources cumulatively affected in conjunction with the proposed Projects. As noted in the following subsections, some projects were eliminated from further discussion if it was determined that they would not meet the criteria listed above or if sufficient information is not available to allow for a meaningful analysis. Descriptions of potential cumulative impacts by resource category are presented in section 4.13.2. In cases where quantitative information is not available for projects considered in this analysis (e.g., projects in the planning stages, or those contingent on economic conditions, availability of financing, or the issuance of permits), the potential impacts of those projects are considered qualitatively.

TABLE 4.13.1-1

Present and Reasonably Foreseeable Activities and Projects Considered in the Cumulative Impact Analysis for the Projects

Activity/Project	Counties/ Parishes Shared with Projects	Approximate Distance from Projects [b]	Watershed(s) Shared with Projects	Description	Status or Timeframe	Resources Potentially Cumulatively Affected [c]
INDUSTRIAL DEVELOPMENTS						
LNG Export Projects						
Sabine Pass Liquefaction Expansion Project FERC Dockets CP13-552 and CP13-553	Cameron Parish, LA	3 miles from Liquefaction Project	Johnson Bayou-Starks South Canal	The Sabine Pass LNG Terminal is in Cameron Parish, LA. The facility was built between 2012 and 2016 (trains 1 through 4). On April 6, 2015, FERC approved the Sabine Pass Liquefaction Expansion Project, which authorized Sabine Pass LNG to construct and operate two additional trains (Trains 5 and 6) at the Sabine Pass LNG Terminal (Docket No. CP13-552). The additional trains will add 9 mtpy of capacity to the 20 mtpy already authorized for the Sabine Pass Liquefaction Project.	Two liquefaction trains were put into service in 2016, and two additional trains would be put into service in 2018. As of December 2018, construction of Trains 5 and 6 continues. An in-service date of 2019 is anticipated.	GW, SW, W, EFH, VG, WL, PS, V – LNG, S, A – Ops
Sabine Pass Third Berth Project (same location as Sabine Pass Liquefaction Expansion Project) FERC Docket 19-11	Cameron Parish, LA	3 miles from Liquefaction Project	Johnson Bayou-Starks South Canal	The Sabine Pass Third Birth Project would expand the existing Sabine Pass LNG Terminal with the addition of a third marine berth and supporting facilities used to load LNG vessels for export. Supporting facilities would include tie-ins to existing loading lines and boil-off gas lines associated with the five existing LNG tanks; and the addition of piping, piperacks, utilities, and other additional infrastructure to transport the LNG from the new tie-ins to the third berth.	An application was filed with FERC in October 2018, and the NEPA process continues. Construction would begin in 2020; an in-service date of late 2022 is anticipated.	GW, SW, W, EFH, VG, WL, PS, V – LNG, S, A – Ops
Golden Pass Export Terminal Project FERC Docket CP14-517	Jefferson and Orange Counties, TX and Calcasieu Parish, LA	1 mile from Liquefaction Project	Salt Bayou	The Golden Pass Export Terminal Project is in Jefferson County, TX. The export terminal and associated Golden Pass Pipeline were constructed between 2006 and 2010, and placed into service between 2009 and 2010. In July 2014, Golden Pass Products LLC and Golden Pass Pipeline LLC filed an application with FERC to construct the Golden Pass LNG Export Project, which consists of the Golden Pass Export Terminal Expansion and the Golden Pass Export Pipeline Expansion (see description under Pipeline Projects).	As of December 2018, construction of the expansion has not yet begun. Export of LNG is anticipated to begin in 2021; and full production is anticipated in 2022.	GW, SW, W, EFH, VG, WL, PS, V – LNG, S, A - Ops, N – Ops

TABLE 4.13.1-1 (cont'd)

Present and Reasonably Foreseeable Activities and Projects Considered in the Cumulative Impact Analysis for the Projects

Activity/Project	Counties/ Parishes Shared with Projects	Approximate Distance from Projects [b]	Watershed(s) Shared with Projects	Description	Status or Timeframe	Resources Potentially Cumulatively Affected [c]
Cameron LNG Liquefaction Project and Cameron LNG Expansion (Trains 4 and 5) FERC Dockets CP13-25 and CP15-560	Cameron, Calcasieu, and Beauregard Parishes, LA	6 miles from Louisiana Connector Project	None	The Cameron LNG Terminal is in Calcasieu and Cameron Parishes, LA. In 2013, Cameron LNG, LLC filed an application with FERC to expand the existing Cameron LNG Terminal in Cameron Parish, Louisiana. In 2015, Cameron LNG, LLC requested approval to further expand the Cameron LNG Terminal by adding Trains 4 and 5.	Construction began in July 2014; as of December 2018, construction of Trains 1, 2, and 3 continues; an in-service date is anticipated in 2019. In May 2016, FERC issued an Order granting authorization to site, construct, and operate Trains 4 and 5. Trains 4 and 5 were anticipated be operational in 2019; construction has not yet begun as of December 2018.	S
Magnolia LNG Project FERC Docket CP14-347	Calcasieu Parish, LA	5.5 miles from Louisiana Connector Project	None	Magnolia LNG, LLC submitted an application to FERC seeking authorization to construct and operate various liquefaction facilities in Calcasieu Parish, LA near Lake Charles, Louisiana.	In May 2016, FERC issued an Order granting authorization to site, construct, and operate the project. Initial site preparation activities began in early 2017. The planned in-service date for the first train was December 2018; construction has not yet begun as of December 2018.	S
Driftwood LNG Project FERC Docket CP17-117	Calcasieu Parish, LA	7 miles from Louisiana Connector Project	Sabine Canal-Bayou Choupique	Driftwood LNG LLC and DWPL propose to construct and operate LNG export facilities on the west bank of the Calcasieu River near Carlyss, Louisiana; and a new 96-mile-long pipeline system in Evangeline, Acadia, Jefferson Davis, and Calcasieu Parishes, Louisiana (see Pipeline System Projects).	A final EIS was issued in January 2019; a decision on an Order granting authorization to site, construct, and operate the project is pending. The anticipated in-service date is 2025.	GW, SW, W, EFH, VG, WL, PS, S, A – Ops
Lake Charles Liquefaction Project FERC Dockets CP14-119 and CP14-120	Calcasieu Parish, LA	6 miles from Louisiana Connector Project	None	Trunkline LNG Company, LLC/Trunkline LNG Export, LLC and Trunkline Gas Company, LLC submitted an application to FERC in 2014 seeking authorization to construct and operate new liquefaction facilities about 0.5 mile from the existing Lake Charles LNG Terminal and modify the existing Trunkline LNG Terminal in Calcasieu Parish, Louisiana.	As of December 2018, construction has not yet begun. The facility is expected to be fully operational by 2020.	S

TABLE 4.13.1-1 (cont'd)

Present and Reasonably Foreseeable Activities and Projects Considered in the Cumulative Impact Analysis for the Projects

Activity/Project	Counties/ Parishes Shared with Projects	Approximate Distance from Projects [b]	Watershed(s) Shared with Projects	Description	Status or Timeframe	Resources Potentially Cumulatively Affected [c]
Pipeline System Projects						
Golden Pass Pipeline Project FERC Docket CP14-518	Jefferson and Orange Counties, TX; Calcasieu Parish, LA	0 miles from FGT Lateral; 12 miles from Louisiana Connector Project	Houston River	The Golden Pass Pipeline was constructed between 2006 and 2009, and placed into service in 2009. In July 2014, Golden Pass Pipeline LLC filed an application, along with Golden Pass Products LLC, with FERC to construct the Golden Pass LNG Export Project, which consists of the Golden Pass Export Terminal Expansion and the Golden Pass Export Pipeline Expansion. The Golden Pass Pipeline system would be expanded by constructing 2.6 miles of 24-inch-diameter pipeline loop in Calcasieu Parish, Louisiana; three new compressor stations in Jefferson and Orange Counties, Texas, and Calcasieu Parish, Louisiana; and modifying existing interconnections and metering facilities.	As of December 2018, construction has not yet begun. Construction of pipeline facilities is scheduled to begin in 2019 with an in-service date of 2020.	GE, SL, GW, SW, W, EFH, VG, WL, PS, S, CR, A - Ops
South Texas Expansion Project FERC Docket CP15-499	Chambers, Orange, and Brazoria Counties, TX	<1 mile from Texas Connector Project; 11 miles from Louisiana Connector Project	Tenmile Creek-Neches River	TETCO filed an application with FERC for authorization to construct, own, and operate the South Texas Expansion Project, which includes piping modifications at its existing Vidor Compressor Station in Orange County, Texas.	On December 11, 2018, TETCO notified FERC that it had commenced service of its project on December 1, 2018.	GW, SW, W, EFH, VG, WL, PS, V – LNG, S, A – Ops, N – Ops

TABLE 4.13.1-1 (cont'd)

Present and Reasonably Foreseeable Activities and Projects Considered in the Cumulative Impact Analysis for the Projects

Activity/Project	Counties/ Parishes Shared with Projects	Approximate Distance from Projects [b]	Watershed(s) Shared with Projects	Description	Status or Timeframe	Resources Potentially Cumulatively Affected [c]
Driftwood Pipeline Project FERC Docket CP17-118	Evangeline, Acadia, Jefferson Davis, and Calcasieu Parishes, LA	Collocated with Louisiana Connector Project	Bayou Des Cannes	DWPL submitted an application to FERC seeking authorization to construct and operate a new 96-mile-long pipeline system in Evangeline, Acadia, Jefferson Davis, and Calcasieu Parishes, Louisiana that would supply natural gas to the Driftwood LNG Terminal. The project also includes construction of 3 new compressor stations and up to 15 meter stations.	Construction is anticipated to begin in 2019. A final EIS was issued in January 2019. The in-service date is anticipated to be 2022.	All
Tellurian Pipeline Project [d]	Calcasieu Parish, LA	Potentially less than 2 miles from Louisiana Connector Project	Sabine Canal-Bayou Choupique	Currently planned to be 96 miles of 48-inch-diameter pipeline to serve the proposed Driftwood LNG Project.	Proposed in-service by mid-2021.	GW, SW, W, EFH, VG, WL, PS, V – LNG, S, A - Ops
Permian Global Access Project [d]	Beauregard, Allen, Jefferson Davis Parishes, LA	Potentially intersects Louisiana Connector Project	Lower Calcasieu River, Barnes Creek	Permian Global Access Pipeline is proposing to construct, own, and operate the project, a 625-mile-long, 42-inch-diameter interstate natural gas pipeline originating at the Waha Hub, the gateway for Permian gas heading to market, and terminating near Lake Charles, Louisiana. The investment is incremental to Driftwood LNG Project near Lake Charles, Louisiana (see description under LNG Export Projects).	A FERC application would be submitted some time in 2019; construction would occur between 2020 and 2021; and the proposed in-service date is 2022.	All
Haynesville Global Access Project [d]	Beauregard, Allen, Jefferson Davis Parishes, LA	Potentially intersects Louisiana Connector Project	Barnes Creek, Whisky Chitto Creek, Middle Calcasieu River, Lower Bayou Nezpique	Haynesville Global Access Pipeline LLC is proposing to construct, own, and operate the project, a 200-mile-long, 42-inch-diameter pipeline capable of transporting upwards of 2 bscfd from supply sources originating in the Haynesville / Bossier Shale area. The project would include a compressor station and 18 meter stations.	A FERC application would be submitted some time in 2019; construction would occur between 2020 and 2021; and the proposed in-service date is 2022.	All
Lake Charles Expansion Project FERC Docket CP14-511	Acadia, Calcasieu, and Evangeline Parishes, LA	<1 mile from Louisiana Connector Project	Bayou Des Cannes	Kinder Morgan Louisiana Pipeline LLC submitted an application to FERC seeking authorization to reconfigure its existing pipeline system by constructing new interconnects, a compressor station, and approximately 6,400 feet of 36-inch and 700 feet of 24-inch-diameter natural gas header pipelines, as well as modifying existing meter stations in Acadia, Calcasieu, and Evangeline Parishes, Louisiana to supply natural gas to the Magnolia LNG Terminal.	The project was approved by FERC in May 2016. As of December 2018, construction has not yet begun.	All

TABLE 4.13.1-1 (cont'd)

Present and Reasonably Foreseeable Activities and Projects Considered in the Cumulative Impact Analysis for the Projects

Activity/Project	Counties/ Parishes Shared with Projects	Approximate Distance from Projects [b]	Watershed(s) Shared with Projects	Description	Status or Timeframe	Resources Potentially Cumulatively Affected [c]
Trunkline Pipeline Modifications Project FERC Docket CP14-119	Calcasieu and Jefferson Davis Parishes, LA	6.9 miles from Louisiana Connector Project	None	Trunkline Gas Company, LLC submitted an application to FERC seeking authorization to construct and operate 11.4 miles of new pipeline, 6.5 miles of looping pipeline along its existing mainline system, one new compressor station, and modify existing compressor and metering stations and other existing ancillary facilities to supply natural gas to liquefaction facilities in the Louisiana Gulf Coast area.	The project was approved by FERC in December 2015; however, as of December 2018, construction had been limited to the LNG project. The anticipated in-service date for the pipeline has yet to be determined.	S
Other Industrial Facilities						
Axiall Corporation, Westlake Industrial Complex	Calcasieu Parish, LA	5 miles from Louisiana Connector Project	None	Axiall Corporation plans to construct and operate an ethylene production facility with a capacity of 2 billion pounds/year. If approved, the project would be a joint venture with Lotte Chemical of South Korea. Lotte Chemical also is evaluating a wholly owned derivatives plant on that would be constructed directly adjacent to the preferred site for the ethylene production facility.	Construction start date is unknown. Anticipated in-service date is some time in 2019.	S
G2X Energy, Inc. / Big Lake Fuels LLC	Lake Charles, LA (Calcasieu Parish)	5 miles from Louisiana Connector Project	None	G2X Energy's subsidiary, Big Lake Fuels LLC, is constructing a natural gas-to-gasoline plant along the Industrial Canal of the Port of Lake Charles. The plant is on a 200-acre site owned by the Lake Charles Harbor and Terminal District. The project is designed to convert domestic natural gas into about 12,500 barrels per day of sulfur, gasoline, and/or methanol, which would be shipped to customers by marine vessels or by pipeline.	Construction began in 2016 and is expected to last for 3 years.	S
Utilities and Transportation						
Entergy Louisiana LLC, Lake Charles Power Plant	Calcasieu Parish, LA	2 miles from Louisiana Connector Project	Sabine Canal-Bayou Choupique	Entergy Louisiana LLC plans to operate a 994-MW electricity generation plant in Westlake, near Lake Charles, Louisiana. The Louisiana Public Service Commission approved the Lake Charles project in June 2017.	Construction began January 2018. Facility planned to be operational in 2020.	GW, SW, W, EFH, VG, WL, PS, S

TABLE 4.13.1-1 (cont'd)

Present and Reasonably Foreseeable Activities and Projects Considered in the Cumulative Impact Analysis for the Projects

Activity/Project	Counties/ Parishes Shared with Projects	Approximate Distance from Projects [b]	Watershed(s) Shared with Projects	Description	Status or Timeframe	Resources Potentially Cumulatively Affected [c]
Calcasieu Parish Transportation Plan	Calcasieu Parish, LA	1 mile from Louisiana Connector Project	None	According to the Calcasieu Parish Transportation Plan, the Parish plans to conduct the following road improvement projects: I-10 Widening to Six Lanes; LA 27 Widening from Lewis St to Bankens to LA 12; LA 378 Corridor Improvements – John Stine to LA 378 Spur; US 90 Corridor Improvements in Sulphur Area – From I-10 to Post Oak Ave; Houston River Rd Improvements – LA 378 to LA 27 / N Beglis Pkwy; Enterprise Blvd Extension to Fitzenreiter Rd to US 171; Nelson RD Ext from Avenue L'Auberge to Sallier St. - New 4 Lane Road and Bridge (Committed Project); Cities Service Hwy Extension (Sasol Project); and New I-10 Interchange West of Ruth St / LA 1256 Interchange. Municipalities impacted by the road improvement projects include Lake Charles, Westlake, Sulphur, and DeQuincy; the towns of Iowa and Vinton; and unincorporated communities of Moss Bluff and Carlyss.	Projects are being or will be constructed in three stages between 2015 and 2040.	S
Beauregard Airport Industrial Site	Beauregard Parish, LA	28 miles from Louisiana Connector Project	None	Beauregard Airport plans to construct and operate a new development-ready, industrial site near the Intersection of U.S. Highways 171 and 90 in Beauregard Parish, LA. Approximately 1,200 acres of Parish-owned airport property with access to a railroad spur, major highways, a 5,495-foot airport runway, and onsite utilities.	Unknown. Based on the project's website (most recent update was March 2018), the property is still available for development.	S
GOVERNMENT FACILITIES/ACTIVITIES						
SNWW Channel Improvement Project (CIP)	Jefferson and Orange Counties, TX	0 miles from Projects	Salt Bayou	The CIP is a large-scale transportation infrastructure project sponsored by the federal government and managed by the USACE to deepen the SNWW from 40 feet to 48 feet (SNND). The USACE approved the project in 2011. In 2013, the U.S. Senate and Congress both approved versions of the Water Resource Development Act (S.601) and the Water Resources Reform and Development Act (H.R.3080) that would allow the CIP to move forward. President Obama signed the House version of the Act (H.R.3080) into law in 2014, thereby authorizing the USACE to move forward with development of the CIP.	Construction start date is unknown. After construction begins, it is expected to take 7 to 10 years to complete the project.	GW, SW, W, EFH, VG, WL, PS, LU, Rec, V – LNG, V – PL, S, CR, A – Con, N – Con, R&S

TABLE 4.13.1-1 (cont'd)

Present and Reasonably Foreseeable Activities and Projects Considered in the Cumulative Impact Analysis for the Projects

Activity/Project	Counties/ Parishes Shared with Projects	Approximate Distance from Projects [b]	Watershed(s) Shared with Projects	Description	Status or Timeframe	Resources Potentially Cumulatively Affected [c]
Berth 5 Expansion Project	Jefferson County, TX	1 mile from Projects	Salt Bayou	The Port of Port Arthur Navigation District has proposed the construction of wharf deck, new bulkhead wall, existing bulkhead wall improvements, anchor wall, bulkhead return wall, low mast light poles and associated foundations, shoreline stabilization, dredging, filling of the Grannis Ditch, site fill, fencing, hydromulching, and other work associated with the extension of the existing dock located at the Port of Port Arthur.	Bid package issued by Port of Port Arthur in January 2018. Status of project is unknown.	GW, SW, W, EFH, VG, WL, PS, V – LNG, S
COMMERCIAL AND RESIDENTIAL DEVELOPMENTS						
RV Park in Port Arthur, TX	Port Arthur, TX	2.8 miles from Texas Connector Project	Salt Bayou	Proposed RV park in Port Arthur, TX.	Construction status is unknown.	GW, SW, W, EFH, VG, WL, PS, V – LNG, S, A - Ops
Hurricane Ike Replacement Home Project	Port Arthur, TX	Variable distance from Texas Connector Project	Salt Bayou	Construction of new homes in Port Arthur, TX to replace homes damaged by Hurricane Ike. Locations unknown other than generally in the Port Arthur, TX area.	Construction status is unknown.	GW, SW, W, EFH, VG, WL, PS, V – LNG, S, A - Ops
420-unit apartment complex in Port Arthur, TX	Port Arthur, TX	3.7 miles from Texas Connector Project	Salt Bayou	Proposed 420-unit apartment complex in Port Arthur, TX.	Construction status is unknown.	GW, SW, W, EFH, VG, WL, PS, V – LNG, S, A - Ops
The Shadows at Bayou Oaks Residential Development	Calcasieu Parish, LA	1.5 miles from Louisiana Connector Project	Sabine Canal-Bayou Choupique	A planned residential community development east of Choupique Bayou in the town of Carlyss that is pre-selling lots.	As of August 2018, some homes had been developed. Completion date is unknown.	GW, SW, W, EFH, VG, WL, PS, V – LNG, S, A - Ops
Belle Savanne Residential Development	Calcasieu Parish, LA	0.7 mile from Louisiana Connector Project	Sabine Canal-Bayou Choupique	The proposed Belle Savanne Development is a new residential and commercial development in Sulphur, Calcasieu Parish, LA. The development offers multiple shopping, dining, and entertainment options, as well as access to I-10. The Master plan for the entire property includes over 12 acres of commercial and 15 acres of multifamily development. The remaining 174 lots are being designed; the first 40 of these designed lots delivered in November of 2017.	Construction completed in 2016. Future phase approved and planned; however construction status is unknown.	GW, SW, W, EFH, VG, WL, PS, V – LNG, S, A - Ops

TABLE 4.13.1-1 (cont'd)

Present and Reasonably Foreseeable Activities and Projects Considered in the Cumulative Impact Analysis for the Projects

Activity/Project	Counties/ Parishes Shared with Projects	Approximate Distance from Projects [b]	Watershed(s) Shared with Projects	Description	Status or Timeframe	Resources Potentially Cumulatively Affected [c]
NONJURISDICTIONAL FACILITIES						
Relocation of SH 87, and Third-party Pipelines and Other Utilities	Jefferson County, TX	0 miles from Liquefaction Project	Salt Bayou	PALNG's proposed location for its marine berth on the Port Arthur Canal would require 3.3 miles of existing utilities to be relocated around the western side of the liquefaction site prior to construction of the liquefaction facilities. Following relocations, the respective owners of each utility would be responsible for interconnecting the new facilities with the old, abandoning the unused utility and pipeline segments per industry and regulatory requirements, and future operations of the facilities.	Relocation of SH 87 and its collocated utilities would begin once all permit approvals are received, which is contingent on the final EIS for the Projects. Construction is anticipated to take about 6 months, with operations resuming after.	All; included with impacts analyses in section 4.
Louisiana Connector – Electric distribution line to proposed Compressor Station	Allen Parish, LA	0 miles from Louisiana Connector Project	Salt Bayou	The nonjurisdictional facilities associated with the Louisiana Connector Project include an electric power supply line to serve the proposed compressor station. The power line would be built by CLECO and BECi. PAPL, CLECO, and BECi are currently investigating two options. Option One would tap into the existing CLECO distribution line at the intersection of SH 165 and Green Oak Cemetery Road and extend about 0.25 mile along the north side of Green Oak Cemetery Road to the compressor station site. Option Two would tap into the existing BECi three phase distribution line at the intersection of Green Oak Cemetery Road and Green Oak Road and extend about 0.75 mile along the south side of Green Oak Cemetery Road before crossing Green Oak Cemetery Road to the compressor station site.	Construction of the electric distribution line expected to occur concurrently with construction of the Compressor Station, between 2021 and 2023.	GW, SW, W, EFH, VG, WL, PS, V – LNG, S, A - Ops

[a] This table lists those projects that are most likely to contribute to the cumulative impacts within the vicinity of the proposed Liquefaction Project, Texas Connector Project, and Louisiana Connector Project; it is not intended to provide an all-inclusive listing of projects in the region.

[b] Approximate distance listed represents the feature or facility closest to the Projects.

[c]

All – all resources	W – Wetlands	LU – Land Use	A – Con – Air, Construction
GE – Geology	EFH – Essential Fish Habitat	Rec – Recreation	A – Ops – Air, Operations
SL – Soils	VG – Vegetation	V – LNG – Visual LNG	N – Con – Noise, Construction
GW – Groundwater	WL – Wildlife	V – PL – Visual Pipeline S – Socioeconomics	N – Ops – Noise, Operations
SW – Surface Waters	PS – Protected Species	CR – Cultural Resources	R&S – Reliability & Safety

[d] As of December 2018, the Tellurian Pipeline Project, Permian Global Access Project, and Haynesville Global Access Project had not yet requested to participate in the FERC's pre-filing process or filed an application with FERC. As such, these projects are speculative and, because NEPA does not require a speculative analysis if not enough information is available to permit meaningful consideration, they are not discussed in detail in our analysis below.

As listed in table 4.13.1-1, the Tellurian Pipeline Project, Permian Global Access Project, and Haynesville Global Access Project would potentially intersect the Louisiana Connector Project. As of August 2018, none of these projects have requested to participate in the FERC's pre-filing process or filed an application with FERC. As such, these projects are speculative and, because NEPA does not require a speculative analysis if not enough information is available to permit meaningful consideration, they are not discussed in detail in our analysis below.

Likewise, the nonjurisdictional facilities associated with the Liquefaction Project (i.e., highway, utility, and pipeline relocation) would take place within the same area of effect, be conducted by the applicant (i.e., PALNG, as opposed to another entity), and generally occur within the same timeframe. Therefore, the cumulative effects of these activities are already captured in the environmental analysis in section 4 and not discussed further in the analyses below.

4.13.2 Potential Cumulative Impacts by Resource

The following sections address the potential cumulative impacts of the Projects and the other projects identified within the cumulative geographic scope area on specific environmental resources. Of the projects that are within the cumulative impacts area for potential cumulative effects, table 4.13.2-1 lists the general environmental impacts associated with each FERC-regulated project based on FERC-issued environmental documents (i.e., EIS or EA) or applicant-prepared reports provided as part of the application or pre-filing materials, which can be quantified. The impacts listed reflect those associated with the entire project and not just those associated with impacts within the cumulative impacts area (e.g., HUC-10 watershed).

All of the FERC-jurisdictional projects would be constructed and maintained in accordance with general measures that are similar to those that are described throughout section 4 of this EIS; our additional recommended mitigation measures for each project, as applicable; and other construction, operation, and mitigation measures that may be required by federal, state, or local permitting authorities (see tables 1.5-1, 1.5-2, and 1.5-3), further reducing the potential for cumulative impacts.

TABLE 4.13.2-1

Environmental Impacts Associated With FERC-Regulated Projects Within the HUC-10 Cumulative Impacts Area [a]

	Impacts (acres) – *Soils, Vegetation, Land Use*		Prime Farmland Impacts – Permanent	Number of Waterbodies	Wetland Impacts (acres)		Forest Impacts (acres) [b]		No. of Likely to Adversely Affect	EFH
Project Name	Con.	Op.	(acres)	Crossed	Temp.	Perm.	Temp.	Perm.	Species	Impacts
Sabine Pass Liquefaction Expansion Project [d]	401.2	156.3	None (Expansion)	None	153.5	153.5	N/A	N/A	None	No effect
Sabine Pass Third Berth Project	375.2	171.6	None	1	27.7	27.7	N/A	N/A	Pending	Pending
Golden Pass Export Terminal Project [c]	918.7	782.8	None (Expansion)	1	387.7	376.0	63.0	58.7	None	No adverse effect
Golden Pass Pipeline Project [e]	98.7	55.6	37.4	3	13.1	9.7	34.1	26.5	None	None
South Texas Expansion Project [f]	17.1	1.1	15.7	0	0.0	0.0	0.0	0.0	None	None
Driftwood LNG Project [g]	790.0	718.0	384.5	1	330.6	318.7	181.4	179.3	None	No adverse effect
Driftwood Pipeline Project [g]	1,948.8	569.7	92.5	383	454.1	89.2	596.6	171.2	None	No adverse effect

TABLE 4.13.2-1 (cont'd)

Environmental Impacts Associated With FERC-Regulated Projects Within the HUC-10 Cumulative Impacts Area [a]

Project Name	Impacts (acres) – *Soils, Vegetation, Land Use* Con.	Impacts (acres) – *Soils, Vegetation, Land Use* Op.	Prime Farmland Impacts – Permanent (acres)	Number of Waterbodies Crossed	Wetland Impacts (acres) Temp.	Wetland Impacts (acres) Perm.	Forest Impacts (acres) [b] Temp.	Forest Impacts (acres) [b] Perm.	No. of Likely to Adversely Affect Species	EFH Impacts
Lake Charles Expansion Project [h]	75.8	20.8	20.8	10	15.3	15.3	0.0	0.0	None	None

[a] Quantitative data are approximate and based on information presented in a FERC-issued EIS or EA, or information presented in the proponent's FERC application.

[b] Acres of forest impacts include managed tree plantations.

[c] Impacts for the Golden Pass Export Terminal Project include the terminal expansion, supply dock, and access road.

[d] Impacts for the Sabine Pass Liquefaction Expansion Project include Trains 5 and 6 and existing Sabine Pass LNG Terminal access roads.

[e] Impacts for the Golden Pass Pipeline Project include interconnects, looping pipelines, aboveground facilities, and all appurtenances.

[f] Impacts for the South Texas Expansion Project include the Vidor Compressor Station only, which is the only facility within the region of influence for cumulative impacts.

[g] Impacts for the Driftwood LNG Project include the liquefaction terminal; impacts for the Driftwood Pipeline Project include the pipeline facilities, aboveground facilities, and all appurtenances.

[h] Impacts for the Lake Charles Expansion Project include the pipeline facilities, aboveground facilities, and all appurtenances.

4.13.2.1 Geologic Resources

Projects from table 4.13.1-1 that are within the cumulative impacts area for geologic resources include the following locations:

- The portion of the Louisiana Connector Project between MPs 45.3 and 55.8 that would be collocated with the proposed Driftwood Pipeline Project.
- The portion of Northern Pipeline of the Texas Connector Project between MPs 23.0 and 26.6 that would be collocated with the pipeline portion of the Golden Pass Pipeline Project.
- The pipeline portion of the Golden Pass Pipeline Project that would intersect the FGT Lateral at about MP 1.
- The pipeline portion of Lake Charles Expansion Project that would intersect the Louisiana Connector Project pipeline at about MP 118.

The impacts at these areas would be both incremental and repeated. Incremental because they would expand the impacts already experienced at the given location and repeated because they would occur within the same relative timeframe (within a few months before or after) as the proposed Projects. While each project proponent would be responsible for restoration of an area, the restoration timeframe could be extended because of ground disturbance associated with the next project in any given area.

With the exception of the nonjurisdictional facilities, whose impacts are assessed in section 4 of this EIS, there are no current or reasonably foreseeable projects within the cumulative impacts area for geologic resources resulting from the Liquefaction Project. As such, cumulative impacts would not occur.

The primary cumulative impacts on existing geologic conditions resulting from the Louisiana Connector and Texas Connector Projects and the other pipeline projects listed above would be limited to

construction activities and would include disturbance of slopes within the work areas, which would be permanent where grading and filling is required to create a safe and stable land surface to support the facilities. Project activities such as grading, trenching, and backfilling would result in minor alteration of surficial geology within the pipeline projects workspace, and HDD activities would physically alter geologic materials along a very narrow subsurface drill path. Where they overlap, the Louisiana Connector Project and Driftwood Pipeline Project would be largely within previously disturbed areas adjacent to an existing pipeline system, and the proposed new aboveground facilities would occupy relatively small footprints at various locations. PAPL does not anticipate that any blasting would be required for the construction of the pipeline facilities and, following construction, it would restore topographic contours along the pipeline rights-of-way to preconstruction conditions. In general, the Louisiana Connector and Texas Connector Projects, Driftwood Pipeline Project, Golden Pass Pipeline Project, and Lake Charles Expansion Project facilities would not materially impact (i.e., permanently curtail or preclude the extraction of) marketable mineral resources in the projects area. As such, construction and operation of the Projects, when considered with the other projects in the cumulative impacts area, would not contribute significantly to cumulative impacts on geologic resources.

4.13.2.2 Soils

Projects from table 4.13.1-1 that are within the cumulative impacts area for soil resources include the same ones discussed above for geologic resources.

Cumulative impacts on soils from the Projects and other actions in the cumulative impacts area could occur from overlapping construction activities such as clearing, grading, trench excavation, backfilling, and the movement of construction equipment may affect soil resources.

With the exception of the nonjurisdictional facilities, whose impacts are assessed in section 4 of this EIS, there are no current or reasonably foreseeable projects within the cumulative impacts area for soil resources resulting from the Liquefaction Project. However, it should be noted that the proposed dredging in the Port Arthur Canal could contribute to the disruption of sediments in combination with the ongoing USACE maintenance dredging of the Port Arthur Canal and SNWW that could then cumulatively contribute to water quality impacts, as discussed in section 4.13.2.4.

Regarding potential cumulative impacts within the Texas Connector and Louisiana Connector Projects, we note that PAPL, Driftwood, Golden Pass Pipeline LLC, and KMLP would implement the Commission's Plan and Procedures, or alternative measures when justified, to protect soil resources and minimize soil impacts. This would include applying measures to control erosion and sedimentation during construction and ensuring proper restoration and revegetation of disturbed areas. As a result, most project-related impacts on soils due to construction of the Louisiana Connector and Texas Connector Projects, Driftwood Pipeline Project, Golden Pass Pipeline Project, and Lake Charles Expansion Project would be temporary to short term. The area affected by the permanent conversion of existing surfaces to impervious ground for these projects would result in a permanent impact on over 415 acres of soils (about 210 acres at aboveground facilities associated with the Louisiana Connector and Texas Connector Projects; about 96 acres at aboveground facilities associated with the Driftwood Pipeline Project; about 36 acres at aboveground facilities associated with the Golden Pass Pipeline Project; and about 73 acres at aboveground facilities associated with the Lake Charles Expansion Project), which is about 0.03 percent of the undeveloped land in the affected counties and parishes shared between the projects (Orange County, Texas and Calcasieu and Evangeline Parishes, Louisiana). As such, construction and operation of the Projects, when considered with the other projects in the cumulative impacts area, would not contribute significantly to cumulative impacts on soils.

4.13.2.3 Groundwater

Projects from table 4.13.1-1 that are within the cumulative impacts area for groundwater resources include all those within the same HUC-10 watershed(s) crossed by the proposed Projects. However, the majority of the listed projects are over 0.5 mile from the Projects and/or have undetermined timing (e.g., many of the commercial and residential developments). As such, cumulative impacts from these projects would be minor and would be dissipated the further they occur from the Projects. We have determined that potential cumulative impacts on groundwater resources would be relatively greater at the following locations, due to proximity:

- The portion of the Louisiana Connector Project between MPs 45.3 and 55.8 that would be collocated with the proposed Driftwood Pipeline Project.
- The portion of Northern Pipeline of the Texas Connector Project between MPs 23.0 and 26.6 that would be collocated with the pipeline portion of the Golden Pass Pipeline Project.
- The pipeline portion of the Golden Pass Pipeline Project that would intersect the FGT Lateral at about MP 1.
- The pipeline portion of Lake Charles Expansion Project that would intersect the Louisiana Connector Project pipeline at about MP 118.
- Modifications to the existing Vidor Compressor Station associated with the South Texas Expansion Project, which would be about 0.5 mile from the North Compressor Station along the Texas Connector Project.

Because the Projects generally involve surficial and shallow earthwork, we assumed that the Projects' effects on groundwater would be confined to the local water tables within the watersheds crossed by the Projects and shared with other projects in the area. Project activities such as clearing, grading, trenching, backfilling, drilling, dewatering, and refueling could result in minor impacts on groundwater quality, quantity, and flow.

Construction activities associated with the LNG projects that could potentially affect groundwater resources include foundation excavation and installation, installation of piles for LNG vessel loading facilities and LNG tanks, and accidental release of fuels, lubricants, and/or hazardous materials during construction.

Construction of the pipeline and other project types such as residential developments would occur mostly above the water table; however, where the water table is within the trench or grading depth, shallow groundwater resources could be temporarily affected by minor fluctuations of water level, flow characteristics, and/or increased turbidity in localized areas adjacent to the trench, which could also affect the hydrology of nearby wetland areas. Given the relatively shallow (typically less than about 8 feet) nature of pipeline trenching and the often deep depths at which water wells are drilled to reach aquifers, it is generally unlikely that pipeline activities would negatively affect groundwater supplies from wells, although springs may be more subject to disruption. Additionally, new impervious surfaces created as part of construction of the proposed Projects and other projects in the cumulative impacts area could also potentially affect groundwater resources by reducing infiltration and groundwater recharge. With the exception of the establishment of new impervious surfaces, which would represent a permanent impact, the project effects on groundwater would be limited to the duration of construction or shortly thereafter and, as such, this is the same timeframe for cumulative impacts on groundwater.

Considering the above locations where cumulative impacts would be the most concentrated, there are two known groundwater withdrawal wells or drinking water wells within 150 feet of the Louisiana Connector Project and Driftwood Pipeline Project where they are collocated; there are no known groundwater withdrawal wells or drinking water wells within 150 feet of the Texas Connector (including the FGT Lateral) and Louisiana Connector Projects, Golden Pass Pipeline Project, Lake Charles Expansion Project, and South Texas Expansion Project's Vidor Compressor Station where they intersect or are located nearby. Because these are all FERC-regulated projects, PAPL and the proponents of the other projects would mitigate for potential contamination of wells due to accidental spills or leaks of hazardous materials associated with vehicle refueling, vehicle maintenance, and storage of construction materials by adhering to the Commission's Plan and Procedures and their project-specific plans, which include spill prevention and containment measures to minimize potential impacts on groundwater resources.

As discussed in section 4.3.1, the Chicot aquifer underlies the Louisiana Connector Project between MPs 17 and 130. The Chicot aquifer system more broadly underlies any project occurring in Cameron, Calcasieu, Beauregard, Allen, Evangeline, and St. Landry Parishes, Louisiana (see table 4.13.1-1). The EPA has designated the Chicot aquifer as an SSA in southwestern Louisiana because it is the most heavily used aquifer in Louisiana, and water levels in the Chicot aquifer have declined in portions of Louisiana due to extensive pumping, which has led to concerns over the potential for saltwater intrusion (USGS, 2010). PAPL does not plan to use groundwater as a water supply during construction or operation of the pipelines. Water for hydrostatic testing would be obtained from the City of Port Arthur, the LNVA, and/or surface water sources. Since groundwater withdrawals are not anticipated for the Texas Connector and Louisiana Connector Projects, cumulative withdrawal impacts when combined with the other projects would not occur.

We conclude that there would be no significant cumulative impacts on groundwater because of the small aggregate size of actions within the watersheds and because each action would be required to obtain permits, such as storm and waste water discharge permits, that are designed to reduce impacts on groundwater and to ensure that the resource is managed in a sustainable manner. Further, PAPL, Driftwood, Golden Pass Pipeline LLC, KMLP, and TETCO would implement the measures in their respective construction and restoration plans, which includes the Commission's Plan and Procedures, to avoid or minimize cumulative impacts on groundwater.

4.13.2.4 Surface Water Resources

Projects from table 4.13.1-1 that are within the cumulative impacts area for surface water resources include all those within the same HUC-10 watershed(s) crossed by the proposed Projects. However, the majority of the listed projects are over 0.5 mile from the Projects and/or have undetermined timing (e.g., many of the commercial and residential developments). As such, cumulative impacts from these projects would be minor and would be dissipated the further they occur from the Projects. We have determined that potential cumulative impacts on surface water resources would be relatively greater at the same locations as those listed above, in section 4.13.2.3, due to proximity; and from the other LNG terminal projects (e.g., the Sabine Pass Liquefaction Expansion and Third Berth Expansion, Golden Pass Export Terminal, and Driftwood LNG Projects), and the SNWW Channel Improvement and Berth 5 Expansion Projects), due to the amount of proposed activity (e.g., dredging; ballast water exchange) in the marine/aquatic environment that would be required for these projects.

Most construction-related impacts from projects in the cumulative impacts area in or near waterbodies and aquatic resources would be within the immediate area of the waterbody crossing, temporary (returning to normal shortly after in-stream construction and restoration is completed), and diminishing with distance downstream of the crossing. As such, cumulative impacts on surface waters would be dissipated the further they occur from the Projects.

Construction and operation of the Projects and other actions in the cumulative impacts area could have direct and indirect impacts on onshore surface water quality and flow, as well as on fish and other organisms that inhabit affected waters. These impacts could include increased sedimentation, turbidity, decreased dissolved oxygen, impaired flow, releases of chemicals and nutrient pollutants, reduced riparian cover, thermal changes, modification of habitat, and fish injury or mortality. For example, construction and maintenance dredging during operation of the Liquefaction Project is anticipated to result in temporarily increased turbidity levels, decreased dissolved oxygen levels, and resuspension of nutrients or chemicals into the Port Arthur Canal water column. Ballast water and cooling water discharges associated with LNG vessels and discharged into the Port Arthur Canal could result in changes in temperature, pH, dissolved oxygen, and salinity levels.

Other actions within the cumulative impacts area that involve similar activities could also impact surface waters. Thus, cumulative impacts could occur where the location and timing of those other effects overlap with the Projects' effects, which includes the portions of the Driftwood Pipeline Project, Golden Pass Pipeline Project, Lake Charles Expansion Project, and South Texas Expansion Project as listed in section 4.13.2.3. In addition, the proposed dredging in the Port Arthur Canal in combination with the ongoing USACE maintenance dredging of the Port Arthur Canal and SNWW (CIP, Berth 5 Expansion Project) would cumulatively contribute to water quality impacts. While within the same HUC-10 watershed, most other projects (industrial and residential developments) are expected to avoid direct impacts on waterbodies because their facilities are at discrete locations (versus long linear features) and relatively flexible in placement (not dependent on connecting to another existing facility).

The Sabine Pass Liquefaction Expansion and Third Berth Expansion Projects, Golden Pass Export Terminal Project, and Driftwood LNG Project are planned within the same HUC-10 watershed as PALNG's Liquefaction Project. Of these, the Golden Pass Export Terminal Project would also result in ballast water discharges in the broader extent of the SNWW of which the Port Arthur Canal is associated. However, these projects are expected to follow USCG and EPA regulations with regard to ballast water, which reduces the potential for adversely affecting water quality bacteria and pathogens. As discussed in sections 4.3.2.2 and 4.6.2.2, PALNG anticipates that construction barge traffic would peak at about 175 barges per month in the early stages of construction and 180 additional vessels per year are expected to visit the liquefaction site during operations, which is less than a 1 percent increase in current traffic patterns. Given the fact that the Port Arthur Canal was created to accommodate vessel traffic and the amount of ballast water discharged into the Port Arthur Canal during each LNG vessel visit to the liquefaction facility would represent 0.03 percent of the water within a 500-meter stretch of the Port Arthur Canal, we do not anticipate the Liquefaction Project when combined with the other projects to contribute significantly to cumulative impacts associated with the intake or discharge of ballast water.

Construction of the Liquefaction Project's slip, berthing area, and turning basin would require dredging a total of about 7.2 million yd^3 of material. The Golden Pass Export Terminal Project would also require dredging along with ongoing USACE maintenance dredging of the Port Arthur Canal and SNWW. Golden Pass would remove a total of about 305,750 yd^3 of material from the SNWW to construct a supply dock, and dredging to improve vessel access to the tug berth would require removal of an estimated 530,000 yd^3 of sediment from the SNWW. This project is 1 mile from the Liquefaction Project so the cumulative effects on water resources from dredging would be speculative and dependent on numerous other factors such as sediment transport distance and pace. Ongoing USACE maintenance dredging is estimated at 97 million yd^3 over 20 years.

If the proposed dredging for PALNG's Liquefaction Project were to occur at the same time as the dredging for the other actions, the adverse impacts on water quality (e.g., increased turbidity, TSS, release of nutrient-bound contaminants) in the cumulative impacts area could be exacerbated. However, dredging impacts tend to be localized (i.e., generally confined to the areas close to the dredging activity) and limited

primarily to the time when the dredging is taking place (i.e., the effects cease soon after the dredging stops). Pile driving and sheet pile installation during in-water construction of the Liquefaction Project and other planned area projects, should these activities occur concurrently with each other, could also cumulatively affect water conditions; however, as with dredging, these impacts would be localized and temporary to short term.

Before any dredging or pile driving can occur, PALNG and the proponents of the other area projects would need to obtain section 10 RHA/section 404 CWA authorizations from the USACE and corresponding section 401 (CWA) Water Quality Certifications from the state of Texas or Louisiana. These authorizations would be contingent on the companies' use of BMPs to minimize effects on water quality and to ensure that state water quality standards are not violated. Additionally, the permits could require that the dredged material be tested before being disposed of in an approved offshore or onshore location. These measures would ensure there are no long-term, adverse, or significant cumulative impacts on water quality as a result of foreseeable dredging and pile driving activities in the area.

Increased barge traffic could result in shoreline erosion. As stated above, barge traffic for the Liquefaction Project would result in a less-than-one percent increase in current traffic patterns. Also, PALNG developed a Shoreline Protection Report to address potential shoreline erosion, and would protect the shoreline within the project area through the installation of riprap or other erosion prevention measures, which has been successfully implemented for other facilities along the Port Arthur Canal. The Golden Pass Export Terminal Project is an existing facility already resulting in vessel traffic in the SNWW. Given that the increase in vessel traffic from the Liquefaction Project would represent a negligible increase in current traffic patterns, the Port Arthur Canal was specifically created to provide deepwater access for maritime commerce and is maintained by regular dredging (SNND, 2017a), and the other projects in the cumulative impacts area are expansions of existing projects where vessel traffic is already experienced, there would be no cumulatively significant impacts on shoreline erosion.

Cumulative impacts on waterbodies would be greatest where the Texas Connector Project and/or Louisiana Connector Project would be collocated or intersect with Driftwood Pipeline Project, Golden Pass Pipeline Project, Lake Charles Expansion Project, and South Texas Expansion Project as listed in section 4.13.2.3. Specific to the Texas Connector Project, one unnamed waterbody crossing would occur where multiple pipeline projects are proposed, and specific to the Louisiana Connector Project, two unnamed waterbody crossings would occur where multiple pipeline project are proposed.

Generally, impacts resulting from pipeline construction across waterbodies are localized and short term because surface water conditions would return to normal within days or weeks of completing construction, and cumulative impacts would only occur in the event that more than one project crosses the same waterbody within a similar period of time. Other activities such as clearing, grading, trenching, backfilling, drilling, dewatering, and refueling could result in minor impacts on surface water quality, quantity, and flow. Due to the temporary, short-term, and localized nature of impacts associated with the waterbody crossings during construction of the Texas Connector and Louisiana Connector Projects pipelines and the distance of these pipelines from most of the other projects listed in table 4.13.1-1, we believe these activities would result in only a minor contribution to cumulative impacts on surface waters in the Projects cumulative impacts area. Because these are FERC-regulated projects, PAPL and the other project proponents would adopt the construction and restoration measures described in the Commission's Procedures such as completing non-HDD crossings within 24 to 28 hours to limit the impacts on a waterbody. Additional protective measures outlined in the Commission's Procedures, such as fueling buffer restrictions, maintenance of flow rates, and stream and riparian area restoration, would further limit the potential for impacts on waterbodies associated with FERC-regulated projects. Given PAPL's and the other project proponents' commitment to restore waterbodies according to specifications based on the Commission's Procedures, direct and indirect impacts, such as increased sediment transport to waterbodies

and turbidity levels, are expected to return to baseline levels following construction and restoration efforts at each crossing.

The impacts of each of the projects identified near the Projects on jurisdictional WOUS (e.g., wetlands and waterbodies) would be evaluated by the USACE and permitted accordingly. Although stormwater runoff from construction activities near waterbodies upstream or downstream of the proposed construction right-of-way could result in impacts, we are not aware of any other substantial construction projects that would affect surface water quality near PAPL's proposed waterbody crossings. As a result, the cumulative impact on surface water resources in these areas due to stormwater runoff would be minor. The Projects and other projects in the geographic scope area would be required to comply with the state regulations for discharge of pollutants in stormwater or point source discharges.

Based on compliance by PALNG, PAPL, and the proponents of the other projects with these regulations, implementation of the Commission's Plan and Procedures and other project erosion and sediment control plans, and project-specific best management practices, the cumulative impacts due to the withdrawal and discharge of hydrostatic test water would be temporary and minor.

4.13.2.5 Wetlands

Projects from table 4.13.1-1 that are within the cumulative impacts area for wetland resources include all those within the same HUC-10 watershed(s) crossed by the proposed Projects. However, the majority of the listed projects are over 0.5 mile from the Projects and/or have undetermined timing (e.g., many of the commercial and residential developments). As such, cumulative impacts from these projects would be minor and would be dissipated the further they occur from the Projects. We have determined that potential cumulative impacts on wetlands would be relatively greater at the same locations as those listed in section 4.13.2.3, due to proximity.

Most construction-related impacts from projects in the cumulative impacts area in or near wetlands would range from temporary to permanent, depending on the proposed action/facility and type of wetland impacted. For example, impacts on PEM wetlands from pipeline construction would be temporary because they would return to original emergent function and value shortly after construction; impacts on PSS wetlands from pipeline construction would be short to long term because they would take 3 to 5 years to return to original scrub-shrub function and value; and impacts on PFO wetlands from pipeline construction would be long term because trees would take from 3 to 50 years or longer to become reestablished and trees would not be allowed to become reestablished directly over the pipeline. The exception to these would be the permanent loss of wetlands at the Liquefaction Project site and other projects where aboveground facilities would be placed and operated in wetlands.

As mentioned above, cumulative impacts on wetlands would be relatively greater at the locations listed in section 4.13.2.3 where the projects overlap, which includes the portions of the Driftwood Pipeline Project, Golden Pass Pipeline Project, Lake Charles Expansion Project, and South Texas Expansion Project. In addition, the proposed dredging in the Port Arthur Canal in combination with the ongoing USACE maintenance dredging of the Port Arthur Canal and SNWW (CIP, Berth 5 Expansion Project) would cumulatively contribute to water quality impacts. While within the same HUC-10 watershed, most other projects (industrial and residential developments) are expected to avoid direct impacts on wetlands because their facilities are at discrete locations (versus long linear features) and relatively flexible in placement (not dependent on connecting to another existing facility).

Cumulative impacts on wetlands would be greatest where the Texas Connector Project and/or Louisiana Connector Project would be collocated or intersect with Driftwood Pipeline Project, Golden Pass Pipeline Project, Lake Charles Expansion Project, and South Texas Expansion Project as listed in section

4.13.2.3. Specific to the Texas Connector Project, about 11 acres and 5 acres of wetlands impacts would occur during construction and operation, respectively, where projects overlap or intersect in the cumulative impacts area. Specific to the Louisiana Connector Project, 89 acres and 37 acres of wetlands impacts would occur during construction and operation, respectively, where projects overlap or intersect in the cumulative impacts area. The impacts on wetlands at these areas would be both incremental and repeated. Incremental because they would expand the impacts already experienced at the given location and repeated because they would occur within the same relative timeframe (within a few months before or after) as the proposed pipeline projects. While each project proponent would be responsible for restoration of an area, the restoration timeframe could be extended because of ground disturbance associated with the next project in any given area.

Based on available information, operation of the Projects and other FERC-regulated actions in the cumulative impacts area would permanently affect at least 644 acres of wetlands (see table 4.13.1-2). The overall magnitude of this impact on wetlands relative to the total amount of wetlands within the affected counties and parishes equates to 0.03 percent, which is considered minor. Other specific impacts on wetlands from the other projects are unknown; however, given the extensive presence of wetlands in southeastern Texas and southwestern Louisiana, it is assumed that avoidance would be difficult, and wetlands would be affected to some extent during construction and operation of these actions.

Wetlands are broadly regulated under the CWA, and avoidance, minimization, compensation, and/or replacement would be required by the USACE for most impacts. PALNG and PAPL, as well as the proponents of the other projects in the cumulative impacts area, would need to obtain applicable permits from the USACE. Accordingly, as part of the permitting and approval process, PALNG, PAPL, and the other project proponents would prepare a wetlands mitigation plan and provide compensatory mitigation for the impacts on these wetlands. These plans promote no net loss of WOUS and, therefore, no significant cumulative effects would result. In addition, the Liquefaction Project would result in a beneficial impact on wetlands due to the fact that it would bring dredged material to the J.D. Murphree WMA for wetland mitigation and restoration from project impacts. As part of the ongoing USACE maintenance dredging of the Port Arthur Canal, dredged material is used for coastal wetlands and marshland creation and restoration, which could also help offset some of the long-term wetlands losses from other cumulative projects. Lastly, each of the FERC-regulated projects would minimize impacts on wetlands by implementing the measures in the Commission's Plan and Procedures (or variations that provide equal or greater protection) and its own best management practices during construction and operation of the Projects.

Based on the expected wetland mitigation (including the adoption of the HDD method at over 50 locations), and the proposed Projects' mitigation for wetland losses, the Projects when combined with other projects in the cumulative impacts area would not have substantial or long-term impacts on sensitive wetlands and the contribution to cumulative effects would be limited.

4.13.2.6 Vegetation and Wildlife

Projects from table 4.13.1-1 that are within the cumulative impacts area for vegetation and wildlife resources include all those within the same HUC-10 watershed(s) crossed by the proposed Projects. However, the majority of the listed projects are over 0.5 mile from the Projects and/or have undetermined timing (e.g., many of the commercial and residential developments). As such, cumulative impacts from these projects would be minor and would be dissipated the further they occur from the Projects. We have determined that potential cumulative impacts on vegetation and wildlife would be relatively greater at the same locations as those listed in section 4.13.2.3, due to proximity.

Most construction-related impacts from projects in the cumulative impacts area for vegetation and wildlife would depend on the type of project/activity, amount and type of habitat affected, and the rate at

which the vegetation and wildlife habitat would regenerate after construction (either short term, long term, or permanent, as discussed in the vegetation and wildlife resources sections 4.5 and 4.6 of this EIS).

Cumulative impacts on vegetation and wildlife from the Projects and other actions in the cumulative impacts area could occur from overlapping or temporally sequential construction activities such as clearing, grading, and installation of impervious surfaces (e.g., building pads, access roads), or activities that cumulatively contribute to a long-term or permanent conversion of habitat. Impacts on wildlife could include displacement, stress, and direct mortality of some individuals. Potentially suitable cover, nesting, and foraging habitat for some wildlife species would be reduced due to clearing of vegetation.

Based on available information, operation of the Projects and other FERC-regulated actions in the cumulative impacts area would permanently affect almost 1,600 acres of vegetation (see table 4.13.1-2). The overall magnitude of this impact on vegetation and wildlife habitat relative to the total amount of vegetated land within the affected counties and parishes equates to less than 0.5 percent, which is considered minor. Other specific impacts on vegetation from the other projects are unknown; however, it is assumed that avoidance would be difficult and vegetation and wildlife would be affected to some extent during construction and operation of these actions. It should be noted that previous activities have resulted in the degradation of wildlife habitat in the area surrounding the Port Arthur liquefaction facility, which has reduced the number and diversity of species inhabiting the area. Also, the Liquefaction Project would result in a beneficial impact on wildlife due to the fact that it would bring dredged material to the J.D. Murphree WMA for wetland vegetation mitigation and restoration from project impacts.

Operation of the liquefaction facilities would result in increased noise, lighting, and human activity that could disturb wildlife in the area. However, due to current industrial activities at the existing Golden Pass Export Terminal Project that is about 1 mile away from the Liquefaction Project and the other industrial facilities in the cumulative impacts area, most wildlife is acclimated to these conditions. Birds flying through the project area could also be affected by flaring at both the Port Arthur liquefaction facility and nearby Golden Pass Export Terminal Project and Sabine Pass Liquefaction Expansion and Marine Berth Expansion Projects facilities. Startup flaring would be required and during operation of the liquefaction facilities, use of the emergency flares would only occur occasionally. It is unlikely that the startup flares from the three facilities would be in use at the same time due to schedule variability. In addition, PALNG would restrict any permanent lighting needed for the liquefaction facility and pipeline to the boundaries and pointed downward towards these sites. This includes security lighting for the facility and pipeline meter stations, pump stations, or security features. Therefore, cumulative impacts on wildlife due to noise, light, and human activity during operation of the facilities would be minor.

As mentioned above, cumulative impacts on vegetation and wildlife would be relatively greater at the locations listed in section 4.13.2.3 where the pipeline projects overlap. During pipeline construction, vegetation would be cleared from the right-of-way during construction and then restored before operation, except for at aboveground facilities, new permanent access roads, and in forested areas along the permanent right-of-way. While the vegetation impacts of the Projects within the cumulative impacts area would not be inconsequential, we consider the overall impact of all projects minor in comparison to the abundance of comparable habitat in the area. For example, based on data from the National Land Cover Database from the USGS, there are about 408,408.4 acres of upland forest in the shared HUC-10 watershed within the geographic scope considered for our analysis (USGS, 2014).

Specific to the Texas Connector Project, its estimated (based on an average 100-foot-wide construction and 50-foot-wide operational right-of-way) that about 37 acres and 18 acres of vegetation and wildlife habitat impacts would occur during construction and operation, respectively, where projects overlap or intersect in the cumulative impacts area. Specific to the Louisiana Connector Project, its estimated (based on an average 100-foot-wide construction and 50-foot-wide operational right-of-way) that

about 121 acres and 60 acres of vegetation and wildlife habitat impacts would occur during construction and operation, respectively, where projects overlap or intersect in the cumulative impacts area. The impacts on vegetation at these areas would be both incremental and repeated. Incremental because they would expand the impacts already experienced at the given location and repeated because they would occur within the same relative timeframe (within a few months before or after) as the proposed pipeline projects. While each project proponent would be responsible for restoration of an area, the restoration timeframe could be extended because of ground disturbance associated with the next project in any given area.

Vegetation and wildlife habitat near the Texas Connector and Louisiana Connector Projects have been affected by past and ongoing agricultural processes, oil and gas development, and construction and maintenance of existing roads, railroads, natural gas and oil pipelines, utility lines, and electrical transmission line rights-of-way. The oil and gas development, transportation projects, residential development projects, and nonjurisdictional project-related facilities listed in table 4.13.1-1 would also likely be required to implement mitigation measures designed to minimize the potential for long-term erosion and resource loss, increase the stability of site conditions, and revegetate disturbed soils, thereby minimizing the degree and duration of the impacts of these projects.

The development of the Texas Connector and Louisiana Connector Projects and other projects in the cumulative impacts area would result in habitat fragmentation due to vegetation removal. Existing roads, trails, agricultural practices, forest harvesting, and other infrastructure in the geographic scope area are also contributing to fragmentation. New or modified roads associated with new projects would also result in increased fragmentation. Fragmentation of forested habitat would make the right-of-way permanently unsuitable for interior forest species, and would create additional forest edge susceptible to edge effects, which may include change in microclimate factors, spread of invasive plant species, increased avian predation, and creation of wildlife movement barriers. Some species, such as white-tailed deer and some predator species, may benefit from the creation of an open corridor. PAPL would minimize impacts on vegetation and wildlife habitat by collocating the pipelines with other existing pipelines, using the HDD method at several locations, refraining from maintaining the pipeline right-of-way between HDD exit and entrance points during operation, and implementing the Commission's Plan and Procedures, which would be adopted for the other FERC-regulated projects proposed or under construction by Driftwood, Golden Pass Pipeline LLC, KMLP, and TETCO. Constructing and operating the projects adjacent to existing rights-of-way would minimize the areas of previously undisturbed vegetation that would be affected, be incremental to what is already experienced, and reduce additional cumulative impacts on vegetation communities and wildlife habitats.

With the implementation of the Commission's Plan and Procedures, the adoption of the HDD method at several locations (over 50 for the pipeline projects), the existing habitat changes that have already occurred as a result of previous projects, and the acquisition of federal and state permits, construction and operation of the proposed Projects, when considered with the other projects in the cumulative impacts area, would not contribute significantly to cumulative impacts on vegetation and wildlife.

4.13.2.7 Aquatic Resources and EFH

Projects from table 4.13.1-1 that are within the cumulative impacts area for aquatic resources and EFH include all those within the same HUC-10 watershed(s) crossed by the proposed Projects. However, the majority of the listed projects are over 0.5 mile from the Projects and/or have undetermined timing (e.g., many of the commercial and residential developments). As such, cumulative impacts from these projects would be minor and would be dissipated the further they occur from the Projects. Potential cumulative impacts on aquatic resources and EFH would be relatively greater at the same locations as those discussed for surface water resources (section 4.13.2.4).

Activities such as dredging, pile driving, increased barge/vessel traffic, the release of ballast water or hull fouling, alternative of light regimes, stormwater runoff, the accidental spill of petroleum, and HDD installation could affect offshore water quality, fish, marine mammals, and aquatic organisms, including EFH, by disturbing the seafloor, suspending sediment in the water, dispersing the sediment over a wider area, and possibly re-suspending and re-distributing contamination. Similar to waterbodies, most construction-related impacts from projects in the cumulative impacts area for aquatic resources and EFH would be within the immediate area of the waterbody crossing, temporary (returning to normal shortly after in-stream construction and restoration is completed), and diminishing with distance downstream of the crossing. As such, cumulative impacts on surface waters would be dissipated the further they occur from the Projects. As discussed above, there is a potential for relatively greater cumulative impacts at the locations listed in section 4.13.2.3 where the pipeline projects overlap, as well as where liquefaction facility construction occurs in shared waterbodies.

The proposed Liquefaction Project, Sabine Pass Liquefaction Expansion and Marine Berth Expansion Projects, Golden Pass Export Terminal Project, and Driftwood LNG Project would all result in permanent impacts on aquatic species, including EFH and EFH-managed species. Dredging and pile driving during construction of the liquefaction facilities would disturb the estuarine bed and potentially result in mortality of some benthic and aquatic organisms if present. If PALNG's dredging and pile driving activities occur concurrently with those required for the other liquefaction projects, this impact would be exacerbated as a direct result of each of the projects' dredge activities and as sediments resettle following construction. Other than the Driftwood LNG Project, which is along the Calcasieu River, these impacts would occur within the existing SNWW and Port Arthur Canal, which are maintained (including periodic dredging) to support shipping for industrial activity. Additionally, benthos in soft bottom habitats recover rapidly through various reproductive and recolonization mechanisms. Impacts on estuarine fisheries, including those related to changes in benthic forage, would be temporary, with habitat use reverting to normal conditions following completion of construction.

Hydroacoustic impacts on fish, sea turtles, and other animals with gas-filled cavities as a result of pile driving may include injury, trauma, or displacement of these aquatic resources. It is expected that other proposed LNG projects along the Port Arthur Canal and SNWW, and within the cumulative impacts area (Sabine Pass Liquefaction Expansion and Marine Berth Expansion Projects, Golden Pass Export Terminal Project), may also generate hydroacoustic impacts on aquatic resources during their construction phase. If PALNG's project is approved within the next year, these project schedules would overlap (see table 4.13.1-1) and noise and vibration impacts would occur within the same impact zones. To reduce the cumulative impact associated with noise on aquatic resources, PALNG would implement construction methods such as pre-drilling pile holes, the use of a vibratory hammer, bubble curtains/cofferdams, and ramping driving activities. PALNG would also ramp pile driving activities by gradually increasing power and frequency over a period of time, which would allow sensitive aquatic species to depart the area before harmful underwater sound pressures are reached by the vibratory hammers.

Cumulative impacts would include those associated with the transit and operation of vessels serving the various project facilities while in the Port Arthur Canal and SNWW. NOAA Fisheries is currently reviewing the permit applications for the Liquefaction Project. Because the Port Arthur Canal was created and is maintained to support industrial activities, it is assumed that NOAA Fisheries would issue similar opinions for work conducted by the other projects in the Port Arthur Canal and SNWW. Also, because of these ongoing industrial activities, the quality of aquatic resources and EFH is not high. As such, cumulative impacts on aquatic resources and EFH affected by construction and operation of the proposed liquefaction facility would not be significant.

Impacts associated with construction and operation of the Texas Connector and Louisiana Connector Projects, as well as the other pipeline, industrial, waterway improvement or expansions, utility,

and residential projects in the cumulative impacts area would be limited to the duration of construction or shortly thereafter because water conditions would return to normal within days or weeks of completing construction. Benthic communities would take slightly longer to recover, but would be expected to recolonize within 3 years.

We expect that most of the projects in the cumulative impacts area would be designed to minimize impacts on waterbodies, and thus on fisheries and aquatic resources, to the extent practicable. For example, the FERC-regulated projects are required to adopt the waterbody and wetland crossing measures identified the Commission's Procedures, or variations that provide equal or greater protection. Any waterbodies that could not be avoided would be mitigated through implementation of BMPs and restoration practices in accordance with the respective federal, state, and local permitting agencies. Further, we expect that the Texas and Louisiana state permitting agencies would require any other applicable projects constructed in the geographic scope to adhere to state-mandated or recommended time of year restrictions for construction within waterbodies containing sensitive fish and mussel species.

PAPL would avoid most impacts by crossing EFH-designated wetlands and waterbodies using the HDD method. More specifically, PAPL would avoid 12.7 acres of EFH along the Texas Connector Project and 25.6 acres of EFH along the Louisiana Connector Project by crossing EFH-designated wetlands and waterbodies using HDD installation methods. Of the 10.4 acres along the Texas Connector Project and 1,534.7 acres along the Louisiana Connector Project to be impacted, PAPL would restore any EFH impacted areas within 6 months, thus avoiding permanent impacts on EFH. Any unavoidable impacts on EFH would be mitigated for through USACE wetland mitigation. Where projects overlap or intersect in the cumulative impacts area, there would be no impacts on EFH.

Based on adherence to the Commission's Plan and Procedures, which includes adopting agency-recommended time of year restrictions; the increase in the amount of estuarine water column habitat created during construction of the berthing area, MOF, and Pioneer Dock associated with the Liquefaction Project; the increased habitat for encrusting species; avoidance of designated-EFH areas by using the HDD method at over 50 locations; preliminary coordination with NOAA Fisheries; and the development of the wetland mitigation plans, construction and operation of the proposed Projects, when considered with the other projects in the cumulative impacts area, would not adversely or significantly contribute to cumulative impacts on aquatic resources, EFH, or EFH-managed species.

4.13.2.8 Special Status Species

Projects from table 4.13.1-1 that are within the cumulative impacts area for special status or protected species include all those within the same HUC-10 watershed(s) crossed by the proposed Projects. However, the majority of the listed projects are over 0.5 mile from the Projects and/or have undetermined timing (e.g., many of the commercial and residential developments). As such, cumulative impacts from these projects would be minor and would be dissipated the further they occur from the Projects. Potential cumulative impacts on special status species could be greater at the same locations as those discussed for wildlife resources (section 4.13.2.6), or, for marine species, where activities may be cumulative as discussed for aquatic resources (section 4.13.2.7).

The ESA prohibits the take of any threatened and endangered species except under federal permit or take statement. A federal permit or take statement is issued only if individual and cumulative impacts on a listed species are not significant. A such, the other federal projects in the cumulative impacts area are required to comply with section 7 of the ESE to ensure construction and operation of the facility would not jeopardize the continued existence of federally listed species. Non-federal projects are also required to adhere to section 10 of the ESA, although the FWS has a different mechanism for evaluation and minimizing impacts.

As discussed in section 4.7, we have determined that the Projects would have *no effect* on 8 federally listed species or their critical habitat, and *would not adversely affect* 19 federally listed species and/or their designated critical habitats. These determinations are based on consultations with the FWS and NMFS, and commitments from PALNG and PAPL, to complete outstanding biological surveys and, if the species is identified during preconstruction surveys or encountered during construction, to adopt species-specific avoidance or conservation measures recommended by the FWS and/or NMFS. As such, no additional mitigation is proposed and the Projects would not contribute to cumulative impacts on these species.

Additionally, marine mammals are federally protected under the MMPA. While many marine mammals are listed as threatened or endangered under the ESA, the MMPA provides additional protections for all marine mammals. The MMPA prohibits, with certain exceptions, the take of marine mammals. Where incidental take by harassment cannot be avoided, NOAA has the authority to issue harassment authorizations, so long as the effects are not significant on the species. Thus, given the regulatory requirements, the Projects would not have an individual or cumulatively significant impact on marine mammals.

Protection of threatened, endangered, and other special status species is part of the various state permitting processes or resource reviews. As such, cumulative impacts on such species would be specifically considered and reduced or eliminated through conservation and mitigation measures identified during those relevant processes and consultations.

4.13.2.9 Land Use, Recreation, and Visual Resources

Land Use

Projects from table 4.13.1-1 that are within the cumulative impacts area for land use generally include the same ones discussed above for geologic resources.

Similar to vegetation (see section 4.13.2.6), cumulative impacts on land uses from the Projects and other actions in the cumulative impacts area could occur from construction activities such as clearing and grading, and construction of buildings, structures and/or impervious surfaces (e.g., building pads, access roads). The duration of impacts on land use would depend on the type of land cover affected and the rate at which the land can be restored to its preconstruction use and condition after construction. Pipeline project impacts on agricultural land, transportation land, residential land, commercial/industrial land, and open water would be temporary because they would return to their preconstruction uses and conditions almost immediately after construction. Pipeline project impacts on open lands, emergent wetlands, and scrub-shrub wetlands would be short to long term because those areas likely would require 1 to 5 years to regain preconstruction use and composition. Pipeline project impacts on forested uplands and wetlands would be long term or permanent because trees would take up to 50 years or longer to become reestablished and would not be allowed to become reestablished in directly over the pipeline. Impacts where new buildings, structures, and/or impervious surfaces are installed also would be permanent because they would permanently change the underlying land use. In general, the cumulative impacts of the Texas Connector and Louisiana Connector Projects on land use, when combined with the other projects identified above, would be similar to that described for vegetation (section 4.13.2.6).

With the implementation of the Commission's Plan and Procedures, the adoption of the HDD method at several locations (over 50 for the pipeline projects), the existing land use changes that have already occurred as a result of previous projects, and the acquisition of federal and state permits, construction and operation of the proposed Projects, when considered with the other projects in the cumulative impacts area, would not contribute significantly to cumulative impacts on land use.

Recreation

Projects from table 4.13.1-1 that are within the cumulative impacts area for recreation include all those within 0.25 mile of the Projects. However, the majority of the listed projects are over 0.5 mile from the Projects and/or have undetermined timing (e.g., many of the commercial and residential developments). As such, cumulative impacts from these projects would be minor and would be dissipated the further they occur from the Projects.

The Texas Connector Project would cross the J.D. Murphree WMA at four locations and private property managed for hunting would be crossed between MPs 65.5 and 67.2 along the Louisiana Connector Project. As listed in section 4.13.2.3, the Driftwood Pipeline Project, Golden Pass Pipeline Project, Lake Charles Expansion Project, and South Texas Expansion Project would be collocated with and/or intersected by the Texas Connector or Louisiana Connector Projects. However, there are no designated recreational areas or facilities within the cumulative impacts area at these locations. As such, the pipeline projects would not have cumulative impacts on recreation when considered with other projects in the cumulative impacts area.

Visual Resources

Projects from table 4.13.1-1 that are within the cumulative impacts area for visual resources include all those within 5 miles of the Liquefaction Project and 0.5 mile of the pipeline projects.

The visual character of the proposed liquefaction facility would be similar to and consistent with the visual character of the adjacent existing industrial facilities surrounding the project area. The tops of the three LNG storage tanks would be 256 feet above grade, which would create a strong vertical visual contrast across a relatively flat existing landscape. The LNG vessel berths, offloading facilities, and utility buildings would also alter the existing viewshed. The storage tanks and liquefaction facilities would not be screened and would result in long-term and moderate visual impacts on views from the eastern edge of the J.D. Murphree WMA. Impacts on views for those traveling on SH 87 and SH 82 and visiting Pleasure Island and the Port Arthur Canal, when combined with other projects in the cumulative impacts area (Sabine Pass Liquefaction Expansion and Marine Berth Expansion Projects, Golden Pass Export Terminal Project), would be relatively minor due to existing industrial facilities surrounding the site.

The pipeline facilities proposed as part of the Texas Connector and Louisiana Connector Projects would be in rural areas and collocated with other existing pipeline rights-of-way for much of their routes. The visual impact of other projects in the cumulative impacts area would occur primarily from the conversion of forested land to scrub-shrub or herbaceous vegetation types. Permanent visual impacts would occur in developed areas where permanent structures (e.g., houses, buildings, guardrails) would remain. Whereas these permanent visual impacts may be locally noticed, generally they would not be inconsistent with the existing visual character of the area.

As discussed in section 4.13.2.6, cumulative impacts on vegetation would be greatest where tree clearing would occur and where the Texas Connector Project and/or Louisiana Connector Project would be collocated or intersect with Driftwood Pipeline Project, Golden Pass Pipeline Project, Lake Charles Expansion Project, and South Texas Expansion Project. Where projects overlap or intersect in the cumulative impacts area, its estimated (based on an average 50-foot-wide operational right-of-way) that about 45 acres of forest would be cleared for operation.

The visual character of the vegetation and land uses near the Texas Connector and Louisiana Connector Projects have been affected by past and ongoing agricultural processes, oil and gas development, and construction and maintenance of existing roads, railroads, natural gas and oil pipelines, utility lines,

and electrical transmission line rights-of-way. The oil and gas development, transportation projects, residential development projects, and nonjurisdictional project-related facilities listed in table 4.13.1-1 would also likely be required to implement mitigation measures designed to minimize the potential for long-term erosion and resource loss, increase the stability of site conditions, and revegetate disturbed soils, thereby minimizing the degree and duration of the impacts of these projects.

Given the proposed Projects' mitigation measures described in earlier sections and the existing, surrounding developed areas, cumulative impacts on visual resources would mostly be limited to the construction phase (except as noted above), cumulative impacts on visual resources resulting from the construction and operation of the Projects when combined with the other projects in the cumulative impacts area would not contribute significantly.

4.13.2.10 Socioeconomics

Socioeconomic Conditions

Every project and action listed in table 4.13.1-1 would occur within a similar county or parish as the Projects, and cumulative impacts could occur where the timing of those other effects overlap the Projects effects. Although the timing of many of these projects is unknown (e.g., transportation and residential projects), impacts on population and employment; demand for housing and public services; transportation and tourism; and government revenue from sales and payroll taxes would be temporary because these impacts would be limited to the period of construction.

Construction and operation of the Projects could result in changes to population and employment; increased demand for housing and public services; transportation and tourism impacts; and an increase in government revenue associated with sales, payroll, and property taxes. Impacts on government revenue associated with property taxes would be long term to permanent because PALNG and PAPL, as well as the other FERC-regulation projects, would pay ad valorem property tax on its pipeline indefinitely.

The LNG export projects listed in table 4.13.1-1 would have the greatest impact on the social and economic conditions within the cumulative impacts area (i.e., counties and parishes) because they require a large numbers of workers. For example, if the two nearest LNG export projects, Golden Pass and Sabine Pass, had peak construction periods occurring at the same time as PALNG's Liquefaction Project, an influx of over 8,350 construction personnel would occur in Jefferson and Orange Counties, Texas and Cameron and Calcasieu Parishes, Louisiana. Because the proponents of these projects have committed to hiring up to 40 percent of its workforce from local populations, the cumulative effect of over 5,000 persons into a community would be a reduction in local and perhaps regional unemployment. The abundance of jobs resulting from the Liquefaction Project when combined with the other LNG export projects in the cumulative impacts area would in turn lead to an influx of non-local workers, which would impact transient housing Projects' geographic scope area, and could increase the need for some public services, such as police, fire, and medical services.

A large workforce for the simultaneously constructed projects would have a beneficial cumulative effect on revenues for the states, counties, and parishes due to expenditures for services and materials for the projects, increased expenditures by local workers, and expenditures by the non-local workforce and any family members accompanying the non-local workers. The states, counties, and parishes would also receive a substantial increase in property taxes from the combined projects.

While construction of the three nearest LNG projects (PALNG's Liquefaction Project, Golden Pass, Sabine Pass) could result in the influx of over 5,000 persons, this would only represent a 1 to 2 percent increase of the total populations of Jefferson and Orange Counties, Texas. Therefore, cumulative impacts

on socioeconomic conditions from construction and operation of the Liquefaction Project, when combined with the other projects in the cumulative impacts area, would not be significant.

Marine Transportation

The cumulative impact area for marine transportation is limited to the Liquefaction Project and includes the Port Arthur Canal and SNWW. As described in section 4.9.6.1, during construction, PALNG estimates between 100 and 200 deliveries would be needed per month during the first 25 months of construction or about 3 to 6 barges per day. Of the other LNG export and marine projects in the cumulative impacts area and located in the Port Arthur Canal or SNWW, only the Liquefaction Project would be new as the other projects involve expansions or modifications of existing facilities. The Port Arthur Canal was specifically created to provide deepwater access for maritime commerce and is maintained by regular dredging (SNND, 2017a). Marine traffic in the area is already over 125 million tons of cargo shipments annually (SNND, 2017b). Therefore, deliveries during construction of PALNG's liquefaction facility when combined with other projects in the cumulative impacts area would not cause significant cumulative impact when compared to the total amount of traffic in the Port Arthur Canal and SNWW.

In addition to commercial barge traffic, there is also traffic associated with commercial offshore fishing vessels, although commercial fishing traffic in the SNWW is minor (USACE, 2011). Recreational fishing also occurs along the SNWW. The impacts of construction on marine traffic in the SNWW would be minor and temporary to short-term, concentrated during the first 25 months of project construction.

Concurrent construction of the other projects in the cumulative impacts area and specific to the Port Arthur Canal and SNWW would result in cumulatively increased congestion and vessel travel times. However, these impacts would be temporary, and the extent of the impacts would depend on the frequency and number of deliveries being made for various projects at any given time during the respective construction periods.

During operation of the Liquefaction Project, PALNG estimates about 180 transits of LNG vessels per year from the liquefaction facility. The impacts of operation of the Liquefaction Project on marine traffic in the Port Arthur Canal and SNWW, as well as the other projects in the cumulative impacts area, would be governed by USCG requirements. Therefore, cumulative impacts on marine transportation from operation of the Liquefaction Project, when combined with the other projects in the cumulative impacts area, would not be significant. Impacts on marine transportation from construction and operation of the proposed pipelines are not anticipated.

Traffic

The greatest potential for cumulative impacts on vehicular traffic and roads during construction and operation of the Projects is associated with the proposed liquefaction facility. During construction of the liquefaction facility, along with the relocation of SH 87 and the other existing utilities currently on the eastern side of the proposed liquefaction site, roadways in the area would experience a substantial increase in daily vehicle trips as a result of material and equipment deliveries and commuting of construction personnel to and from the project sites. AECOM, on behalf of PALNG, commissioned a traffic impact study focused on the intersection of SH 87 and SH 82. The traffic study concluded that the intersection of SH 87 and SH 82 remained at a stable traffic flow with a high degree of freedom to select speed and operating conditions but with some influence from other users after taking into account the workforce and ground-based delivery traffic projected to occur at the Liquefaction Project site during construction and operation (see section 4.9.6.1). Due to the fact that the LOS on the roads in the project study area would remain at current acceptable levels of service, the impacts on the roadways would be minor, temporary, and not likely to result in significant cumulative impacts on local traffic.

Construction-related traffic associated with the proposed pipelines would result in only minor, temporary impacts on traffic, would be relatively short term at any given location, and would not be in close proximity to other known large projects. Construction of the pipeline projects, as well as the commercial and residential projects in the cumulative impacts area, could contribute to cumulative traffic, parking, and transit impacts if other projects are scheduled to take place at the same time. PAPL would use major highways and the construction right-of-way, to the extent practicable, to reduce impacts on local roadways. It is likely the other projects listed in table 4.13.1-1 would also use existing public roads. In addition, increased use of local roadways from multiple projects could accelerate degradation of roadways and require early replacement of road surfaces. However, PAPL and the other project sponsors in the geographic scope area would be required to adhere to local road permit requirements (which may have provisions for road damage repairs or compensation) and road weight restrictions.

We received a comment on the draft EIS from Sabine Pass LNG, L.P., Sabine Pass Liquefaction, LLC, and Cheniere Creole Trail Pipeline, L.P. (also referred to as Cheniere Entities) stating cumulative impacts associated with FERC approval of construction adjacent to and on the same site as construction and commissioning associated with Sabine Pass Trains 5 and 6 were not addressed. In PAPL's supplemental filing dated November 30, 2018, PAPL expressed its commitment to meet with the Cheniere Entities. PAPL stated that the parties have begun discussions and are scheduled to have further discussion during the first week of December, in the expectation that the matters regarding construction traffic would be resolved to all parties' satisfaction.

On November 30, 2018, Sabine Pass LNG, L.P., Sabine Pass Liquefaction, LLC, Cheniere Creole Trail Pipeline, L.P. (collectively, Sabine Pass and Creole Trail), PALNG, and PAPL filed a joint letter with FERC stating that the project teams are scheduled to meet and that the parties are "optimistic that further refinement of the issues and a mutual resolution can be reached before Commission issuance of the Final Environmental Impact Statement for the Project. For this reason, the undersigned parties request that the Commission Staff withhold action on the Sabine Pass and Creole Trail requested condition and cumulative impacts analysis pending the outcome of these discussions among the parties."

On December 17, 2018 and January 16, 2019, the affected parties filed joint letters updating the FERC on the status of the parties' consultations, noting that as a result of a December 5, 2018 and January 10, 2019 meeting, the parties reached an initial agreement on procedures and coordination protocols to ensure that the project would not impact Sabine Pass or Creole Trail construction and operation.

The measures described above, in addition to other potential measures such as controlled shift times and coordination among the other projects to reduce peak hour vehicular trips, traffic signal coordination/timing, intersection and road improvements, and use of law enforcement to control traffic, would help mitigate for and alleviate cumulative impacts from the other area projects, if needed. With these mitigation options available, cumulative impacts on land transportation would not be significant.

4.13.2.11 Cultural Resources

Projects from table 4.13.1-1 that are within the cumulative impacts area for cultural resources include those that overlap the project work area or, for indirect effects, are closely adjacent. This generally corresponds to the same projects considered for geologic and soils resources, and the SNWW Channel Improvement Project. Those that are defined as federal actions (e.g., all FERC-regulated projects) would have to adhere to section 106 of the NHPA and include mitigation measures designed to avoid or minimize additional direct impacts on cultural resources. Where direct impacts on significant cultural resources are unavoidable, mitigation (e.g., recovery of data and curation of materials) would take place before construction. Non-federal actions would need to comply with any mitigation measures required by the affected states.

The Texas SHPO concurred with PALNG that no historic properties would be affected by the Liquefaction Project, and we also concur. However, as noted above, cumulative impacts on cultural resources could occur where the Texas Connector or Louisiana Connector Projects would be collocated with or overlap portions of the Driftwood Pipeline Project, Golden Pass Pipeline Project, Lake Charles Expansion Project, and South Texas Expansion Project. PAPL has consulted with the Texas and Louisiana SHPOs in regard to the impact of the pipeline projects. Cultural resource surveys have been completed where access was allowed and survey reports prepared. Where survey access was denied, surveys would be completed once access is obtained. PALNG and PAPL have developed project-specific plans to address unanticipated discoveries of cultural resources and human remains during construction.

Because it is not known how other foreseeable actions would affect cultural resources, we cannot make any definitive quantitative statements about the nature of cumulative impacts on historic properties. However, we can conclude that given the state and federal laws and regulations that protect cultural resources mentioned previously, it is not likely that there would be significant cumulative impacts on historic properties resulting from the Texas Connector and Louisiana Connector Projects when considering the other projects in the cumulative impacts area.

4.13.2.12 Air Quality and Noise

Air Quality

Construction Cumulative Impacts

From table 4.13.1-1, present and/or reasonably foreseeable projects within the defined geographic scope for cumulative air impacts (0.25 mile) and with a similar schedule as the Projects include the Golden Pass Export Terminal Project, Sabine Pass Liquefaction Expansion and Marine Berth Expansion Projects, Driftwood LNG Project (pipeline aspects only), Lake Charles Expansion Project, South Texas Expansion Project, CIP, and electric distribution line to the proposed Louisiana Connector Project's compressor station.

Project construction would involve the use of heavy, earthmoving equipment, on-road and off-road vehicles, generators, air compressors, and other equipment that would generate air emissions largely through combustion of diesel fuel or gasoline. Construction would also generate particulate matter in the form of fugitive dust. Construction emissions would cease with the end of construction; thus, the period of influence for cumulative air quality impacts during construction of the Texas Connector and Louisiana Connector Projects would be temporary (weeks to months at each location) and of the Liquefaction Project would be short term (5 years). In addition, construction emissions would also disperse within the airshed and diminish in concentration with distance from active construction areas.

Construction of the Projects would temporarily increase air quality impacts surrounding the construction workspaces due to emissions from the combustion engines used to power construction equipment, vehicle emissions traveling to and from the construction sites, and fugitive emission dust resulting from equipment movement on dirt roads and earth-disturbing activities. The potential for cumulative construction emissions impacts would be greatest during site preparation when fugitive dust production would likely be at its peak. Emissions from equipment engines and vehicles operating concurrently for the different projects would also result in cumulative air quality impacts in the local area. PALNG and PAPL and the sponsors of the FERC-regulated projects would implement mitigation measures to minimize construction impacts on air quality such as applying water or dust control chemicals to minimize fugitive dust, and by complying with applicable EPA mobile source emission performance standards and using equipment manufactured to meet these standards. It is assumed that the sponsors of or

permitting authorities associated with the other projects in the region of influence would also implement or require measures to minimize air quality impacts and keep them within their respective permitted levels.

Construction of the liquefaction trains would occur in multiple phases. If the project is approved, the first train would begin operations as early as the 1st Quarter of 2023 and the second train would begin operations as early as the 3rd Quarter of 2023. Emissions from commissioning and operating the first train would overlap with construction emissions of the second train.

Based on the short-term nature of construction and the implementation of appropriate mitigation measures, the cumulative impacts on air quality due to construction of these facilities would not be significant. Local residents near the liquefaction site and/or pipeline projects and within the impact area may experience localized minor to moderate elevated levels of fugitive dust and tailpipe emissions near the construction areas.

Due to the limited amount of combustion engines required to construct transmission lines and the short duration of construction activities associated with construction of the nonjurisdictional facilities (i.e., electric transmission lines to the compressor station), we determined that cumulative impacts on air quality due to construction of the supporting facilities would be negligible.

Operational Cumulative Impacts

Cumulative impacts associated with the operation of the aboveground facilities associated with the Projects were evaluated according to the significant impact area of the proposed facilities, determined through a significant impact modeling assessment. For the Liquefaction Project, we considered cumulative impacts on air quality from reasonably foreseeable, major sources of air emissions out to 50 kilometers (31 miles), as this is the maximum distance used in air quality modeling for PSD-applicable sources. Using these parameters, 15 projects would have operational emissions with the potential to contribute to cumulative air quality impacts with the proposed Projects (see table 4.13.1-1 and figure 4.13-1). Some of the larger of these projects, and most likely to contribute to cumulative impacts for operational air emissions, are the Golden Pass Export Terminal Project, the Driftwood LNG Project, and the Sabine Pass Terminal Expansion and Marine Berth Expansion Projects. The Golden Pass Export Terminal Project and Sabine Pass Terminal Expansion and Marine Berth Expansion Projects are expansion projects of existing facilities currently contributing to air quality impacts. Other projects listed in the table, such as the residential developments and the CIP are within the cumulative impacts area; however, they would not include major sources of air emissions and thus would not contribute to cumulative impacts and are not discussed further.

Emissions from the indefinite operational of the Liquefaction Facility, the North Compressor Station (associated with the Texas Connector Project), and the Louisiana Connector Compressor Station would contribute to a cumulative impact on air quality. Several current or planned actions exist near each of these gas-fired aboveground facilities and would result in cumulative air quality impacts during operation.

Air quality impact modeling of the operational emissions of each of these facilities (the North Compressor Station, the Louisiana Connector Project compressor station, and the Liquefaction Terminal) are discussed in detail in section 4.11.1.3. In all three cases, modeled concentrations were first compared to SILs for criteria air pollutants to determine which, if any, could be of meaningful impact to air quality. When modeled emissions exceeded the SILs, a subsequent full cumulative model including potential operational emissions from major facilities within 50 kilometers were performed.

The Texas Connector Project's North Compressor Station models and assumptions indicated no meaningful impact on air quality, and table 4.11.1-10 presents the results of the modeling analyses, including the current ambient monitored data, the facility impact, the combined concentration, and a comparison with the NAAQS. We therefore conclude the Texas Connector Project would not have a significant cumulative impact on air quality.

The emissions from PAPL's Louisiana Connector Project compressor station exceeded the SILs for 1-hour NO_2, 24-hour $PM_{2.5}$, and 24-hour PM_{10} NAAQS. A full cumulative impact analysis for these pollutants is summarized in table 4.11.1-8 and results showed an exceedance of the NAAQS for 1-hour NO_2. This indicates there may be a significant cumulative impact on air quality based on the potential to emit of nearby industrial emission sources. As described in section 4.11.1.3, subsequent modeling showed that the Louisiana Connector Project's compressor station would not contribute to a violation of the 1-hour NO_2 NAAQS and would not significantly contribute to cumulative impacts.

The emissions from PALNG's Liquefaction Terminal exceeded the SILs for SO_2, NO_2, PM_{10}, or $PM_{2.5.}$ When all existing and planned projects are included, the concentrations of NO_2 1-hour and $PM_{2.5}$ 24-hour exceed the NAAQS, as shown in table 4.11.1-13. This indicates there may be a significant cumulative impact on air quality based on the potential to emit of nearby industrial emission sources. As described in section 4.11.1.3, subsequent modeling showed that the Liquefaction Project's facilities would not contribute to a violation of the 1-hour NO_2 or $PM_{2.5}$ 24-hour NAAQS and would not significantly contribute to cumulative impacts.

Projects that would potentially be constructed in the future and are considered to be major sources of air emissions would be required to conduct a similar PSD analysis. Should operation of a new project result in a significant impact on air quality, TCEQ and LDEQ would enforce operational limitations or require emissions controls that ensure the facility's compliance with each state's SIP and attainment with the NAAQS. In addition, PALNG and PAPL would be required to comply with permit conditions during operation of the facility and incorporate the required controls to limit the emission of certain criteria pollutants, HAPs, and/or GHGs.

The cumulative modeling analysis of the "potential to emit" (emission limits by permit) of nearby industrial emission sources showed past and present activities may have already resulted in exceedances of the NAAQS in the vicinity of the Liquefaction Terminal and Louisiana Connector Compressor Station and the Projects would be incrementally adding to the existing condition. However, the Project area is designated as in "attainment" with NAAQS based on ongoing monitoring of actual air quality. Based on the detailed modeling presented in section 4.11.1.3, we conclude that the Liquefaction Project facilities and the Louisiana Connector Project's compressor station would not significantly contribute to cumulative operational air impacts. In other areas of the Projects, we conclude there would not be significant cumulative operational air impacts.

Noise

The region of influence for cumulative effects of construction-related noise was conservatively estimated to be an area about 0.5 mile around the liquefaction facility, compressor stations, HDD sites, and pile driving. For operational noise impacts, the geographic scope was set at 1 mile. Present and/or reasonably foreseeable projects listed in table 4.13.1-1 that are within these areas and with a similar schedule as the Projects include the Driftwood LNG Project (pipeline aspects only), Lake Charles Expansion Project, South Texas Expansion Project, CIP, the SNWW Channel Improvement Project, and the electric distribution line to the proposed Louisiana Connector Project's compressor station.

Construction Cumulative Impacts

Construction of the Projects would require the use of heavy equipment, HDD drilling rigs, marine vessels, pile driving equipment, and other equipment and vehicles, all of which would generate noise. Other actions in the Projects area would also generate noise, and cumulative impacts could occur where the location and timing of those noise effects overlap the Projects noise effects. As discussed in section 4.11.2.3, the Projects' construction noise would attenuate quickly as the distance from the construction site increases.

The greatest potential for cumulative construction-related noise impacts would be from internal combustion engines and pile driving activities during construction. The estimated noise generated from construction associated with the Liquefaction Project and Texas Connector Project's South Compressor Station could reach 60 dBA at the nearest NSAs during pile driving activities. This value exceeds our criterion of 55 dBA L_{dn}. However, pile driving would only be conducted for 10 hours a day, 6 days a week. Estimated noise generated from construction associated with the Texas Connector and Louisiana Connector Projects would not exceed 90 dBA at 50 feet when equipment is operating at full load. Ambient sound levels near the Louisiana Connector Project's compressor station is 57 dBA, which is higher than our recommended 55 dBA. Similarly, ambient sound levels near several of the HDD entry and exit locations exceed our recommended 55 dBA L_{dn}. As discussed in section 4.11.2.3, an acoustical analysis was performed determine the noise level attributable to the construction of the Louisiana Connector Project's compressor station and HDD sites. During some construction activities, noise levels at the nearest NSA would exceed our 55 dBA L_{dn} criterion. However, the due to the high ambient noise levels at these NSAs, the project-related noise impacts would be less than 10 dBA above existing noise levels. Based on the analysis above, the temporary nature of construction, and compliance with our criterion of 55 dBA L_{dn} or less than a 10 dBA increase, we conclude that construction noise at the aboveground facility sites would not have a significant impact on nearby NSAs.

Operational Cumulative Impacts

The estimated operational noise level of the liquefaction facility at the nearest NSA (about 0.95 miles to the northeast) is 54 dBA L_{dn}. The ambient noise level at this NSA is currently 64 dBA L_{dn}. Operation of the liquefaction facilities would increase this ambient noise level to 64.4 dBA L_{dn}, which exceeds our recommended level of 55 dBA L_{dn}. The threshold of perception of change in sound levels for human hearing is about 3 dB; therefore, the increase would be unnoticeable or barely noticeable at the nearest NSA.

Noise decreases logarithmically with increasing distance from a noise source; therefore, cumulative operational noise impacts would only occur where other facilities or activities would occur very close to the Projects' noise-emitting facilities, i.e., the liquefaction facility and compressor stations. Also, the cumulative noise during operation of some of the projects and facilities identified above would likely be less than during construction because they would generate little to no noise after they are built. We did not identify any projects that would contribute to operational noise impacts in the cumulative impact area for the North Compressor Station and the Louisiana Connector Project's compressor station. The project most likely to result in and contribute to cumulative noise impacts based on its proximity to the Liquefaction Project is the CIP. While the channel improvement project and any maintenance dredging of the SNWW could contribute to the cumulative noise impact of NSAs near the liquefaction site, the effect would be temporary and limited to when dredging is occurring very close by. As such, we conclude that operation of the Projects would not contribute significantly to existing noise in the area.

4.13.2.13 Climate Change

Climate change is the change in climate over time, whether due to natural variability or as a result of human activity, and cannot be represented by single annual events or individual anomalies. For example, a single large flood event or particularly hot summer are not indications of climate change, while a series of floods or warm years that statistically change the average precipitation or temperature over years or decades may indicate climate change. However, recent research has begun to attribute certain extreme weather events to climate change (U.S. Global Change Research Program, 2018).

Climate change has resulted in a wide range of impacts across every region of the country. Impacts extend beyond atmospheric climate change alone and include changes to water resources, agriculture, ecosystems, and human health. The United States and the world are warming; global sea level is rising and acidifying; and certain weather events are becoming more frequent and more severe. These changes are driven by accumulation of GHG in the atmosphere through combustion of fossil fuels (coal, petroleum, and natural gas), combined with agriculture and clearing of forests. These impacts have accelerated throughout the end 20th and into the 21st century (U.S. Global Change Research Program, 2018). Although climate change is a global concern, for this analysis, we focus on the potential cumulative impacts in the Projects area.

The following observations of environmental impacts are attributed to climate change in the Gulf Coast and Southeast regions with a high or very high level of confidence: [76,77,78,79]

- The region's climate is generally warm and wet, with mild and humid winters. Since 1970, average annual temperatures in the region have increased by about 2 °F. Higher average temperatures are occurring in the summer months. There have been increasing number of days above 95 °F and decreasing number of extremely cold days since the 1970s.

- Average annual temperatures in the region are projected to increase by 4 to 8 °F by 2100.

- Most areas, with the exception of southern Florida, are getting wetter. Autumn precipitation has increased by 40 percent since 1948. The number of heavy downpours has increased in many parts of the region.

- Despite increases in fall precipitation, the area affected by moderate and severe drought, especially in the spring and summer, has increased since the mid-1970s.

- The coasts will likely experience stronger hurricanes and sea level rise. Storm surge could present problems for coastal communities and ecosystems.

- Many coastal areas in Texas and Louisiana are subsiding; local land elevation is sinking relative to sea level. Combined with global sea level rise, local subsidence will lead to a higher "relative" change in sea level at the local scale. Observed subsidence rates in the

76 Melillo, Jerry M., Terese (T.C.) Richmond, and Gary W. Yohe. Eds. 2013. 2014: Climate Change Impacts in the United States: The Third National Climate Assessment. U.S. Global Change Research Program, 841 pp. doi:10.7930/J0Z31WJ2.
77 Global and Regional Sea Level Rise Scenarios for the United States, NOAA January 2017
78 U.S. Global Change Research Program, 2017: *Climate Science Special Report: Fourth National Climate Assessment, Volume I*
79 U.S. Global Change Research Program. 2018. *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II*

southeast are significant. The highest rise in relative sea level in the United States is found in Louisiana (0.3 to 0.4 inch per year) and Texas (0.2 to 0.3 inch per year).

- Higher temperatures increase evaporation and water loss from plants. Projected increases in temperature will likely increase the frequency, duration, and intensity of droughts in the area.

- Projected changes in surface water runoff to the coast and groundwater recharge will likely allow saltwater to intrude and mix with shallow aquifers in some coastal areas of the Southeast, particularly in Florida and Louisiana.

- If the region increases groundwater pumping to offset water shortfalls, then aquifers will be further depleted. In the long term, the depletion of groundwater supplies would place additional strain on surface-water resources.

- Higher temperatures will likely increase heat stress, respiratory illnesses, and heat-related deaths in the Southeast. High temperatures also correlate with poor air quality and pose a risk to people with respiratory problems. While the number of cold-related deaths is projected to decrease, net climate-related mortality will likely increase.

- Increased flooding and hurricanes could present extreme public-health and emergency-management challenges.

- The spread of some types of bacteria has been linked to warmer temperatures. For example, food poisoning from eating shellfish infected with *Vibrio* spp. bacteria is reported both a month earlier and a month later than historically observed, increasing the infection report period by two months. As temperatures increase, the frequency of these types of shellfish-borne disease outbreaks in coastal waters is likely to increase.

The rate and magnitude of expected changes would exceed those experienced in the last century. In November 2018, Volume II of the Fourth National Climate Assessment was issued by the U.S. Global Change Research Program. The National Climate Assessment, a report mandated by the Global Change Research Act of 1990, assesses the science of climate change and variability and its impacts across the United States. Volume II focuses on societal response strategies (mitigation and adaptation), providing examples of actions underway in communities across the United States to reduce risk, increase resilience, and improve livelihoods (U.S. Global Change Research Program, 2018).

The GHG emissions from construction and operation of the Projects are presented in section 4.11.1. Current LDEQ and EPA regulations require a GHG BACT analysis to ensure the project employs the best available technologies to address the impacts of GHG emissions. Proposed GHG BACT for the liquefaction facilities includes use of low carbon fuels, combustion equipment (turbines, thermal oxidizers, emergency back-up and firewater pump engines) designed as operational energy efficient in accordance with EPA GHG BACT standards, and a leak detection and repair program for monitoring piping and storage tank components to limit the impact of CH_4 emissions. The North Compressor Station (associated with the Texas Connector Project) and the Louisiana Connector Project's compressor station are not PSD major sources and therefore, GHG BACT analyses are not required for this facility. However, the installation of new turbines and internal combustion engines would also be designed for energy efficient operations.

Construction and operation emissions from the Projects would increase the atmospheric concentration of GHGs, in combination with past and future emissions from all other sources, and contribute incrementally to future climate change impacts. There is no generally accepted methodology to

estimate what extent a project's incremental contribution to greenhouse gas emissions would result in physical effects on the environment for the purposes of evaluating the Projects' impacts on climate change, either locally or nationally.

The states of Louisiana and Texas have not set any GHG reduction or climate goals. Because we cannot determine the Projects' incremental physical impacts due to climate change on the environment, we cannot determine whether or not the Projects' contribution to cumulative impacts on climate change would be significant.

4.13.2.14 Safety

In general, impacts on reliability and public safety would be mitigated using the DOT Minimum Federal Safety Standards in 49 CFR 192, which are intended to protect the public and to prevent natural gas facility accidents and failures. In addition, PALNG's and PAPL's construction contractors would be required to comply with the OSHA and Health Regulations for Construction in 29 CFR 1926. Those rules and regulations ensure that the applicable design and engineering standards are implemented to protect the public and avoid or minimize the potential for accidents and failures.

Emergency response time is a key aspect of public health and safety. Key emergency services are provided by police departments, fire departments, and hospitals in area surrounding the liquefaction facility, and those services would expand to include the associated proposed liquefaction facility. In accordance with our regulations, PALNG and PAPL would prepare a comprehensive plan that identifies the cost sharing mechanisms for funding these emergency response costs. This plan would minimize the potential for a cumulative public safety impact associated with the project.

The other liquefaction projects listed in table 4.13.1-1, if authorized, constructed, and operated, would each also have to prepare and implement a similar comprehensive plan to provide emergency services. In addition, we anticipate that the other major projects in the Projects area would include emergency services within their facilities, and have ERPs developed with the appropriate agencies. Emergency responses at any of those facilities could temporarily stress emergency services in the area, but we would not expect them to result in a long-term significant impact on those services. In the unlikely event of major emergencies at several of the facilities at the same time, there could be a short term but significant cumulative impact on emergency services within Jefferson and Orange Counties, Texas and Cameron, Calcasieu, Jefferson Davis, Beauregard, Allen, Evangeline, and St. Landry Parishes, Louisiana. That impact could be mitigated by assistance from emergency service providers from surrounding counties and parishes.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY OF THE ENVIRONMENTAL ANALYSIS

The conclusions and recommendations presented in this section are those of the FERC environmental and engineering staff. Our conclusions and recommendations were developed with input from the USACE, USCG, DOE, EPA, and DOT PHMSA as cooperating agencies. A cooperating agency may adopt the EIS per 40 CFR 1506.3 if, after an independent review of the document, it concludes that its permitting requirements and/or regulatory responsibilities have been satisfied. However, each cooperating agency would present its own conclusions and recommendations in its respective and applicable record of decision. Otherwise, it may elect to conduct its own supplemental environmental analysis, if necessary.

We determined that construction and operation of the Projects would result in some adverse environmental impacts. Most of these environmental impacts would be temporary or short term during construction and operation, but long-term and permanent environmental impacts on wetlands, EFH, vegetation, land use, visual resources, and air quality and noise would also result from the Projects. However, if the Projects are constructed and operated in accordance with applicable federal laws and regulations, the mitigating measures discussed in this EIS, and our recommendations, these impacts would be reduced to less than significant levels. This determination is based on a review of the information provided by PALNG and PAPL and further developed from data requests; field investigations; scoping; literature research; alternatives analysis; and contacts with federal, state, and local agencies as well as Indian tribes and individual members of the public. As part of our review, we developed specific mitigation measures that we determined would appropriately and reasonably reduce the environmental impacts resulting from construction and operation of the Projects. We are therefore recommending that our mitigation measures be attached as conditions to any authorization issued by the Commission. A summary of the anticipated impacts and our conclusions is provided in the following subsections, by resource area.

5.1.1 Geology

The overall effect of the Projects on topography and geology would be minor. Geologic impacts would be limited to construction activities and would include disturbance of slopes within the work areas. All areas disturbed during construction would be returned as closely as possible to preconstruction contours during cleanup and restoration.

In general, the potential is low for geologic hazards such as earthquakes, surface faults, soil liquefaction, subsidence, karst, landslides, or a seismically generated tsunami or seiche to significantly affect construction or operation of the proposed Projects. However, some hazards such as severe flooding, storm surges, high winds, erosion along the shoreline and docking facilities, and potential site access interruptions could affect the Liquefaction Project during operation. In addition to structural and mechanical elements that have been designed into the liquefaction facilities, PALNG would construct an earthen levee around the entire Liquefaction Project site to further minimize these hazards and monitor foundations and other critical facilities to ensure they are maintained within acceptable limits. Along the pipelines, PAPL would implement buoyancy control measures such as concrete-coated piping, anchors, or aggregate-filled saddle bags to weigh the pipe in wet areas, and would periodically monitor the pipeline right-of-way during operation to aid in identification of subsidence-related conditions that may require maintenance.

Construction of the Projects would not affect any known mineral resources or active wells, pits, or mines. However, the Projects would affect at least four abandoned oil or gas wells and other abandoned wells may be discovered during surveying and construction of the Projects. Because PALNG and PAPL have not indicated what steps it would take if construction would impact an abandoned oil or gas well, we

are recommending that PALNG and PAPL file with the Secretary a plan for construction of the Projects near known abandoned oil or gas wells that discusses how PALNG and PAPL would maintain the integrity of any plugged wells.

PAPL would utilize the HDD method to reduce impacts on sensitive environmental features. PAPL has not yet conducted geotechnical surveys for the proposed HDD crossings to evaluate the suitability of the geologic material, but proposes to conduct these investigations during final engineering design of the proposed pipelines. Prior to construction, and as part of its Implementation Plan, PAPL has committed to provide the Commission with detailed geotechnical surveys/reports for each HDD to confirm the site-specific geological conditions, which have resulted in the success of previous HDDs in the area. Additionally, PAPL has not yet completed geotechnical boring/investigations at the compressor stations, but proposes to conduct these investigations during the final engineering design. Therefore, we are recommending that, prior to construction of the compressor stations associated with the Texas Connector and Louisiana Connector Projects, PAPL file with the Secretary the geotechnical investigations for the compressor stations.

Paleontological resources are generally rare in the region, and no specific sites containing significant paleontological resources were identified in the Projects area. To minimize potential impacts on paleontological resources that may be uncovered during construction, PALNG and PAPL would follow procedures provided in their *Unanticipated Discovery of Paleontological Resources Plan*.

PALNG and PAPL do not anticipate that any blasting would be required during construction of the Projects. Based on PALNG's and PAPL's proposed mitigation and design criteria, and our recommended mitigation measures, we conclude that the Projects would not significantly impact or be impacted by geological conditions in the area.

5.1.2 Soils

Construction of the Projects could affect soil resources by increasing the potential for erosion, compaction, mixing of topsoil, and rutting. Based on the soil properties reviewed, none of the soils affected by the Projects are considered highly susceptible to erosion by wind or water; however, the area found along the SH 87, pipelines, and utilities relocation area has experienced long-term erosion issues associated with tidal action. These issues would be alleviated by PALNG's proposal to relocate SH 87, the pipelines, and utilities farther inland and outside of the proposed liquefaction site. The erosion potential of soils within the construction workspace is reduced by the generally level topography of the area and through the use of erosion control and revegetation measures described in PALNG's and PAPL's *Environmental Plan*.[80]

The upland portions of the liquefaction facilities site, dredge disposal areas, and nonjurisdictional facilities are comprised entirely of soils categorized as hydric soils containing clay and peat soils prone to compaction. However, these soils would be permanently impacted by the conversion to industrial land or placement of dredge spoil. Operation of the compressor stations and other aboveground facilities along the pipelines for the Texas Connector and Louisiana Connector Projects would permanently affect 105.7 acres of prime farmland but would not result in a significant reduction of usable prime farmland soils in the area.

Based on comments from the EPA, PALNG committed to resampling sediments at the landward component of the MOF prior to dredging and disposal. Because the soil and sediment analyses have not yet been conducted, we are recommending that, prior to construction, PALNG provide the soil and sediment

80 *Environmental Plans* for the Liquefaction Project, Texas Connector Project, and Louisiana Connector Project were filed on November 29, 2016; December 12, 2017; and October 16, 2017, respectively. These plans can be found on the FERC eLibrary website using Accession Numbers 20161129-5254 (Liquefaction Project), 20171212-5147 (Texas Connector Project), and 20171016-5210 (Louisiana Connector Project).

analysis to the EPA, USACE, TCEQ, and Texas RRC, and, if the analysis determines that the dredge material is not suitable, PALNG file evidence that authorizations and permits for the modified activity have been obtained. Additionally, the need for sediment testing could be required as part of the section 401 Water Quality Certification process, which is overseen by the Texas RRC. Prior to disposal at the J.D. Murphree WMA, PALNG is required to develop a dredge disposal plan per the TPWD.

Contamination from spills or leaks of fuels, lubricants, and coolant from construction equipment could also adversely affect soils. PALNG and PAPL would implement mitigation measures included in its *Environmental Plan*, which would specify cleanup procedures to minimize the potential for soil contamination from such spills or leaks. PALNG and PAPL would also follow its *Unanticipated Hazardous Waste Discovery Plan* in the event contaminated soil or water is encountered. In addition, disturbed areas would be monitored following construction for the first and second (as necessary) growing seasons in upland areas and at least 3 years in wetlands to ensure successful restoration.

Construction activities such as clearing, grading, excavation, backfilling, and the movement of construction equipment may affect soil resources at the liquefaction facilities. In order to increase the load bearing capacity of soils along the heavy haul road, an engineered grout would be added to the subsoil that would permanently alter the physical characteristics of 7.5 acres of soils at the liquefaction facilities.

To protect the liquefaction facility post-construction during its operation, PALNG would construct a storm surge barrier of improved soil and structural clay to a top elevation of 20 feet. About 4.4 million yd^3 of fill would be used on the remainder of the liquefaction facilities site. In addition, PALNG would further armor the Port Arthur Canal adjacent to the site by means of riprap or other erosion prevention measures, and would develop a Shoreline Protection Report to address potential shoreline erosion that may occur during operations in the shoreline zone.

With implementation of the proposed mitigation measures and plans, and with our additional recommendations, we conclude that impacts on soil resources would be adequately minimized.

5.1.3 Water Resources

5.1.3.1 Groundwater

The Projects are underlain by the Gulf Coast aquifer, which consists of the Chicot, Evangeline, and Jasper aquifers. Specifically, the Projects would be above the Chicot and Evangeline aquifers. In southwestern Louisiana, the Chicot aquifer is an EPA-designated SSA; however, this designation does not apply to the Chicot aquifer in Texas. We do not anticipate any long-term or significant impacts on the aquifer due to construction or operation of the Projects.

In some areas of southwest Louisiana, increased groundwater withdrawals have resulted in decreasing water levels (drawdown) and saltwater encroachment. Although no portion of the Chicot aquifer in Louisiana has been designated as an Area of Ground Water Concern, high water use in southwest Louisiana has been identified as one of the current major issues having an impact on groundwater sustainability management. In 2012, the LDNR and USGS entered into a joint partnership to increase groundwater monitoring. PALNG and PAPL do not plan to use groundwater as a water supply during construction or operation of the Projects. Water for the facilities would be obtained from the local municipal water system. Water for hydrostatic testing would be obtained from City of Port Arthur, the LNVA, and/or surface water sources. PAPL has not yet identified its source or volume of water to be utilized for dust suppression; therefore, we are recommending that prior to construction, PAPL file with the Secretary its proposed dust control water sources and volumes for review and approval.

Most construction activities associated with the liquefaction and pipeline facilities would involve shallow, temporary, and localized excavation, with the exception of concrete and steel piles for LNG vessel loading facilities and LNG tanks. Piles required for the LNG storage tanks and LNG ship loading and berthing areas would be driven to a depth no lower than 160 feet and are not expected to have direct impacts on the underlying aquifer, which is overlain by at least 155 feet of surficial sediments. During construction of the Texas Connector and Louisiana Connector Projects, shallow groundwater could be encountered within the first 3 feet below grade within Jefferson and Orange Counties, Texas and in Cameron, Calcasieu, and Beauregard Parishes, Louisiana. If it became necessary to remove water from the pipeline trench during construction, the water would be pumped through filter bags prior to being discharged. The typical pipeline trench excavation depth would be at least 6.5 feet, which is far shallower than the depth of the Chicot aquifer in the Texas Connector and Louisiana Connector Projects area. New impervious surfaces caused by construction of the Liquefaction Project and aboveground facilities and compressor stations for the Texas Connector and Louisiana Connector Projects could also potentially affect groundwater resources by reducing infiltration and groundwater recharge.

No drinking water wells or identified springs are within 150 feet of the Liquefaction Project. There are no known groundwater withdrawal wells, drinking water wells, designated WHPAs, or springs within 150 feet of the Texas Connector Project in Texas and Louisiana. There are 16 known groundwater withdrawal wells or drinking water wells within 150 feet of the Louisiana Connector Project in Louisiana and none in Texas. Eight of these wells are identified as plugged and abandoned, and eight are identified as active. Active wells include six private water wells for domestic or agricultural use, one commercial well, and one monitor well. There are no designated WHPAs or springs identified within 150 feet of the Louisiana Connector Project. Prior to construction, PAPL would offer to the land/well owner(s) pre- and post-construction water quality well testing conducted by a qualified independent inspection service. Should construction of the projects temporarily impact a private or public well quality, PAPL would provide alternative water sources or other compensation to the land/well owner(s). Should construction impacts permanently impact a well, PAPL would repair, replace, or provide alternative sources of potable water to the land/well owner(s).

With implementation of the measures discussed above, the activities associated with the construction and operation of the Projects would result in negligible to minor and temporary impacts on local groundwater resources.

5.1.3.2 Surface Waters

Construction of the Liquefaction Project would involve crossing two waterbodies: the Port Arthur Canal and the Round Lake/Oilfield Road Canal. Round Lake is surrounded by both the jurisdictional and nonjurisdictional portions of the project on the northern end of the facility, but would not be directly impacted by project activities. The Port Arthur Canal has been designated as EFH and a Navigable Waterway under section 10 of the RHA.

The primary impacts on water quality within the Port Arthur Canal during construction of the Liquefaction Project would be associated with dredging the marine berths, MOF, and Pioneer Dock. Dredging for construction and maintenance dredging during operation are anticipated to result in temporarily increased turbidity levels, decreased dissolved oxygen levels, and resuspension of nutrients or chemicals into the Port Arthur Canal water column. Increased turbidity levels have the potential to negatively impact aquatic plants and phytoplankton in the immediate area of dredging activities, while decreased dissolved oxygen concentrations may negatively impact benthic organisms. To minimize impacts on aquatic resources due to increased turbidity and suspended solid levels, PALNG would use dry excavation methods to the extent practicable and utilize hydraulic cutter heads to capture siltation. During

operation, maintenance dredging of the recessed berthing area would be required every 4 to 5 years to maintain adequate water depths for LNG vessel maneuvering.

During construction of the Liquefaction Project, dredge material would be transported to the J.D. Murphree WMA and SNND Dredge Disposal Areas 8, 9A, and 9B via a temporary 30-inch-diameter pipeline laid on the ground surface or, where necessary, floated in water. PALNG would complete final design of this temporary pipeline where it would cross the ICWW and Port Arthur Canal prior to construction to ensure navigational activities in the waterway are not interrupted.

Construction of the Liquefaction Project would reduce the amount of existing pervious surfaces, thereby increasing the potential frequency and volume of stormwater runoff into the Port Arthur Canal. Stormwater runoff may pick up debris, chemicals, soil, and other pollutants before entering a waterbody. Dredging activities associated with construction of the marine berths, MOF, and Pioneer Dock may cause temporary increases in erosion and sedimentation in the immediate vicinity of construction activities. Following construction, the Port Arthur shoreline would be stabilized with an armored shoreline protection system to prevent post-construction erosion.

The primary impact on water quality from construction of the Texas Connector and Louisiana Connector Projects would be sediment suspension caused by in-stream trenching and backfilling. To minimize potential erosion and sedimentation impacts on surface waters, PALNG and PAPL would implement its project-specific *Environmental Plan* (which includes the Commission's Plan and Procedures) and all stormwater regulations and permitting requirements. With the implementation of these measures and the design of the Projects, erosion and stormwater runoff from construction and operation would be minimized and not significant.

During operation of the Liquefaction Project, up to 180 LNG vessels would call on the liquefaction facility per year, each of which could discharge between 12 to 18 million gallons of ballast water (depending on LNG vessel size) into the Port Arthur Canal during loading. Potential impacts on water quality may include changes in temperature, pH, dissolved oxygen, and salinity levels. The amount of ballast water discharged into the Port Arthur Canal during each LNG vessel visit to the liquefaction facility would represent 0.03 percent of the water within a 500-meter stretch of the Port Arthur Canal, which would present a minor influence on the overall system. To ensure compliance with U.S. laws and regulations governing ballast water discharges, PALNG's marine staff would review any applicable documentation that the visiting ship is or has been operating the LNG vessel in accordance with federal standards and practices. With the implementation of international and national requirements, impacts on surface waters would be temporary and minor from ballast water discharge or temporary increases in turbidity.

LNG vessels and barges require water for cooling of the main engine/condenser, diesel generators, and fire main auxiliary and hotel services. The volume of water required for engine cooling would vary greatly based on the type of vessel calling on the liquefaction facility. Steam-powered LNG vessels (maximum LNG capacity of 138,000 m^3) would have the highest cooling water requirements while LNG vessels with dual fuel/diesel electric engines (maximum LNG capacity of 218,000 m^3) would require a smaller volume of cooling water. Cooling water requirements may range from 530,000 to 660,000 gallons per hour depending upon type and size of the LNG vessel. At the high end of this range, a complete discharge of cooling water would represent less than 0.01 percent of the water in the Port Arthur Canal in the project area. Impacts on surface waters from cooling water intake and discharge would be primarily limited to an increase in water temperature near the LNG vessel. Based on a review of available information, we anticipate that cooling water discharged at the liquefaction facility could range between 2.7 °F and 7.2 °F warmer than ambient water temperatures. Due to the limited temperature differences and relatively small volume of discharge compared to the total water within the Port Arthur Canal, we anticipate

that the increased water temperature levels would diminish shortly after discharge and, therefore, would have temporary and minor impacts on water quality.

About 151.1 million gallons of test water would be required for hydrostatic testing of the LNG tanks and pipelines, which would be obtained from using both municipal sources and surface waters, including waters on 303(d) impaired waters lists. Although the Port Arthur Canal is not listed on the Texas 2014 303(d) impaired waters list, the potential for chemical contamination exists because of the current and historical industrial use of the canal. In addition, the Texas Connector and Louisiana Connect Projects would cross 16 waterbodies that are on the 303(d) list of impaired waters. After completion of hydrostatic testing, PALNG would discharge the hydrostatic test water to the Port Arthur Canal, and PAPL would discharge hydrostatic test water to Sabine Pass (a 303[d] impaired water) and upland areas. To minimize potential impacts on surface water, PALNG and PAPL would discharge the hydrostatic test water in accordance with its Texas RRC discharge permit and its project-specific *Environmental Plan.* In addition, PALNG and PAPL would not add any chemicals to the hydrostatic test water and the discharged water would be tested in accordance with the requirements of their permits. With the implementation of these measures, impacts on water quality due to hydrostatic testing would be temporary to short term and minor.

During construction and operation, hazardous materials resulting from spills or leaks flushed into waterbodies with stormwater runoff or entering the Port Arthur Canal, Round Lake Canal, Round Lake, and Oil Field Road Canal could have an adverse impact on water quality. To minimize the potential for a release of hazardous materials and to avoid or minimize the impacts of a release if one were to occur, PALNG and PAPL would adhere to the measures outlined in its *Environmental Plan*.

The Texas Connector and Louisiana Connect Projects would cross 12 watersheds and construction would affect a total of 222 waterbodies, including 97 perennial, 42 intermittent, and 69 ephemeral, and 14 open waterbodies. Of these, 51 are major waterbody crossings (greater than 100 feet wide). None of the waterbodies crossed by the pipeline projects are listed as National Wild and Scenic Rivers, listed as important riparian areas, or designated as an Ecologically Significant Stream segment. None of the waterbodies crossed by the Texas Connector Project contain federally listed species. Four waterbodies crossed by the Louisiana Connector Project are designated as System Rivers: Beckwith Creek, Hickory Branch, Barnes Creek, and Whiskey Chitto Creek. PALNG and PAPL would minimize potential impacts on surface waters by implementing its *Environmental Plan* (which includes the Commission's Procedures).

PAPL proposes to conduct 24 HDDs as part of the Texas Connector Project. As some of the HDDs would encompass more than one waterbody, a total of 38 waterbodies would be crossed using the HDD or bore method. For the Louisiana Connector Project, PAPL would use the open-cut method at 91 waterbody crossings, the HDD method at 46 crossings, the bore method at 7 crossings, the barge lay method at 3 crossings, and the push method at 23 crossings. Successful implementation of HDD or bore methods would avoid impacts on waterbodies. To minimize surface water impacts during open-trench construction, PAPL would limit the use of equipment operating in waterbodies, install and maintain sediment barriers around spoil piles, and complete welding of the in-stream pipe section outside of any waterbodies prior to commencing in-stream activity. In accordance with the Commission's Procedures, PAPL would provide detailed plans for each HDD crossing prior to construction, and prepare a HDD Contingency Plan that describes measures PAPL would implement in the event of the HDD is unsuccessful. PAPL stated that it would finalize the HDD Contingency Plan with the selected contractor and incorporate into construction compliance documents.

Sabine Lake would be crossed using the HDD and open-cut methods. Temporary siltation and sedimentation could occur at the HDD entry and exit points in Sabine Lake, primarily from the drilling mud associated with the initial drilling of the pilot hole, the subsequent reaming, and the pulling of the pipeline through the hole. In the event of an inadvertent return of drilling mud during HDD construction, drilling

mud is typically non-toxic and would not be expected to chemically affect organisms in the lake; however, sessile organisms near the release could be smothered and killed. The primary impacts on water quality associated with open-cut construction in the lake would be the resuspension of sediment into the water column. Dredging and excavation operations necessary to install the pipeline through Sabine Lake would suspend sediment and affect water quality and aquatic resources. Sediments may be resuspended during trench excavation and from spoil pile erosion due to wind and wave forces. These lake processes could result in additional impacts on water quality and aquatic resources. The suspended solids and turbidity levels would decline to ambient levels following completion of construction. Turbidity resulting from trenching could reduce light penetration and the corresponding primary production of aquatic plants, algae, and phytoplankton. Additionally, the resuspension of organic materials and sediments could cause an increase in biological and chemical oxygen demand along the construction right-of-way. Lower dissolved oxygen concentrations could cause a temporary displacement of motile organisms and may stress or kill sessile benthic organisms within the construction right-of-way. Detailed information, including site-specific HDD plans, for the Sabine Lake crossing along the Louisiana Connector Project are pending. PAPL would adhere to the Commission's Procedures, which requires that a site-specific crossing plan be provided for each major waterbody crossing (which includes Sabine Lake) prior to construction.

With implementation of PALNG's and PAPL's project-specific plans, the proposed mitigation measures discussed in this EIS, and our recommendations, we conclude that impacts on surface waters would be adequately minimized.

5.1.3.3 Wetlands

Construction of the Liquefaction Project facilities would permanently convert 724.0 acres of wetlands, including 301.9 acres of PEM wetlands, 21.2 acres of EEM wetlands, and 400.9 acres of PSS wetlands. Permanently impacted wetlands would be converted to upland industrial or open land within the liquefaction site, or open water within the marine berth, Pioneer Dock, and MOF. Operation and maintenance of the proposed facilities is not expected to result in additional wetland impacts.

Construction of the marine facilities would require dredging 7.8 million yd^3 of material from the Port Arthur Canal. PALNG proposes to place about 4.9 million yd^3 of dredged material in the established SNND Dredge Disposal Areas, which are authorized by the USACE for use as disposal areas for the maintenance dredging of Port Arthur Canal. PALNG also proposes to utilize approximately 2.9 million yd^3 of material dredged from the ship berthing area and Pioneer Dock to restore wetlands within the 1,900-acre area of the J.D. Murphree WMA, which is southwest of the Liquefaction Project area. Placement of the dredge material would result in the creation of 1,268.8 acres of coastal marsh wetlands. Revegetation would be monitored over a minimum of 5 years to ensure achievement of 80 percent native vegetative cover. Placement of dredge material within the J.D. Murphree WMA and incorporation of design features described previously is intended to provide, maintain, or enhance shoreline protection, sediment deposition, nutrient and organic carbon exchange, wildlife habitat, native plant community, and plant biomass production. Achievement of these functions would provide adequate restoration of natural marsh function. As a result, the beneficial use of dredge material to recreate historic emergent wetlands is expected to offset adverse impacts on wetlands at the liquefaction site, resulting in a net benefit to wetlands within the Sabine Lake Watershed.

During operation, vessel traffic along the Port Arthur Canal and maneuvering within the berthing area could result in increased shoreline erosion, potentially impacting the wetland fringe along the canal due to increased wave activity. To avoid impacts along the canal and prevent erosion of the adjacent unprotected shoreline, PALNG would install rock armoring along the shore, which when considered along with the anticipated vessel speed and the fact that the Port Arthur Canal is an existing ship channel regularly

subject to commercial marine traffic, we have determined the increase in vessel traffic within the Port Arthur Canal and berthing area would cause a negligible increase in erosion of the adjacent wetland fringe.

Construction of the Texas Connector and the Louisiana Connector Projects would affect a total of 875.0 acres of wetland, and operations would permanently affect a total of 310.9 acres. Permanent impacts along the Texas Connector Project would result in the conversion of 6.6 acres (4.3 acres along the Northern Pipeline, 0.8 acre along the FGT Lateral, and 1.5 acres along the GTS Lateral) of PFO wetland to PEM or PSS wetland. Permanent impacts along the Louisiana Connector Project would result in the conversion of 68.1 acres of PFO wetland to PEM or PSS wetland along the pipeline right-of-way.

PAPL and PALNG are required to avoid wetland impacts and minimize all unavoidable impacts to the extent practicable. The USACE's Section 404(b)1 guidelines also restrict the discharge of dredge or fill material where a less environmentally damaging alternative is feasible. Additionally, the USACE requires compensatory mitigation for all permanent wetland loss. PALNG and PAPL have developed draft compensatory mitigation plans that would include credit purchases from USACE-approved mitigation banks, permittee-responsible compensatory mitigation, and agency in-lieu fee programs with the amount of compensatory mitigation determined based on the USACE's preliminary jurisdictional determinations. The USACE may recommend additional conditions to address components of the compensatory mitigation plan or project authorization.

Our Procedures state that aboveground facilities should be located outside of wetlands, except where such siting would prohibit compliance with DOT regulations. To construct aboveground facilities and permanent roads for the Texas Connector and Louisiana Connector Projects, PAPL has proposed permanently converting 3.4 acres and 11.7 acres of wetlands, respectively. We have determined that PAPL's proposed deviations from the Commission's Procedures are reasonable and adequately justified.

Our Procedures state that the width of the construction right-of-way should be limited to 75 feet or less in wetlands. PAPL has proposed a right-of-way width of 100 to 125 feet in wetlands. We determined that based on the site-specific conditions and soils in areas where conventional construction methods would be used, we have no objection to a 100- to 125-foot-wide construction right-of-way.

Our Procedures state that all extra workspace areas should be at least 50 feet away from wetland boundaries (expect where the adjacent upland consists of cultivated or rotated cropland or other disturbed land) and, if not possible, to file site-specific justification for each extra work area with a less than 50-foot setback from wetland boundaries. In accordance with the Procedures, PAPL has proposed areas where extra workspaces are within 50 feet from a wetland and provided the required site-specific justification for each deviation (see appendix M). We conclude that the workspaces are adequately justified.

With the implementation of PALNG's and PAPL's project-specific plans, PALNG's proposed beneficial use of dredge material to restore emergent wetlands, the proposed mitigation measures discussed in this EIS, and our recommendations, significant impacts on wetlands due to construction and operation of the Projects are not anticipated.

5.1.4 Vegetation

Construction and operation of the Projects would affect a total of 1,206.5 acres and 5,767.0 acres of forested and open land vegetation types, respectively. A total of 845.3 acres of vegetation would be cleared during construction of the liquefaction site for the Liquefaction Project and 808.0 acres would be permanently converted to industrial use associated with operation of the liquefaction facilities. Additionally, 151.0 acres of open water would be created for project operations. Following construction, temporarily impacted areas would be restored to their original contours and revegetated per landowner or

NRCS recommendations in accordance with the Commission's Plan and Procedures, which are part of PALNG's *Environmental Plan*. To mitigate for permanent wetland impacts, PALNG developed a draft mitigation plan in coordination with the USACE.

Dredge materials removed by construction of the Liquefaction Facility would be deposited in four areas: the J.D. Murphree WMA, and the existing SNND Dredge Disposal Areas 8, 9A, and 9B. Project-related dredge material placement at the J.D. Murphree WMA would be used to improve existing degraded wetlands by creating coastal marshlands, temporarily affecting 903.0 acres of wetland vegetation. PALNG would revegetate the affected areas of the WMA and, as such, no permanent impacts in the form of lost vegetation are anticipated. SNND Dredge Disposal Areas 8, 9A, and 9B are existing dredge disposal locations operated by the SNND and permitted by the USACE where vegetation is routinely disturbed by placement of dredge material. Dredge disposal in these three sites would affect 3,431.8 acres of vegetation and, per agreements with the USACE, no restoration activities are proposed. The temporary aboveground 30-inch-diameter pipelines used to transport dredge materials to their respective sites would not require vegetation clearing; therefore, associated impacts on vegetation are not anticipated.

As a result of PALNG's development of a draft wetland mitigation plan, the beneficial reuse of dredge materials at the J.D. Murphree WMA, and impacts to regularly disturbed vegetation at the existing SNND Dredge Disposal Areas, we have determined that impacts on vegetation from construction and operation of the liquefaction facility would be permanent but minor.

Construction of the Texas Connector and Louisiana Connector Projects would disturb a total of 482.8 acres and 2,044.1 acres of vegetated land, respectively, including open and forested upland and wetland areas. Impacts on vegetation associated with installation of the pipelines would primarily be caused by vegetation clearing within the construction right-of-way and associated ATWS. About 184.4 acres of upland forest would be permanently affected along the pipeline route. Except for the 410.0 areas that would be crossed by HDD, vegetation would be cleared from the entire working right-of-way. PAPL would minimize impacts on vegetative communities affected by pipeline construction by collocating the Texas Connector Project with existing pipelines and utilities for 43 percent of the routes and the Louisiana Connector Project for 73 percent of its route.

No vegetative communities of special concern have been identified in the Liquefaction Project area. Construction of the Texas Connector Project would not affect vegetation communities of special concern. The Louisiana Connector Project would cross a Coastal Prairie community between MPs 34.5 and 38.5 and a stand of Western Acidic Longleaf Pine Savannah/Flatwoods between MPs 65.5 and 67.2. Permanent impacts are not anticipated due to active livestock grazing on the Coastal Prairie community, and existing silviculture management and a logging road on the Western Acidic Longleaf Pine Savannah/Flatwoods community. In addition, PAPL would implement its *Environmental Plan* to restore Coastal Prairie community.

Field surveys indicated that Chinese tallow, Japanese honeysuckle, and Chinaberry tree fern were present at the liquefaction site. Because the site would be cleared of vegetation and maintained in such state, no invasive species controls are anticipated. Invasive species present at the nonjurisdictional facilities would be periodically mowed by the TDOT.

Chinese tallow and alligator weed were identified in the Texas Connector Project area. PAPL proposes to control Chinese tallow and alligator weed through routine mowing of the right-of-way. The presence of invasive species along the Louisiana Connector Project was observed during wetland delineations. Chinese tallow was identified in upland areas, and alligator weed and water hyacinth were observed in canals and drainage ditches. PAPL proposes to control Chinese tallow through a management approach of leaf spraying per consultation with the NRCS. PAPL's *Environmental Plan* details measures

that would be implemented to minimize the spread of aquatic invasive species, including equipment inspection and invasive species removal before equipment arrives on site, during in-stream work, and before equipment leaves the worksite. PAPL also would implement the measures in the Commission's Plan and Procedures, which require post-construction monitoring for the first and second growing seasons in uplands, and for 3 years in wetlands, to evaluate the success of revegetation.

With the implementation of PAPL's *Environmental Plan*, which includes the Commission's Plan and Procedures, the previous activities, which disturbed native vegetation and have resulted in the establishment largely non-native and low-quality vegetation at the liquefaction site, collocation of the pipeline projects, and adopting of the HDD method at multiple locations, construction and operation of the Texas Connector and Louisiana Connector Projects would not have a significant impact on vegetation.

5.1.5 Wildlife

Wildlife species in the Projects area are characteristic of the communities that inhabit the vegetative habitats that occur in these areas. About 7,828.1 acres of wildlife habitat would be affected by construction of the Projects and 6,003.1 acres would be affected during operations, although the majority of these impacts would occur at the dredge disposal areas. Overall, the greatest impacts would be on open wetland habitat, followed by open upland and forested upland habitats. Operation of the liquefaction facilities would result in increased noise, lighting, and human activity that could disturb wildlife in the area. However, due to current industrial activities at other facilities in the area (e.g., Golden Pass, Sabine Pass), wildlife species in the area are expected to be acclimated to the noise and artificial lighting associated with these activities. To minimize project-related impacts on wildlife, PALNG would implement its project-specific *Environmental Plan*, which includes the Commission's Plan and Procedures, as well as its *Spill Prevention Plan* during construction. During operation of the liquefaction facilities, PALNG committed to using ground flares as opposed to elevated flares to minimize impacts on migratory birds. We conclude the temporary flaring during construction and the occasional flaring during operation would not adversely or significantly impact migratory birds.

Based on the previous use of the Liquefaction Project site for dredge material placement, adequate similar habitat for wildlife near the site, presence of exotic and/or invasive species (e.g., Chinese tallow), limited amount of forest habitat impacts, proposed beneficial use of dredge material, and implementation of PALNG's proposed mitigation measures, we have determined that construction and operation of the proposed Liquefaction Project would have permanent but minor impacts on wildlife. While we acknowledge that placement of dredge material at the J.D. Murphree WMA would create about 1,268.8 acres of coastal marsh wetland, resulting in a beneficial impact on wildlife species associated with this habitat, the activity could also result in the mortality of immobile/slow moving organisms and nesting birds and their eggs at the WMA.

Construction of the Texas Connector and Louisiana Connector Projects would affect 2,526.5 acres of vegetated wildlife habitat, with the greatest impact on open upland habitat, and operation would permanently convert 816.3 acres of wildlife habitat. The remaining acres of agricultural lands, open wetlands, and upland areas would be revegetated to a cover state similar to preconstruction conditions. Individuals of some wildlife species would be affected by construction and operation of the proposed aboveground facilities; however, most impacts on wildlife would be short term and limited predominantly to the construction period. PAPL would not conduct routine vegetation mowing or clearing over the entire width of the permanent right-of-way more frequently than every 3 years, except for a corridor not exceeding 10 feet in width centered on the pipeline that would be cleared at a frequency necessary to maintain an herbaceous state, and routine vegetation mowing or clearing would not occur during the migratory bird nesting season between April 15 and August 1.

PAPL would conduct surveys for rookeries and bald eagle nests prior to the start of construction. If active nests are identified, PAPL would adjust the construction timeline and implement the appropriate buffers in accordance with the agency recommendations.

The vegetation communities within the areas affected by the Projects provide potential habitat for migratory bird species, including songbirds, waterbirds, and raptors. However, much of the vegetated land associated with the Liquefaction Project and nonjurisdictional facilities is previously disturbed, and/or within or adjacent to existing facilities. Removal or conversion of these habitat types would reduce bird nesting and foraging habitat value. Impacts on migratory birds and BCC species and their habitat due to construction and operation of the Projects would typically be similar to impacts on general wildlife resources. Potential impacts specific to migratory birds could result from loss of habitat and injury or disorientation due to flaring and other artificial illumination.

During construction, PALNG would direct all shrouding lights downward to minimize impacts on migratory birds while providing the illumination needed to ensure safe operation of the facility. Additionally, PALNG would use nesting inhibitors (e.g., pennant flagging) in parking areas to discourage migratory birds from nesting in unsuitable areas. With the implementation of these mitigation measures, temporary flaring during construction and occasional flaring during operation would not adversely or significantly impact migratory birds. Similarly, outdoor lighting at the Texas Connector and Louisiana Connector Projects aboveground facilities would be limited, shielded, and downward-facing to facilitate safe operations at night or during inclement weather.

Based on the previous use of the site for dredge material placement, adequate similar habitat for wildlife near the site, presence of exotic and/or invasive species (e.g., Chinese tallow), limited amount of forest habitat impacts, proposed beneficial use of dredge material, and implementation of PALNG's proposed mitigation measures, we have determined that construction and operation of the proposed Liquefaction Project would have permanent but minor impacts on wildlife.

With the implementation of PAPL's *Environmental Plan*, which includes the Commission's Plan and Procedures, and since abundant similar habitat is available for wildlife adjacent to the affected areas, construction and operation of the Texas Connector and Louisiana Connector Projects would not have a significant impact on local wildlife populations or habitat.

5.1.6 Aquatic Resources

Aquatic habitat associated with waterbodies that would be affected by the Projects include the marine and estuarine habitats of the Port Arthur Canal adjacent to the Liquefaction Project, and the marine, estuarine, and freshwater habitats affected by the Texas Connector and Louisiana Connector Projects. Fifty-five (55) waterbodies that support warm water fisheries would be crossed by the Texas Connector Project and 167 waterbodies of the same type would be crossed by the Louisiana Connector Project.

Activities associated with construction and operation of the Liquefaction Project with the potential to impact aquatic species include increased turbidity due to dredging, increased in-water noise from pile driving, increased vessel traffic, the release of ballast water or hull fouling, alteration of light regimes, creation of habitat for encrusting species, alterations to stormwater drainage and increased stormwater runoff, alteration of wave energy, and inadvertent spills of hazardous materials.

Construction of the MOF, Pioneer Dock, and marine berth would require the dredging of 7.8 million yd^3 within the Port Arthur Canal. Potential impacts on aquatic resources resulting from dredging activities would temporarily cause sediment suspension and turbidity temporarily, lowering the water quality within a localized area surrounding the dredged area. Increases in turbidity can adversely affect

fish physiology and behavior, resulting in less healthy individuals, reduced fecundity, reduced foraging habitat, and temporary emigration of fish out of the project area. Direct effects on the physical environment would result in less sunlight absorbed throughout the water column, affecting the amount of photosynthesis by aquatic plants, dissolved oxygen in the water column, algae, and phytoplankton, ultimately affecting the food chain. Within the first few days after completion of dredging operations, the benthic community would be reduced in species richness, species abundance, and biomass through direct mortality. This would reduce the amount of prey available for aquatic species within the berthing area. Based on historic dredging of the Port Arthur Canal, polychaetes, oligochaetes, and other similar species would quickly re-colonize in the soft mud bottom of the disturbed areas following dredging through natural rapid population growth as these species take advantage of unoccupied space in newly exposed sediments. PALNG would minimize turbidity and sediment suspension by commencing construction from the landward side, working its way into the Port Arthur Canal, and would use wet dredging techniques to retain much of the entrained sediment.

Maintenance dredging of the recessed berthing area would be conducted by PALNG every 4 to 5 years during operation of the liquefaction facilities. Potential impacts on aquatic resources from maintenance dredging include direct take and habitat modification as well as temporary increases in noise, turbidity, and suspended solid levels; however, impacts would be shorter in duration due to the reduced amount of material being removed from the recessed berthing area. As a result of similar projects in the area and the existing conditions and activities associated with the Port Arthur Canal, along with PALNG's impact minimization measures and agency accepted turbidity analyses, the impacts on aquatic resources associated with dredging during construction and operation of the project would be negligible to minor and temporary.

Construction of the Liquefaction Project would require the installation of approximately 779 piles over a 24-month period to support the proposed structures, including both in-water and onshore hydraulic piling rigs. It is anticipated that aquatic resources would largely avoid the pile driving area when the piles are being installed, although some aquatic resources could experience stress or injury due to the underwater sound pressure levels. PALNG would implement construction techniques that minimize noise effects on aquatic species, including pre-drilling pile holes, the use of a vibratory hammer, bubble curtains/ cofferdams, and ramping up driving activities. PALNG would also gradually increase the power and frequency of pile driving over a period of time, which would allow sensitive aquatic species to depart the area before harmful underwater sound pressures are reached by the vibratory hammers. With the implementation of PALNG's noise mitigation measures and our recommendations, impacts associated with pile driving during construction on aquatic species would be minor and temporary.

During construction and operation of the Liquefaction Project, barges and support vessels would call on the liquefaction facility, increasing ship traffic within the Port Arthur Canal. Potential impacts on aquatic resources resulting from increased vessel traffic include increased shoreline erosion and resuspension of sediments, ballast water discharges, cooling water discharges, and increased noise levels. PALNG would minimize potential erosion of the shoreline by installing rip-rap along the shoreline. Given the existing conditions and activities within the Port Arthur Canal, along with implementation of the mandatory practices required by federal regulations and USCG, the effects of ballast water discharges on aquatic resources and four ambient water quality parameters (i.e., temperature, pH, dissolved oxygen, and salinity) resulting from construction and operation of the Liquefaction Project would be minor and temporary. Impacts associated with increased barge traffic and noise on aquatic species would be consistent with current vessel traffic noise occurring in proximity to the liquefaction facilities. As a result, the impacts on aquatic species associated with increased vessel traffic during construction and operation of the project would be minor and temporary.

During construction of the work dock, and particularly during operation, additional lighting within and near the Port Arthur Canal would be present at the liquefaction facility. Aquatic species in the area are

generally acclimated to the current ambient light. Increased light could affect small organisms by causing minor disruptions to the food chain, including changes in the vegetation community structure and increased predation. Impacts on aquatic resources resulting from shading could include reduced plant growth and changed vegetation assemblages, which would affect the food chain and modify animal behavior. Additionally, reduced natural light levels in areas due to new structures providing shading would occur where previously not experienced. Changes in light regimes resulting from construction and operation of the Liquefaction Project would have minor to moderate and temporary to permanent impacts on aquatic species.

An additional 50,000 square feet of habitat for encrusting species would be created by construction of the new dock structures and installation of rip-rap along the shoreline for erosion control. The new encrusting species expected to inhabit the new area would be consistent with the existing biota and would permanently contribute to the biodiversity of Port Arthur Canal. While the habitat for encrusting species would have a minor, temporary impact on aquatic resources during construction, the additional hard surface would create a permanent and beneficial impact on these aquatic species.

Conversion of land to impervious surface areas at the liquefaction facility site and pipeline facilities would result in an increased volume of stormwater runoff, which could create changes in salinity, temperature, and/or dissolved oxygen for aquatic species in the areas affected by discharges, as well as increase the potential for contamination. To minimize direct stormwater runoff, catch basins and water diversion structures would be used in accordance with PALNG's and PAPL's project-specific *Environmental Plans*. To reduce contamination to waterways, direct fueling spills would be minimized by including a hazardous material containment area in the fueling facility design and implementing the spill control procedures included as part of PALNG's and PAPL's project-specific *Environmental Plans*. The effects of stormwater runoff resulting from construction and operation of the Projects would not have significant or adverse impacts on aquatic species.

Changes to wave energy within the Liquefaction Project area would result from the installation of piers, pilings, and docks during construction, and increased vessel traffic during operation. Potential impacts from increased wave energy include erosion, increased turbidity, and sedimentation, which could alter the plant and animal composition as substrate regimes change. The Port Arthur Canal has been previously altered with shoreline stabilization devices to minimize erosion, turbidity, and sedimentation to allow for heavy vessel traffic. To further minimize the potential for erosion and sedimentation resulting from project-related vessel traffic and construction activities, PALNG would install rip-rap along the shoreline of the Port Arthur Canal. The impacts on aquatic species associated with changes to wave energy during construction and operation of the Liquefaction Project would be negligible to minor and temporary (i.e., lasting as long as the vessels are in the area).

Construction of the Texas Connector and Louisiana Connector Projects would temporarily impact aquatic resources from activities such as waterbody crossings, removal of streamside vegetation, hydrostatic testing, and inadvertent spills. Potential operational impacts on aquatic resources would be primarily limited to increases in impervious surfaces and associated stormwater runoff and streamside vegetation clearing for operation, and would not otherwise affect aquatic resources.

Potential impacts on aquatic resources related to construction and operation of the Texas Connector and Louisiana Connector Projects would be associated with increased erosion and sedimentation due to open-cut waterbody crossings, inadvertent release of drilling mud during HDD crossings, physical or chemical water alterations from hydrostatic testing, entrainment from water appropriation for hydrostatic testing, and inadvertent spills. PAPL would implement the measures outlined in its *Environmental Plan* to minimize impacts on waterbodies and aquatic resources during pipeline construction. These mitigation measures include reduced workspace areas near waterbodies, establishing buffers to prevent run-off from entering waterbodies, installing erosion control devices, minimizing response time and ensure appropriate

cleanup actions are taken in the event of a spill. PAPL would also implement its *Horizontal Directional Drilling Contingency Plan* to minimized impacts in the case of an inadvertent return of drilling mud. Once construction is complete, streambeds and banks would be restored to their preconstruction conditions and contours to the maximum extent practicable, which would aid in preventing erosion and minimize long-term impacts on aquatic resources.

We received comments on the draft EIS from the TPWD expressing concern that construction of the Louisiana Connector Project pipeline could bury or smother oyster habitat within the Texas portion of the Sabine Lake crossing based on analysis of PAPL's proposed route and an oyster survey assessment. As a result, the TPWD recommended moving the proposed HDD location. Consultations regarding oyster habitat impacts are still ongoing between PAPL and the TPWD. In accordance with the Commission's Procedures, PAPL would provide detailed plans for each HDD crossing for FERC review and approval prior to construction. If PAPL would need to modify its proposed HDD location as a result of consultations with the TPWD and to avoid oyster beds, it would be required to file a revised HDD crossing plan for FERC review and approval prior to construction. The TPWD also expressed concern that vessel access, travel lanes, and associated activities could potentially impact oyster habitat outside of the proposed temporary workspaces. PAPL committed to using sediment curtains as needed to minimize impacts on the oyster habitat areas; would mark the area; and would advise vessels to avoid water bottom impacts in the area to the maximum extent possible while maintaining safe operations. PAPL also noted that one access route from the SNWW into Sabine Lake would be used; however, it is over 11 miles north of the oyster habitat areas. While water bottom impacts are not anticipated from the use of the access route into Sabine Lake, PAPL would mark the proposed route in accordance with the recommendations by the TPWD. Also, vessel operators would record tide data and log the draft of the vessel as recommended by the TPWD.

Due to the relatively small number of crossings, limited construction workspace and duration, and implementation of the mitigation measures, the Projects would have minor and localized impacts on aquatic resources.

5.1.7 Essential Fish Habitat

Estuarine emergent marsh EFH occurs within the J.D. Murphree WMA and Dredge Disposal Area 8 as well as within the shoreline of the Port Arthur Canal and Sabine Lake, along the Texas Connector Project at MP 5.1 on the Northern Pipeline and at MP 2.6 and 7.2 on the Southern Pipeline, and at various locations along the Louisiana Connector Project.

Construction and operation of the Liquefaction Project would affect 3.2 acres of estuarine water column and estuarine mud/soft bottom EFH, which would result in temporary and permanent impacts. The Liquefaction Project would create 68.3 acres of additional open water habitat for aquatic species and EFH-managed species by dredging the berthing area and MOF, resulting in a net increase of estuarine mud/soft bottom and estuarine water column EFH. The restoration of marsh habitat within the J.D. Murphree WMA would also create an additional 1,268.8 acres of estuarine emergent marsh EFH offsite and the installation of riprap along the shoreline would provide habitat for encrusting species

For the Texas Connector Project, construction of the Northern and Southern Pipelines and access roads would temporarily affect 1.2 acres, 8.4 acres, and 0.8 acre of estuarine emergent marsh EFH, respectively. Estuarine scrub-shrub EFH is crossed at MP 7.1 along the Southern Pipeline but would be avoided using the HDD method.

Pipeline construction on the Louisiana Connector Project would affect 1,534.7 acres of EFH, including 131.7 acres of estuarine emergent marsh EFH and 1,403.0 acres of estuarine water column and mud/soft bottom EFH. Permanent access roads required for the operation would permanently affect 1.7

acres of EFH, 1.2 acres of estuarine emergent marsh, and 0.5 acre of estuarine water column and estuarine mud/soft bottom (see table 4.6.3-2). The MLV at MP 19.2 would also impact 0.1 acre of estuarine emergent EFH. Several EFH areas would be avoided by implementing the HDD method along the route, including parts of Sabine Lake and the ICWW.

As a non-federal party assisting the FERC in meeting its obligations under the MSA, PALNG and PAPL coordinated with NMFS regarding potential project impacts on EFH. NMFS indicated that the Projects would not have significant impacts on EFH, provided the PALNG and PAPL implements EFH conservation measures, including the use of HDD crossing methods, an inadvertent release plan, wetland and waterbody restoration, and wetland and waterbody mitigation, as applicable. The beneficial use of dredge material to recreate historic emergent wetlands within the J.D. Murphree WMA is expected to offset adverse impacts on estuarine mud/soft bottom and water column EFH at the Liquefaction Project, resulting in long-term benefits to wetlands.

Due to the relatively small area of EFH impacted by the Liquefaction Project (i.e., the recessed berthing area, MOF, and Pioneer Dock), which cumulatively represents 5 percent of the total acreage within the canal; the increase in the amount of estuarine water column habitat created during construction of the Liquefaction Project; the increased habitat for encrusting species; avoidance of designated-EFH crossings by HDD installations; coordination with NMFS; wetland and waterbody restoration methods per the *Environmental Plan*; and the development of the Wetland Mitigation Plan, the Projects would not have a significant adverse impact on EFH. The NMFS Southeast Region Habitat Conservation Division staff reviewed the EFH assessment included within the draft EIS for the Projects, and by email dated October 5, 2018, concurred that "with the use of avoidance and minimization construction techniques as well as the wetlands restoration activities, the project would result in temporary and minimal impacts to EFH. Therefore, the EFH consultation required by the Magnuson-Stevens Fishery Conservation and Management Act is concluded and no further coordination with the NMFS is required." We agree.

5.1.8 Threatened, Endangered, and Other Special Status Species

Based on input from the FWS and NMFS, 26 federally listed or proposed species may occur within the parishes and/or counties affected by the Projects. The FWS confirmed the proposed Texas Connector Project would have no effect on federal trust resources in Louisiana. We determined the Projects would have *no effect* on 7 of the 26 federally listed threatened and endangered species, and designated critical habitat for the piping plover; would be *not likely to adversely affect* 18 species and/or their designated critical habitats. The remaining species, the eastern black rail, is discussed further below.

Surveys for the American chaffseed have not been completed due to lack of access and, therefore, consultation with the Louisiana FWS is ongoing for the American chaffseed. We are recommending that PAPL conduct surveys for the American chaffseed on the remaining no-access parcels with potential habitat prior to construction and file the results of the survey with the Secretary and the FWS. In addition, if the American chaffseed is found, PAPL should incorporate methods to avoid impacts on the American chaffseed and file with the Secretary and Louisiana FWS any proposed avoidance methods.

On October 9, 2018, the FWS proposed the eastern black rail for listing as threatened under the ESA, with a final rule anticipated no later than October 2019 (83 FR 50610). ESA section 7 consultation for the Projects is complete for all species under NMFS' jurisdiction. As required by section 7 of the ESA, we requested that the FWS review and concur with the information provided in section 4.7 of the draft EIS, which also served as the BA for the Projects. Consultations with FWS regarding listed species are ongoing; therefore, before construction of the Projects can begin, we are recommending that PALNG and PAPL finish all necessary biological surveys, complete ESA section 7 consultations with FWS, including

conference for the proposed black rail, and receive written notification from the Director of OEP that construction and/or use of mitigation (including implementation of conservation measures) may begin.

Based on information obtained from the TPWD and LDWF, 18 state-listed threatened and endangered species, and 16 state rare species may occur within the areas of the Liquefaction Project and Texas Connector Project in Texas. According to the LDWF, no impacts on rare, threatened, or endangered species or critical habitats are anticipated for the Louisiana portion of the Texas Connector Project. To mitigate for potential impacts on listed species in Texas, PALNG and PAPL would educate workers on all sensitive habitats and wildlife species prior to construction and adopt the species-specific mitigation measures described in section 4.7.4.1.

The LDWF identified nine rare species that may occur within the Louisiana Connector Project area and recommended typical BMPs to minimize impacts on the crested caracara and avoiding disturbances in waterbodies (such as pollution, siltation, and dams) to protect old prairie crawfish habitat. PAPL has not developed any project-specific BMPs for this purpose but would implement its *Environmental Plan* to minimize impacts on habitats crossed by the Louisiana Connector Project. No specific recommendations were provided for the six rare plant species identified as potentially occurring in the area, but PAPL has committed to further consultation with the LDWF prior to construction to determine if additional rare plant species surveys would be necessary.

With the implementation of PAPL's *Environmental Plan*, which includes the Commission's Plan and Procedures, and the conservation and mitigation measures proposed by the FWS and NMFS and adopted by PALNG and PAPL, construction and operation of the Projects would not have a significant impact on federally and state protected species or their habitat.

5.1.9 Land Use, Recreation, and Visual Resources

Construction of the Projects, including nonjurisdictional facilities, would temporarily affect a total of 10,612.0 acres of land. Of this, 7,952.5 acres would be permanently affected by operation of the Projects, and 2,659.5 acres would be allowed to revert to the existing land use type after the completion of construction. Impacts on permanently affected wetlands would be partially offset through restoration of about 1,268.8 acres of tidally influenced coastal marsh habitat within the J.D. Murphree WMA.

The land retained as new permanent right-of-way would generally be allowed to revert to its former use, except for forest/woodland and silviculture. Certain activities, such as the construction of permanent structures or the planting of trees, would be prohibited within the permanent right-of-way. To facilitate pipeline inspection, operation, and maintenance, the entire permanent right-of-way in upland areas would be maintained in an herbaceous vegetated state. This maintained right-of-way would be mowed no more than once every 3 years, but a 10-foot-wide strip centered over the pipeline might be mowed more frequently to facilitate corrosion and other operational surveys.

The Liquefaction Project's proposed construction workspace is not within 50 feet of any residence. The Texas Connector and Louisiana Connector Projects' proposed construction workspaces are within 50 feet of 11 and 24 residential structures, respectively, which includes homes, sheds, and associated structures. PAPL has developed site-specific RCPs for the residential structures within 25 feet of the construction work area. We reviewed these plans and find them acceptable. PALNG and PAPL would develop a grievance and resolution plan as part of its *Implementation Plan* that identifies how stakeholders can contact pipeline company representatives with questions, concerns, and complaints prior to, during, and after construction. We conclude that implementation of PALNG's and PAPL's mitigation measures, including the construction methods in residential areas and commercial facilities, its site-specific RCPs,

and grievance and resolution process, impacts on residential and commercial areas would be minimized or mitigated.

No planned or ongoing residential or commercial/industrial development projects were identified within 0.25 mile of the proposed Liquefaction Project facilities. Three planned commercial/industrial development projects (i.e., an electric substation, the Golden Pass LNG Project, and the Sabine Pass LNG Project) have been identified within 0.3 mile of the proposed Texas Connector Project facilities. One planned commercial/industrial development project (i.e., Driftwood) has been identified parallel to the Louisiana Connector Project between MPs 45.4 and 54.5 in Calcasieu Parish and at MP 116 in Evangeline Parish.

Construction of the Projects would affect a total of 520.5 acres of agricultural land, and 175.7 acres would be retained during operation of the Projects. Agricultural land in the construction rights-of-way would generally be taken out of production for one growing season and would be restored to previous use following construction. PAPL would coordinate with landowners during construction and maintain landowner access to fields, storage areas, field access roads, structures, and other agricultural areas as well as maintain irrigation and drainage systems crossed by the right-of-way. If drain tiles are damaged during construction, PAPL would immediately mark the locations of damaged tiles, assess all drainage tile systems within the area of disturbance, and replace or repair all tiles to preconstruction conditions or better. If irrigation lines are damaged during construction, PAPL would complete repairs within one week of identifying the damaged irrigation system.

The Projects would cross 213 roads and 6 railroads. Of these, 58 roads and 2 railroads would be crossed using the bore method, 74 roads and 2 railroads would be crossed using the HDD method, 79 roads would be crossed using the open-cut and upland methods, and 2 roads would be crossed using the push-pull method. Project-related impacts on roads and railroads would be temporary to short-term and minor. Most paved roads and railroads would be crossed by the HDD or bore method, and unimproved or gravel roads would be crossed using the open-cut method. Potential effects associated with roadway crossings include temporary disruption of traffic flow, disturbance of existing underground utilities (i.e., water and sewer lines), and hindrance of emergency vehicle access. In areas where traffic volumes are high or other circumstances (e.g., congested areas) exist, PAPL would obtain the assistance of law enforcement to ensure traffic flow and the safety of pedestrians and vehicles.

The Projects would affect or be within 0.25 mile of a WMA, state-designated wild and scenic rivers, and other general recreational activities, including public and private hunting lands. PALNG and PAPL would construct the Liquefaction Project and the Texas Connector Project near several recreation areas, including the J.D. Murphree WMA and Round Lake, Keith Lake, and Port Arthur Canal. The Louisiana Connector Project would cross four designated scenic rivers and two state scenic byways in Louisiana. In general, effects of the Projects on recreational and special interest areas would be temporary and limited to the period of active construction, which typically lasts several days to several weeks in any one area. These effects would be minimized by implementing the measures in PALNG's and PAPL's *Environmental Plan* and site-specific crossing plans.

All of the Liquefaction Project facilities, the entire Northern Pipeline and associated aboveground facilities, portions of the Southern Pipeline, and portions of the Louisiana Connector Project pipeline and associated ATWS are subject to a federal coastal zone consistency review in Texas and Louisiana. We are recommending that PALNG and PAPL file documentation of concurrence from the USACE, Texas General Land Office, and the Louisiana Office of Coastal Management that the Projects are consistent with the Texas and Louisiana CZMA.

The Liquefaction Project and Texas Connector Project would be within 0.25 mile of three sites listed as potential or known sources of contamination and hazardous wastes. There are no properties within 0.25 mile of the Louisiana Connect Project facilities that are listed as potential or known sources of contamination. The Projects would also cross waterbodies that are listed under section 303(d) of the CWA for various contaminants. Should contaminated media (i.e., soil or groundwater) be encountered during construction, PALNG and PAPL would implement their respective project-specific *Unanticipated Hazardous Waste Discovery Plan*. We reviewed PALNG's and PAPL's *Unanticipated Hazardous Waste Discovery Plans* and find it acceptable.

Impacts on visual resources would be greatest where the pipeline routes parallel or cross roads and the pipeline rights-of-way, and the LNG storage tanks and marine facilities that can be seen by passing motorists and boaters; from residences where vegetation used for visual screening or for ornamental value is removed; and where the pipelines are routed through forested (including silvicultural land) areas. The majority of pipelines (about 69 percent or 113.8 miles) would be installed within or parallel to existing rights-of-way. As a result, the visual resources along these portions of the Projects have been previously affected by other similar activities. In other areas, the visual effects of construction in forests, including silvicultural land, would be permanent on the maintained right-of-way where the regrowth of trees would not be allowed, and would be long term in the temporary workspaces. After construction, all disturbed areas, including forested areas, would be restored in accordance with PALNG's and PAPL's project-specific *Environmental Plan* and any agency and landowner requirements. Generally, this would include seeding the restored areas with grasses and other herbaceous vegetation, after which trees would be allowed to regenerate within the temporary workspaces.

Visual effects also would occur at rivers, roads, and historic properties that are valued for their scenic quality, including Beckwith Creek, Hickory Branch, Barnes Creek, Whiskey Chitto Creek, Myths and Legends Byway, and Zydeco Cajun Prairie Byway. Historic properties are described in section 5.1.11. Visual impacts on these areas would be minimized by collocation with an existing corridor or use of HDD or bore construction method.

The Texas Connector Project's North and South Compressor Stations, and Louisiana Connector Project's Compressor Station would be visible to motorists passing through the immediate area and to the few nearby residences during construction and operation. The greatest visual impacts would be for those residences south of the North Compressor Station and for motorists traveling on Mansfield Ferry Road. The greatest permanent visual impacts from the South Compressor Station would be to those visiting the lakes and traversing relocated SH 87. The greatest visual impacts from the Louisiana Compressor Station would be for motorists traveling on Green Oak Cemetery Road. To minimize visual impacts of the Compressor Stations on nearby residences and motorists, lighting would be directed toward the facilities to minimize glare on surrounding areas. Some visual screening would be provided by the remaining forested areas between the compressor stations and residences.

Construction activities at the existing meter stations, mainline valves, and pig launchers/receivers would have permanent visual impacts. Most visual impacts would be minor because of surrounding land use and visual screening provided by trees and forested areas. The CGT Meter Station would be 0.1 mile from a residence and requires noise mitigation. PAPL has committed to implementing noise mitigation measures to reach a 55-decible day-night equivalent level at all NSAs located within 0.5 mile of the CGT Meter Station. Land use surrounding the CGT Meter Station is agricultural, and because PAPL would not enclose or paint the structure to blend in with the surroundings, the meter station would be visible to motorists traveling on nearby roads and the residence.

Visual impacts from access roads would be temporary and insignificant. New access roads in forested areas associated with operation of the Projects would represent a permanent visual impact. The

greatest visual impacts would occur on visitors of the J.D. Murphree WMA and nearby lakes, including users of the Keith Lake boat ramp, during construction of the new access roads at MP 2.9 and MP 3.7 along the South Pipeline of the Texas Connector Project, which are adjacent to these features.

With the implementation of PAPL's *Environmental Plan*, which includes the Commission's Plan and Procedures, the previous activities at the liquefaction site, collocation of the pipeline projects, and adopting of the HDD method at multiple locations, construction and operation of the Texas Connector and Louisiana Connector Projects would have temporary to permanent, but minor, impacts on land use, recreation, and visual resources.

5.1.10 Socioeconomics

Construction and operation activities could affect socioeconomic conditions in the Projects area including impacts on local populations, employment, provision of community services, tourism and transportation, and state tax revenues from sales taxes, payroll taxes, and property taxes.

Construction of the liquefaction facilities would take place over an approximate 5-year period and would increase the population within Jefferson and Orange counties in Texas for about 3 years. PALNG estimates the peak construction workforce for the Liquefaction Project would be about 3,000 workers at month 32. After construction, 200 permanent jobs would be created at the liquefaction facility. This would be a small increase for the population of Jefferson County, and PALNG anticipates that 140 of the permanent employees (70 percent) would be hired locally.

Construction of the Texas Connector and Louisiana Connector Projects would take place over an approximate 1.5-year period and would increase the population within the counties and parishes crossed by the projects in Texas and Louisiana. Construction of the Texas Connector and Louisiana Connector Projects would average 623 and 600 workers per month, respectively. PAPL estimates the peak construction workforce would be about 750 workers for each project. The influx of construction workers would be limited to the time of construction. The demand for temporary housing by non-local workers is not expected to exceed the available number of hotels, motels, and campground units in the study area, but accommodations could experience some minor limited availability, particularly during planned construction periods that overlap with the peak tourism season in the projects area, which is typically during spring.

After construction, 20 permanent employees would be employed during operation of the Texas Connector Project pipeline and associated facilities and 10 permanent employees would be employed during operation of the Louisiana Connector Project pipeline and associated facilities. This would be a minor increase for the population of the study area. PAPL anticipates that about two to four persons (20 to 40 percent) of the permanent employees would be hired locally for each project.

PALNG estimates 150 construction workers would be needed for the duration of the relocation of SH 87, pipelines, and utilities. Population impacts resulting from the SH 87, pipeline, and utility relocation are expected to be temporary and are scheduled to conclude prior to or following the influx of the peak workforce of the Projects.

The Projects are expected to have their peak workforce requirements at roughly the same time, from the fourth quarter of 2019 through the first quarter of 2022. At the peak, anticipated for the third quarter of 2020, a combined workforce of over 3,230 workers would be needed. This could represent a population increase of less than 1 percent to the entire study area. Where the Projects would overlap the greatest geographically, in Cameron Parish and Orange and Jefferson Counties, this would be an increase of 1 percent to the population. Based on the populations of the counties/parishes and cities in the study

area, in the event some construction workers and families do temporarily relocate to the area, the increase in population would not be significant. Additionally, there appears to be adequate public service infrastructure near the Projects to accommodate the temporary needs of the non-local construction workforce and long-term needs of non-local operations, while not compromising services to residents. In addition, any temporary increase in population would be distributed throughout the study area and would not have a permanent impact on public services in any one location.

There would be a temporary increase in traffic levels due to the commuting of the construction workforce to the project area as well as the movement of construction vehicles and delivery of equipment and materials to the construction work areas. PALNG estimates that during peak construction just over 3,000 workers would be traveling to the project site via personal vehicle or bus. In addition to the 500 parking spaces available, an estimated 48 busses would transport the remaining workers to and from the construction site to offsite parking lots. Ground-based deliveries would occur throughout the 5-year construction period. At the peak of material and equipment delivery, PALNG estimates 6,900 deliveries per month to the liquefaction project site. On average, 2,562 material deliveries per month would be made to the site throughout the construction period. When possible, ground-based deliveries would be made during off-peak hours to minimize congestion and impacts on roadways in the Liquefaction Project study area. To minimize and mitigate potential impacts on transportation, we are recommending that PALNG file a traffic management plan outlining the measures it would adopt to manage vehicle traffic during construction of the Liquefaction Project.

Construction activities in the Texas Connector and Louisiana Connector Projects study areas would result in temporary effects on local transportation infrastructure and vehicle traffic, including disruptions from increased transportation of construction materials, equipment, and workforce; disruptions from construction of pipeline facilities at or across existing roads; and damage to local roads caused by heavy machinery. PAPL estimates a total of 3,120 vehicles trips per week for the Texas Connector Project along the length of the pipeline route during the 12-month construction period. Of this number, 600 heavy truck trips and 2,520 commuter trips are anticipated.

PAPL estimates a total of 626 vehicles trips per week for the Louisiana Connector Project along the length of the pipeline route during the 21-month construction period. Of this number, 91 heavy truck trips and 535 commuter trips are anticipated.

PALNG would construct a MOF to support the transfer of construction materials delivered by barge. During construction, PALNG estimates between 100 and 200 deliveries would be needed per month during the first 25 months of construction, or three to six barges per day. These trips would not cause significant impact when compared to the total amount of traffic in the SNWW. During operation of the project, PALNG estimates 180 transits of LNG vessels per year from the liquefaction facility. The impacts of operation of the Liquefaction Project on marine traffic in the SNWW would be minor and permanent.

Specific to the Louisiana Connector Project, water routes would also be used to access portions of the upland right-of-way and Sabine Lake construction. Vessels used to access Sabine Lake would consist of digging and backfill barges, pipelaying barges, pipe transportation barges, HDD barges, and tug boats. Sabine Lake is regularly accessed by similar types of activities and the project would impact a relatively small percentage (less than 1 percent) of the entire lake area. Project-related impacts would primarily affect barges and smaller recreational vessels. To mitigate for potential impacts on other vessels in Sabine Lake, PAPL stated that the pipeline would be installed using barges mobilized with tug boats. This procedure would minimize impacts resulting from construction operations.

Construction activities in the Projects study area would result in temporary effects on local transportation infrastructure and vehicle traffic, including disruptions from increased transportation of

construction equipment, materials, and workforce; disruptions from construction of pipeline facilities at or across existing roads; and damage to local roads caused by heavy machinery and materials.

Construction of the nonjurisdictional facilities may temporarily impact transportation and traffic across and within roadways due to increased vehicle traffic to the project area associated with the construction workforce, construction vehicles and equipment, and delivery of materials. Traffic control measures would be employed as necessary to ensure safety of local traffic, including flagmen and signs. Additionally, the existing SH 87 would remain open until the relocated SH 87 is completed.

Construction and operation of the Liquefaction Project would not have a disproportionately high adverse effect on minority or low-income populations. The Texas Connector and Louisiana Connector Projects would result in negligible to minor negative impacts and minor positive impacts on socioeconomic characteristics and economies in the project area. Potentially adverse environmental effects associated with the projects would be minimized or mitigated, as applicable. Additionally, we did not find evidence that the Texas Connector or Louisiana Connector Projects would cause a disproportionate share of adverse environmental or socioeconomic impacts on any racial, ethnic, or socioeconomic group.

As a result of PALNG's and PAPL's measures and methods, construction and operation activities associated with the Projects would result in minor and temporary to short-term impacts on transportation infrastructure and traffic.

5.1.11 Cultural Resources

Due to the environmental setting, no cultural resource surveys were required within the areas affected by construction of the Liquefaction Project, the turning basin within the SNWW, Dredge Disposal Areas 9A and 9B, and the dredge disposal area within the J.D. Murphree WMA. In letters dated June 2, 2015 and August 24, 2017, the Texas SHPO concurred that no historic properties would be affected by construction of the proposed Liquefaction Project. We concur. PALNG has not filed information to or comments from the Texas SHPO concerning proposed Dredge Disposal Area 8. In addition, no direct or indirect impacts on cultural resources are anticipated for in-kind use of the four existing offsite parking lots.

Cultural resources surveys have been completed for 83.3 percent of the Northern Pipeline, and 50.6 percent of the Southern Pipeline in Texas and 92.5 percent in Louisiana. Surveys were completed for the North Compressor Station, the three yards, and the HPL, FGT, and GTS/CIPCO Meter Stations. The historic aboveground survey resulted in the identification of one cemetery and five historic standing structures that have been assessed as not eligible for the listing on the NRHP. In a letter dated September 16, 2016, the Texas SHPO recommended PAPL maintain a 25-foot-wide buffer zone between the Granger Family cemetery and the construction workspace. PAPL notified the Texas SHPO that while the cemetery would be avoided and preserved in place, the pipeline would be within 25 feet of the cemetery boundary. In a letter dated July 28, 2017, the Texas SHPO requested mechanical scraping of the proposed buffer area to confirm the cemetery boundaries. PAPL has not yet provided results of the additional investigation to FERC or Texas SHPO. On November 2, 2018, the Texas SHPO concurred that the five historic structures would not be NRHP-eligible. No archaeological resources have been identified to date; however, three previously recorded sites have not been assessed for NRHP-eligibility. On September 1, 2016, the Texas SHPO received PAPL's Phase I report summarizing the survey results for portions of the Southern Pipeline that only cross the J.D. Murphree WMA. No archaeological sites or architectural resources were identified during survey of the J.D. Murphree WMA. On September 13, 2016, the Texas SHPO, and on September 12, 2016 the Louisiana SHPO, concurred with the Phase I report's recommendations that no historic properties within the areas surveyed would be affected by the Texas Connector Project. We concur also.

Cultural resources surveys have been completed for 58.0 percent of the Louisiana Connector Project corridor, compressor station, access roads, contractor yard, valve sites, and ATWS. The survey resulted in the identification of two archaeological sites, nine historic architectural properties, and four cemeteries. The two archaeological sites have been assessed as not eligible for the NRHP. The historic architectural properties represent three farmstead complexes, four residential buildings, and two collapsed structures. PAPL recommended that eight of these historic architectural properties were not eligible for the NRHP, and one would be avoided by the project. PAPL would maintain a 50-foot buffer around two of the cemeteries, would not encroach on the third cemetery, and would not affect the fourth cemetery based on distance. In a letter dated December 14, 2017, the Louisiana SHPO concurred. On August 17, 2018, PAPL submitted a Phase I archaeological report providing results of survey across Coushatta Tribe of Louisiana Trust Lands, including the TGP Meter Station and approximately 0.9 mile of pipeline corridor. A total of 13.51 acres was surveyed on Trust Lands. The Louisiana SHPO concurred with no historic properties affected on September 14, 2018.

PAPL has not assessed three sites for NRHP eligibility as they extend into parcels in which the landowners have denied survey permission, and would complete surveys at these sites once access becomes available.

PAPL completed a geophysical survey of a 1-mile, 600-foot-wide corridor along the offshore portion of the Louisiana Connector Project across Sabine Lake in Texas, and a 17.6-mile-long, 600-foot-wide corridor offshore segment in Louisiana. In Texas, a total of 61 magnetic anomalies and 44 side scan sonar contacts were identified. On December 22, 2017, the Texas SHPO requested additional information on four magnetometer targets. PAPL has not yet provided the requested information to the Texas SHPO. In Louisiana, a total of 157 magnetic anomalies and 32 side scan sonar contacts were identified. Analysis resulted in the recommendation that no submerged cultural resources nor relic geomorphic features with the potential of archaeological deposits are present. In a letter dated December 15, 2017, the Louisiana SHPO concurred that no historic properties would be impacted by this portion of the Louisiana Connector Project. We concur also.

PALNG and PAPL provided FERC and each SHPO an unanticipated discoveries plan for Texas and Louisiana, which would be implemented if cultural resources or human remains are encountered during construction of the Projects. The plan also provides for the notification of Native American tribes in the event of any discovery. In a letter dated December 15, 2017, the Louisiana SHPO concurred with the plan. The Texas SHPO has not commented on the plan. During an October 16, 2018 meeting with PAPL and the Coushatta Tribe of Louisiana, the tribe requested changes to PAPL's *Unanticipated Discoveries Plan*. On January 15, 2019, PAPL filed a revised *Unanticipated Discoveries Plan (For Project Facilities within the State of Louisiana)*. Because the plan currently provides construction recommencement authority to THPOs on non-tribal lands, we are recommending that PAPL file a revised *Unanticipated Discoveries Plan* that clarifies that THPO construction recommencement authorization is only applicable to tribal trust lands.

PALNG, PAPL, and FERC staff contacted several Native American tribes to identify properties of traditional, religious, or cultural importance that may be affected by the proposed Projects. The Choctaw Nation of Oklahoma requested shapefiles from PAPL on the Louisiana portion of the Texas Connector Project, which were provided on May 21, 2015. On June 22, 2015, the tribe requested a copy of the technical report from PAPL to enable an evaluation of the project and its potential impacts on archaeological and human remains; the Phase I report was submitted by PAPL to the tribe on March 17, 2017. No other responses have been received by FERC to date regarding the Texas Connector Project.

Regarding the Louisiana Connector Project, the Choctaw Nation of Oklahoma, in an email dated June 26, 2017, requested shapefiles and a copy of the technical report from PAPL to enable an evaluation of the project and its potential impacts on archaeological and human remains, which was provided on

September 12, 2017. On June 13, 2017, we attended a meeting hosted by the Coushatta Tribe of Louisiana, where the Coushatta THPO provided comments regarding the tribe's concerns related to tribal cultural resources. In a June 21, 2018 letter, the Coushatta Tribe of Louisiana again raised concerns regarding the project's impacts on cultural resources, and requested government-to-government consultation and a meeting. On August 17, 2018, PAPL submitted a Phase I archaeological report providing results of survey across Coushatta Tribe of Louisiana Trust Lands to the Coushatta Tribe of Louisiana. The Tribe provided comments on August 30, 2018, which were addressed on October 17, 2018. On November 15, 2018, the Coushatta Tribe of Louisiana concurred with no historic properties affected. On October 16, 2018, FERC staff met with the Coushatta Tribe of Louisiana on a government-to-government basis. Also, on October 16, 2018, FERC staff met with representatives of both PAPL and the Coushatta Tribe of Louisiana to discuss the project's potential impacts on tribal cultural resources and on ways to mitigate impacts. No other responses have been received by FERC to date regarding the Louisiana Connector Project.

Because the process of complying with section 106 of the NHPA has not been completed for the Projects, we are recommending that prior to construction, PALNG and PAPL file all outstanding information, survey reports, evaluation reports, special studies, and plans, and the SHPOs' comments on these.

5.1.12 Air Quality and Noise

Most Projects-related air emissions would be produced by operation of the liquefaction facilities and the compressor stations. PALNG and PAPL would comply with all applicable air permit requirements for those facilities. Construction of the Projects would also create emissions from fossil-fueled construction equipment and fugitive dust. Such air quality impacts would generally be short term and localized. PALNG and PAPL have each prepared separate project-specific *Fugitive Dust Control Plans* with specific mitigation measures to control dust during construction.

The Projects are generally located in attainment areas; however, the delivery of equipment and facilities by marine vessels would pass through the Houston-Galveston-Brazoria area which is classified a marginal nonattainment area for the 2008 8-hour ozone standard. We conducted a General Conformity applicability determination for the estimated emissions from the marine operations through the Houston-Galveston-Brazoria area. The marine operations emissions would not exceed the general conformity determination thresholds for nitrogen oxides or VOCs (both precursors for ozone) and General Conformity would not apply to the Projects. We would not expect construction equipment emissions to cause or significantly contribute to a violation of an applicable air quality standard.

Long-term impacts on air quality would result from operation of the Liquefaction Project facilities and the compressor stations. PALNG and PAPL would minimize potential impacts on air quality caused by operation of the liquefaction facilities and compressor stations by adhering to applicable federal and state regulations and installing best available control technology to minimize emissions. The Air Quality Permit 131769 and the PSD Air Quality Permits PSDTX1456, and GHGPSDTX134 were issued by the TCEQ on February 17, 2016, authorizing construction and operation of the liquefaction facilities. The LDEQ issued minor New Source Review permit and Title V operating permit 0060-00107-V0 on March 29, 2018 for the Louisiana Connector Project's compressor station. PAPL proposes to submit an air permit application for the Texas Connector's North Compressor Station 6 months prior to start of construction, as required by Texas air permitting regulations. It is expected that compliance with the applicable federal and state air quality standards and regulations would be addressed accordingly in the corresponding permit applications and issued permits.

During construction of the Texas Connector and Louisiana Connector Projects, use of the HDD method would result in minor impacts on NSAs in the vicinity. We are recommending that PAPL develop

an HDD noise mitigation plan for any HDD that could exceed the sound level criterion at the closest NSA to reduce the projected noise level attributable to the proposed drilling operations at nearby NSAs. We conclude that, with the recommended mitigation, construction noise from the Texas Connector and Louisiana Connector Projects would result in minor and temporary impacts on the nearest NSAs.

Operation of the liquefaction facilities and associated South Compressor Station would generate sound levels throughout the life of the project, but the increase in noise levels would be below the "barely detectable" noise level increase of 3 dBA and would result in minor impacts on the nearest NSA. The proposed noise level would be below the FERC limit of an L_{dn} of 55 dBA. In addition, we are recommending that PALNG file a full power load noise survey no later than 60 days after each liquefaction train is put in service. If noise levels attributable to operation of the Liquefaction Project exceed the FERC limit of 55 dBA L_{dn} at the nearest NSA, PALNG would modify operation of the liquefaction facilities or install additional noise controls until a noise level below 55 dBA L_{dn} at the NSA is achieved. We are also recommending that PALNG file a noise survey no later than 60 days after placing all the Liquefaction Project facilities, including the South Compressor Station, in service. If a full load condition noise survey is not possible, PALNG would provide an interim survey at the maximum possible horsepower load within 60 days of placing the Liquefaction Project facility and South Compressor Station into service and provide the full load survey within 6 months. If the noise attributable to operation of the equipment at the Liquefaction Project facility and South Compressor Station exceeds 55 dBA L_{dn} at the nearest NSA under interim or full horsepower load conditions, PALNG should file a report on what changes are needed and should install the additional noise controls to meet the level within 1 year of the in-service date. With the implementation of these recommendations, we conclude that operational noise from the Liquefaction Project would result in minor impacts on the nearest NSAs.

Sound levels would increase during operation of the North Compressor Station, the Louisiana Connector Project's compressor station, and the meter stations associated with the project. Those sound level increases would occur for the life of the projects. PAPL would implement mitigation measures to reduce noise impacts, such as the use of acoustically treated compressor enclosures, silencers on the exhaust outlet and air intake, and acoustically treated wall and roof fan openings. Based on our noise analysis, the predicted noise levels attributable to operation of the North Compressor Station associated the Texas Connector Project, the Louisiana Connector Project's compressor station, and the meter stations would be less than 55 dBA L_{dn} at all nearby NSAs. To ensure that noise levels would be below 55 dBA L_{dn}, we are recommending that PAPL file noise surveys during full-load operations and, if the noise levels exceed the FERC guideline, that PAPL install additional noise controls to meet the guideline within 1 year of the in-service date. As a result, the impact on noise levels during operation of the projects would be minor.

5.1.13 Safety and Reliability

As part of the NEPA review and NGA determinations, Commission staff assesses the potential impact to the human environment in terms of safety and whether the proposed facilities would operate safely, reliably, and securely.

As a cooperating agency, the DOT assists the FERC by determining whether PALNG's proposed design would meet the DOT's 49 CFR 193 Subpart B siting requirements. The DOT reviewed information submitted by PALNG and on March 20, 2018 provided a letter to FERC staff stating that the DOT had no objection to PALNG's methodology to comply with the Part 193 siting requirements for the Liquefaction Project, but would need to resolve legal control of exclusion zones. On December 18, 2018, the DOT provided a LOD on the project's compliance with 49 CFR Part 193 Subpart B. This is provided to the Commission as further consideration in its decision on the project applications. If the Projects are authorized and constructed, the facilities will be subject to the DOT's inspection and enforcement program

and final determination of whether the Liquefaction Project is in compliance with the requirements of 49 CFR Part 193.

As a cooperating agency, the USCG also assisted the FERC staff by reviewing the Liquefaction Project and the associated LNG carrier traffic. The USCG reviewed a WSA submitted by PALNG that focused on the navigation safety and maritime security aspects of LNG carrier transits along the affected waterway. On September 11, 2015, the USCG issued a LOR to FERC staff indicating the Sabine Neches Ship Channel would be considered suitable for accommodating the type and frequency of LNG marine traffic associated with this project, based on the WSA and in accordance with the guidance in the USCG's NVIC 01-11. If the Projects are authorized and constructed, the Liquefaction Project facilities will be subject to the USCG's inspection and enforcement program to ensure compliance with the requirements of 33 CFR Parts 105 and 127.

FERC staff conducted a preliminary engineering and technical review of the Liquefaction Project, including potential external impacts based on the site location. Based on this review, we are recommending a number of mitigation measures to be implemented prior to initial site preparation, prior to construction of final design, prior to commissioning, prior to introduction of hazardous fluids, prior to commencement of service, and throughout life of the facility, to enhance the reliability and safety of the facility. Based on our external impact analysis and preliminary evaluation of the engineering design, and with the incorporation of our recommended mitigation measures and oversight, we conclude that the Liquefaction Project's design would include acceptable layers of protection or safeguards that would reduce the risk of a potentially hazardous scenario from developing into an event that could impact the offsite public.

PAPL must design, construct, operate, and maintain its proposed pipelines and aboveground facilities in accordance with the DOT Minimum Federal Safety Standards in 49 CFR 192. These regulations, which are intended to protect the public and to prevent natural gas facility accidents and failures, include specifications for material selection and qualification, minimum design requirements, and protection of pipelines from corrosion.

We conclude that PAPL's compliance with the DOT's safety standards will ensure that PAPL's construction and operation of the facilities would not have a significant impact on public safety.

5.1.14 Cumulative Impacts

Three types of projects (past, present, and reasonably foreseeable projects) could potentially contribute to a cumulative impact when considered with the proposed Projects. Such projects in the Project area include existing LNG terminals and future liquefaction projects, oil and gas facilities, other industrial facilities, utility and transportation projects, commercial and residential developments, and government facilities/activities. Our assessment considered the impacts of the proposed Projects combined with the impacts of the other projects on resources within all or part of the same area and time. We provide a detailed discussion about potential cumulative impacts by resource in section 4.13.

We assessed projects that shared a geographic and temporal overlap with the impacts from either or both the Liquefaction Project and pipeline projects, and considered the cumulative impact on affected resources. As discussed in detail in section 4.13 and as summarized in sections 5.1.1 through 5.1.13, based on the measures to minimize effects on environmental resources, mitigation measures, laws and regulations protecting environmental resources, and permitting requirements on the Projects and other projects, the potential for the Projects to significantly contribute to cumulative impacts is not anticipated for all environmental resources.

5.1.15 Alternatives

As alternatives to the proposed action, we evaluated the No-Action Alternative, system alternatives for the Projects, alternative liquefaction site locations, alternative pipeline routes, and alternative aboveground facility sites. While the No-Action Alternative would eliminate the short- and long-term environmental impacts identified in the EIS, the stated objectives of the proposed action would not be met.

We evaluated system alternatives for the liquefaction facility, including operating LNG import terminals with approved, proposed, or planned expansions to provide liquefaction capabilities, and approved and proposed liquefaction projects along the Gulf of Mexico in the southern United States. All of these were eliminated from further consideration and we concluded that the potential system alternatives were not reasonable alternatives or did not offer a significant environmental advantage over the Liquefaction Project.

We evaluated four sites for the liquefaction facility, including the proposed site and three alternatives. The sites were selected based on location along the SNWW and property considerations (e.g., size and contiguity, current ownership, potential availability). Various environmental criteria were applied for site prioritization and selection when compared to the proposed site, including potential impacts on aquatic species; deepwater channel access, access to safety and security infrastructure, sufficient size and practicability of the site, available utilities, and road access. Our analysis concluded that the currently proposed site is acceptable because it provides sufficient upland areas for construction of the facilities, includes existing dock structures for material off-loading, requires fewer newly constructed access roads, and does not require the construction or improvement of bridges. None of the site alternatives evaluated offered a significant environmental advantage. While the proposed site does contain wetlands and forested cover, the loss of habitat diversity and function resulting from facility development would be generally comparable with that anticipated at the other sites, with the advantage that no designated wildlife refuges, important bird areas, or higher quality wetlands would be affected.

As a result of comments on the draft EIS, we also analyzed a potential alternative liquefaction site along the north side of the Industrial Canal, which can be accessed via the Calcasieu Ship Channel, in Calcasieu Parish, Louisiana. The alternative site would impact fewer wetlands compared to the proposed liquefaction site; however, the impacts on PFO wetland and forested vegetation types (deciduous, evergreen, and woody wetlands) would be greater than the proposed site. In addition, PALNG reviewed the proposed location's availability of sale and determined the property is owned by the Lake Charles Harbor and Terminal District and the properties on the north bank are currently leased. Because an authorization granted under section 3 of the NGA does not grant the applicant eminent domain, and we have limited ability to ensure that a recommended alternative site would be available unless the landowner willingly makes it available for purchase or lease, the availability of the site for sale is undetermined.

The 2006 analysis concluded that the impacts associated with the proposed site were acceptable because the project would be mostly located on land that has been historically used for dredge material placement, best fulfilled the technical and economic criteria required to meet the project objectives, and had received support of the community and elected officials. Conditions at the Liquefaction Project site have not changed significantly since 2006.

We analyzed the regional setting of PAPL's pipeline routes and determined that different routes (which would likely be longer) between other points of interconnection would not offer any environmental advantage, irrespective of engineering feasibility or cost. We identified minimal environmental impacts associated with the construction and operation of these facilities. We analyzed three pipeline route alternatives (Sabine Lake Alternative, Driftwood Route Alternative, and Wimberley Route Alternative) and determined that these route alternatives do not convey a significant advantage over the proposed pipeline

route and are not recommended. In response to comments on the draft EIS, we also considered pipeline routes that avoid deviations to the FERC's Procedures and pipeline routes that would avoid all Coushatta Tribe of Louisiana ancestral lands. Due to the presence of extensive waterbodies and wetlands along the pipeline routes, as well as the construction workspace needs considering the size of the pipeline and the specific environmental conditions, there were no other reasonable or practical locations for the pipeline routes and the associated construction workspace that could be constructed without the requested deviations to the FERC's Procedures. Also, because of the wide historical range of the Coushatta Tribe of Louisiana, and the location of gas sources to supply the proposed pipeline and liquefaction facility, there are no pipeline routes that could avoid ancestral lands that would meet the purpose and need of the Projects.

The proposed Texas Connector and Louisiana Connector Projects' pipeline routes would be collocated with existing pipelines and other utility rights-of-way for about 43 percent and 73 percent, respectively. In addition, where collocated with other pipelines owned and operated by one of its affiliates, the Louisiana Connector Project would be offset from the existing pipeline by 25 to 35 feet, where feasible. This would limit environmental impacts. As a result, many types of environmental impacts have been reduced compared to establishing new rights-of-way. In addition, PAPL incorporated minor route variations into the Texas Connector and Louisiana Connector Projects routes as a result of environmental and engineering investigations and stakeholder outreach efforts. Beyond a general analysis of viable pipeline system alternatives, we did not receive any comments requesting us to look at a specific pipeline system alternative. Therefore, we did not further consider pipeline system alternatives.

No significant environmental concerns were identified, and no comments were received asking us to examine any additional sites for either the Texas Connector Project's North Compressor station site or the Louisiana Connector Project's compressor station site. Therefore, no alternative sites were considered for these facilities. The Texas Connector Project's South Compressor Station would be located within the same area affected by the Liquefaction Project and therefore the impacts associated with the South Compressor Station are accounted for in with the Liquefaction Project. None of the alternative liquefaction terminal sites and layouts that we evaluated offer a significant environmental advantage over the proposed site and, by association, no alternative site was considered for the South Compressor Station.

We therefore conclude that the proposed Projects, as modified by our recommended mitigation measures, is the preferred alternative to meet the Projects' objectives.

5.2 FERC STAFF'S RECOMMENDED MITIGATION

If the Commission authorizes the Projects, we are recommending that the following measures be included as specific conditions in the Commission's Order. We have determined that these measures would further mitigate the environmental impacts associated with the construction and operation of the Projects.

1. PALNG and PAPL shall follow the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests) and as identified in the EIS, unless modified by the Order. PALNG and PAPL must:

    a. request any modification to these procedures, measures, or conditions in a filing with the Secretary;

    b. justify each modification relative to site-specific conditions;

    c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and

    d. receive approval in writing from the Director of OEP **before using that modification**.

2. For the Liquefaction Project, the Director of OEP, or the Director's designee, has delegated authority to address any requests for approvals or authorizations necessary to carry out the conditions of the Order, and take whatever steps are necessary to ensure the protection of life, health, property, and the environment during construction and operation of the project. This authority shall allow:

    a. the modification of conditions of the Order;

    b. stop-work authority and authority to cease operation; and

    c. the imposition of any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the Order as well as the avoidance or mitigation of unforeseen adverse environmental impact resulting from project construction and operation.

3. For the pipeline facilities, the Director of OEP, or the Director's designee, has delegated authority to address any requests for approvals or authorizations necessary to carry out the conditions of the Order, and take whatever steps are necessary to ensure the protection of environmental resources during construction and operation of the projects. This authority shall allow:

    a. the modification of conditions of the Order;

    b. stop-work authority and authority to cease operation; and

    c. the imposition of any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the Order as well as the avoidance or mitigation of unforeseen adverse environmental impact resulting from project construction and operation.

4. **Prior to any construction**, PALNG and PAPL shall file affirmative statements with the Secretary, certified by a senior company official, that all company personnel, EIs, and contractor personnel will be informed of the EIs' authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.

5. The authorized facility locations shall be as shown in the EIS, as supplemented by filed alignment sheets. **As soon as they are available and before the start of construction**, PALNG and PAPL shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by the Order. All requests for modifications of environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

    PAPL's exercise of eminent domain authority granted under NGA section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized facilities and locations. PAPL's right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of its natural gas pipelines or facilities to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

6. PALNG and PAPL shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations; staging areas; pipe storage yards; new access roads; and other areas that will be used or disturbed and have not been previously identified in filings with the Secretary. Approval for

each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, documentation of landowner approval, whether any cultural resources or federally-listed threatened or endangered species will be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of OEP **before construction in or near that area**.

This requirement does not apply to extra workspace allowed by the Commission's *Upland Erosion Control, Revegetation & Maintenance Plan* and/or minor field realignments per landowner needs and requirements that do not affect other landowners or sensitive environmental areas such as wetlands.

Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

a. implementation of cultural resources mitigation measures;

b. implementation of endangered, threatened, or special concern species mitigation measures;

c. recommendations by state regulatory authorities; and

d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.

7. **Within 60 days of the acceptance of the authorization and before construction begins**, PALNG and PAPL shall each file Implementation Plans with the Secretary for review and written approval by the Director of OEP. PALNG and PAPL must file revisions to their plans as schedules change. The plans shall identify:

   a. how PALNG and PAPL will implement the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests), identified in the EIS, and required by the Order;

   b. how PALNG and PAPL will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to on-site construction and inspection personnel;

   c. the number of EIs assigned per spread and how PALNG and PAPL will ensure that sufficient personnel are available to implement the environmental mitigation;

   d. the number of company personnel, including EIs and contractors, who will receive copies of the appropriate material;

   e. the location and dates of the environmental compliance training and instructions PALNG and PAPL will give to all personnel involved with construction and restoration (initial and refresher training as the Projects progress and personnel change), with the opportunity for OEP staff to participate in the training session(s);

   f. the company personnel (if known) and specific portion of the PALNG's and PAPL's organization having responsibility for compliance;

g. the procedures (including use of contract penalties) PALNG and PAPL will follow if noncompliance occurs; and

h. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram) and dates for:

i. the completion of all required surveys and reports;

ii. the environmental compliance training of on-site personnel;

iii. the start of construction; and

iv. the start and completion of restoration.

8. PALNG and PAPL shall employ a team of EIs, including at least one EI for the Liquefaction Project, and at least one EI per construction spread for the pipeline facilities. The EI(s) shall be:

a. responsible for monitoring and ensuring compliance with all mitigation measures required by the Order and other grants, permits, certificates, or other authorizing documents;

b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 7) and any other authorizing document;

c. empowered to order correction of acts that violate the environmental conditions of the Order, and any other authorizing document;

d. a full-time position, separate from all other activity inspectors;

e. responsible for documenting compliance with the environmental conditions of the Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies or the Coushatta Tribe of Louisiana for Tribal Trust Lands; and

f. responsible for maintaining status reports.

9. Beginning with the filing of the Implementation Plans, PALNG and PAPL shall each file updated status reports with the Secretary on a **monthly** basis for the Liquefaction Project and **weekly** basis for the Texas Connector and Louisiana Connector Projects until all construction and restoration activities are complete. Problems of a significant magnitude shall be reported to the FERC **within 24 hours.** On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:

a. an update on PALNG's and PAPL's efforts to obtain the necessary federal authorizations;

b. the construction status of Liquefaction Facilities and each spread of the Texas Connector and Louisiana Connector Projects, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally sensitive areas;

c. a listing of all problems encountered, contractor nonconformance/deficiency logs, and each instance of noncompliance observed by the EIs during the reporting period (both for the

conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);

d. a description of the corrective and remedial actions implemented in response to all instances of noncompliance, nonconformance, or deficiency;

e. the effectiveness of all corrective and remedial actions implemented;

f. a description of any landowner/resident complaints that may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and

g. copies of any correspondence received by PALNG and PAPL from other federal, state, local, or tribal permitting agencies concerning instances of noncompliance, and the PALNG's and PAPL's responses.

10. PALNG and PAPL must receive written authorization from the Director of OEP **before commencing construction of any project facilities**. To obtain such authorization, PALNG and PAPL shall file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).

11. PALNG must receive written authorization from the Director of OEP **prior to introducing hazardous fluids into the liquefaction facilities**. Instrumentation and controls, hazard detection, hazard control, and security components/systems necessary for the safe introduction of such fluids shall be installed and functional.

12. PALNG must receive written authorization from the Director of OEP **before placing the Liquefaction Project facilities into service**. Such authorization will only be granted following a determination that the facilities have been constructed in accordance with the FERC approval, can be expected to operate safely as designed, and the rehabilitation and restoration of the area affected by the Liquefaction Project facilities are proceeding satisfactorily.

13. PAPL must receive written authorization from the Director of OEP **before placing the Texas Connector and/or the Louisiana Connector Projects into service**. Such authorization will only be granted following a determination that the rehabilitation and restoration of the right-of-way and other areas affected by the Texas Connector and Louisiana Connector Projects are proceeding satisfactorily.

14. **Within 30 days of placing the authorized facilities in service**, PALNG and PAPL shall file an affirmative statement with the Secretary, certified by a senior company official:

a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or

b. identifying which of the conditions in the Order PALNG and PAPL have complied with or will comply with. This statement shall also identify any areas affected by the Projects where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.

15. **Prior to construction of the Projects**, PALNG and PAPL shall file with the Secretary, for review and written approval by the Director of OEP, a project-specific plan for construction near known abandoned oil and gas wells. This plan shall identify actions to be taken if any unidentified oil or

gas wells are discovered during construction and discuss how PALNG or PAPL will maintain the integrity of any plugged wells. (*section 4.1.2*)

16. **Prior to construction of the compressor stations associated with the Texas Connector and Louisiana Connector Projects**, PAPL shall file with the Secretary the results of geotechnical studies for the compressor stations, including any recommended mitigation measures PAPL will adopt as part of the final engineering design. (*section 4.1.3.1*)

17. **Prior to construction of the Liquefaction Project**, PALNG shall provide the EPA, USACE, TCEQ, and Texas RRC with the soil and sediment analysis conducted at the area within the ship canal at the marine berth, construction dock, MOF, and landward component of the MOF for review. PALNG shall file the conclusions of the agency reviews with the Secretary along with documentation of its consultations with these agencies including any measures PALNG will need to adopt if the analysis discovers previously unknown contamination. (*section 4.2.1.6*)

18. **Prior to construction of the Texas Connector and Louisiana Connector Projects**, PAPL shall file with the Secretary, for review and approval by the Director of OEP, the anticipated volume and source of water to be used for dust control. (*section 4.3.2.2*)

19. **PALNG and PAPL shall not begin construction of the Projects until**:

    a. all outstanding biological surveys are completed;

    b. the FERC staff complete any necessary ESA section 7 consultation, including conference for the eastern black rail, with the FWS;

    c. PALNG and PAPL have received written notification from the Director of OEP that construction and/or use of mitigation (including implementation of conservation measures) may begin. (*section 4.7.3*)

20. **Prior to construction of the Louisiana Connector Project**, PAPL shall conduct surveys for the American chaffseed on the remaining no-access parcels with potential habitat. If the American chaffseed is found, PAPL shall incorporate methods to avoid impacts on the American chaffseed. PAPL shall file with the Secretary and the Louisiana FWS both the survey results and PAPL's proposed avoidance methods. (*section 4.7.3.5*)

21. **Prior to construction of the Liquefaction Project**, PALNG shall file with the Secretary documentation of concurrence from the USACE and TGLO that the Liquefaction Project is consistent with the CZMA. (*section 4.8.9.1*)

22. **Prior to construction of the Texas Connector and Louisiana Connector Projects**, PAPL shall file with the Secretary documentation of concurrence from the USACE, TGLO, and Louisiana Office of Coastal Management that the Texas Connector Project and Louisiana Connector Project are consistent with the CZMA. (*section 4.8.9.2*)

23. **Prior to construction of the Liquefaction Project,** PALNG shall file with the Secretary its Transportation Plan for the Liquefaction Project, for review and written approval by the Director of OEP. The plan shall include personnel training; permitting requirements; consultations conducted with local and state agencies; and how access to/from the work site by personnel, equipment, and materials will be managed on a daily basis throughout construction. (*section 4.9.6.1*)

24. **Prior to construction of the Louisiana Connector Project in Louisiana**, PAPL shall file with the Secretary, for review and written approval by the Director of OEP, a revised *Unanticipated Discoveries Plan* that clarifies that THPO construction recommencement authorization is only applicable to Coushatta Tribe of Louisiana tribal trust lands. (*section 4.10.2*)

25. PALNG shall **not begin** construction of facilities and/or use of staging, storage, or temporary work areas and new or to-be-improved access roads **associated with the Liquefaction Project until**:

    a. PALNG files with the Secretary, the outstanding information for Dredge Disposal Area 8, and the Texas SHPO's comments on the information;

    b. PALNG files any required survey report and the Texas SHPO's comments on the report;

    c. the ACHP is afforded an opportunity to comment on the undertaking if historic properties will be adversely affected; and

    d. the FERC staff reviews and the Director of OEP approves any cultural resources report and notifies PALNG in writing that construction may proceed.

    All material filed with the Commission that contains **location, character, and ownership information** about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering "**CUI//PRIV- DO NOT RELEASE**." (*section 4.10.4.1*)

26. PAPL shall **not begin** construction of facilities and/or use of staging, storage, or temporary work areas and new or to-be-improved access roads **associated with the Texas Connector and Louisiana Connector Projects until**:

    a. PAPL files with the Secretary all outstanding survey reports, evaluation reports, special studies, and any required avoidance/treatment plans, and the Texas and Louisiana SHPOs' and the Coushatta Tribe of Louisiana THPO's comments (as applicable) on these;

    b. the ACHP is afforded an opportunity to comment if historic properties will be adversely affected; and

    c. the FERC staff reviews and the Director of OEP approves the cultural resources reports, studies, and plans, and notifies PAPL in writing that treatment plans/mitigation measures (including archaeological data recovery) may be implemented and/or construction may proceed.

    All materials filed with the Commission containing **location, character, and ownership information** about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering "**CUI//PRIV – DO NOT RELEASE**."(*section 4.10.4.2*)

27. **Prior to construction of HDDs at MPs 19.6 and 20.3 along the Texas Connector Project's Northern Pipeline; MP 0.5 along the GTS Lateral; MP 0.8 along the FGT Lateral; and MPs 38.7, 40.5, 42.5, 47.9, 48.5, 56.8, 60.2, 79.4, 91.1, 96.9, 110.1, and 110.3 along the Louisiana Connector Project** where HDD-related noise could exceed the Commission's sound level criterion at the closest NSA, PAPL shall file with the Secretary, for review and written approval by the Director of OEP, an HDD noise mitigation plan to reduce the projected noise level attributable to the proposed drilling operations at nearby NSAs. During drilling operations, PAPL shall implement the approved plan, monitor noise levels, and make all reasonable efforts to restrict the

noise attributable to the drilling operations to no more than an L_{dn} of 55 dBA at the NSAs or 10 dBA above background where nighttime ambient noise is above 55 dBA L_{dn}. (*section 4.11.2.3*)

28. PALNG shall file a full power load noise survey with the Secretary **no later than 60 days** after placing each Liquefaction Project train in service. If the noise attributable to the operation of the equipment at the liquefaction facilities exceeds 55 dBA L_{dn} at the nearest NSA, **within 60 days** PALNG shall modify operation of the liquefaction facilities or install additional noise controls until a noise level below 55 dBA L_{dn} at the NSA is achieved. PALNG shall confirm compliance with the above requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls. (*section 4.11.2.4*)

29. PALNG and PAPL shall file noise surveys with the Secretary **no later than 60 days** after placing the entire Liquefaction Project facility, including the South Compressor Station associated with the Texas Connector Project, into service. If a full load condition noise survey is not possible, PALNG and PAPL shall provide an interim survey at the maximum possible horsepower load **within 60 days** of placing the Liquefaction Project facility and South Compressor Station into service and provide the full load survey **within 6 months**. If the noise attributable to operation of the equipment at the Liquefaction Project facility and South Compressor Station exceeds 55 dBA L_{dn} at the nearest NSA under interim or full horsepower load conditions, PALNG and PAPL shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within 1 year** of the in-service date. PALNG and PAPL shall confirm compliance with the above requirement by filing an additional noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls. (*section 4.11.2.4*)

30. PAPL shall file a noise survey with the Secretary **no later than 60 days** after placing the Texas Connector Project North Compressor Station and Louisiana Connector Project's compressor station in service. If a full load condition noise survey is not possible, PAPL shall instead file an interim survey at the maximum possible horsepower load and file the full load survey **within 6 months**. If the noise attributable to the operation of all of the equipment at any station under interim or full horsepower load exceeds 55 dBA L_{dn} at any nearby NSA, PAPL shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within 1 year** of the in-service date. PALP shall confirm compliance with the 55 dBA L_{dn} requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls. (*section 4.11.2.4*)

31. **Prior to construction of final design,** PALNG shall file with the Secretary the following information, stamped and sealed by the professional engineer-of-record, registered in Texas:

    a. site preparation drawings and specifications;

    b. LNG terminal structures and foundation design drawings and calculations (including prefabricated and field constructed structures);

    c. seismic specifications for procured equipment; and

    d. quality control procedures to be used for civil/structural design and construction.

    In addition, PALNG shall file, in its Implementation Plan, the schedule for producing this information. *(section 4.12.6)*

32. **Prior to commencement of service,** PALNG shall file with the Secretary a monitoring and maintenance plan, stamped and sealed by the professional engineer-of-record registered in Texas,

for the perimeter levee which ensures the crest elevation relative to mean sea level will be maintained for the life of the facility considering berm settlement, subsidence, and sea level rise. *(section 4.12.6)*

Conditions 33 through 127 shall apply to the Port Arthur Liquefaction Project. Information pertaining to these specific conditions below shall be filed with the Secretary for review and written approval by the Director of OEP, or the Director's designee, within the timeframe indicated by each condition. Specific engineering, vulnerability, or detailed design information meeting the criteria specified in Order No. 833 (Docket No. RM16-15-000), including security information, shall be submitted as critical energy infrastructure information pursuant to 18 CFR 388.113. See *Critical Electric Infrastructure Security and Amending Critical Energy Infrastructure Information*, Order No. 833, 81 Fed. Reg. 93,732 (December 21, 2016), FERC Stats. & Regs. 31,389 (2016). Information pertaining to items such as offsite emergency response, procedures for public notification and evacuation, and construction and operating reporting requirements will be subject to public disclosure. All information shall be filed **a minimum of 30 days** before approval to proceed is requested.

33. **Prior to initial site preparation,** PALNG shall file an overall project schedule, which includes the proposed stages of the commissioning plan. *(section 4.12.6)*

34. **Prior to initial site preparation,** PALNG shall file quality assurance and quality control procedures for construction activities. *(section 4.12.6)*

35. **Prior to initial site preparation,** PALNG shall file procedures for controlling access during construction. *(section 4.12.6)*

36. **Prior to initial site preparation,** PALNG shall develop an ERP (including evacuation) and coordinate procedures with the USCG; state, county, and local emergency planning groups; fire departments; state and local law enforcement; and appropriate federal agencies. This plan shall include at a minimum:

    a. designated contacts with state and local emergency response agencies;

    b. scalable procedures for the prompt notification of appropriate local officials and emergency response agencies based on the level and severity of potential incidents;

    c. procedures for notifying residents and recreational users within areas of potential hazard;

    d. evacuation routes/methods for residents and public use areas that are within any transient hazard areas along the route of the LNG marine transit;

    e. locations of permanent sirens and other warning devices; and

    f. an "emergency coordinator" on each LNG carrier to activate sirens and other warning devices.

    PALNG shall notify the FERC staff of all planning meetings in advance and shall report progress on the development of its ERP at **3-month intervals**. *(section 4.12.6)*

37. **Prior to initial site preparation,** PALNG shall file a Cost-Sharing Plan identifying the mechanisms for funding all Project-specific security/emergency management costs that will be imposed on state and local agencies. This comprehensive plan shall include funding mechanisms

for the capital costs associated with any necessary security/emergency management equipment and personnel base. PALNG shall notify FERC staff of all planning meetings in advance and shall report progress on the development of its Cost Sharing Plan at **3-month intervals**. *(section 4.12.6)*

38. **Prior to construction of final design,** PALNG shall file change logs that list and explain any changes made from the FEED provided in PALNG's application and filings. A list of all changes with an explanation for the design alteration shall be filed and all changes shall be clearly indicated on all diagrams and drawings. *(section 4.12.6)*

39. **Prior to construction of final design,** PALNG shall file information/revisions pertaining to PALNG' response numbers 9, 11, 18, 19, 24, 28, 29, 30-33, 34, 36-41, 43-46, 54-55 of its January 29, 2018 filing and 52 and 57 of its February 7, 2018 filing, which indicated features to be included or considered in the final design. *(section 4.12.6)*

40. **Prior to construction of final design,** PALNG shall file a plot plan of the final design showing all major equipment, structures, buildings, and impoundment systems. *(section 4.12.6)*

41. **Prior to construction of final design,** PALNG shall file three-dimensional plant drawings to confirm plant layout for maintenance, access, egress, and congestion. *(section 4.12.6)*

42. **Prior to construction of final design,** PALNG shall file drawings of the storage tank piping support structure and support of horizontal piping at grade including pump columns, relief valves, pipe penetrations, instrumentation, and appurtenances. *(section 4.12.6)*

43. **Prior to construction of final design,** PALNG shall file a complete specification and drawings of the proposed LNG tank design and installation. *(section 4.12.6)*

44. **Prior to construction of final design,** PALNG shall file an up-to-date equipment list, process and mechanical data sheets, and specifications. The specifications shall include:

    a. building specifications (control buildings, electrical buildings, compressor buildings, storage buildings, pressurized buildings, ventilated buildings, blast resistant buildings);

    b. mechanical specifications (piping, valve, insulation, rotating equipment, heat exchanger, storage tank and vessel, other specialized equipment);

    c. electrical and instrumentation specifications (power system specifications, control system specifications, SIS specifications, cable specifications, other electrical and instrumentation specifications); and

    d. security and fire safety specifications (security, passive protection, hazard detection, hazard control, firewater). *(section 4.12.6)*

45. **Prior to construction of final design,** PALNG shall file a list of all codes and standards and the final specification document number where they are referenced. *(section 4.12.6)*

46. **Prior to construction of final design,** PALNG shall file up-to-date PFDs and P&IDs, including vendor P&IDs. The PFDs shall include heat and material balances. The P&IDs shall include the following information:

    a. equipment tag number, name, size, duty, capacity, and design conditions;

b. equipment insulation type and thickness;

c. storage tank pipe penetration size and nozzle schedule;

d. valve high pressure side and internal and external vent locations;

e. piping with line number, piping class specification, size, and insulation type and thickness;

f. piping specification breaks and insulation limits;

g. all control and manual valves numbered;

h. relief valves with size and set points; and

i. drawing revision number and date. *(section 4.12.6)*

47. **Prior to construction of final design,** PALNG shall file P&IDs, specifications, and procedures that clearly show and specify the tie-in details required to safely connect subsequently constructed facilities with the operational facilities. *(section 4.12.6)*

48. **Prior to construction of final design,** PALNG shall file a car seal philosophy and a list of all car-sealed and locked valves consistent with the P&IDs. *(section 4.12.6)*

49. **Prior to construction of final design,** the engineering, procurement, and construction contractor shall verify that the recommendations from the FEED Hazard Identification are complete and consistent with the requirements of the final design as determined by the engineering, procurement, and construction contractor. *(section 4.12.6)*

50. **Prior to construction of final design,** PALNG shall file a HAZOP review prior to issuing the P&IDs for construction. A copy of the review, a list of the recommendations, and actions taken on the recommendations shall be filed. *(section 4.12.6)*

51. **Prior to construction of final design,** PALNG shall file the safe operating limits (upper and lower), alarm and shutdown set points for all instrumentation (i.e., temperature, pressures, flows, and compositions). *(section 4.12.6)*

52. **Prior to construction of final design,** PALNG shall file cause-and-effect matrices for the process instrumentation, fire and gas detection system, and ESD system for review and approval. The cause-and-effect matrices shall include alarms and shutdown functions, details of the voting and shutdown logic, and set points. *(section 4.12.6)*

53. **Prior to construction of final design,** PALNG shall file an evaluation of ESD valve closure times. The evaluation shall account for the time to detect an upset or hazardous condition, notify plant personnel, and close the ESD valve. *(section 4.12.6)*

54. **Prior to construction of final design,** PALNG shall file an evaluation of dynamic pressure surge effects from valve opening and closure times and pump operations. *(section 4.12.6)*

55. **Prior to construction of final design,** PALNG shall demonstrate that hazardous fluid piping and piping nipples 2 inches or less in diameter are designed to withstand external loads, including vibrational loads in the vicinity of rotating equipment and operator live loads in areas accessible by operators. *(section 4.12.6)*

56. **Prior to construction of final design,** PALNG shall specify that all drains from high pressure hazardous fluid systems are equipped with double isolation and bleed valves. *(section 4.12.6)*

57. **Prior to construction of final design,** PALNG shall file electrical area classification drawings. *(section 4.12.6)*

58. **Prior to construction of final design,** PALNG shall file drawings and details of how process seals or isolations installed at the interface between a flammable fluid system and an electrical conduit or wiring system meet the requirements of NFPA 59A (2001). *(section 4.12.6)*

59. **Prior to construction of final design,** PALNG shall file details of an air gap or vent installed downstream of process seals or isolations installed at the interface between a flammable fluid system and an electrical conduit or wiring system. Each air gap shall vent to a safe location and be equipped with a leak detection device that shall continuously monitor for the presence of a flammable fluid, alarm the hazardous condition, and shut down the appropriate systems. *(section 4.12.6)*

60. **Prior to construction of final design,** PALNG shall include layout and design specifications of the pig trap, inlet separation and liquid disposal, inlet/send-out meter station, and pressure control. *(section 4.12.6)*

61. **Prior to construction of final design,** PALNG shall specify that piping and equipment that may be cooled with liquid nitrogen will be designed for liquid nitrogen temperatures, with regard to allowable movement and stresses. *(section 4.12.6)*

62. **Prior to construction of final design,** PALNG shall include LNG tank fill flow measurement with high flow alarm. *(section 4.12.6)*

63. **Prior to construction of final design,** PALNG shall include BOG flow, tank density profile, and temperature profile measurement for each tank. *(section 4.12.6)*

64. **Prior to construction of final design,** PALNG shall file the structural analysis of the LNG storage tank and outer concrete impoundment wall to demonstrate they are designed to withstand all loads and combinations. *(section 4.12.6)*

65. **Prior to construction of final design,** PALNG shall file an analysis of the structural integrity of the outer containment of the full containment storage tanks when exposed to a roof tank top fire or adjacent tank top fire. *(section 4.12.6)*

66. **Prior to construction of final design,** PALNG shall file the sizing basis and capacity for the final design of the flares and/or vent stacks as well as the pressure and vacuum relief valves for major process equipment, vessels, and storage tanks. *(section 4.12.6)*

67. **Prior to construction of final design,** PALNG shall file detailed cooldown plans showing the piping flow, valve alignment, and instruments used to monitor the initial cooldown and filling of the LNG storage tanks. *(section 4.12.6)*

68. **Prior to construction of final design,** PALNG shall file detailed procedures for import of LNG during the initial cooldown of the LNG storage tanks including detailed P&IDs with flow paths and valve alignment showing the position of valves and lockout/tagout devices. *(section 4.12.6)*

69. **Prior to construction of final design,** PALNG shall file an evaluation on the need to install fixed toxic gas detection to detect H_2S releases from loss of containment from the acid gas piping system and potential release points (i.e., vents, relief valves, vent stacks, and thermal oxidizer stack). *(section 4.12.6)*

70. **Prior to construction of final design,** PALNG shall file process simulation results for the deethanizer, depropanizer depressurized conditions to ensure the associated deethanizer, depropanizer, reboiler, piping, and other associated equipment are adequately designed for settle out and upset conditions to prevent brittle facture of piping and associated equipment. *(section 4.12.6)*

71. **Prior to construction of final design,** PALNG shall file an evaluation assessing the minimum design metal temperature and material of construction needed for the deethanizer, depropanizer, reboiler and piping during upset/settleout conditions. *(section 4.12.6)*

72. **Prior to construction of final design**, PALNG shall include provisions to maintain stability and pressure of the regenerator in the event that the H2S scavenger or thermal oxidizer are unavailable (e.g., change out, maintenance, startup, etc.). *(section 4.12.6)*

73. **Prior to construction of final design,** PALNG shall include a thermal relief valve between the propane shutoff valves (XV-30687 and XV0-30686) to protect piping. *(section 4.12.6)*

74. **Prior to construction of final design,** PALNG shall include a thermal relief valve between the ethane shutoff valves (XV0-30729 and XV0-30731) to protect piping. *(section 4.12.6)*

75. **Prior to construction of final design,** PALNG shall include provisions to prevent cryogenic fluids accumulated in the dry flare knockout drum from reaching the wet flare knockout drum, which are connected by the dry flare knockout drum drain line to the blow case purge to the wet flare knockout drum. *(section 4.12.6)*

76. **Prior to construction of final design**, PALNG shall include details of the flare knockout drum heater and detailed procedures for draining flare knockout drums to a safe location. *(section 4.12.6)*

77. **Prior to construction of final design,** PALNG shall file detailed calculations for the flow rate of the jockey pumps accounting for flow rate losses due to leaks or when drain valves are opened to ensure that system losses do not exceed the specified design flow rate of the jockey firewater pumps. *(section 4.12.6)*

78. **Prior to construction of final design,** PALNG shall file an evaluation of the need to install pressure relieving protection for flammable liquid piping segments (i.e., refrigerants, liquid hydrocarbons, condensate products) that can be isolated by valves. *(section 4.12.6)*

79. **Prior to construction of final design,** PALNG shall specify that all ESD valves will be equipped with open and closed position switches connected to the DCS/SIS. *(section 4.12.6)*

80. **Prior to construction of final design,** PALNG shall file a drawing showing the location of the ESD buttons. Emergency shutdown buttons shall be easily accessible, conspicuously labeled, and located in an area which will be accessible during an emergency. *(section 4.12.6)*

81. **Prior to construction of final design,** PALNG shall file drawings and specifications for vehicle barriers at each facility entrance for access control. *(section 4.12.6)*

82. **Prior to construction of final design,** PALNG shall file an evaluation of the need to install turning lanes to minimize the risk of hazardous material truck and other vehicle incidents entering and exiting the facility from SH 87. *(section 4.12.6)*

83. **Prior to construction of final design,** PALNG shall file an evaluation of the need for installing internal road vehicle protections (e.g., guard rails, barriers, and bollards) to protect transfer piping, pumps, and compressors, etc. and to ensure that they are located away from roadway or protected from inadvertent damage from vehicles. *(section 4.12.6)*

84. **Prior to construction of final design,** PALNG shall file a projectile analysis for review and approval to demonstrate that the outer concrete impoundment wall of a full-containment LNG tank could withstand windborne projectiles. The analysis shall detail the projectile speeds and characteristics and method used to determine penetration or perforation depths. *(section 4.12.6)*

85. **Prior to construction of final design,** PALNG shall file security camera, intrusion detection, and lighting drawings. The security camera drawings shall show the location, areas covered, and features of the camera (fixed, tilt/pan/zoom, motion detection alerts, low light, mounting height, etc.) to verify camera coverage of the entire perimeter with redundancies for cameras interior to the facility to enable rapid monitoring of the LNG plant. The intrusion detection drawings shall show or note the location of the intrusion detection to verify it covers the entire perimeter of the LNG plant. The lighting drawings shall show the location, elevation, type of light fixture, and lux levels of the lighting system. *(section 4.12.6)*

86. **Prior to construction of final design,** PALNG shall file the details of the ESD system, including whether a plant-wide ESD button with proper sequencing and reliability will be installed or whether another system will be installed that is demonstrated through a human reliability analysis to provide a means to quickly and reliably shutdown the entire plant. *(section 4.12.6)*

87. **Prior to construction of final design,** PALNG shall file an updated fire protection evaluation of the proposed facilities. A copy of the evaluation, a list of recommendations and supporting justifications, and actions taken on the recommendations shall be filed. *(section 4.12.6)*

88. **Prior to construction of final design,** PALNG shall file spill containment system drawings with dimensions and slopes of curbing, trenches, impoundments, and capacity calculations considering any foundations and equipment within impoundments, as well as the sizing and design of the down-comer that will transfer spills from the tank top to the ground-level impoundment system. The spill containment drawings shall show containment for all hazardous fluids from the largest flow from a single line for 10 minutes or from the largest vessel or otherwise demonstrate spill containment will not significantly reduce the flammable vapor dispersion or radiant heat consequences of a spill. *(section 4.12.6)*

89. **Prior to construction of final design**, PALNG shall specify the material of construction for the curbed areas, trenches, and impoundments as insulated concrete or otherwise demonstrate insulated concrete will not significantly reduce the flammable vapor dispersion or radiant heat consequences of a spill. *(section 4.12.6)*

90. **Prior to construction of final design,** PALNG shall file an analysis of the localized hazards to operators from a potential liquid nitrogen release and shall also provide spill containment and low oxygen detectors to mitigate liquid nitrogen releases. *(section 4.12.6)*

91. **Prior to construction of final design,** PALNG shall file complete drawings and a list of the hazard detection equipment. The drawings shall clearly show the location and elevation of all detection equipment and demonstrate potential releases resulting in an offsite impact could be detected by at least two detectors to allow for shutdown in less than 10 minutes. The list shall include the instrument tag number, type and location, alarm indication locations, and shutdown functions of the hazard detection equipment. *(section 4.12.6)*

92. **Prior to construction of final design,** PALNG shall file a list of alarm and shutdown set points for all hazard detectors that account for the calibration gas of the hazard detectors when determining the lower flammable limit set points for CH_4, propane, butane, ethane, and condensate. *(section 4.12.6)*

93. **Prior to construction of final design,** PALNG shall file a list of alarm and shutdown set points for all hazard detectors that account for the calibration gas of hazard detectors when determining the set points for toxic components such as aqueous ammonia, natural gas liquids and H_2S. *(section 4.12.6)*

94. **Prior to construction of final design,** PALNG shall file a technical review of facility design that:

    a. identifies all combustion/ventilation air intake equipment and the distances to any possible flammable gas or toxic release; and

    b. demonstrates that these areas are adequately covered by hazard detection devices and indicates how these devices will isolate or shutdown any combustion or heating ventilation and air conditioning equipment whose continued operation could add to or sustain an emergency. *(section 4.12.6)*

95. **Prior to construction of the final design,** PALNG shall file a building siting assessment to ensure plant buildings that are occupied or critical to the safety of the LNG plant are adequately protected from potential hazards involving fires and vapor cloud explosions. *(section 4.12.6)*

96. **Prior to construction of final design,** PALNG shall file a drawing that includes smoke detection in occupied buildings. *(section 4.12.6)*

97. **Prior to construction of final design,** PALNG shall file a drawing that includes hazard detection suitable to detect high temperatures and smoldering combustion products in electrical buildings and control room buildings. *(section 4.12.6)*

98. **Prior to construction of final design,** PALNG shall file a drawing that includes clean agent systems in the electrical switchgear and instrumentation buildings. *(section 4.12.6)*

99. **Prior to construction of final design,** PALNG shall file facility plan drawings and a list of the fixed and wheeled dry-chemical, hand-held fire extinguishers, and other hazard control equipment. Plan drawings shall clearly show the location by tag number and elevation of all fixed, wheeled, and hand-held extinguishers and demonstrate travel distances are along normal paths of access and egress and in compliance with NFPA 10, 15, and 17. The list shall include the equipment tag number, type, capacity, equipment covered, discharge rate, and automatic and manual remote signals initiating discharge of the units. *(section 4.12.6)*

100. **Prior to construction of final design,** PALNG shall file facility plan drawings showing the proposed location of the firewater and any foam systems. Plan drawings shall clearly show the

location of firewater and foam piping, post indicator valves, and the location and area covered by, each monitor, hydrant, hose, water curtain, deluge system, foam system, water-mist system, and sprinkler. The drawings shall demonstrate that each process area, fire zone, or other sections of piping with several users can be isolated with post indicator valves and that firewater coverage is provided by at least two monitors or hydrants with sufficient firewater flow to cool exposed surfaces subjected to a fire. Drawings shall also include piping and instrumentation diagrams of the firewater and foam systems. *(section 4.12.6)*

101. **Prior to construction of final design,** PALNG shall file detailed calculations to confirm that the final fire water volumes will be accounted for when evaluating the capacity of the impoundment system during a spill and fire scenario. *(section 4.12.6)*

102. **Prior to construction of final design,** PALNG shall specify that the firewater flow test meter is equipped with a transmitter and that a pressure transmitter is installed upstream of the flow transmitter. The flow transmitter and pressure transmitter shall be connected to the DCS and recorded. *(section 4.12.6)*

103. **Prior to construction of final design,** PALNG shall specify that the firewater pump shelter is designed with a removable roof for maintenance access to the firewater pumps. *(section 4.12.6)*

104. **Prior to construction of final design,** PALNG shall file calculations for the firewater spray systems sized to provide cooling for mitigation of boiling-liquid-expanding-vapor explosions. *(section 4.12.6)*

105. **Prior to construction of final design,** PALNG shall file a design that accounts for the fire water required for foam generation in calculating the total fire water required for 2 hours of supply. *(section 4.12.6)*

106. **Prior to construction of final design,** PALNG shall file drawings and specifications for the structural passive protection systems to protect equipment and supports from cryogenic releases. *(section 4.12.6)*

107. **Prior to construction of final design,** PALNG shall file a detailed quantitative analysis to demonstrate that adequate thermal mitigation will be provided for each significant component within the 4,000 BTU/ft^2-hr zone from an impoundment, or provide an analysis that evaluates the consequences of pressure vessel bursts and BLEVEs. Trucks at the truck transfer station shall be included in the analysis. Passive mitigation shall be supported by calculations for the thickness limiting temperature rise and active mitigation shall be justified with calculations demonstrating flow rates and durations of any cooling water to mitigate the heat absorbed by the vessel. *(section 4.12.6)*

108. **Prior to construction of final design,** PALNG shall file an evaluation of the voting logic and voting degradation for hazard detectors. *(section 4.12.6)*

109. **Prior to commissioning,** PALNG shall file a detailed schedule for commissioning through equipment startup. The schedule shall include milestones for all procedures and tests to be completed: prior to introduction of hazardous fluids and during commissioning and startup. PALNG shall file documentation certifying that each of these milestones has been completed before authorization to commence the next phase of commissioning and startup will be issued. *(section 4.12.6)*

110. **Prior to commissioning,** PALNG shall file detailed plans and procedures for: testing the integrity of onsite mechanical installation; functional tests; introduction of hazardous fluids; operational tests; and placing the equipment into service. *(section 4.12.6)*

111. **Prior to commissioning,** PALNG shall file a plan for clean-out, dry-out, purging, and tightness testing. This plan shall address the requirements of the American Gas Association's Purging Principles and Practice, and shall provide justification if not using an inert or non-flammable gas for clean-out, dry-out, purging, and tightness testing. *(section 4.12.6)*

112. **Prior to commissioning,** PALNG shall file the procedures for pressure/leak tests which address the requirements of ASME BPVC section VIII and ASME B31.3. The procedures shall include a line list of pneumatic and hydrostatic test pressures. *(section 4.12.6)*

113. **Prior to commissioning,** PALNG shall file the operation and maintenance procedures and manuals, as well as safety procedures, hot work procedures and permits, abnormal operating conditions reporting procedures, simultaneous operations procedures, and management of change procedures and forms. *(section 4.12.6)*

114. **Prior to commissioning,** PALNG shall tag all equipment, instrumentation, and valves in the field, including drain valves, vent valves, main valves, and car-sealed or locked valves. *(section 4.12.6)*

115. **Prior to commissioning,** PALNG shall file a plan to maintain a detailed training log to demonstrate that operating staff has completed the required training. *(section 4.12.6)*

116. **Prior to commissioning,** PALNG shall equip the LNG storage tank and adjacent piping and supports with permanent settlement monitors to allow personnel to observe and record the relative settlement between the LNG storage tank and adjacent piping. The settlement record shall be reported in the **semi-annual** operational reports. *(section 4.12.6)*

117. **Prior to introduction of hazardous fluids,** PALNG shall develop and implement an alarm management program to reduce alarm complacency and maximize the effectiveness of operator response to alarms. *(section 4.12.6)*

118. **Prior to introduction of hazardous fluids**, PALNG shall file results of the LNG storage tank hydrostatic test and foundation settlement results. At a minimum, foundation settlement results shall be provided thereafter **annually.** *(section 4.12.6)*

119. **Prior to introduction of hazardous fluids,** PALNG shall complete and document all pertinent tests (Factory Acceptance Tests, Site Acceptance Tests, Site Integration Tests) associated with the DCS and SIS that demonstrates full functionality and operability of the system. *(section 4.12.6)*

120. **Prior to introduction of hazardous fluids,** PALNG shall complete and document a firewater pump acceptance test and firewater monitor and hydrant coverage test. The actual coverage area from each monitor and hydrant shall be shown on facility plot plan(s). *(section 4.12.6)*

121. **Prior to introduction of hazardous fluids,** PALNG shall complete and document a pre-startup safety review to ensure that installed equipment meets the design and operating intent of the facility. The pre-startup safety review shall include any changes since the last hazard review, operating procedures, and operator training. A copy of the review with a list of recommendations, and actions taken on each recommendation, shall be filed. *(section 4.12.6)*

122. **PALNG shall file a request for written authorization from the Director of OEP prior to unloading or loading the first LNG commissioning cargo**. **After production of first LNG**, PALNG shall file **weekly** reports on the commissioning of the proposed systems that detail the progress toward demonstrating the facilities can safely and reliably operate at or near the design production rate. The reports shall include a summary of activities, problems encountered, and remedial actions taken. The weekly reports shall also include the latest commissioning schedule, including projected and actual LNG production by each liquefaction train, LNG storage inventories in each storage tank, and the number of anticipated and actual LNG commissioning cargoes, along with the associated volumes loaded or unloaded. Further, the weekly reports shall include a status and list of all planned and completed safety and reliability tests, work authorizations, and punch list items. Problems of significant magnitude shall be reported to the FERC **within 24 hours**. *(section 4.12.6)*

123. **Prior to commencement of service,** PALNG shall label piping with fluid service and direction of flow in the field, in addition to the pipe labeling requirements of NFPA 59A (2001). *(section 4.12.6)*

124. **Prior to commencement of service,** PALNG shall provide plans for any preventative and predictive maintenance program that performs periodic or continuous equipment condition monitoring. *(section 4.12.6)*

125. **Prior to commencement of service,** PALNG shall develop procedures for offsite contractors' responsibilities, restrictions, and limitations and for supervision of these contractors by PALNG staff. *(section 4.12.6)*

126. **Prior to commencement of service,** PALNG shall notify the FERC staff of any proposed revisions to the security plan and physical security of the plant. *(section 4.12.6)*

127. **Prior to commencement of service,** PALNG shall file a request for written authorization from the Director of OEP. Such authorization will only be granted following a determination by the USCG, under its authorities under the Ports and Waterways Safety Act, the Magnuson Act, the MTSA of 2002, and the Safety and Accountability For Every Port Act, that appropriate measures to ensure the safety and security of the facility and the waterway have been put into place by PALNG or other appropriate parties. *(section 4.12.6)*

In addition, recommendations 128 through 131 shall apply **throughout the life of the Port Arthur Liquefaction facility**.

128. The facility shall be subject to regular FERC staff technical reviews and site inspections on at least an **annual basis** or more frequently as circumstances indicate. Prior to each FERC staff technical review and site inspection, PALNG shall respond to a specific data request including information relating to possible design and operating conditions that may have been imposed by other agencies or organizations. Up-to-date detailed P&IDs reflecting facility modifications and provision of other pertinent information not included in the semi-annual reports described below, including facility events that have taken place since the previously submitted semi-annual report, shall be submitted. *(section 4.12.6)*

129. **Semi-annual** operational reports shall be filed with the Secretary to identify changes in facility design and operating conditions; abnormal operating experiences; activities (e.g., ship arrivals, quantity and composition of imported and exported LNG, liquefied and vaporized quantities, boil off/flash gas); and plant modifications, including future plans and progress thereof. Abnormalities

shall include, but not be limited to, unloading/loading/shipping problems, potential hazardous conditions from offsite vessels, storage tank stratification or rollover, geysering, storage tank pressure excursions, cold spots on the storage tanks, storage tank vibrations and/or vibrations in associated cryogenic piping, storage tank settlement, significant equipment or instrumentation malfunctions or failures, non-scheduled maintenance or repair (and reasons therefore), relative movement of storage tank inner vessels, hazardous fluids releases, fires involving hazardous fluids and/or from other sources, negative pressure (vacuum) within a storage tank, and higher than predicted boil off rates. Adverse weather conditions and the effect on the facility also shall be reported. Reports shall be submitted **within 45 days after each period ending June 30 and December 31**. In addition to the above items, a section entitled "Significant Plant Modifications Proposed for the Next 12 Months (dates)" shall be included in the semi-annual operational reports. Such information will provide the FERC staff with early notice of anticipated future construction/maintenance at the LNG facilities. *(section 4.12.6)*

130. In the event the temperature of any region of any secondary containment, including imbedded pipe supports, becomes less than the minimum specified operating temperature for the material, the Commission shall be notified **within 24 hours** and procedures for corrective action shall be specified. *(section 4.12.6)*

131. Significant non-scheduled events, including safety-related incidents (e.g., LNG, condensate, refrigerant, or natural gas releases; fires; explosions; mechanical failures; unusual over pressurization; and major injuries) and security-related incidents (e.g., attempts to enter site, suspicious activities) shall be reported to the FERC staff. In the event that an abnormality is of significant magnitude to threaten public or employee safety, cause significant property damage, or interrupt service, notification shall be made **immediately**, without unduly interfering with any necessary or appropriate emergency repair, alarm, or other emergency procedure. In all instances, notification shall be made to the FERC staff **within 24 hours**. This notification practice shall be incorporated into the liquefaction facility's emergency plan. Examples of reportable hazardous fluids-related incidents include:

    a. fire;

    b. explosion;

    c. estimated property damage of $50,000 or more;

    d. death or personal injury necessitating in-patient hospitalization;

    e. release of hazardous fluids for 5 minutes or more;

    f. unintended movement or abnormal loading by environmental causes, such as an earthquake, landslide, or flood, that impairs the serviceability, structural integrity, or reliability of an LNG facility that contains, controls, or processes hazardous fluids;

    g. any crack or other material defect that impairs the structural integrity or reliability of an LNG facility that contains, controls, or processes hazardous fluids;

    h. any malfunction or operating error that causes the pressure of a pipeline or LNG facility that contains or processes hazardous fluids to rise above its maximum allowable operating pressure (or working pressure for LNG facilities) plus the build-up allowed for operation of pressure-limiting or control devices;

i. a leak in an LNG facility that contains or processes hazardous fluids that constitutes an emergency;

j. inner tank leakage, ineffective insulation, or frost heave that impairs the structural integrity of an LNG storage tank;

k. any safety-related condition that could lead to an imminent hazard and cause (either directly or indirectly by remedial action of the operator), for purposes other than abandonment, a 20 percent reduction in operating pressure or shutdown of operation of a pipeline or an LNG facility that contains or processes hazardous fluids;

l. safety-related incidents from hazardous fluids transportation occurring at or en route to and from the LNG facility; or

m. an event that is significant in the judgment of the operator and/or management even though it did not meet the above criteria or the guidelines set forth in an LNG facility's incident management plan.

In the event of an incident, the Director of OEP has delegated authority to take whatever steps are necessary to ensure operational reliability and to protect human life, health, property, or the environment, including authority to direct the liquefaction facility to cease operations. Following the initial company notification, the FERC staff would determine the need for a separate follow-up report or follow up in the upcoming semi-annual operational report. All company follow-up reports shall include investigation results and recommendations to minimize a reoccurrence of the incident. *(section 4.12.6)*

Office of Energy Projects

January 2019

FERC/FEIS-0285F

FINAL ENVIRONMENTAL IMPACT STATEMENT

FOR

Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector Project

Port Arthur LNG, LLC	Docket Nos.: CP17-20-000
PALNG Common Facilities Company, LLC	CP17-21-000
Port Arthur Pipeline, LLC	CP17-21-001
	CP18-7-000

Volume II



Source: Sempra LNG & Midstream, Port Arthur Liquefaction Project Website, 2018

Federal Energy Regulatory Commission
Office of Energy Projects
Washington, DC 20426

Cooperating Agencies:

US Army Corps of Engineers®

U.S. Coast Guard

U.S. Department of Energy

U.S. Department of Transportation PHMSA

U.S. Environmental Protection Agency

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Tarpie Yargee, Chief, Alabama-Quassarte Tribal Town, OK
Bobby Komardley, Chairman, Apache Tribe of Oklahoma, OK
Tamara Francis Fourkiller, Chairperson, Caddo Nation, OK
Tamara Francis-Fourkiller, Tribal Historic Preservation Officer, Caddo Nation, OK
Bill John Baker, Principal Chief, Cherokee Nation of Oklahoma, OK
Melissa Darden, Chairman, Chitimacha Tribe of Louisiana, LA
Kimberly Walden, Tribal Historic Preservation Officer, Chitimacha Tribe of Louisiana, LA
Gary Batton, Chief, Choctaw Nation of Oklahoma, OK
Dr. Ian Thompson, Tribal Historic Preservation Officer, Choctaw Nation of Oklahoma, OK
Martina Callahan, Tribal Historic Preservation Officer, Comanche Nation of Oklahoma, OK
Willie Nelson, Chairman, Comanche Nation of Oklahoma, OK
Dr. Linda Langley, Tribal Historic Preservation Officer, Coushatta Tribe of Louisiana, LA
David Sickey, Chairman, Coushatta Tribe of Louisiana, LA
Alina Shively, Tribal Historic Preservation Officer, Jena Band of Choctaw Indians, LA
B. Cheryl Smith, Tribal Chief, Jena Band of Choctaw Indians, LA
Dr. Jeffrey Blythe, Tribal Historic Preservation Officer, Jicarilla Apache Nation, NM
Wainwright Velarde, President, Jicarilla Apache Nation, NM
Mekko-Tiger Hobia, Town King, Kialegee Tribal Town, OK
Estavio Elizondo, Chairman, Kickapoo Traditional Tribe of Texas, TX
David Pacheco, Chairperson, Kickapoo Tribe of Oklahoma, OK

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Matthew Komalty, Chairperson, Kiowa Tribe of Oklahoma, OK
Danny H. Breuninger, Sr., President, Mescalero Apache Tribe, NM
Holly Houghten, Tribal Historic Preservation Officer, Mescalero Apache Tribe, NM
Phyliss J. Anderson, Chief, Mississippi Band of Choctaw Indians, MS
Kenneth Carleton, Tribal Archaeologist & Tribal Historic Preservation Officer, Mississippi Band of Choctaw Indians, MS
James Floyd, Principal Chief, Muscogee (Creek) Nation, OK
Corain Lowe-Zepeda, Tribal Historic Preservation Officer, Muscogee (Creek) Nation, OK
Geoffry M. Standing Bear, Principal Chief, Osage Nation, OK
Dr. Andrea A. Hunter, Tribal Historic Preservation Officer, Osage Nation, OK
Stephanie Bryan, Chairwoman, Poarch Band of Creek Indians, AL
Carolyn White, Acting Tribal Historic Preservation Officer, Poarch Band of Creek Indians, AL
Everett Bandy, Tribal Historic Preservation Officer, Quapaw Tribe of Oklahoma, OK
John L. Berrey, Chairman, Quapaw Tribe of Oklahoma, OK
Natalie Harjo, Historic Preservation Officer, Seminole Nation of Oklahoma, OK
Leonard M. Harjo, Principal Chief, Seminole Nation of Oklahoma, OK
Dr. Paul Backhouse, Tribal Historic Preservation Officer, Seminole Tribe of Florida, FL
Marcellus W. Osceola, Jr., Chairman, Seminole Tribe of Florida, FL
Kerry Holton, President, The Delaware Nation, OK
Ryan Morrow, Town King, Thlopthlocco Tribal Town, OK
Emman Spain, Tribal Historic Preservation Officer, Thlopthlocco Tribal Town, OK
Russell Martin, President, Tonkawa Tribe of Oklahoma, OK
Earl J. Barbry, Jr., Tribal Historic Preservation Officer, Tunica-Biloxi Tribe of Louisiana, LA
Marshall Sampson, Sr. & Beverly Chapman-Rachel, Co-Administrators, Tunica-Biloxi Tribe of Louisiana, LA
Joe Bunch, Chief, United Keetoowah Band of Cherokee Indians, OK
Terri Parton, President, Wichita and Affiliated Tribes, OK
Carlos Hisa, Governor, Ysleta Del Sur Pueblo of Texas, TX

Federal Representatives and Senators

Louisiana

Senate
The Honorable Bill Cassidy
The Honorable John Neely Kennedy

House of Representatives
The Honorable Clay Higgins
The Honorable Mike Johnson

Texas

Senate
The Honorable John Cornyn
The Honorable Ted Cruz

House of Representatives
The Honorable Brian Babin
The Honorable Randy Weber

Appendix A

Distribution List

State Representatives and Senators

Louisiana

Senate
- Senator Ronnie Johns
- Senator Eric Lafleur
- Senator Dan "Blade" Morrish
- Senator John Smith

House of Representatives
- Representative Mark Abraham
- Representative Mike Danahay
- Representative Phillip R. DeVillier
- Representative Stephen Dwight
- Representative Bob Hensgens
- Representative H. Bernard LeBas

Texas

Senate
- Senator Brandon Creighton
- Senator Robert Nichols

House of Representatives
- Representative Joe Deshotel
- Representative Dade Phelan

State Agencies

Louisiana

John Bel Edwards, Governor

Department of Agriculture and Forestry, Forestry Management
- David Campbell, Forestry Program Director

Department of Agriculture and Forestry, Soil and Water Conservation
- Brad Spicer, Assistant Commissioner

Department of Environmental Quality
- Tom Killeen, Administrator, Inspection Division
- Kathleen Landry
- Scott Wilkinson

Department of Environmental Quality, Office of Environmental Services
- Elliott Vega, Assistant Secretary

Department of Environmental Quality, Southwest Regional Office
- Billy Eakin, Regional Manager

Department of Environmental Quality, Water Permits Division
- Dave Butler, Permits Coordinator
- Scott Guilliams, Administrator
- Elizabeth Hill, Permits Coordinator

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Distribution List

Department of Natural Resources
Stephen Chustz, Secretary

Department of Natural Resources, Office of Coastal Management
Thomas Harris, Secretary
Keith Lovell
Karl Morgan
O.C. Smith
Thomas Van Biersel, Hydrogeologist

Department of Transportation and Development
Deidra Druilhet, Public Information Officer
Patrick Landry, District Administrator

Department of Wildlife and Fisheries
David Butler
Nicole Lorenz, Data Manager
Carey Lynn Perry, Program Manager

Department of Wildlife and Fisheries, Lake Charles Field Office

Department of Wildlife and Fisheries, Opelousas Charles Field Office

Office of Cultural Development
Phil Boggan, State Historic Preservation Officer

Office of Cultural Development, Division of Archaeology
Charles "Chip" McGimsey, State Archaeologist
Rachel Watson, Section 106 Review

Office of Cultural Development, Division of Historic Preservation
Mike Varnado, Section 106/Standing Structures

Office of State Lands
Cheston Hill, Section Manager
Jonathon Robillard, Public Lands Administrator

Texas

Greg Abbott, Governer

Commission on Environment Quality
Kate Brown
Gregg Easley, Manager
Rebecca Villalba

Commission on Environment Quality, Beaumont Regional Office
Kathryn Sauceda, Regional Director

Department of Transportation
Jesse Cooper
Tucker Ferguson, P.E., District Engineer
Adam Jack

Lower Neches Valley Authority
Wayne Blanchard

Parks and Wildlife Department
Winston Denton

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Distribution List

Carey Gelpi, Sabine Lakes Ecosystem Leader
Michael Rezsutek
Jim Sutherlin

Parks and Wildlife Department, Coastal Fisheries Division
Michael N. Morgan, Coastal Ecologist
Mike Morgan

Parks and Wildlife Department, J.D. Murphree Wildlife Management Area

Railroad Commission of Texas
Grant Chambless
Kari French, Oversight & Safety Director
Gaye McElwain, Public Outreach information Officer
James Osterhaus

Sabine Neches Navigation District
Randall Reese, Executive Director

Sabine Pass Port Authority
Sherry Droddy, Manager

Texas General Land Office
Mollie Powell, Regional Field Office Manager
Glenn Rosenbaum
Tony Williams

Texas Historical Commission
Bill Martin, Archeologist and Reviewer
Kerry Nichols, Terrestrial Archaeologist

Texas Workforce Commission
Dale A. Robertson

County/Parish Agencies

Louisiana

Allen Parish
Doug Sonnier, Police Juror, President
Creig Vizena, President

Beauregard Parish
Bobby Hennigan, Parish Administrator
John Stebbins, Police Juror
N.R. "Rusty" Williamson, Police Juror, President

Calcasieu Parish
Francis Andrepont, Police Juror
Judd Bares, Police Juror
Bryan C. Beam, Parish Administrator
Kevin Guidry,Police Juror, President
Hal McMillin, Police Juror
Sandra Treme, Police Juror

Cameron Parish
Ryan Bourriaque, Parish Administrator

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Distribution List

Curtis Fountain, Police Juror, President
Anthony "Dino" Hicks, Police Juror

Evangeline Parish
Ryan M. Ardoin, Police Juror, President
Donald Bergeron, Secretary-Treasurer
Sidney A. Fontenot, Police Juror
Ryan M. Adroin, Police Juror
Eric Soileau, Police Juror
Bryan Vidrine, Police Juror

St. Landry Parish
St. Landry Parish Government
Vallie Theriot, Permit Officer

Texas

Jefferson County
Drainage District Six
Waterway and Navigation District
Everette "Bo" Allfred, County Commissioner
Eddie Arnold, County Commissioner
Jeff Branick, County Judge
Don Rao, Engineering Department
Michael Shane Sinegal, County Commissioner
Brent Weaver, County Commissioner

Orange County
Brint Carlton, Judge
Bobby Fillyaw, Director, Economic Development Corporation

City Agencies

Eunice Chamber of Commerce, Eunice, LA
Scott Fontenot, Mayor, Eunice, LA
Michael Holmes, Representative, Kinder, LA
George Swift, President/CEO, SWLA Economic Development Alliance/SWLA Chamber of Commerce, Lake Charles, LA
Town of Mamou, Mamou, LA
Regina Lindsey, President, Greater Beaumont Chamber of Commerce, Beaumont, TX
Jim Rich, Honorary Member, Greater Beaumont Chamber of Commerce, Beaumont, TX
Becky Ames, Mayor, Beaumont, TX
Wayland LaFargue, Mayor, Kinder, TX
R. A. “Dick” Nugent, Mayor, Nederland, TX
Ida Schossow, President, Greater Orange Area Chamber of Commerce, Orange, TX
Floyd Gaspard, Executive Port Director, Port Arthur, TX
Darlene Thomas-Pierre, Director of Code Compliance, Port Arthur, TX
Brian McDougal, City Manager, Port Arthur, TX
Bill McCoy, President, Greater Port Arthur Chamber of Commerce, Port Arthur, TX
Derrick Ford Freeman, Mayor, Port Arthur, TX
Pamela Langfor, Administrative Aide, Port Arthur, TX
Paul Brown, Port Arthur, TX
Philip Vilardi, Port Arthur, TX

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Distribution List

Ron Burton, Director of Development Services/ACM, Port Arthur, TX
Willie "Bae" Lewis, Jr., District 5 Council Member, Port Arthur, TX
Orlando Ciramella, Senior Director of Trade Development, Port Arthur, TX

Libraries

Evangeline Library, Basile, LA
Cameron Parish Library, Cameron, LA
Beauregard Parish Library, DeRidder, LA
Eunice Public Library, Eunice, LA
Allen Parish Library - Kinder, Kinder, LA
Calcasieu Parish Library, Lake Charles, LA
Allen Parish Library, Oberlin, LA
Opelousas Public Library, Opelousas, LA
Sulphur Regional Library, Sulphur, LA
Beaumont Public Library, Beaumont, TX
Orange Public Library, Orange, TX
Port Arthur Public Library, Port Arthur, TX

Newspapers

The Advocate, Baton Rouge, LA
CameronPilot, DeQuincy, LA
Beauregard Daily News, DeRidder, LA
The Kinder Courier News, Kinder, LA
American Press, Lake Charles, LA
The Texas Observer, Austin, TX
Beaumont Enterprise, Beaumont, TX
Port Arthur News, Port Arthur, TX

Landowners, Individuals, and Organizations

Sigrid Rothschild c/o Rodolfo Rothschild-Anchorena, Buenos Aires, Argentina
Eric R Leboeuf, Anchorage, AK
Sidney Stephenson, Hartselle, AL
Darrell Turner, Heflin, AL
John Campbell Winter Jr, Huntsville, AL
Michael Taylor, Senior Environmental Compliance Advisor, Sempra U.S. Gas & Power, McIntosh, AL
Rayonier Gulf Timberlands, LLC, Mobile, AL
Rayonier Louisiana Timberlands, LLC, Mobile, AL
Rayonier Trs Louisiana Operations, Inc., Mobile, AL
Kay Lynn Eaglin Cabbagestalk, Apo, AP
Elizabeth Smith, Pine Bluff, AR
Isabelle Botley Hawkins, Pine Bluff, AR
Herbert M. Scott and Furlow Living Trust, Ward, AR
Hilda Botley May, White Hall, AR
F.R. Coward (deceased), Bakersfield, CA
Spindletop Renaissance, L.P., Bakersfield, CA
Keith A. Latham, P.E., Kaltech, LLC, El Cajon, CA
Henry Thomas Hey, Los Angeles, CA
Young Family 1996 Trust Dtd June 20,1996, Nevada City, CA
Amizetta McFaddin Clark, Saint Helena, CA
Cameron Interstate Pipeline, LLC, San Diego, CA
Port Arthur LNG Holdings, LLC, San Diego, CA
Jared Arthur Warwick, San Francisco, CA
John Willard Botley, Jr, Sun Valley, CA
Felix J Morrow, Thousand Oaks, CA
Margaret G. Stephens, Walnut, CA
Zachariah White, Boulder, CO
Daniel Joseph Renthrope, Colorado Springs, CO
Edith F. Hultquist, Colorado Springs, CO
Maizie C. and Tasha Tudor Houghton, Lakeville, CT
Paul Austin Jones, Jr, Delray Beach, FL
Else Guillory, Jacksonville, FL
Amy Frederick, Navarre, FL
Anne Ellender Edwards, Ocala, FL
Christina Lowery Allen, Ocala, FL
Angela Kay Eligio, Pensacola, FL
Dann M Thomasson Et al, Ponte Vedra Beach, FL

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Distribution List

Marianne Bell Tweel, Saint Cloud, FL
Jerri C. Kirby Hall, Zephyrhills, FL
Charles Martin, ALPharettta, GA
Golden Triangle Storage – J.N. Miller Property, Atlanta, GA
Dave Williams, Conyers, GA
John O. & Kay S. Sneve, Jasper, GA
Harriotte Parker Bohn, Marietta, GA
Ronald B Jones, Waterloo, IA
Steven L. & Vicki J. Reynolds, Martinsville, IL
Derrick H. Bang, Calhoun, KY
Robert L., II Bang, Calhoun, KY
Sandra H. Bang, Calhoun, KY
Eric J Manuel, Fancy Farm, KY
Gary Lynn Santana, Lexington, KY
Tristin Botley, Lexington, KY
Alice Norrine Winter Et al, Versailles, KY
Catherine Munson, Versailles, KY
Christina Lowery Allen, Versailles, KY
Mary Eyrl Winter, Versailles, KY
James Owen Hebert, Abbeville, LA
Hill Songs, LLC, Alexandria, LA
Kinder Sand Company, Inc., Alexandria, LA
Miller Boys LLC, Alexandria, LA
Roy O Martin Lumber Company LLC, Alexandria, LA
Christa Renee Guidry, Basile, LA
Curtis Johnson, Basile, LA
Dana Marie Guidry, Basile, LA
Davis Ledoux Farm, Inc., Basile, LA
Del-Gwen Enterprises, Basile, LA
Deo Lynn Guidry, Basile, LA
Eloise C. Broussard, Basile, LA
Ezola C. Williams, Basile, LA
Geneva Bellon, Basile, LA
George Dewey Mcgee, Basile, LA
Gordon R Aguillard, Basile, LA
J&S Miller Enterprises, Basile, LA
Jessie C Fontenot, Basile, LA
Louis John Guidry, Basile, LA
Michelle Stroder, Basile, LA
Mona and Nathan Johnson, Basile, LA
Nathan & Mona Johnson, Basile, LA
Patricia C. Sanders, Basile, LA
Patrick Jean Fruge et al, Basile, LA
B.H. Timber, LLC, Baton Rouge, LA
Barbara Jean Pitre Michael, Baton Rouge, LA
Betty Doelling Miller, Baton Rouge, LA
Cherie G Giblin, Baton Rouge, LA
Choupique Edgerly LLC, Baton Rouge, LA
Craig Frank Holthaus, Baton Rouge, LA
Jacklyn Buhler, Baton Rouge, LA
Jean Dupuis Joubert, Baton Rouge, LA
Jeff Peters, Baton Rouge, LA
Jodie Debetaz, Baton Rouge, LA
LPA LLC, Baton Rouge, LA
William Grant, Baton Rouge, LA
Butch's Properties LLC, Bell City, LA
Crain Lands, LLC, Bell City, LA
Jp Farms, LLC, Bell City, LA
Howard Romero, Cameron, LA
Ricky Lane Trahan Et ux, Cameron, LA
Henry Botley, Carencro, LA
Joseph R Cart, Chataignier, LA
Michael Louis Fontenot, Chataignier, LA
Charley Martin Andrepont, Church Point, LA
Chester Wimberley Sr, Church Point, LA
Martha Andrepont Rigsby, Church Point, LA
Wanna Smith Bellard, Church Point, LA
Sabine Uplift Mineral Corp., Converse, LA
J T & Barbara N Primeaux, Creole, LA
Causby Hamic, Jr., Crowley, LA
Green-Lapleau Properties, LLC, Crowley, LA
Laura Mae Gaspard Breaux, Crowley, LA
Arnold Adrian & Anna R. Flower, De Quincy, LA
Judy L. Smith, De Quincy, LA
Randall & Tonia Ann Penny Nolan, De Quincy, LA
Ronald Vincent & Betty Spears Schrader Thomas, De Quincy, LA
Erin Kogel Perez, Denham Springs, LA
Kali Kogel, Denham Springs, LA
Keri Kogel Wassum, Denham Springs, LA
Anthony Wynn Treme, Dequincy, LA
Berna Dean Como, Dequincy, LA
Bettie Lou Henagan, Dequincy, LA
Donna Beth Dupont, Dequincy, LA
Jacob Eli Bertrand, Dequincy, LA
Karen Jane Bertrand Collet, Dequincy, LA
Timothy Allen Treme, Dequincy, LA
Christina Eve Leblanc, Deridder, LA
Holton Dale Vincent, Deridder, LA
U Javi Vasquez, DeRidder, LA
Judith Ann Mcclelland Porter, Deville, LA
Jerry Wayne Courmier, Dry Creek, LA
M & G Farms, Inc, Dry Creek, LA
Barbara Williams Langley, Elton, LA
Ben Houston John, Elton, LA
Betty Jo Putnam Aguillard, Elton, LA
Christian Y. & Shonna G. Granger, Elton, LA
Christopher G. & Madeline Aguillard, Elton, LA
Coushatta Tribe Of La, Elton, LA
Darlene Dunnehoo, Elton, LA
David Ravey, Elton, LA
Donald Crawford Putnam, Elton, LA
Douglas Wayne & Rhonda R. Britnell, Elton, LA
John I. Briscoe, Elton, LA
Joseph D. Miller, Elton, LA
Laura Jeanette Vidrine, Elton, LA
Linda Faye J. Laughlin, Elton, LA
Lorenda John Poncho, Elton, LA

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Distribution List

Margaret Ceaser, Elton, LA
Michael Etienne Cormier, Elton, LA
Octave Victor Savant, Jr., Elton, LA
Octave Victor & Carol Savant, Elton, LA
Paula J Manuel, Elton, LA
Paula Manuel, Elton, LA
Roderick G. Bertrand, Elton, LA
Ronald R. & Anissa Ann Reed, Elton, LA
Rosaline L. Medford, Elton, LA
Teresa Gayle Peloquin, Elton, LA
Amber Arnaud, Eunice, LA
August III Leonards, Eunice, LA
Belle Manuel, Eunice, LA
Blane Allen Frey, Eunice, LA
Brady Jacque Sanders, Eunice, LA
Brandon Keith And Heidi Mcfarlain Stagg, Eunice, LA
Burgess N Veillon and Loretta B Veillon Revocable Living Trust, Eunice, LA
Cobb Realty Inc., Eunice, LA
D John & Deanna Brown Lafleur, Eunice, LA
Daniel Hans Koch, Eunice, LA
Don E. Leonards, Eunice, LA
Donald Ray Johnson, Eunice, LA
Edmund C & Alberta Heinen Frey, Eunice, LA
Ellen Bazinet Medlin Etal, Eunice, LA
Elvin Floyd Vidrine, Eunice, LA
Eric Lawrence and Katherine Bollich, Eunice, LA
Eric W and Felecia May, Eunice, LA
Fruge Frey Ranch & Farms LLC, Eunice, LA
Gary Frey, Eunice, LA
Gene J. Leonards, Eunice, LA
Gerald Ortaire & Claudia S Derouen Larson, Eunice, LA
Harry Louis & Kaye Langley Miller Jr, Eunice, LA
Jackie Derrel Mcclelland, Eunice, LA
James Chester Jr & Suzanne Marie Pavur Wimberley, Eunice, LA
Jennifer Jane Gillette Brown, Eunice, LA
John P Higgins, Eunice, LA
Johnson Family Farm LLC, Eunice, LA
Joseph Lee Granger, Eunice, LA
Judson Ardoin, Eunice, LA
Justin Francois, Eunice, LA
Keith Mcclelland, Eunice, LA
Luther Ray Young, Eunice, LA
Marc Kenneth Savoy, Eunice, LA
Marcel & Stacie Johnson Jr, Eunice, LA
Mary Vivian G Feucht, Eunice, LA
Merrick Blake Miller, Eunice, LA
Michael Lyn & Elizabeth Anne Vidrine, Eunice, LA
Mildred B Lally Living Trust, Eunice, LA
Monty Lou Putnam Stoute, Eunice, LA
Nadine Lejeune, Eunice, LA
Neil Lejeune, Eunice, LA
Patti Carol Caswell, Eunice, LA
Peter G & Ann Adreienne Miller, Eunice, LA
Peter Ray & Nancy Aguillard Lafleur, Eunice, LA
Philip Mark and Pamela Rougeau Bollich, Eunice, LA
Randall Paul & Renea Soileau Rougeau, Eunice, LA
Robert Dean Arnaud, Eunice, LA
Robert J Soileau Farms Inc, Eunice, LA
Russell A Stockwell, Eunice, LA
Ruth Ellen Dupre Duplechin, Eunice, LA
Samuel Medlin, Eunice, LA
Stephen A Guillory, Eunice, LA
Stephen Cody Fontenot, Eunice, LA
Thomas H Mcclelland, Eunice, LA
Tony J Lejeune, Eunice, LA
Valley Jr Vidrine, Eunice, LA
Wesley Harvey, Evans, LA
Betty M. Whiteheard Irrevocable Trust, Forest Hill, LA
Stephen Andrew Ellender, Geismar, LA
Walter Jr Stagg, Glemora, LA
Bobby Lewis Potter, Glenmora, LA
Michael George & Sheila Renee Davis, Glenmora, LA
Neil Charles Treme, Glenmora, LA
Benjamin Carl Welch Sr, Grand Chenier, LA
Carlos Monroe Welch, Grand Chenier, LA
J C Reina, Grand Chenier, LA
Leslie Griffith, Grand Chenier, LA
Leslie Russell Welch, Grand Chenier, LA
Lonnie Glenn & Carolyn Harper, Grand Chenier, LA
Malcolm Lyle Crain Estate, Grand Chenier, LA
Calvin Elton Trahan, Hackberry, LA
David Victor Currie, Hackberry, LA
Janet Ann Desormeau Williams, Hackberry, LA
Velma Lowery, Hackberry, LA
Charles Joubert, Houston, LA
Jason Lee Young, Iota, LA
Larry R. & Juanita M. Wittge, Iota, LA
Randal Lane Johnson, Iowa, LA
Mona Johnson Fontenot, Jarreau, LA
Charles Rene Houssier III, Jennings, LA
Debra D. Edwards, Jennings, LA
John Allen Miller, Jennings, LA
Krielow Farms Inc, Jennings, LA
Linda Stafford Lejeune, Jennings, LA
Mary A. Martinez, Jennings, LA
Michelle Macaluso Gunnell, Jennings, LA
Michelle P. Guidry, Jennings, LA
Olivana H. Hebert, Jennings, LA
Paula Guidry, Jennings, LA
Rouge O LLC, Jennings, LA
Theresa L. Demmel, Jennings, LA
Marie Edna Gaspard, Kaplan, LA
Ashley Medlin, Keithville, LA

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Alichia A Bushnell, Kinder, LA
Alllen Joseph Morehead, Kinder, LA
Alvin Pousson, Jr., Kinder, LA
Andre Richard, Kinder, LA
Annie Lee Actlis, Kinder, LA
Anthony Keith Richard, Kinder, LA
Ben Richard, Kinder, LA
Bertha Botley Flanagan, Kinder, LA
Bobby Ray Cottongin, Kinder, LA
Caleb Butts, Kinder, LA
Charles Richard, Kinder, LA
Charles Timothy Kingrey, Kinder, LA
Christopher Clark, Kinder, LA
Damian & Evelia Bryant Miles, Kinder, LA
Damian Miles, Kinder, LA
Daniel Kerr Morehead, Kinder, LA
Danny Bell, Kinder, LA
Durell Eaglin, Kinder, LA
Earlene B. Corbin, Kinder, LA
Emma Miles Harris, Kinder, LA
Estate of August Botley, Kinder, LA
Evain Guillory, Kinder, LA
Evelia Bryant Miles, Kinder, LA
Gene Michael Karam, Kinder, LA
Gerald Richard, Kinder, LA
Green Oak Cemetary Association, Inc., Kinder, LA
Harmon's Plumbing, Inc., Kinder, LA
Irene A Henry, Kinder, LA
James Tillis, Et ux, Kinder, LA
John Troy Rawlings, Kinder, LA
Joseph Wilton Eaglin, Jr., Kinder, LA
Joyce Monday, Kinder, LA
Kari Ware, Kinder, LA
Kay Sonnier, Kinder, LA
Kurt James Morehead, Kinder, LA
Laine Fontenot, Kinder, LA
Lee Ester Prudhomme, Kinder, LA
Leonard Eaglin, Kinder, LA
Lionel Richard, Kinder, LA
Lonniel Clark, Kinder, LA
Lori Ann Morehead, Kinder, LA
Margie Fontenot Woodcock, Kinder, LA
Mary Earline E. Leonard, Kinder, LA
Matt Fontenot, Kinder, LA
Michael Delatoisse, Kinder, LA
Michael Richard, Kinder, LA
Michael W. Gidlow, Kinder, LA
Peggy Brown Perkins, Kinder, LA
Percy Morehead, Kinder, LA
Peter J Unkel, Kinder Carol Co - Unkel Farms, Kinder, LA
Phillip M. Morrow, Kinder, LA
Randy Charles & Velma L. Pousson, Kinder, LA
Raphael Durosseau, Kinder, LA
Reginald Richard, Kinder, LA
Rhonda Botley Holman, Kinder, LA
Rodney & Lorraine Morehead, Kinder, LA
Rodney Richard, Kinder, LA
Rose Williams Hamilton, Kinder, LA
Roy Ellis & Cindy Faye Miles, Kinder, LA
Shirley Botley, Kinder, LA
Tami R. Johnson, Kinder, LA
The Ethel Sacker 2008 Trust, Kinder, LA
Tracy Miles Pruet, Kinder, LA
Venise Eaglin, Kinder, LA
W. S. Kingrey, Inc., Kinder, LA
Warren Hurron, Kinder, LA
Wayne Bell, Kinder, LA
John Lenhart, LaBlanc, LA
Bill Vidrine, Lafayette, LA
Bobby Glenn Young, Lafayette, LA
Gereline Benoit Phillips, Lafayette, LA
James Patrick Herrington, Lafayette, LA
JP-8, LLC, Lafayette, LA
Ken Sillavan Allied Development, Inc., Lafayette, LA
Mamou Seed Rice Co Inc, Lafayette, LA
Paula Sue Gillette, Lafayette, LA
Rawlin Jay Johnson, Lafayette, LA
Sabine Outback North LLC, Lafayette, LA
Steve Dupuis, Lafayette, LA
Willis Ray Vidrine, Lafayette, LA
Michelle G Broussard Mouton, Lake Arthur, LA
3n75 Trust, Lake Charles, LA
Abear-Nunez Farms, LLC, Et al, Lake Charles, LA
Ann Crowe Lindsay, Lake Charles, LA
Anthony Lynn Lowery, Lake Charles, LA
Arthur Coney Estate, Lake Charles, LA
Barbara Fowler Thomas, Lake Charles, LA
Barbara L Houssiere, Lake Charles, LA
Barbara Louise Houssier, Lake Charles, LA
Bel Khourly Black Bayou Properties, LLC, Lake Charles, LA
Belarbor Timber, LLC, Lake Charles, LA
Belinda Faye Chretien, Lake Charles, LA
Bel-Krause Properties, Inc., Lake Charles, LA
Betty Jean Morehead Eaglin, Lake Charles, LA
Betty Jean Verret Credeur, Lake Charles, LA
Billy Joe Cole, Lake Charles, LA
Blake A. Guidry, Lake Charles, LA
Blake Brothers LLC, Lake Charles, LA
Blake Brothers, LLC, Lake Charles, LA
Burning River Energy Inc Et al, Lake Charles, LA
Calcasieu Parish Police Jury, Lake Charles, LA
Calcasieu Parish School Board, Lake Charles, LA
Caltrax. Inc, Lake Charles, LA
Canal State of LA, Lake Charles, LA
Carmouche Family Properties, LLC, Lake Charles, LA
Carolyn J. Gifford, Lake Charles, LA

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Distribution List

Cary Ross Mckee, Lake Charles, LA
Charlene Estelle Johnson Douget, Lake Charles, LA
Charles Terry Hebert, Lake Charles, LA
Charlotte K. Skinner, Lake Charles, LA
CKX Lands Inc, Lake Charles, LA
Clark Real Estate Enterprises, Lake Charles, LA
Constance Elaine Cormier, Lake Charles, LA
Coral Lee Crain Byrd, Lake Charles, LA
Crowe Property Investments LLC, Lake Charles, LA
Curry Corporation, Lake Charles, LA
Dale H Beam, Lake Charles, LA
Daniel Richard, Lake Charles, LA
David W Beam, Lake Charles, LA
Deborah Cormier Fisher Special Needs Trust, Lake Charles, LA
Don Allen Steen, Lake Charles, LA
Donal Joseph Ledoux, Sr, Lake Charles, LA
Donna Jean Eaglin Carroll, Lake Charles, LA
Donna Lynn Ellender Lowery, Lake Charles, LA
Donnie Monceaux, Lake Charles, LA
Edward Follett Bass, Lake Charles, LA
Edward M. Nichols, Jr, Lake Charles, LA
Edward McCain, Lake Charles, LA
Edwin Robinson, Lake Charles, LA
Elizabeth Ann Fuselier Thomas, Lake Charles, LA
Eloise Fusillier Et al, Lake Charles, LA
Estate Of J. G. Gray, Lake Charles, LA
F. Miller & Sons, LLC, Lake Charles, LA
Fooz LLC, Lake Charles, LA
Frances Jane Nelson, Lake Charles, LA
Frances L Perry, Lake Charles, LA
Fredrick James Nunez Granger, Lake Charles, LA
GCPC, LLC, Lake Charles, LA
Globe-Texas Co, Lake Charles, LA
Goldsmith Farms, LLC, Lake Charles, LA
Gordon E Steen, Jr, Lake Charles, LA
H.C. Drew Estate, Lake Charles, LA
Harold Guidry, Jr., Lake Charles, LA
Hebert Abstract Co Inc, Lake Charles, LA
Henning Management LLC, Lake Charles, LA
Hillsboro Corporation, Lake Charles, LA
J Lawton Company LLC, Lake Charles, LA
J. Lawton Company, LLC, Lake Charles, LA
J.S. Broussard Farms LLC, Lake Charles, LA
James C Beam Et al, Lake Charles, LA
James Francis Carnahan, Lake Charles, LA
James Mark Treme, Lake Charles, LA
James Scott Vincent, Lake Charles, LA
James Steven Broussard, Lake Charles, LA
Janet Mahaffey Postell, Lake Charles, LA
Janet S Leboeuf, Lake Charles, LA
Jardine Properties, Inc., Lake Charles, LA
Jeanette Mathis, Lake Charles, LA
Jerry Dale Hand Lefort, Lake Charles, LA
Jesse Ryan Habetz, Lake Charles, LA
John Craig Moss, Lake Charles, LA
John Kenneth Patin Trust and Peter Durand Patin Trust, Lake Charles, LA
John Paul Crain Qtip #1 Trust for Neil Randall Crain, Lake Charles, LA
Jon E. Hebert, Lake Charles, LA
Judith Marie Wood, Lake Charles, LA
Justin & Caitlan Clark, Lake Charles, LA
JWG, LLC, Lake Charles, LA
Katherine Krause Blake Trust, Lake Charles, LA
Kelly Guildry Robinson, Lake Charles, LA
Kenneth Gerald, Et ux Merchant, Lake Charles, LA
Kenny Constance, Lake Charles, LA
Kerry Traham, Lake Charles, LA
Kim Broussard, Lake Charles, LA
King Minerals LLC, Lake Charles, LA
KLPC, LLC, Lake Charles, LA
L & H Partnership, Lake Charles, LA
Lee Ellender, Lake Charles, LA
Lewing Properties, Inc., Lake Charles, LA
Linda Faye Joubert, Lake Charles, LA
LMD Investments Limited Partnership, Lake Charles, LA
LMD Investments Limited Partnership, Et al, Lake Charles, LA
Ltp Partnership, LP, Lake Charles, LA
Lucille Crosby, Lake Charles, LA
Marie Jeanette Rogers Benoit, Lake Charles, LA
Marshalls Of Orchard, Inc, Lake Charles, LA
Martha A Babcock Et al, Lake Charles, LA
Martha L. Gillman, Etal, Lake Charles, LA
Mary Gennell S. Christian, Lake Charles, LA
Mary Geraldine Lowery Cirello, Lake Charles, LA
Mary Hollins Trust, Lake Charles, LA
Matt Scott Cormier, Lake Charles, LA
Mayboy Inc, Lake Charles, LA
Mcclelland Farm Properties LLC, Lake Charles, LA
Melanie Hebert Ireland, Lake Charles, LA
Melissa Ann Moss Cardone Et al, Lake Charles, LA
Michael Joubert, Lake Charles, LA
Mount W Talbot Family Trust, Lake Charles, LA
N & T Rentals, LLC, Lake Charles, LA
Patricia Baggett, Lake Charles, LA
Patti Jean Ellender Phillips, Lake Charles, LA
PBA Properties, LLC, Lake Charles, LA
Pruitt Company LLC, Lake Charles, LA
PWK Timberland, LLC, Lake Charles, LA
Raleigh Newman Et ux, Lake Charles, LA
Rebecca Lynn Treme Williamson, Lake Charles, LA
Reggie Nyle Leslie, Lake Charles, LA
Richard Sere Kleinschmidt, Jr, Lake Charles, LA
Rickie Dalton Lyons, Lake Charles, LA
Robby Robinson, Lake Charles, LA
Robert Ellis Moss Jr, Lake Charles, LA

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Distribution List

Robert Gene And Debra Ann Lockett, Lake Charles, LA
Robert L. & Sherri Jeanine Streitmatter, Lake Charles, LA
Roger L. & Yvonne Miller, Lake Charles, LA
Ronnie Winfrey, Lake Charles, LA
Sara Nicole Doucet, Lake Charles, LA
Scott Edwin Sandoz, Lake Charles, LA
Scotty G. Rozas, Lake Charles, LA
Secundus Corporation, Lake Charles, LA
Sharon Marie Eaglin James, Lake Charles, LA
Stephen Lowery, Lake Charles, LA
Stream Family Limited Partnership, Lake Charles, LA
Stream Family Trust, LLC, Lake Charles, LA
Strickland Louisiana Properties, LLC, Lake Charles, LA
Sue N Mccardle, Lake Charles, LA
Tamara Hebert Bourque, Lake Charles, LA
Terry D. Fowler, Lake Charles, LA
Tiffany Barber, Lake Charles, LA
Tower Land Company LLC, Lake Charles, LA
TTD Holdings, LLC, Lake Charles, LA
Vicki Diane Ellender Campbell, Lake Charles, LA
Virginia H Webb Kelly M, Lake Charles, LA
Virginia Hollins Webb, Lake Charles, LA
Virginia M Gayle Et al, Lake Charles, LA
W. J. Gayle and Sons, Inc., Lake Charles, LA
Wadean Lee, Lake Charles, LA
Wadine Winfrey Lee, Lake Charles, LA
Whitney Joubert, Jr, Lake Charles, LA
William B. Lawton Family Limited Partnership, Lake Charles, LA
William Johnston, Lake Charles, LA
William Mitchell Perkins, Lake Charles, LA
Wise Land & Title Co Inc, Lake Charles, LA
Wkt Properties, Lake Charles, LA
Woodbrook, Inc., Lake Charles, LA
YMO, LLC, Lake Charles, LA
Moss/Vincent Properties LLC, Lake Charles La, LA
Chad J. & Danielle R. Wright, Leblanc, LA
Dwan Susan M. Leblanc, Leblanc, LA
James W. Potter, Leblanc, LA
John Paul & Kimerly Ann Lenhart, Leblanc, LA
Lana Potter Davis, Leblanc, LA
Richard B. Howell, Leblanc, LA
Shea Marette Ledoux, Leblanc, LA
Troy Brannon, Jr., Leblanc, LA
William E. Lenhart, III, Leblanc, LA
William Lee Marquez, Leblanc, LA
Adam Kogel, Livingston, LA
Freeman Joseph Ledoux Estate, Et al, Longville, LA
Dr B J & Lester Manuel, Mamou, LA
Gerald Fontenot, Mamou, LA
Susan O'connor, Mandeville, LA
Donald Perkins & Katherine Little, Many, LA
Rosalyn J. Whitman, Merryville, LA
Keith Stafford, Metairie, LA
Mary Elaine Koonce, Metairie, LA
Polly Ann Hamilton Tedrow, Metairie, LA
Rodney Douglas Vincent Et al, Metairie, LA
Glynn E. Putnam, Monroe, LA
Shirley Ann Joubert Harmon, Monroe, LA
Ira A. Breaux, Morgan City, LA
Pernell Livingston, New Iberia, LA
Entergy Texas, Inc., New Orleans, LA
Nita Glenn Putnam, New Orleans, LA
Phoenix Development Company, Inc., New Orleans, LA
Jullin Renthrope, New Orleasns, LA
Mona G. Sepulvado, Noble, LA
Dixon Family Timber, LLC, Oakdale, LA
Ellis Quave, Oakdale, LA
John & Betty Healy, Oakdale, LA
Allen Parish School Board, Oberlin, LA
Allen Parish School Board, Oberlin, LA
Bernadette Guillory, Oberlin, LA
Jim Prudhomme, Oberlin, LA
Schumacher Briscoe Farm, LLC, Oberlin, LA
Shawn Carthorn, Oberlin, LA
Virginia B. Wells, Oberlin, LA
Aubretta J. Eaglin, Opelousas, LA
Cynthia Charlie, Opelousas, LA
Frank Morris & Janice Pitre, Opelousas, LA
Haas Hirsch, Opelousas, LA
HHW-Evangeline LLC, Opelousas, LA
Opelousas St. Landry Realty, Opelousas, LA
Clayton Earl Marcantel, Pineville, LA
Cleco Power, LLC, Pineville, LA
Darlene Reeves Horton, Pitkin, LA
Janice Cormier Cole, Pitkin, LA
Allison Ann Windham, Port Allen, LA
Moss Lake Holdings, LLC, Port Allen, LA
Brenda Mistrot, Port Barre, LA
Choupique & Sulphur LLC, Prairieville, LA
Gordon H. & Susan Randall Gill, Prairieville, LA
John Anthony Lowery Jr, Prairieville, LA
Mary Hamilton, Prairieville, LA
Susan Randall Gill, Prairieville, LA
Billie Stillings Mc Michael, Ragley, LA
Brian Alan & Kara Guillory, Ragley, LA
Brown Family Farms, LLC, Ragley, LA
Clifford L. Hantz, Ragley, LA
Danny Ray & Lovie Carrol Dickerson, Ragley, LA
David R. And Mary Ann Daigle, Ragley, LA
Deanna Darbonne Habetz, Ragley, LA
Dorothy Johnson, Ragley, LA
Edward James Guidry Trust, Ragley, LA
Emily Claire Habetz, Ragley, LA
Frankie Leslie Brown, Ragley, LA

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Giles Glen Brown, Ragley, LA
Jackie Lynn Benoit, Ragley, LA
Jimmie Ann Meaux Mc Lean, Ragley, LA
John Brent Meaux, Ragley, LA
Joshua William Habetz, Ragley, LA
Michael Means, Ragley, LA
Michael W. Guidry, Ragley, LA
Michael Wayne & Raenell Savell, Ragley, LA
Natalie Janee Habetz, Ragley, LA
Paul Verbis & Alece Jeline Lafleur, Ragley, LA
Preston L. Dartez, Sr., Ragley, LA
Sam Lawrence & Susan Cavys, Ragley, LA
Shera Fowler, Ragley, LA
Tommy D. Brown, Ragley, LA
Chad Edward Miller, Rayne, LA
Earl Breaux, Rayne, LA
Homer Breaux, Rayne, LA
Houston Breaux, Rayne, LA
Ludovic Miller Estate, Rayne, LA
Mable Gilbert, Rayne, LA
Marion J Miller, Rayne, LA
Melvin Breaux, Rayne, LA
Moise Breaux, Rayne, LA
Rosa Mae Waters, Rayne, LA
Ryan Keith Miller, Rayne, LA
Billie J. Lyles, Reeves, LA
Camp Pearl Ministries, Reeves, LA
Creel Memorial Gardens Association, Inc., Reeves, LA
Horace Joel Airhart, Reeves, LA
James D. & Billie J. Lyles, Reeves, LA
James David Lyles, Reeves, LA
Jerry Glen & Beverly Thomason, Reeves, LA
Patsy Lyles Cavenah, Reeves, LA
Vernice L. Lyles, Reeves, LA
Eve N Garbarino Jr Et al, Roanoke, LA
Julie Berry Et al, Roanoke, LA
Carolyn O'bryan Sutton, Ruston, LA
August Botley III, Senton, LA
Hancock Timberland Xi, Inc., Shreveport, LA
John Hancock Life Ins. Co. (USA), Shreveport, LA
Joyce Elaine Lowery Wofford, Shreveport, LA
Kathy Fair Patterson, Shreveport, LA
Nore Vincent Winter, Shreveport, LA
Warner Glenn Duhon, Shreveport, LA
William Taylor Lyles, Sieper, LA
William Conville Hobgood, St. Francisville, LA
Adam (Nmi) Daigle Et ux, Sulphur, LA
Adam Wayne & Angela Habetz, Sulphur, LA
Alford Clooney Savoie, Sulphur, LA
Alison Wilson, Sulphur, LA
Allen James Leblanc Sr, Sulphur, LA
Amanda Rhodes Jones Et vir, Sulphur, LA
Andre Davidson, Sulphur, LA
Anthony Todd Matthews, Sulphur, LA
Barry Edgar Russell, Sulphur, LA
Beverly Jane Moss Scholtens, Sulphur, LA
Bill Craig Neugent, Sulphur, LA
Boyd Dale Smith, Sulphur, LA
Brant Allan Parish Et ux, Sulphur, LA
Brenda Faye Cuvillier Trahan, Et al, Sulphur, LA
Brenda Sue Sumpter Et vir, Sulphur, LA
Brendia Colligan, Sulphur, LA
Bryan Douglas O'connor, Sulphur, LA
C.E. Benckenstein Living Trust, Sulphur, LA
Carl Henry Vincent, Sulphur, LA
Carol Ruth Brannon Stetz, Sulphur, LA
Chad Carlin Koonce Et ux, Sulphur, LA
Chad Lee Constance, Sulphur, LA
Charles David Benckenstein, Sulphur, LA
Charles Howell Atherton Et ux, Sulphur, LA
Charles Kent Carlin Et ux, Sulphur, LA
Charles Martin Koonce, Sulphur, LA
Charlie Atherton, Sulphur, LA
Christopher Arnold Chaisson, Sulphur, LA
Christopher Isaac Comeaux, Sulphur, LA
Clements Lejeune Jr Et ux, Sulphur, LA
Clopha Darbonne Jr Estate Et al, Sulphur, LA
Cody W. Oliver Et ux, Sulphur, LA
Cody Wayne Goodner Et ux, Sulphur, LA
Corey James Doucet Et ux, Sulphur, LA
Corey Lalonde, Sulphur, LA
CTJ Investments LLC, Sulphur, LA
Curtis Paul Cart Et ux, Sulphur, LA
D & G Construction, LLC, Sulphur, LA
David William Sittig, Et ux, Sulphur, LA
Dean Lee Manning Et ux, Sulphur, LA
Debora Ann Constance Dixon, Sulphur, LA
Denise Julia Church, Sulphur, LA
Dennis Clyde Carruth Et ux, Sulphur, LA
Dept. Of Public Works, Sulphur, LA
Domingo Gonzales Ledesma Et ux, Sulphur, LA
Donald and Sarah Cowick Living Trust, Sulphur, LA
Donald James Beeler, Sulphur, LA
Donald Joseph Elkins Et ux, Sulphur, LA
Donald Lee Lapoint Et ux, Sulphur, LA
Edmond Trahan Et ux, Sulphur, LA
Edward Buryl Baty, Sulphur, LA
Edward, Dan Chapman, Sulphur, LA
Elder Marie Richard Lyons, Sulphur, LA
Eli Benjamin and Leslie Denise Beaty, Sulphur, LA
Elizabeth Vincent, Sulphur, LA
Erica Janeen Duhon, Sulphur, LA
Ernest A Houssier Jr Et al, Sulphur, LA
Ernest E., Et ux Parker, Sulphur, LA
Etha Belle Courmier, Sulphur, LA
Fingerlake Estates Corporation Inc, Sulphur, LA
Floyd Williams, Jr., Et ux Stains, Sulphur, LA
Garry L Glass Et ux, Sulphur, LA
Gary Wayne, Et ux Babineaux, Sulphur, LA

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Georgia A Constance Et al, Sulphur, LA
Gerald Clinton Burnett, Sulphur, LA
Gerald Dwayne Gilbert Et ux, Sulphur, LA
Geraldine Marie Verret Kyle, Sulphur, LA
Gilbert Leon Royer, Sulphur, LA
Glenn Scott Seaford Et ux, Sulphur, LA
Gloria Opel D. Thomas, Sulphur, LA
Gordon Allen Farnum, Sulphur, LA
Grace Marie Wilson, Sulphur, LA
Henry Charles Semple, Sulphur, LA
Horace Curtis Vincent III Et ux, Sulphur, LA
J E Trust, Sulphur, LA
Jacqueline Hope Matthews, Sulphur, LA
Jaime and Diana Pena, Sulphur, LA
James Larry Lafleur Et ux, Sulphur, LA
James T. Quinn, Sulphur, LA
James W. C. Willson, Sulphur, LA
James Wallace Ellender Jr., Sulphur, LA
Janet Lea Richard, Et vir Langley, Sulphur, LA
Jason Brian Fuqua Et ux, Sulphur, LA
Jason Edward Nicholas, Sulphur, LA
Jay Ellender, Sulphur, LA
Jayde Allen Berwick, Sulphur, LA
Jem Testamentary Trust, Sulphur, LA
Jenifer Lynette Dugas Anderson, Sulphur, LA
Jeremy Paul, Et ux Caldwell, Sulphur, LA
Jerry Wayne Winters Et ux, Sulphur, LA
Jessica Pearson Logan Et al, Sulphur, LA
Jessica Pearson Logan, Et al, Sulphur, LA
Joanne Jordon Fontenot, Sulphur, LA
Jody Lynn Vincent Et al, Sulphur, LA
Joel Edward Langford Et ux, Sulphur, LA
John Alton Currie, Sulphur, LA
John Carl Thomson, Sulphur, LA
John Ernest Bergstedt, Sulphur, LA
John Rudy Trahan, Sulphur, LA
Jose (Nmi) Hilerio, Sulphur, LA
Josh Paul Church Et ux, Sulphur, LA
Judith Clifton Bennett, Sulphur, LA
Judy Ann Hulett, Sulphur, LA
Julius A Ogea, Et al, Sulphur, LA
Karen & Lonnie Nickles, Sulphur, LA
Karen Ellender Nichles, Sulphur, LA
Keith Michael Lafauci Et ux, Sulphur, LA
Keith Wayne Parker, Sulphur, LA
Kelly Marie Fuqua Et vir, Sulphur, LA
Ken Racca, Sulphur, LA
Kenneth Charles Walker Et ux, Sulphur, LA
Kenneth Lawrence Ellender, Sulphur, LA
Kenneth Paul Lyons Et al, Sulphur, LA
Kenneth Paul, Et ux Lyons, Sulphur, LA
Kevin James Comeaux, Sulphur, LA
Kleat LLC, Sulphur, LA
Krause & Managan Lumber Company, Sulphur, LA
L. L. Lacy, Sulphur, LA
Larry Carrier Dirt Work LLC, Sulphur, LA
Larry James Carrier, Sulphur, LA
Lena McArthur, Executive Director, West Calcasieu Chamber of Commerce, Sulphur, LA
Leon Lawrence Currie II, Sulphur, LA
Leon Lawrence Currie II, Sulphur, LA
Leslie L. Barker, Sulphur, LA
Linda Louise West, Sulphur, LA
Linda Pickett, Sulphur, LA
Lionel Joseph Mestayer Jr, Sulphur, LA
Louis Calvin Ashworth Jr Et ux, Sulphur, LA
Lucas Kelly Maddox Et ux, Sulphur, LA
Luke Gerard Leblanc, Sulphur, LA
Margaret Lamont Williams, Sulphur, LA
Marie Louise Antoinette Doiron Estate, Sulphur, LA
Mark Wayne and Sharon Reed, Sulphur, LA
Martha Ann Clifton, Sulphur, LA
Marvin Jean Lyons Et al, Sulphur, LA
Mary Granger, Sulphur, LA
Mary Noelie Semple Lott, Sulphur, LA
Matthew Linton Vincent Et al, Sulphur, LA
Micha Faye Sonnier Lowry, Sulphur, LA
Nathan Thomas Burnett, Sulphur, LA
Nelson Family Irrevocable Trust, Sulphur, LA
Norman Dale Champagne Et ux, Sulphur, LA
North Sulphur Building Association Inc, Sulphur, LA
Palermo Land Company, Inc, Sulphur, LA
Palvest, Inc., Sulphur, LA
Patsy R. Little Trahan, Sulphur, LA
Paul Alan, Et ux Brown, Sulphur, LA
Phillip Ray, Et ux Allen, Sulphur, LA
Preston J Stelly Jr Et ux, Sulphur, LA
Rahn Lanier Drost Et ux, Sulphur, LA
Randal Joseph Trahan, Sulphur, LA
Randy Ethan Babaz Et ux, Sulphur, LA
Richard Wayne and Dinah Fontenot, Sulphur, LA
Richard Wayne Frauenberger, Et ux, Sulphur, LA
Robert Charles Babcock Et al, Sulphur, LA
Robert Charles Babcock Et ux, Sulphur, LA
Robert E. Etux Broussard, Sulphur, LA
Robert Joeph Constance, Sulphur, LA
Robert Lee, Jr. Trahan, Sulphur, LA
Rodney Lee Williams, Sulphur, LA
Ronald Eugene Lawrence Et vir, Sulphur, LA
Ronald R. & Anissa Ann Reed, Sulphur, LA
Ruby Mae S Constance Et al, Sulphur, LA
Ryan Nicholas Cormier, Sulphur, LA
Sheila Jo Constance Miller, Sulphur, LA
Sherrell Lynn Welton Labove, Sulphur, LA
Southern Home Rentals Inc, Sulphur, LA
Stacy Lynn Helms Et ux, Sulphur, LA
Stephanie Miles Ughovwa, Sulphur, LA
Sulphur Group LLC, Sulphur, LA
Tab Perkins, Sulphur, LA
Terri Lea McMurray, Sulphur, LA

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Distribution List

Thaddeus Brian Hoffpauir, Sulphur, LA
Todd Ercell Perkins, Sulphur, LA
Todd Patrick Broussard, Sulphur, LA
Vicki Frankland Nezat, Et al, Sulphur, LA
Vicky Winters, Sulphur, LA
Vito Tramonte, Sulphur, LA
West Family Irrevocable Trust, Sulphur, LA
William Michael Price Et ux, Sulphur, LA
William Neal Leger Et ux, Sulphur, LA
Norman R Nicko, Sunset, LA
Pamela Post Boudreaux, Thibodaux, LA
Cehpus Mitchell Duhon Estate, Ventress, LA
Cephus Richard Duhon, Ventress, LA
Dewey Duhon, Ventress, LA
Hattie Duhon Smith, Ventress, LA
Arthur L Courville, Ville Platte, LA
Duane Richard Smith, Ville Platte, LA
Freda Denise Mcdaniel, Ville Platte, LA
Leonard G & Mary Alice A Fontenot, Ville Platte, LA
Wilbur Carter, Ville Platte, LA
William Thelma Lavergne Family, LLC, Ville Platte, LA
Dena Janell Johnson, Watson, LA
Pamela Mae E. Johnson, Et al, Watson, LA
Wanda Gayle Johnson, Watson, LA
Athony Lynn Hantz, Westlake, LA
Baggett Enterprises, LLC, Westlake, LA
George R. Scalia, Westlake, LA
Jeffrey Martin, Westlake, LA
Mayo Realty Co Inc, Westlake, LA
Northfork Enterprises, LLC, Westlake, LA
Patricia Ann Braeux, Westlake, LA
Annise Faye Mcduff, Youngsville, LA
Kevin Lee Fuselier and Michelle Renee Fuselier Boutin, Youngsville, LA
Children's Hospital Medical Center, Boston, MA
EIP Calcasieu, LLC, Baltimore, MD
Katherine Birnic, Baltimore, MD
Fitzhugh Elder, III, Curchton, MD
Sheila Botley Burgess, Florissant, MO
Howard Shirla McFaddin c/o Michael R. Perry, Poplar Bluff, MO
Charles Donald Hembree, Carriere, MS
David Richard, Clinton, MS
Kristin Monique Farr Broussard, Hattiesburg, MS
Cerisa Lynn Epps, Jackson, MS
Frietta Nashae Epps, Jackson, MS
Heibertg. Epps, Jackson, MS
MWF IV Acadia, LLC, Jackson, MS
Rochelle Epps, Jackson, MS
Valerie C. Epps, Jackson, MS
Zabrina Faye Epps, Jackson, MS
Chemical Waste Management, Inc., Madison, MS
Alan Humphrey, Project Engineer, Sempra U.S. Gas & Power, Mount Olive, MS
Ernest Keaton Young, Oxford, MS
Mitchell, Jr. Young, Oxford, MS
Wendell Wilson, Summit, MS
WPH McFaddin, IV, Dexter, MT
Frank Robert Clifton, Chapel Hill, NC
Boston Timber Opportunities, LLC, Charlotte, NC
Pamela Ann Eaglin Hebert, Fort Bragg, NC
Barbara Miller, Garner, NC
The Ellen P. Nealy Living Trust, Greensboro, NC
The Ellen P. Nealy Living Trust of 1992, Greensboro, NC
The Ellen P. Nealy Living Trust of 2004, Greensboro, NC
Megan Weir, Kannapolis, NC
Smith Family Trust, Raleigh, NC
Mary Lou Sortino, Omaha, NE
Mary Jane Nelson Donofrio, Brick, NJ
BASF Corporation, Florham Park, NJ
James Lamar Nelson, Kenilworth, NJ
Daniel P. O'Bryan & Leo Francis O'Bryan, Jr., Albuquerque, NM
Turrentine Frankllin, Las Cruces, NM
Pamela Lebrun, Rio Rancho, NM
Thomas Allen Barr, Santa Fe, NM
Leslie Jane Hinton, Sante Fe, NM
Dann M Thomasson Et al, Silver City, NM
R. Russell McMahon Estate, Silver City, NM
Mildred C Addison, Las Vegas, NV
Myrtis Ann Tanner, Las Vegas, NV
C.B. Claypool c/o Patricia Evans, Pahrump, NV
Dorothy S. Brooke, Brooklyn, NY
Marion Brooke Worth, Locust Valley, NY
Richard Evert Karlsson, Staten Island, NY
Floyd Lowery, Carlisle, OH
Madelyn Darbonne, Toledo, OH
Ivolee Nash Estate, Bethany, OK
Leboeuf Land & Investments LLC, Idabel, OK
Rebecca Griffith Kendall, Tulsa, OK
Renee H Tuthill Trusts, Tulsa, OK
Richard D Griffith Sr Estate, Tulsa, OK
Richard Griffith Jr, Tulsa, OK
Transcontinental Gas Pipeline Corp, Tulsa, OK
Crown Pine Timber 4 LP, Portland, OR
Crown Atlantic Co., McMurray, PA
Amy Mccoubrey, Philadelphia, PA
John David Karlsson, Hope Valley, RI
Marion Lane West, Cordova, TN
Charles R. Johnson, Jackson, TN
Mitchel Ross Lagrone, Oakland, TN
Uel Scott Clanton, Alvarado, TX
Gladys City Companies, Amarillo, TX
Hubert Breaux, Anahuac, TX
Julie Garbarino Buisson Et al, Arlington, TX

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Distribution List

Paula Lee Harris Paus, Audrey, TX
3n75 Trust, Austin, TX
C.J. Hebert, Austin, TX
David L. Broadus, Austin, TX
Joan Donaldson Watkins, Austin, TX
Kelly M Hollins Et al, Austin, TX
Lucas Investments, LLC, Austin, TX
Philip B. Lucas, Jr., Austin, TX
Rebecca Hensley, Regional Director, Ecosystem Resources Program, Texas Parks & Wildlife Dept, Coastal Fisheries Division, Austin, TX
Ben C. Hebert Heirs, Beaumont, TX
Black Schroeder, Beaumont, TX
Bonnie Faul, Beaumont, TX
Caldwell Company Trust, Beaumont, TX
Corwil, LLC, Beaumont, TX
Dorothy Mae Joubert, Beaumont, TX
Dubea Investments Wildhorse, LP, Beaumont, TX
E.G. Cordts, Jr., Beaumont, TX
Ed Crawford, Beaumont, TX
Edwin Arnaud, Inc., Beaumont, TX
Entergy Gulf States Texas, Beaumont, TX
Gan McFaddin, Beaumont, TX
Golden Eagle Financial Group, Inc., Beaumont, TX
Hebert Family, Beaumont, TX
J.E. Broussard, Jr., Beaumont, TX
James H. Sterling, Beaumont, TX
Jerry Crawford, Beaumont, TX
Kimberly Ann Chica, Beaumont, TX
Kristen Lynn Patterson, Beaumont, TX
L.M. Hebert, III Life Estate, Beaumont, TX
Linda Leslie Veuleman, Beaumont, TX
Louis M Hebert, Beaumont, TX
Margaret Alma Benckenstein, Beaumont, TX
Marie Summerlin Hester, Beaumont, TX
Mark Hawthorne, Beaumont, TX
Martin R. and Stephen Hebert, Beaumont, TX
Mary Jock Hebert, Beaumont, TX
Nancy Cowart, Beaumont, TX
Natgasoline LLC, Beaumont, TX
Nelson-Umphrey Real Estate, LLC, Beaumont, TX
Ora Lee Cassimere, Beaumont, TX
Ransom W. Jones, Jr., Beaumont, TX
Rhinoceros Ventures Group, Inc., Beaumont, TX
Rhonda Kay Richter, Beaumont, TX
Rocklon, LLC, Beaumont, TX
Andree H Macaluso, Bedford, TX
Robert F Houssier, Bedford, TX
Albin J & Michelle Judice, Bridge City, TX
Larry J & Louellen Judice, Bridge City, TX
Marie Louise Antoinette Doiron Estate, Bridge City, TX
Paul M & Debbie Roy, Bridge City, TX
Shirlie Ann Johnson, Brookshire, TX
Wiley Eaves Wieson c/o Fred W. Wieson, Brownsboro, TX
Ernestine Vincent Estate, Burkeville, TX
Lucas William Terrell, Call, TX
Ewing Louisiana Properties LLC, Casper, TX
Witchita Partnership Ltd, Chappel Hill, TX
Randy L. Gardner, Chester, TX
Blair Madylon, College Station, TX
Daniel Joseph Goodman, Jr, Conroe, TX
Jackie Lynn Benoit, Conroe, TX
Melviney Garcia, Crosby, TX
Johns S Brown Louisiana Trust, Cuervo, TX
Propylene Pipeline Partnership, LP, Cypress, TX
Abraham Davis, Dallas, TX
Julie L. Warner, Dallas, TX
Julie L. Warner Clancy, Dallas, TX
Sigrid Rothchild, Dallas, TX
Steven Craig Fowler, Dallas, TX
Thomas J. Howell, Dallas, TX
W.L. and M.A. Cain Family Limited Partnership, Dallas, TX
Thomas Milton Bergstedt, Deer Park, TX
Tim Tindell, Crown Pine Timber 4 LP, Diboll, TX
Betty Mercer, Edna, TX
South Texas Land Limited Partnership, El Campo, TX
L. H. Kinard Sr., El Paso, TX
The Linda Trahan Revocable Trust, Euless, TX
Carla Gail Leslie Wall, Forney, TX
Michele G. Smith, Brite Divinity School, Fort Worth, TX
Rinae Fowler Morrow, Fort Worth, TX
Ronald Terrell, Fort Worth, TX
Lucy Eaves, Fred, TX
Bartlett Doe Moore Jr, Galveston, TX
Kathy Thomas, Galveston, TX
Judie Patterson & The Butch & Linda Smith Family Trust, Georgetown, TX
Melissa Ann Macaluso, Georgetown, TX
The Allar Company, Graham, TX
Shirley Spruiell, Grand Prairie, TX
Captain Charles Lahaye, President, Sabine Pilots, Groves, TX
Ellen Warner, Captain, Sabine Pilots, Groves, TX
Nonie Devillier, Groves, TX
Monte Krebs Crawford, Hampshire, TX
Anthony Albert Macaluso Jr, Houston, TX
Arthur Hollins III, Houston, TX
B.P. American Production Co., Houston, TX
Ben W. Curry c/o Susan Curry Swift, Houston, TX
Burlington Resources Oil & Gas Co LP, Houston, TX
Byng Hall Corporation, Houston, TX
Charles R Houssiere III, Houston, TX
Citgo Petroleum Corporation, Houston, TX
CM Mid-County Properties, LLC, Houston, TX
Dawn I Herrington, Houston, TX

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Distribution List

Donald Jock Hinrichs, Houston, TX
Douglas Pedigo, Houston, TX
Dustan Thomas Gawthorp, Houston, TX
Elroy Lovejoy, Houston, TX
Enterprise Refined Products CO., LLC, Houston, TX
Erma Nadean Bludworth Trust, Houston, TX
Ernest Morehead, Houston, TX
Eve Norman Garbarino Jr, Houston, TX
FLB/CBB Family Limited Partnership, Et al, Houston, TX
Gloria Mae Hubbert, Houston, TX
Gloria Sheffield Hubbard, Houston, TX
Golden Pass LNG Terminal, LP, Houston, TX
Golden Triangle Properties, Houston, TX
H D Cox Estate, Houston, TX
H.B. Joiner LLC, Houston, TX
Harold Moore, Houston, TX
Hilton Winfrey & Nancy Winfrey Williams, Houston, TX
James Thaddeus Mcclellan, Houston, TX
Janet Jeanes, Houston, TX
Jennifer Dunn Blanc, Houston, TX
Jim Thompson, Manager-Permitting and Compliance, Sempra LNG, Houston, TX
Kenneth E. Dubose, Houston, TX
Kenneth Michael Karam, Houston, TX
Kinder Morgan Texas Pipeline, Houston, TX
Landon Lyles, Houston, TX
Larry J & Louellen Mcclellan, Houston, TX
Lesa A. Lagrone, Houston, TX
Linda Parry M George, Houston, TX
Maybell Baker Chandler, Houston, TX
MBLH Properties Ltd, Houston, TX
Michael Albert Macaluso, Houston, TX
Michael W. Robbins, Senior Project Manager, TRC Solutions, Houston, TX
Mobil Pipe Line Company, Houston, TX
Molly Bennett Brown, Houston, TX
Molly Jane P Fink, Houston, TX
Nancy W. Williams, Houston, TX
Oiltanking Beaumont Partnership, Houston, TX
Rickie Abbs, Houston, TX
Robert Jackson, Houston, TX
Robert Winfrey, Houston, TX
Sabine Pass Liquefaction, LLC, Houston, TX
Samuel A Mcclellan, Houston, TX
Tawana Gail Robinson, Houston, TX
Teneda Middleton, Houston, TX
Texas Eastern Transmission, Houston, TX
Texas Eastern Transmission Corporation, Houston, TX
Vivian Ledet, Houston, TX
William L Welch Et al, Houston, TX
ADJ Partnership, LTD, Jasper, TX
Jasper County Real Estate, LLC, Jasper, TX
McGraw Minerals, LTD, Jasper, TX
Pamela Gale Johnson, Katy, TX
Roy H Donaldson Jr, Kerrville, TX
Ruben S. Martin III, Martin Operating Partnership, Kilgore, TX
Jose Villarreal, Lafkin, TX
Carolyn Leveque, Lago Vista, TX
J C Tracy Estate, Lake Jackson, TX
The Herman E. and/or Era M. Mcfatter Revocable Living Trust, Lake Jackson, TX
Mary Elizabeth G. Farley, Lampass, TX
Edgar Brown Land Company LLC, League City, TX
Louie E. Robinson, III, and Travis Mark Robinson, League City, TX
W.T. Robinson, Liberty, TX
Craig Williams, Livingston, TX
Delores A Williams, Livingston, TX
Nathan Smith, Livingston, TX
Norman Williams, Livingston, TX
Peggy Williams, Livingston, TX
Peggy Williams, Livingston, TX
Rebecca Alec, Livingston, TX
Rebecca W. Alec, Livingston, TX
Rodney Williams, Livingston, TX
Sandra W. Walker, Livingston, TX
Shana Smith, Livingston, TX
Verlis Williams, Livingston, TX
Becky McKinley, Lufkin, TX
Kimberly Anne Benckenstein Webster, Lufkin, TX
Larry D. Williams, Lufkin, TX
Wynema Kay Robinson, Lufkin, TX
Corbin Willianson, Magnolia, TX
Joseph L. Hantz, Magnolia, TX
Paula Louise Hebert, Magnolia, TX
Charlene Williams Wall, Mauriceville, TX
John Dudley and Lorri and Patti Baker, Mauriceville, TX
Mega Chips, Inc., Mauriceville, TX
Robert White, Jr., Medina, TX
Robin Fowler Taylor, Mesquite, TX
Michael Ballare, Missouri City, TX
Karen Lucas Trust, Montgomery, TX
Richard E. Wallace, Montgomery, TX
Barry Barnette, Nederland, TX
C. Doornbos A&B, LP, Nederland, TX
Gary W. Collins, Nederland, TX
Labelle Properties, LLC, Nederland, TX
Wilmer Young, Nederland, TX
Billy Walter & Era Jane Odom, Orange, TX
Brenda J. Lawson, Orange, TX
Clint Jones, Orange, TX
Davis C. Dixon, Orange, TX
Dorothy Henry, Orange, TX
Dudley Scott Rollins, Orange, TX
Earma Garn, Orange, TX
Ivan Valle Divila, Orange, TX

Appendix A

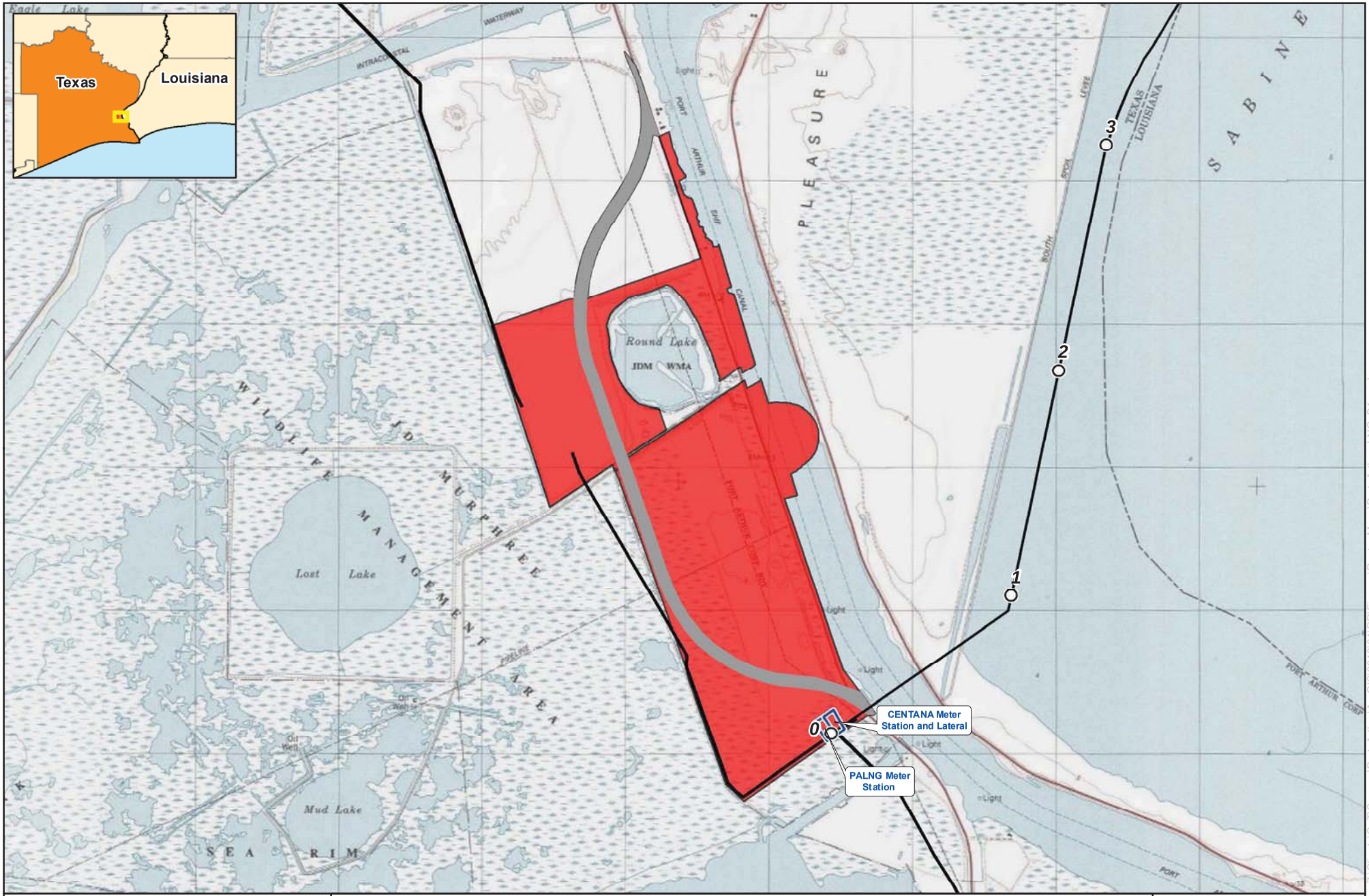
Distribution List

J H Spector & Sons, Orange, TX
J.A. Foster, Orange, TX
James A. Stelly & Billie Rae Stelly Revocable Living Trust, Orange, TX
Jeremy A. & Tabitha G. Tynes, Orange, TX
Jerry J. & Donna J. Harris, Orange, TX
Jimmie Simmons, Orange, TX
Joe Bob Sorter, Orange, TX
Joshua Samms, Orange, TX
Kudu Limited II, Inc., Orange, TX
Leir Rollins (Attn: Betty Rollins), Orange, TX
Morgan D. Michael, Orange, TX
Phillip & Terri Kennedy, Orange, TX
Susan Steed, Orange, TX
W E Mccorquodale Sr, Orange, TX
Wood P. Meanrd, Orange, TX
William Edward Winfree, Orangefield, TX
Sherluff Lee Leslie, Pasadena, TX
Joe Van Duhon, Pearland, TX
Don Michael Johnston, Pipe Creek, TX
Carolyn Akers Eastham, Plano, TX
Donna E. Cormier, Plano, TX
Margaret Helen Ratliff Reamer, Plano, TX
Mary Carolyn Eastham, Plano, TX
Cecil J. Broussard, Port Arthur, TX
City of Port Arthur, Port Arthur, TX
Connie S. Broussard, Port Arthur, TX
Gulf Copper & Manufacturing, Port Arthur, TX
Hemmenway Family, LP, Port Arthur, TX
Jack Hemmingway, Port Arthur, TX
Jefferson Co Drainage Dist 7, Port Arthur, TX
Narasimha Reddy Chandamuri, Port Arthur, TX
Richard Lavallee, Port Arthur, TX
Linda Montgomery, Port Neches, TX
Myrna Summerlin Connelly, Port Neches, TX
R.L. Breaux, Jr., Port Neches, TX
Susan Chevis Arceneaux, Port Neches, TX
Willard Young, Port Neches, TX
Sandra Fowler Alexander, Quinlan, TX
The Flying F LLC, Rockport, TX
Kenneth Charles Macaluso, Round Rock, TX
Kristi Heid, Superintendent, Sabine Pass ISD, Sabine Pass, TX
Andrew J. Lewis, Jr. or Linda L. McSween, San Antonio, TX
Cala M. Hunter, San Antonio, TX
Carol Kyle Tyrrell Real Estate Partnership, San Antonio, TX
Donald White, San Antonio, TX
Jeanne M. Conner and Mary Lynn Ryder, San Antonio, TX
John Matthews, San Antonio, TX
Pat W. McNamara, Jr., San Antonio, TX
The Pemcor Refining Group, Inc., San Antonio, TX
Bettie Sue Cowan c/o Peter S. Sloan, San Saba, TX
David W & Laura Blacksher, Santa Fe, TX
Kyle Consolidated Group, LP, Seguin, TX
OCF Properties, Ltd., Seguin, TX
Debra Jenean Leslie Castle, Sherman, TX
Bruce S., Meredith H., Susan E., & Dosite S. II Perkins, Spring, TX
Charles J. Hebert, Spring, TX
Fann Family Living Trust, Spring, TX
Houston Baptist University, c/o Dudley Veal Property Tax Group, Spring, TX
John L. Hebert, Spring, TX
Judy Waldo, Spring, TX
Leonard Benckenstein, Spring, TX
Marjorie W Fann Et al, Spring, TX
Richard Keith Hebert, Spring, TX
Rogers U. Karr, Spring, TX
Stanley P. Benckenstein, II, As Trustee of The Kimberly Anne Benckenstein Webster Heritage Trust, Spring, TX
Stanley P. Benckenstein, II, As Trustee of The Shannon Elaine Benckenstein Baker Heritage Trust, Spring, TX
Steven Couch Benckenstein, Spring, TX
Vickie A. Anselmi, Spring, TX
CLB Louisiana Properties LLC, Stafford, TX
Calvin Botley, Sugarland, TX
James R Fruge, The Woodlands, TX
Janet Louise Benson, Valley View, TX
A.B. Mansfield, Jr., Vidor, TX
Betty Manning Gall, Vidor, TX
Elmer L Ellender, Vidor, TX
Emma Jean Ellis Lamar, Vidor, TX
Lorraine M. Brodnax, Vidor, TX
Michael Deramus, Vidor, TX
Powell Anderson, Vidor, TX
Mary Henderson, Village Mills, TX
Clayton Todd Rollins, Winnie, TX
Malcolm Lynn Rollins, Winnie, TX
Dewey Conrad Pearson Jr Et al, Woodlands, TX
Charlinda Inc, Woodville, TX
Hebert Abstract Co LLC, Woodville, TX
Judith Hebert Cagle, Woodville, TX
Perkins Beverly Harrell, Woodville, TX
Elaine Elder King Mccarrick, Staunton, VA
Johnson Family Trust, Woodbridge, VA
Donald Mcelwain, Bristol, VT
Helen Botley Gorden, Moss Lake, WA
Caroline Louise Lucas Trust, Renton, WA
Frederick Allen, Et al Cordsen, Seattle, WA
Clifton Louisiana Properties, LLC, Tacoma, WA
Clifton Louisiana Properties, LLC, Tacoma, WA
Karen Gwen Hill Carnes, Vancouver, WA
Sheila D Cernek, Gratiot, WI
Kay Francis Johnson Heard, Cody, WY

APPENDIX B

PROJECT MAPS

Liquefaction Project



B-1-1

0 1,500 3,000 Feet

1 inch = 3,000 feet

N W E S

For Environmental Review Purposes Only

Appendix B-1
Liquefaction Facility Project
Route Map
Jefferson County, Texas

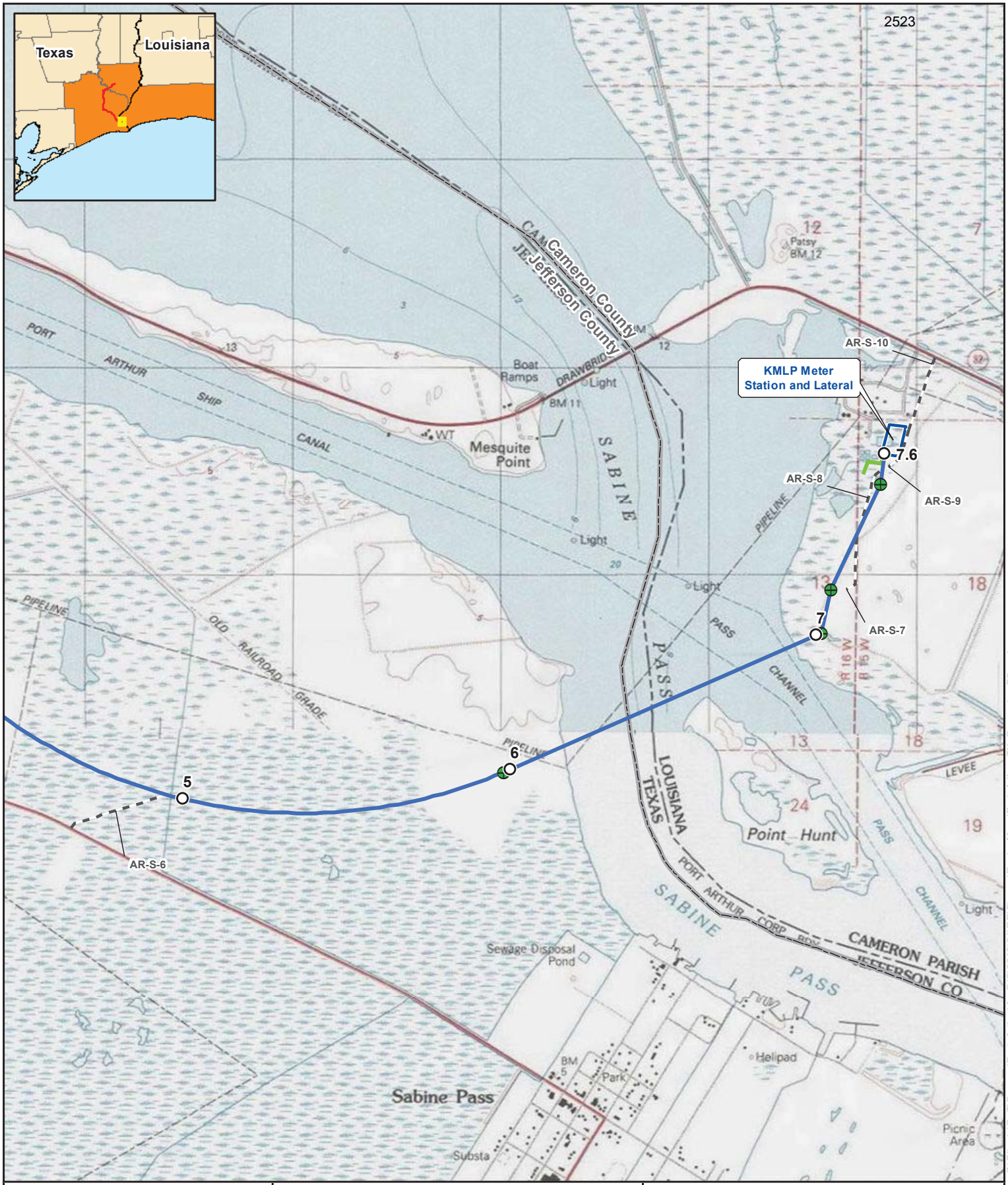
- Milepost
- Proposed Centerline
- Proposed Meter Station
- Proposed Liquefaction Project Site
- SH87 Relocation

2521

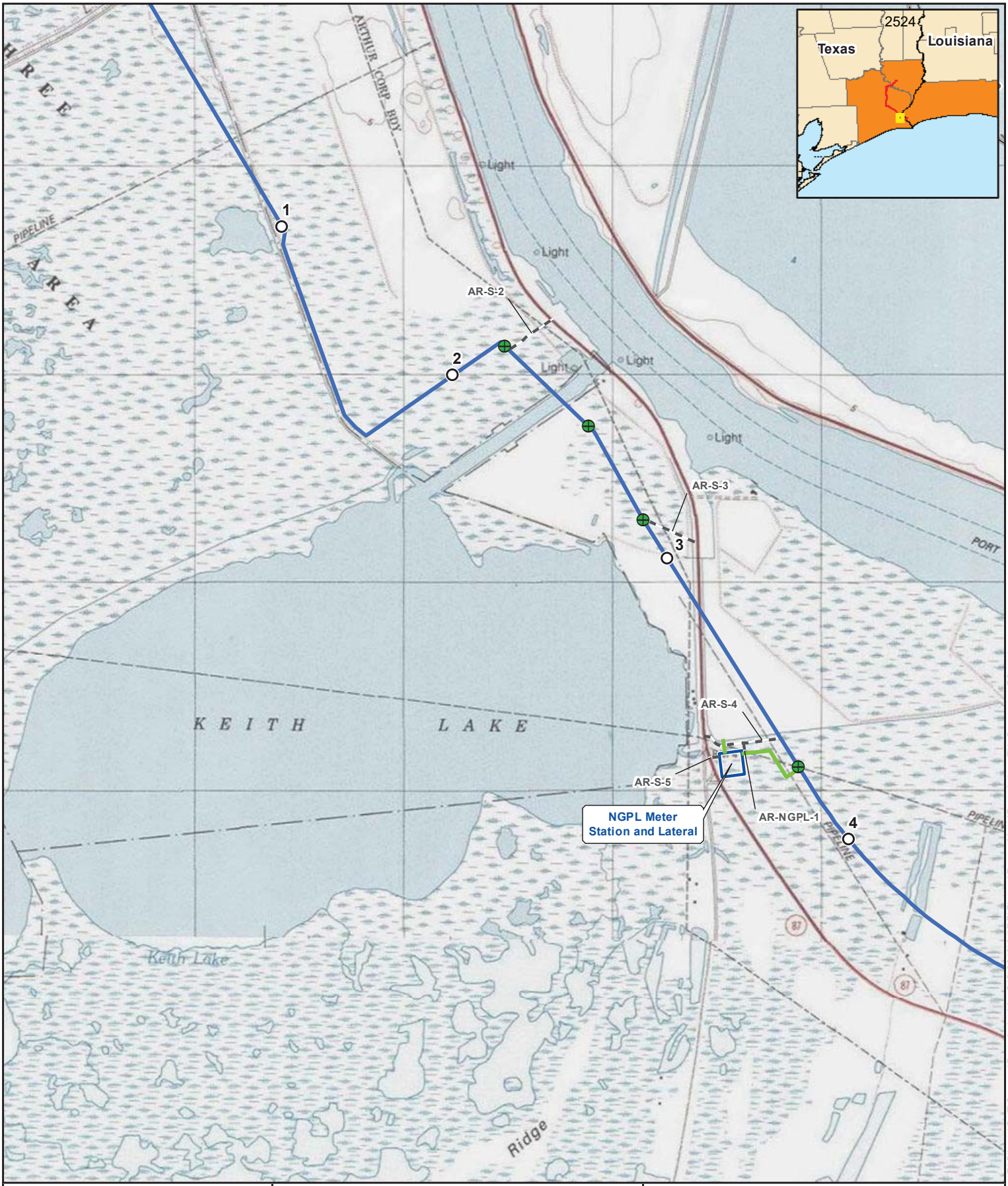
Source: Z:\Clients\Q_T\Sempra\Port_Arthur\ArcGIS\2018\01\RR\Figures\Route_Maps\Port_Arthur_LNG_B1.mxd

Date: (2/13/2018)

Texas Connector Project



Appendix B-2
Texas Connector Project
Route Map
Cameron Parish, Louisiana and Jefferson County, Texas



0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

Map 2 of 10

Appendix B-2
Texas Connector Project
Route Map
Jefferson County, Texas

- Milepost
- Proposed HDD Entry/Exit
- Proposed Lateral
- Proposed North Pipeline
- Proposed South Pipeline
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

Source: Z:\Clients\SG_TSempraPort_ArthurArcGIS\2016\TRR\Figures\Route_Maps\Port_Arthur_TX_Connector_B2.mxd

Date: (1/15/2016)



0 1,000 2,000 Feet

1 inch = 2,000 feet

For Environmental Review Purposes Only

Map 3 of 10

Appendix B-2
Texas Connector Project
Route Map
Jefferson County, Texas

- Milepost
- Proposed HDD Entry/Exit
- Proposed Lateral
- Proposed North Pipeline
- Proposed South Pipeline
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

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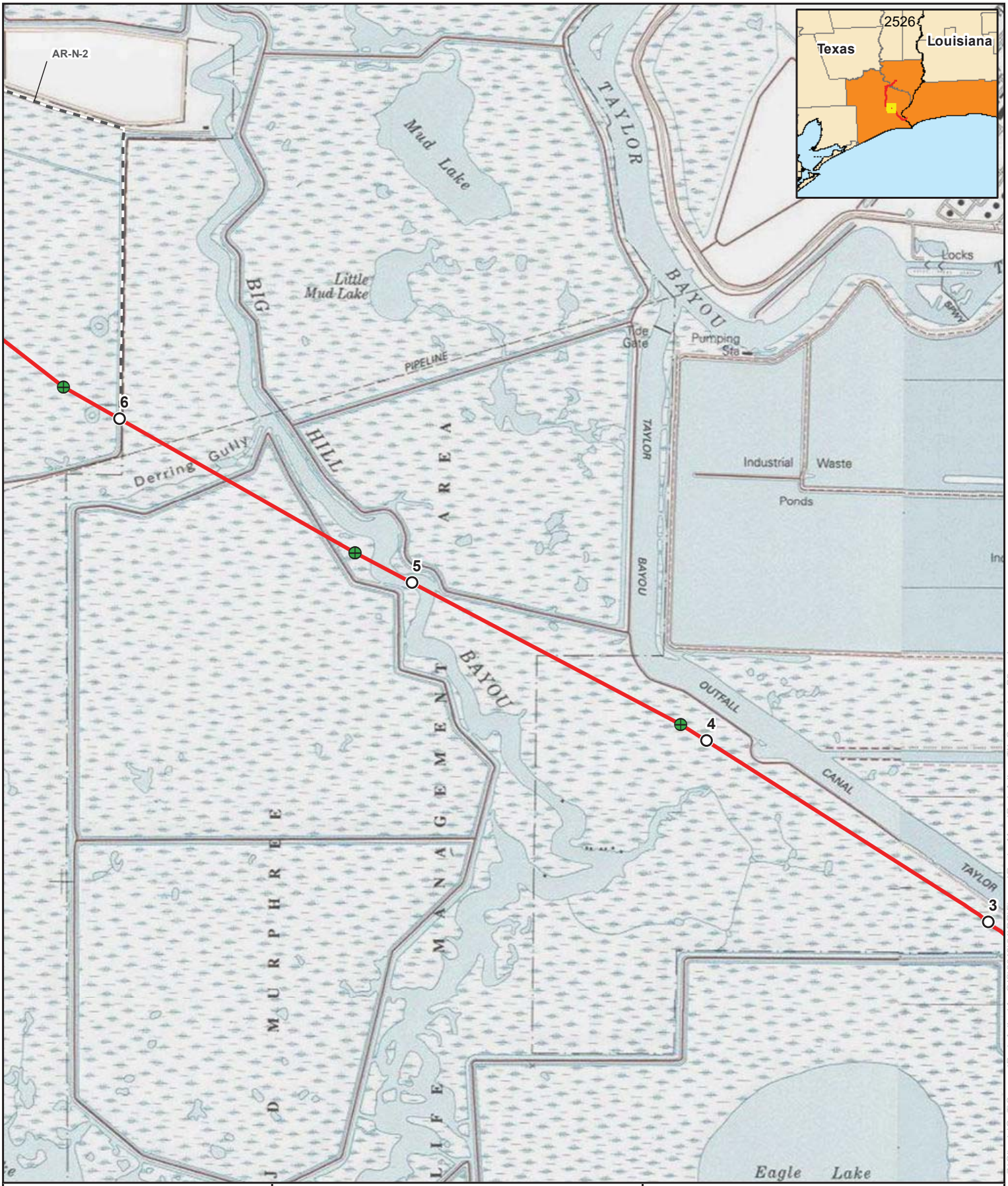

0 1,000 2,000 Feet

1 inch = 2,000 feet

For Environmental Review Purposes Only

Map 4 of 10

Appendix B-2
Texas Connector Project
Route Map
Jefferson County, Texas

- Milepost
- Proposed HDD Entry/Exit
- Proposed Lateral
- Proposed North Pipeline
- Proposed South Pipeline
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

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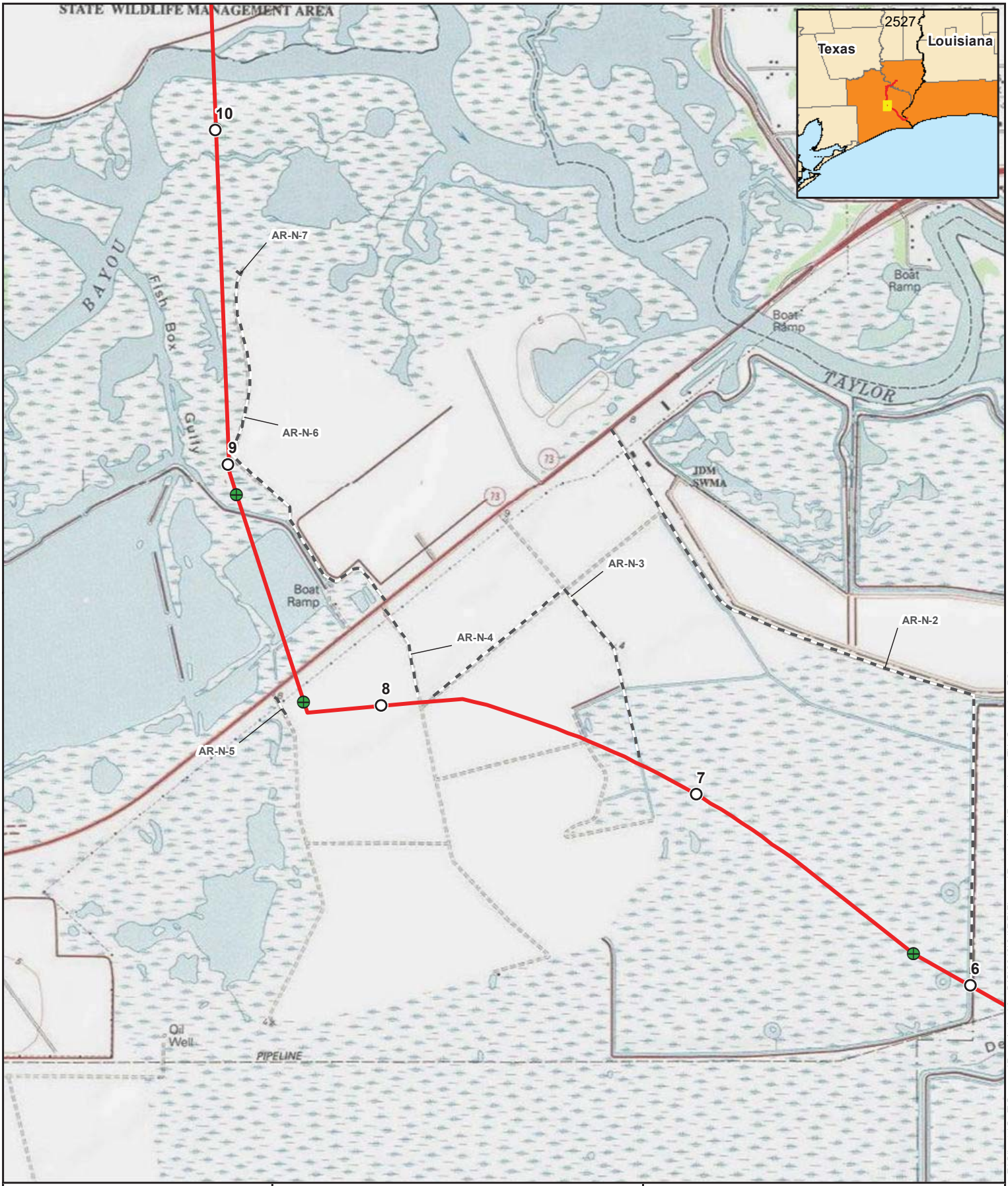

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

Map 5 of 10

Appendix B-2
Texas Connector Project
Route Map
Jefferson County, Texas

- Milepost
- Proposed HDD Entry/Exit
- Proposed Lateral
- Proposed North Pipeline
- Proposed South Pipeline
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

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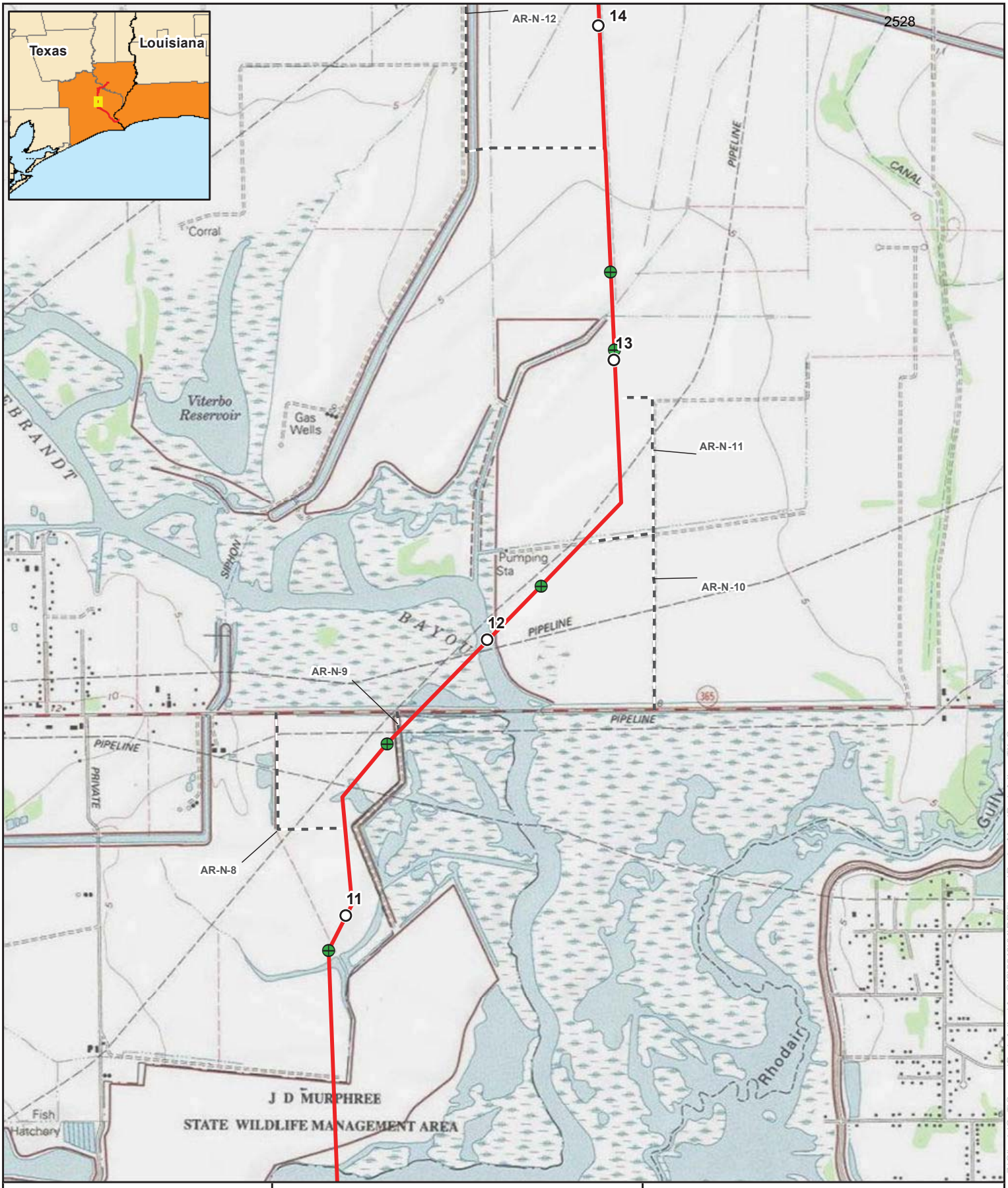

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

Map 6 of 10

Appendix B-2
Texas Connector Project
Route Map
Jefferson County, Texas

- Milepost
- Proposed HDD Entry/Exit
- Proposed Lateral
- Proposed North Pipeline
- Proposed South Pipeline
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

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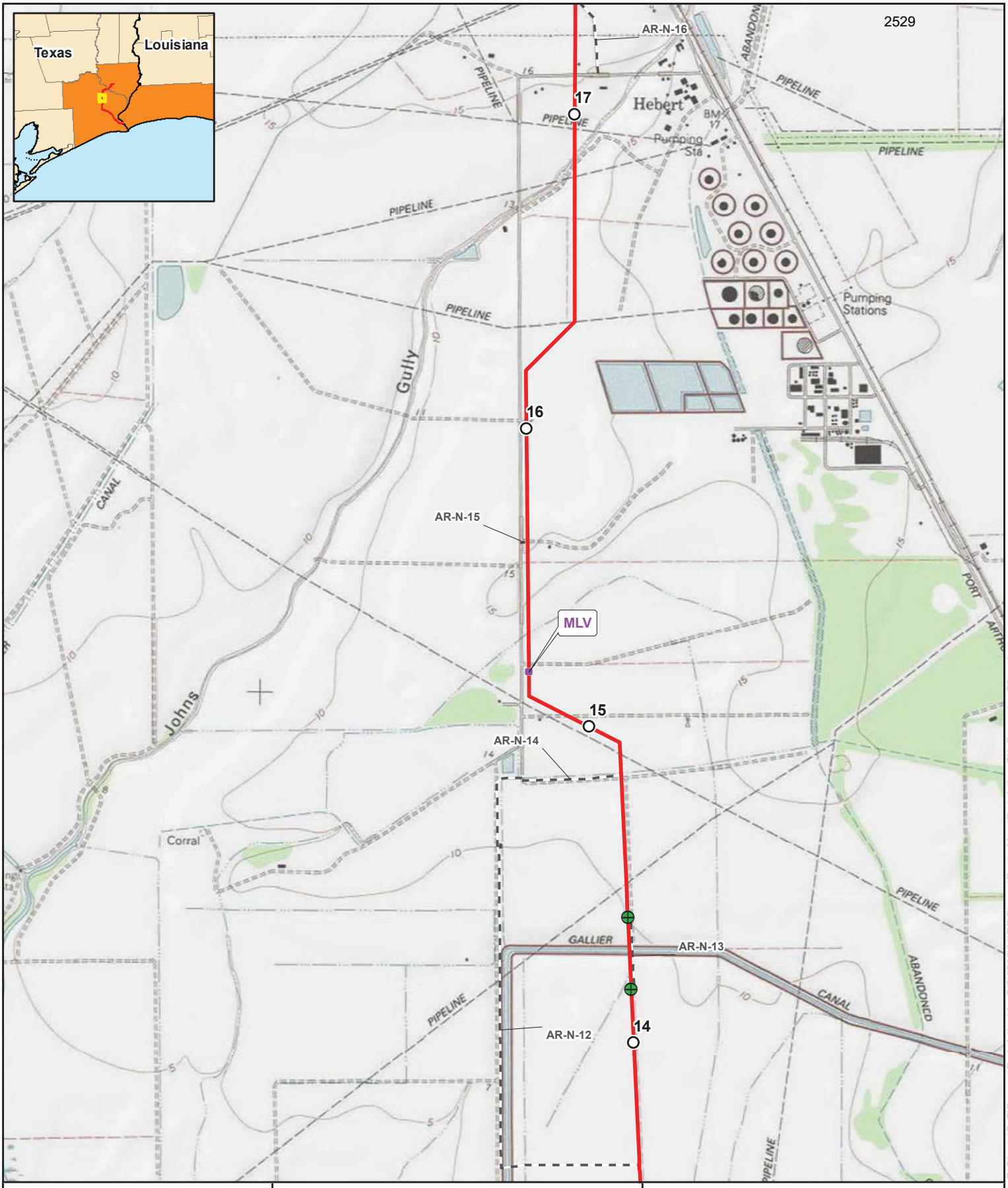

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

Map 7 of 10

Appendix B-2

Texas Connector Project

Route Map

Jefferson County, Texas

- Milepost
- Proposed HDD Entry/Exit
- Proposed Lateral
- Proposed North Pipeline
- Proposed South Pipeline
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

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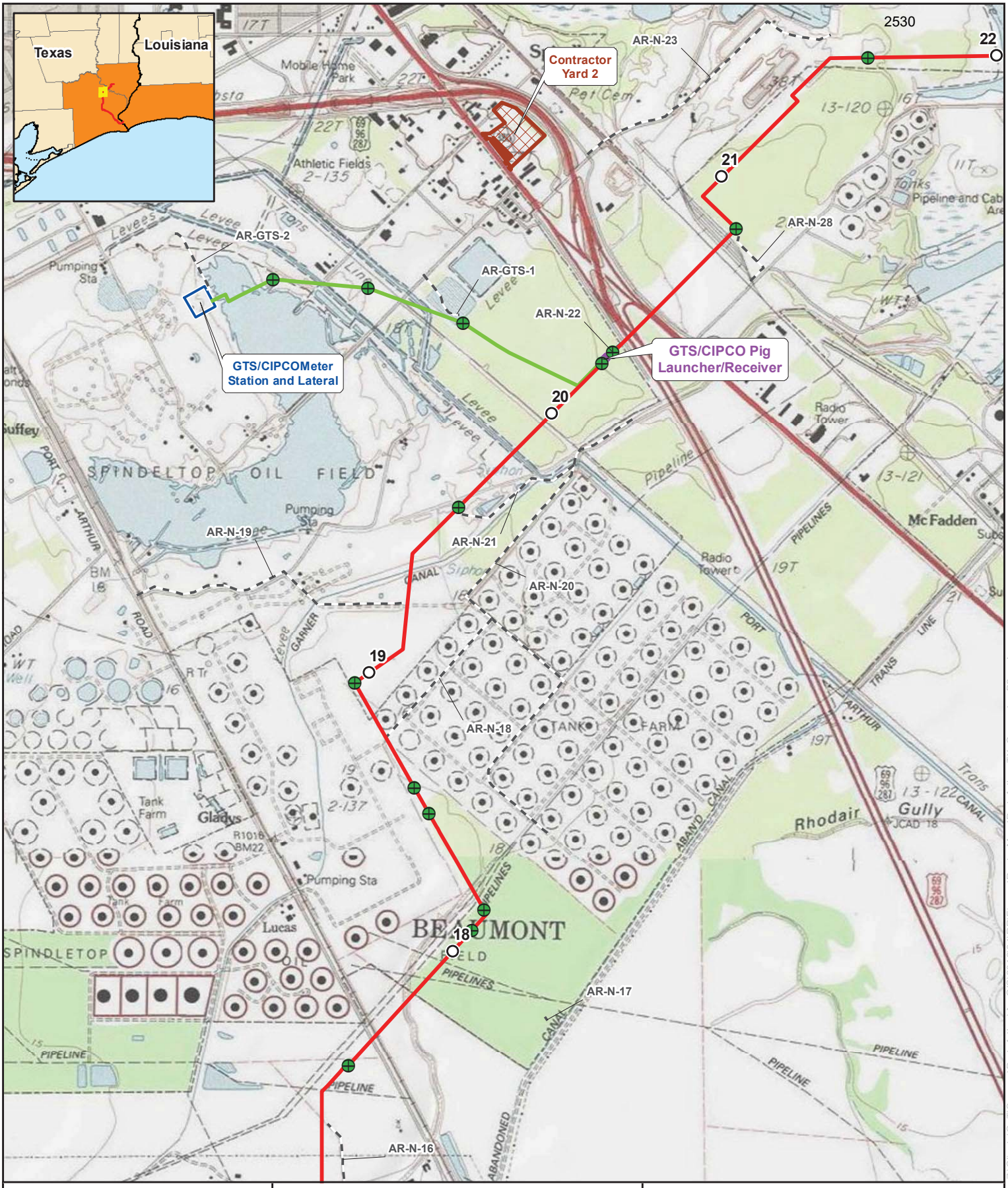

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

Map 8 of 10

Appendix B-2
Texas Connector Project
Route Map
Jefferson County, Texas

- Milepost
- Proposed HDD Entry/Exit
- Proposed Lateral
- Proposed North Pipeline
- Proposed South Pipeline
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

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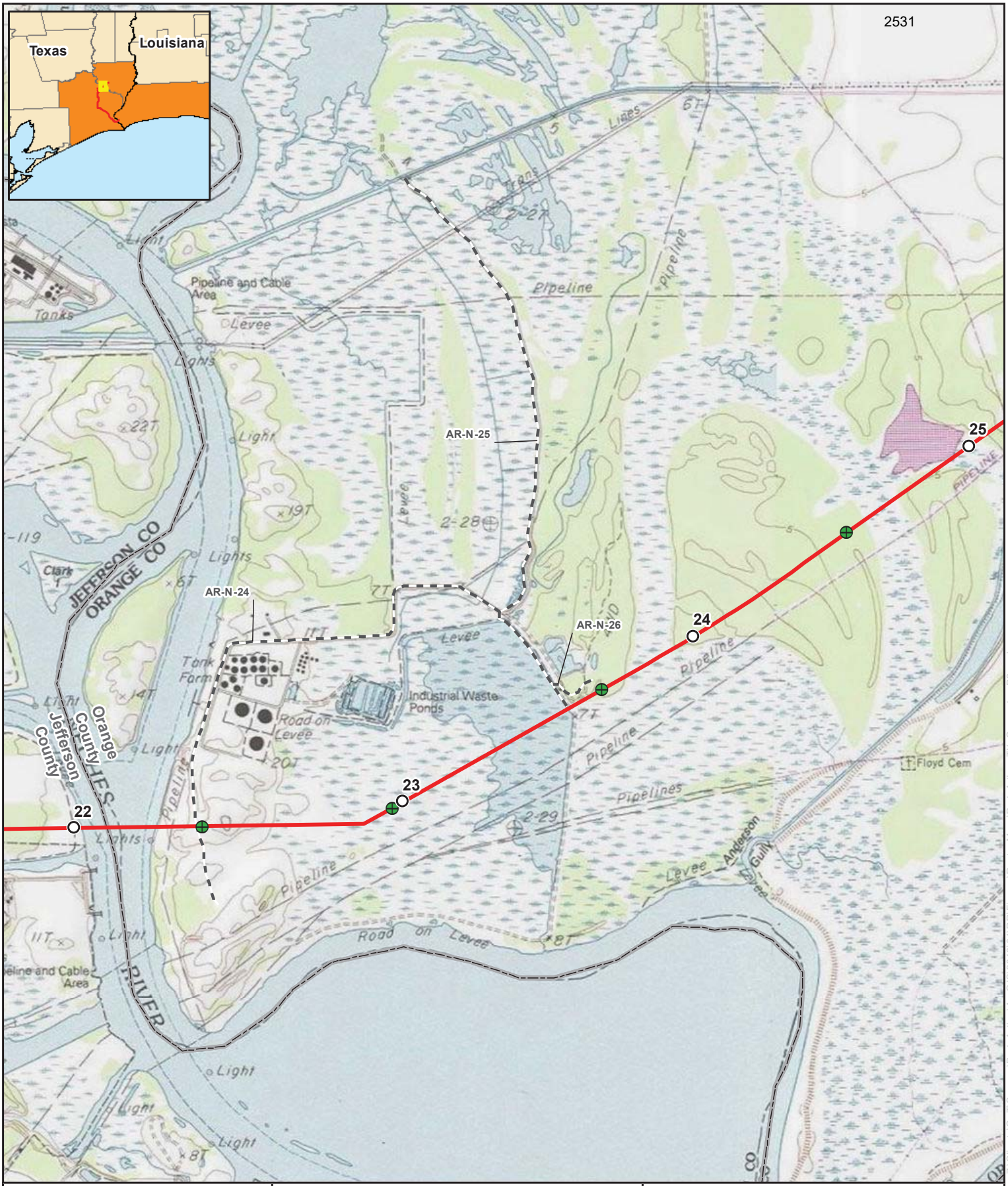

0 1,000 2,000 Feet

1 inch = 2,000 feet

For Environmental Review Purposes Only

Map 9 of 10

Appendix B-2
Texas Connector Project
Route Map
Orange County, Texas

- Milepost
- Proposed HDD Entry/Exit
- Proposed Lateral
- Proposed North Pipeline
- Proposed South Pipeline
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

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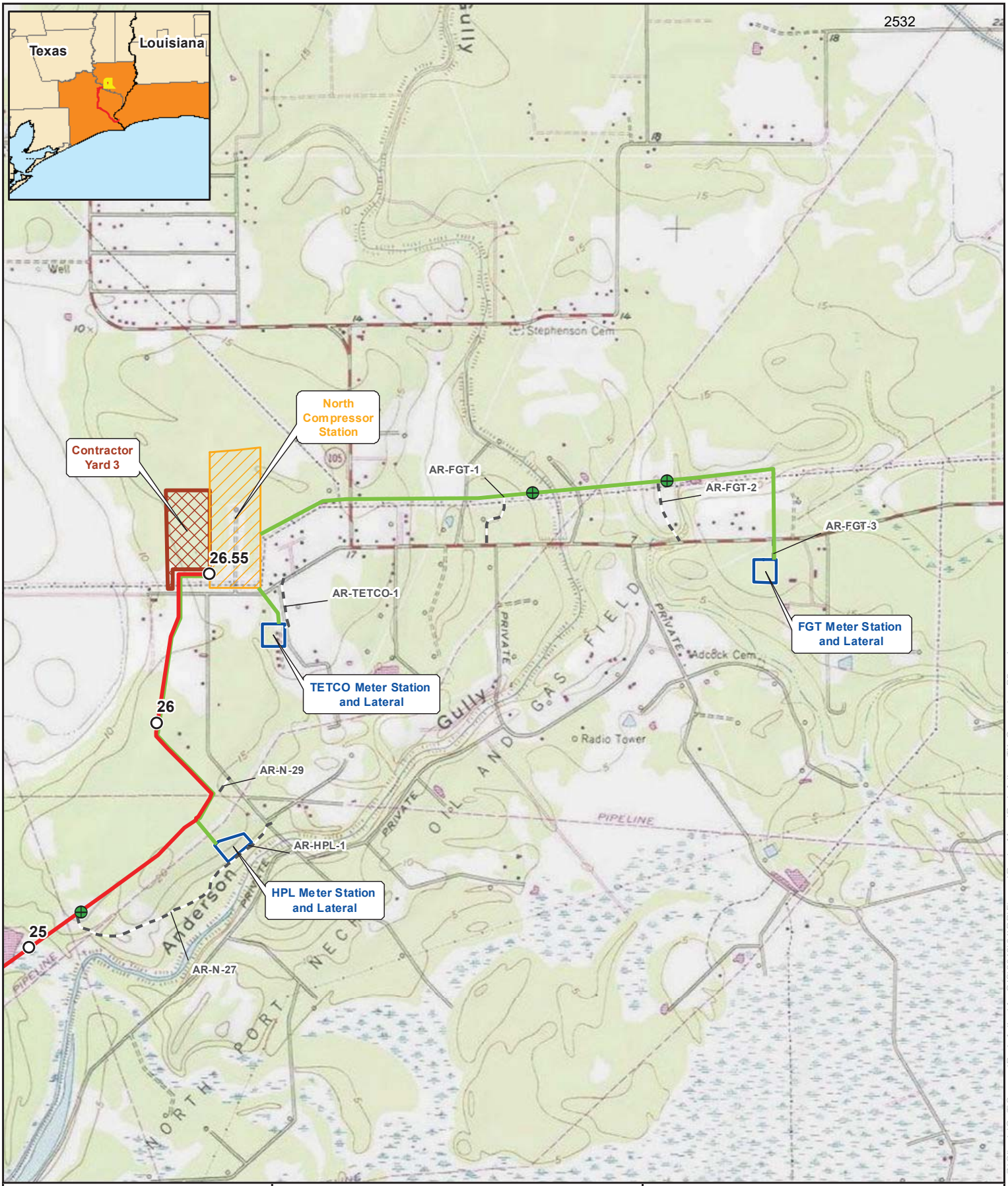

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

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Map 10 of 10

Appendix B-2
Texas Connector Project
Route Map
Orange County, Texas

- Milepost
- Proposed HDD Entry/Exit
- Proposed Lateral
- Proposed North Pipeline
- Proposed South Pipeline
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

Source: Z:\Clients\Q_T\Sempra\Port_Arthur\ArcGIS\2018\01\RR\Figures\Route_Maps\Port_Arthur_TX_Connector_B2.mxd

Date: (1/15/2018)

Louisiana Connector Project



B-3-1

0 1,000 2,000 Feet

1 inch = 2,000 feet

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Page 1 of 38

Appendix B-3
Louisiana Connector Project
Route Map
Jefferson County, Texas

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

2534

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Date: (1/15/2018)



B-3-2

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

Page 2 of 38

Appendix B-3
Louisiana Connector Project
Route Map
Jefferson County, Texas

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

2535

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Date: (1/15/2018)



B-3-3

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

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Page 3 of 38

Appendix B-3
Louisiana Connector Project
Route Map
Jefferson County, Texas

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

2536

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Date: (1/15/2018)



0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

Page 4 of 38

Appendix B-3
Louisiana Connector Project
Route Map
Jefferson County, Texas

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

2535

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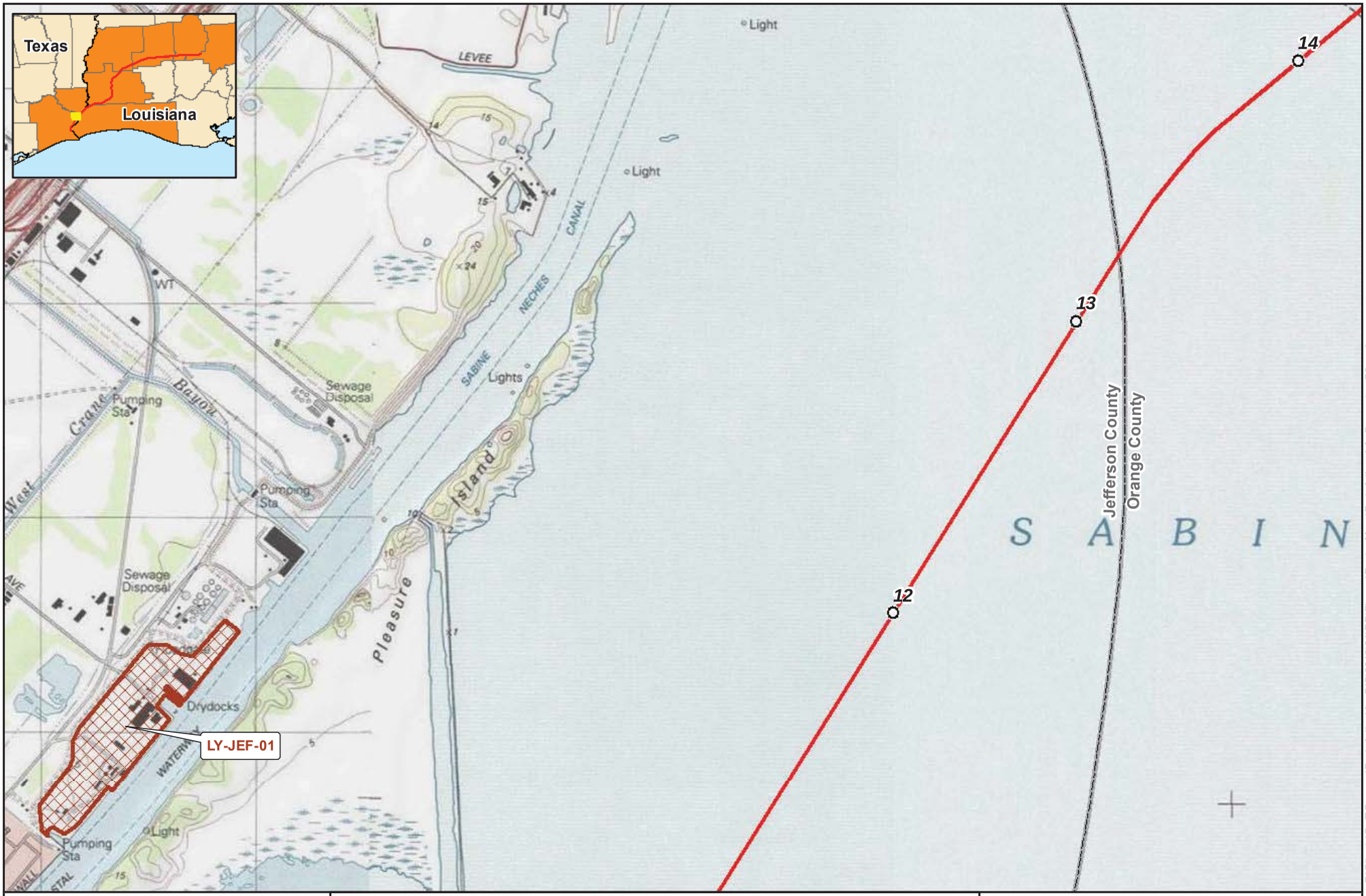

B-3-5

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

Page 5 of 38

Appendix B-3
Louisiana Connector Project
Route Map
Jefferson and Orange Counties, Texas

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

2536

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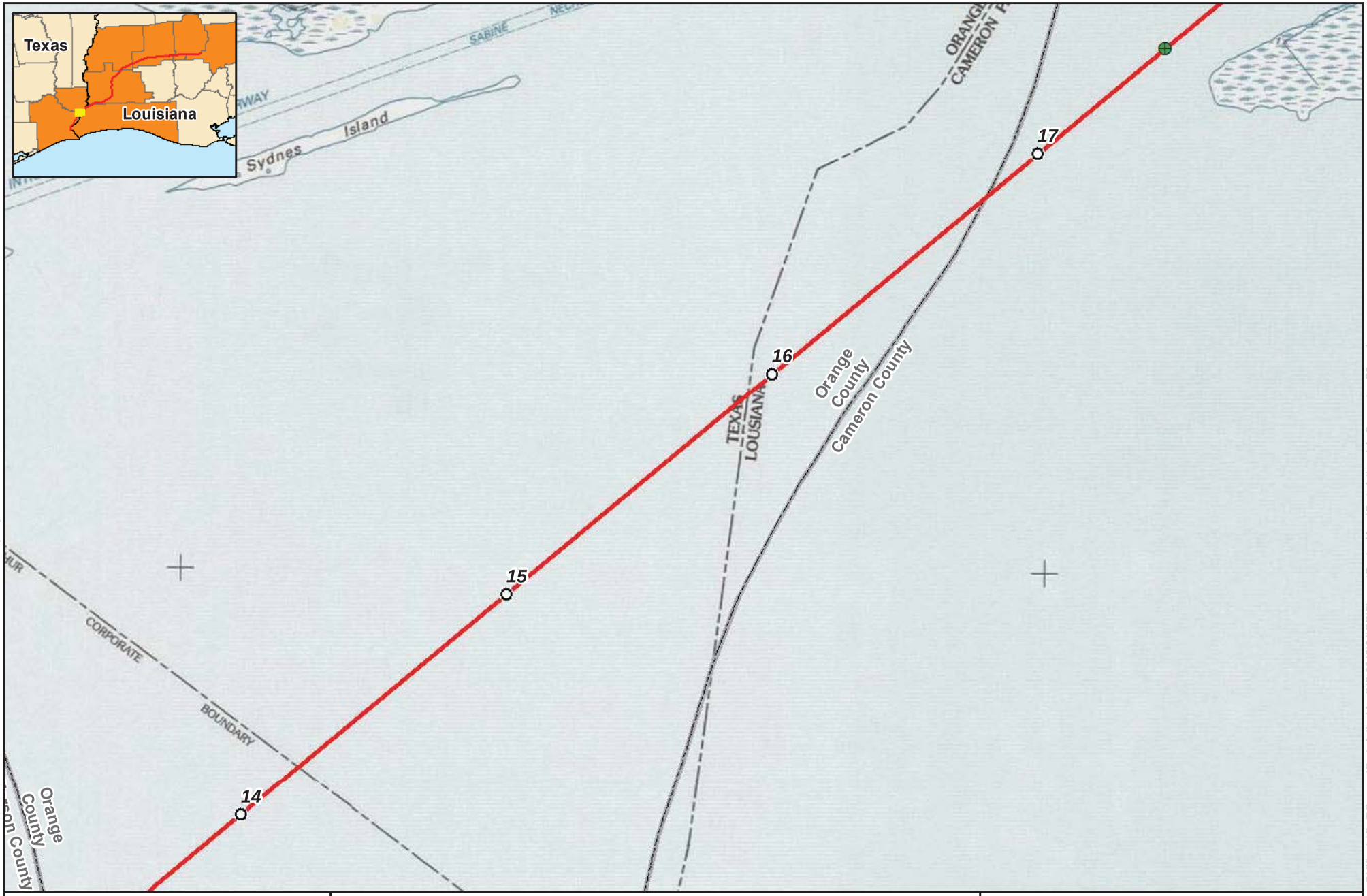
Texas
Louisiana
Sydnes Island
SABINE
ORANGE
CAMERON P
17
16
15
14
TEXAS
LOUISIANA
Orange County
Cameron County
CORPORATE
BOUNDARY
Orange County
0 1,000 2,000
Feet
1 inch = 2,000 feet
N
W
E
S
For Environmental Review Purposes Only
Page 6 of 38
Appendix B-3
Louisiana Connector Project
Route Map
Orange County, Texas
Milepost
Proposed HDD Entry/Exit
Proposed Pipeline
Proposed Lateral
Proposed Access Road
Proposed Valve
Proposed Compressor Station
Proposed Contractor Yard
Proposed Meter Station
County Boundary
2539
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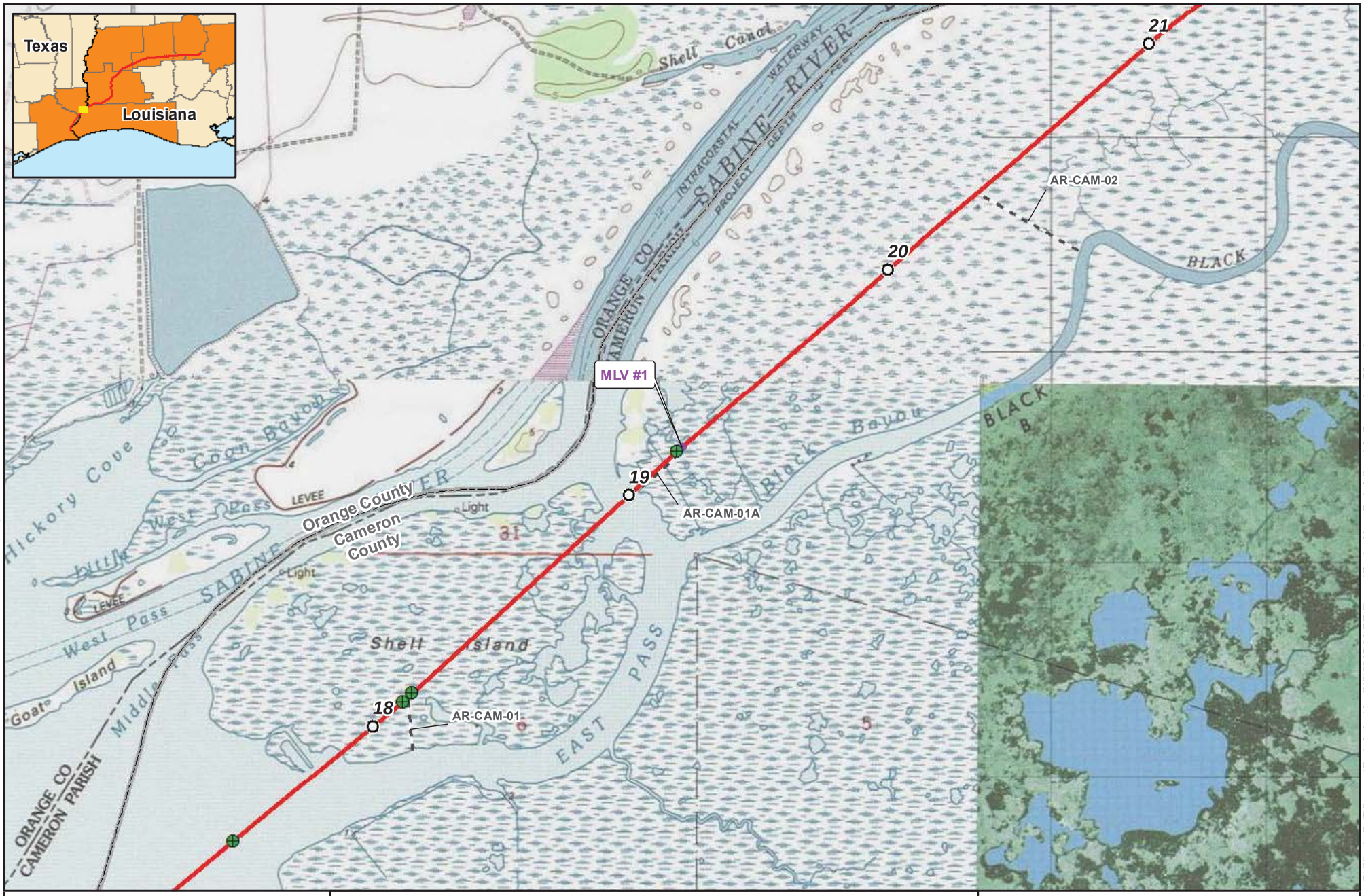

B-3-7

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

Page 7 of 38

Appendix B-3
Louisiana Connector Project
Route Map
Cameron Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

2540

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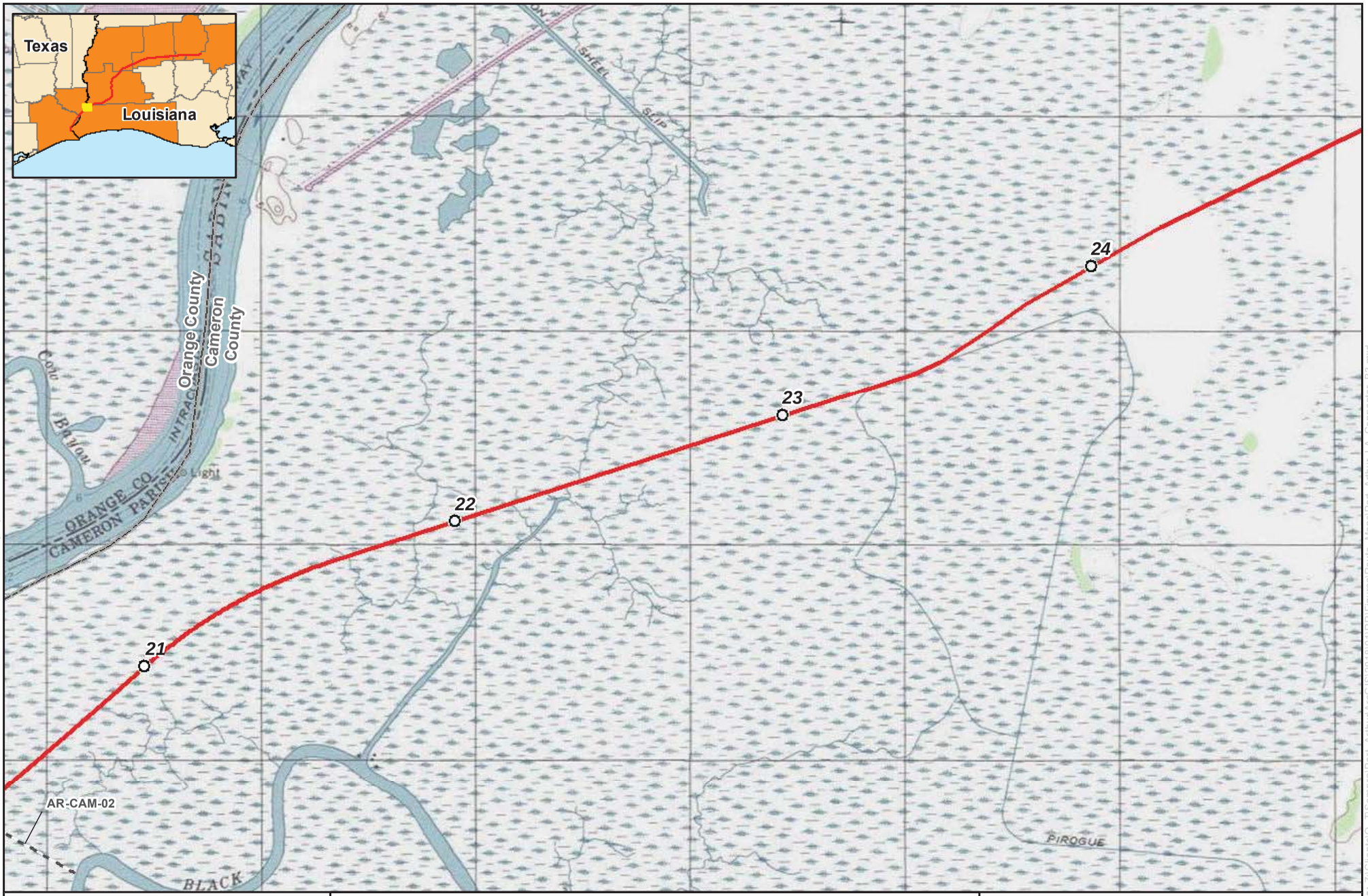

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

Page 8 of 38

Appendix B-3
Louisiana Connector Project
Route Map
Cameron Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

2544

Source: Z:\Clients\Q_T\Sempra\Port_Arthur\ArcGIS\2018\01\RR\Figures\Route_Maps\Port_Arthur_LA_Connector_B3.mxd

Date: (1/15/2018)



0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

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Appendix B-3
Louisiana Connector Project
Route Map
Cameron and Calcasieu Parishes, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

2542

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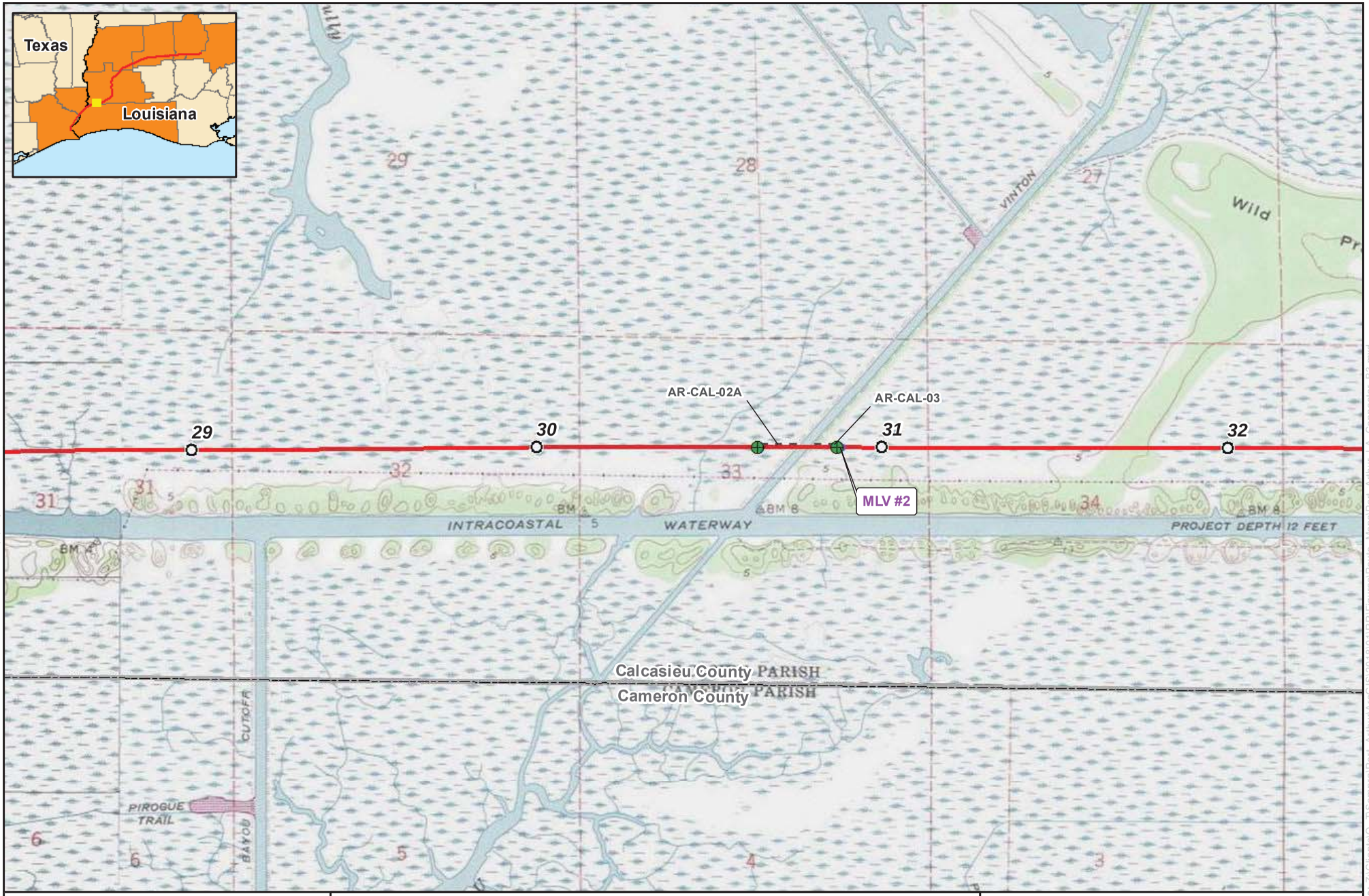
Date: (1/15/2018)



B-3-10

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

Appendix B-3

Louisiana Connector Project

Route Map

Calcasieu Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

25455

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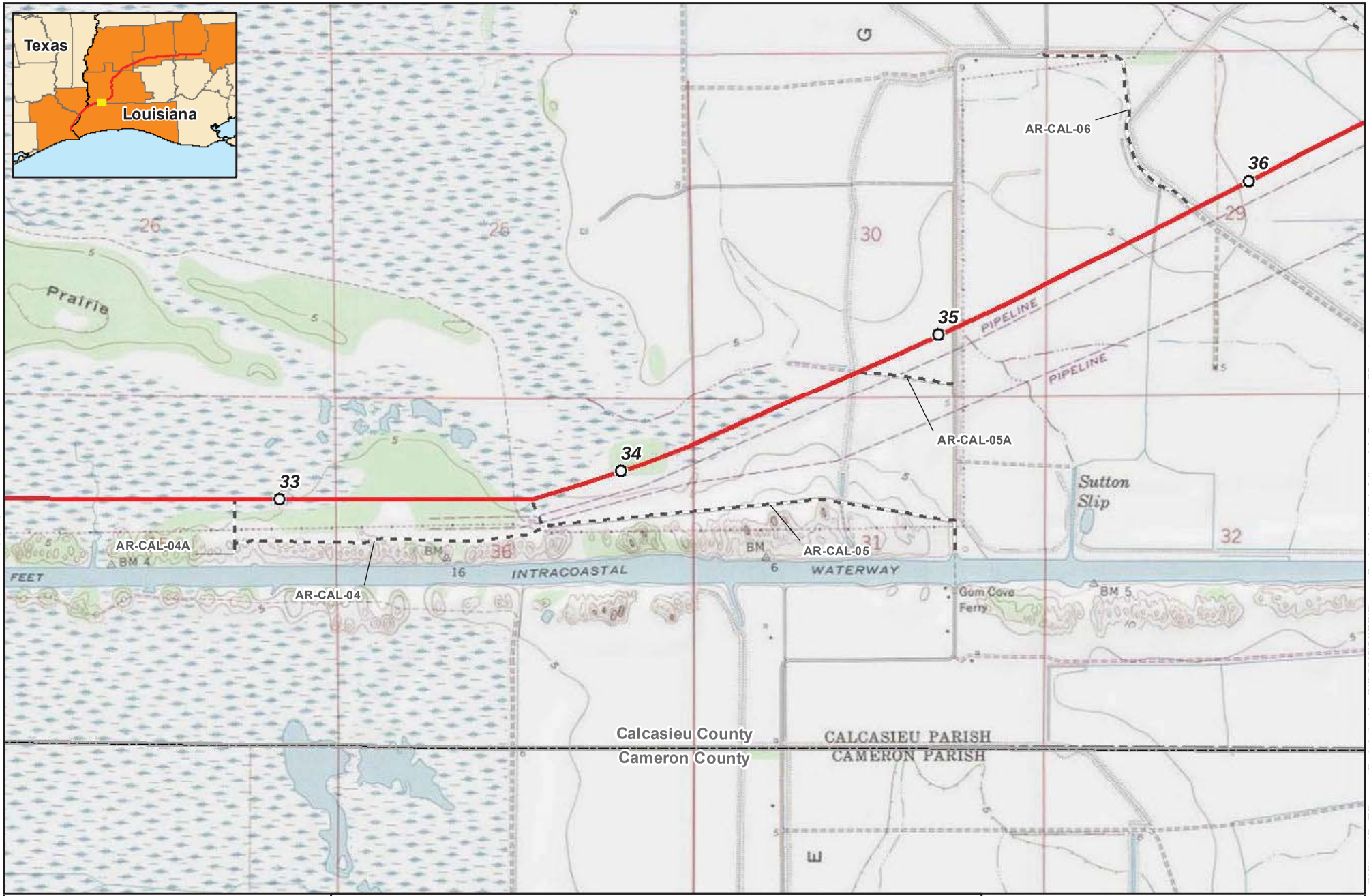

B-3-11

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

Page 11 of 38

Appendix B-3
Louisiana Connector Project
Route Map
Calcasieu Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

2545

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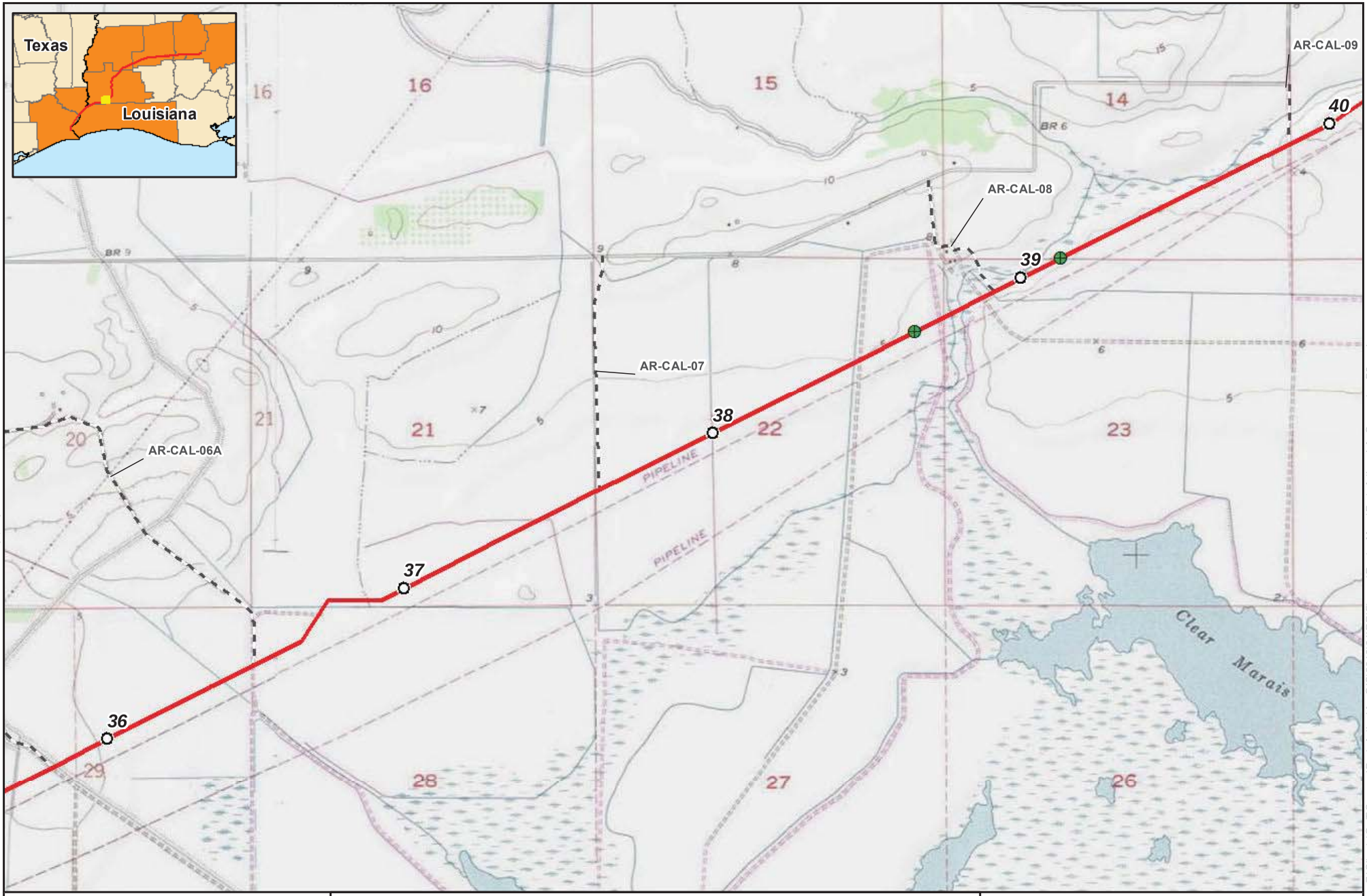

B-3-12

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

Page 12 of 38

Appendix B-3
Louisiana Connector Project
Route Map
Calcasieu Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

2545

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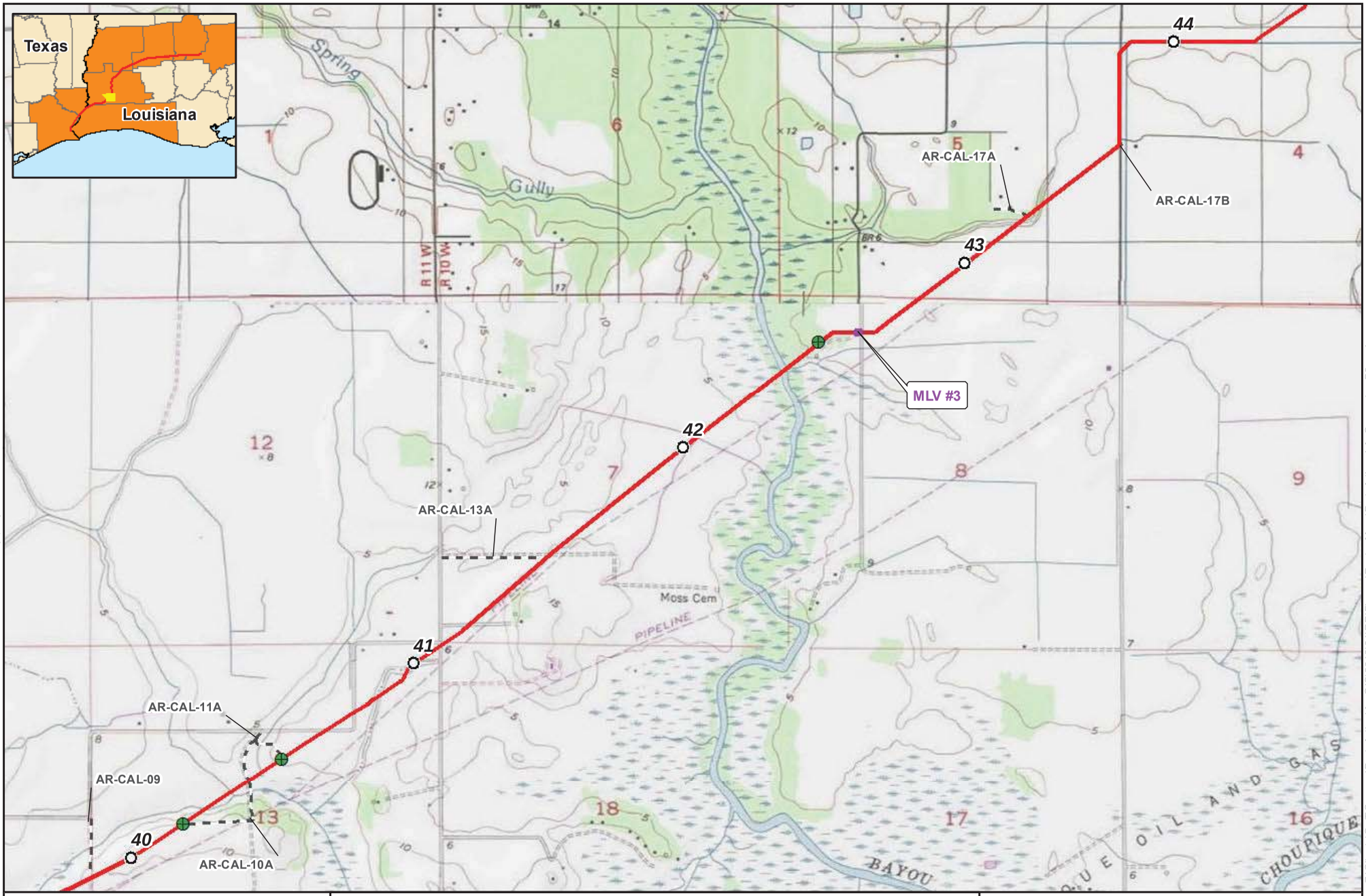

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

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Appendix B-3
Louisiana Connector Project
Route Map
Calcasieu Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

2546

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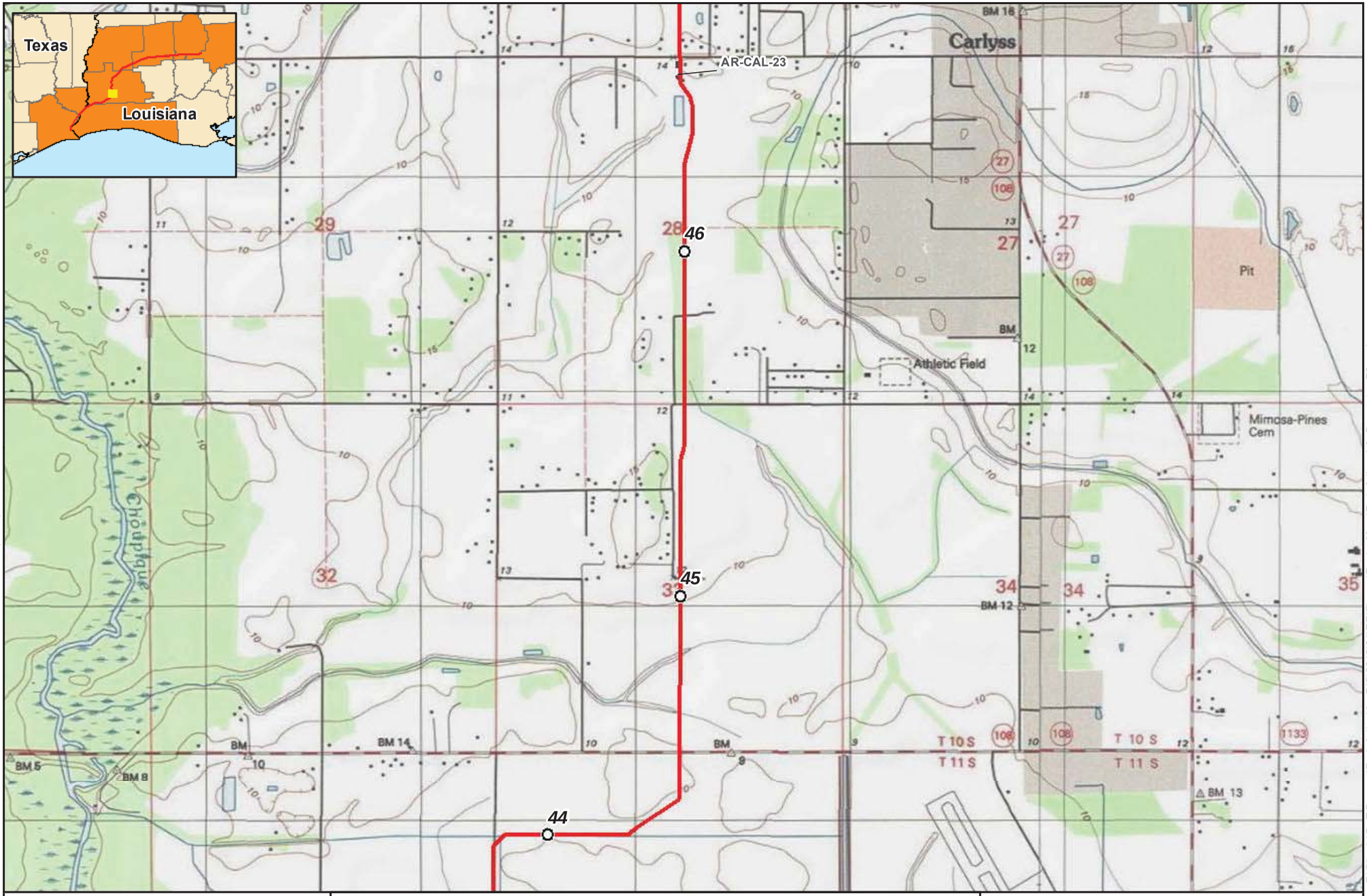

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

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Appendix B-3
Louisiana Connector Project
Route Map
Calcasieu Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

2545

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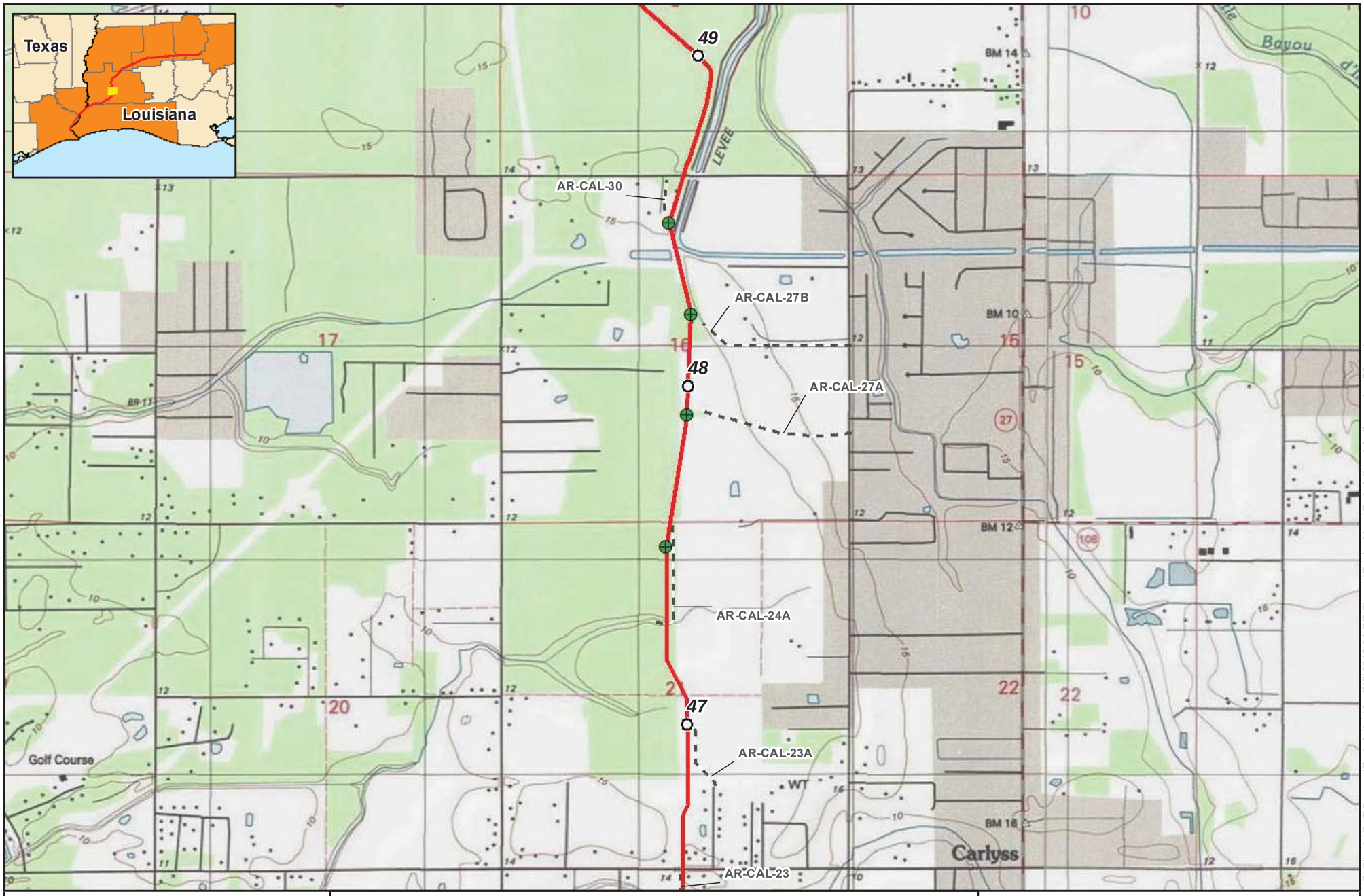

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

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Appendix B-3
Louisiana Connector Project
Route Map
Calcasieu Parish, Louisiana

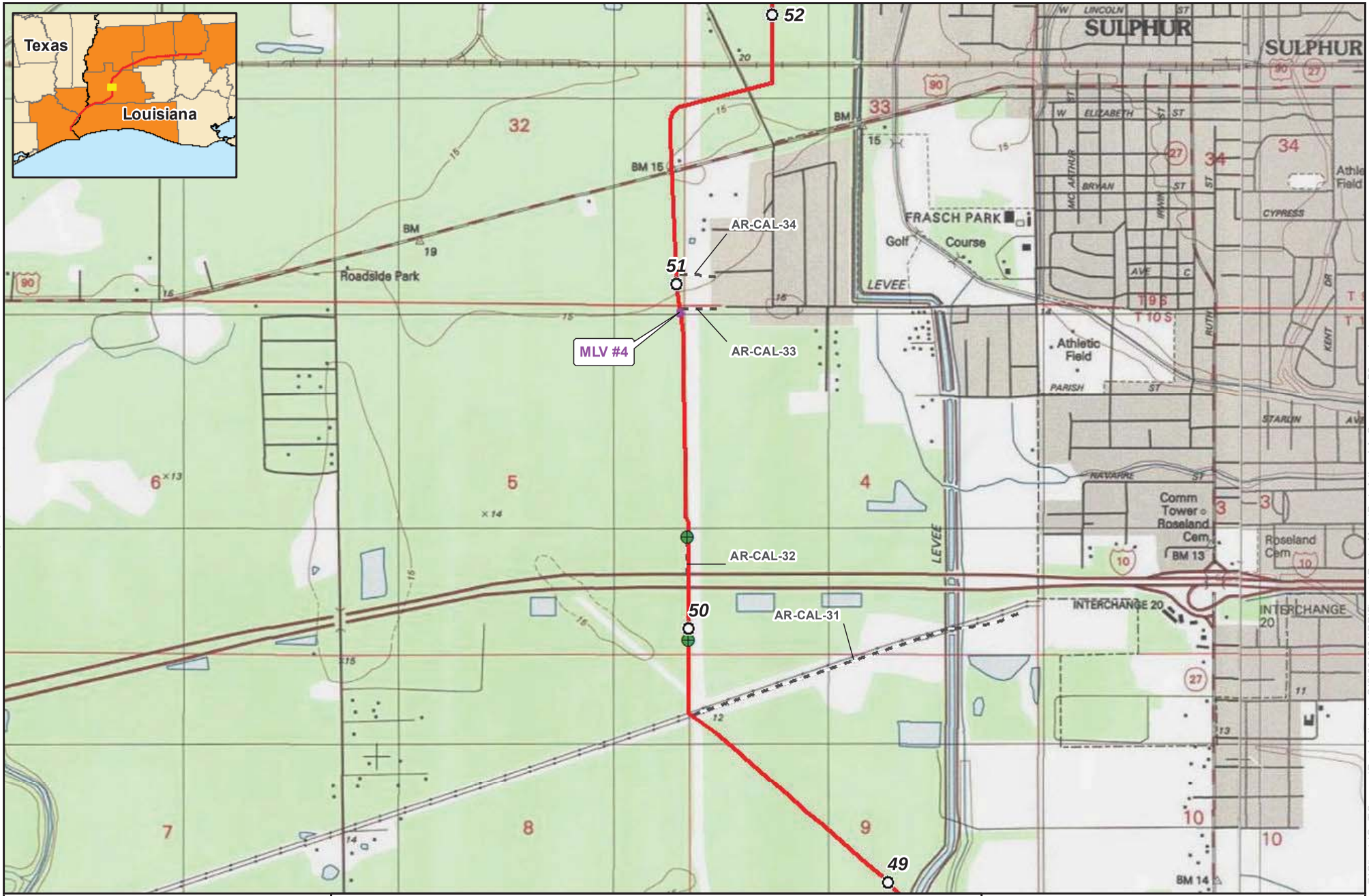
- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

25466

Source: Z:\Clients\Q_TiSempra\Port_ArthurArcGIS\2018\01\RR\Figures\Route_Maps\Port_Arthur_LA_Connector_B3.mxd

Date: (1/15/2018)

B-3-15



Appendix B-3
Louisiana Connector Project
Route Map
Calcasieu Parish, Louisiana

For Environmental Review Purposes Only

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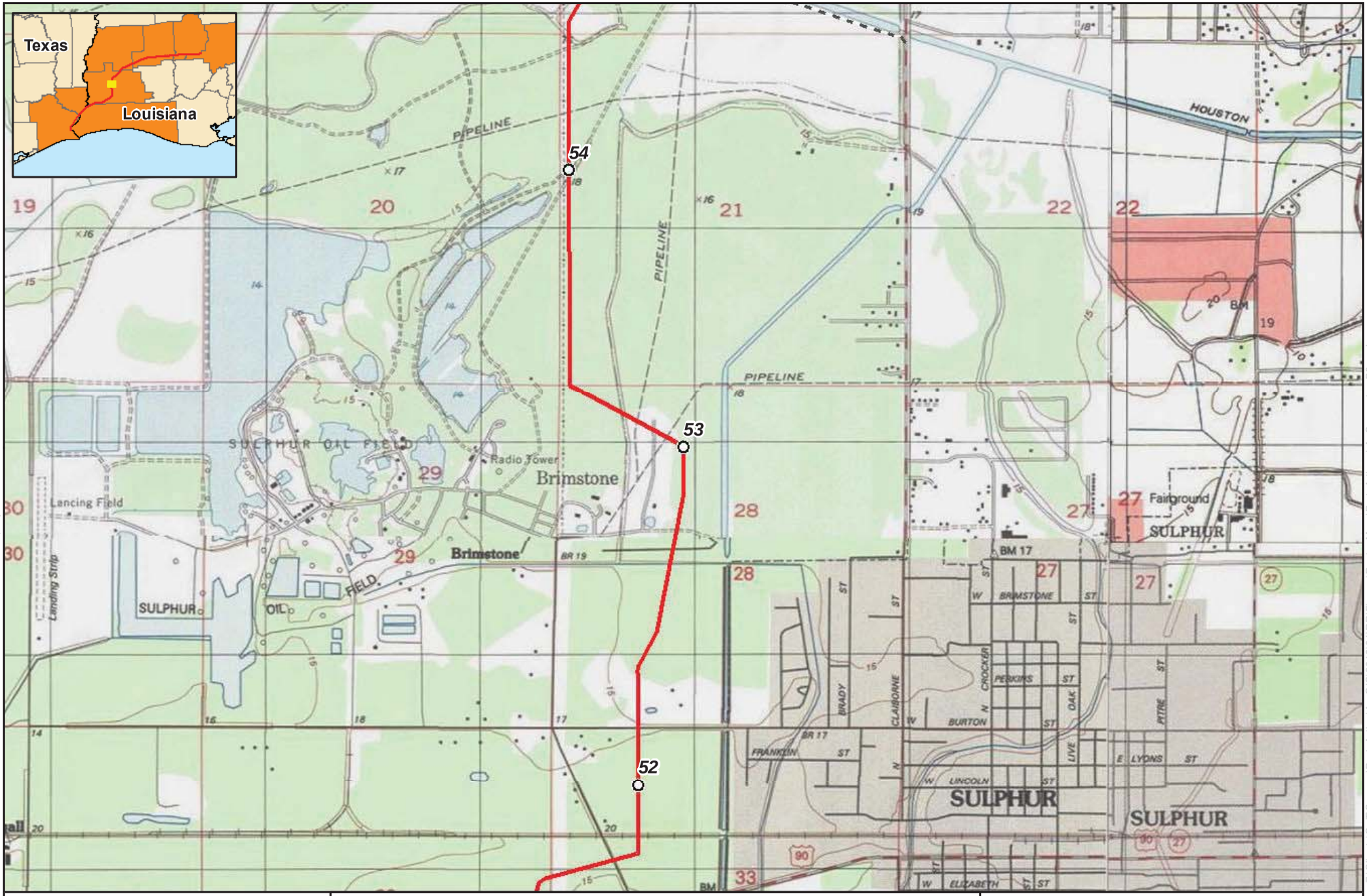

B-3-17

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

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Appendix B-3
Louisiana Connector Project
Route Map
Calcasieu Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

25556

Source: Z:\Clients\Q_T\Sempra\Port_Arthur\ArcGIS\2018\01\RR\Figures\Route_Maps\Port_Arthur_LA_Connector_B3.mxd

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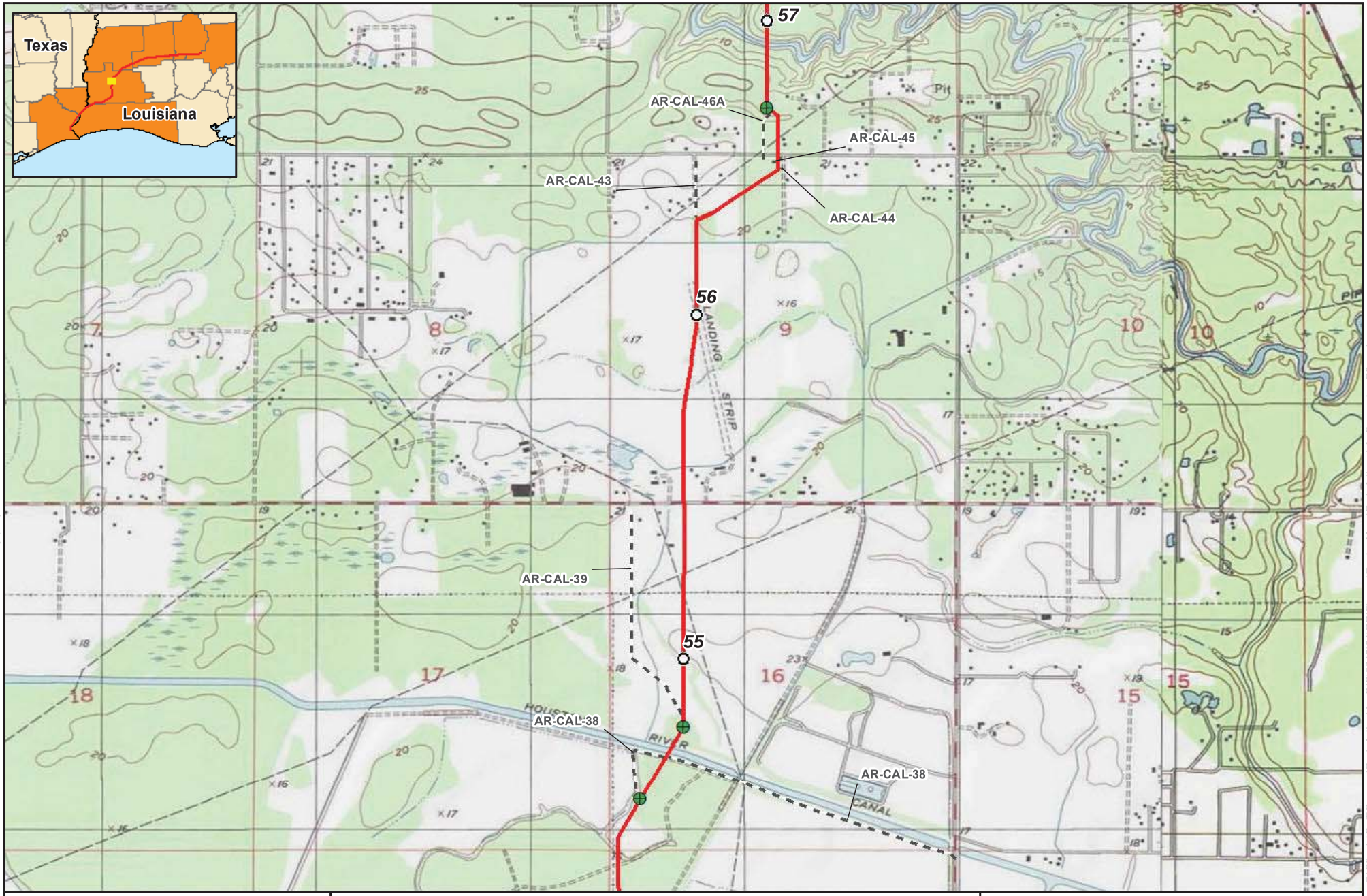

B-3-18

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

Page 18 of 38

Appendix B-3
Louisiana Connector Project
Route Map
Calcasieu Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

255

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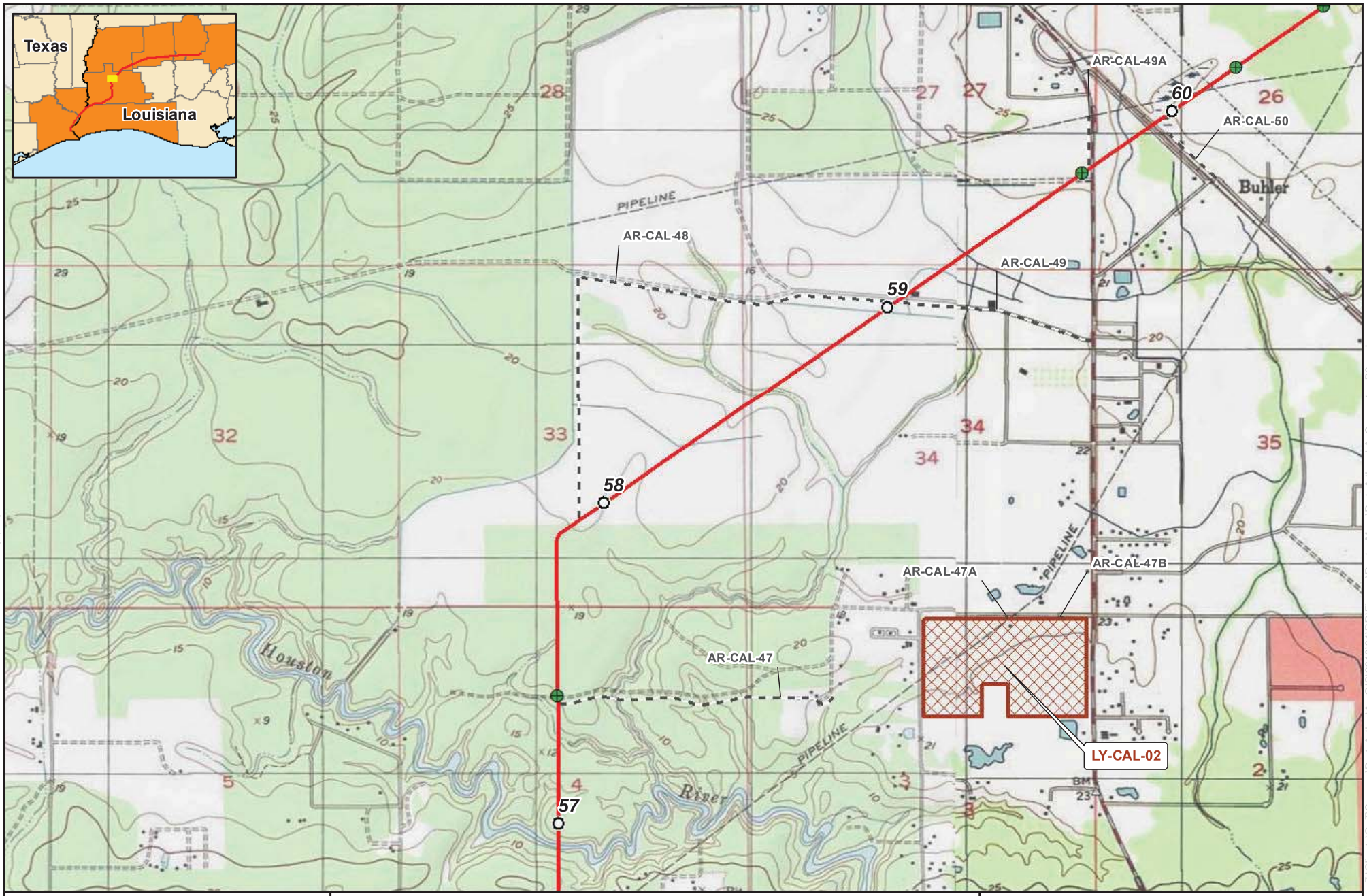
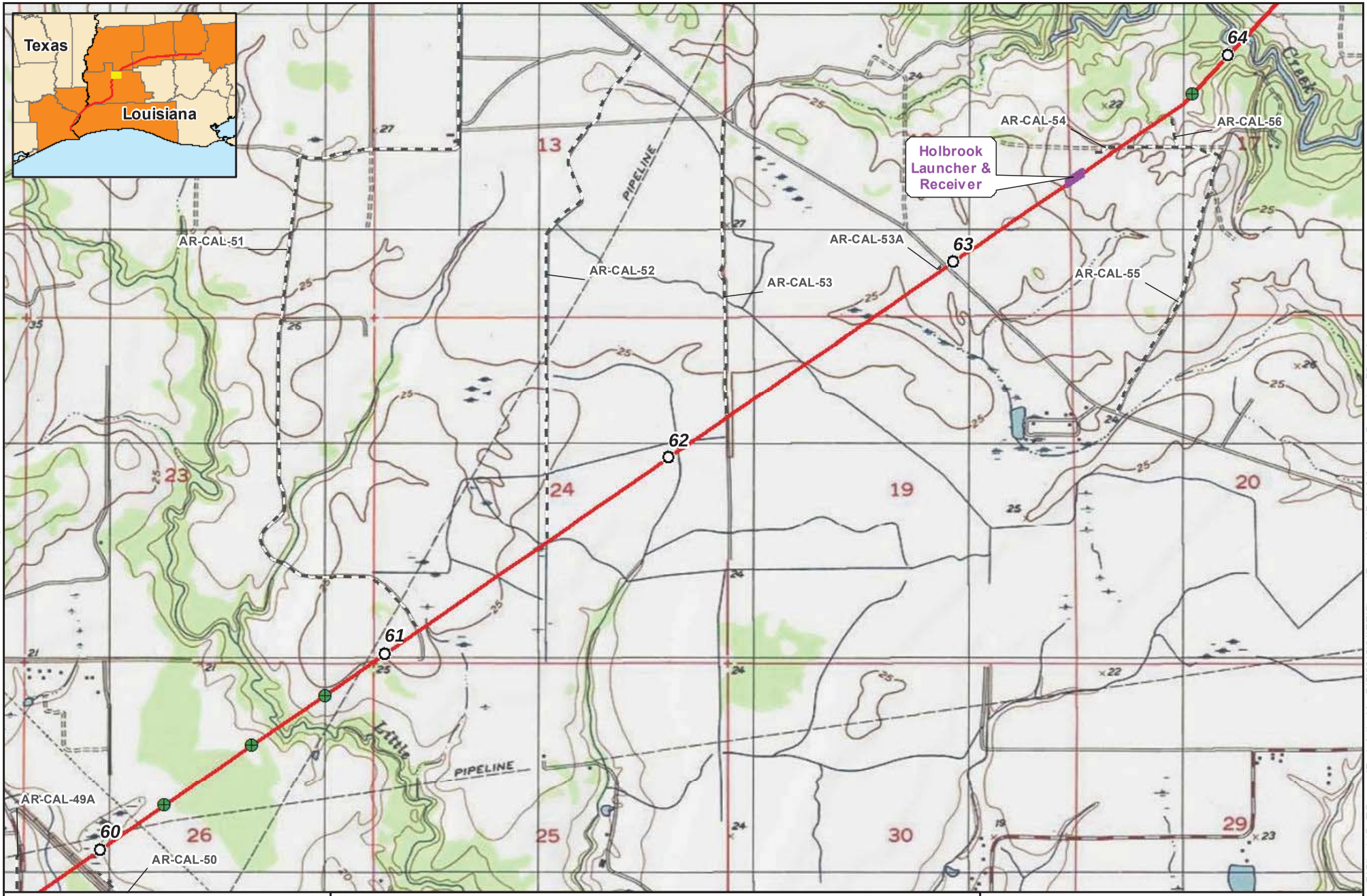


Appendix B-3
Louisiana Connector Project
Route Map
Calcasieu Parish, Louisiana

For Environmental Review Purposes Only



B-3-20

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

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Appendix B-3

Louisiana Connector Project

Route Map

Calcasieu Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

25557

Source: Z:\Clients\Q_T\Sempra\Port_Arthur\ArcGIS\20180101RR\Figures\Route_Maps\Port_Arthur_LA_Connector_B3.mxd

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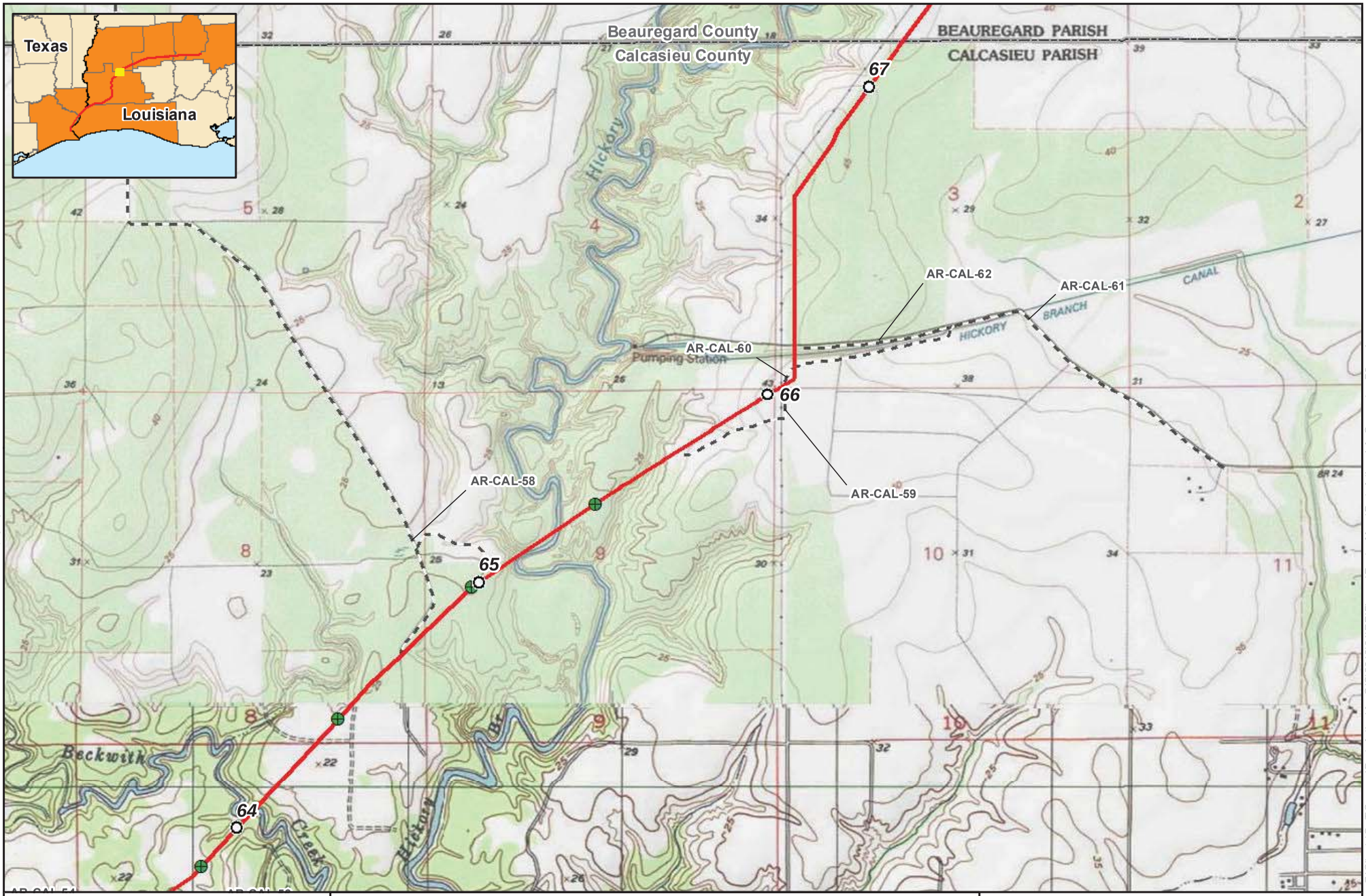

Appendix B-3
Louisiana Connector Project
Route Map
Calcasieu Parish, Louisiana

For Environmental Review Purposes Only

Source: Z:\Clients\Q_TISempra\Port_Arthur\ArcGIS\2018\01\RR\Figures\Route_Maps\Port_Arthur_LA_Connector_B3.mxd

Date: (1/15/2018)



B-3-22

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

Appendix B-3

Louisiana Connector Project

Route Map

Beauregard Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

25555

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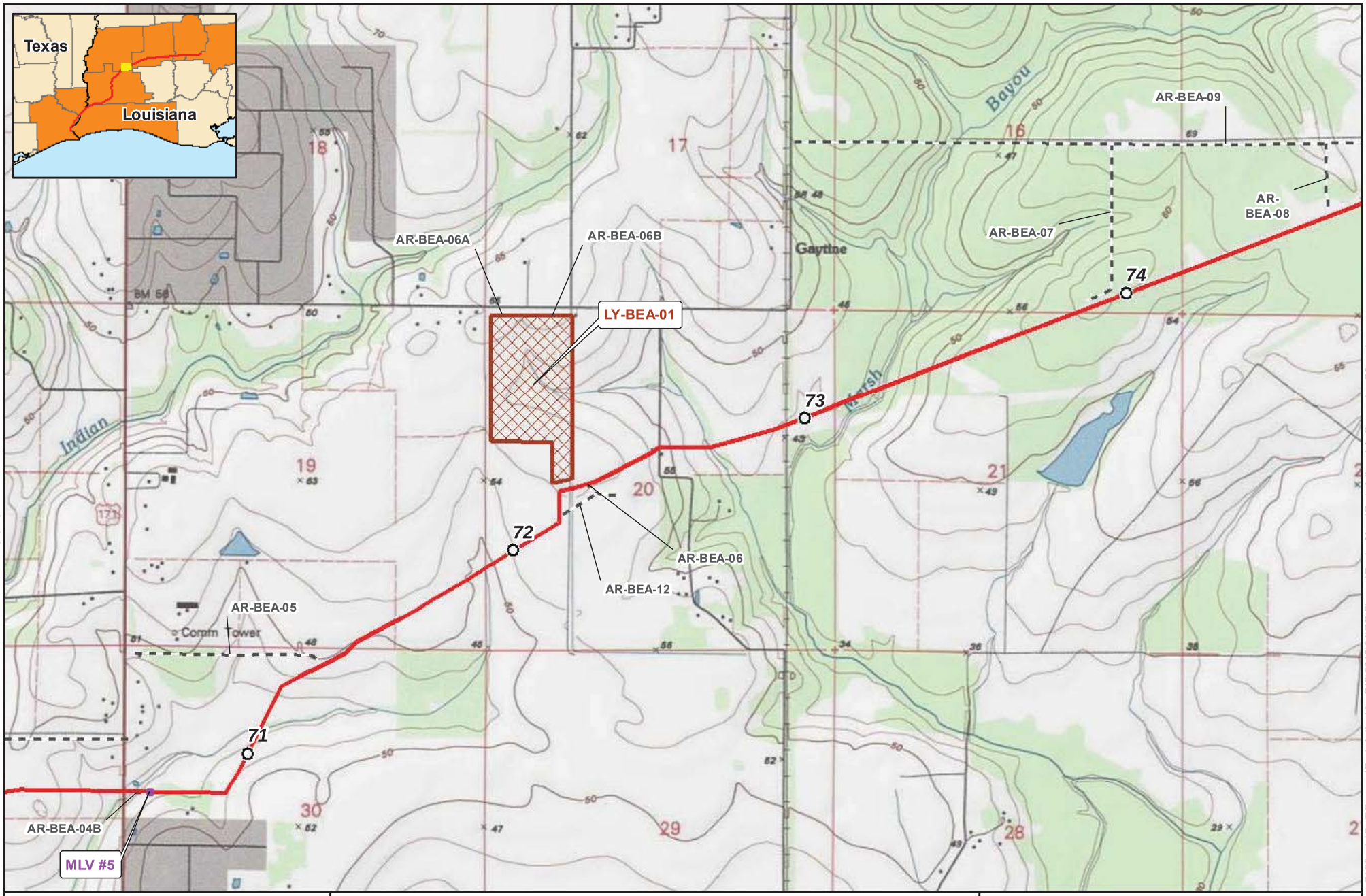

B-3-23

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

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Appendix B-3
Louisiana Connector Project
Route Map
Beauregard Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

2556

Source: Z:\Clients\Q_T\Sempra\Port_Arthur\ArcGIS\20180101\RR\Figures\Route_Maps\Port_Arthur_LA_Connector_B3.mxd

Date: (1/15/2018)



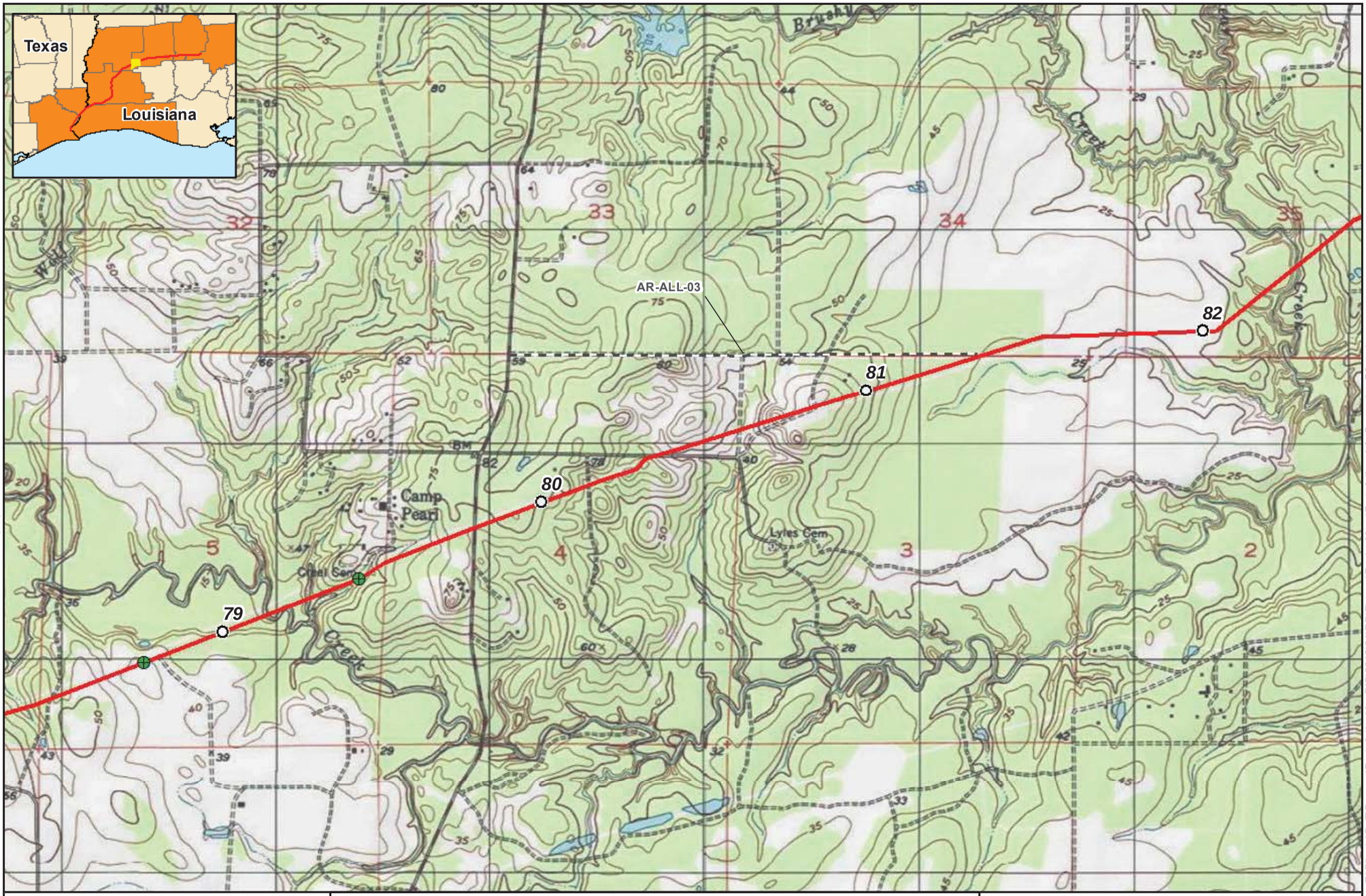
Appendix B-3
Louisiana Connector Project
Route Map
Beauregard and Allen Parishes, Louisiana

For Environmental Review Purposes Only

Source: Z:\Clients\Q_T\Sempra\Port_Arthur\ArcGIS\2018\01\RR\Figures\Route_Maps\Port_Arthur_LA_Connector_B3.mxd

Date: (1/15/2018)

2557



0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

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Appendix B-3
Louisiana Connector Project
Route Map
Allen Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

25556

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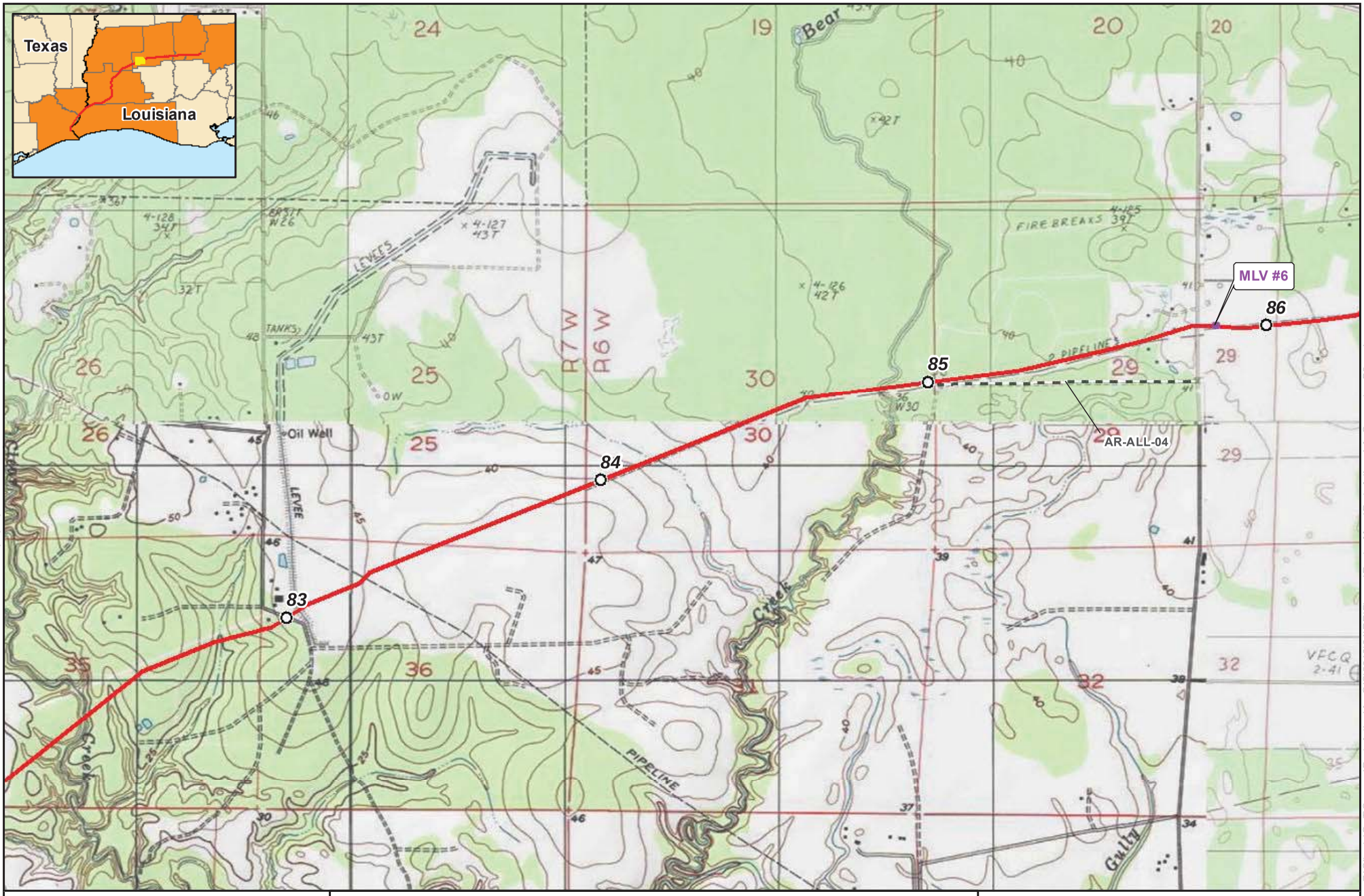
B-3-25



0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

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Appendix B-3
Louisiana Connector Project
Route Map
Allen Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

2559

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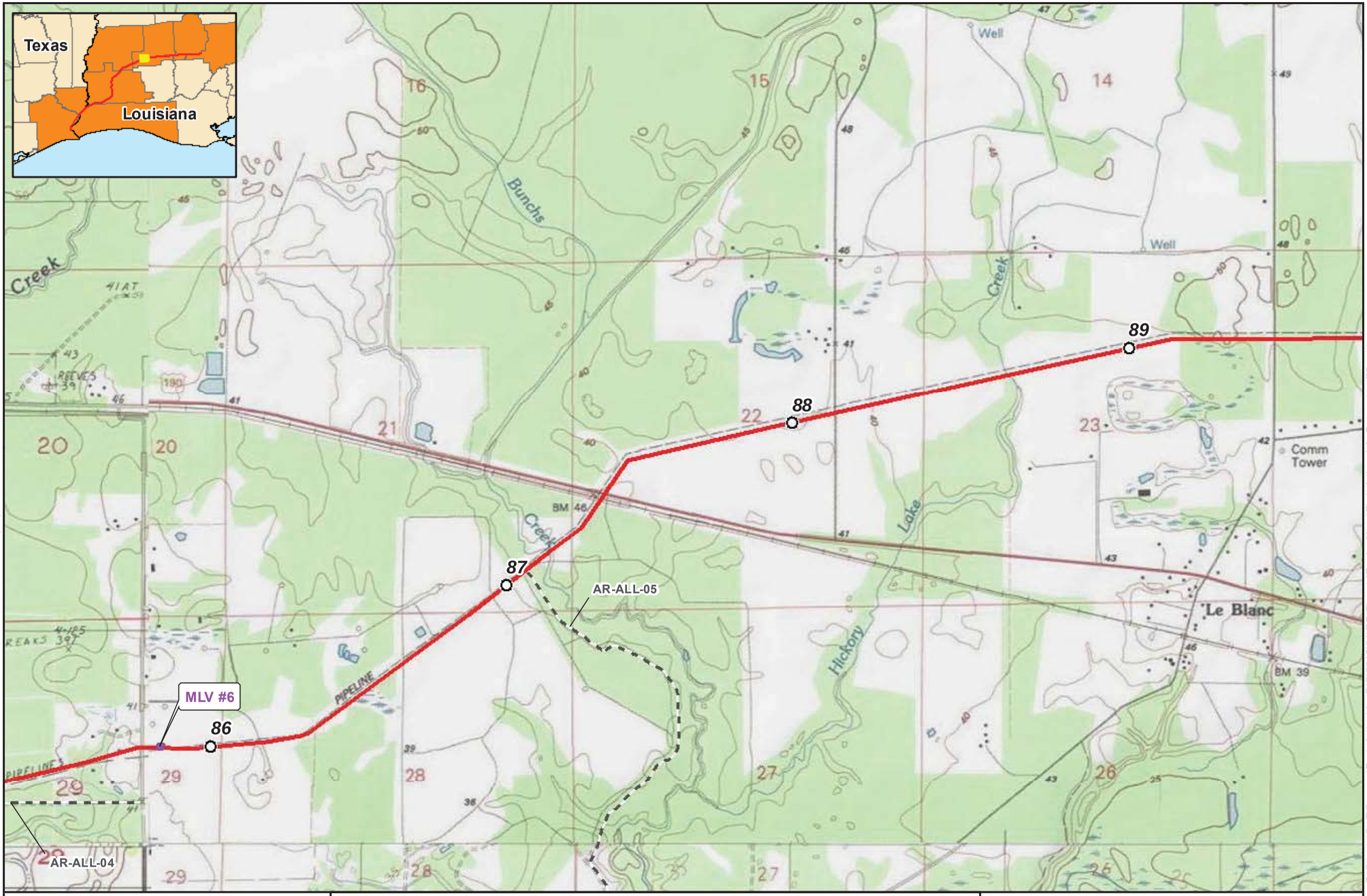

0 1,000 2,000 Feet

1 inch = 2,000 feet

For Environmental Review Purposes Only

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Appendix B-3
Louisiana Connector Project
Route Map
Allen Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

25606

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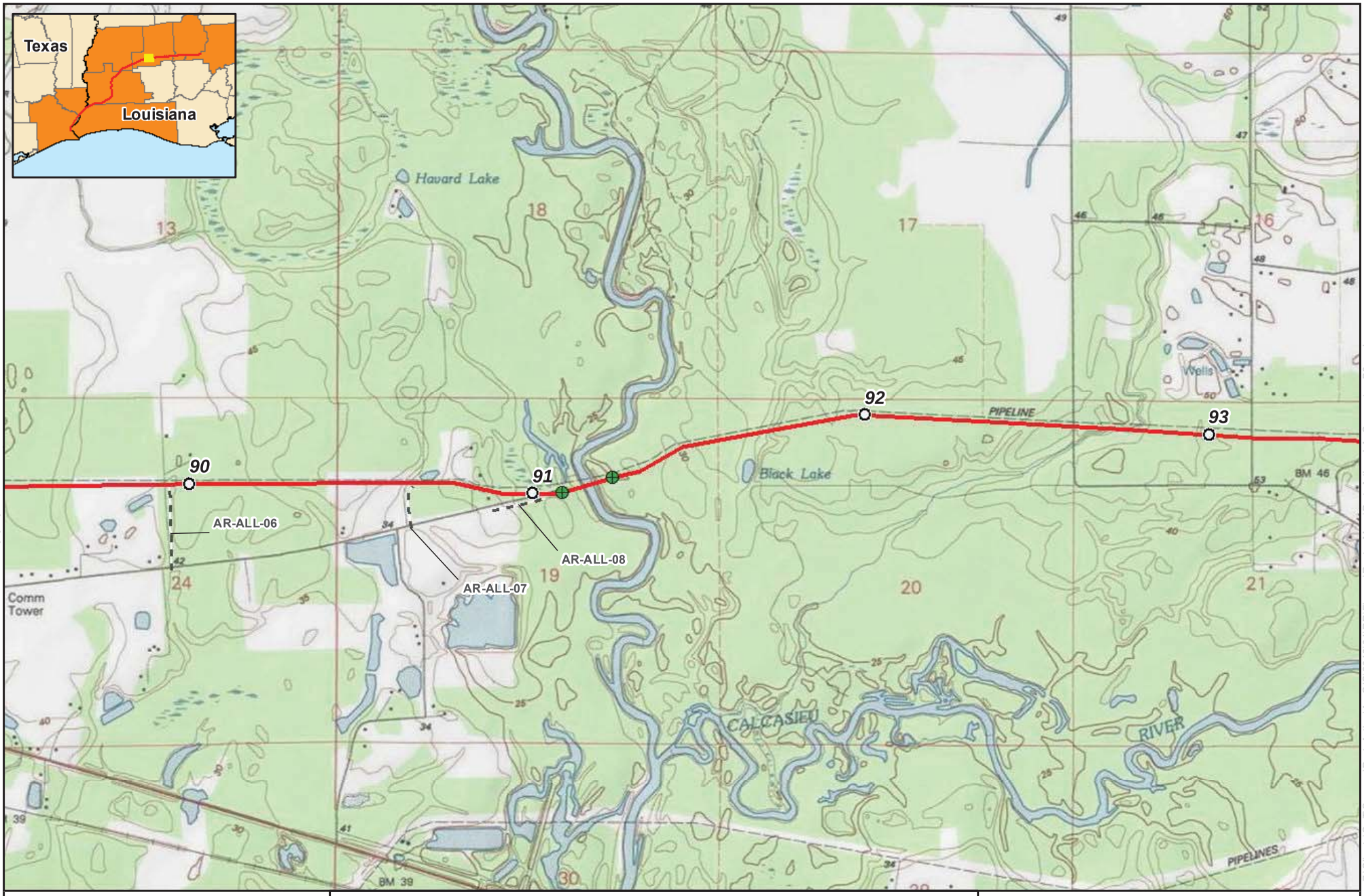

B-3-28

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

Page 28 of 38

Appendix B-3
Louisiana Connector Project
Route Map
Allen Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

2567

Source: Z:\Clients\Q_T\Sempra\Port_Arthur\ArcGIS\2018101\RR\Figures\Route_Maps\Port_Arthur_LA_Connector_B3.mxd

Date: (1/15/2018)



0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

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Appendix B-3
Louisiana Connector Project
Route Map
Allen Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

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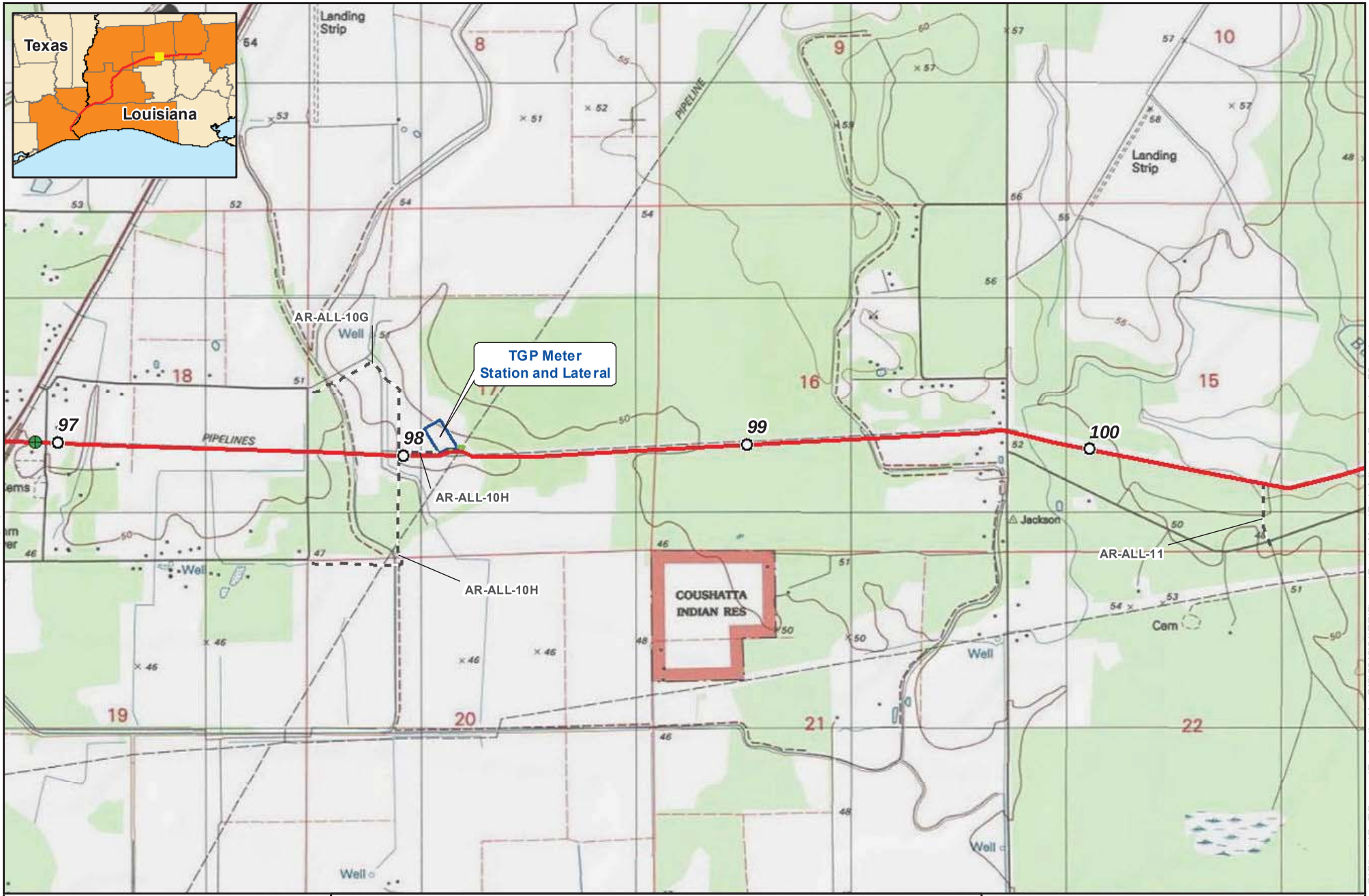

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

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Appendix B-3

Louisiana Connector Project

Route Map

Allen Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

25627

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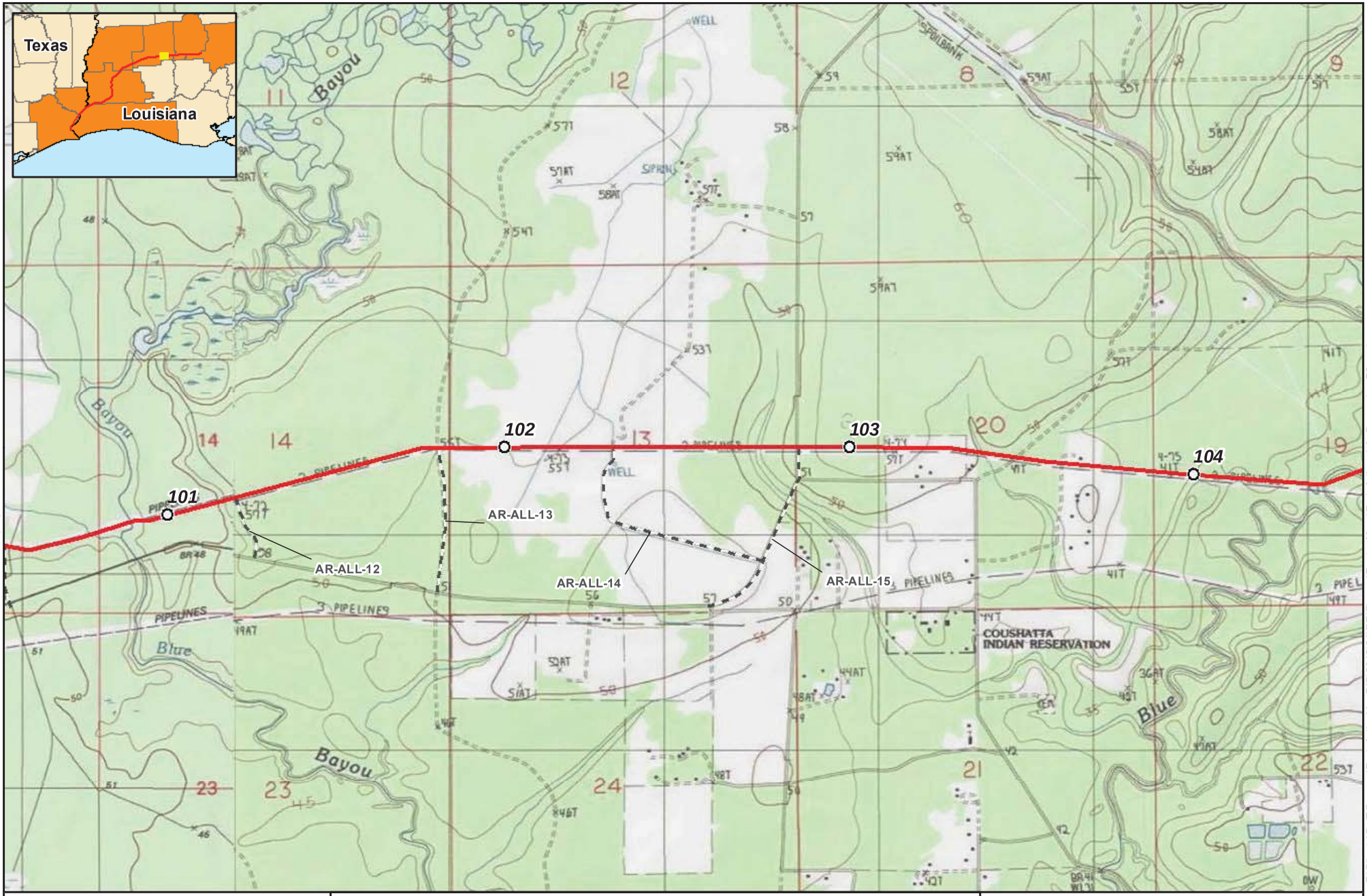

B-3-31

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

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Appendix B-3
Louisiana Connector Project
Route Map
Allen Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

25645

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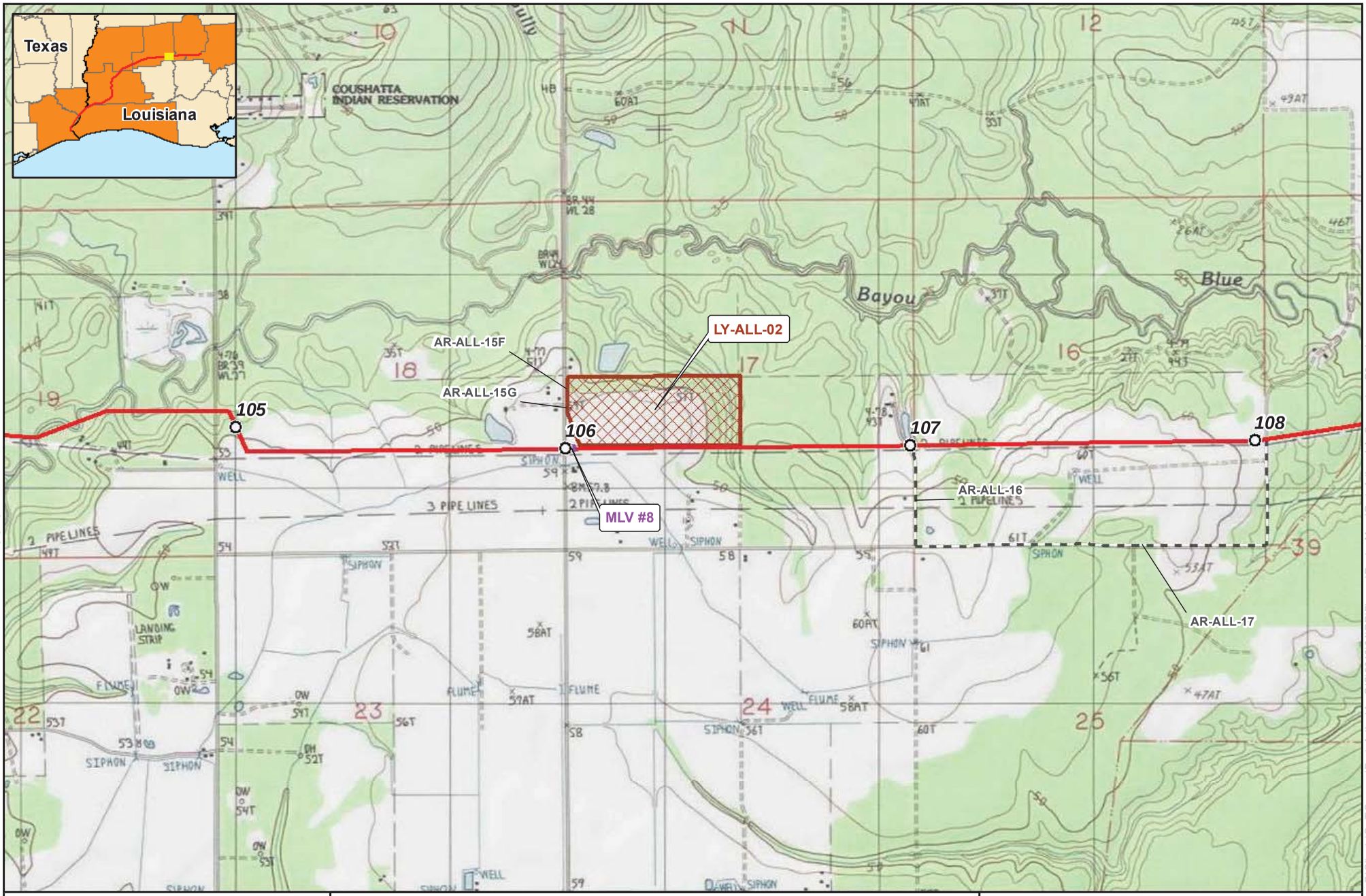

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

Appendix B-3
Louisiana Connector Project
Route Map
Allen Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

25625

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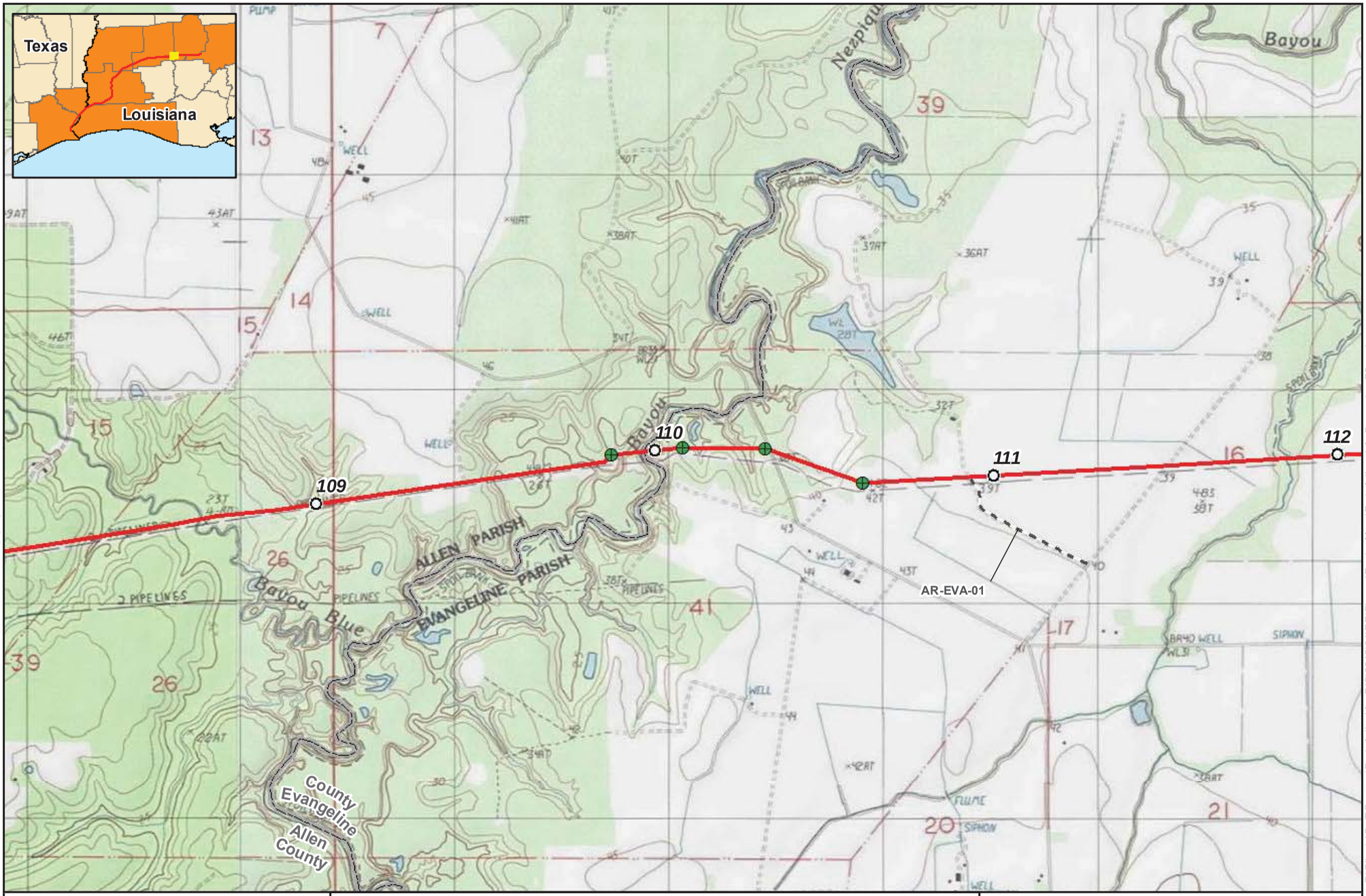

B-3-33

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

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Appendix B-3

Louisiana Connector Project

Route Map

Allen and Evangeline Parishes, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

25666

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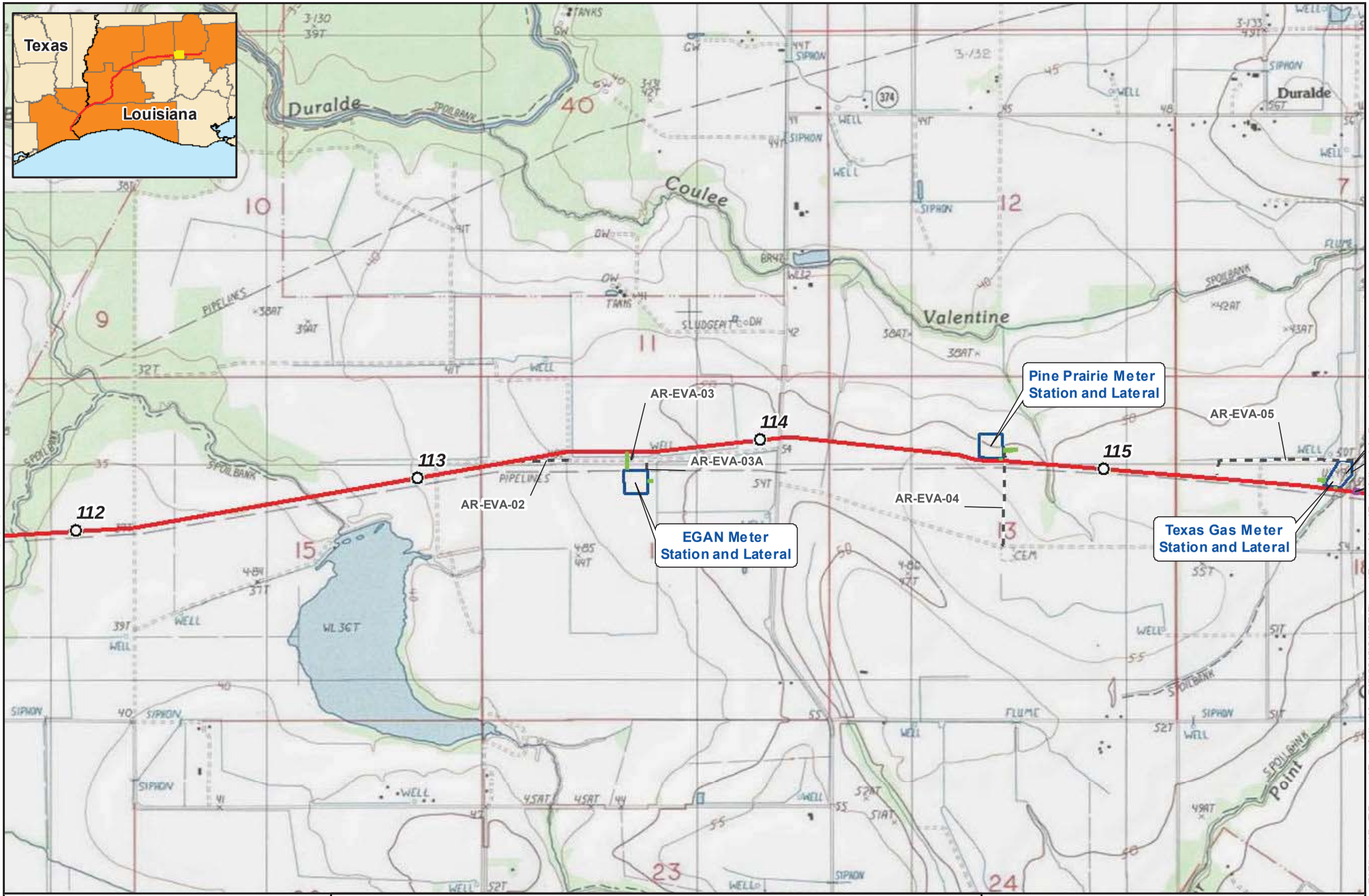

Appendix B-3
Louisiana Connector Project
Route Map
Evangeline Parish, Louisiana

For Environmental Review Purposes Only

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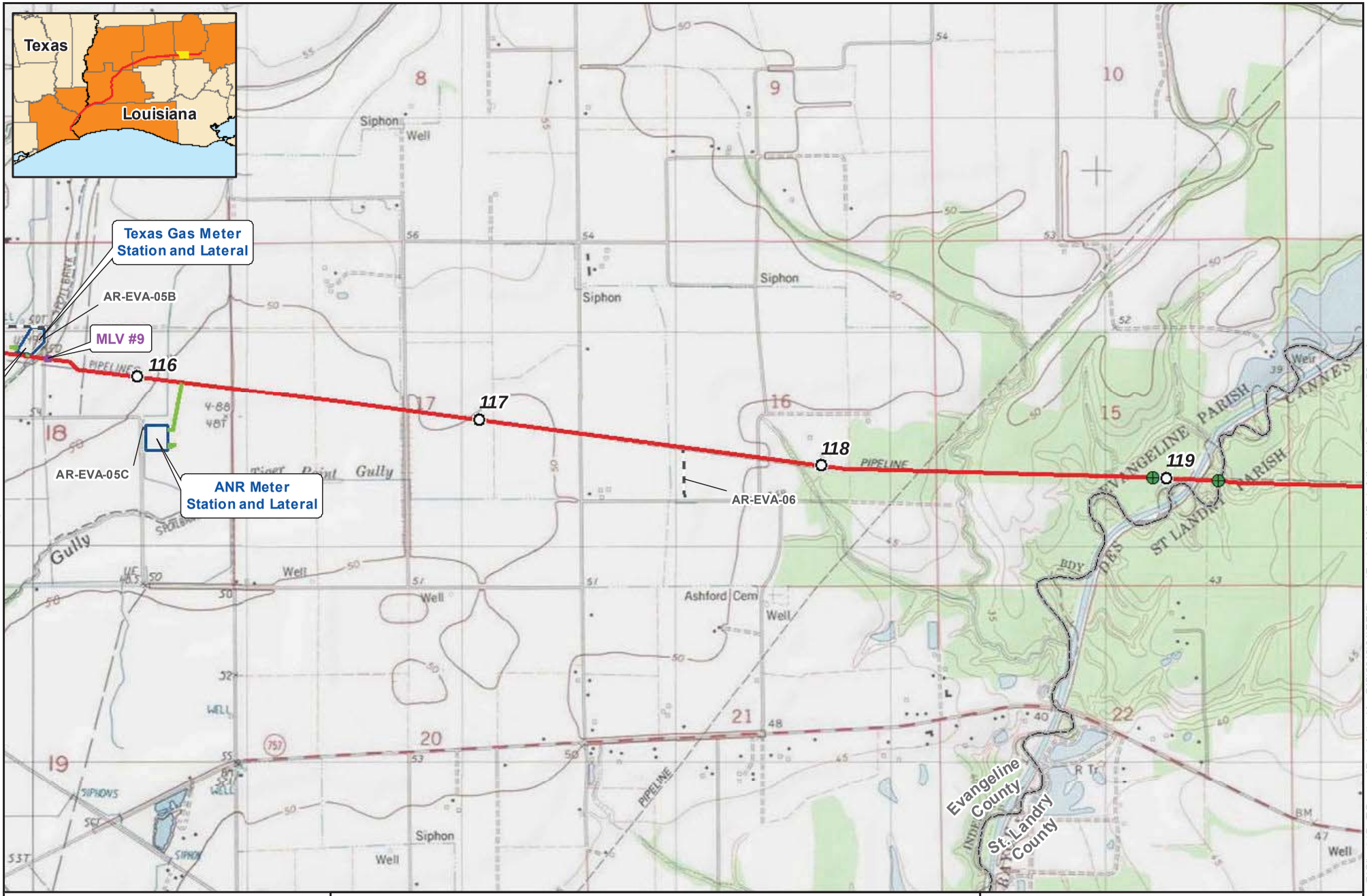

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

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Appendix B-3

Louisiana Connector Project

Route Map

Evangeline Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

25626

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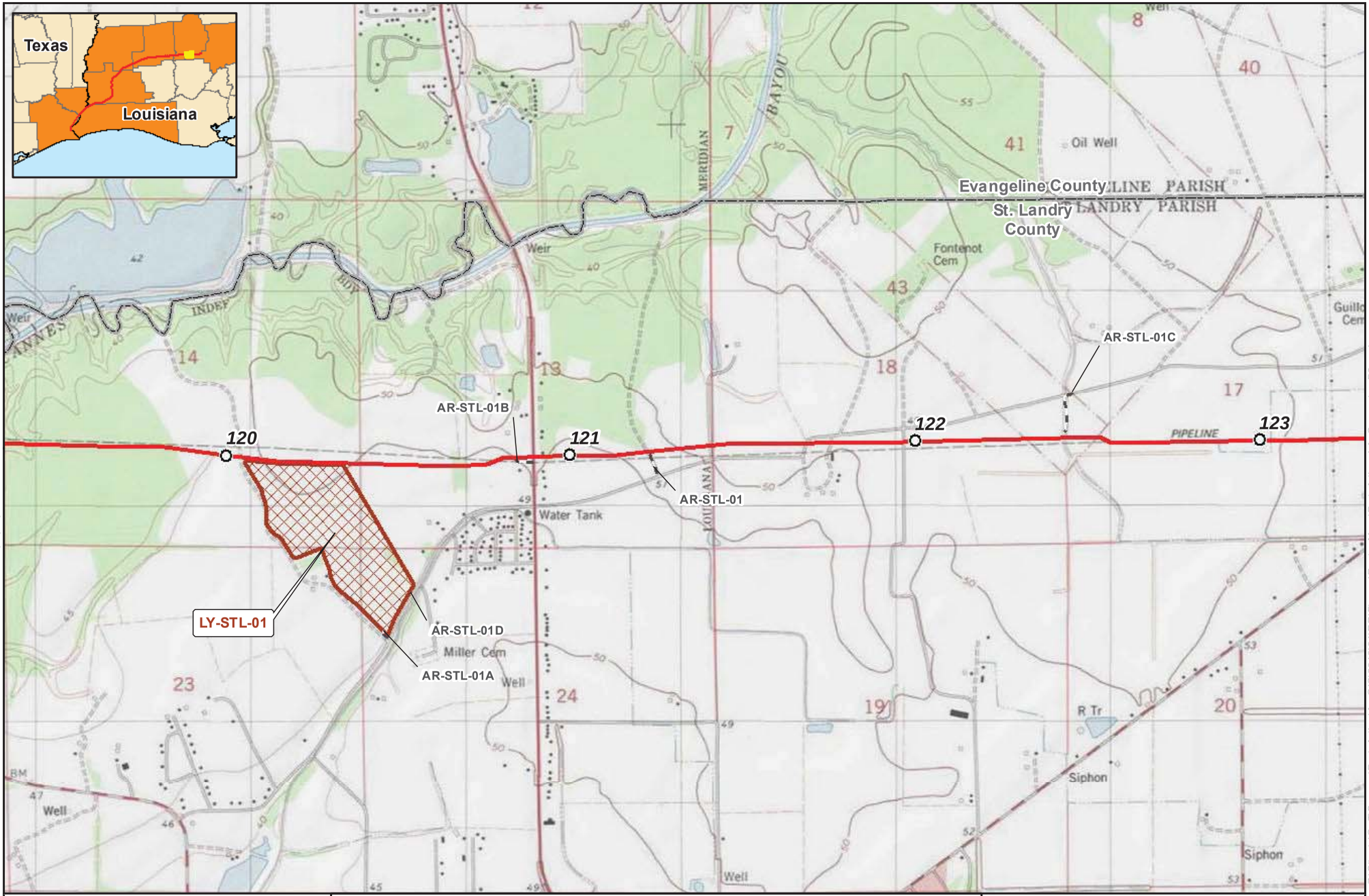
Date: (1/15/2018)



0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

For Environmental Review Purposes Only

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Appendix B-3
Louisiana Connector Project
Route Map
St. Landry Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

2569

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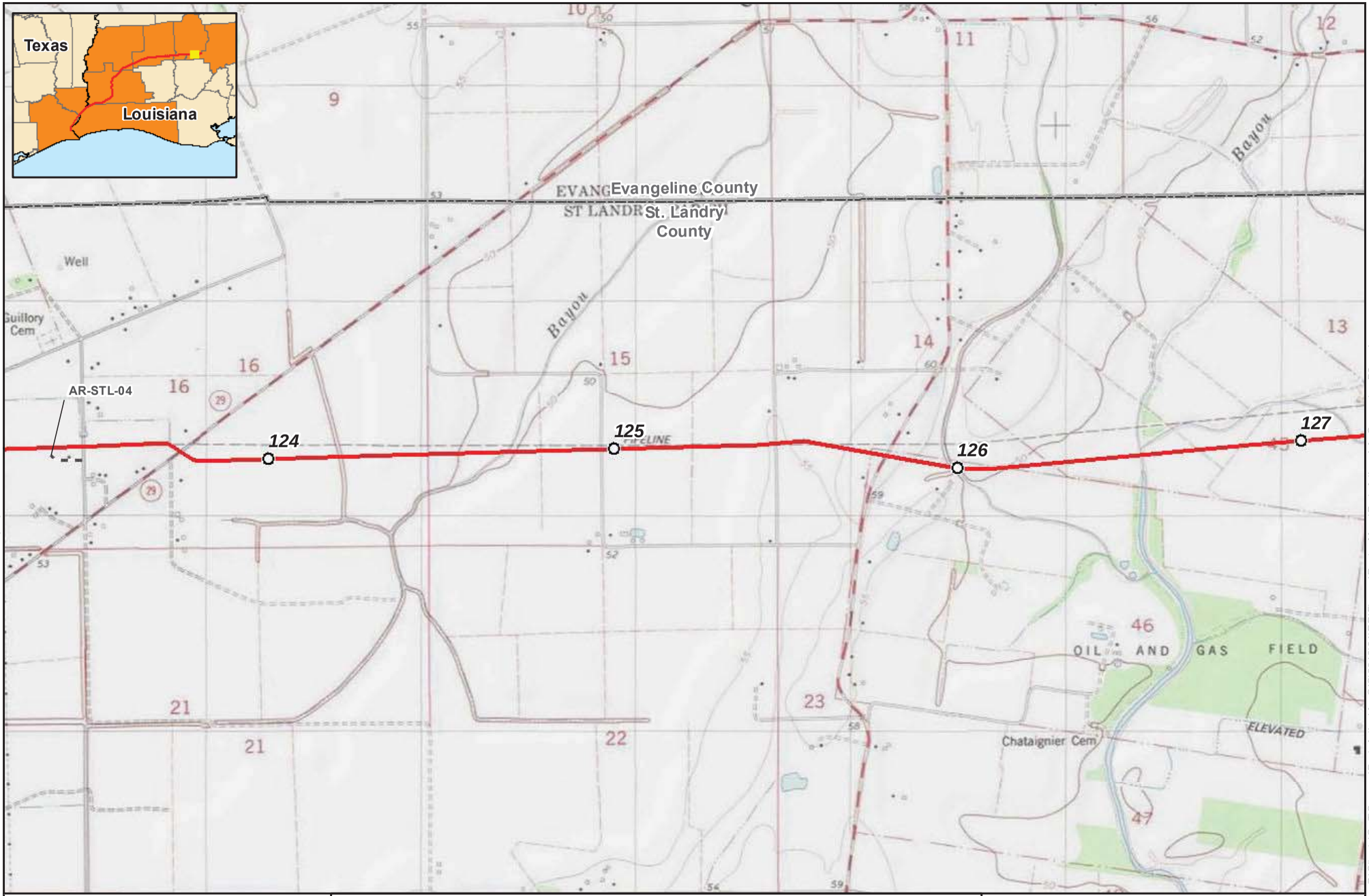
Date: (1/15/2018)

B-3-36



B-3-37

0 1,000 2,000 Feet

1 inch = 2,000 feet

N W E S

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Appendix B-3
Louisiana Connector Project
Route Map
St. Landry Parish, Louisiana

- Milepost
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2576

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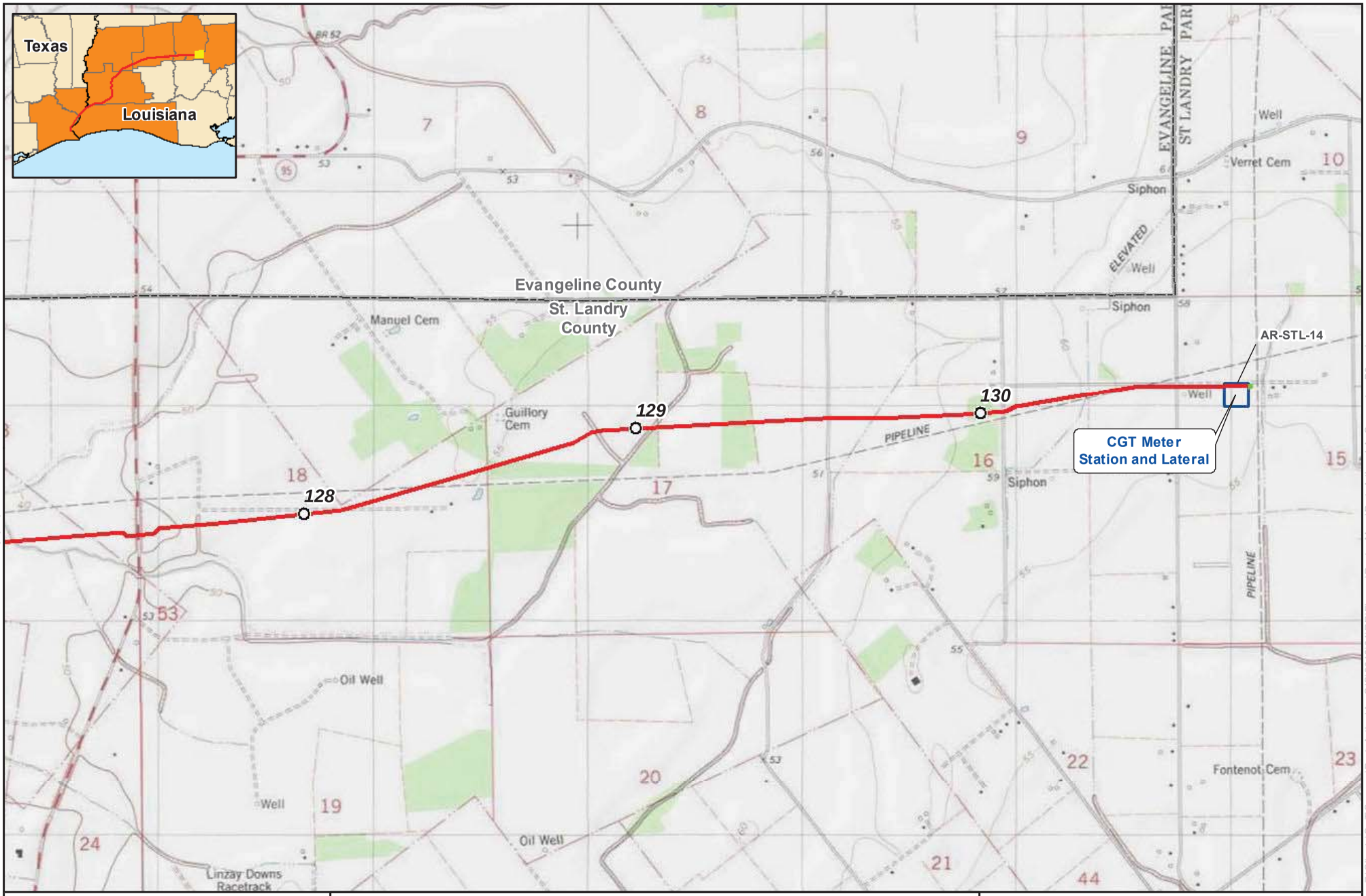

Appendix B-3
Louisiana Connector Project
Route Map
St. Landry Parish, Louisiana

- Milepost
- Proposed HDD Entry/Exit
- Proposed Pipeline
- Proposed Lateral
- Proposed Access Road
- Proposed Valve
- Proposed Compressor Station
- Proposed Contractor Yard
- Proposed Meter Station
- County Boundary

For Environmental Review Purposes Only

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Date: (1/15/2018)

APPENDIX C

PIPELINE CONSTRUCTION RIGHT-OF-WAY WIDTHS FOR THE TEXAS CONNECTOR PROJECT

APPENDIX C

Pipeline Construction Right-of-Way Widths for the Texas Connector Project

Pipeline Milepost Range	Proposed Construction Right-of-way Width	Conditions or Construction Method
Northern Pipeline		
0.0 – 1.5	125 feet	Saturated wetlands
1.5 – 2.4	0 feet	HDD crossing
2.4 – 4.1	125 feet	Saturated wetlands
4.1 – 6.2	0 feet	HDD crossing
6.2 – 8.3	125 feet	Saturated wetlands
8.3 – 8.9	0 feet	HDD crossing
8.9 – 10.0	125 feet	Saturated wetlands
10.0 – 10.9	0 feet	HDD crossing
10.9 – 11.6	125 feet	Saturated wetlands
11.6 – 12.2	0 feet	HDD crossing
12.2 – 12.4	100 feet	Non-saturated wetlands
12.4 – 12.7	125 feet	Upland
12.7 – 12.8	100 feet	Non-saturated wetlands
12.7 – 13.0	125 feet	Upland
13.0 – 13.2	0 feet	HDD crossing
13.2 – 14.2	125 feet	Upland and non-saturated wetlands
14.2 – 14.4	0 feet	HDD crossing
14.4 – 15.9	125 feet	Upland and non-saturated wetlands
15.9 – 16.7	100 feet	Upland and non-saturated wetlands
16.7 – 16.7	125 feet	Upland
16.7 – 16.9	100 feet	Upland and non-saturated wetlands
16.9 – 17.2	125 feet	Upland and non-saturated wetlands
17.2 – 17.3	100 feet	Upland and non-saturated wetlands
17.3 – 17.6	125 feet	Upland and non-saturated wetlands
17.6 – 18.1	0 feet	HDD crossing
18.1 – 18.2	125 feet	Upland and non-saturated wetlands
18.2 – 18.5	0 feet	HDD crossing
18.5 – 18.6	125 feet	Upland and non-saturated wetlands
18.6 – 18.9	0 feet	HDD crossing
18.9 – 19.1	125 feet	Upland and non-saturated wetlands
19.1 – 19.3	100 feet	Upland and non-saturated wetlands
19.3 – 19.4	125 feet	Upland and non-saturated wetlands
19.4 – 19.5	100 feet	Upland and non-saturated wetlands
19.5 – 19.6	125 feet	Upland and non-saturated wetlands
19.6 – 20.2	0 feet	HDD crossing
20.2 – 20.3	125 feet	Upland and non-saturated wetlands
20.3 – 20.7	0 feet	HDD crossing
20.7 – 20.8	125 feet	Upland and non-saturated wetlands
20.8 – 21.3	100 feet	Upland and non-saturated wetlands
21.3 – 21.5	125 feet	Upland and non-saturated wetlands
21.5 – 21.5	100 feet	Upland and non-saturated wetlands
21.5 – 21.6	125 feet	Upland and non-saturated wetlands
21.6 – 22.4	0 feet	HDD crossing
22.4 – 22.5	125 feet	Upland
22.5 – 22.6	100 feet	Upland and non-saturated wetlands
22.6 – 22.9	125 feet	Upland and non-saturated wetlands
22.9 – 22.9	100 feet	Upland and non-saturated wetlands
22.9 – 23.7	0 feet	HDD crossing

APPENDIX C (cont'd)

Pipeline Construction Right-of-Way Widths for the Texas Connector Project

Pipeline Milepost Range	Proposed Construction Right-of-way Width	Conditions or Construction Method
23.7 – 24.4	125 feet	Upland and saturated wetlands
24.4 – 24.4	100 feet	Upland and non-saturated wetlands
24.4 – 24.5	125 feet	Upland
24.5 – 24.5	100 feet	Upland and non-saturated wetlands
24.5 – 24.6	125 feet	Upland and non-saturated wetlands
24.6 – 25.2	0 feet	HDD crossing
25.2 – 26.6	125 feet	Upland
Southern Pipeline		
0.0 – 0.1	125 feet	Upland and saturated wetlands
0.1 – 1.0	0 feet	HDD crossing
1.0 – 2.2	125 feet	Upland and saturated wetlands
2.2 – 2.5	0 feet	HDD crossing
2.5 – 2.9	125 feet	Saturated wetlands
2.9 – 3.7	0 feet	HDD crossing
3.7 – 6.2	125 feet	Upland and saturated wetlands
7.0 – 7.2	125 feet	Upland
7.5 – 7.6	125 feet	Saturated wetlands
NGPL Lateral		
0.0 – 0.1	125 feet	Upland and saturated wetlands
KMLP Lateral		
0.0 – 0.2	125 feet	Saturated wetlands
GTS Lateral		
0.0 – 0.2	125 feet	Upland
0.2 – 0.5	100 feet	Upland and non-saturated wetlands
0.5 – 0.5	125 feet	Upland and non-saturated wetlands
0.5 – 0.8	0 feet	HDD crossing
0.8 – 0.8	125 feet	Upland
0.8 – 1.1	0 feet	HDD crossing
1.1 – 1.3	125 feet	Upland
HPL Lateral		
0.0 – 0.1	125 feet	Upland
TETCO Lateral		
0.0 – 0.1	125 feet	Upland
FGT Lateral		
0.0 – 0.3	125 feet	Upland and non-saturated wetland
0.3 – 0.3	0 feet	HDD crossing
0.3 – 0.3	125 feet	Upland
0.3 – 0.3	75 feet	Upland (avoids electric transmission pole)
0.3 – 0.5	125 feet	Upland
0.5 – 0.6	100 feet	Upland and non-saturated wetland
0.6 – 0.7	125 feet	Upland
0.7 – 0.8	100 feet	Upland and non-saturated wetland
0.8 – 0.9	125 feet	Upland and non-saturated wetland
0.9 – 1.2	0 feet	HDD crossing
1.2 – 1.3	125 feet	Upland and non-saturated wetland
1.3 – 1.4	100 feet	Upland and non-saturated wetland
1.4 – 1.7	125 feet	Upland
1.7 – 1.8	0 feet	HDD crossing
1.8 – 1.8	125 feet	Upland

APPENDIX D

ADDITIONAL TEMPORARY WORKSPACE FOR THE TEXAS CONNECTOR AND LOUISIANA CONECTOR PROJECTS

ADDITIONAL TEMPORARY WORKSPACE FOR THE TEXAS CONNECTOR PROJECT

APPENDIX D-1

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
Northern Pipeline						
28290	1.5	3.2	Intracoastal Waterway	Y	Y	Pull String
						Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28211	1.5	5.9	Intracoastal Waterway	Y	Y	Pull String
						Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28203	1.5	0.4	Intracoastal Waterway	Y	Y	Water Access
						Necessary to tie-in pipeline at a point of intersection (PI), after a long HDD across Intracoastal Waterway; additional spoil storage, assembly of pipe, parking, and through access for equipment and personnel. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28198	1.5	0.8	Intracoastal Waterway	Y	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28202	1.6	0.4	Intracoastal Waterway	Y	Y	Water Access
						Necessary to tie-in pipeline at a PI, after a long HDD across Intracoastal Waterway; spoil storage, assembly of pipe, parking, and through access for equipment and personnel. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28204	2.6	0.3	Taylor Bayou	Y	Y	Water Access
						Necessary to tie-in pipeline at a PI, after a long HDD across Taylor Bayou; spoil storage, assembly of pipe, parking, and through access for equipment and personnel. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
28199	2.7	1.8	Taylor Bayou	Y	Y	HDD Entry/Push Section
						Additional staging area and equipment needs for HDD entry: worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional staging area and equipment needs for push: staging the bore machine for the push construction, backhoe machine(s), and pipe material staging. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28244	4.1	0.7	Big Hill Reservoir	Y	Y	Water Access
						Necessary to tie-in pipeline at a PI, after a long HDD across Taylor Bayou; spoil storage, assembly of pipe, parking, and through access for equipment and personnel. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28243	4.1	0.8	Big Hill Reservoir	Y	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28200	5.2	2.0	Big Hill Reservoir	Y	Y	HDD Entry/Exit
						Additional staging area and equipment needs for HDD entry: worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional staging area and equipment needs for HDD exit: aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28205	5.2	0.7	Big Hill Reservoir	Y	Y	Water Access
						Necessary to tie-in pipeline at a PI, after a long HDD across JD Murphee and Big Hill Bayou; spoil storage, assembly of pipe, parking, and through access for equipment and personnel. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
28206	5.2	0.6	Big Hill Reservoir	Y	Y	HDD Entry/Exit
						Additional staging area and equipment needs for HDD entry: worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional staging area and equipment needs for HDD exit: aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28209	5.3	1.1	Big Hill Reservoir	Y	Y	HDD Entry/Exit
						Additional staging area and equipment needs for HDD entry: worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional staging area and equipment needs for HDD exit: aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28236	6.2	0.2	Unnamed stream	Y	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28208	6.2	0.5	Unnamed stream	Y	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28286	7.7	2.8	Unnamed road	Y	Y	Push Section
						Additional staging area and equipment needs includes staging the bore machine for the push construction, backhoe machine(s), and pipe material staging. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28155	7.8	0.2		Y	Y	Road

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
			Unnamed wetland			Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Wetland impacts required due to the road located on the North side of the pipeline. Moving the ATWS to the South side would not assist with the road crossing and is restricted by foreign pipelines and valve sites.
28201	7.9	0.1	Unnamed road	Y	Y	Road
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28241	8.2	0.2	State Hwy 73	Y	Y	PI/Pull String
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. ATWS is required on this portion due to the many construction activities taking place in the area. Shifting this ATWS to any other workable configuration would not reduce the wetland impacts.
28156	8.2	3.9	State Hwy 73	Y	Y	PI/Pull String
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The wetland impacts here are unavoidable since the pull-string must be adjacent to the other pipeline ATWS.
28289	8.3	1.9	State Hwy 73	Y	Y	HDD Exit/Access
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. Maintain through access for equipment and personnel. The HDD pad in this area was placed so that it would have the least impact on surrounding wetlands. The surrounding wetlands were unavoidable in the area.
28165	8.9	0.6	Unnamed road	Y	Y	HDD Entry/Push Section
						Additional staging area and equipment needs for HDD entry: worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional staging area and equipment needs for push: staging the bore machine for the push construction, backhoe machine(s), and pipe material staging.The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
28157	8.9	2.8	Unnamed road	Y	Y	HDD Entry/Push Section
						Additional staging area and equipment needs for HDD entry: worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional staging area and equipment needs for push: staging the bore machine for the push construction, backhoe machine(s), and pipe material staging. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28291	9.6	0.5	Unnamed wetland	Y	Y	Staging Area
						Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28166	10.0	0.8	Unnamed stream	Y	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28440	10.9	0.4	Unnamed wetland	Y	Y	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. A large canal and Texas Prairie Wetland Program seasonal wetlands to the south, a wetland area to the west, wetlands and the Hillebrandt Unit of the J.D. Murphree Wildlife Management Area to the east, and the location of the HDD restricts the workspace to be placed in this area.
28441	10.9	0.2	Unnamed wetland	Y	Y	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. A large canal and Texas Prairie Wetland Program seasonal wetlands to the south, a wetland area to the west, wetlands and the Hillebrandt Unit of the J.D. Murphree Wildlife Management Area to the east, and the location of the HDD restricts the workspace to be placed in this area.
28294	11.3	0.3	Unnamed pond	Y	Y	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
28158	11.6	0.7	Unnamed road	Y	Y	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.The location of the HDD in the area and a valve site for foreign pipelines restricts the HDD pad to be placed over the wetlands in the area.
28268	12.2	0.8	Unnamed canal/ditch	Y	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28328	12.4	0.1	Unnamed canal/ditch	Y	Y	Canal/Road
						Additional staging area and equipment needs for water crossing. Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28319	12.4	0.3	Unnamed canal/ditch	Y	Y	Canal/Road
						Additional staging area and equipment needs for water crossing. Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28164	12.5	0.3	Unnamed stream	N	N	Canal/Road
						Additional staging area and equipment needs for water crossing. Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.
28242	12.6	1.9	Unnamed canal/ditch	Y	Y	Pull String
						Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The area of the location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.
28320	12.6	1.2	Unnamed canal/ditch	Y	Y	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
28329	12.7	0.2	Unnamed canal/ditch	Y	Y	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
31641	13.0	0.8	Unnamed road	N	N	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
31644	13.3	0.8	Unnamed stream	N	N	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking.
28210	13.6	0.2	Unnamed road	Y	Y	Foreign Pipeline
						Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
28167	13.7	0.2	Unnamed road	Y	Y	Foreign Pipeline
						Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
28161	14.2	0.8	Gallier Canal	Y	Y	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28162	14.4	0.8	Gallier Canal	Y	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28169	14.5	0.2	Gallier Canal	Y	Y	Foreign Pipeline

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
						Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28168	14.5	0.2	Gallier Canal	Y	Y	Foreign Pipeline
						Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28171	14.9	1.1	Unnamed canal	Y	Y	Road/Foreign Pipeline/PI
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Existing foreign pipelines and canals in the area restrict the placement of the ATWS in this area, making this wetland impact unavoidable.
28172	15.0	0.1	Unnamed canal	N	N	Canal
						Additional area needs for canal include equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.
28173	15.1	0.2	Unnamed canal	N	N	Canal
						Additional area needs for canal include equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.
28174	15.2	0.3	Knauth Road	N	N	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
28170	15.3	0.1	Knauth Road	N	N	Road
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.
28177	15.3	0.1	Knauth Road	N	N	Road
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.
28178	15.4	0.2	Unnamed canal/ditch	N	N	Canal
						Additional area needs for canal include equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
28179	15.4	0.2	Unnamed canal/ditch	N	N	Canal
						Additional area needs for canal include equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.
28238	15.6	0.1	Hebert Rd	N	N	Foreign Pipeline
						Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
28237	15.6	0.1	Hebert Rd	N	N	Foreign Pipeline
						Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
28175	15.7	0.1	Hebert Rd	N	N	Road
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.
28176	15.7	0.1	Hebert Rd	N	N	Road
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.
28269	16.2	0.3	Unnamed wetland	Y	Y	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28270	16.4	0.3	Unnamed wetland	Y	Y	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28181	16.6	0.2	Unnamed wetland	Y	Y	Foreign Pipeline
						Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28182	16.7	0.3	Unnamed wetland	Y	Y	Foreign Pipeline
						Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the foreign line crossing and multitude of wetlands in the area restrict the placement of this ATWS pad and makes the wetland impacts unavoidable.

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
28330	16.9	0.2	Unnamed stream	Y	Y	Canal/Foreign Pipeline
						Additional area needs for canal include equipment and personnel parking/staging, parallel pipeline stringing, bore pit, extra bore pit spoil, and bore rig area. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28321	16.9	0.5	Unnamed stream	Y	Y	Canal/Foreign Pipeline
						Additional area needs for canal include equipment and personnel parking/staging, parallel pipeline stringing, bore pit, extra bore pit spoil, and bore rig area. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28180	16.9	0.4	Unnamed stream	N	Y	Canal/FPL
						Additional area needs for canal include equipment and personnel parking/staging, parallel pipeline stringing, bore pit, extra bore pit spoil, and bore rig area. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
28184	17.1	0.1	Hebert Road	N	N	Road
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.
28183	17.2	0.3	Hebert Road	N	N	Road/Foreign Pipeline
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
28331	17.2	0.1	Unnamed road	Y	Y	Foreign Pipeline
						Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the foreign line crossing and wetlands in the area restrict the placement of this ATWS pad and makes the wetland impacts unavoidable.
28196	17.3	0.3	Unnamed road	Y	Y	Foreign Pipeline
						Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
28187	17.3	0.1		N	N	Road

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
			Unnamed road			Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.
28186	17.3	0.2	Unnamed road	N	N	Road
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.
28193	17.5	0.3	State Spur 93	N	N	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
28188	17.5	0.8	Unnamed road	N	N	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
28262	18.1	0.3	Johns Gully	Y	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28263	18.1	1.0	Johns Gully	Y	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28257	18.1	2.0	Johns Gully	Y	Y	HDD Exit/Pull String
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. Additional staging area and equipment needs includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28264	18.2	0.3	Johns Gully	Y	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
28261	18.2	3.5	Johns Gully	Y	Y	Pull String
						Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The wetland impacts here are unavoidable since the pull-string must be adjacent to the other pipeline ATWS.
28260	18.5	1.9	Johns Gully	Y	Y	HDD Entry/Exit
						Additional staging area and equipment needs for HDD entry: worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional staging area and equipment needs for HDD exit: aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDDs and the foreign pipeline restricts the location of the ATWS. Therefore, the wetlands in this area are unavoidable.
28190	19.0	1.0	Unnamed wetland	N	Y	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
28323	19.1	0.3	Unnamed wetland	Y	Y	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and the multitude of wetlands in the surrounding area restrict the placement of this ATWS pad. Therefore, the wetland is unavoidable.
28194	19.4	0.2	Unnamed canal/ditch	Y	Y	Canal
						Additional area needs for canal include equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28185	19.4	2.6	Unnamed canal/ditch	Y	Y	Pull String
						Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28195	19.4	0.3	Unnamed canal/ditch	Y	Y	Canal/PI
						Additional area needs for canal include equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
28191	19.6	0.3	Unnamed stream	N	N	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking.
28192	19.6	0.5	Unnamed stream	N	N	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking.
28189	20.2	1.0	US Hwy 287	N	N	HDD Entry/Exit
						Additional staging area and equipment needs for HDD entry: worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional staging area and equipment needs for HDD exit: aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking.
28197	20.2	0.4	US Hwy 287	N	Y	HDD Entry/Exit
						Additional staging area and equipment needs for HDD entry: worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional staging area and equipment needs for HDD exit: aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking.
28251	20.8	1.5	State Hwy 347	N	N	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
28252	20.9	0.4	State Hwy 347	N	Y	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
28249	21.3	0.5	Neches River	Y	Y	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This and the construction conditions due to the industrial area makes wetland impacts unavoidable by any ATWS configuration in this location.
28325	21.4	1.7	Neches River	N	Y	Construction Conditions
						Additional staging area and equipment needs. Permanent and temporary workspace is necked down due to land/owner constraints and existing foreign pipeline; therefore, ATWS was added to compensate for restricted existing conditions.

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
28250	21.6	0.2	Neches River	N	N	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
28276	21.6	0.6	Neches River	Y	Y	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD in the area restrict the placement of the ATWS and make the wetland impact unavoidable.
28253	22.4	0.6	Neches River	N	N	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking.
28254	22.4	0.2	Neches River	N	N	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking.
28346	22.5	0.4	Neches River	Y	Y	Construction Conditions
						Additional staging area and equipment needs. Permanent and temporary workspace is necked down due to land/owner constraints and existing foreign pipeline; therefore, ATWS was added to compensate for restricted existing conditions. The entire surrounding area is wetlands. This and the construction conditions make wetland impacts unavoidable by any ATWS configuration in this location.
28258	22.8	3.8	Neches River	Y	Y	Pull String
						Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the pipestring restrict the placement of this ATWS pad and makes wetland impacts unavoidable for this pull string.
28259	22.9	1.7	Neches River	N	Y	Pull String
						Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment.
28347	22.9	0.1	Neches River	Y	Y	Construction Conditions
						Additional staging area and equipment needs. Permanent and temporary workspace is necked down due to land/owner constraints and existing foreign pipeline; therefore, ATWS was added to compensate for restricted existing conditions. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
28255	23.0	0.5	Neches River	Y	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28256	23.0	0.2	Neches River	Y	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28207	23.7	1.8	Unnamed swamp	Y	Y	HDD Entry/Push
						Additional staging area and equipment needs for HDD entry: worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional staging area and equipment needs for push: staging the bore machine for the push construction, backhoe machine(s), and pipe material staging. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28337	24.4	0.2	Unnamed wetland	Y	Y	Tie-In
						Additional staging area and equipment needs for tie-in including bell hole installation for the T section and additional spoil area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28313	24.6	0.8	Unnamed stream	Y	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28217	25.2	0.8	Pipeline corridor	N	N	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
28221	25.6	0.1	Anderson Gully	N	N	Bore Existing Utility Line
						Additional staging area and equipment needed for boring construction method include equipment and personnel parking/staging, parallel pipeline stringing, bore pit, extra bore pit spoil, and bore rig area.

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands: Within ATWS	Wetlands: Within 50 ft. of ATWS	Site-Specific Justification
28231	25.7	0.4	Church House Rd	N	Y	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
28232	26.0	0.4	NA	N	N	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
31242	26.1	<0.1	Avoid Cemetery	N	N	Construction Conditions
						Additional staging area and equipment needs. Temporary workspace is necked down due to land/owner constraints; therefore, ATWS was added to compensate for restricted existing conditions.
31243	26.2	<0.1	Avoid Cemetery	N	N	Construction Conditions
						Additional staging area and equipment needs. Temporary workspace is necked down due to land/owner constraints; therefore, ATWS was added to compensate for restricted existing conditions.
28230	26.4	0.1	S Mansfield Ferry Rd	N	N	Road
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.
28234	26.4	0.1	S Mansfield Ferry Rd	N	N	Road
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, bore pit, extra bore pit spoil, and bore rig area.
Southern Pipeline						
28318[a]	0.0	0.9	Unnamed canal/ditch	Y	Y	Pull String
						Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28308[a]	0.1	<0.1	Unnamed canal/ditch	Y	Y	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28307[a]	0.1	<0.1		Y	Y	PI

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
			Unnamed canal/ditch			Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28306[a]	1.0	<0.1	Unnamed canal/ditch	Y	Y	PI/HDD Entry
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional staging area and equipment needs for HDD. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28305[a]	1.0	<0.1	Unnamed canal/ditch	Y	Y	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28304[a]	1.7	0.0	Port Arthur Canal	Y	Y	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28311[a]	2.1	0.0	Port Arthur Canal	Y	Y	Southern Pipeline Staging
						Additional spoil storage, timber mat storage, assembly of pipeline segment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28301[a]	2.2	0.1	Port Arthur Canal	Y	Y	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28302[a]	2.2	0.0	Port Arthur Canal	Y	Y	Southern Pipeline Staging
						Additional spoil storage, timber mat storage, assembly of pipeline segment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28842	2.6	0.4		Y	Y	HDD Exit

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
			Port Arthur Canal			Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking.The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28843	2.6	0.1	Port Arthur Canal	Y	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28248	2.6	1.8	Port Arthur Canal	Y	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28246	2.9	0.4	Port Arthur Canal	Y	Y	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28245	2.9	0.0	Port Arthur Canal	Y	Y	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28284	3.8	2.8	State Hwy 87	Y	Y	HDD Exit/ Push Section
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. Area needs also include staging the bore machine for the push construction, backhoe machine(s), and pipe material staging. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28278	5.0	0.2	Unnamed canal/ditch	Y	Y	Road
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands: Within ATWS	Wetlands: Within 50 ft. of ATWS	Site-Specific Justification
28281	5.0	0.1	Unnamed canal/ditch	Y	Y	Road
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28277	6.0	0.8	Sabine Pass	N	N	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking.
28443	7.0	0.1	Sabine Pass	N	N	HDD Entry/Pull String
						Additional staging area and equipment needs for HDD entry: worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional staging area and equipment needs for pull string: includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment.
29240	7.0	0.5	Sabine Pass	N	N	HDD Entry/Pull String
						Additional staging area and equipment needs for HDD entry: worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional staging area and equipment needs for pull string: includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment.
28442	7.1	1.2	Sabine Pass	N	N	HDD Entry/Pull String
						Additional staging area and equipment needs for HDD entry: worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional staging area and equipment needs for pull string: includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment.
28215	7.1	0.7	Sabine Pass	N	N	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking.
28214	7.5	0.8	Unnamed stream	Y	Y	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
GTS/CIPCO Lateral						
28216	0.1	0.1	NA	N	N	PI

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
28271	0.2	0.3	Unnamed Wetland	N	Y	Pull String
						Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment.
28333	0.5	1.6	Amco Road	Y	Y	Pull String
						Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment.The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28213	0.5	0.8	Amco Road	Y	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
28222	0.8	0.8	Amco Road	N	N	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
28226	0.8	0.2	Amco Road	N	N	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
28223	1.1	0.2	Unnamed lake	N	N	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking.
28224	1.1	0.5	Unnamed lake	N	N	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking.
28225	1.1	1.7	Unnamed lake	N	N	Pull String
						Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment.
28218	1.2	0.2	Unnamed lake	N	N	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
28275	1.3	0.2	Unnamed lake	N	N	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
HPL Lateral						
28220	1.0	0.3	Anderson Gully	Y	Y	Pull String
						Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the pipestring restrict the placement of the ATWS and makes the wetland impact unavoidable.
TETCO Lateral						
28233	0.0	0.1	S Mansfield Ferry Rd	N	N	Road
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, bore pit, extra bore pit spoil, and bore rig area.
FGT Lateral						
28228	0.3	0.1	State Road 105	N	N	Road
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.
28340	0.6	0.2	Unnamed wetland	Y	Y	Foreign Pipeline
						Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the foreign pipelines that are crossed in the area restricts the area of the ATWS in this location which makes the wetland impacts unavoidable.
28339	0.6	0.1	Unnamed wetland	Y	Y	Foreign Pipeline
						Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the foreign pipelines that are crossed in the area restricts the area of the ATWS in this location which makes the wetland impacts unavoidable.
28341	0.6	0.2	Unnamed wetland	N	Y	Foreign Pipeline
						Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
28342	0.6	0.2	Unnamed wetland	N	Y	Foreign Pipeline
						Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
28343	0.7	0.0	Unnamed wetland	Y	Y	Foreign Pipeline
						Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the foreign pipelines that are crossed in the area restricts the area of the ATWS in this location which makes the wetland impacts unavoidable.
28315	0.8	0.2	Unnamed stream	Y	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and foreign pipelines in the area restrict the location of the ATWS and make the wetland impacts unavoidable.
28266	0.8	0.5	Unnamed stream	N	Y	HDD Exit
						Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking.
28239	1.2	0.1	Unnamed stream	N	N	Road
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.
32047	1.2	0.1	Unnamed stream	N	N	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
32054	1.2	0.1	Unnamed stream	N	N	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
28265	1.3	0.4	Unnamed stream	N	Y	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
28314	1.3	0.1	Unnamed stream	N	Y	HDD Entry
						Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
28235	1.6	0.3	Unnamed stream	N	N	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.

APPENDIX D-1 (cont'd)

Additional Temporary Workspace for the Texas Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands: Within ATWS	Wetlands: Within 50 ft. of ATWS	Site-Specific Justification
28227	1.8	0.1	State Road 105	N	N	Road
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, bore pit, extra bore pit spoil, and bore rig area.
28229	1.8	0.1	State Road 105	N	N	Road
						Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, bore pit, extra bore pit spoil, and bore rig area.
NGPL Lateral						
28240	0.1	0.4	State Hwy 87	Y	Y	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
28219	0.1	0.2	State Hwy 87	Y	Y	PI
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
KMLP Lateral						
28267	0.1	0.5	Unnamed stream	Y	Y	PI/Foreign Pipeline
						Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

[a] ATWS is partially or completely within the Liquefaction Facility boundary, so affected acreage only represents ATWS occurring outside the facility boundary.

ADDITIONAL TEMPORARY WORKSPACE FOR THE LOUISIANA CONNECTOR PROJECT

APPENDIX D-2

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-JEF-001	0.0	0.1	Hwy 87/Pt Arthur Canal/Levee Rd	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment and parking. Pipeline initiation point is surrounded by wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-JEF-002	0.0	<0.1	NA	N	N	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
ATWS-JEF-003	0.1	<0.1	NA	N	N	Centana Tie-In Additional staging area and equipment needs for tie-in including bell hole installation for the T section and additional spoil area.
ATWS-JEF-006	1.0	24.8	NA	N	N	HDD Pullback Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area.
ATWS-CAM-003	18.0	0.2	AR-CAM-01	Y	Y	Work Area from Water Additional material staging area and equipment needs including barge offloading equipment, parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-004	18.1	0.2	AR-CAM-01	Y	Y	Work Area from Water Additional material staging area and equipment needs including barge offloading equipment, parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-005	18.1	<0.1	Sabine Lake	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-006	18.1	0.9	Sabine Lake	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAM-011	19.1	0.4	AR-CAM-01A	Y	Y	Work Area from Water Additional material staging area and equipment needs including barge offloading equipment, material staging, parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-012	19.2	0.7	East Pass	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-013	19.6	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-014	20.4	0.3	AR-CAM-02	Y	Y	Access Road to Workspace Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-015	20.4	0.2	AR-CAM-02	Y	Y	Access Road to Workspace Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-016	20.4	0.2	AR-CAM-02	Y	Y	Work Area from Water Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-018	20.5	0.2	AR-CAM-02	Y	Y	Work Area from Water Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAM-020	20.8	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-023	21.9	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-024	22.2	0.1	Targa (2)	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil storage for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-025	22.2	0.1	Targa (2)	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil storage for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-026	22.3	0.1	Targa (2)	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil storage for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-027	22.3	0.1	Targa (2)	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil storage for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-029	22.6	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-030	23.5	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAM-031	24.2	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-032	24.9	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-033	25.7	0.1	NA	N	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. Location is critical to allowing vehicles and equipment to turn around or pass on the working side of the ROW near the access road. The location of the foreign pipelines and multitude of wetlands in the area restrict the placement of this ATWS pad and makes the wetland impacts unavoidable.
ATWS-CAM-034	25.7	0.9	NA	N	N	Access Road to Workspace Work Area Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-CAM-037	26.1	0.4	AR-CAM-03B	Y	Y	Access Road to Workspace Work Area Additional staging area and equipment needs including parking and equipment turn-around area. Location was selected in an existing, cleared ROW and existing access route from the Intercoastal Waterway to avoid vegetation clearing. The location of the foreign pipelines and multitude of wetlands in the area restrict the placement of this ATWS pad and makes the wetland impacts unavoidable.
ATWS-CAM-039	26.2	0.4	NA	Y	Y	Point of Intersection (PI) Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. This location will also be used to stage material and equipment for the push/pull installation method. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-001	26.4	0.2	NA	N	N	Work Area from Water Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-002	26.4	0.2	NA	N	N	Work Area from Water Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section.
ATWS-CAL-004	26.5	0.2	NA	N	N	Work Area from Water Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section.
ATWS-CAL-006	26.5	0.2	NA	N	N	Work Area from Water Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section.
ATWS-CAM-041	26.5	0.7	Foreign Pipelines	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAM-042	26.7	0.2	AR-CAM-03C	Y	Y	Access Road Turnaround Additional staging area and equipment needs including parking and equipment turn-around area as well as material staging to construct the access road to the West. Site was selected to utilize existing raised berm and road. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-007	26.9	0.2	NA	N	N	Work Area from Water Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section.
ATWS-CAL-008	27.0	0.2	NA	N	N	Work Area from Water Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section.
ATWS-CAL-010	27.2	0.5	Foreign Pipelines	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-011	27.2	0.5	Foreign Pipelines	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-013	27.4	0.4	Intracoastal Waterway	Y	Y	HDD Entry Additional staging area and equipment needs for HDD entry and at end of access road. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-014	27.5	0.5	Intracoastal Waterway	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-015	27.5	<0.1	Intracoastal Waterway	Y	Y	HDD Entry Additional staging area and equipment needs for HDD entry and at end of access road. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-016	27.5	0.2	NA	N	N	Work Area from Water Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section.
ATWS-CAL-017	27.6	0.2	NA	N	N	Work Area from Water Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section.
ATWS-CAL-021	28.3	0.2	AR-CAL-01B	Y	Y	Work Area from Water Additional material staging area and equipment needs including barge offloading equipment, parking and equipment turn-around area. Location was selected for shortest path between HDD exit and Intercoastal Waterway to reduce vegetation clearing and wetland impacts. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-022	28.3	0.2	AR-CAL-01B	Y	Y	Work Area from Water Additional material staging area and equipment needs including barge offloading equipment, parking and equipment turn-around area. Location was selected for shortest path between HDD exit and Intercoastal Waterway to reduce vegetation clearing and wetland impacts. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-023	28.4	0.2	Intracoastal Waterway	Y	Y	HDD Exit/PI Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD was selected to reduce the need for tree and vegetation clearing. Due to the multitude of wetlands in the area, it is unavoidable for the location of the ATWS pad to not impact wetlands.
ATWS-CAL-024	28.4	0.4	Intracoastal Waterway	Y	Y	HDD Exit/PI Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD was selected to reduce the need for tree and vegetation clearing. Due to the multitude of wetlands in the area it is unavoidable for the location of the ATWS pad to not impact wetlands.
ATWS-CAL-025	28.4	0.1	Intracoastal Waterway	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD was selected to reduce the need for tree and vegetation clearing. Due to the multitude of wetlands in the area it is unavoidable for the location of the ATWS pad to not impact wetlands.
ATWS-CAL-026	28.4	7.8	Intracoastal Waterway	Y	Y	HDD Pullback Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.
ATWS-CAL-027	28.7	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-028	29.5	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-029	30.0	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-031	30.6	0.6	Vinton Drainage Canal	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. Due to the multitude of wetlands in the area it is unavoidable for the location of the ATWS pad to not impact wetlands.
ATWS-CAL-033	30.8	0.6	AR-CAL-02A	Y	Y	Boat Access Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-036	30.8	0.6	AR-CAL-03	Y	Y	Boat Access Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-037	30.9	1.0	Vinton Drainage Canal	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. Additional staging and area for equipment is required for the installation of MLV #2. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-038	31.5	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-039	32.3	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-040	32.9	0.1	NA	N	N	Boat Access Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section.
ATWS-CAL-041	32.9	0.2	AR-CAL-04	N	Y	Access Road Additional staging area and equipment needs including parking, materials, and equipment turn-around area. Location was selected in an existing, cleared ROW to reduce tree clearing. The additional area is also required to assist stringing trucks going around the 90° turn in access road AR-CAL-04. The location of the foreign pipelines and multitude of wetlands in the area restrict the placement of this ATWS pad and makes the wetland impacts unavoidable.
ATWS-CAL-043	32.9	0.2	AR-CAL-04	N	Y	Access Road Additional staging area and equipment needs including parking, materials, and equipment turn-around area. Location was selected in an existing, cleared ROW to reduce tree clearing. The additional area is also required to assist stringing trucks going around the 90° turn in access road AR-CAL-04. The location of the foreign pipelines and multitude of wetlands in the area restrict the placement of this ATWS pad and makes the wetland impacts unavoidable.
ATWS-CAL-044	32.9	0.1	NA	N	N	Boat Access Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section.
ATWS-CAL-045	32.9	0.1	NA	N	N	Boat Access Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section.
ATWS-CAL-046	33.0	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-047	33.7	0.6	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-048	34.6	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-CAL-050	34.8	0.2	AR-CAL-05	Y	Y	Work Area from Water Additional material staging area and equipment needs including barge offloading equipment, parking and equipment turn-around area. This location was selected to utilize existing road and dock to reduce clearing and the need for a new dock. The surrounding area is mostly wetlands. This makes wetland impacts nearly unavoidable by any ATWS configuration in this location.
ATWS-CAL-051	34.8	0.2	AR-CAL-05	Y	Y	Work Area from Water Additional material staging area and equipment needs including barge offloading equipment, parking and equipment turn-around area. This location was selected to utilize existing road and dock to reduce clearing and the need for a new dock. The surrounding area is mostly wetlands. This makes wetland impacts nearly unavoidable by any ATWS configuration in this location.
ATWS-CAL-052	35.0	0.2	Gum Cove Rd	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road, powerline, and multitude of wetlands in the area restrict the placement of this ATWS pad and makes the wetland impacts unavoidable.
ATWS-CAL-053	35.1	0.3	Gum Cove Rd	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road, powerline, and multitude of wetlands in the area restrict the placement of this ATWS pad and makes the wetland impacts unavoidable.
ATWS-CAL-054	35.5	0.1	NA	N	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The pad is located outside the wetlands but is surrounded by wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-055	35.8	0.2	Unnamed Road	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, spoil storage, and temporary bypass equipment. The pad is located to abut the road ROW. Moving farther away would reduce the benefit for nearby spoil storage for the road crossing.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-056	35.8	0.2	Unnamed Road	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, spoil storage, and temporary bypass equipment. The pad is located to abut the road ROW. Moving farther away would reduce the benefit for nearby spoil storage for the road crossing.
ATWS-CAL-058	36.3	0.6	Unnamed Waterbody	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-059	36.4	0.7	CAL-WB-014	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-060	36.5	0.2	Unnamed Road	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-061	36.5	0.2	Unnamed Road	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-062	36.6	0.3	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-063	36.7	0.1	Unnamed Road	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-064	36.7	0.1	Unnamed Road	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-065	36.8	0.5	NA	Y	Y	PI / Turnaround Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-067	36.9	0.3	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-068	37.4	0.1	CAL-WB-015	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-069	37.4	0.2	CAL-WB-015	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-071	37.5	0.2	CAL-WB-016	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-073	37.6	0.2	Unnamed Road	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-074	37.7	0.2	Unnamed Road	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-075	38.5	0.2	Unnamed Road	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-076	38.5	0.2	Unnamed Road	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-078	38.6	1.1	Waterbodies	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-079	39.2	0.7	Waterbodies	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and surrounding wetlands restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-081	39.5	0.7	CAL-WB-023	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-082	39.8	0.7	CAL-WB-023	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-083	39.9	0.2	Unnamed Road	Y	Y	Road Open Cut Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location is limited to the north side of the pipeline ROW due to foreign pipelines. Wetlands are all around the proposed ATWS pad. This makes wetland impacts unavoidable.
ATWS-CAL-084	39.9	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-CAL-086	40.2	0.6	Waterbody / Unnamed Road	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD, foreign pipeline to the south, and multiple wetlands in the area restrict the location of the ATWS pad.
ATWS-CAL-089	40.5	0.2	Waterbody / Unnamed Road	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-090	40.6	0.7	Waterbody / Unnamed Road	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-091	40.6	0.1	Charlie Moss Rd	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Due to the paralleled foreign pipeline directly to the south, the ATWS pad for road bore must be to the north side of the ROW. Multiple wetlands are on the north side making it unavoidable to impact wetlands.
ATWS-CAL-092	40.7	0.2	Charlie Moss Rd	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Due to the paralleled foreign pipeline directly to the south, the ATWS pad for road bore must be to the north side of the ROW. Multiple wetlands are on the north side making it unavoidable to impact wetlands.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-093	40.8	0.2	Charlie Moss Rd	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Due to the paralleled foreign pipeline directly to the south, the ATWS pad for road bore must be to the north side of the ROW. Multiple wetlands are on the north side making it unavoidable to impact wetlands.
ATWS-CAL-094	40.8	0.4	Charlie Moss Rd	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Due to the paralleled foreign pipeline directly to the south, the ATWS pad for road bore must be to the north side of the ROW. Multiple wetlands are on the north side making it unavoidable to impact wetlands.
ATWS-CAL-095	40.9	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Due to the paralleled foreign pipeline directly to the south, the ATWS pad for road bore must be to the north side of the ROW. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-096	41.0	0.3	Equistar	N	Y	PI Additional staging area and equipment needs for multiple PIs which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PIs, and extra track hoe requirements. ATWS pad is located between foreign pipelines and wetland on the south side of the ROW. The north side of the ROW is restricted by multiple residences making the wetland impact unavoidable.
ATWS-CAL-097	41.1	0.2	Choupique Rd	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. ATWS pad is located between on the north side of the ROW. The south side of the ROW is restricted by foreign pipelines and an existing above grade facility/valve site. Due to this restriction and the multiple wetlands and residences in the area, impacts to the wetland are unavoidable.
ATWS-CAL-098	41.1	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-099	41.2	0.1	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-CAL-100	41.5	0.1	Unnamed Road	N	Y	Road Open Cut Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Due to the paralleled foreign pipeline directly to the south, the ATWS pad for road bore must be to the north side of the ROW. Multiple wetlands are on the north side making it unavoidable to impact wetlands.
ATWS-CAL-101	41.5	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-CAL-315	41.7	0.5	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-CAL-102	42.0	0.7	Choupique Bayou	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and surrounding wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-103	42.5	0.5	Choupique Bayou	Y	Y	HDD Entry / Foreign Pipeline Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the HDD and surrounding wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-104	42.5	0.6	Choupique Bayou	Y	Y	HDD Entry / Foreign Pipeline Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the HDD and surrounding wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-105	42.6	0.2	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-106	42.6	0.2	Murl Ellender Rd	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The entire surrounding area is wetlands and the south side is restricted due to foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-107	42.7	0.3	Murl Ellender Rd	Y	Y	Road Bore / PI Additional staging area and equipment needs for Bore entry/exit and PI: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil, turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands and the south side is restricted due to foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-108	43.0	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands and the south side is restricted due to foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-109	43.1	0.5	CAL-WB-032	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The surrounding area includes a multitude of wetlands and the south side is restricted due to foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-110	43.2	0.5	CAL-WB-032	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands and the south side is restricted due to foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-112	43.3	1.2	Unnamed Waterbody	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands and the south side is restricted due to foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-113	43.4	0.6	Unnamed Waterbody	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands and the south side is restricted due to foreign pipelines. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-114	43.5	0.3	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands and the south side is restricted due to foreign pipelines. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-115	43.8	0.3	John Brannon Rd	Y	Y	PI / Road Bore Additional staging area and equipment needs for Bore entry/exit and PI: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil, turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location is critical to avoid existing WRP lands. Wetland impacts are unavoidable due to the manmade ditch which intersects the road.
ATWS-CAL-314	43.9	0.1	John Brannon Rd	N	Y	PI / Road Bore Additional staging area and equipment needs for Bore entry/exit and PI: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil, turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location is critical to avoid existing WRP lands. Wetland impacts are unavoidable due to the manmade ditch which intersects the road.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-116	43.9	0.6	John Brannon Rd	Y	Y	PI / Road Bore Additional staging area and equipment needs for Bore entry/exit and PI: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil, turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location is critical to avoid existing WRP lands. Wetland impacts are unavoidable due to the manmade ditch which intersects the road.
ATWS-CAL-119	44.2	0.3	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands and the south side is restricted due to foreign pipelines. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-120	44.4	0.3	NA	Y	Y	PI / Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the PI, pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-121	44.4	0.2	NA	Y	Y	PI / Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the PI, pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-122	44.5	0.2	State Route 108	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The entire surrounding area is wetlands and the west side is restricted due to a pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-124	44.6	0.2	State Route 108	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The entire surrounding area is wetlands and the west side is restricted due to a pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-125	44.6	0.2	Unnamed Waterbody	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands and the west side is restricted due to a pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-126	44.7	0.2	Unnamed Waterbody	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands and the west side is restricted due to a paralleling pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-127	44.8	0.2	CAL-WB-033	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-128	44.9	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-CAL-129	44.9	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-CAL-130	45.1	0.2	Augie Lyons Rd	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-131	45.5	0.9	W Cotton Vincent Rd	Y	Y	Road Bore Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-133	45.6	0.1	W Cotton Vincent Rd	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-134	45.7	0.1	NA	N	Y	Waterbody / Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The location was selected near the transition to TWS neckdown area for vehicle/equipment to be able to pass on the working side and assist with an open cut water crossing. Additional area includes parallel foreign pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-135	45.8	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-CAL-136	45.8	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-CAL-137	46.0	0.1	CITGO	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. ATWS pad location was restricted to the east side due to the paralleling foreign pipeline on the west side. Moving the ATWS further to the south would hinder its ability to aid in construction as the distance from the foreign pipeline would be too far to transfer spoil.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands: Within ATWS	Wetlands: Within 50 ft. of ATWS	Site-Specific Justification
ATWS-CAL-138	46.0	<0.1	CITGO	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. ATWS pad location was restricted to the east side due to the paralleling foreign pipeline on the west side. Moving the ATWS further to the south would hinder its ability to aid in construction as the distance from the foreign pipeline would be too far to transfer spoil.
ATWS-CAL-139	46.1	0.2	CITGO	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-140	46.1	0.1	DOW	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-142	46.2	0.1	Phillips 66	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-143	46.3	0.3	Phillips 66	Y	Y	Foreign Pipeline / PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-144	46.4	0.4	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-141	46.4	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-145	46.5	0.4	CenterPoint	Y	Y	PI / Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-147	46.6	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-CAL-148	46.6	0.3	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-CAL-149	46.8	0.5	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-150	47.1	0.6	Creole Trail/ Sempra/Phillips 66/Targa/CITGO	Y	Y	PI / Bore / Foreign Pipeline Additional staging area and equipment needs for PI, bore entry/exit, and foreign pipeline crossing which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI and bore pit, extra spoil, parallel pipe stringing, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-151	47.1	0.1	Creole Trail/ Sempra/Phillips 66/Targa	Y	Y	PI / Bore / Foreign Pipeline Additional staging area and equipment needs for PI, bore entry/exit, and foreign pipeline crossing which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI and bore pit, extra spoil, parallel pipe stringing, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-152	47.1	0.1	CITGO	Y	Y	Turnaround / Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Additional staging area and equipment needs including parking and equipment turn-around area. The surrounding area includes a multitude of wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-153	47.2	0.2	Creole Trail/ Sempra/Phillips 66/Targa/CITGO	Y	Y	PI / Bore / Foreign Pipeline Additional staging area and equipment needs for PI, bore entry/exit, and foreign pipeline crossing which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI and bore pit, extra spoil, parallel pipe stringing, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The surrounding area includes a multitude of wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-154	47.2	0.2	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The surrounding area includes a multitude of wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-155	47.5	1.9	Walker Rd	Y	Y	HDD Pullback Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. In addition, the area is surrounded with a multitude of wetlands. The wetland impact is unavoidable.
ATWS-CAL-156	47.5	0.3	Walker Rd	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-157	47.5	0.4	Walker Rd	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-159	47.9	1.1	Walker Rd	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.
ATWS-CAL-160	48.2	1.4	Foreign Pipeline	Y	Y	HDD Pullback Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.
ATWS-CAL-162	48.2	0.7	Foreign Pipeline	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-163	48.5	0.5	NA	N	N	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-164	48.5	0.6	Foreign Pipeline	Y	Y	HDD Entry/PI Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-316	48.6	0.1	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-CAL-165	48.6	0.1	NA	N	N	Road Bore/Turnaround Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, equipment turn-around area, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-CAL-166	48.6	0.1	Currie Dr	N	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-167	48.6	0.1	Currie Dr	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-168	48.6	0.1	Currie Dr	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-327	48.9	0.3	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-169	49.4	0.1	NA	N	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-170	49.8	0.6	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-172	49.9	0.1	PetroLogistics / Gulf South	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-CAL-173	50.0	1.0	Interstate Hwy 10	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-174	50.3	0.6	Interstate Hwy 10	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-175	50.3	0.2	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-176	50.4	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-177	50.5	0.4	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-181	51.3	0.1	US Hwy 90 / W Napoleon St	N	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-182	51.3	0.1	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-CAL-183	51.3	0.1	US Hwy 90 / W Napoleon St	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-184	51.3	0.1	US Hwy 90 / W Napoleon St	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-186	51.5	0.4	Creole Trail / Sempra (42" CIP)	Y	Y	PI / Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the PI, several foreign pipelines crossing, the location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-185	51.5	0.3	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-187	51.6	0.1	Creole Trail/Sempra / PetroLogistics(2)	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines crossing, the location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-188	51.6	<0.1	Creole Trail/Sempra / PetroLogistics(2)	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines crossing, the location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-189	51.6	0.1	PetroLogistics (2)	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines crossing, the location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-190	51.6	0.1	PetroLogistics (2)	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines crossing, the location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-191	51.7	0.1	Kim St	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-192	51.7	0.1	Kim St	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-193	51.8	0.1	Kim St	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-194	51.8	0.1	Kim St	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-320	51.8	0.4	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-197	51.9	0.2	Union Pacific RR	Y	Y	Railroad Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the railroad and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-198	52.1	0.2	W Burton St	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-199	52.2	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-CAL-200	52.3	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-201	52.4	0.4	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-202	52.5	0.2	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-203	52.5	0.1	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-204	52.6	0.1	PetroLogistics / Gulf South	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-205	52.6	0.1	PetroLogistics / Gulf South	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-206	52.7	0.1	PetroLogistics / Gulf South	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-207	52.7	0.1	PetroLogistics / Gulf South	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-209	53.0	0.2	UCAR	Y	Y	PI / Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-208	53.0	0.2	UCAR	Y	Y	PI / Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-210	53.1	0.1	UCAR	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-211	53.1	0.1	UCAR	Y	Y	Foreign Pipeline / Open Cut Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-CAL-212	53.1	0.1	NA	N	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-325	53.2	0.2	CAL-WB-052	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-326	53.2	0.2	CAL-WB-052	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-214	53.4	0.2	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-213	53.4	0.1	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-215	53.8	0.1	NA	N	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-216	53.9	<0.1	CAL-WB-042	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-217	54.0	0.1	CAL-WB-042	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-328	54.1	0.3	CAL-WB-042	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-218	54.2	0.1	Bluegrass / Dixie	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and paralleling in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-CAL-219	54.2	0.1	Bluegrass / Dixie	N	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and paralleling in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-CAL-220	54.4	0.3	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-222	54.5	0.5	Houston River Canal	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-221	54.6	0.8	Houston River Canal	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-223	54.8	0.4	Houston River Canal	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-224	54.8	0.2	Houston River Canal	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-225	54.9	1.3	Houston River Canal	Y	Y	HDD Pullback Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.
ATWS-CAL-226	54.9	0.1	Houston River Canal	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-227	55.1	0.1	NA	N	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-229	55.2	0.1	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-CAL-228	55.2	0.1	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-CAL-230	55.3	0.1	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-CAL-231	55.4	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-232	55.5	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-CAL-233	55.8	0.2	CAL-WB-048	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-234	55.8	0.2	CAL-WB-048	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-235	56.1	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-CAL-236	56.3	0.3	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-239	56.5	0.2	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-238	56.5	0.4	NA	N	N	Bore Pullback Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, testing equipment and pipe string, and travel lanes for other equipment.
ATWS-CAL-240	56.5	0.1	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-317	56.6	0.1	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-242	56.7	0.2	Houston River	Y	Y	HDD Entry / PI Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-243	56.7	<0.1	Houston River	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-244	57.4	0.7	NA	N	N	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking.
ATWS-CAL-245	57.4	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-CAL-247	57.8	1.1	NA	N	N	HDD Pullback Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area.
ATWS-CAL-246	57.9	0.6	NA	N	N	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
ATWS-CAL-249	58.3	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-323	58.5	0.2	Unnamed Waterbody	N	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-324	58.6	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-CAL-252	58.9	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-CAL-253	59.0	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-CAL-254	59.1	0.2	NA	N	N	Road/Foreign Pipeline Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-CAL-255	59.1	0.1	Bluegrass	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and paralleling the Sempra pipeline in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-CAL-256	59.6	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-257	59.7	0.6	State Route 27 / Bankens Rd / Unnamed Rr	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-258	59.7	0.2	State Route 27 / Bankens Rd / Unnamed Rr	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-319	60.0	1.5	Bankens Rd / Kansas City Southern Rr	Y	Y	Slope Equipment Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable
ATWS-CAL-318	60.1	0.4	NA	Y	Y	Slope Equipment Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable
ATWS-CAL-259	60.3	0.2	State Route 27 / Bankens Rd / Unnamed Road	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-260	60.3	0.9	State Route 27 / Bankens Rd / Unnamed Rr	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-261	60.5	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-262	60.5	1.0	NA	N	N	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
ATWS-CAL-263	60.8	0.7	Little River	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-264	60.9	0.3	NA	N	N	Foreign Pipeline/Waterbody Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment.
ATWS-CAL-265	61.0	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-CAL-267	61.2	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-CAL-268	61.5	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-CAL-269	61.6	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-CAL-271	61.9	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-272	61.9	0.2	CAL-WB-053	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-273	62.0	0.1	CAL-WB-053	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-274	62.7	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-CAL-275	62.7	0.2	CAL-WB-054	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-276	62.8	0.2	CAL-WB-054	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-277	63.0	0.2	Holbrook Park Rd	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-279	63.0	0.2	Holbrook Park Rd	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-280	63.5	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-283	63.8	<0.1	Beckwith Creek	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-284	63.8	0.9	Beckwith Creek	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-285	64.5	0.7	NA	N	N	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking.
ATWS-CAL-286	64.5	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-CAL-287	64.7	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-CAL-288	64.7	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-CAL-289	64.9	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-CAL-290	65.0	1.0	NA	N	N	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
ATWS-CAL-292	65.4	0.7	NA	N	N	HDD Exit

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-293	65.5	0.2	CAL-WB-061	N	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-294	65.6	0.2	CAL-WB-061	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-296	65.8	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-CAL-297	66.0	0.1	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-CAL-298	66.1	0.1	NA	N	N	Road/Foreign Pipeline Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-CAL-299	66.1	0.5	Creole Trail / Unnamed Road	N	Y	Foreign Pipeline / PI / Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Existing foreign pipelines and multitude of wetlands in the area restrict the placement of the ATWS in this area, making this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-300	66.1	<0.1	Creole Trail / Unnamed Road	Y	Y	Foreign Pipeline / PI / Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Existing foreign pipelines and multitude of wetlands in the area restrict the placement of the ATWS in this area, making this wetland impact unavoidable.
ATWS-CAL-301	66.1	0.2	Creole Trail / Unnamed Road	N	Y	Foreign Pipeline / PI / Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Existing foreign pipelines and multitude of wetlands in the area restrict the placement of the ATWS in this area, making this wetland impact unavoidable.
ATWS-CAL-302	66.1	<0.1	Creole Trail / Unnamed Road	Y	Y	Foreign Pipeline / PI / Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Existing foreign pipelines and multitude of wetlands in the area restrict the placement of the ATWS in this area, making this wetland impact unavoidable.
ATWS-CAL-304	66.2	0.1	Unnamed Road	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-305	66.2	0.1	Unnamed Road	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-CAL-307	66.3	0.1	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-CAL-308	66.4	0.1	Gulf South	N	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and paralleling in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-CAL-309	66.4	<0.1	Gulf South	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and paralleling in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-CAL-310	66.5	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-CAL-311	66.6	0.3	NA	N	N	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
ATWS-CAL-312	66.8	0.4	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-CAL-313	66.9	0.2	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-BEA-001	67.4	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-BEA-003	67.9	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-BEA-004	67.9	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-BEA-006	68.0	0.1	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-BEA-008	68.0	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-BEA-009	68.0	0.1	NA	N	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-010	68.2	0.1	Unnamed Road	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-BEA-011	68.2	0.2	Unnamed Road	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-012	68.4	0.3	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-BEA-013	68.4	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-BEA-014	68.7	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-BEA-015	68.8	0.3	NA	N	N	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
ATWS-BEA-016	69.5	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-BEA-017	69.7	0.2	BEA-WB-009	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-018	69.8	0.2	BEA-WB-009	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-020	69.9	0.3	NA	N	N	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-BEA-021	69.9	0.1	NA	N	N	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
ATWS-BEA-022	69.9	0.2	NA	N	N	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
ATWS-BEA-023	70.0	0.2	NA	N	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-024	70.0	0.1	NA	N	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-025	70.1	0.4	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-026	70.3	0.1	Creole Trail	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and paralleling in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-BEA-027	70.4	0.1	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-BEA-028	70.4	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-BEA-029	70.5	0.5	US Hwy 171	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-030	70.5	0.2	US Hwy 171	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-031	70.7	0.5	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-BEA-032	70.8	0.1	Targa	Y	Y	Foreign Pipeline / PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the PI, Foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-033	70.8	0.1	Targa	Y	Y	Foreign Pipeline / PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the PI, Foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-034	70.9	0.3	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-BEA-035	71.0	0.1	NA	N	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. Moving the ATWS would not assist with the waterbody crossing and is restricted by foreign pipelines.
ATWS-BEA-036	71.1	0.2	BEA-WB-014	N	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-037	71.1	0.2	BEA-WB-014	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-038	71.2	0.1	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-039	71.2	0.3	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-040	71.4	0.3	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-BEA-041	71.5	0.2	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-BEA-042	71.8	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-BEA-043	72.2	0.3	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-BEA-044	72.3	0.4	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-BEA-046	72.3	<0.1	NA	N	N	Bore Pullback Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, testing equipment and pipe string, and travel lanes for other equipment.
ATWS-BEA-048	72.4	0.3	NA	N	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-051	72.6	0.4	NA	N	N	PI/Road Bore Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-BEA-052	72.6	0.2	NA	N	N	Road Bore/Foreign Pipeline Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-BEA-053	72.7	0.3	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-BEA-054	72.7	0.2	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-055	72.7	0.1	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-056	72.8	<0.1	Targa	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and paralleling the Sempra pipeline in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-BEA-057	72.8	0.2	Targa	N	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and paralleling the Sempra pipeline in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-BEA-058	72.8	0.1	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-BEA-059	73.2	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-BEA-060	73.2	0.2	BEA-WB-017	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-BEA-061	73.3	0.2	BEA-WB-017	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-BEA-062	73.6	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-BEA-063	73.6	0.2	BEA-WB-018	N	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would not assist with the waterbody crossing and is restricted by foreign pipelines.
ATWS-BEA-064	73.9	0.5	NA	N	N	Access Road to Workspace Work Area Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-BEA-066	74.1	0.1	NA	N	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable
ATWS-BEA-067	74.1	0.1	BEA-WL-038, BEA-WL-039	N	Y	Wetland Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would not assist with the waterbody crossing and is restricted by foreign pipelines.
ATWS-BEA-068	74.2	0.1	BEA-WL-039, BEA-WL-040	N	Y	Wetland Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would not assist with the waterbody crossing and is restricted by foreign pipelines.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-BEA-070	74.7	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-BEA-071	75.1	0.1	Gulf South	N	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and paralleling the Sempra pipeline in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-BEA-072	75.1	<0.1	NA	N	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and paralleling the Sempra pipeline in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-BEA-073	75.1	0.2	Gulf South	N	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and paralleling the Sempra pipeline in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-BEA-074	75.6	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-BEA-075	76.0	0.1	Trunkline (3)	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-BEA-076	76.0	0.1	Trunkline (3)	N	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-BEA-077	76.0	<0.1	NA	N	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-BEA-078	76.1	<0.1	NA	N	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-BEA-079	76.1	0.1	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-BEA-080	76.1	0.1	Trunkline (3)	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-BEA-082	76.4	0.2	NA	N	N	Road Bore/Foreign Pipeline/Turnaround Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, equipment turn-around area, parallel pipeline stringing, bore pit, and extra bore pit spoil. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-BEA-081	76.4	0.1	NA	N	N	Road Bore/Turnaround Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, equipment turn-around area, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-BEA-083	76.4	0.1	NA	N	N	Road Bore/Foreign Pipeline Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-BEA-086	76.5	0.1	Starks Header	Y	Y	Foreign Pipeline / PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-BEA-085	76.5	0.1	Parish Rd 152 / Texas Eastern Rd	Y	Y	Road Bore / PI Maintain through access for equipment and personnel. Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-087	76.6	0.1	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-089	76.6	0.1	NA	N	N	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
ATWS-BEA-088	76.6	0.1	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-BEA-090	76.7	0.1	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-BEA-091	76.7	0.4	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-BEA-092	77.2	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-001	77.6	0.3	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-ALL-002	77.8	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-004	78.6	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-230	78.7	<0.1	Barnes Creek HDD	N	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-005	78.7	0.7	Barnes Creek HDD	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-006	79.4	1.1	Barnes Creek HDD	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Moving the ATWS would reduce the benefit for nearby spoil storage for the road crossing.
ATWS-ALL-007	79.5	0.3	NA	N	N	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-008	79.8	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-ALL-009	79.8	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-ALL-010	80.1	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-011	80.3	0.5	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-ALL-012	80.3	0.2	NA	N	N	Road/PI/Foreign Pipeline Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-ALL-014	80.4	0.3	NA	N	N	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
ATWS-ALL-015	81.3	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-ALL-224	81.5	0.4	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-226	81.6	<0.1	TETCO (2)	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable
ATWS-ALL-016	81.6	0.1	TETCO (2)	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable
ATWS-ALL-017	81.7	0.1	TETCO (2)	Y	Y	Foreign Pipeline / Turnaround Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional staging area, equipment storage for pipeline mats, and parallel pipeline stringing. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable
ATWS-ALL-019	82.1	0.1	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Moving the would reduce the benefit for nearby spoil storage for the road crossing.
ATWS-ALL-018	82.1	0.2	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Moving the ATWS would reduce the benefit for nearby spoil storage for the road crossing.
ATWS-ALL-021	82.1	0.1	ALL-WB-004	N	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable
ATWS-ALL-022	82.2	0.2	ALL-WB-004	N	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-025	82.3	0.2	ALL-WB-006	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable
ATWS-ALL-026	82.4	0.2	ALL-WB-006	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would not assist with the waterbody crossing.
ATWS-ALL-027	82.4	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-028	82.4	0.1	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-029	82.5	0.1	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-030	82.6	0.3	NA	N	N	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
ATWS-ALL-031	83.0	0.5	NA	N	N	PI/Road Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.
ATWS-ALL-032	83.1	0.5	NA	N	N	PI/Road Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-034	83.2	0.3	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-ALL-035	83.3	0.4	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-ALL-036	83.9	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-038	84.6	0.4	NA	N	N	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
ATWS-ALL-229	84.8	0.1	Unnamed Waterbody	N	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would not assist with the waterbody crossing and is restricted by foreign pipelines.
ATWS-ALL-039	84.8	<0.1	ALL-WB-008	N	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-040	84.9	0.2	ALL-WB-008	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-041	85.4	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-042	85.8	0.1	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-ALL-043	85.8	0.1	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-ALL-044	85.8	0.1	Snooky's Rd	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-045	85.8	0.1	Snooky's Rd	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-046	86.1	<0.1	Getter Parker Rd	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-047	86.1	0.2	Geeter Parker Rd	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-048	86.2	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-049	86.2	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-050	86.3	0.4	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-051	86.9	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-052	87.1	0.1	ALL-WB-010	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-053	87.2	0.1	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-054	87.3	0.5	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-ALL-055	87.4	0.5	Unnamed RR / US Hwy 190	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-056	87.5	0.4	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-057	87.7	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-058	88.1	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-ALL-059	88.2	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-ALL-060	88.5	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-233	89.1	0.2	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-061	89.3	0.1	NA	N	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-062	89.4	0.2	Methodist Camp Rd	N	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-063	89.5	0.2	Methodist Camp Rd	N	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-064	89.9	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-065	90.0	0.3	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-067	90.6	<0.1	Shorty Rawlings Rd	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-068	90.6	0.2	Shorty Rawlings Rd	N	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-069	90.7	0.2	Shorty Rawlings Rd	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-071	90.8	0.5	NA	N	N	PI/Road Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.
ATWS-ALL-073	90.9	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-074	90.9	0.4	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-075	91.1	1.1	Whisky Chitto Creek	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-076	91.3	0.7	Whisky Chitto Creek	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-077	91.3	0.4	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-078	91.4	0.3	Whisky Chitto Creek	Y	Y	HDD Pullback Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.
ATWS-ALL-079	91.5	0.4	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-080	91.5	0.1	NA	N	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-081	92.0	0.3	NA	N	N	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-082	92.2	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-083	92.6	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-084	92.6	0.2	Carpenters Bridge Rd	N	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-085	92.9	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-086	93.1	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-087	93.2	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-088	93.3	0.1	Tennessee Gas	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-ALL-089	93.3	0.1	Tennessee Gas	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-090	93.5	0.1	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-091	93.5	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-092	93.7	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-093	94.2	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-ALL-094	94.5	0.7	Calcasieu River	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-095	94.7	1.0	Calcasieu River	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-096	94.8	0.3	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI, foreign pipeline crossing and the multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-098	94.8	0.4	TETCO (2)	N	Y	Foreign Pipeline / PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the PI, foreign pipeline crossing and the multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-099	95.2	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-100	95.3	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-101	95.3	0.1	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-102	95.7	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-ALL-103	95.7	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-ALL-105	96.0	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-108	96.1	0.1	ALL-WB-018	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and the multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-109	96.2	0.1	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-110	96.4	0.2	Unnamed Road	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-111	96.5	0.1	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-112	96.6	1.1	US Hwy 165 / Unnamed RR	Y	Y	HDD Pullback Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.
ATWS-ALL-113	96.6	0.3	Gulf South	Y	Y	PI / Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-ALL-114	96.7	0.5	US Hwy 165 / Unnamed RR	N	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-115	97.0	0.9	US Hwy 165 / Unnamed RR	N	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-116	97.0	<0.1	US Hwy 165 / Unnamed RR	N	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-117	97.0	<0.1	Botley Cemetery Rd	N	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Existing structures and the multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-118	97.0	0.2	Botley Cemetery Rd	N	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Existing structures and the multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-222	97.1	0.1	ALL-WB-024	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-119	97.1	0.2	ALL-WB-024	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-223	97.1	0.1	ALL-WB-024	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-120	97.1	0.2	ALL-WB-024	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-227	97.3	0.2	NA	N	N	Wetland Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment.
ATWS-ALL-228	97.6	0.2	Botley Cemetery Rd	N	Y	Wetland Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would not assist with the waterbody crossing and is restricted by foreign pipelines.
ATWS-ALL-121	97.6	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-122	97.7	0.1	Botley Cemetery Rd	N	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Moving the ATWS would not assist with the waterbody crossing and is restricted by foreign pipelines.
ATWS-ALL-123	97.8	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-124	97.8	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-125	97.9	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-127	98.1	0.2	NA	N	N	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-128	98.1	0.1	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-ALL-129	98.1	<0.1	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-ALL-130	98.2	<0.1	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-ALL-131	98.2	0.3	Tennessee Gas	Y	Y	PI / Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the PI, foreign pipelines paralleling the Sempra pipeline and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-132	98.2	0.1	Tennessee Gas	Y	Y	PI / Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the PI, foreign pipelines paralleling the Sempra pipeline and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-231	98.3	0.2	Unnamed Waterbody	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-ALL-232	98.4	0.2	Unnamed Waterbody	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-ALL-133	98.6	0.1	NA	Y	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-ALL-134	99.2	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-135	99.3	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-136	99.4	0.2	ALL-WB-026	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would not assist with the waterbody crossing and is restricted by foreign pipelines.
ATWS-ALL-137	99.7	0.2	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-138	99.8	0.1	Parish Rd 4-190e / Lauderdale Woodyard Rd	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-139	99.9	0.1	NA	N	Y	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-140	100.6	0.1	Left	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-141	100.6	0.3	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-142	100.6	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-143	100.7	0.1	ALL-WB-028	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-144	100.8	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-145	100.8	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-146	100.9	0.5	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-147	100.9	0.1	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-148	101.4	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-149	101.8	0.4	NA	N	N	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
ATWS-ALL-151	102.1	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-153	102.7	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-154	102.8	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-155	102.8	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-156	102.8	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-ALL-157	102.9	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-158	103.4	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-159	103.4	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-160	103.5	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-161	103.5	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-ALL-162	103.5	0.1	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-ALL-163	103.6	<0.1	LaFleur Rd	N	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Moving the ATWS would not assist with the road crossing and is restricted by foreign pipelines.
ATWS-ALL-164	103.6	0.1	LaFleur Rd	N	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Moving the ATWS would not assist with the road crossing and is restricted by foreign pipelines.
ATWS-ALL-165	103.6	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-166	104.2	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-167	104.3	0.3	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-168	104.4	0.1	Gulf South	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-171	104.4	0.1	Gulf South / Texas Gas	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-173	104.5	<0.1	Texas Gas / Gulf South	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-177	104.6	0.2	NA	N	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-178	104.7	0.1	ALL-WB-034	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-179	104.7	0.2	ALL-WB-034	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-180	104.7	0.1	ALL-WB-035	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-181	104.8	0.1	ALL-WB-035	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-182	104.9	0.1	Bel Oil Rd	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-183	104.9	0.1	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-ALL-184	105.0	0.2	Bel Oil Rd	Y	Y	Road Bore / PI Maintain through access for equipment and personnel. Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-ALL-185	105.0	0.1	NA	N	N	Road Bore/PI Maintain through access for equipment and personnel. Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
ATWS-ALL-186	105.1	0.3	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-187	105.1	0.1	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-ALL-188	105.3	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-189	105.9	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-190	106.0	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-ALL-193	106.0	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-ALL-194	106.5	<0.1	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-195	106.5	0.1	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-196	106.6	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-197	107.0	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-198	107.0	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-200	107.1	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-201	107.1	0.1	ALL-WB-038	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-ALL-202	107.3	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-203	107.4	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-ALL-204	107.5	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-ALL-205	108.0	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-ALL-206	108.1	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-ALL-207	108.1	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-208	108.4	0.2	ALL-WB-043	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-ALL-209	108.5	0.2	ALL-WB-043	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-ALL-210	108.6	0.2	ALL-WB-044	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-ALL-211	108.7	0.2	ALL-WB-044	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-ALL-212	108.8	0.2	ALL-WB-045	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-ALL-213	108.8	0.2	ALL-WB-045	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-ALL-214	109.1	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-ALL-215	109.7	0.2	Nezpique Bayou	Y	Y	HDD Pullback Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.
ATWS-ALL-216	109.7	0.5	Nezpique Bayou	Y	Y	HDD Pullback Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.
ATWS-ALL-217	109.8	0.1	Nezpique Bayou	Y	Y	HDD Pullback Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.
ATWS-ALL-218	109.8	0.1	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-219	109.9	0.1	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-220	109.9	0.6	Nezpique Bayou	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-ALL-221	109.9	0.1	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-EVA-001	110.1	0.2	NA	N	N	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
ATWS-EVA-002	110.1	1.1	NA	N	N	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
ATWS-EVA-003	110.2	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-EVA-004	110.3	0.2	EVA-WB-002	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would reduce the benefit for nearby spoil storage for the waterbody crossing.
ATWS-EVA-005	110.3	0.6	NA	N	N	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.
ATWS-EVA-006	110.6	1.9	NA	N	N	HDD Pullback Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area.
ATWS-EVA-007	110.7	0.9	Pond	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-EVA-008	110.9	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-EVA-009	110.9	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-EVA-010	111.0	0.2	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-EVA-011	111.1	0.2	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-EVA-012	111.3	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-EVA-013	111.5	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-EVA-014	111.6	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-EVA-015	111.8	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-EVA-016	111.9	0.2	EVA-WB-005	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would reduce the benefit for nearby spoil storage for the waterbody crossing.
ATWS-EVA-017	111.9	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-EVA-018	112.2	0.2	Ruby Rd	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-EVA-019	112.2	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-EVA-020	112.6	0.2	EVA-WB-006	N	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS farther away would reduce the benefit for nearby spoil storage for the waterbody crossing.
ATWS-EVA-021	112.7	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-EVA-022	112.7	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-EVA-023	113.4	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-EVA-025	113.5	0.1	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-EVA-024	113.5	0.1	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-EVA-072	113.6	0.1	NA	N	N	Proposed Egan Lateral Additional staging area and equipment needs for construction of lateral.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-EVA-073	113.6	0.1	NA	N	N	Proposed Egan Lateral Additional staging area and equipment needs for construction of lateral.
ATWS-EVA-074	113.6	0.1	NA	N	N	Proposed Egan Lateral Additional staging area and equipment needs for construction of lateral.
ATWS-EVA-027	113.7	0.1	NA	N	N	Egan Tie-In Additional staging area and equipment needs for tie-in including bell hole installation for the T section and additional spoil area.
ATWS-EVA-028	114.0	0.1	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-EVA-029	114.0	0.1	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-EVA-030	114.1	0.1	NA	N	N	Road Bore/PI Maintain through access for equipment and personnel. Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
ATWS-EVA-031	114.1	0.2	NA	N	N	Road Bore/PI Maintain through access for equipment and personnel. Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
ATWS-EVA-032	114.2	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-EVA-033	114.7	0.1	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-EVA-071	114.7	<0.1	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-EVA-034	114.8	0.1	NA	N	N	Pine Prairie Tie-In Additional staging area and equipment needs for tie-in including bell hole installation for the T section and additional spoil area.
ATWS-EVA-035	114.8	0.1	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-EVA-070	114.8	0.2	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-EVA-036	114.8	0.1	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-EVA-037	114.9	0.2	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-EVA-038	115.0	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-EVA-039	115.6	0.2	Texas Gas	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-EVA-040	115.6	0.1	Texas Gas	N	Y	Texas Gas Tie-In Additional staging area and equipment needs for tie-in including bell hole installation for the T section and additional spoil area. The location of the tie-in and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-EVA-041	115.7	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-EVA-042	115.8	0.4	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-EVA-043	115.8	0.4	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-EVA-044	116.1	0.1	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-EVA-045	116.1	0.1	NA	N	N	ANR Tie-Ins Additional staging area and equipment needs for tie-in including bell hole installation for the T section and additional spoil area.
ATWS-EVA-046	116.2	0.2	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-EVA-047	116.5	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-EVA-048	116.8	0.2	NA	N	N	Road Open Cut Additional staging area and equipment needs for open cut crossing.
ATWS-EVA-049	116.8	0.2	NA	N	N	Road Open Cut Additional staging area and equipment needs for open cut crossing.
ATWS-EVA-050	117.3	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-EVA-051	117.3	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-EVA-052	117.3	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-EVA-053	117.6	0.1	NA	N	N	Foreign Pipeline/Road Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-EVA-054	117.6	0.2	NA	N	N	Foreign Pipeline/Road Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-EVA-055	117.8	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-EVA-056	117.8	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-EVA-057	117.9	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-EVA-058	118.0	0.2	EVA-WB-010	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS farther away would reduce the benefit for nearby spoil storage for the waterbody crossing.
ATWS-EVA-059	118.2	0.1	Targa (2) / Phillips 66	N	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-EVA-060	118.3	0.2	Targa (2) / Phillips 66	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-EVA-061	118.4	0.2	EVA-WB-011	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS farther away would reduce the benefit for nearby spoil storage for the waterbody crossing.
ATWS-EVA-062	118.4	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-EVA-063	118.7	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-EVA-064	118.7	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-EVA-065	118.8	0.2	EVA-WB-012	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-EVA-067	118.8	<0.1	Phillips 66	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-EVA-068	118.8	0.1	Phillips 66	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-EVA-069	118.9	1.0	Des Cannes Bayou	Y	Y	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-STL-001	119.2	0.7	Des Cannes Bayou	Y	Y	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.
ATWS-STL-002	119.5	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-STL-003	120.0	0.2	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-STL-004	120.1	<0.1	NA	N	N	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-STL-007	120.7	0.1	Lion Oil	N	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-STL-010	120.7	0.2	Lion Oil	Y	Y	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.
ATWS-STL-011	120.8	0.5	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-STL-012	120.8	0.3	TETCO (2)	N	Y	Foreign Pipeline / PI / Road Bore Additional staging area and equipment needs for Bore entry/exit and PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI,: personnel parking/staging, parallel pipeline stringing, bore pit, extra bore pit spoil, daylighting foreign pipeline spoil. Moving the ATWS farther away would reduce the benefit pipeline construction.
ATWS-STL-014	120.9	0.1	State Route 13	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Moving the ATWS farther away would reduce the benefit for nearby spoil storage for the road crossing.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-STL-015	121.0	0.3	State Route 13	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Moving the ATWS farther away would reduce the benefit for nearby spoil storage for the road crossing.
ATWS-STL-016	121.0	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-STL-017	121.4	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-018	121.4	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-019	121.7	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-STL-020	121.7	0.1	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-STL-021	121.8	0.1	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-082	121.8	<0.1	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-022	121.8	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-STL-023	121.8	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-STL-024	121.9	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-025	122.0	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-026	122.4	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-027	122.5	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-029	122.5	0.4	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.
ATWS-STL-030	122.6	0.4	NA	N	N	PI/Foreign Pipeline Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-STL-031	123.4	0.2	Parish Rd 6-270 / Carl Loewer Rd	Y	Y	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The entire surrounding area is wetlands. Moving the ATWS to the East is restricted by existing structures. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-STL-033	123.5	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-STL-034	123.7	0.3	NA	N	N	PI/Road Bore Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-STL-035	123.8	0.7	NA	N	N	PI/Road Bore Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-STL-036	124.2	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-STL-037	124.6	0.1	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-038	124.7	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-039	124.7	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-STL-040	125.0	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-041	125.0	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-042	125.5	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-043	125.5	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-044	125.5	0.1	NA	N	N	Turnaround/Road/PI Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, equipment turn-around area, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
ATWS-STL-045	125.6	0.3	NA	N	N	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.
ATWS-STL-046	125.8	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-STL-047	125.8	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-STL-048	125.9	0.1	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-049	126.0	0.1	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-050	126.1	0.1	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-052	126.5	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-053	126.6	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-055	127.1	0.2	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-056	127.4	0.2	STL-WB-010	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-STL-057	127.5	0.5	State Route 95 / Etienne Rd	Y	Y	Road Bore / PI Maintain through access for equipment and personnel. Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-STL-058	127.6	0.6	State Route 95 / Etienne Rd	Y	Y	Road Bore / PI Maintain through access for equipment and personnel. Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-STL-060	128.1	0.5	STL-WB-011	Y	Y	Waterbody/PI Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-STL-061	128.3	0.2	STL-WB-011	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-STL-063	128.8	0.6	NA	Y	Y	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-STL-064	129.0	0.1	STL-WB-015	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-STL-065	129.0	0.1	STL-WB-016	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-STL-066	129.1	0.2	STL-WB-016	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-STL-067	129.4	0.1	NA	N	N	Turnaround Additional staging area and equipment needs including parking and equipment turn-around area.
ATWS-STL-068	129.5	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-069	129.6	0.2	NA	N	N	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-070	129.6	0.1	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-071	129.7	0.1	STL-WB-017	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-STL-072	129.8	0.1	STL-WB-018	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.

APPENDIX D-2 (cont'd)

Additional Temporary Workspace for the Louisiana Connector Project

ATWS ID	Milepost	Affected Acreage	Feature Crossed	Wetlands		Site-Specific Justification
				Within ATWS	Within 50 ft. of ATWS	
ATWS-STL-073	129.9	0.2	STL-WB-018	Y	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-STL-074	130.0	0.2	Parish Rd 6-105 / Belleau Rd	Y	Y	Road Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.
ATWS-STL-075	130.1	0.5	NA	N	N	Road/PI
ATWS-STL-077	130.3	0.1	NA	N	N	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing.
ATWS-STL-078	130.3	0.1	STL-WB-019	N	Y	Waterbody Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS to the North side would not assist with the waterbody crossing and is restricted by foreign pipelines.
ATWS-STL-079	130.6	0.2	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-STL-080	130.6	0.3	NA	N	N	Road Bore Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.
ATWS-STL-081	130.8	0.1	NA	N	N	CGT Tie-Ins Additional staging area and equipment needs for tie-in including bell hole installation for the T section and additional spoil area.

APPENDIX E

PROPOSED ACCESS ROADS FOR THE TEXAS CONNECTOR AND LOUISIANA CONNECTOR PROJECTS

PROPOSED ACCESS ROADS FOR THE TEXAS CONNECTOR PROJECT

APPENDIX E-1

Proposed Access Roads for the Texas Connector Project

Segment/Access Road Name	Milepost	Existing Land Uses	New/Existing	Temporary/ Permanent	Ownership	Construction Impacts (acres)	Operation Impacts (acres)	Length (miles)	Improvements Required
Southern Pipeline									
AR-S-1	0.1	Roads/Transportation	Partially Existing	Temporary	Private/State	4.1	0.0	0.9	Widen/Regrade
AR-S-2	2.2	Roads/Transportation	Existing	Temporary	Local/State	0.8	0.0	0.2	Widen/Regrade
AR-S-3	2.9	Roads/Transportation, Open Land	New	Temporary	Private	0.7	0.0	0.2	To be constructed
AR-S-4	3.6	Roads/Transportation	Existing	Temporary	Private	1.1	0.0	0.2	Widen/Regrade
AR-S-5	3.7	Roads/Transportation	New	Permanent	Private	0.0	0.2	<0.1	Widen/Regrade
AR-S-6	4.9	Roads/Transportation	Existing	Temporary	Private	1.3	0.0	0.3	Widen/Regrade
AR-S-7	7.2	Roads/Transportation	Existing	Temporary	Private	0.9	0.0	0.2	Widen/Regrade
AR-S-8	7.4	Roads/Transportation	Existing	Temporary	Private	0.8	0.0	0.2	Widen/Regrade
AR-S-9	7.6	Roads/Transportation	Existing	Temporary	Private	0.6	0.0	0.1	Widen/Regrade
AR-S-10	7.6	Roads/Transportation	Existing	Permanent	Private	0.0	1.2	0.2	Widen/Regrade
Southern Pipeline Subtotal						**10.3**	**1.3**	**2.4**	
Northern Pipeline									
AR-N-1	1.5	Roads/Transportation	Existing	Temporary	Private	4.5	0.0	0.9	Widen/Regrade
AR-N-2	6.0	Roads/Transportation	Existing	Temporary	Private/State	11.1	0.0	2.3	Widen/Regrade
AR-N-3	7.2	Roads/Transportation	Existing	Temporary	Private	5.2	0.0	1.1	Widen/Regrade
AR-N-4	7.9	Roads/Transportation	Existing	Temporary	Private	1.4	0.0	0.3	Widen/Regrade
AR-N-5	8.2	Roads/Transportation	Existing	Temporary	Private	0.3	0.0	0.1	Widen/Regrade
AR-N-6	9.6	Roads/Transportation	Existing	Temporary	Private/Local	6.0	0.0	1.3	Widen/Regrade
AR-N-7	9.6	Open Land, Wetland	New	Temporary	Private	0.1	0.0	<0.1	To be constructed
AR-N-8	11.3	Roads/Transportation	Existing	Temporary	Private	2.6	0.0	0.5	Widen/Regrade
AR-N-9	11.6	Roads/Transportation	Existing	Temporary	Private	0.3	0.0	0.1	Widen/Regrade
AR-N-10	12.4	Roads/Transportation	Existing	Temporary	Private	3.5	0.0	0.7	Widen/Regrade
AR-N-11	12.9	Roads/Transportation	Existing	Temporary	Private/Other	2.3	0.0	0.5	Widen/Regrade
AR-N-12	13.6	Roads/Transportation	Partially Existing	Temporary	Private/Other	8.0	0.0	1.6	Widen/Regrade
AR-N-13	14.2	Roads/Transportation	Existing	Temporary	Private/Other	0.9	0.0	0.2	Widen/Regrade
AR-N-14	14.8	Roads/Transportation	Existing	Temporary	Private/Other	1.4	0.0	0.3	Widen/Regrade
AR-N-15	15.7	Roads/Transportation	Existing	Temporary	Private	0.1	0.0	<0.1	Widen/Regrade
AR-N-16	17.3	Roads/Transportation	Existing	Temporary	Private	1.1	0.0	0.2	Widen/Regrade
AR-N-17	18.1	Open Land, Open Water	New	Temporary	Private	0.1	0.0	<0.1	To be constructed
AR-N-20	18.2	Roads/Transportation	Existing	Temporary	Private	8.5	0.0	1.8	Widen/Regrade
AR-N-18	18.8	Roads/Transportation	Existing	Temporary	Private	2.3	0.0	0.5	Widen/Regrade

APPENDIX E-1 (cont'd)

Proposed Access Roads for the Texas Connector Project

Segment/Access Road Name	Milepost	Existing Land Uses	New/Existing	Temporary/ Permanent	Ownership	Construction Impacts (acres)	Operation Impacts (acres)	Length (miles)	Improvements Required
AR-N-19	19.3	Roads/Transportation	Existing	Temporary	Private	4.1	0.0	0.9	Widen/Regrade
AR-N-21	19.6	Roads/Transportation	Partially Existing	Temporary	Private	1.9	0.0	0.4	Widen/Regrade
AR-N-22	20.2	Forest/Woodland, Open Land	New	Permanent	Private	0.0	0.3	0.1	To be constructed
AR-N-28	20.8	Roads/Transportation	Partially Existing	Temporary	Private	0.9	0.0	0.2	Widen/Regrade
AR-N-23	21.5	Roads/Transportation	Existing	Temporary	Private	4.3	0.0	0.9	Widen/Regrade
AR-N-24	22.4	Roads/Transportation	Existing	Temporary	Private	8.6	0.0	1.8	Widen/Regrade
AR-N-25	23.6	Roads/Transportation	Existing	Temporary	Private	8.9	0.0	1.8	Widen/Regrade
AR-N-26	23.7	Roads/Transportation	Partially Existing	Temporary	Private	0.7	0.0	0.2	Widen/Regrade
AR-N-27	25.2	Roads/Transportation	Existing	Temporary	Private	3.1	0.0	0.7	Widen/Regrade
AR-N-29	25.7	Forest/Woodland, Open Land	New	Permanent	Private	0.3	0.3	0.1	To be constructed
Northern Pipeline Subtotal						**92.3**	**0.5**	**19.2**	
Laterals									
GTS Lateral									
AR-GTS-1	0.5	Roads/Transportation	Partially Existing	Temporary	Private	0.8	0.0	0.2	Widen/Regrade
AR-GTS-2	1.3	Roads/Transportation	Partially Existing	Permanent	Private/Unknown	1.0	1.0	0.2	Widen/Regrade
FGT Lateral									
AR-FGT-1	0.8	Roads/Transportation	Existing	Temporary	Private	0.8	0.0	0.2	Widen/Regrade
AR-FGT-2	1.2	Roads/Transportation	Existing	Temporary	Private	0.9	0.0	0.2	Widen/Regrade
AR-FGT-3 [a]	1.8	Forest/Woodland, Open Land	New	Permanent	Private	0.0	0.0	0.1	To be constructed
HPL Lateral									
AR-HPL-1	1.0	Roads/Transportation	Existing	Temporary	Private	0.5	0.5	0.1	Widen/Regrade
NGPL Lateral									
AR-NGPL-1	0.2	Open Land, Roads/Transportation, Open Water	New	Temporary	Private	0.1	0.0	<0.1	To be constructed
TETCO Lateral									
AR-TETCO-1	0.1	Roads/Transportation	Existing	Permanent	Private	0.7	0.7	0.2	Widen/Regrade
Laterals Subtotal						**4.8**	**2.2**	**1.0**	
Access Road Totals						**107.4**	**4.1**	**22.7**	

[a] AR-FGT-3 is located inside the permanent right-of-way.

Note: Addends may not sum due to rounding.

PROPOSED ACCESS ROADS FOR THE LOUISIANA CONNECTOR PROJECT

APPENDIX E-2

Proposed Access Roads for the Louisiana Connector Project

Segment/Access Road Name	Milepost	Existing Surface	Status of Improvement/Type [a]	Construction Impacts (acres)	Operation Impacts (acres)	Length (miles)	Improvements Required
WR-JEF-07	0.3	Water	NA	0.0	0.0	11.5	NA
WR-JEF-01	12.8	Water	NA	0.0	0.0	3.2	NA
WR-CAM-02A	17.5	Water	NA	0.0	0.0	0.6	NA
AR-CAM-01	18.1	New	Temporary Improvements/ Restored	0.7	0.0	0.1	Grade, Widen, Gravel
WR-CAM-07	19.0	Water	NA	0.0	0.0	0.3	NA
WR-CAM-01	19.0	Water	NA	0.0	0.0	2.5	NA
AR-CAM-01A	19.2	New	Temporary Improvements/ Restored	0.7	0.0	0.1	Grade, Widen, Gravel
AR-CAM-02	20.3	New	Temporary Improvements/ Restored	1.5	0.0	0.3	Grade, Widen, Gravel
WR-CAM-03	20.5	Water	NA	0.0	0.0	0.1	NA
WR-CAM-02	22.3	Water	NA	0.0	0.0	1.0	NA
WR-CAM-02	22.3	Water	NA	0.0	0.0	3.9	NA
AR-CAM-03A	25.7	New	Temporary Improvements/ Restored	5.1	0.0	1.1	Grade, Widen, Gravel
AR-CAM-03B	26.1	Dirt	No Improvements/ Temporary Use	1.2	0.0	0.8	NA
AR-CAM-03B	26.1	Dirt	Temporary Improvements/ Restored	0.2	0.0	0.0	Grade, Widen, Gravel
WR-CAL-01	26.4	Water	NA	0.0	0.0	0.1	NA
AR-CAM-03C	26.5	Dirt	No Improvements/ Temporary Use	0.7	0.0	0.5	NA
AR-CAM-03C	26.5	New	Permanently Improved	1.0	1.0	0.2	Grade, Widen, Gravel
WR-CAL-02	26.5	Water	NA	0.0	0.0	0.1	NA
WR-CAL-03	27.0	Water	NA	0.0	0.0	0.1	NA
AR-CAL-01A	27.5	New	Permanently Improved	1.0	1.0	0.2	Grade, Widen, Gravel
WR-CAL-04	27.5	Water	NA	0.0	0.0	0.1	NA
WR-CAM-04	27.9	Water	NA	0.0	0.0	17.7	NA
WR-CAL-05	28.2	Water	NA	0.0	0.0	0.2	NA
AR-CAL-01B	28.4	New	Temporary Improvements/ Restored	0.7	0.0	0.2	Grade, Widen, Gravel
AR-CAL-02A	30.7	New	No Improvements/ Temporary Use	0.6	0.0	0.1	NA
WR-CAL-06	30.8	Water	NA	0.0	0.0	0.4	NA
AR-CAL-03	30.8	New	Temporary Improvements/ Restored	0.3	0.0	0.1	Grade, Widen, Gravel
AR-CAL-04	32.9	Gravel	No Improvements/ Temporary Use	1.5	0.0	1.1	NA
AR-CAL-04A	32.9	New	Permanently Improved	0.2	0.2	0.0	Grade, Widen, Gravel
WR-CAL-07	32.9	Water	NA	0.0	0.0	0.1	NA
AR-CAL-05	33.7	Dirt	No Improvements/ Temporary Use	2.3	0.0	1.3	NA
AR-CAL-05	33.7	Dirt	Temporary Improvements/ Restored	0.5	0.0	0.1	Grade, Widen, Gravel

APPENDIX E-2 (cont'd)

Proposed Access Roads for the Louisiana Connector Project

Segment/Access Road Name	Milepost	Existing Surface	Status of Improvement/Type [a]	Construction Impacts (acres)	Operation Impacts (acres)	Length (miles)	Improvements Required
WR-CAL-08	34.7	Water	NA	0.0	0.0	0.2	NA
AR-CAL-05A	34.8	Dirt	Temporary Improvements/ Restored	1.3	0.0	0.3	Grade, Widen, Gravel
AR-CAL-06	35.8	Gravel	No Improvements/ Temporary Use	0.8	0.0	0.8	NA
AR-CAL-06A	36.5	Dirt	Temporary Improvements/ Restored	7.1	0.0	1.5	Grade, Widen, Gravel
AR-CAL-07	37.6	Gravel	No Improvements/ Temporary Use	0.8	0.0	0.7	NA
AR-CAL-08	38.9	Gravel	No Improvements/ Temporary Use	0.4	0.0	0.3	NA
AR-CAL-08	38.9	Dirt	Temporary Improvements/ Restored	0.9	0.0	0.2	Grade, Widen, Gravel
AR-CAL-09	39.9	Gravel	No Improvements/ Temporary Use	0.2	0.0	0.2	NA
AR-CAL-10A	40.4	Gravel	No Improvements/ Temporary Use	0.3	0.0	0.3	NA
AR-CAL-10A	40.4	New	Temporary Improvements/ Restored	1.0	0.0	0.2	Grade, Widen, Gravel
AR-CAL-11A	40.5	Gravel	No Improvements/ Temporary Use	<0.1	0.0	0.0	NA
AR-CAL-11A	40.5	Dirt	Temporary Improvements/ Restored	0.6	0.0	0.1	Grade, Widen, Gravel
AR-CAL-13A	41.5	Gravel	No Improvements/ Temporary Use	0.4	0.0	0.3	NA
AR-CAL-17A	43.2	Dirt	Temporary Improvements/ Restored	0.5	0.0	0.1	Grade, Widen, Gravel
AR-CAL-17B	43.6	New	Permanently Improved	<0.1	<0.1	0.0	Grade, Widen, Gravel
AR-CAL-23	46.5	New	Temporary Improvements/ Restored	0.3	0.0	0.1	Grade, Widen, Gravel
AR-CAL-23A	47.0	New	Permanently Improved	1.0	1.0	0.2	Grade, Widen, Gravel
AR-CAL-24A	47.3	Dirt	Temporary Improvements/ Restored	1.6	0.0	0.3	Grade, Widen, Gravel
AR-CAL-27A	47.9	New	Temporary Improvements/ Restored	2.2	0.0	0.4	Grade, Widen, Gravel
AR-CAL-27B	48.2	Asphalt	No Improvements/ Temporary Use	0.2	0.0	0.2	NA
AR-CAL-27B	48.2	New	Temporary Improvements/ Restored	1.0	0.0	0.2	Grade, Widen, Gravel
AR-CAL-30	48.5	Dirt	No Improvements/ Temporary Use	0.2	0.0	0.1	NA
AR-CAL-31	49.8	Dirt	Temporary Improvements/ Restored	4.8	0.0	1.0	Grade, Widen, Gravel
AR-CAL-32	50.1	New	Temporary Improvements/ Restored	0.6	0.0	0.1	Grade, Widen, Gravel
AR-CAL-33	50.9	New	Permanently Improved	0.5	0.5	0.1	Grade, Widen, Gravel
AR-CAL-34	51.0	Gravel	No Improvements/ Temporary Use	0.1	0.0	0.1	NA
AR-CAL-38	54.6	Gravel	No Improvements/ Temporary Use	0.2	0.0	0.1	NA
AR-CAL-38	54.6	Dirt	No Improvements/ Temporary Use	0.8	0.0	0.7	NA
AR-CAL-38	54.6	Dirt	Temporary Improvements/ Restored	1.6	0.0	0.3	Grade, Widen, Gravel
AR-CAL-39	54.8	Gravel	No Improvements/ Temporary Use	0.9	0.0	0.5	NA
AR-CAL-39	54.8	New	Permanently Improved	1.0	1.0	0.2	Grade, Widen, Gravel
AR-CAL-43	56.3	Gravel	No Improvements/ Temporary Use	0.1	0.0	0.1	NA
AR-CAL-43	56.3	New	Temporary Improvements/ Restored	0.2	0.0	0.0	Grade, Widen, Gravel

APPENDIX E-2 (cont'd)

Proposed Access Roads for the Louisiana Connector Project

Segment/Access Road Name	Milepost	Existing Surface	Status of Improvement/Type [a]	Construction Impacts (acres)	Operation Impacts (acres)	Length (miles)	Improvements Required
AR-CAL-44	56.6	Dirt	Temporary Improvements/ Restored	<0.1	0.0	0.0	Grade, Widen, Gravel
AR-CAL-45	56.6	Gravel	Temporary Improvements/ Restored	<0.1	0.0	0.0	Grade, Widen, Gravel
AR-CAL-46A	56.7	Dirt	Temporary Improvements/ Restored	0.7	0.0	0.1	Grade, Widen, Gravel
AR-CAL-47	57.4	Dirt	Temporary Improvements/ Restored	4.0	0.0	0.8	Grade, Widen, Gravel
AR-CAL-47A	58.8	Gravel	No Improvements/ Temporary Use	<0.1	0.0	0.0	NA
AR-CAL-47B	58.9	New	Temporary Improvements/ Restored	0.1	0.0	0.0	Grade, Widen, Gravel
AR-CAL-48	59.0	Gravel	No Improvements/ Temporary Use	2.8	0.0	1.6	NA
AR-CAL-49	59.0	Gravel	No Improvements/ Temporary Use	1.0	0.0	0.6	NA
AR-CAL-49A	59.7	Dirt	Temporary Improvements/ Restored	0.8	0.0	0.2	Grade, Widen, Gravel
AR-CAL-50	60.0	Dirt	Temporary Improvements/ Restored	0.9	0.0	0.2	Grade, Widen, Gravel
AR-CAL-51	61.1	Gravel	No Improvements/ Temporary Use	8.7	0.0	2.9	NA
AR-CAL-52	61.6	Gravel	No Improvements/ Temporary Use	1.9	0.0	1.5	NA
AR-CAL-53	62.2	Gravel	No Improvements/ Temporary Use	1.2	0.0	0.9	NA
AR-CAL-53A	63.0	Dirt	No Improvements/ Temporary Use	<0.1	0.0	0.0	NA
AR-CAL-54	63.6	Dirt	Temporary Improvements/ Restored	0.4	0.0	0.1	Grade, Widen, Gravel
AR-CAL-55	63.6	Gravel	No Improvements/ Temporary Use	1.5	0.0	0.8	NA
AR-CAL-55	63.6	Dirt	Temporary Improvements/ Restored	1.3	0.0	0.3	Grade, Widen, Gravel
AR-CAL-56	63.8	Dirt	Temporary Improvements/ Restored	0.4	0.0	0.1	Grade, Widen, Gravel
AR-CAL-57	64.7	Gravel	No Improvements/ Temporary Use	9.7	0.0	4.0	NA
AR-CAL-58	65.1	Gravel	No Improvements/ Temporary Use	0.4	0.0	0.2	NA
AR-CAL-58	65.1	New	Temporary Improvements/ Restored	0.2	0.0	0.1	Grade, Widen, Gravel
AR-CAL-59	65.7	Gravel	No Improvements/ Temporary Use	0.1	0.0	0.1	NA
AR-CAL-59	65.7	Dirt	Temporary Improvements/ Restored	1.6	0.0	0.3	Grade, Widen, Gravel
AR-CAL-60	66.1	Gravel	No Improvements/ Temporary Use	0.1	0.0	0.0	NA
AR-CAL-61	66.1	Gravel	No Improvements/ Temporary Use	1.7	0.0	1.4	NA
AR-CAL-62	66.2	Dirt	Temporary Improvements/ Restored	2.1	0.0	0.4	Grade, Widen, Gravel
AR-BEA-01	68.2	Gravel	No Improvements/ Temporary Use	0.7	0.0	0.4	NA
AR-BEA-01	68.2	Dirt	Temporary Improvements/ Restored	1.4	0.0	0.3	Grade, Widen, Gravel
AR-BEA-02	68.2	Gravel	No Improvements/ Temporary Use	0.2	0.0	0.1	NA
AR-BEA-03	69.3	Dirt	Temporary Improvements/ Restored	2.2	0.0	0.5	Grade, Widen, Gravel
AR-BEA-04	69.9	Gravel	No Improvements/ Temporary Use	1.4	0.0	0.8	NA
AR-BEA-04	69.9	New	Temporary Improvements/ Restored	0.4	0.0	0.1	Grade, Widen, Gravel
AR-BEA-04B	70.6	New	Permanently Improved	1.0	1.0	0.0	Grade, Widen, Gravel

APPENDIX E-2 (cont'd)

Proposed Access Roads for the Louisiana Connector Project

Segment/Access Road Name	Milepost	Existing Surface	Status of Improvement/Type [a]	Construction Impacts (acres)	Operation Impacts (acres)	Length (miles)	Improvements Required
AR-BEA-05	71.4	Gravel	No Improvements/ Temporary Use	0.9	0.0	0.5	NA
AR-BEA-12	72.2	New	Permanently Improved	0.5	0.5	0.1	Grade, Widen, Gravel
AR-BEA-06A	72.3	New	Temporary Improvements/ Restored	<0.1	0.0	0.0	Grade, Widen, Gravel
AR-BEA-06	72.3	New	Permanently Improved	0.45	0.5	0.1	Grade, Widen, Gravel
AR-BEA-06B	72.5	New	Temporary Improvements/ Restored	<0.1	0.0	0.0	Grade, Widen, Gravel
AR-BEA-07	73.9	Dirt	Temporary Improvements/ Restored	2.4	0.0	0.5	Grade, Widen, Gravel
AR-BEA-08	74.6	Dirt	Temporary Improvements/ Restored	0.9	0.0	0.2	Grade, Widen, Gravel
AR-BEA-09	75.2	Gravel	No Improvements/ Temporary Use	3.3	0.0	2.1	NA
AR-BEA-10	75.7	Dirt	No Improvements/ Temporary Use	1.0	0.0	0.6	NA
AR-BEA-11	76.7	New	Permanently Improved	0.2	0.2	0.0	Grade, Widen, Gravel
AR-ALL-01	77.6	Dirt	Temporary Improvements/ Restored	2.9	0.0	0.6	Grade, Widen, Gravel
AR-ALL-01A	77.9	Dirt	Temporary Improvements/ Restored	0.5	0.0	0.1	Grade, Widen, Gravel
AR-ALL-03	81.3	Gravel	No Improvements/ Temporary Use	3.0	0.0	1.4	NA
AR-ALL-04	85.0	Dirt	No Improvements/ Temporary Use	0.9	0.0	0.8	NA
AR-ALL-05	87.1	Gravel	No Improvements/ Temporary Use	3.5	0.0	1.8	NA
AR-ALL-05	87.1	New	Permanently Improved	1.6	1.6	0.3	Grade, Widen, Gravel
AR-ALL-06	89.9	Asphalt	No Improvements/ Temporary Use	0.6	0.0	0.2	NA
AR-ALL-07	90.7	Dirt	No Improvements/ Temporary Use	0.8	0.0	0.1	NA
AR-ALL-08	91.0	Dirt	No Improvements/ Temporary Use	0.2	0.0	0.2	NA
AR-ALL-09	93.9	Dirt	Temporary Improvements/ Restored	1.1	0.0	0.2	Grade, Widen, Gravel
AR-ALL-10A	96.0	New	Temporary Improvements/ Restored	<0.1	0.0	0.0	Grade, Widen, Gravel
AR-ALL-10D	96.1	New	Temporary Improvements/ Restored	<0.1	0.0	0.0	Grade, Widen, Gravel
AR-ALL-09C	96.1	Dirt	No Improvements/ Temporary Use	0.1	0.0	0.0	NA
AR-ALL-10E	96.2	New	Permanently Improved	<0.1	<0.1	0.0	Grade, Widen, Gravel
AR-ALL-10B	96.3	New	Permanently Improved	<0.1	<0.1	0.0	Grade, Widen, Gravel
AR-ALL-10F	96.4	New	Permanently Improved	0.2	0.2	0.1	Grade, Widen, Gravel
AR-ALL-10	96.4	Gravel	No Improvements/ Temporary Use	0.5	0.0	0.3	NA
AR-ALL-10G	98.0	Dirt	No Improvements/ Temporary Use	0.9	0.0	0.5	NA
AR-ALL-10H	98.0	Dirt	Temporary Improvements/ Restored	3.3	0.0	0.7	Grade, Widen, Gravel
AR-ALL-11	100.5	Dirt	Temporary Improvements/ Restored	0.9	0.0	0.2	Grade, Widen, Gravel
AR-ALL-12	101.2	Dirt	No Improvements/ Temporary Use	0.2	0.0	0.2	NA
AR-ALL-13	101.8	Dirt	Temporary Improvements/ Restored	2.0	0.0	0.4	Grade, Widen, Gravel
AR-ALL-14	102.3	Dirt	Temporary Improvements/ Restored	3.3	0.0	0.7	Grade, Widen, Gravel

APPENDIX E-2 (cont'd)

Proposed Access Roads for the Louisiana Connector Project

Segment/Access Road Name	Milepost	Existing Surface	Status of Improvement/Type [a]	Construction Impacts (acres)	Operation Impacts (acres)	Length (miles)	Improvements Required
AR-ALL-15	102.9	Gravel	No Improvements/ Temporary Use	1.5	0.0	0.6	NA
AR-ALL-15F	106.0	Dirt	Temporary Improvements/ Restored	<0.1	0.0	0.0	Grade, Widen, Gravel
AR-ALL-15G	106.0	New	Temporary Improvements/ Restored	<0.1	0.0	0.0	Grade, Widen, Gravel
AR-ALL-16	107.0	Gravel	No Improvements/ Temporary Use	0.6	0.0	0.3	NA
AR-ALL-17	108.0	Gravel	No Improvements/ Temporary Use	3.5	0.0	1.3	NA
AR-EVA-01	110.9	Dirt	Temporary Improvements/ Restored	2.2	0.0	0.4	Grade, Widen, Gravel
AR-EVA-02	113.3	Gravel	No Improvements/ Temporary Use	0.2	0.0	0.1	NA
AR-EVA-03	113.6	Dirt	Temporary Improvements/ Restored	0.1	0.0	0.0	Grade, Widen, Gravel
AR-EVA-03A	113.7	New	Permanently Improved	0.1	0.1	0.0	Grade, Widen, Gravel
AR-EVA-04	114.7	Gravel	No Improvements/ Temporary Use	0.4	0.0	0.3	NA
AR-EVA-05	115.3	Dirt	No Improvements/ Temporary Use	0.5	0.0	0.4	NA
AR-EVA-05	115.3	New	Permanently Improved	0.2	0.2	0.0	Grade, Widen, Gravel
AR-EVA-05B	115.7	Dirt	Temporary Improvements/ Restored	<0.1	0.0	0.0	Grade, Widen, Gravel
AR-EVA-05C	116.0	New	Permanently Improved	<0.1	<0.1	0.0	Grade, Widen, Gravel
AR-EVA-06	117.6	Gravel	No Improvements/ Temporary Use	0.2	0.0	0.1	NA
AR-STL-01A	120.5	Dirt	Temporary Improvements/ Restored	0.1	0.0	0.0	Grade, Widen, Gravel
AR-STL-01D	120.5	New	Temporary Improvements/ Restored	<0.1	0.0	0.0	Grade, Widen, Gravel
AR-STL-01B	120.8	Gravel	No Improvements/ Temporary Use	0.1	0.0	0.0	NA
AR-STL-01B	120.8	Dirt	Temporary Improvements/ Restored	0.1	0.0	0.0	Grade, Widen, Gravel
AR-STL-01	121.2	Dirt	Temporary Improvements/ Restored	0.3	0.0	0.1	Grade, Widen, Gravel
AR-STL-01C	122.4	Dirt	Temporary Improvements/ Restored	0.6	0.0	0.1	Grade, Widen, Gravel
AR-STL-04	123.4	New	Temporary Improvements/ Restored	0.5	0.0	0.1	Grade, Widen, Gravel
AR-STL-14	130.8	New	Permanently Improved	<0.1	<0.1	0.0	Grade, Widen, Gravel
Access Road Totals				**144.9**	**8.2**	**93.9**	

[a] Permanently Improved access roads require improvements, would be used during operations, and are considered permanent impacts. No Improvements/ Temporary Use access roads do not require improvements, would only be used during construction, and are considered temporary impacts. Temporary Improved/ Restored access roads only require improvements during construction, would be returned to pre-construction conditions, and are considered temporary impacts.

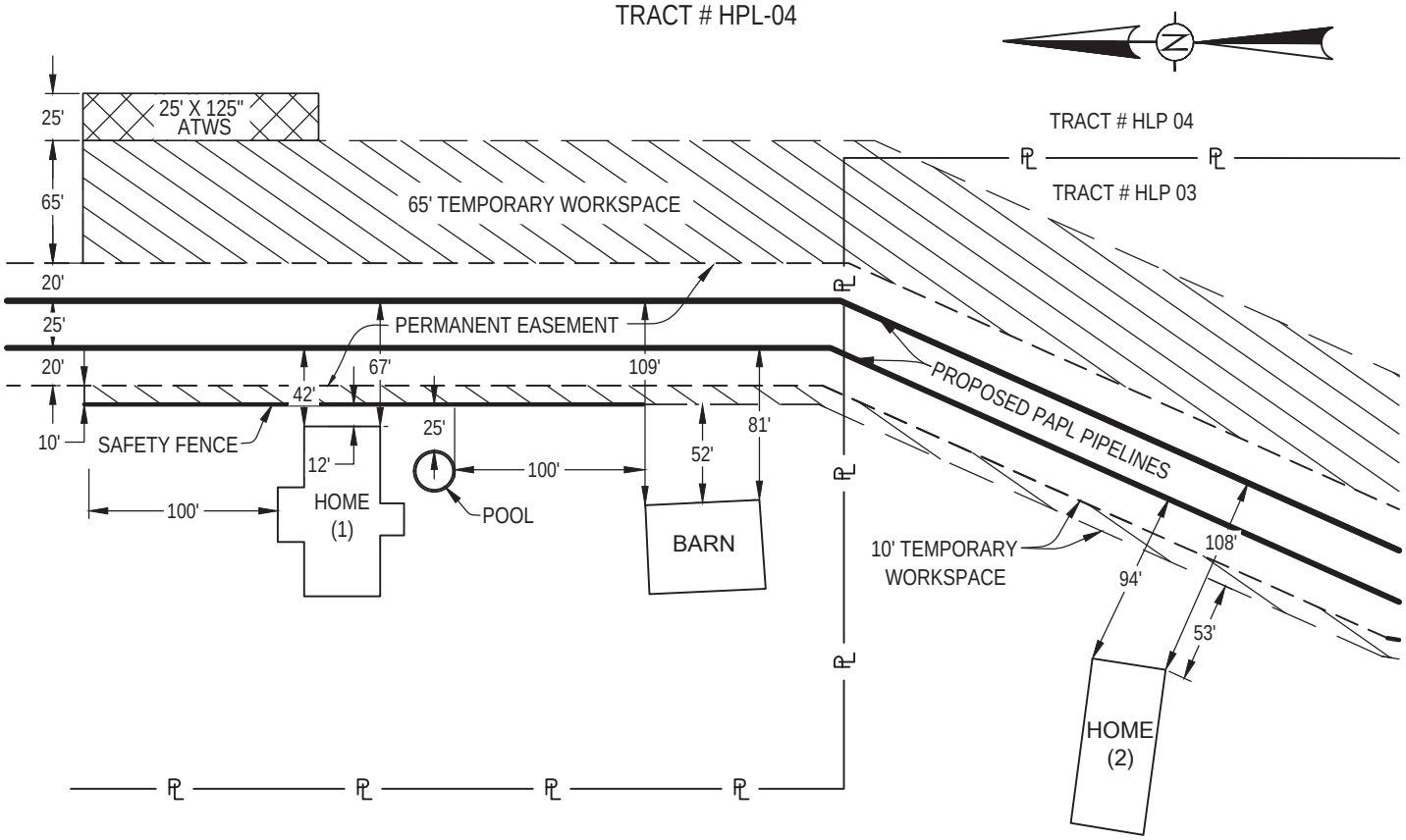
Note: Addends may not sum due to rounding.

APPENDIX F

RESIDENTIAL CONSTRUCTION PLANS

TEXAS CONNECTOR PROJECT

RESIDENTIAL IMPLEMENTATION PLAN
DEC ' D, A-169
TRACT # HPL-03
TRACT # HPL-04



STRUCTURE LOCATED 0' TO 50'
FROM THE EDGE OF WORKSPACE

STRUCTURE	M.P.	DISTANCE
HOME (1)	N 26.4	12.0'
POOL	N 26.4	25.0'
BARN	N 26.3	52.0'
HOME (2)	N 26.3	53.0'

NOTES:
1. TRUE ORIENTATION OF STRUCTURE TO THE CENTERLINE OF THE PROPOSED PIPELINE MAY DIFFER FROM THAT SHOWN.
2. ADDITIONAL CONSTRUCTION LIMITATIONS/INSTRUCTIONS FOR THIS TRACT MAY BE DEFINED UNDER SPECIAL CONSTRUCTION PROVISIONS OF THE RIGHT-OF-WAY LINE LIST.
3. FOR ADDITIONAL CONSTRUCTION PROCEDURES, SEE RESIDENTIAL/STRUCTURAL IMPLEMENTATION PLAN NOTES.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL CONSTRUCTION TECHNIQUES

PREFERRED TECHNIQUE
1. ELIMINATE TEMPORARY WORK SPACE WITH A MINIMUM DISTANCE OF 10 FEET BEYOND NEAREST POINT OF STRUCTURE.
2. INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE TEMPORARY WORK SPACE AREA, SAFETY FENCE TO EXTEND AT LEAST 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.
3. CONSTRUCTION IN RESIDENTIAL AREAS THAT INVOLVES ITEMS SUCH AS THE REMOVAL OF FENCES, STONE WALLS, WATER SUPPLIES, DRIVE WAYS, SIDEWALKS OR SEPTIC SYSTEMS SHALL BE REPAIRED OR REPLACED.

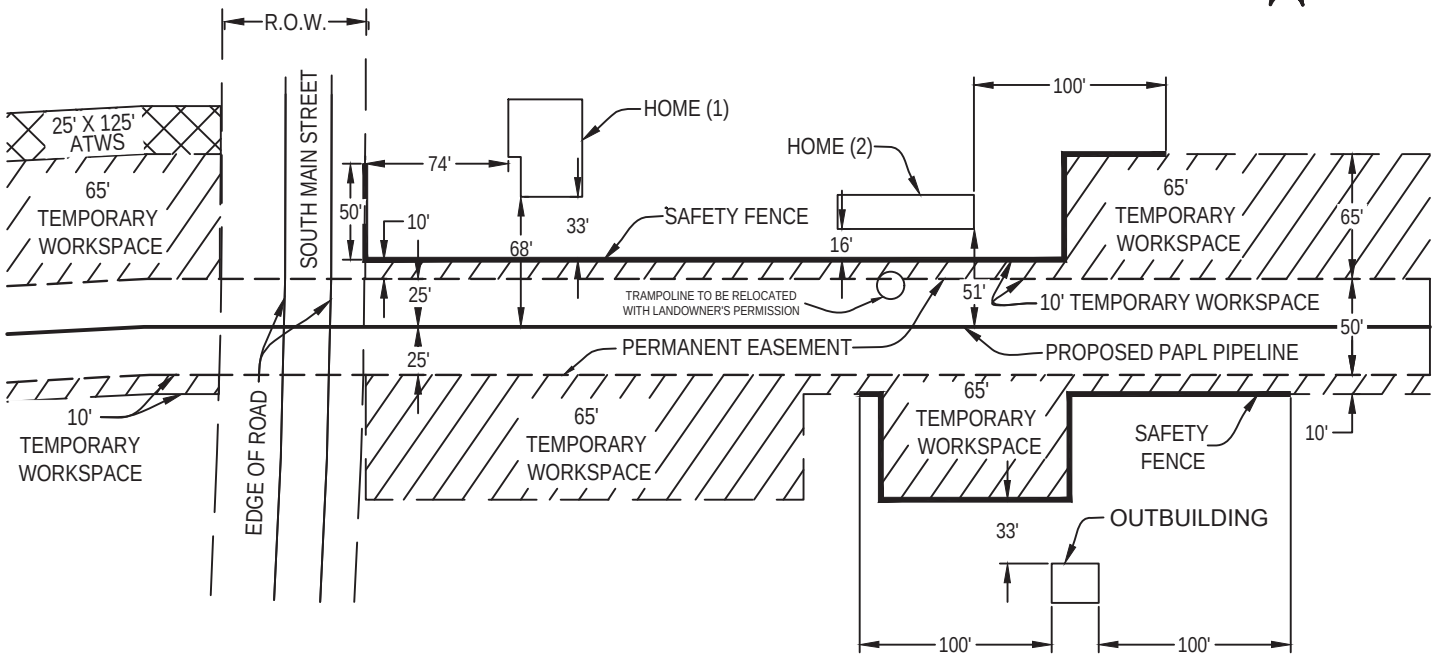
PORT ARTHUR PIPELINE

NO.	REVISION	DATE	APPR.
B	ISSUED FOR REVIEW	1/5/16	FAT
A	ISSUED FOR REVIEW	12/18/15	FAT

PORT ARTHUR PIPELINE
RESIDENTIAL IMPLEMENTATION PLAN
0' TO 50' OF WORK AREA
ORANGE COUNTY, TEXAS

SCALE	DATE	DRAWN	CHECKED	APPROVED	PROJ. NO.	DRAWING NUMBER	SHEET
1"=100'	1/5/16	JBS	BJV	FAT	22670	22670-510-SSP-19004	1 OF 1

RESIDENTIAL IMPLEMENTATION PLAN
J. STEPHENSON SURVEY, A-169
TRACT # FGT-03



STRUCTURE LOCATED 0" TO 50' FROM THE EDGE OF WORKSPACE

STRUCTURE	M.P.	DISTANCE
HOME (2)	FGT 0.3	16.0'
HOME (1)	FGT 0.3	33.0'
OUTBUILDING	FGT 0.3	33.0'

NOTES:
1. TRUE ORIENTATION OF STRUCTURE TO THE CENTERLINE OF THE PROPOSED PIPELINE MAY DIFFER FROM THAT SHOWN.
2. ADDITIONAL CONSTRUCTION LIMITATIONS/INSTRUCTIONS FOR THIS TRACT MAY BE DEFINED UNDER SPECIAL CONSTRUCTION PROVISIONS OF THE RIGHT-OF-WAY LINE LIST.
3. FOR ADDITIONAL CONSTRUCTION PROCEDURES, SEE RESIDENTIAL/STRUCTURAL IMPLEMENTATION PLAN NOTES.
4. TRAMPOLINE TO BE RELOCATED WITH LANDOWNER'S PERMISSION.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL CONSTRUCTION TECHNIQUES

PREFERRED TECHNIQUE
1. ELIMINATE TEMPORARY WORK SPACE WITH A MINIMUM DISTANCE OF 10 FEET BEYOND NEAREST POINT OF STRUCTURE.
2. INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE TEMPORARY WORK SPACE AREA, SAFETY FENCE TO EXTEND AT LEAST 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.
3. CONSTRUCTION IN RESIDENTIAL AREAS THAT INVOLVES ITEMS SUCH AS THE REMOVAL OF FENCES, STONE WALLS, WATER SUPPLIES, DRIVE WAYS, SIDEWALKS OR SEPTIC SYSTEMS SHALL BE REPAIRED OR REPLACED.

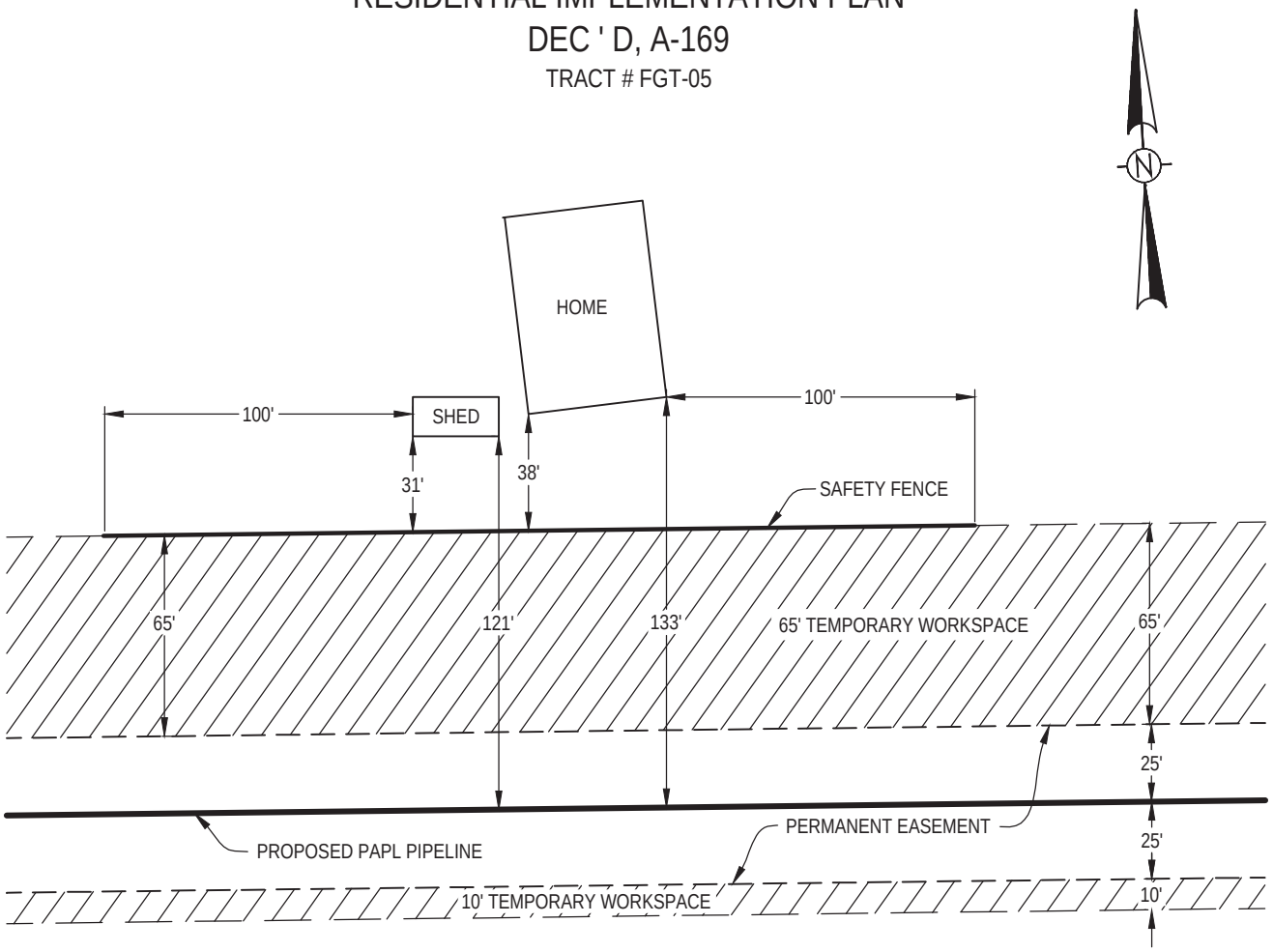
PORT ARTHUR PIPELINE

NO.	REVISION	DATE	APPR.
B	ISSUE FOR REVIEW	05/18/17	FAT
A	ISSUED FOR REVIEW	12/18/15	TJ

PORT ARTHUR PIPELINE
RESIDENTIAL IMPLEMENTATION PLAN
0' TO 50' OF WORK AREA
ORANGE COUNTY, TEXAS

SCALE	DATE	DRAWN	CHECKED	APPROVED	PROJ. NO.	DRAWING NUMBER	SHEET
1"=100'	12/09/15	JBS	BJV	TJ	22670	22670-510-SSP-19005	1 OF 1

RESIDENTIAL IMPLEMENTATION PLAN
DEC ' D, A-169
TRACT # FGT-05



STRUCTURE LOCATED 0" TO 50'
FROM THE EDGE OF WORKSPACE

STRUCTURE	M.P.	DISTANCE
HOME	FGT 0.5	38.0'
SHED	FGT 0.5	31.0'

NOTES:
1. TRUE ORIENTATION OF STRUCTURE TO THE CENTERLINE OF THE PROPOSED PIPELINE MAY DIFFER FROM THAT SHOWN.
2. ADDITIONAL CONSTRUCTION LIMITATIONS/INSTRUCTIONS FOR THIS TRACT MAY BE DEFINED UNDER SPECIAL CONSTRUCTION PROVISIONS OF THE RIGHT-OF-WAY LINE LIST.
3. FOR ADDITIONAL CONSTRUCTION PROCEDURES, SEE RESIDENTIAL/STRUCTURAL IMPLEMENTATION PLAN NOTES .

SITE SPECIFIC RESIDENTIAL/STRUCTURAL CONSTRUCTION TECHNIQUES

PREFERRED TECHNIQUE
1. ELIMINATE TEMPORARY WORK SPACE WITH A MINIMUM DISTANCE OF 10 FEET BEYOND NEAREST POINT OF STRUCTURE.
2. INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE TEMPORARY WORK SPACE AREA, SAFETY FENCE TO EXTEND AT LEAST 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.
3. CONSTRUCTION IN RESIDENTIAL AREAS THAT INVOLVES ITEMS SUCH AS THE REMOVAL OF FENCES, STONE WALLS, WATER SUPPLIES, DRIVE WAYS, SIDEWALKS OR SEPTIC SYSTEMS SHALL BE REPAIRED OR REPLACED.

PORT ARTHUR PIPELINE

UniversalPegasus INTERNATIONAL

Port Arthur Pipeline

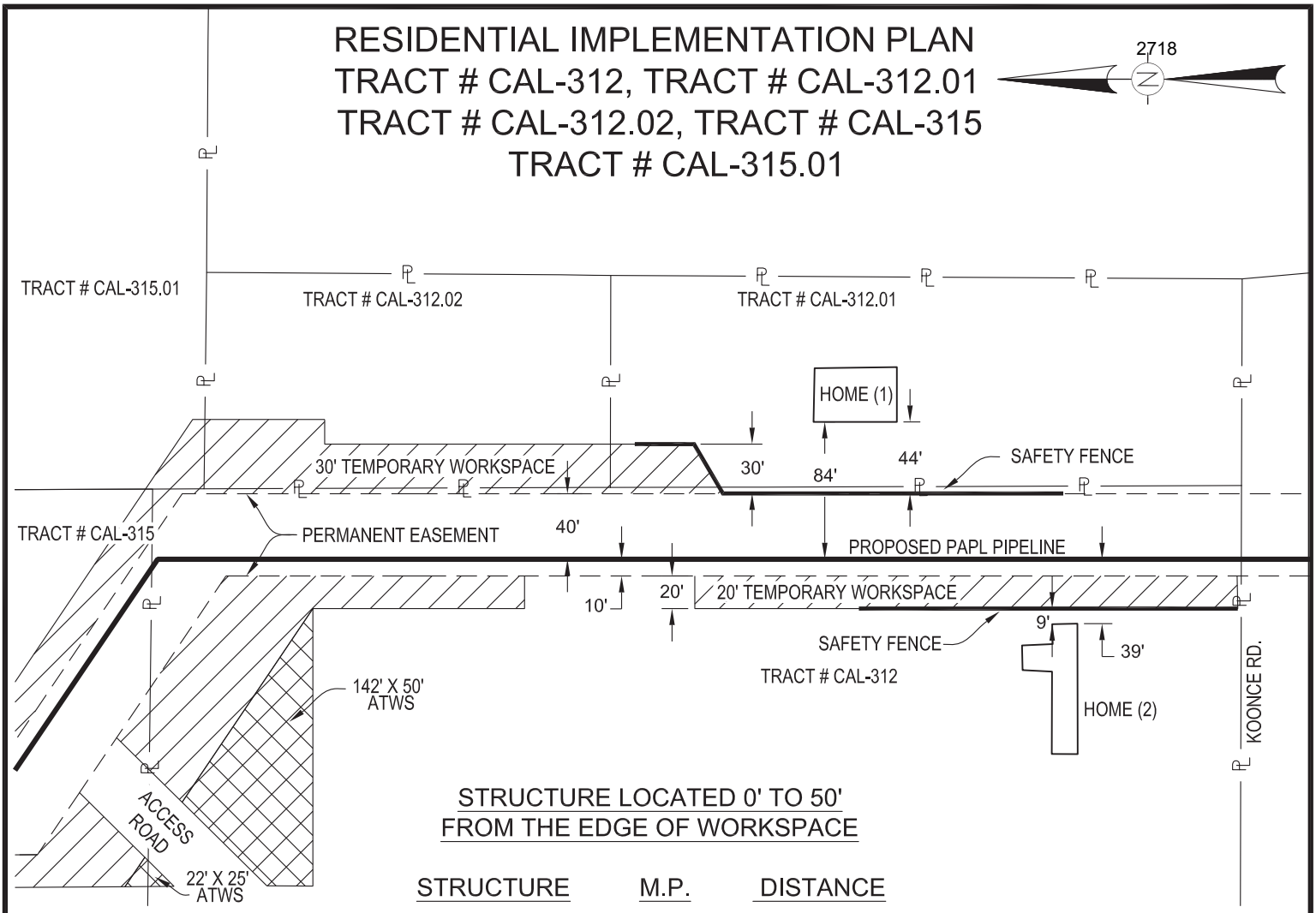
NO.	REVISION	DATE	APPR.
A	ISSUED FOR REVIEW	12/18/15	TJ

PORT ARTHUR PIPELINE
RESIDENTIAL IMPLEMENTATION PLAN
0' TO 50' OF WORK AREA
ORANGE COUNTY, TEXAS

SCALE	DATE	DRAWN	CHECKED	APPROVED	PROJ. NO.	DRAWING NUMBER	SHEET
1"=60'	12/14/15	JBS	BJV	TJ	22670	22670-510-SSP-19006	1 OF 1

LOUISIANA CONNECTOR PROJECT

RESIDENTIAL IMPLEMENTATION PLAN
TRACT # CAL-312, TRACT # CAL-312.01
TRACT # CAL-312.02, TRACT # CAL-315
TRACT # CAL-315.01



STRUCTURE LOCATED 0' TO 50'
FROM THE EDGE OF WORKSPACE

STRUCTURE	M.P.	DISTANCE
HOME (1)	56.6	44.0'
HOME (2)	56.6	9.0'

NOTES:

1. TRUE ORIENTATION OF STRUCTURE TO THE CENTERLINE OF THE PROPOSED PIPELINE MAY DIFFER FROM THAT SHOWN.
2. ADDITIONAL CONSTRUCTION LIMITATIONS/INSTRUCTIONS FOR THIS TRACT MAY BE DEFINED UNDER SPECIAL CONSTRUCTION PROVISIONS OF THE RIGHT-OF-WAY LINE LIST.
3. FOR ADDITIONAL CONSTRUCTION PROCEDURES, SEE RESIDENTIAL/STRUCTURAL IMPLEMENTATION PLAN NOTES.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL CONSTRUCTION TECHNIQUES

PREFERRED TECHNIQUE

1. ELIMINATE TEMPORARY WORK SPACE WITH A MINIMUM DISTANCE OF 10 FEET BEYOND NEAREST POINT OF STRUCTURE.
2. INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE TEMPORARY WORK SPACE AREA, SAFETY FENCE TO EXTEND AT LEAST 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.
3. CONSTRUCTION IN RESIDENTIAL AREAS THAT INVOLVES ITEMS SUCH AS THE REMOVAL OF FENCES, STONE WALLS, WATER SUPPLIES, DRIVE WAYS, SIDEWALKS OR SEPTIC SYSTEMS SHALL BE REPAIRED OR REPLACED.
4. INSTALL A SAFETY FENCE AT THE EDGE OF THE CONSTRUCTION ROW FOR A DISTANCE OF 100 FEET ON EITHER SIDE OF THE RESIDENCE.
5. ATTEMPT TO LEAVE MATURE TREES AND LANDSCAPING INTACT WITHIN THE CONSTRUCTION WORK AREA, UNLESS THEY INTERFERE WITH INSTALLATION TECHNIQUES OR PRESENT UNSAFE WORKING CONDITIONS.
6. ENSURE PIPE IS WELDED, INSTALLED, AND BACKFILLED IN A TIMELY MANNER TO REDUCE THE CONSTRUCTION IMPACTS OF THE NEIGHBORHOOD.
7. BACKFILL THE TRENCH AS SOON AS PIPE IS INSTALLED, OR TEMPORARILY PLACE STEEL PLATES OVER THE TRENCH.
8. COMPLETE FINAL CLEANUP, GRADING, AND INSTALLATION OF PERMANENT EROSION CONTROL DEVICES WITHIN 10 DAYS AFTER BACKFILLING THE TRENCH, WEATHER PERMITTING.

UNIVERSAL ENSCO, INC. - LOUISIANA ENGINEERING
FIRM LIC. # EF.0001688

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

PORT ARTHUR PIPELINE
RESIDENTIAL IMPLEMENTATION PLAN
0' TO 50' OF WORK AREA - CALCASIEU PARISH, LOUISIANA

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMIT	09/14/2017	DCM	GLE	CAS

DRAWN	JN	DATE	09/05/2017
CHKD	GLE	DATE	09/05/2017
APPD	CAS	DATE	09/05/2017
JOB NO.	23707	SHEET	1 OF 1
LOCATION	-----	STATE	LA
SCALE	1"=100'	REV	A
DWG NO.	23707-507-PLN-19001		
CLIENT JOB NO.	N/A		

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RESIDENTIAL IMPLEMENTATION PLAN
TRACT # ALL-108, TRACT # ALL-109
TRACT # ALL-109.01, TRACT # ALL-110

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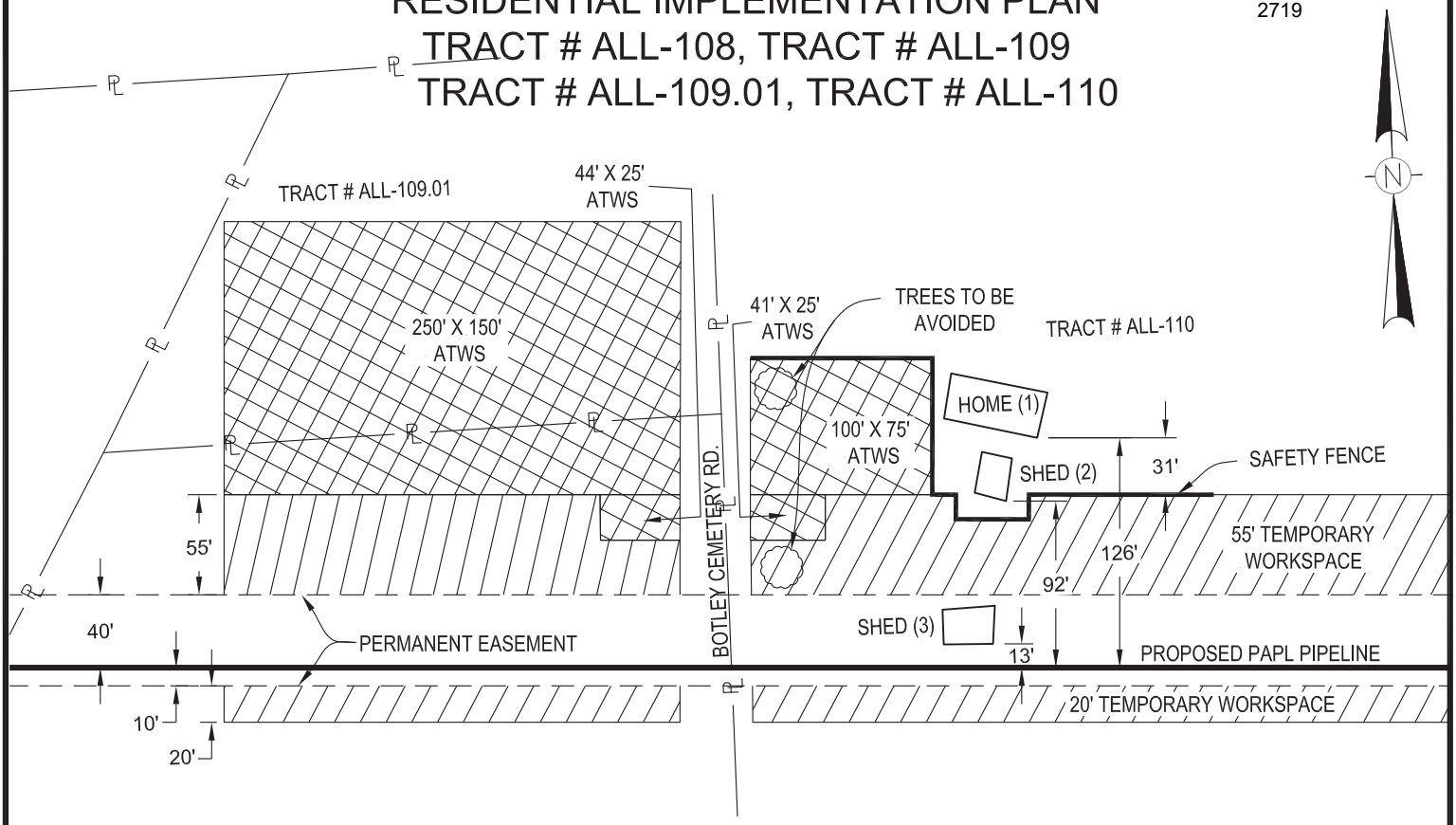

TRACT # ALL-109
TRACT # ALL-108

STRUCTURE LOCATED 0' TO 50' FROM THE EDGE OF WORKSPACE

STRUCTURE	M.P.	DISTANCE
HOME (1)	97.0	31.0'
SHED (2)	97.0	5.9'
SHED (3)	97.0	0.0' * TO BE REMOVED

NOTES:

1. TRUE ORIENTATION OF STRUCTURE TO THE CENTERLINE OF THE PROPOSED PIPELINE MAY DIFFER FROM THAT SHOWN.
2. ADDITIONAL CONSTRUCTION LIMITATIONS/INSTRUCTIONS FOR THIS TRACT MAY BE DEFINED UNDER SPECIAL CONSTRUCTION PROVISIONS OF THE RIGHT-OF-WAY LINE LIST.
3. FOR ADDITIONAL CONSTRUCTION PROCEDURES, SEE RESIDENTIAL/STRUCTURAL IMPLEMENTATION PLAN NOTES.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL CONSTRUCTION TECHNIQUES

PREFERRED TECHNIQUE

1. ELIMINATE TEMPORARY WORK SPACE WITH A MINIMUM DISTANCE OF 10 FEET BEYOND NEAREST POINT OF STRUCTURE.
2. INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE TEMPORARY WORK SPACE AREA, SAFETY FENCE TO EXTEND AT LEAST 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.
3. CONSTRUCTION IN RESIDENTIAL AREAS THAT INVOLVES ITEMS SUCH AS THE REMOVAL OF FENCES, STONE WALLS, WATER SUPPLIES, DRIVE WAYS, SIDEWALKS OR SEPTIC SYSTEMS SHALL BE REPAIRED OR REPLACED.
4. INSTALL A SAFETY FENCE AT THE EDGE OF THE CONSTRUCTION ROW FOR A DISTANCE OF 100 FEET ON EITHER SIDE OF THE RESIDENCE.
5. ATTEMPT TO LEAVE MATURE TREES AND LANDSCAPING INTACT WITHIN THE CONSTRUCTION WORK AREA, UNLESS THEY INTERFERE WITH INSTALLATION TECHNIQUES OR PRESENT UNSAFE WORKING CONDITIONS.
6. ENSURE PIPE IS WELDED, INSTALLED, AND BACKFILLED IN A TIMELY MANNER TO REDUCE THE CONSTRUCTION IMPACTS OF THE NEIGHBORHOOD.
7. BACKFILL THE TRENCH AS SOON AS PIPE IS INSTALLED, OR TEMPORARILY PLACE STEEL PLATES OVER THE TRENCH.
8. COMPLETE FINAL CLEANUP, GRADING, AND INSTALLATION OF PERMANENT EROSION CONTROL DEVICES WITHIN 10 DAYS AFTER BACKFILLING THE TRENCH, WEATHER PERMITTING.

UNIVERSAL ENSCO, INC. - LOUISIANA ENGINEERING
FIRM LIC. # EF.0001688

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PORT ARTHUR PIPELINE
RESIDENTIAL IMPLEMENTATION PLAN
0' TO 50' OF WORK AREA - ALLEN PARISH, LOUISIANA

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMIT	09/14/2017	DCM	GLE	CAS

DRAWN	JN	DATE	09/05/2017
CHKD	GLE	DATE	09/05/2017
APPD	CAS	DATE	09/05/2017
JOB NO.	23707	SHEET	1 OF 1
LOCATION	-----	STATE	LA
SCALE	1"=100'	REV	A
DWG NO.	23707-507-PLN-19002		
CLIENT JOB NO.	N/A		

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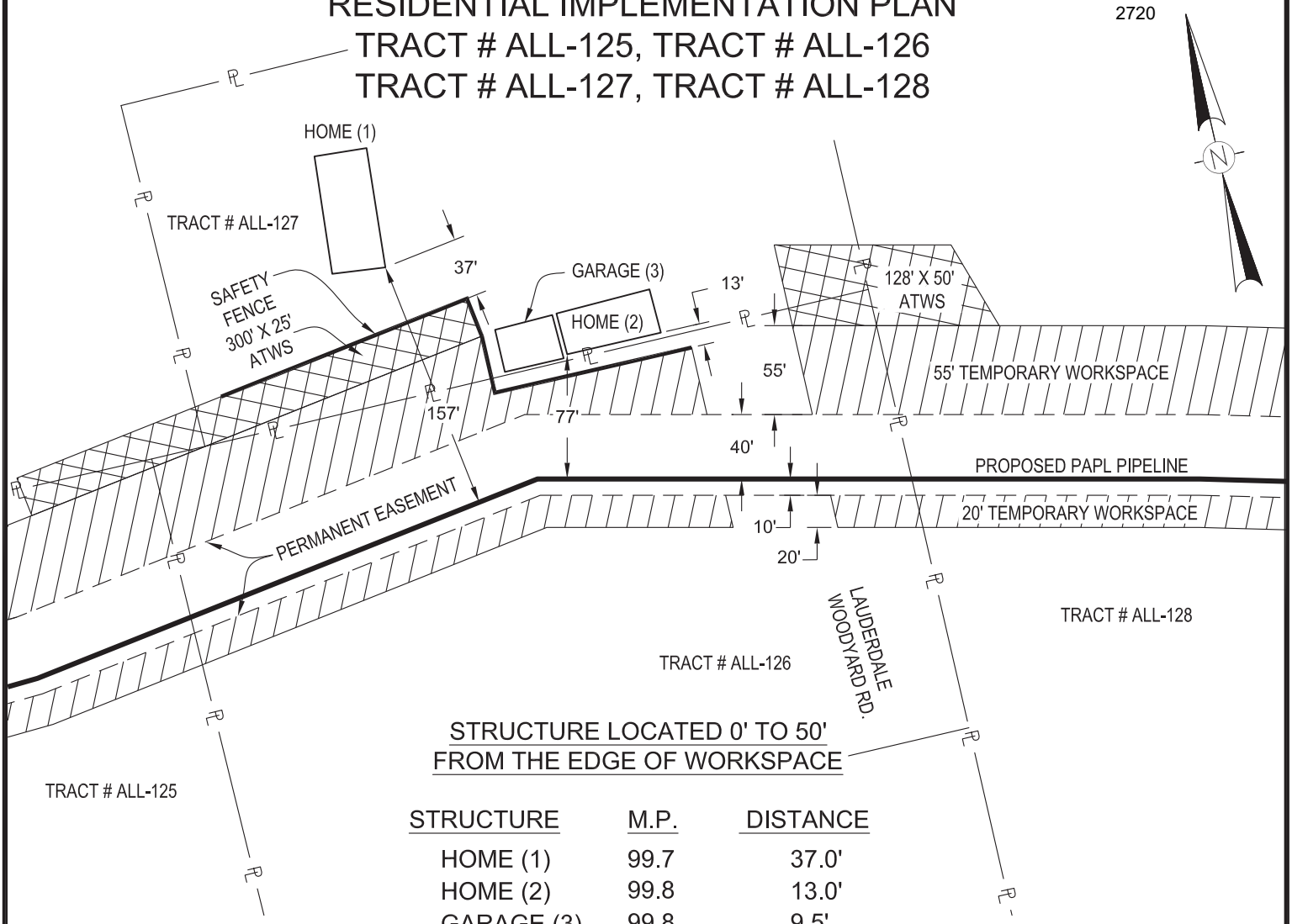
RESIDENTIAL IMPLEMENTATION PLAN
TRACT # ALL-125, TRACT # ALL-126
TRACT # ALL-127, TRACT # ALL-128



STRUCTURE LOCATED 0' TO 50' FROM THE EDGE OF WORKSPACE

STRUCTURE	M.P.	DISTANCE
HOME (1)	99.7	37.0'
HOME (2)	99.8	13.0'
GARAGE (3)	99.8	9.5'

NOTES:

1. TRUE ORIENTATION OF STRUCTURE TO THE CENTERLINE OF THE PROPOSED PIPELINE MAY DIFFER FROM THAT SHOWN.
2. ADDITIONAL CONSTRUCTION LIMITATIONS/INSTRUCTIONS FOR THIS TRACT MAY BE DEFINED UNDER SPECIAL CONSTRUCTION PROVISIONS OF THE RIGHT-OF-WAY LINE LIST.
3. FOR ADDITIONAL CONSTRUCTION PROCEDURES, SEE RESIDENTIAL/STRUCTURAL IMPLEMENTATION PLAN NOTES.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL CONSTRUCTION TECHNIQUES

PREFERRED TECHNIQUE

1. ELIMINATE TEMPORARY WORK SPACE WITH A MINIMUM DISTANCE OF 10 FEET BEYOND NEAREST POINT OF STRUCTURE.
2. INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE TEMPORARY WORK SPACE AREA, SAFETY FENCE TO EXTEND AT LEAST 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.
3. CONSTRUCTION IN RESIDENTIAL AREAS THAT INVOLVES ITEMS SUCH AS THE REMOVAL OF FENCES, STONE WALLS, WATER SUPPLIES, DRIVE WAYS, SIDEWALKS OR SEPTIC SYSTEMS SHALL BE REPAIRED OR REPLACED.
4. INSTALL A SAFETY FENCE AT THE EDGE OF THE CONSTRUCTION ROW FOR A DISTANCE OF 100 FEET ON EITHER SIDE OF THE RESIDENCE.
5. ATTEMPT TO LEAVE MATURE TREES AND LANDSCAPING INTACT WITHIN THE CONSTRUCTION WORK AREA, UNLESS THEY INTERFERE WITH INSTALLATION TECHNIQUES OR PRESENT UNSAFE WORKING CONDITIONS.
6. ENSURE PIPE IS WELDED, INSTALLED, AND BACKFILLED IN A TIMELY MANNER TO REDUCE THE CONSTRUCTION IMPACTS OF THE NEIGHBORHOOD.
7. BACKFILL THE TRENCH AS SOON AS PIPE IS INSTALLED, OR TEMPORARILY PLACE STEEL PLATES OVER THE TRENCH.
8. COMPLETE FINAL CLEANUP, GRADING, AND INSTALLATION OF PERMANENT EROSION CONTROL DEVICES WITHIN 10 DAYS AFTER BACKFILLING THE TRENCH, WEATHER PERMITTING.

UNIVERSAL ENSCO, INC. - LOUISIANA ENGINEERING
FIRM LIC. # EF.0001688

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A Subsidiary of Huntington Ingalls Industries

PORT ARTHUR PIPELINE
RESIDENTIAL IMPLEMENTATION PLAN
0' TO 50' OF WORK AREA - ALLEN PARISH , LOUISIANA

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMIT	09/14/2017	DCM	GLE	CAS

DRAWN	JN	DATE	09/05/2017
CHKD	GLE	DATE	09/05/2017
APPD	CAS	DATE	09/05/2017
JOB NO.	23707	SHEET	1 OF 1
LOCATION	-----	STATE	LA
SCALE	1"=100'	REV	A
DWG NO.	23707-507-PLN-19003		
CLIENT JOB NO.	N/A		

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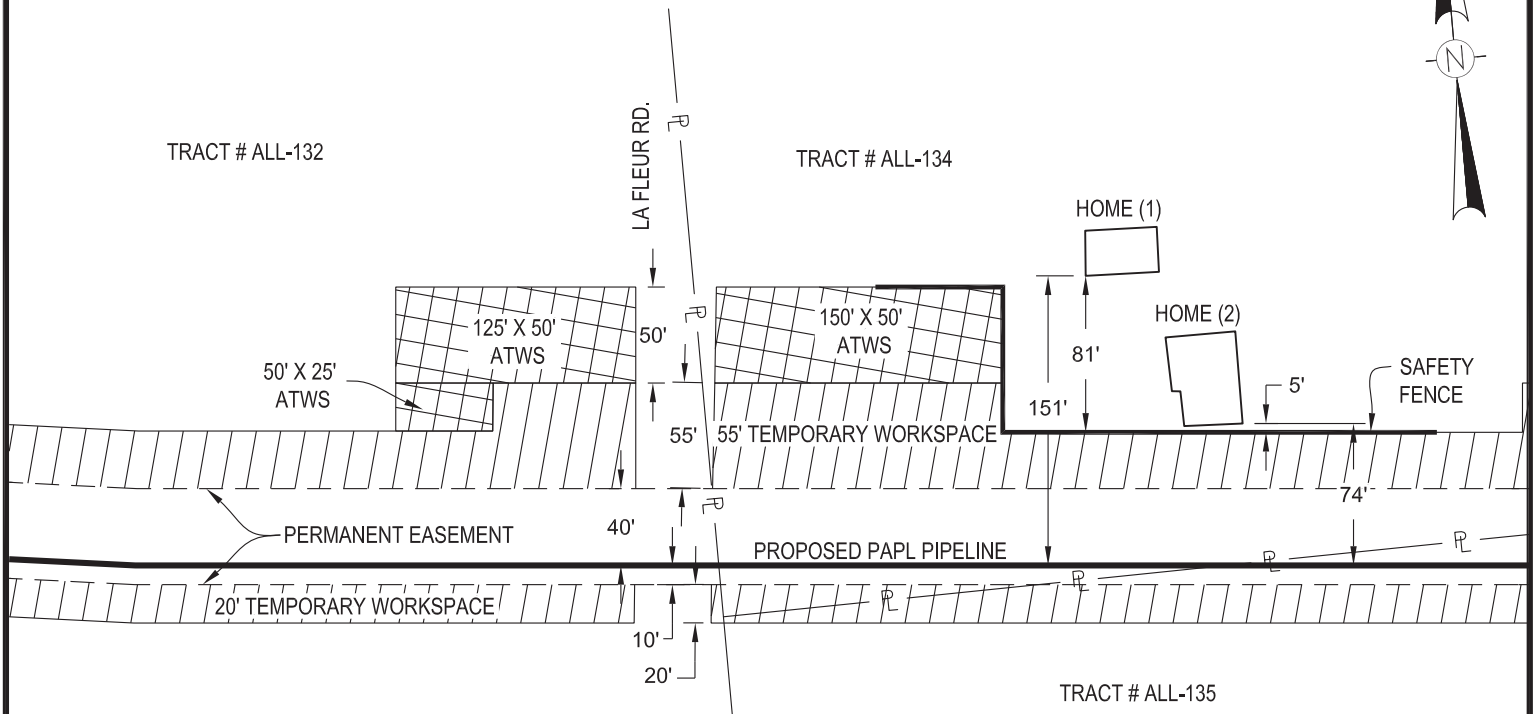
RESIDENTIAL IMPLEMENTATION PLAN
TRACT # ALL-132, TRACT # ALL-134
TRACT # ALL-135

2721



STRUCTURE LOCATED 0' TO 50' FROM THE EDGE OF WORKSPACE

STRUCTURE	M.P.	DISTANCE
HOME (1)	103.7	81.0'
HOME (2)	103.7	5.0'

NOTES:

1. TRUE ORIENTATION OF STRUCTURE TO THE CENTERLINE OF THE PROPOSED PIPELINE MAY DIFFER FROM THAT SHOWN.
2. ADDITIONAL CONSTRUCTION LIMITATIONS/INSTRUCTIONS FOR THIS TRACT MAY BE DEFINED UNDER SPECIAL CONSTRUCTION PROVISIONS OF THE RIGHT-OF-WAY LINE LIST.
3. FOR ADDITIONAL CONSTRUCTION PROCEDURES, SEE RESIDENTIAL/STRUCTURAL IMPLEMENTATION PLAN NOTES.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL CONSTRUCTION TECHNIQUES

PREFERRED TECHNIQUE

1. ELIMINATE TEMPORARY WORK SPACE WITH A MINIMUM DISTANCE OF 10 FEET BEYOND NEAREST POINT OF STRUCTURE.
2. INSTALL AND MAINTAIN SAFETY FENCE ALONG EDGE OF THE TEMPORARY WORK SPACE AREA, SAFETY FENCE TO EXTEND AT LEAST 100 FEET BEYOND THE EXTREMES OF THE STRUCTURES.
3. CONSTRUCTION IN RESIDENTIAL AREAS THAT INVOLVES ITEMS SUCH AS THE REMOVAL OF FENCES, STONE WALLS, WATER SUPPLIES, DRIVE WAYS, SIDEWALKS OR SEPTIC SYSTEMS SHALL BE REPAIRED OR REPLACED.
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5. ATTEMPT TO LEAVE MATURE TREES AND LANDSCAPING INTACT WITHIN THE CONSTRUCTION WORK AREA, UNLESS THEY INTERFERE WITH INSTALLATION TECHNIQUES OR PRESENT UNSAFE WORKING CONDITIONS.
6. ENSURE PIPE IS WELDED, INSTALLED, AND BACKFILLED IN A TIMELY MANNER TO REDUCE THE CONSTRUCTION IMPACTS OF THE NEIGHBORHOOD.
7. BACKFILL THE TRENCH AS SOON AS PIPE IS INSTALLED, OR TEMPORARILY PLACE STEEL PLATES OVER THE TRENCH.
8. COMPLETE FINAL CLEANUP, GRADING, AND INSTALLATION OF PERMANENT EROSION CONTROL DEVICES WITHIN 10 DAYS AFTER BACKFILLING THE TRENCH, WEATHER PERMITTING.

UNIVERSAL ENSCO, INC. - LOUISIANA ENGINEERING
FIRM LIC. # EF.0001688

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A Subsidiary of Huntington Ingalls Industries

PORT ARTHUR PIPELINE
RESIDENTIAL IMPLEMENTATION PLAN
0' TO 50' OF WORK AREA - ALLEN PARISH , LOUISIANA

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMIT	09/14/2017	DCM	GLE	CAS

DRAWN	JN	DATE	09/05/2017
CHKD	GLE	DATE	09/05/2017
APPD	CAS	DATE	09/05/2017
JOB NO.	23707	SHEET	1 OF 1
LOCATION	-----	STATE	LA
SCALE	1"=100'	REV	A
DWG NO.	23707-507-PLN-19004		
CLIENT JOB NO.	N/A		

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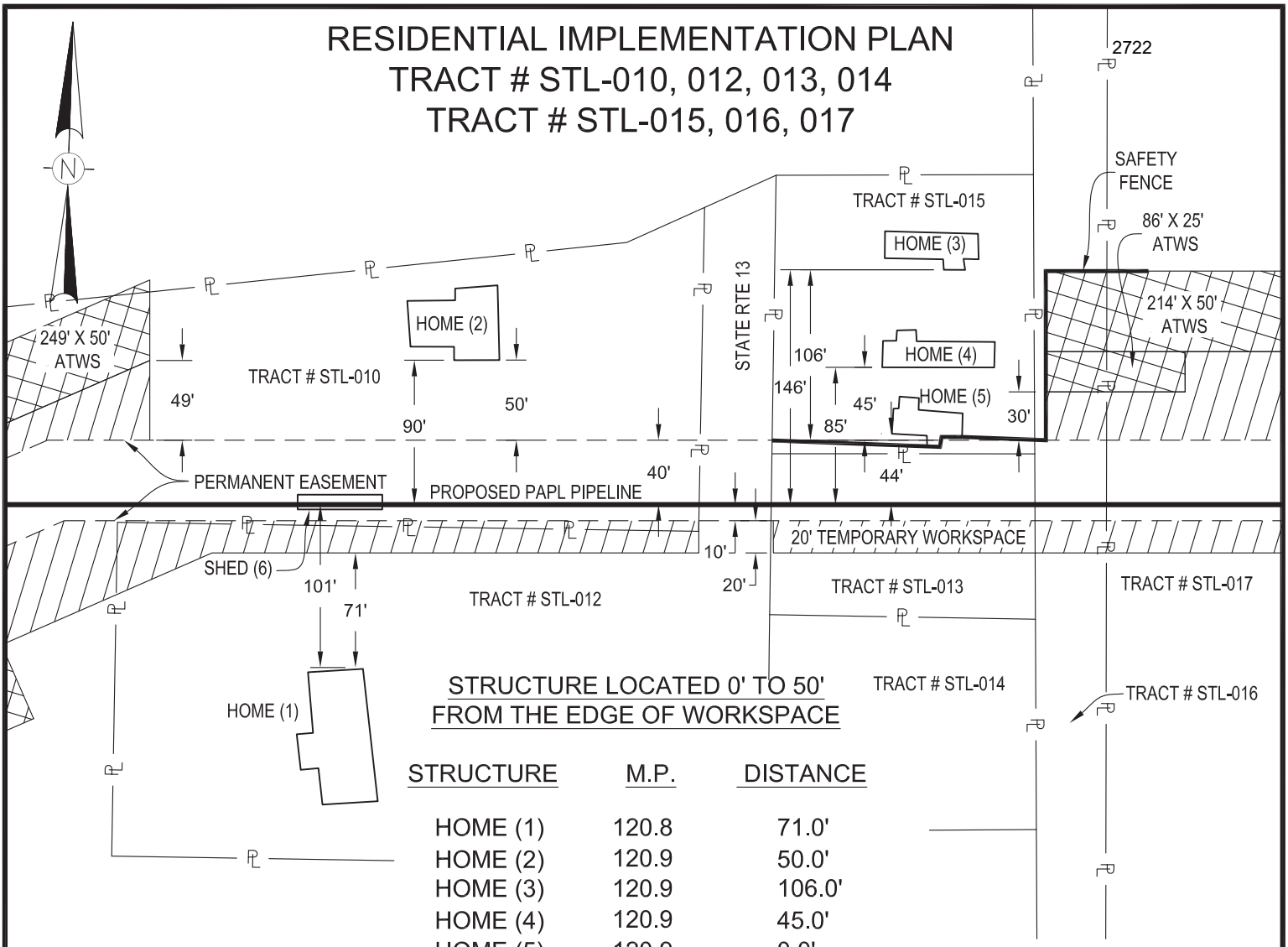
RESIDENTIAL IMPLEMENTATION PLAN
TRACT # STL-010, 012, 013, 014
TRACT # STL-015, 016, 017



STRUCTURE LOCATED 0' TO 50' FROM THE EDGE OF WORKSPACE

STRUCTURE	M.P.	DISTANCE
HOME (1)	120.8	71.0'
HOME (2)	120.9	50.0'
HOME (3)	120.9	106.0'
HOME (4)	120.9	45.0'
HOME (5)	120.9	0.0'
SHED (6)	120.8	0.0' * TO BE REMOVED

NOTES:

1. TRUE ORIENTATION OF STRUCTURE TO THE CENTERLINE OF THE PROPOSED PIPELINE MAY DIFFER FROM THAT SHOWN.
2. ADDITIONAL CONSTRUCTION LIMITATIONS/INSTRUCTIONS FOR THIS TRACT MAY BE DEFINED UNDER SPECIAL CONSTRUCTION PROVISIONS OF THE RIGHT-OF-WAY LINE LIST.
3. FOR ADDITIONAL CONSTRUCTION PROCEDURES, SEE RESIDENTIAL/STRUCTURAL IMPLEMENTATION PLAN NOTES.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL CONSTRUCTION TECHNIQUES

PREFERRED TECHNIQUE

1. ELIMINATE TEMPORARY WORK SPACE WITH A MINIMUM DISTANCE OF 10 FEET BEYOND NEAREST POINT OF STRUCTURE.
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7. BACKFILL THE TRENCH AS SOON AS PIPE IS INSTALLED, OR TEMPORARILY PLACE STEEL PLATES OVER THE TRENCH.
8. COMPLETE FINAL CLEANUP, GRADING, AND INSTALLATION OF PERMANENT EROSION CONTROL DEVICES WITHIN 10 DAYS AFTER BACKFILLING THE TRENCH, WEATHER PERMITTING.

UNIVERSAL ENSCO, INC. - LOUISIANA ENGINEERING
FIRM LIC. # EF.0001688

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PORT ARTHUR PIPELINE
RESIDENTIAL IMPLEMENTATION PLAN
0' TO 50' OF WORK AREA - ST. LANDRY PARISH, LOUISIANA

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMIT	09/14/2017	DCM	GLE	CAS

DRAWN	JN	DATE	09/05/2017
CHKD	GLE	DATE	09/05/2017
APPD	CAS	DATE	09/05/2017
JOB NO.	23707	SHEET	1 OF 1
LOCATION	-----	STATE	LA
SCALE	1"=100'	REV	A
DWG NO.	23707-507-PLN-19005		
CLIENT JOB NO.	N/A		

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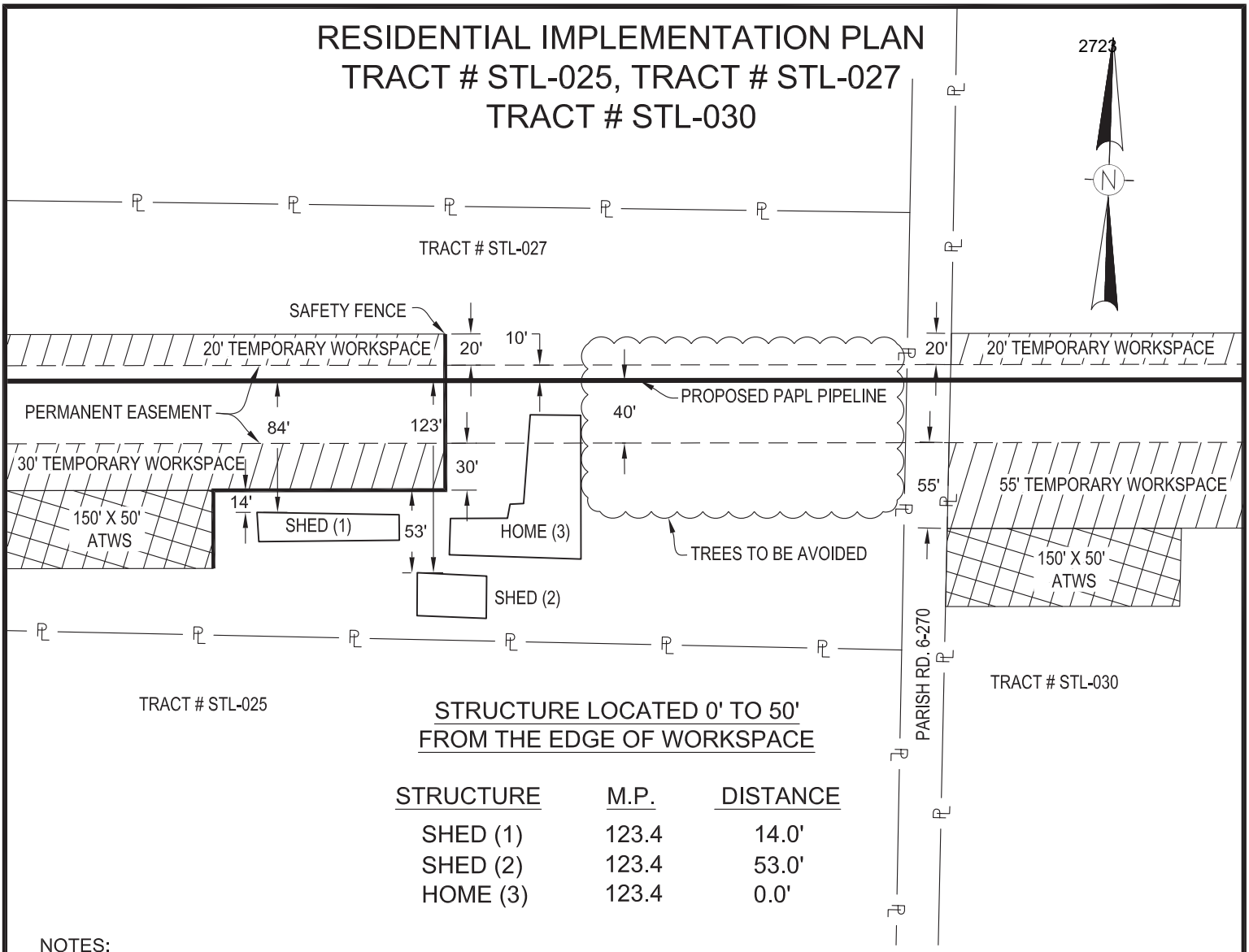
RESIDENTIAL IMPLEMENTATION PLAN
TRACT # STL-025, TRACT # STL-027
TRACT # STL-030



STRUCTURE LOCATED 0' TO 50' FROM THE EDGE OF WORKSPACE

STRUCTURE	M.P.	DISTANCE
SHED (1)	123.4	14.0'
SHED (2)	123.4	53.0'
HOME (3)	123.4	0.0'

NOTES:

1. TRUE ORIENTATION OF STRUCTURE TO THE CENTERLINE OF THE PROPOSED PIPELINE MAY DIFFER FROM THAT SHOWN.
2. ADDITIONAL CONSTRUCTION LIMITATIONS/INSTRUCTIONS FOR THIS TRACT MAY BE DEFINED UNDER SPECIAL CONSTRUCTION PROVISIONS OF THE RIGHT-OF-WAY LINE LIST.
3. FOR ADDITIONAL CONSTRUCTION PROCEDURES, SEE RESIDENTIAL/STRUCTURAL IMPLEMENTATION PLAN NOTES.

SITE SPECIFIC RESIDENTIAL/STRUCTURAL CONSTRUCTION TECHNIQUES

PREFERRED TECHNIQUE

1. ELIMINATE TEMPORARY WORK SPACE WITH A MINIMUM DISTANCE OF 10 FEET BEYOND NEAREST POINT OF STRUCTURE.
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UNIVERSAL ENSCO, INC. - LOUISIANA ENGINEERING
FIRM LIC. # EF.0001688

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PORT ARTHUR PIPELINE
RESIDENTIAL IMPLEMENTATION PLAN
0' TO 50' OF WORK AREA - ST. LANDRY PARISH, LOUISIANA

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMIT	09/14/2017	DCM	GLE	CAS

DRAWN	JN	DATE	09/05/2017
CHKD	GLE	DATE	09/05/2017
APPD	CAS	DATE	09/05/2017
JOB NO.	23707	SHEET	1 OF 1
LOCATION	-----	STATE	LA
SCALE	1"=100'	REV	A
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CLIENT JOB NO.	N/A		

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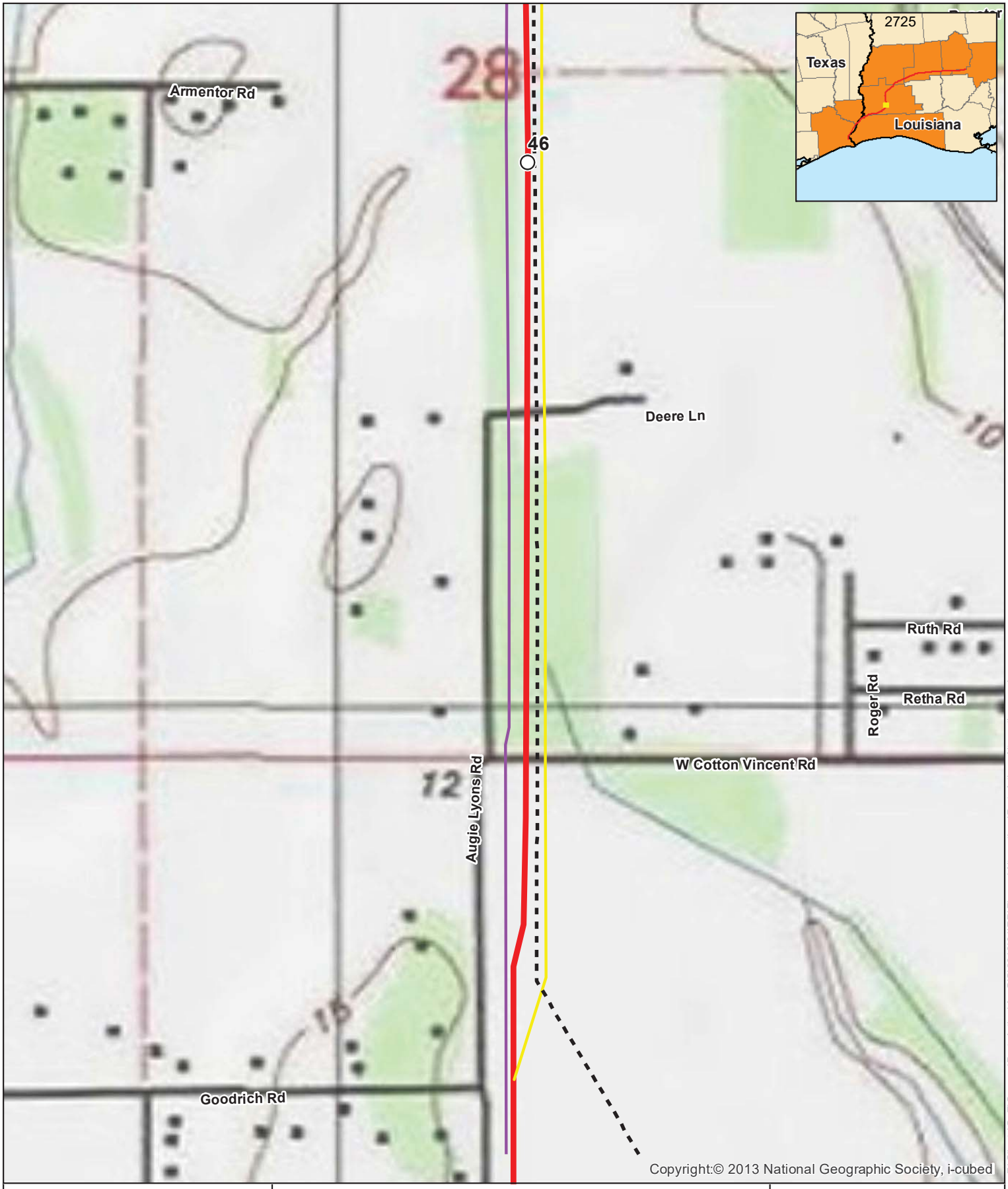
APPENDIX G

DRIFTWOOD ALTERNATIVE



0 250 500 Feet

1 inch = 500 feet

N W E S

For Environmental Review Purposes Only

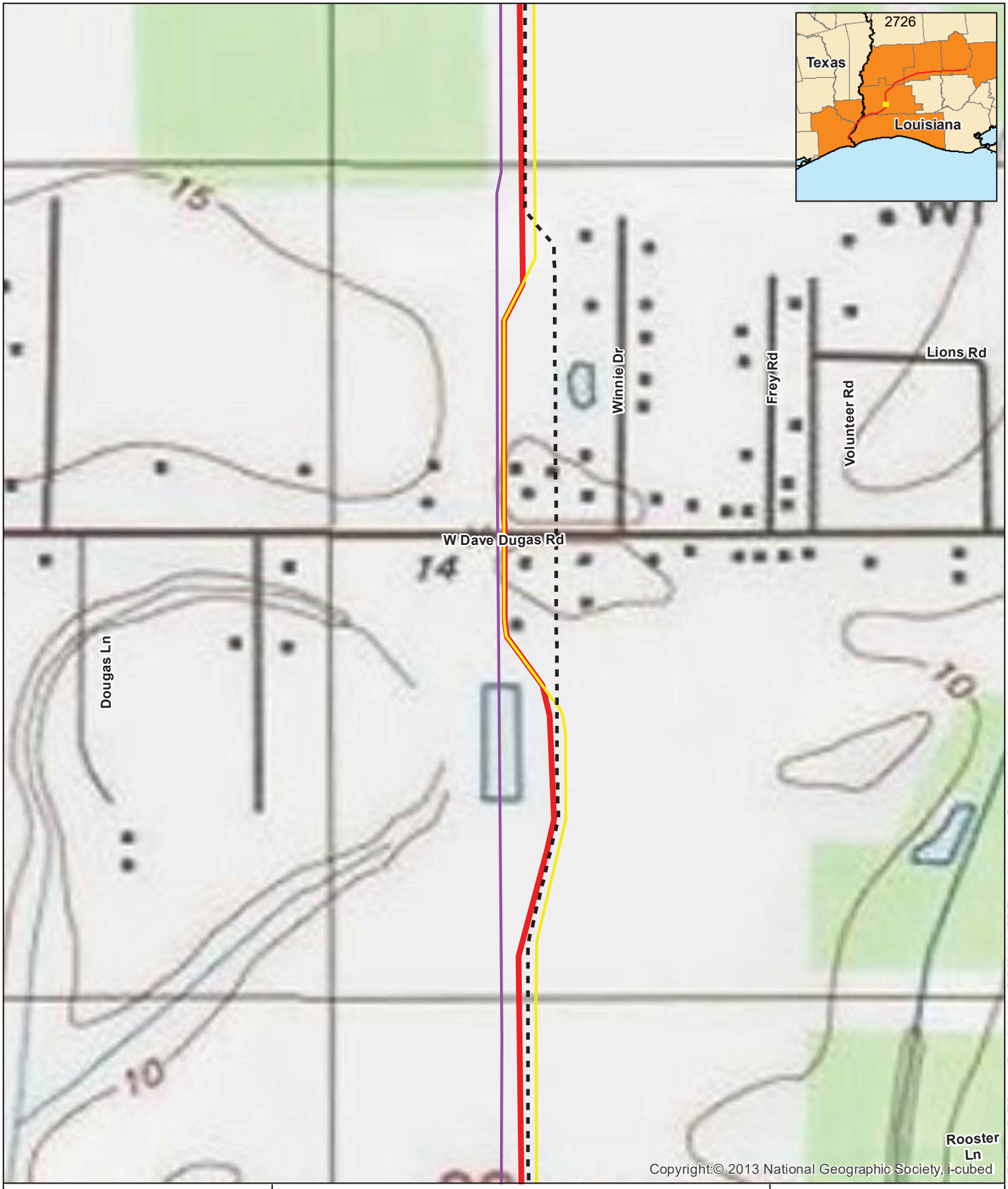
Map 1 of 13

Appendix G
Driftwood Alternative

- Milepost
- LA Connector Project
- Driftwood Route
- Driftwood Alternative
- Existing Sempra CIP Route

Source: Z:\Clients\Q_T\SempraPort_Arthur\ArcGIS\2018\01\RR\Figures\Alternatives\Port_Arthur_Alternatives.mxd

Date: (9/13/2018)



0 250 500 Feet

1 inch = 500 feet

N W E S

For Environmental Review Purposes Only

Map 2 of 13

Appendix G
Driftwood Alternative

- Milepost
- LA Connector Project
- Driftwood Route
- Driftwood Alternative
- Existing Sempra CIP Route

Source: Z:\Clients\Q_T\SempraPort_Arthur\ArcGIS\2018\01\RR\Figures\Alternatives\Port_Arthur_Alternatives.mxd

Date: (9/13/2018)



0 250 500 Feet

1 inch = 500 feet

N W E S

For Environmental Review Purposes Only

Map 3 of 13

Appendix G
Driftwood Alternative

- Milepost
- LA Connector Project
- Driftwood Route
- Driftwood Alternative
- Existing Sempra CIP Route

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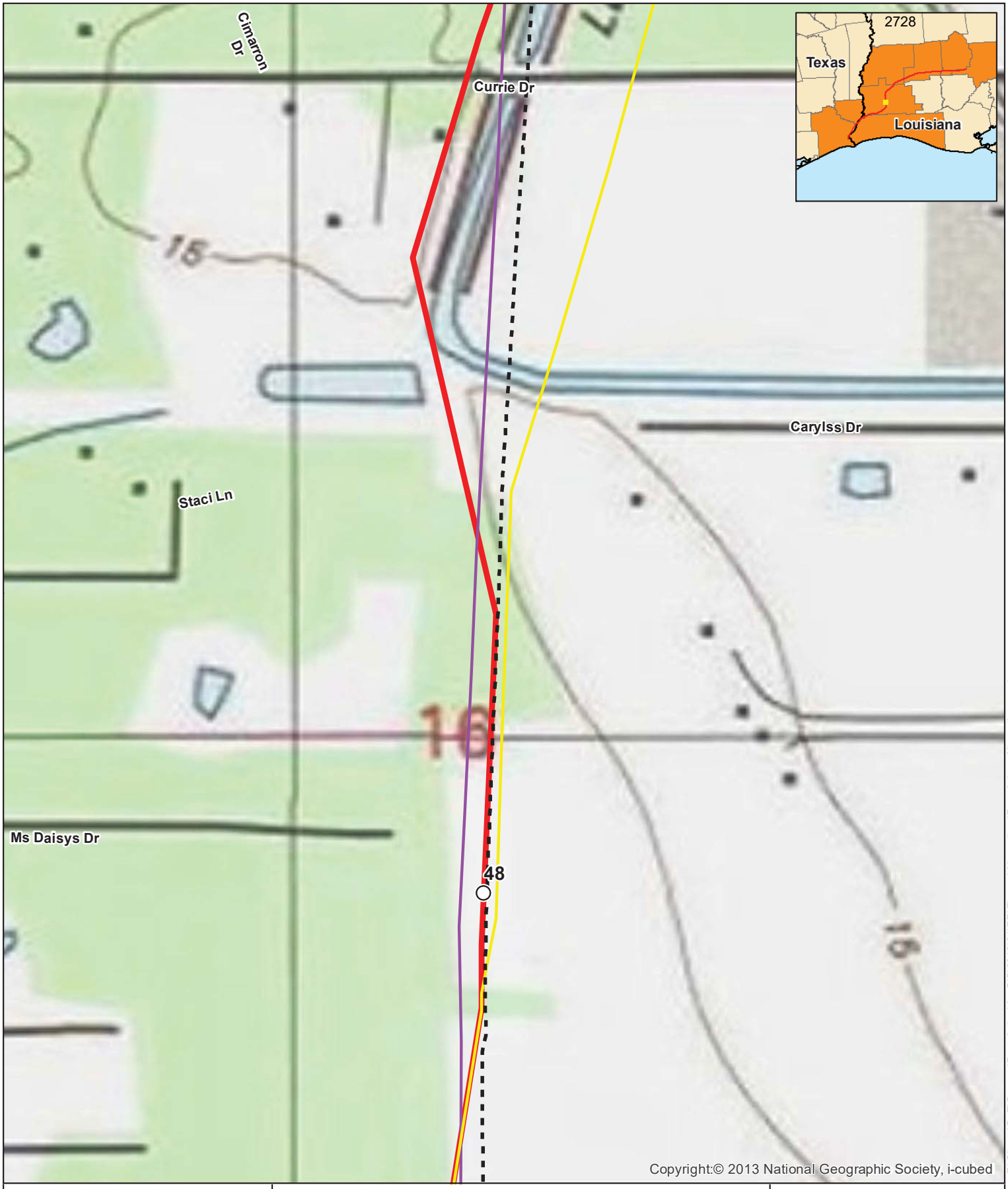

0 250 500 Feet

1 inch = 500 feet

N W E S

For Environmental Review Purposes Only

Map 4 of 13

Appendix G
Driftwood Alternative

- Milepost
- LA Connector Project
- Driftwood Route
- Driftwood Alternative
- Existing Sempra CIP Route

Source: Z:\Clients\Q_T\SempraPort_Arthur\ArcGIS\2018\01\RR\Figures\Alternatives\Port_Arthur_Alternatives.mxd

Date: (9/13/2018)



0 250 500 Feet

1 inch = 500 feet

N W E S

For Environmental Review Purposes Only

Map 5 of 13

Appendix G
Driftwood Alternative

- Milepost
- LA Connector Project
- Driftwood Route
- Driftwood Alternative
- Existing Sempra CIP Route

Source: Z:\Clients\G_T\SempraPort_Arthur\ArcGIS\2018\01\RR\Figures\Alternatives\Port_Arthur_Alternatives.mxd

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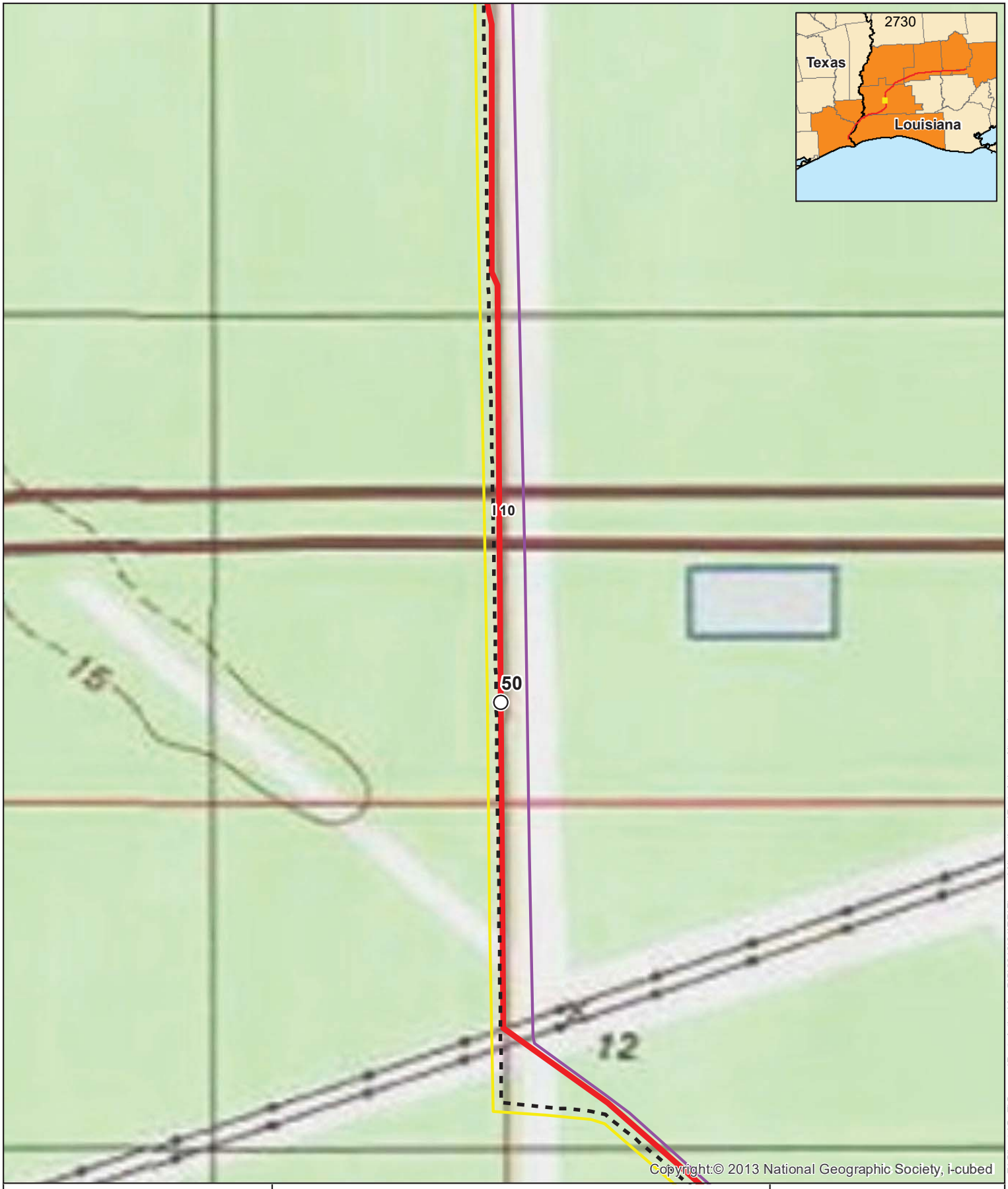


0 250 500 Feet

1 inch = 500 feet

N W E S

For Environmental Review Purposes Only

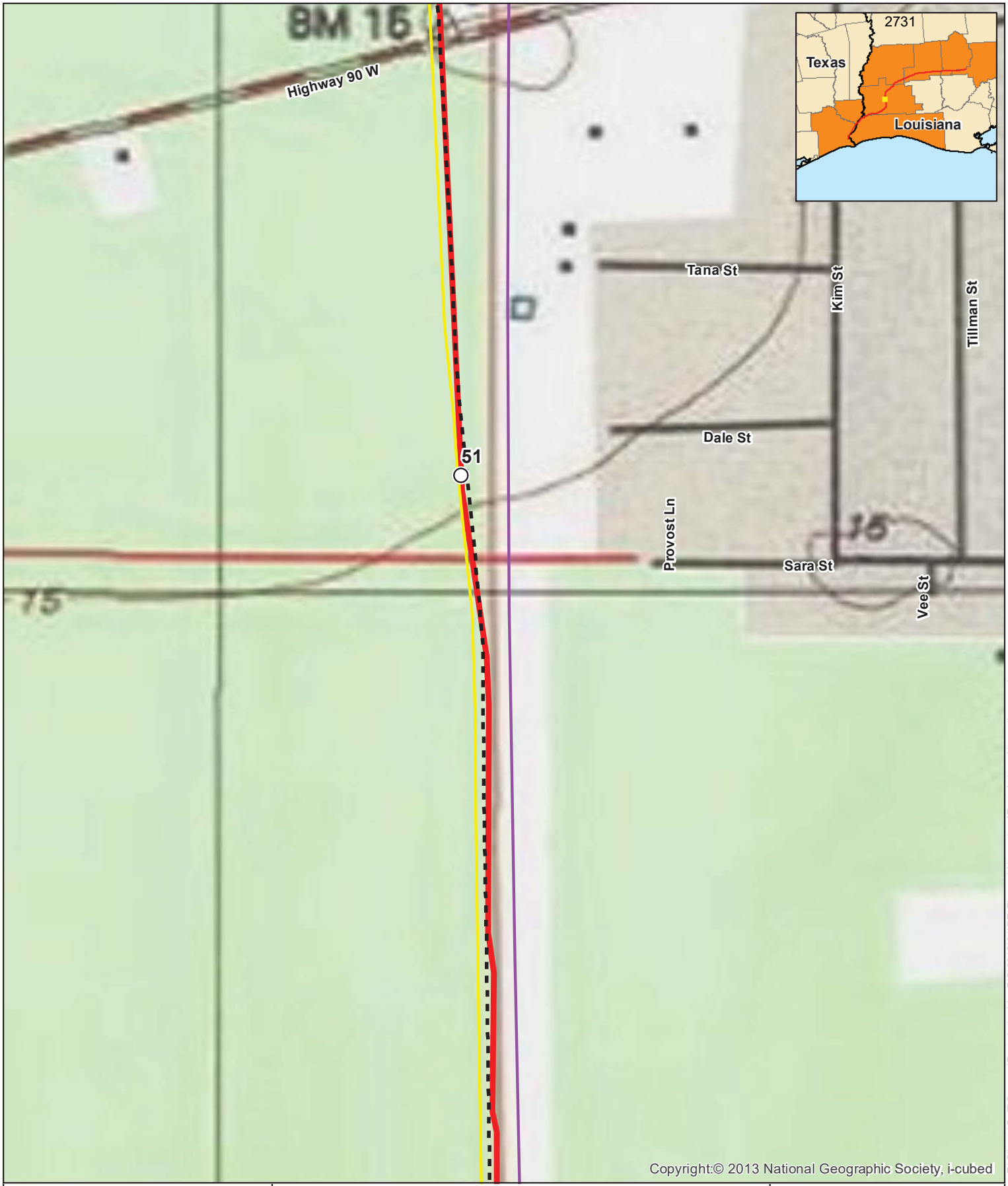
Map 6 of 13

Appendix G
Driftwood Alternative

- Milepost
- LA Connector Project
- Driftwood Route
- Driftwood Alternative
- Existing Sempra CIP Route

Source: Z:\Clients\Q_T\SempraPort_Arthur\ArcGIS\2018\01\RR\Figures\Alternatives\Port_Arthur_Alternatives.mxd

Date: (9/13/2018)



0 250 500 Feet

1 inch = 500 feet

N W E S

For Environmental Review Purposes Only

Map 7 of 13

Appendix G
Driftwood Alternative

- Milepost
- LA Connector Project
- Driftwood Route
- Driftwood Alternative
- Existing Sempra CIP Route

Source: Z:\Clients\Q_T\SempraPort_Arthur\ArcGIS\2018\01\RR\Figures\Alternatives\Port_Arthur_Alternatives.mxd

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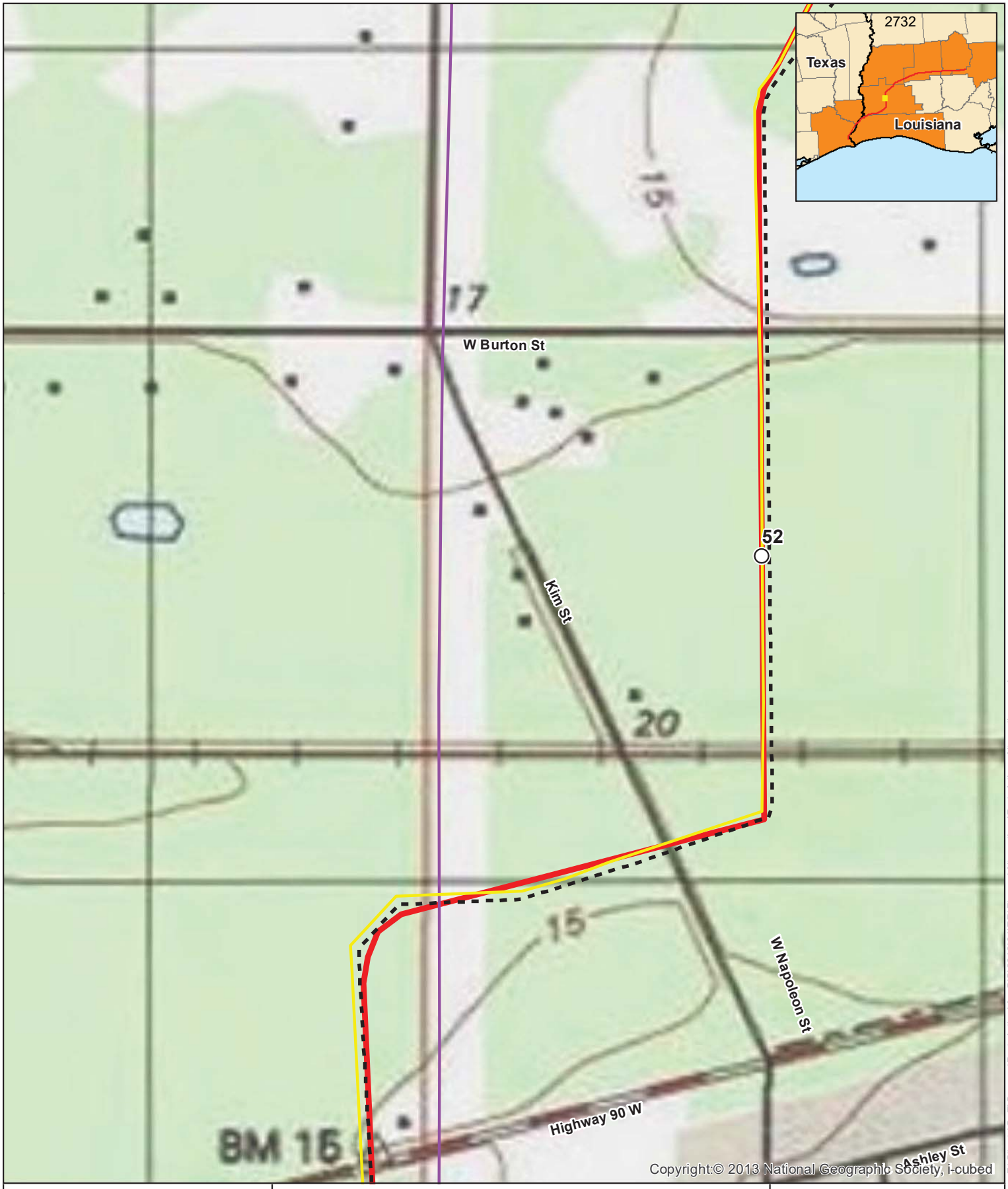

0 250 500 Feet

1 inch = 500 feet

N W E S

For Environmental Review Purposes Only

Map 8 of 13

Appendix G
Driftwood Alternative

- Milepost
- LA Connector Project
- Driftwood Route
- Driftwood Alternative
- Existing Sempra CIP Route

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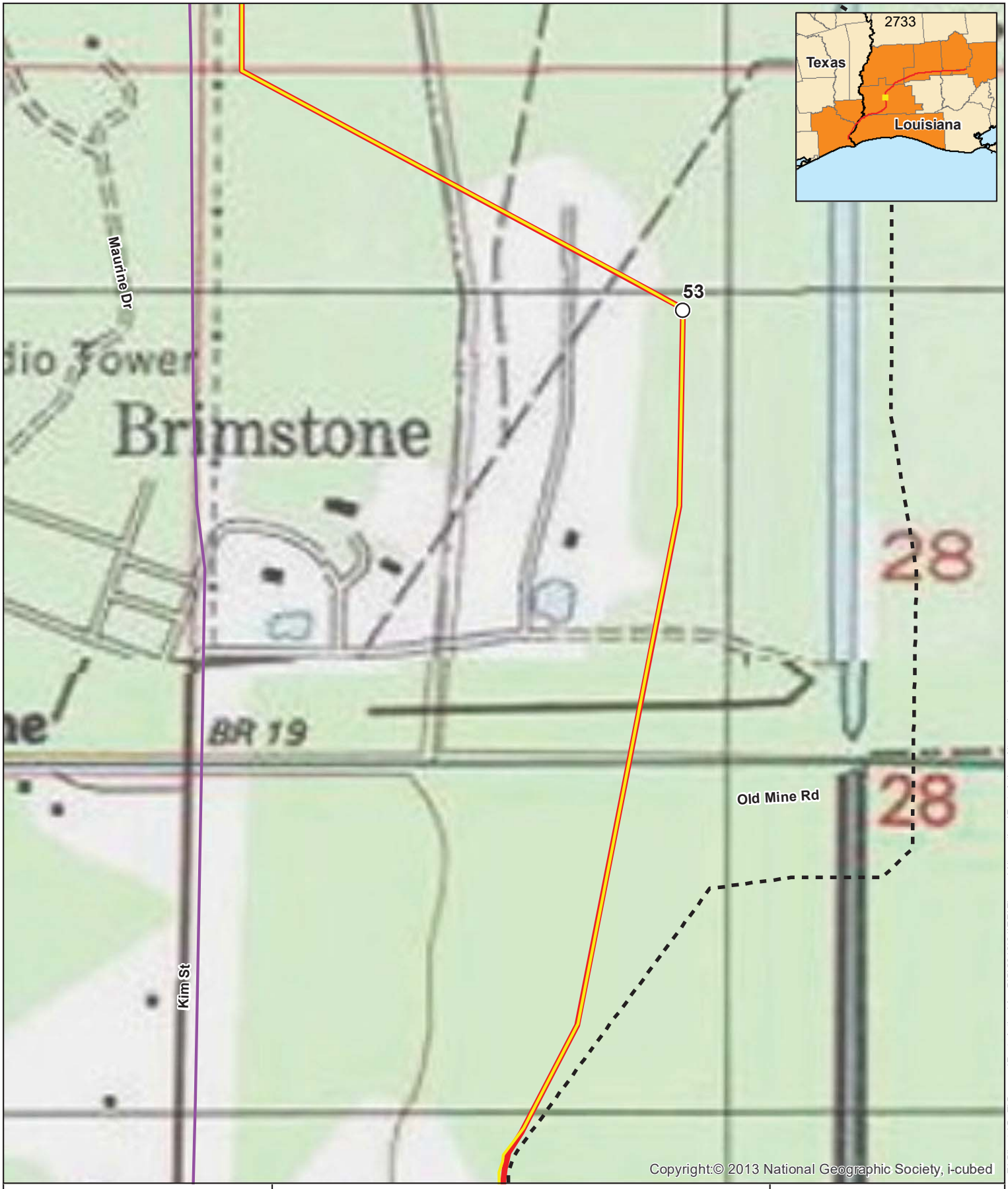

0 250 500 Feet

1 inch = 500 feet

N W E S

For Environmental Review Purposes Only

Map 9 of 13

Appendix G
Driftwood Alternative

- Milepost
- LA Connector Project
- Driftwood Route
- Driftwood Alternative
- Existing Sempra CIP Route

Source: Z:\Clients\IQ_T\SempraPort_Arthur\ArcGIS\2018\01\RR\Figures\Alternatives\Port_Arthur_Alternatives.mxd

Date: (9/13/2018)



0 250 500 Feet

1 inch = 500 feet

N W E S

For Environmental Review Purposes Only

Map 10 of 13

Appendix G
Driftwood Alternative

- Milepost
- LA Connector Project
- Driftwood Route
- Driftwood Alternative
- Existing Sempra CIP Route

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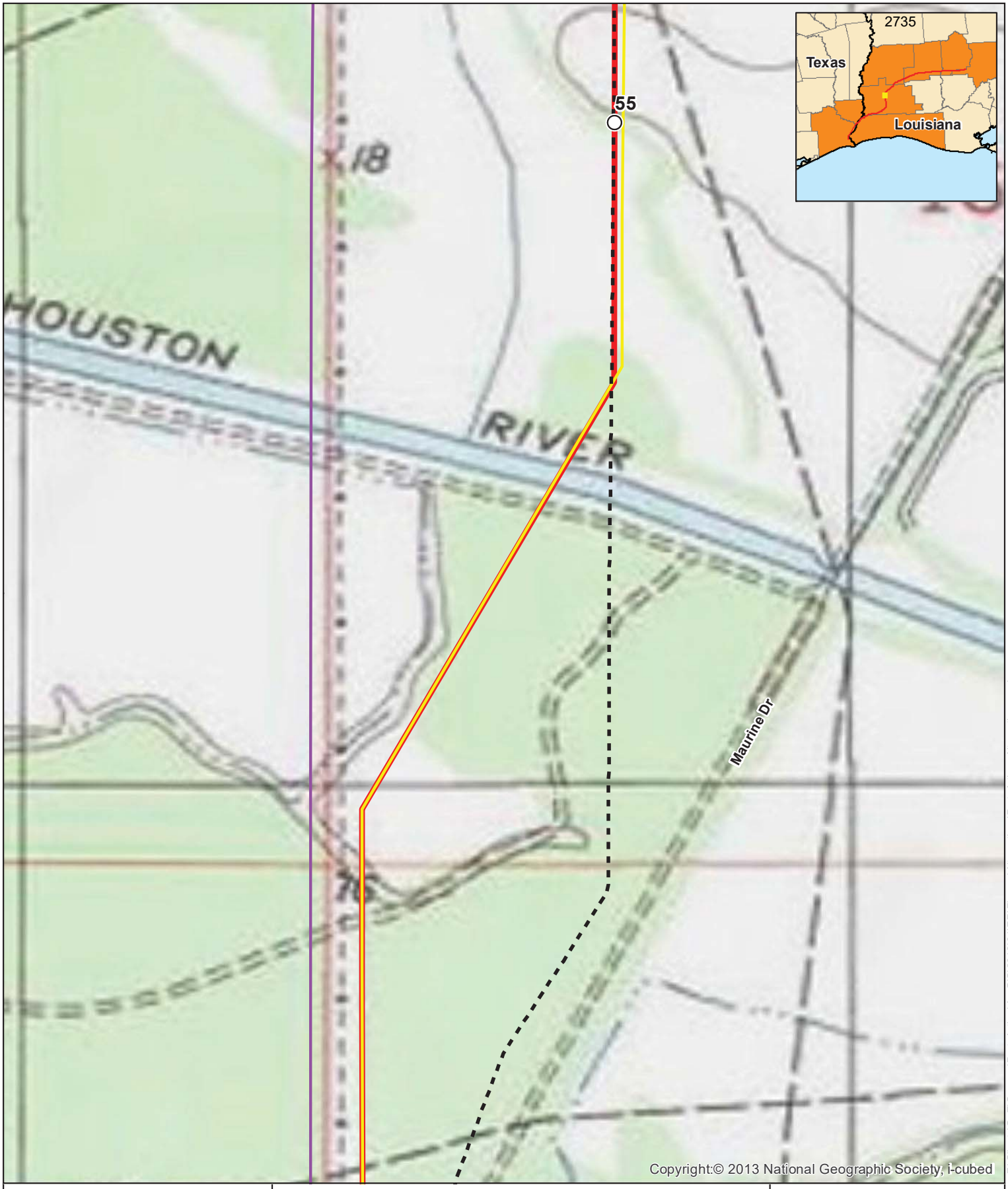


0 250 500 Feet

1 inch = 500 feet

N W E S

For Environmental Review Purposes Only

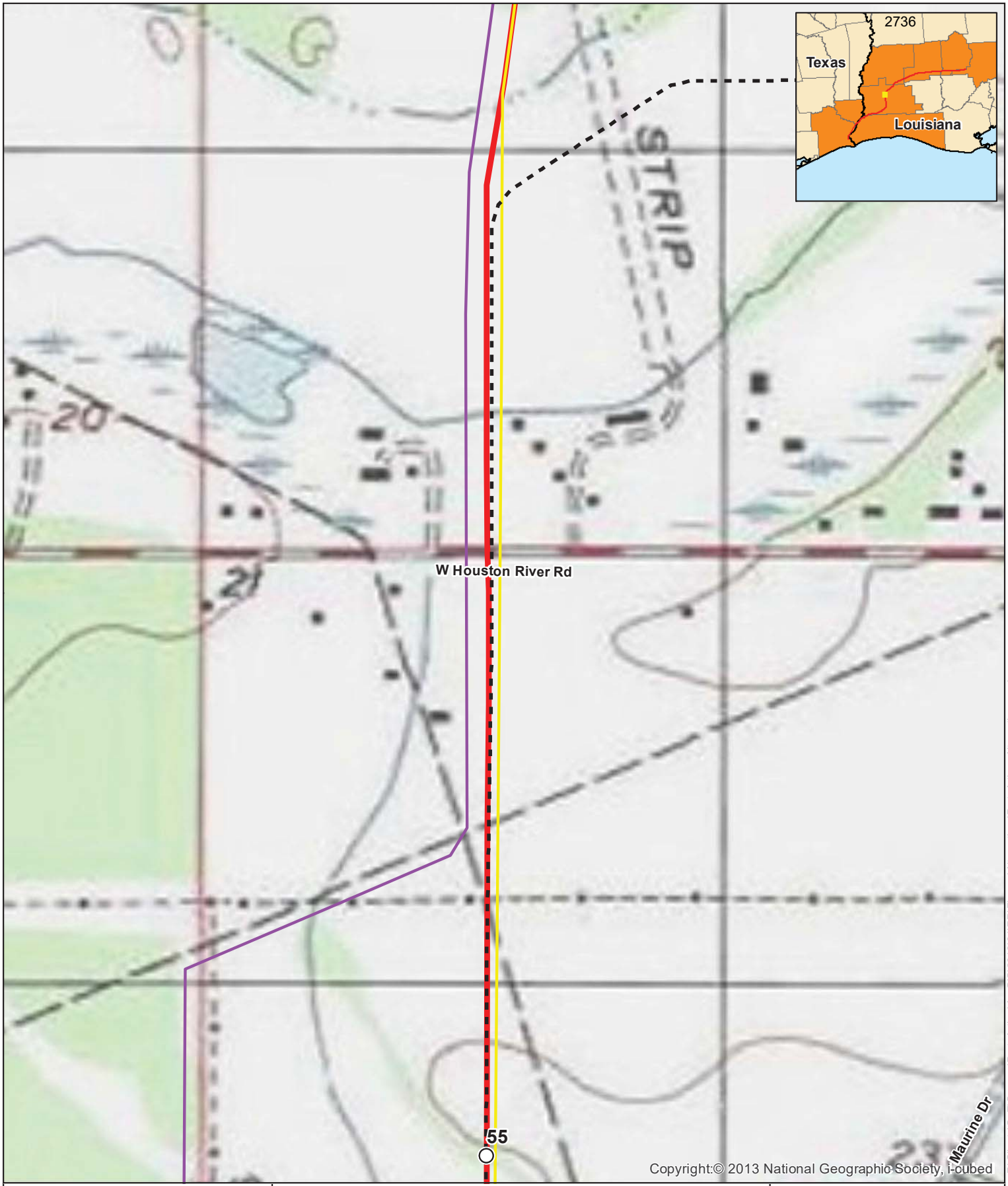
Map 11 of 13

Appendix G
Driftwood Alternative

- Milepost
- LA Connector Project
- Driftwood Route
- Driftwood Alternative
- Existing Sempra CIP Route

Source: Z:\Clients\G_T\SempraPort_Arthur\ArcGIS\2018\01\RR\Figures\Alternatives\Port_Arthur_Alternatives.mxd

Date: (9/13/2018)



0 250 500 Feet

1 inch = 500 feet

N W E S

For Environmental Review Purposes Only

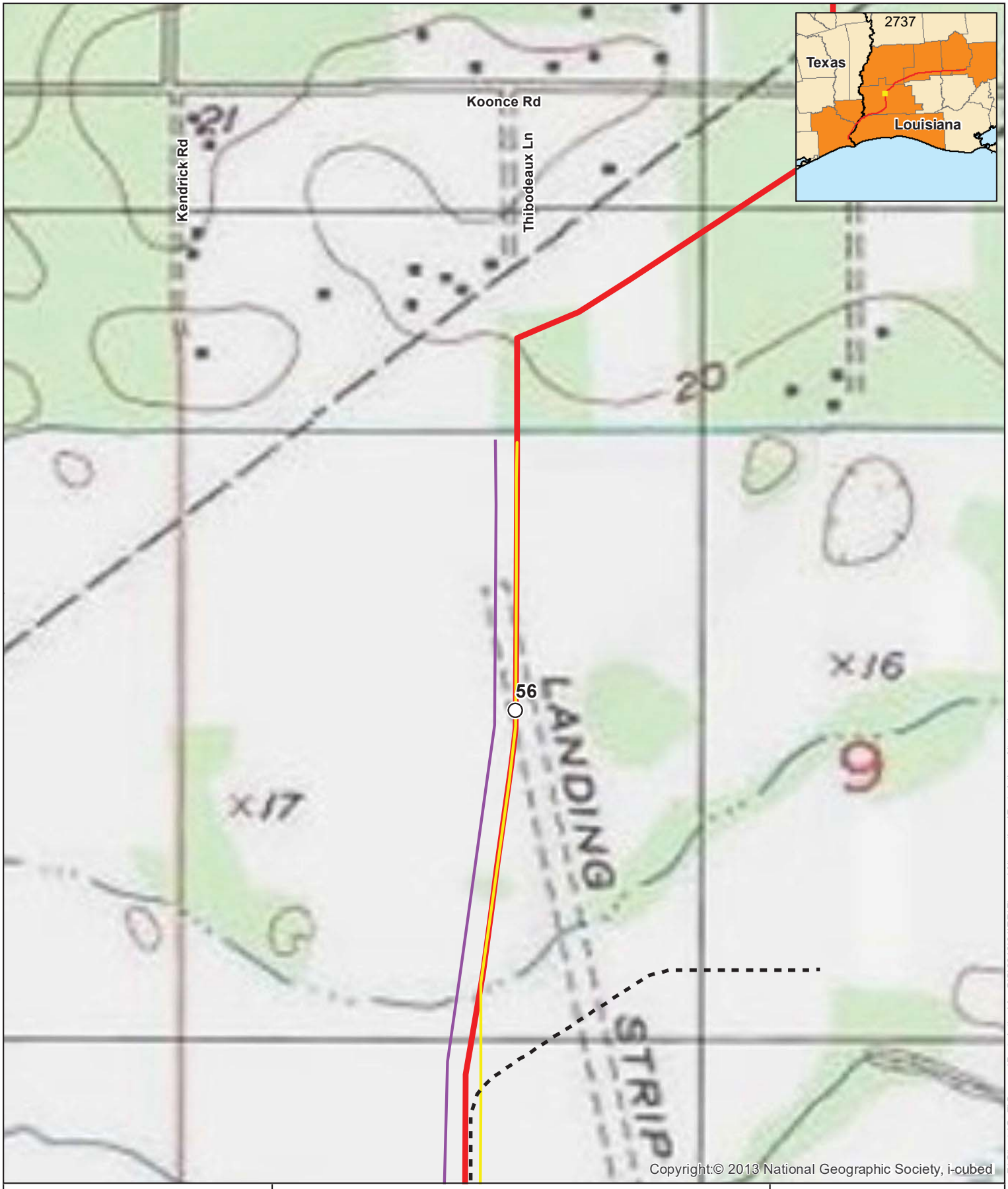
Map 12 of 13

Appendix G
Driftwood Alternative

- Milepost
- LA Connector Project
- Driftwood Route
- Driftwood Alternative
- Existing Sempra CIP Route

Source: Z:\Clients\Q_T\SempraPort_Arthur\ArcGIS\2018\01\RR\Figures\Alternatives\Port_Arthur_Alternatives.mxd

Date: (9/13/2018)



0 250 500 Feet

1 inch = 500 feet

N W E S

For Environmental Review Purposes Only

Map 13 of 13

Appendix G
Driftwood Alternative

- Milepost
- LA Connector Project
- Driftwood Route
- Driftwood Alternative
- Existing Sempra CIP Route

Source: Z:\Clients\Q_T\SempraPort_Arthur\ArcGIS\2018\01\RR\Figures\Alternatives\Port_Arthur_Alternatives.mxd

Date: (9/13/2018)

APPENDIX H

MINERAL RESOURCES WITHIN 0.25 MILE OF THE PROJECTS

APPENDIX H

Mineral Resources within 0.25 mile of the Projects

Project, State, Component	Milepost (mile) [a]	Distance from Project (mile)	Resource Type
TEXAS			
Liquefaction Facility	NA	0.0	Dry Well
	NA	0.0	Dry Well
	NA	0.0	Natural Gas – Abandoned
	NA	0.0	Dry Well
Texas Connector North Pipeline	4.4	185.6	Natural Gas
	6.4	4,726.5	Natural Gas
	6.5	4,855.9	Natural Gas
	6.5	4,880.9	Crude Oil
	9.6	648.7	Crude Oil
	9.6	380.2	Natural Gas
	11.4	2,182.1	Natural Gas
	11.4	2,345.2	Natural Gas
	11.6	2,682.2	Natural Gas
	11.6	478.5	Natural Gas
	12.3	1,148.8	Natural Gas
	12.9	484.3	Natural Gas
	18.9	4,839.2	Crude Oil
	18.9	4,506.2	Crude Oil
	18.9	4,095.2	Crude Oil
	18.9	4,033.5	Crude Oil
	18.9	4,073.5	Crude Oil
	18.9	4,306.4	Crude Oil
	18.9	2,095.5	Crude Oil
	18.9	1,431.5	Crude Oil
	18.9	1,988.7	Crude Oil
	18.9	2,470.0	Crude Oil
	18.9	2,200.7	Crude Oil
	18.9	2,546.6	Crude Oil
	18.9	2,380.6	Crude Oil
	18.9	2,673.3	Crude Oil
	18.9	1,904.5	Crude Oil
	18.9	3,413.1	Crude Oil
	18.9	2,474.9	Crude Oil
	18.9	2,627.3	Crude Oil
	18.9	2,918.3	Crude Oil
	18.9	3,540.5	Crude Oil
	18.9	1,912.3	Crude Oil
	18.9	3,168.1	Crude Oil
	18.9	836.7	Crude Oil
	18.9	4,300.6	Crude Oil
	18.9	1,434.7	Crude Oil
	18.9	4,607.4	Natural Gas
	18.9	4,553.3	Crude Oil
	18.9	3,651.2	Crude Oil
	18.9	3,894.2	Crude Oil
	18.9	4,249.5	Crude Oil
	18.9	3,897.6	Crude Oil
	18.9	3,065.6	Crude Oil
	18.9	2,249.8	Crude Oil
	18.9	3,284.9	Crude Oil
	18.9	2,813.7	Crude Oil
	18.9	2,479.9	Crude Oil

APPENDIX H (cont'd)

Mineral Resources within 0.25 mile of the Projects

Project, State, Component	Milepost (mile) [a]	Distance from Project (mile)	Resource Type
	18.9	3,162.7	Crude Oil
	18.9	3,567.2	Crude Oil
	18.9	2,942.8	Crude Oil
	18.9	1,751.6	Crude Oil
	18.9	2,852.1	Crude Oil
	18.9	2,038.3	Crude Oil
	18.9	2,218.6	Crude Oil
	18.9	2,257.3	Crude Oil
	18.9	2,334.5	Crude Oil
	18.9	3,278.6	Natural Gas
	18.9	3,977.2	Crude Oil
	18.9	4,503.9	Crude Oil
	18.9	3,999.6	Crude Oil
	18.9	4,076.8	Crude Oil
	18.9	4,260.0	Crude Oil
	18.9	3,654.5	Crude Oil
	18.9	4,194.4	Crude Oil
	18.9	3,849.3	Crude Oil
	18.9	4,040.3	Crude Oil
	18.9	1,646.0	Crude Oil
	19.0	1,600.3	Crude Oil
	19.0	1,504.7	Crude Oil
	19.0	1,509.2	Crude Oil
	19.0	808.8	Crude Oil
	19.2	757.1	Crude Oil
	19.2	332.4	Crude Oil
	19.2	615.5	Crude Oil
	19.2	1,172.3	Crude Oil
	19.3	931.7	Crude Oil
	19.3	117.1	Crude Oil
	19.3	1,302.7	Crude Oil
	19.3	1,473.7	Crude Oil
	19.3	1,938.1	Crude Oil
	19.3	1,510.7	Crude Oil
	19.3	118.1	Crude Oil
	19.3	1,543.1	Crude Oil
	19.3	1,341.1	Crude Oil
	19.4	1,418.1	Crude Oil
	19.4	1,237.9	Crude Oil
	19.4	408.4	Crude Oil
	19.4	553.5	Crude Oil
	19.4	2,081.3	Crude Oil
	19.4	1,043.1	Crude Oil
	19.4	959.9	Crude Oil
	19.4	2,491.1	Crude Oil
	19.5	452.9	Crude Oil
	19.6	1,042.9	Crude Oil
	19.6	877.8	Crude Oil
	19.6	1,140.6	Crude Oil
	19.6	1,197.5	Crude Oil
	19.6	1,307.1	Crude Oil
	19.6	1,243.8	Crude Oil
	13.0	114	Sand and gravel
	21.1	141	Halite, sulfur, limestone

APPENDIX H (cont'd)

Mineral Resources within 0.25 mile of the Projects

Project, State, Component	Milepost (mile) [a]	Distance from Project (mile)	Resource Type
Texas Connector South Pipeline	3.6	1,178.1	Natural Gas
KMPL Lateral	0.0	420.9	Water
FGT Lateral	0.0	416.2	Crude Oil
	0.3	553.3	Crude Oil
	0.4	382.9	Crude Oil
	0.5	1,028.0	Natural Gas and Crude Oil
	0.6	450.9	Crude Oil
	0.6	1,097.5	Natural Gas and Crude Oil
	0.7	1,118.0	Natural Gas and Crude Oil
	0.7	465.2	Natural Gas and Crude Oil
	0.8	951.5	Natural Gas
	0.9	633.4	Natural Gas and Crude Oil
GTS Lateral	0.6	1,281.8	Crude Oil
	0.6	973.9	Crude Oil
	0.6	1,329.8	Crude Oil
	0.6	1,183.7	Crude Oil
	0.7	577.5	Crude Oil
	0.7	1,002.7	Crude Oil
	0.7	798.5	Crude Oil
	0.7	930.7	Crude Oil
	0.7	745.9	Crude Oil
	0.7	876.9	Natural Gas
	0.7	729.8	Crude Oil
	0.7	635.4	Crude Oil
	0.7	376.9	Crude Oil
	1.1	814.8	Crude Oil
	1.2	1,326.5	Crude Oil
	1.2	1,265.9	Crude Oil
	1.3	1,345.1	Crude Oil
	1.3	2,264.4	Crude Oil
	1.3	2,461.6	Crude Oil
	1.3	200.1	Crude Oil
	1.3	2,317.8	Natural Gas
	1.3	582.6	Crude Oil
	1.3	679.9	Crude Oil
	1.3	1,496.1	Crude Oil
	1.3	1,443.7	Crude Oil
	1.3	682.3	Crude Oil
	1.3	1,494.9	Crude Oil
	1.3	1,349.8	Crude Oil
	1.3	4,277.0	Crude Oil
	1.3	4,482.1	Crude Oil
	1.3	4,352.8	Crude Oil
	1.3	4,394.9	Crude Oil
	1.3	888.2	Crude Oil
	1.3	4,629.6	Crude Oil
	1.3	720.6	Crude Oil
	1.3	4,661.5	Crude Oil
	1.3	4,462.6	Crude Oil
	1.3	4,321.3	Crude Oil
	1.3	1,403.2	Crude Oil
	1.3	1,281.1	Crude Oil
	1.3	764.0	Crude Oil
	1.3	1,320.0	Crude Oil
	1.3	1,229.5	Crude Oil

APPENDIX H (cont'd)

Mineral Resources within 0.25 mile of the Projects

Project, State, Component	Milepost (mile) [a]	Distance from Project (mile)	Resource Type
	1.3	1,676.6	Crude Oil
	1.3	808.9	Crude Oil
	1.3	1,728.5	Crude Oil
	1.3	970.5	Crude Oil
	1.3	814.2	Crude Oil
	1.3	1,570.9	Crude Oil
	1.3	877.2	Crude Oil
	1.3	1,457.2	Crude Oil
	1.3	1,659.6	Crude Oil
	1.3	1,777.6	Crude Oil
	1.3	1,467.6	Crude Oil
	1.3	1,507.3	Crude Oil
	1.3	823.7	Crude Oil
	1.3	1,746.3	Crude Oil
	1.3	734.3	Crude Oil
	1.3	711.8	Crude Oil
	1.3	1,416.0	Crude Oil
	1.3	1,629.3	Crude Oil
	1.3	1,466.0	Crude Oil
	1.3	1,351.1	Crude Oil
	1.3	1,590.9	Crude Oil
	1.3	1,643.7	Crude Oil
	1.3	696.1	Crude Oil
	1.3	1,351.1	Crude Oil
	1.3	1,532.6	Crude Oil
	1.3	1,574.2	Crude Oil
	1.3	1,379.7	Crude Oil
	1.3	1,470.0	Crude Oil
	1.3	1,611.8	Crude Oil
	1.3	1,614.5	Crude Oil
	1.3	1,566.0	Crude Oil
	1.3	1,152.2	Crude Oil
	1.3	1,402.9	Crude Oil
	1.3	1,369.4	Crude Oil
	1.3	1,157.0	Crude Oil
	1.3	4,123.2	Crude Oil
	1.3	4,226.8	Crude Oil
	1.3	4,368.2	Crude Oil
	1.3	3,953.9	Crude Oil
	1.3	1,985.4	Crude Oil
	1.3	4,319.3	Crude Oil
	1.3	1,590.8	Crude Oil
HPL Lateral	0.0	1,179.4	Crude Oil
Non-jurisdictional Facilities	NA	NA	NA
Louisiana Connector			
TETCO Lateral	0.0	338.7	Unknown
	0.0	1,224.4	Crude Oil
	0.1	361.1	Crude Oil
LOUISIANA			
Texas Connector South Pipeline	0.2	917.2	Natural Gas
	0.2	875.3	Natural Gas
Louisiana Connector Mainline	19.0	1,291.6	Unknown

APPENDIX H (cont'd)

Mineral Resources within 0.25 mile of the Projects

Project, State, Component	Milepost (mile) [a]	Distance from Project (mile)	Resource Type
	29.7	699.8	Unknown
	32.9	548.3	Unknown
	33.1	274.7	Unknown
	38.8	813.2	Unknown
	39.1	1,179.9	Unknown
	39.2	837.1	Natural Gas
	39.2	1,129.1	Unknown
	40.2	74.3	Unknown
	41.5	1,120.0	Unknown
	43.1	1,171.8	Unknown
	47.6	1,122.1	Unknown
	48.1	554.9	Unknown
	48.4	676.5	Unknown
	51.6	899.6	Unknown
	51.8	173.3	Unknown
	53.1	1,010.5	Crude Oil
	53.4	1,196.3	Unknown
	53.4	620.5	Crude Oil
	53.5	1,187.1	Crude Oil
	53.5	964.4	Natural Gas
	54.7	124.0	Unknown
	56.6	915.9	Unknown
	56.6	901.7	Unknown
	57.3	192.1	Unknown
	57.6	519.9	Unknown
	57.9	1,055.9	Unknown
	59.4	958.7	Unknown
	61.6	416.2	Unknown
	61.6	788.3	Unknown
	63.2	1,085.1	Unknown
	64.1	435.6	Unknown
	64.5	727.7	Natural Gas
	64.6	586.9	Crude Oil
	64.7	1,064.9	Unknown
	64.8	1,027.7	Unknown
	65.1	351.3	Unknown
	66.4	265.2	Unknown
	67.4	231.3	Unknown
	67.6	1,129.0	Unknown
	70.5	732.9	Unknown
	71.4	656.8	Crude Oil
	71.4	658.6	Unknown
	72.6	505.7	Unknown
	73.3	896.7	Unknown
	73.3	832.4	Unknown
	74.0	110.7	Unknown
	76.4	143.3	Unknown
	78.1	1,085.6	Unknown
	78.2	1,020.4	Natural Gas

APPENDIX H (cont'd)

Mineral Resources within 0.25 mile of the Projects

Project, State, Component	Milepost (mile) [a]	Distance from Project (mile)	Resource Type
	79.3	48.4	Unknown
	80.7	363.2	Unknown
	80.8	899.1	Unknown
	81.5	312.2	Unknown
	81.8	2.5	Crude Oil
	81.8	1,209.4	Unknown
	82.0	19.3	Crude Oil
	82.2	150.7	Natural Gas
	82.4	410.8	Crude Oil
	82.7	915.1	Crude Oil
	83.0	1,027.5	Crude Oil
	83.0	229.3	Crude Oil
	83.5	1,308.7	Unknown
	83.5	653.4	Crude Oil
	83.7	724.0	Crude Oil
	84.1	211.0	Unknown
	84.2	1,222.4	Unknown
	84.4	408.5	Unknown
	84.5	1,289.1	Unknown
	84.8	1,107.2	Unknown
	85.2	915.9	Crude Oil
	85.7	902.4	Unknown
	85.9	278.6	Natural Gas
	86.0	699.9	Natural Gas
	86.1	512.6	Unknown
	86.2	329.2	Natural Gas
	86.3	508.6	Natural Gas
	86.4	1,208.0	Natural Gas
	86.5	337.8	Unknown
	86.5	176.3	Unknown
	86.6	876.6	Unknown
	86.6	852.1	Crude Oil
	86.6	408.5	Natural Gas
	86.7	683.5	Crude Oil
	86.8	799.5	Unknown
	86.8	185.5	Natural Gas
	86.9	506.2	Unknown
	87.0	606.0	Unknown
	87.2	334.1	Unknown
	87.2	104.7	Natural Gas
	87.4	898.1	Natural Gas
	88.0	500.6	Unknown
	92.1	830.3	Natural Gas
	100.3	845.8	Unknown
	105.2	617.3	Unknown
	106.2	1,201.2	Unknown
	107.2	1,306.5	Unknown
	109.9	807.2	Unknown
	110.8	928.0	Unknown

APPENDIX H (cont'd)

Mineral Resources within 0.25 mile of the Projects

Project, State, Component	Milepost (mile) [a]	Distance from Project (mile)	Resource Type
	111.6	61.9	Unknown
	112.1	904.7	Natural Gas
	112.5	1,195.2	Unknown
	113.1	918.6	Unknown
	113.4	364.8	Unknown
	114.2	429.0	Unknown
	114.2	625.8	Unknown
	114.7	140.8	Unknown
	114.7	618.3	Unknown
	114.9	751.2	Crude Oil
	114.9	549.6	Crude Oil
	115.1	467.3	Unknown
	115.1	488.0	Unknown
	115.4	943.3	Natural Gas
	115.7	1,230.3	Unknown
	117.5	1,034.5	Unknown
	120.3	657.4	Unknown
	121.7	82.9	Unknown
	124.0	306.5	Unknown
	125.1	670.7	Unknown
	125.2	1,153.0	Unknown
	126.4	847.7	Unknown
	127.5	1,195.1	Unknown
	127.7	136.1	Unknown
	127.7	389.9	Natural Gas
	127.8	852.0	Unknown
	127.9	1,313.8	Unknown
	128.2	238.8	Unknown
	128.2	1,256.9	Unknown
	130.4	961.7	Unknown

Source: USGS, 2016b.

APPENDIX I

SURFACE WATERBODIES CROSSED BY THE TEXAS CONNECTOR AND LOUISIANA CONNECTOR PROJECTS

SURFACE WATERBODIES CROSSED BY THE TEXAS CONNECTOR PROJECT

APPENDIX I.1

Surface Waterbodies Crossed by the Texas Connector Project

County/Parish, State, Milepost	Waterbody Name	Flow Type [a]	Crossing Length (feet)	State Water Quality Classification [b]	Fishery Type [c]	Proposed Crossing Method
Northern Pipeline						
Jefferson County, Texas						
1.7	Intracoastal Waterway	E	425.9	PCR1, H	WWMF	HDD
1.6	Intracoastal Waterway	E	441.9	PCR1, H	WWMF	HDD
2.5	Taylor Bayou	P	790.5	PCR1, H	WWMF	HDD
2.8	Unnamed	P	54.8	NA	WWFF	Push
2.9	Unnamed	P	47.1	NA	WWFF	Push
5.0	Unnamed	P	1,133.6	NA	WWFF	HDD
5.3	Unnamed	P	74.0	NA	WWFF	HDD
5.3	Unnamed	P	63.6	NA	WWFF	HDD
5.6	Unnamed	P	29.0	NA	WWFF	HDD
5.7	Unnamed	P	51.4	NA	WWFF	HDD
7.9	Unnamed	E	23.9	NA	WWFF	HDD
8.4	Unnamed	E	10.3	NA	WWFF	HDD
8.6	Unnamed	P	1,566.4	NA	WWFF	HDD
8.9	Unnamed	P	35.6	NA	WWFF	HDD
9.9	Unnamed	P	19.0	NA	WWFF	Open Cut
10.2	Taylor Bayou	P	375.1	PCR1, I	WWFF	HDD
10.9	Unnamed	P	79.5	NA	WWFF	HDD
11.0	Unnamed	I	15.2	NA	WWFF	Open Cut
11.7	Unnamed	P	75.0	NA	WWFF	HDD
11.8	Unnamed	P	569.9	NA	WWFF	HDD
12.0	Hillebrandt Bayou	P	394.6	PCR1, I	WWFF	HDD
12.0	Unnamed	P	29.7	NA	WWFF	HDD
12.4	Unnamed	P	41.5	NA	WWFF	Open Cut
12.7	Unnamed	I	30.2	NA	WWFF	Open Cut
13.2	Unnamed	P	52.2	NA	WWFF	HDD
14.0	Unnamed	E	49.2	NA	WWFF	Open Cut
14.3	Gallier Canal	P	59.0	NA	WWFF	HDD
14.5	Unnamed	E	617.3	NA	WWFF	Open Cut
16.5	Unnamed	E	14.1	NA	WWFF	Open Cut
16.9	Unnamed	P	63.6	NA	WWFF	Open Cut
17.1	Unnamed	E	5.0	NA	WWFF	HDD
17.8	Unnamed	P	11.1	NA	WWFF	HDD
18.3	Unnamed	P	18.1	NA	WWFF	HDD
19.3	Unnamed	E	6.0	NA	WWFF	Open Cut
19.3	Unnamed	E	4.0	NA	WWFF	Open Cut
19.4	Unnamed	P	54.1	NA	WWFF	Open Cut
19.7	Unnamed	P	79.4	NA	WWFF	HDD
19.8	Unnamed	P	85.13	NA	WWFF	HDD
Orange County, Texas						
22.1	Neches River	P	873.7	PCR1, I	WWMF	HDD
25.6	Unnamed	I	60.4	NA	WWFF	HDD
26.4	Unnamed	I	5.0	NA	WWFF	Bore
26.4	Unnamed	I	5.0	NA	WWFF	Bore

APPENDIX I.1 (cont'd)

Surface Waterbodies Crossed by the Texas Connector Project

County/Parish, State, Milepost	Waterbody Name	Flow Type [a]	Crossing Length (feet)	State Water Quality Classification [b]	Fishery Type [c]	Proposed Crossing Method
Southern Pipeline						
Jefferson County, Texas						
0.3	Unnamed	P	132.5	NA	WWMF	HDD
2.4	Unnamed	P	365.3	NA	WWMF	HDD
4.2	Unnamed	P	58.4	NA	WWMF	Push
4.3	Unnamed	P	42.1	NA	WWMF	Push
6.6	Sabine Pass	P	4,325.9	PCR, E/O	WWMF	HDD
Cameron Parish, Louisiana						
7.3	Unnamed	P	43.1	NA	WWMF	HDD
FGT Lateral						
Orange County, Texas						
0.3	Unnamed	E	2.0	NA	WWFF	Bore
0.3	Unnamed	E	2.0	NA	WWFF	Bore
0.9	Unnamed	P	21.8	NA	WWFF	HDD
1.4	Unnamed	I	17.5	NA	WWFF	Open Cut
GTS/CIPCO Lateral						
Jefferson County, Texas						
0.6	Unnamed	P	103.0	NA	WWFF	HDD
0.9	Unnamed	P	64.2	NA	WWFF	HDD
1.2	Unnamed	P	705.9	NA	WWFF	Open Cut

[a] Flow Type:
P = Perennial
I = Intermittent
E = Ephemeral

[b] 2014 Texas Water Quality Standards
E = Exceptional Aquatic Life Use
H = High Aquatic Life Use
I = Intermediate Aquatic Life Use
NA = Not Applicable (Unclassified by TCEQ)
O = Oyster Waters
PCR = Primary Contact Recreation

[c] WWMF = Warm Water Marine Fishery
WWFF = Warm Water Freshwater Fishery

[d] ATWS within 50 feet of the water's edge.

SURFACE WATERBODIES CROSSED BY THE LOUISIANA CONNECTOR PROJECT

APPENDIX I.2

Surface Waterbodies Crossed by the Louisiana Connector Project

County/ Parish, State, Milepost	Waterbody Label	Waterbody	Type [a]	Crossing Width (feet)	State Water Quality Classification [b]	Fishery Type [c]	Proposed Construction Crossing Method [d]	FERC Classification [e]
Jefferson County, Texas								
0.20	JEF-WB-001	Sabine-Neches Canal	P	1,402.4	A,C	Saltwater Fishery	HDD	Major
0.62	JEF-WB-002	Unnamed Waterbody	I	123.8	N/A	Saltwater Fishery	HDD	Major
0.66	JEF-WB-003	Unnamed Waterbody	E	28.5	N/A	Saltwater Fishery	HDD	Intermediate
0.69	JEF-WB-004	Sabine Lake	OW	1,571.6	A,B,C,E	Saltwater Fishery	HDD	Major
0.98	JEF-WB-004	Sabine Lake	OW	64,626.2	A,B,C,E	Saltwater Fishery	HDD	Major
3.71	JEF-WB-004	Sabine Lake	OW	0.0	A,B,C,E	Saltwater Fishery	Barge Lay	Minor
Orange County, Texas								
13.22	ORA-WB-001	Sabine River	OW	18,888.2	A,B,C,E	Saltwater Fishery	Barge Lay	Major
Cameron Parish, Louisiana								
16.79	CAM-WB-001	Sabine River	OW	5,831.9	A,B,C,E	Saltwater Fishery	Barge Lay	Major
17.63	CAM-WB-001	East Pass	OW	5,831.9	N/A	Saltwater Fishery	HDD	Major
18.92	CAM-WB-002	East Pass	P	620.2	N/A	Saltwater Fishery	HDD	Major
19.36	CAM-WB-003	Unnamed Waterbody	P	48.6	N/A	Saltwater Fishery	Push	Intermediate
20.35	CAM-WB-004	Unnamed Waterbody	P	73.1	N/A	Saltwater Fishery	Push	Intermediate
20.63	CAM-WB-005	Unnamed Waterbody	P	99.3	N/A	Saltwater Fishery	Push	Intermediate
20.86	CAM-WB-006	Unnamed Waterbody	P	385.8	N/A	Saltwater Fishery	Push	Major
21.17	CAM-WB-007	Unnamed Waterbody	P	42.9	N/A	Saltwater Fishery	Push	Intermediate
21.29	CAM-WB-008	Unnamed Waterbody	P	23.5	N/A	Saltwater Fishery	Push	Intermediate
21.66	CAM-WB-009	Unnamed Waterbody	P	47.9	N/A	Saltwater Fishery	Push	Intermediate
21.88	CAM-WB-010	Unnamed Waterbody	P	36.7	N/A	Saltwater Fishery	Push	Intermediate
22.07	CAM-WB-011	Unnamed Waterbody	P	14.2	N/A	Saltwater Fishery	Push	Intermediate
22.33	CAM-WB-012	Unnamed Waterbody	P	306.6	N/A	Saltwater Fishery	Push	Major
22.60	CAM-WB-013	Unnamed Waterbody	OW	541.4	N/A	Saltwater Fishery	Push	Major
22.81	CAM-WB-014	Unnamed Waterbody	OW	2,130.9	N/A	Saltwater Fishery	Push	Major
23.38	CAM-WB-015	Unnamed Waterbody	OW	347.8	N/A	Saltwater Fishery	Push	Major
23.57	CAM-WB-018	Unnamed Waterbody	OW	1,166.7	N/A	Saltwater Fishery	Push	Major

APPENDIX I.2 (cont'd)

Surface Waterbodies Crossed by the Louisiana Connector Project

County/ Parish, State, Milepost	Waterbody Label	Waterbody	Type [a]	Crossing Width (feet)	State Water Quality Classification [b]	Fishery Type [c]	Proposed Construction Crossing Method [d]	FERC Classification [e]
23.83	CAM-WB-019	Unnamed Waterbody	OW	996.3	N/A	Saltwater Fishery	Push	Major
24.07	CAM-WB-020	Unnamed Waterbody	OW	350.5	N/A	Saltwater Fishery	Push	Major
24.38	CAM-WB-023	Unnamed Waterbody	OW	1,990.9	N/A	Saltwater Fishery	Push	Major
25.19	CAM-WB-026	Unnamed Waterbody	OW	57.0	N/A	Saltwater Fishery	Push	Intermediate
26.71	CAM-WB-027	Unnamed Waterbody	P	31.8	N/A	Saltwater Fishery	HDD	Intermediate
Calcasieu Parish, Louisiana								
27.85	CAL-WB-001	Intracoastal Waterway	P	899.1	N/A	Saltwater Fishery	HDD	Major
28.55	CAL-WB-004	Unnamed Waterbody	OW	479.9	N/A	Saltwater Fishery	Push	Major
28.68	CAL-WB-005	Unnamed Waterbody	OW	118.1	N/A	Saltwater Fishery	Push	Major
30.50	CAL-WB-006	Unnamed Waterbody	P	19.6	N/A	Saltwater Fishery	Push	Intermediate
30.56	CAL-WB-007	Unnamed Waterbody	P	129.4	N/A	Saltwater Fishery	Push	Major
30.67	CAL-WB-008	Unnamed Waterbody	P	38.4	N/A	Saltwater Fishery	HDD	Intermediate
30.68	CAL-WB-009	Unnamed Waterbody	P	38.9	N/A	Saltwater Fishery	HDD	Intermediate
30.75	CAL-WB-010	Vinton Drainage Canal	P	246.8	A,B,C	Saltwater Fishery	HDD	Major
33.66	CAL-WB-011	Unnamed Waterbody	P	27.0	N/A	Saltwater Fishery	Push	Intermediate
34.72	CAL-WB-012	Unnamed Waterbody	P	44.9	N/A	Warm Water Fishery	Open Cut	Intermediate
35.04	CAL-WB-013	Unnamed Waterbody	P	13.1	N/A	Warm Water Fishery	Bore	Intermediate
35.05	CAL-WB-014	Unnamed Waterbody	P	14.1	N/A	Warm Water Fishery	Bore	Intermediate
36.37	CAL-WB-015	Unnamed Waterbody	P	23.3	N/A	Warm Water Fishery	Open Cut	Intermediate
36.74	CAL-WB-016	Unnamed Waterbody	I	41.3	N/A	Warm Water Fishery	Open Cut	Intermediate
37.43	CAL-WB-017	Unnamed Waterbody	P	43.3	N/A	Warm Water Fishery	Open Cut	Intermediate
37.47	CAL-WB-018	Unnamed Waterbody	P	13.3	N/A	Warm Water Fishery	Open Cut	Intermediate
38.72	CAL-WB-019	Unnamed Waterbody	P	32.5	N/A	Warm Water Fishery	HDD	Intermediate
38.80	CAL-WB-020	Unnamed Waterbody	P	46.5	N/A	Warm Water Fishery	HDD	Intermediate
38.81	CAL-WB-021	Unnamed Waterbody	P	21.5	N/A	Warm Water Fishery	HDD	Intermediate
38.90	CAL-WB-022	Unnamed Waterbody	P	25.8	N/A	Warm Water Fishery	HDD	Intermediate

APPENDIX I.2 (cont'd)

Surface Waterbodies Crossed by the Louisiana Connector Project

County/ Parish, State, Milepost	Waterbody Label	Waterbody	Type [a]	Crossing Width (feet)	State Water Quality Classification [b]	Fishery Type [c]	Proposed Construction Crossing Method [d]	FERC Classification [e]
39.63	CAL-WB-025	Unnamed Waterbody	P	125.5	N/A	Warm Water Fishery	Open Cut	Major
39.87	CAL-WB-026	Unnamed Waterbody	I	30.7	N/A	Warm Water Fishery	Open Cut	Intermediate
40.25	CAL-WB-028	Unnamed Waterbody	P	188.6	N/A	Warm Water Fishery	HDD	Major
40.34	CAL-WB-029	Unnamed Waterbody	P	32.8	N/A	Warm Water Fishery	HDD	Intermediate
40.43	CAL-WB-031	Unnamed Waterbody	P	30.4	N/A	Warm Water Fishery	HDD	Intermediate
42.04	CAL-WB-032	Unnamed Waterbody	I	19.8	N/A	Warm Water Fishery	HDD	Intermediate
42.35	CAL-WB-033	Bayou Choupique	P	156.9	A,B,C	Warm Water Fishery	HDD	Major
42.88	CAL-WB-034	Unnamed Waterbody	E	27.0	N/A	Warm Water Fishery	Open Cut	Intermediate
43.17	CAL-WB-035	Unnamed Waterbody	P	44.3	N/A	Warm Water Fishery	Open Cut	Intermediate
43.28	CAL-WB-036	Unnamed Waterbody	P	49.9	N/A	Warm Water Fishery	Open Cut	Intermediate
43.58	CAL-WB-037	Unnamed Waterbody	E	22.7	N/A	Warm Water Fishery	Open Cut	Intermediate
44.64	CAL-WB-038	Unnamed Waterbody	I	0.0	N/A	Warm Water Fishery	Bore	Minor
44.81	CAL-WB-039	Unnamed Waterbody	I	0.0	N/A	Warm Water Fishery	Bore	Minor
45.56	CAL-WB-040	Unnamed Waterbody	I	231.2	N/A	Warm Water Fishery	Open Cut	Major
47.29	CAL-WB-041	Unnamed Waterbody	E	49.8	N/A	Warm Water Fishery	Open Cut	Intermediate
47.70	CAL-WB-042	Unnamed Waterbody	E	115.6	N/A	Warm Water Fishery	HDD	Major
48.11	CAL-WB-043	Unnamed Waterbody	E	9.0	N/A	Warm Water Fishery	Open Cut	Minor
48.40	CAL-WB-046	Unnamed Waterbody	P	0.0	N/A	Warm Water Fishery	HDD	Minor
48.41	CAL-WB-046	Unnamed Waterbody	E	25.7	N/A	Warm Water Fishery	HDD	Intermediate
48.44	CAL-WB-047	Unnamed Waterbody	E	12.9	N/A	Warm Water Fishery	HDD	Intermediate
48.51	CAL-WB-049	Unnamed Waterbody	E	11.2	N/A	Warm Water Fishery	Open Cut	Intermediate
52.64	CAL-WB-051	Unnamed Waterbody	E	27.8	N/A	Warm Water Fishery	Open Cut	Intermediate
53.19	CAL-WB-052	Unnamed Waterbody	E	25.1	N/A	Warm Water Fishery	Open Cut	Intermediate
53.96	CAL-WB-053	Unnamed Waterbody	E	34.9	N/A	Warm Water Fishery	Open Cut	Intermediate
53.98	CAL-WB-054	Unnamed Waterbody	E	53.5	N/A	Warm Water Fishery	Open Cut	Intermediate
54.68	CAL-WB-056	Unnamed Waterbody	E	13.4	N/A	Warm Water Fishery	HDD	Intermediate

APPENDIX I.2 (cont'd)

Surface Waterbodies Crossed by the Louisiana Connector Project

County/ Parish, State, Milepost	Waterbody Label	Waterbody	Type [a]	Crossing Width (feet)	State Water Quality Classification [b]	Fishery Type [c]	Proposed Construction Crossing Method [d]	FERC Classification [e]
54.70	CAL-WB-057	Houston River Canal	P	122.5	N/A	Warm Water Fishery	HDD	Major
54.74	CAL-WB-058	Unnamed Waterbody	E	14.4	A,B,C,F	Warm Water Fishery	HDD	Intermediate
55.76	CAL-WB-059	Unnamed Waterbody	E	30.9	N/A	Warm Water Fishery	Open Cut	Intermediate
56.90	CAL-WB-060	Houston River	P	132.1	A,B,C,F	Warm Water Fishery	HDD	Major
58.52	CAL-WB-061	Unnamed Waterbody	I	29.0	N/A	Warm Water Fishery	Open Cut	Intermediate
59.27	CAL-WB-063	Unnamed Waterbody	I	20.8	N/A	Warm Water Fishery	Open Cut	Intermediate
59.84	CAL-WB-064	Unnamed Waterbody	E	12.1	N/A	Warm Water Fishery	HDD	Intermediate
60.64	CAL-WB-065	Little River	P	41.1	A,B,C	Warm Water Fishery	HDD	Intermediate
60.93	CAL-WB-066	Unnamed Waterbody	I	8.1	N/A	Warm Water Fishery	Open Cut	Minor
61.92	CAL-WB-067	Unnamed Waterbody	E	27.5	N/A	Warm Water Fishery	Open Cut	Intermediate
62.73	CAL-WB-068	Unnamed Waterbody	I	35.5	N/A	Warm Water Fishery	Open Cut	Intermediate
63.88	CAL-WB-069	Unnamed Waterbody	E	7.6	N/A	Warm Water Fishery	HDD	Minor
64.05	CAL-WB-070	Beckwith Creek [f]	P	122.6	A,B,C,F	Warm Water Fishery	HDD	Major
65.13	CAL-WB-071	Unnamed Waterbody	I	140.9	N/A	Warm Water Fishery	HDD	Major
65.27	CAL-WB-071	Hickory Branch [f]	P	140.9	A,B,C,F	Warm Water Fishery	HDD	Major
65.59	CAL-WB-072	Unnamed Waterbody	I	59.2	N/A	Warm Water Fishery	Open Cut	Intermediate
66.14	CAL-WB-073	Unnamed Waterbody	E	28.1	N/A	Warm Water Fishery	Open Cut	Intermediate
Beauregard Parish, Louisiana								
67.89	BEA-WB-002	Unnamed Waterbody	E	4.9	N/A	Warm Water Fishery	Open Cut	Minor
67.93	BEA-WB-003	Unnamed Waterbody	E	4.1	N/A	Warm Water Fishery	Open Cut	Minor
67.97	BEA-WB-004	Unnamed Waterbody	E	11.2	N/A	Warm Water Fishery	Open Cut	Intermediate
68.12	BEA-WB-005	Unnamed Waterbody	E	0.0	N/A	Warm Water Fishery	ATWS	Minor
69.78	BEA-WB-007	Indian Bayou	P	15.3	A,B,C,F	Warm Water Fishery	Open Cut	Intermediate
70.62	BEA-WB-009	Unnamed Waterbody	I	10.8	N/A	Warm Water Fishery	Bore	Intermediate
71.06	BEA-WB-012	Unnamed Waterbody	I	7.9	N/A	Warm Water Fishery	Open Cut	Minor
73.24	BEA-WB-014	Marsh Bayou	P	22.1	A,B,C	Warm Water Fishery	Open Cut	Intermediate
73.57	BEA-WB-015	Unnamed Waterbody	E	2.2	N/A	Warm Water Fishery	Open Cut	Minor

APPENDIX I.2 (cont'd)

Surface Waterbodies Crossed by the Louisiana Connector Project

County/ Parish, State, Milepost	Waterbody Label	Waterbody	Type [a]	Crossing Width (feet)	State Water Quality Classification [b]	Fishery Type [c]	Proposed Construction Crossing Method [d]	FERC Classification [e]
76.57	BEA-WB-019	Unnamed Waterbody	E	7.8	N/A	Warm Water Fishery	Open Cut	Minor
Allen Parish, Louisiana								
79.13	ALL-WB-001	Barnes Creek [f]	P	42.4	A,B,C	Warm Water Fishery	HDD	Intermediate
79.28	ALL-WB-002	Unnamed Waterbody	I	3.7	N/A	Warm Water Fishery	HDD	Minor
82.07	ALL-WB-003	Unnamed Waterbody	E	13.3	N/A	Warm Water Fishery	Open Cut	Intermediate
82.12	ALL-WB-004	Unnamed Waterbody	I	26.5	N/A	Warm Water Fishery	Open Cut	Intermediate
82.19	ALL-WB-005	Unnamed Waterbody	I	33.7	N/A	Warm Water Fishery	Open Cut	Intermediate
82.32	ALL-WB-006	Clear Creek	P	85.8	N/A	Warm Water Fishery	Open Cut	Intermediate
82.43	ALL-WB-007	Unnamed Waterbody	E	4.1	N/A	Warm Water Fishery	Open Cut	Minor
84.85	ALL-WB-008	Bear Creek	P	23.9	N/A	Warm Water Fishery	Open Cut	Intermediate
87.13	ALL-WB-010	Bunchs Creek	I	56.6	N/A	Warm Water Fishery	Open Cut	Intermediate
91.14	ALL-WB-011	Whiskey Chitto Creek [f]	P	0.0	N/A	Warm Water Fishery	HDD	Minor
91.14	ALL-WB-011	Whiskey Chitto Creek [f]	P	168.2	N/A	Warm Water Fishery	HDD	Major
94.55	ALL-WB-013	Calcasieu River	P	235.0	A,B,C,F,G	Warm Water Fishery	HDD	Major
95.30	ALL-WB-014	Unnamed Waterbody	E	8.5	N/A	Warm Water Fishery	Open Cut	Minor
95.67	ALL-WB-015	Unnamed Waterbody	E	2.9	N/A	Warm Water Fishery	Bore	Minor
95.68	ALL-WB-016	Unnamed Waterbody	E	2.9	N/A	Warm Water Fishery	Bore	Minor
96.15	ALL-WB-018	Unnamed Waterbody	I	6.4	N/A	Warm Water Fishery	Open Cut	Minor
96.39	ALL-WB-019	Unnamed Waterbody	E	50.6	N/A	Warm Water Fishery	Open Cut	Intermediate
96.41	ALL-WB-020	Unnamed Waterbody	E	0.0	N/A	Warm Water Fishery	HDD Pullback ATWS	Minor
96.42	ALL-WB-021	Unnamed Waterbody	E	2.6	N/A	Warm Water Fishery	Open Cut	Minor
96.76	ALL-WB-023	Unnamed Waterbody	P	17.5	N/A	Warm Water Fishery	HDD	Intermediate
97.10	ALL-WB-024	Unnamed Waterbody	E	13.2	N/A	Warm Water Fishery	Open Cut	Intermediate
97.85	ALL-WB-025	Unnamed Waterbody	I	19.2	N/A	Warm Water Fishery	Open Cut	Intermediate
98.36	ALL-WB-027	Unnamed Waterbody	I	30.6	N/A	Warm Water Fishery	Open Cut	Intermediate
99.34	ALL-WB-028	Unnamed Waterbody	I	28.8	N/A	Warm Water Fishery	Open Cut	Intermediate

APPENDIX I.2 (cont'd)

Surface Waterbodies Crossed by the Louisiana Connector Project

County/ Parish, State, Milepost	Waterbody Label	Waterbody	Type [a]	Crossing Width (feet)	State Water Quality Classification [b]	Fishery Type [c]	Proposed Construction Crossing Method [d]	FERC Classification [e]
100.75	ALL-WB-030	Unnamed Waterbody	I	22.8	N/A	Warm Water Fishery	Open Cut	Intermediate
100.87	ALL-WB-031	Bayou Blue	P	47.0	A,B,C	Warm Water Fishery	Open Cut	Intermediate
102.72	ALL-WB-033	Unnamed Waterbody	E	8.0	N/A	Warm Water Fishery	Open Cut	Minor
103.38	ALL-WB-034	Unnamed Waterbody	E	10.0	N/A	Warm Water Fishery	Open Cut	Intermediate
104.37	ALL-WB-036	Bayou Blue	P	298.7	A,B,C,	Warm Water Fishery	Open Cut	Major
104.66	ALL-WB-037	Bayou Blue	P	37.1	A,B,C,	Warm Water Fishery	Open Cut	Intermediate
104.71	ALL-WB-038	Bayou Blue	P	164.8	A,B,C,	Warm Water Fishery	Open Cut	Major
106.47	ALL-WB-041	Unnamed Waterbody	E	11.7	N/A	Warm Water Fishery	Open Cut	Intermediate
107.09	ALL-WB-042	Unnamed Waterbody	E	8.6	N/A	Warm Water Fishery	Open Cut	Minor
107.35	ALL-WB-045	Unnamed Waterbody	E	5.3	N/A	Warm Water Fishery	Open Cut	Minor
108.39	ALL-WB-051	Unnamed Waterbody	E	67.6	N/A	Warm Water Fishery	Open Cut	Intermediate
108.65	ALL-WB-052	Bayou Blue	P	52.3	A,B,C,	Warm Water Fishery	Open Cut	Intermediate
108.80	ALL-WB-053	Unnamed Waterbody	E	3.2	N/A	Warm Water Fishery	Open Cut	Minor
109.75	ALL-WB-054	Unnamed Waterbody	E	15.4	N/A	Warm Water Fishery	Open Cut	Intermediate
109.89	ALL-WB-055	Unnamed Waterbody	E	30.5	N/A	Warm Water Fishery	HDD	Intermediate
109.95	ALL-WB-056	Bayou Nezpique	P	43.7	A,B,C,F	Warm Water Fishery	HDD	Intermediate
Evangeline Parish, Louisiana								
109.96	EVA-WB-001	Bayou Nezpique	P	43.7	A,B,C,F	Warm Water Fishery	HDD	Intermediate
110.24	EVA-WB-002	Unnamed Waterbody	I	10.9	N/A	Warm Water Fishery	Open Cut	Intermediate
110.35	EVA-WB-003	Unnamed Waterbody	I	0.0	N/A	Warm Water Fishery	HDD	Minor
111.84	EVA-WB-006	Unnamed Waterbody	I	18.1	N/A	Warm Water Fishery	Open Cut	Intermediate
112.68	EVA-WB-007	Unnamed Waterbody	I	35.0	N/A	Warm Water Fishery	Open Cut	Intermediate
115.68	EVA-WB-008	Unnamed Waterbody	I	34.5	N/A	Warm Water Fishery	Open Cut	Intermediate
115.72	EVA-WB-009	Unnamed Waterbody	E	3.5	N/A	Warm Water Fishery	Open Cut	Minor
115.72	EVA-WB-009	Unnamed Waterbody	E	3.5	N/A	Warm Water Fishery	Open Cut	Minor
117.93	EVA-WB-010	Unnamed Waterbody	E	6.7	N/A	Warm Water Fishery	Open Cut	Minor
118.40	EVA-WB-011	Unnamed Waterbody	E	21.7	N/A	Warm Water Fishery	Open Cut	Intermediate

APPENDIX I.2 (cont'd)

Surface Waterbodies Crossed by the Louisiana Connector Project

County/ Parish, State, Milepost	Waterbody Label	Waterbody	Type [a]	Crossing Width (feet)	State Water Quality Classification [b]	Fishery Type [c]	Proposed Construction Crossing Method [d]	FERC Classification [e]
118.73	EVA-WB-012	Unnamed Waterbody	E	7.0	N/A	Warm Water Fishery	Open Cut	Minor
119.07	EVA-WB-013	Bayou des Canne	P	80.8	A,B,C	Warm Water Fishery	HDD	Intermediate
St. Landry Parish, Louisiana								
119.25	STL-WB-001	Unnamed Waterbody	I	0.0	N/A	Warm Water Fishery	ATWS	Minor
121.37	STL-WB-002	Unnamed Waterbody	E	9.9	N/A	Warm Water Fishery	Open Cut	Minor
121.40	STL-WB-003	Unnamed Waterbody	E	9.2	N/A	Warm Water Fishery	Open Cut	Minor
121.77	STL-WB-004	Unnamed Waterbody	E	2.7	N/A	Warm Water Fishery	Open Cut	Minor
121.95	STL-WB-005	Unnamed Waterbody	E	10.4	N/A	Warm Water Fishery	Open Cut	Intermediate
122.42	STL-WB-006	Unnamed Waterbody	I	29.1	N/A	Warm Water Fishery	Open Cut	Intermediate
124.65	STL-WB-007	Bayou Choupique	P	77.5	N/A	Warm Water Fishery	Open Cut	Intermediate
125.97	STL-WB-008	Unnamed Waterbody	I	36.5	N/A	Warm Water Fishery	Open Cut	Intermediate
126.52	STL-WB-009	Bayou Doza	P	65.6	N/A	Warm Water Fishery	Open Cut	Intermediate
127.13	STL-WB-010	Unnamed Waterbody	I	34.1	N/A	Warm Water Fishery	Open Cut	Intermediate
128.12	STL-WB-011	Unnamed Waterbody	E	34.4	N/A	Warm Water Fishery	Open Cut	Intermediate
128.14	STL-WB-012	Unnamed Waterbody	E	28.0	N/A	Warm Water Fishery	Open Cut	Intermediate
128.16	STL-WB-013	Unnamed Waterbody	E	28.6	N/A	Warm Water Fishery	Open Cut	Intermediate
128.88	STL-WB-014	Unnamed Waterbody	I	11.8	N/A	Warm Water Fishery	Open Cut	Intermediate
129.01	STL-WB-015	Unnamed Waterbody	I	37.5	N/A	Warm Water Fishery	Open Cut	Intermediate
129.06	STL-WB-016	Unnamed Waterbody	E	4.6	N/A	Warm Water Fishery	Open Cut	Minor
129.67	STL-WB-017	Unnamed Waterbody	I	27.7	N/A	Warm Water Fishery	Open Cut	Intermediate
129.86	STL-WB-018	Unnamed Waterbody	E	12.1	N/A	Warm Water Fishery	Open Cut	Intermediate
130.30	STL-WB-019	Unnamed Waterbody	E	26.0	N/A	Warm Water Fishery	Open Cut	Intermediate

APPENDIX I.2 (cont'd)

Surface Waterbodies Crossed by the Louisiana Connector Project

County/ Parish, State, Milepost	Waterbody Label	Waterbody	Type [a]	Crossing Width (feet)	State Water Quality Classification [b]	Fishery Type [c]	Proposed Construction Crossing Method [d]	FERC Classification [e]

[a] P = Perennial
E = Ephemeral
I = Intermittent

[b] State Water Quality Classifications:
A = Primary Contact Recreation
B = Secondary Contact Recreation
C = Propagation of Fish and Wildlife
D = Drinking Water
E = Oyster Production
F = Agriculture
G = Outstanding Natural Resource Waters
H = Limited Aquatic Life and Wildlife Use

[c] Fishery Type: Fishery type determination based on demarcation of the saltwater/freshwater areas from LDWF.

[d] Crossing Method: Construction method proposed by PAPL to install pipeline across waterbody. All waterbodies with a perceivable flow would be crossed by the dry-ditch method or the predetermined HDD locations. Non-flowing water at the time of construction would utilize an open-cut crossing method. An appropriate crossing method would be determined at the time of construction based on water flow.

[e] FERC Classifications:
Minor = <10 feet crossing length
Intermediate = >10 feet but <100 feet crossing length
Major = >100 feet crossing length

[f] Waterbody listed as a Scenic River by the State of Louisiana.

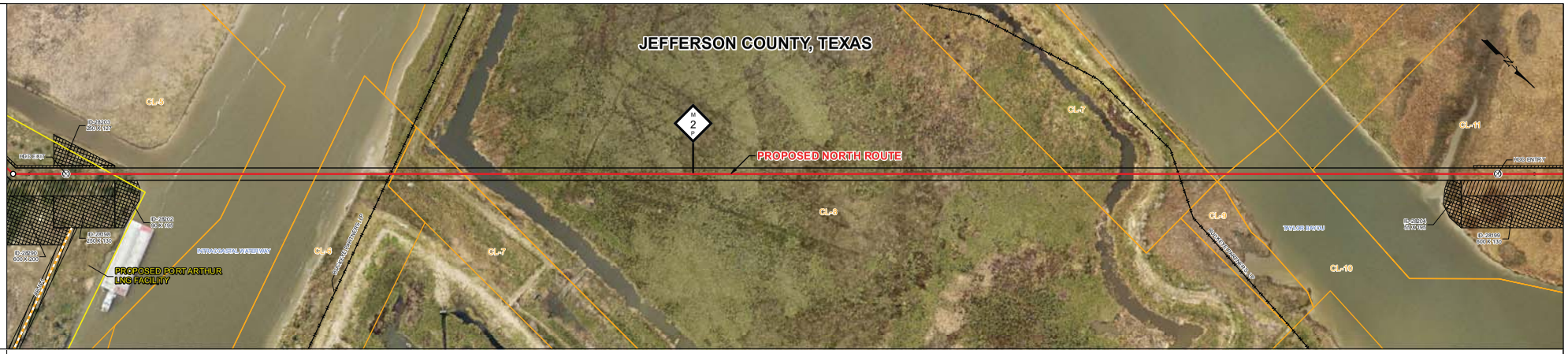
Note: No waterbodies are crossed or otherwise impacted by any of the proposed above ground facilities.

APPENDIX J

PROFILES OF HDD CROSSINGS

TEXAS CONNECTOR PROJECT

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/26/2015)



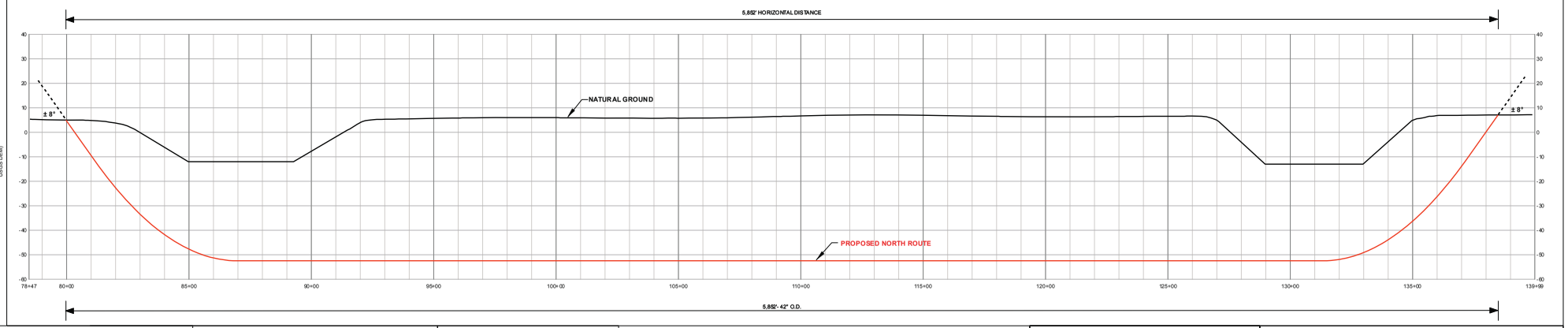
PRELIM. DATA

STATIONING

79+97 HDD EXIT

138+49 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS.
4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT).
5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.

DISCLAIMER

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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	BJV	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	001 OF 024

JOB NO. 22670

CLIENT SEMPRA LNG AND MIDSTREAM

UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. #F-1942

	APPROVAL	COMPANY
ENVIRONMENTAL		
LAND		

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 79+97 TO 138+49

0 200 400 800
FEET

PORT ARTHUR PIPELINE TEXAS CONNECTOR (PAPTC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED NORTH ROUTE
INTRACOASTAL WATERWAY / TAYLOR BAYOU

JEFFERSON COUNTY TEXAS

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	BJV	FAT

DRAWING NO. 22670-505-HDW-12001 REV. A

2762

SCALE: 1" = 200'

(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/26/2015)



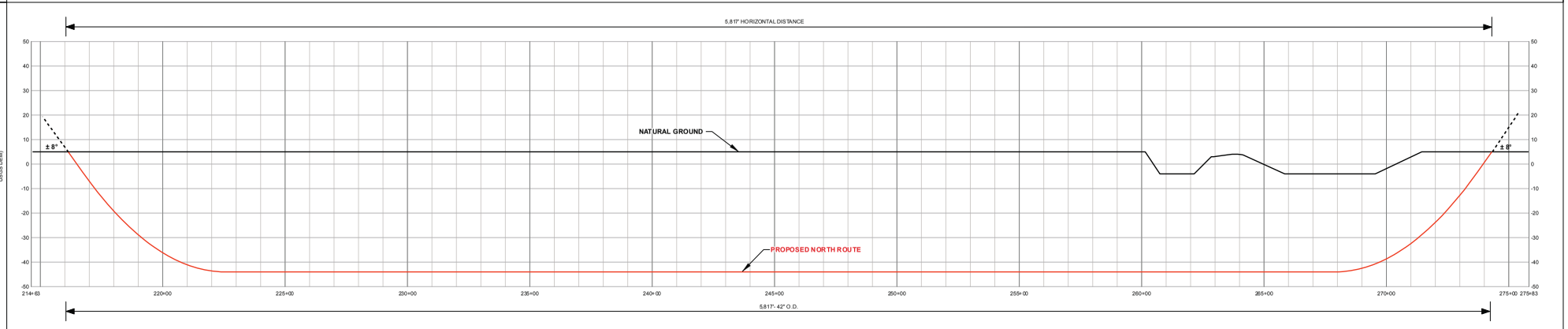
PRELIM. DATA

STATIONING

216+14 HDD EXIT

274+31 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2/3rd)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS.
4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT).
5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.

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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	BJV	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	002 OF 024

JOB NO. 22670

CLIENT SEMPRA LNG AND MIDSTREAM

UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. #F-1942

	APPROVAL	COMPANY
ENVIRONMENTAL		
LAND		

MIN. TEST PRESSURE ### PSIG | DESIGN PRESSURE 1440 PSIG

STA. 216+14 TO 274+31

0 200 400 800

FEET

PORT ARTHUR PIPELINE TEXAS CONNECTOR (PAPTC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED NORTH ROUTE
FOREIGN PIPELINES / SHALLOW PRONG LAKE

JEFFERSON COUNTY TEXAS

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	BJV	FAT

DRAWING NO. 22670-505-HDW-12002 REV. A

2763

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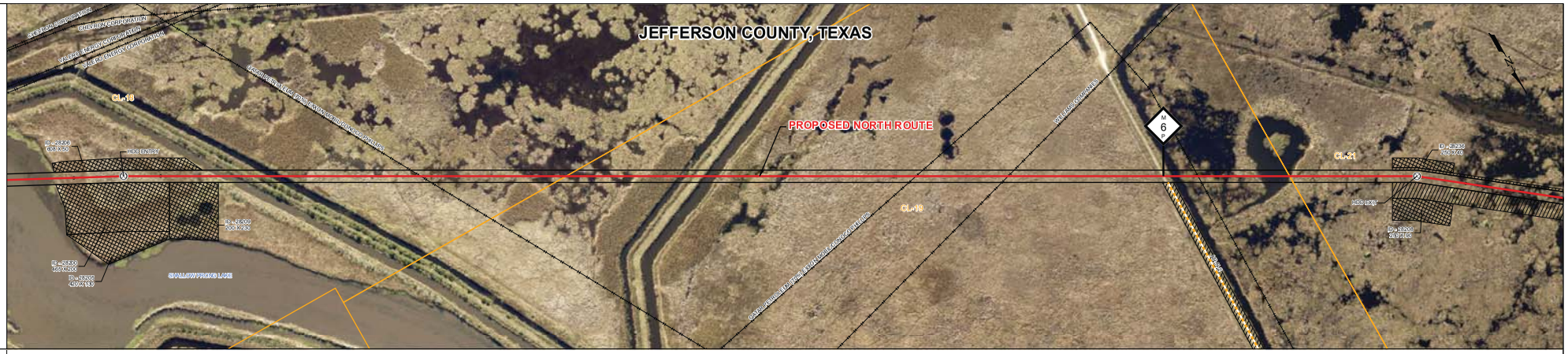
SCALE: 1" = 200'

(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/29/2015)



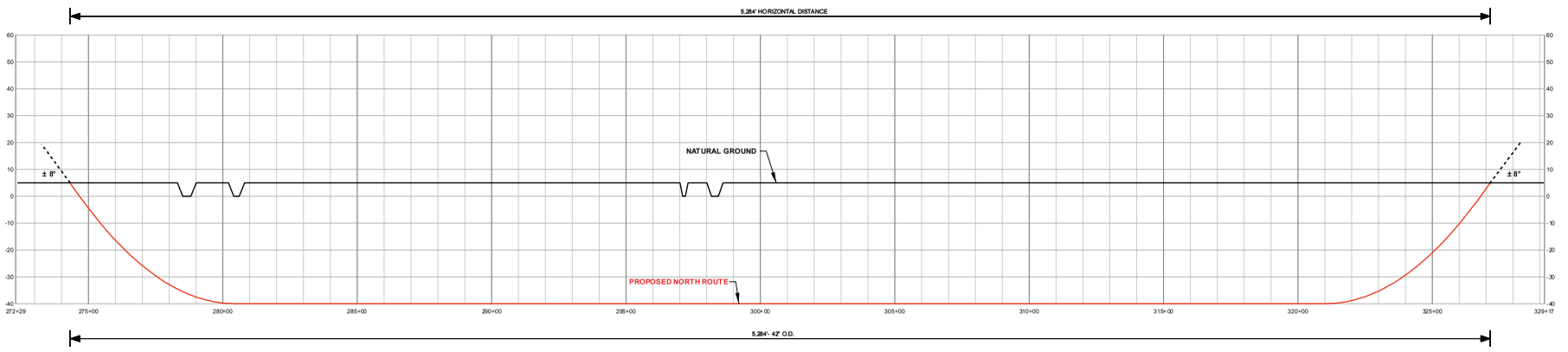
PRELIM. DATA

STATIONING

274+31 HDD ENTRY

327+15 HDD EXIT

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2DEM)



BILL OF MATERIALS

MISCELLANEOUS MATERIALS

FITTINGS SUMMARY

CONTINUOUS CONCRETE COATING

PIPE ASSEMBLIES

PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
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4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT).
5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.

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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	BJV	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	003 OF 024

JOB NO. 22670

CLIENT SEMPRA LNG AND MIDSTREAM

UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. # F- 1942

	APPROVAL	COMPANY
ENVIRONMENTAL		
LAND		

MIN. TEST PRESSURE #### PSIG | DESIGN PRESSURE 1440 PSIG

STA. 274+31 TO 327+15

0 200 400 800
FEET

PORT ARTHUR PIPELINE TEXAS CONNECTOR (PAPTC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED NORTH ROUTE
WATERBODIES

JEFFERSON COUNTY TEXAS

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	BJV	FAT

DRAWING NO. 22670-505-HDW-12003 REV. A

27641

Document Path: \\na-fs-hou02\Houston\Projects\22670_Sempra_PAL_Arthur_Pt Maps\MXD\Docs\22670-505-HDW-12003.mxd

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/26/2015)



PRELIM. DATA

STATIONING

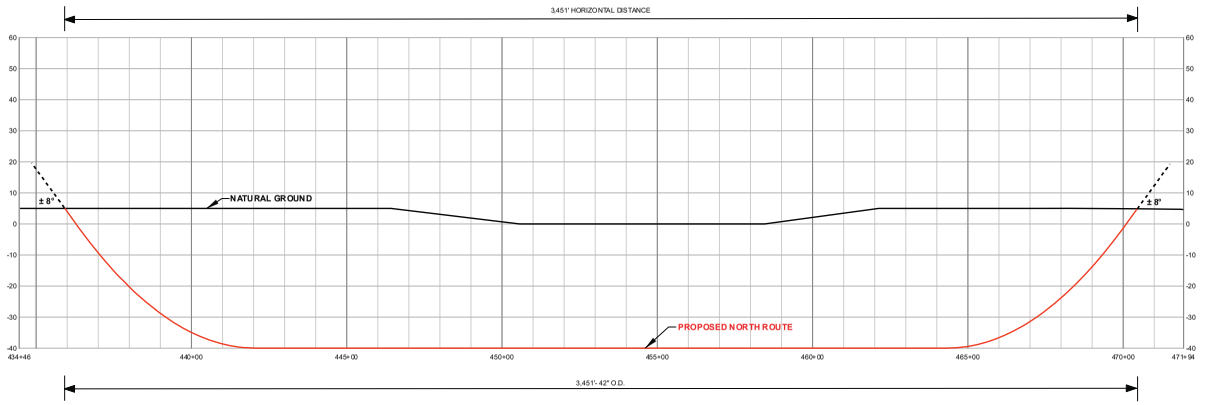
435+93 HDD EXIT

439+76 STATE HWY 73

440+48 STATE HWY 73

470+44 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS

FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING

PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS.
4. MAP PROJECTION: NAD 1983 UTM ZONE 19N (US FOOT).
5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.

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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	BJV	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	004 OF 024

JOB NO. 22670

CLIENT SEMPRA LNG AND MIDSTREAM

UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. # F-1942

	APPROVAL	COMPANY
ENVIRONMENTAL		
LAND		

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 435+93 TO 470+44

0 200 400 800
FEET

PORT ARTHUR PIPELINE TEXAS CONNECTOR (PAPTC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED NORTH ROUTE
STATE HWY 73 / POND

JEFFERSON COUNTY TEXAS

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	BJV	FAT

DRAWING NO. 22670-505-HDW-12004 REV. A

2765

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/26/2015)



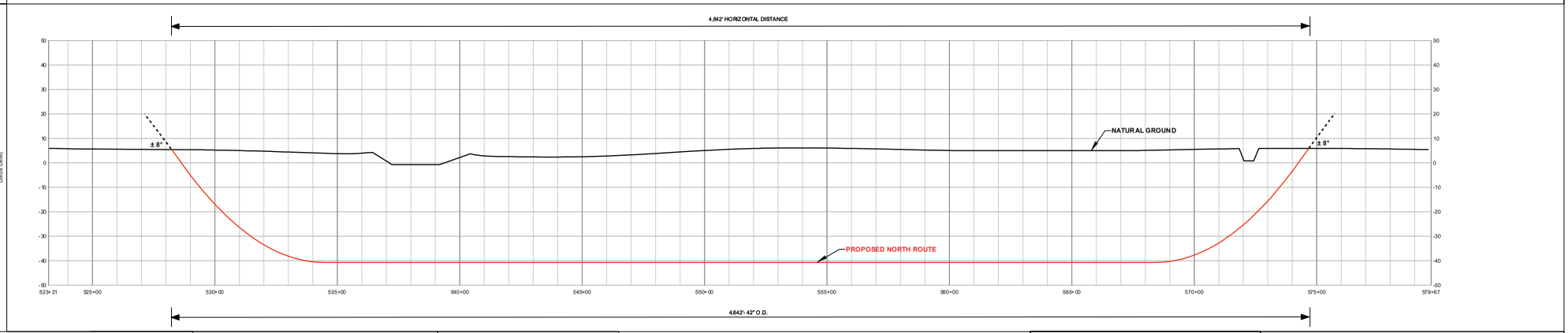
PRELIM. DATA

STATIONING

528+25 HDD EXIT

574+67 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	BJV	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	005 OF 024

JOB NO. 22670

CLIENT SEMPRA LNG AND MIDSTREAM

UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. # F-1942

	APPROVAL	COMPANY
ENVIRONMENTAL		
LAND		

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 528+25 TO 574+67

0 200 400 800
FEET

PORT ARTHUR PIPELINE TEXAS CONNECTOR (PAPTC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED NORTH ROUTE
TAYLOR BAYOU

JEFFERSON COUNTY TEXAS

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

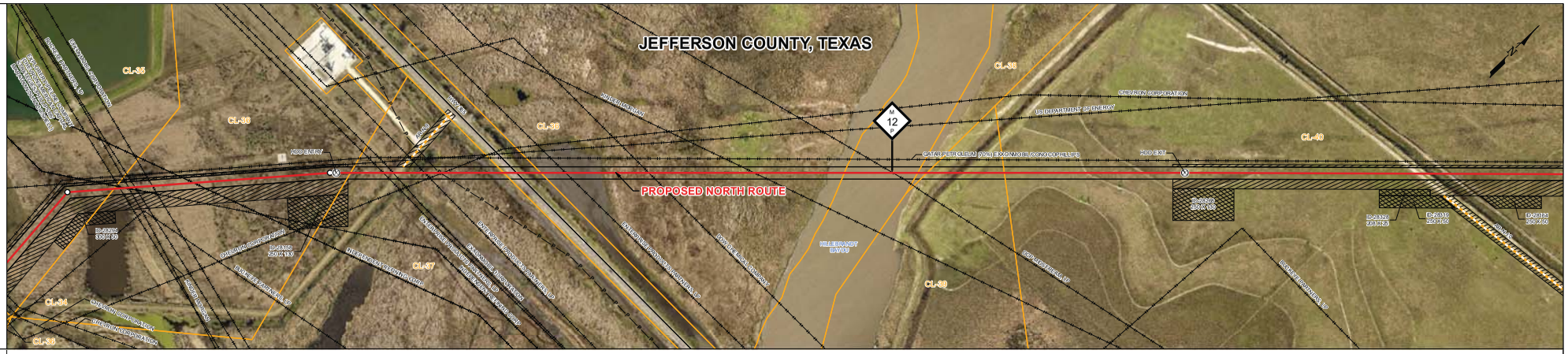
NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	BJV	FAT

DRAWING NO. 22670-505-HDW-12005 REV. A

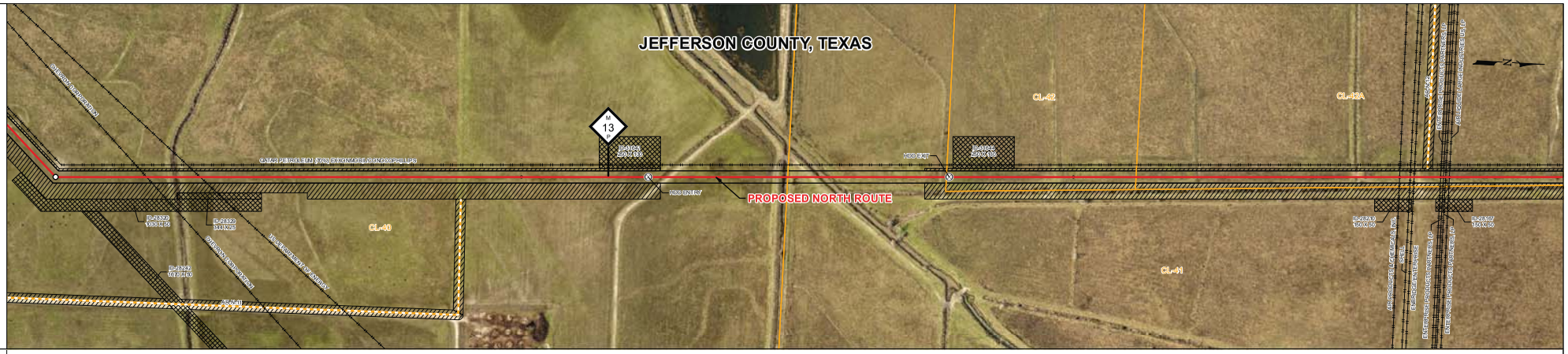
2766

SCALE: 1" = 200'

(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/29/2015)


JEFFERSON COUNTY, TEXAS
PROPOSED NORTH ROUTE
HDD ENTRY
HDD EXIT
CL-35
CL-36
CL-37
CL-38
CL-39
CL-40
MILE POST 12
HILLEBRANDT BAYOU
MILE POST BAYOU
CHEVRON CORPORATION
US DEPARTMENT OF ENERGY
CATERPILLER (SEN) / WYLE EXXON MOBIL/CONOCO PHILLIPS
CHEVRON PIPELINE CO.
SEMPRA PIPELINES & STORAGE
SEMPRA PIPELINES & STORAGE
SEMPRA PIPELINES & STORAGE

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/26/2015)



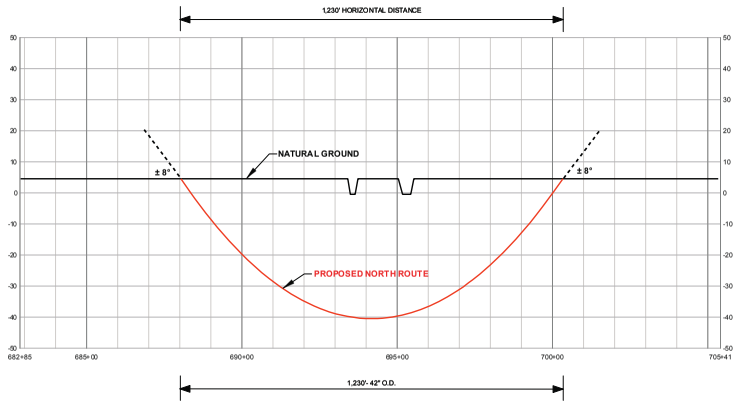
PRELIM. DATA

STATIONING

688+03 HDD ENTRY

700+33 HDD EXIT

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	BJV	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	007 OF 024

JOB NO. 22670
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. # F-1942

	APPROVAL	COMPANY
ENVIRONMENTAL		
LAND		

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 688+03 TO 700+33

0 200 400 800
FEET

PORT ARTHUR PIPELINE TEXAS CONNECTOR (PAPTC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED NORTH ROUTE
CANALS

JEFFERSON COUNTY TEXAS

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	BJV	FAT

DRAWING NO. 22670-505-HDW-12007 REV. A

2768

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/26/2015)



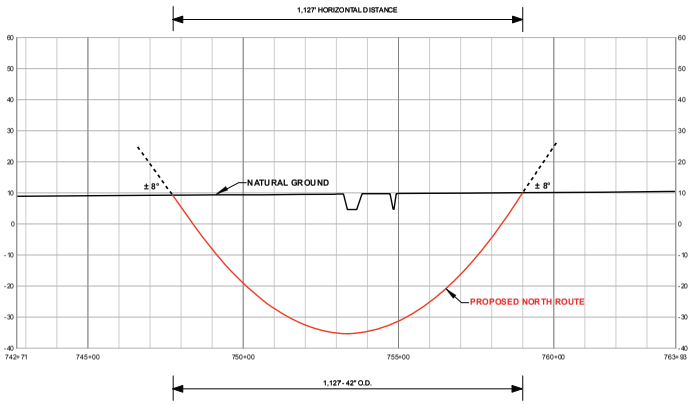
PRELIM. DATA

STATIONING

747+73 HDD ENTRY

759+00 HDD EXIT

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	BJV	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	008 OF 024

JOB NO. 22670

CLIENT SEMPRA LNG AND MIDSTREAM

UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. #F-1942

	APPROVAL	COMPANY
ENVIRONMENTAL		
LAND		

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 747+73 TO 759+00

0 200 400 800
FEET

PORT ARTHUR PIPELINE TEXAS CONNECTOR (PAPTC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED NORTH ROUTE
CANAL

JEFFERSON COUNTY TEXAS

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

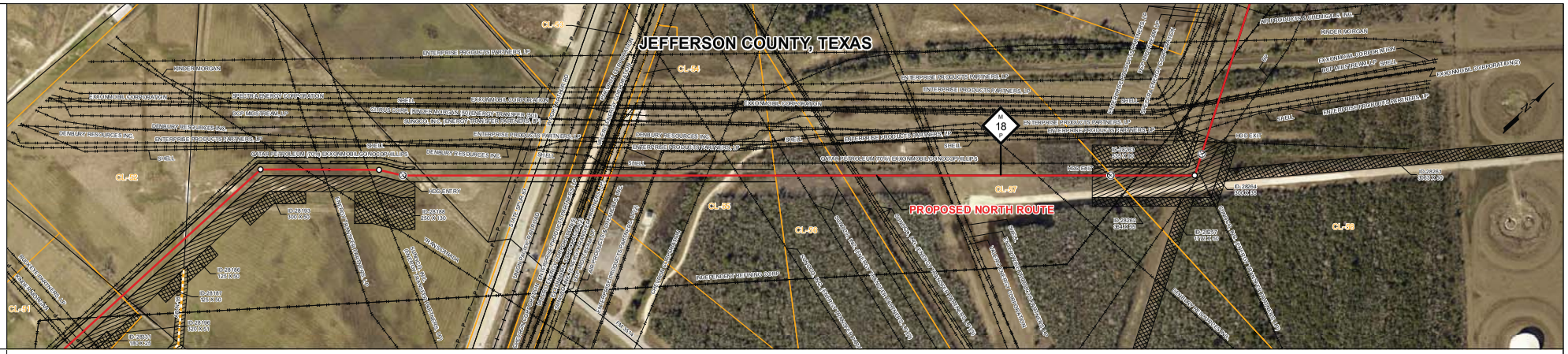
Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	BJV	FAT

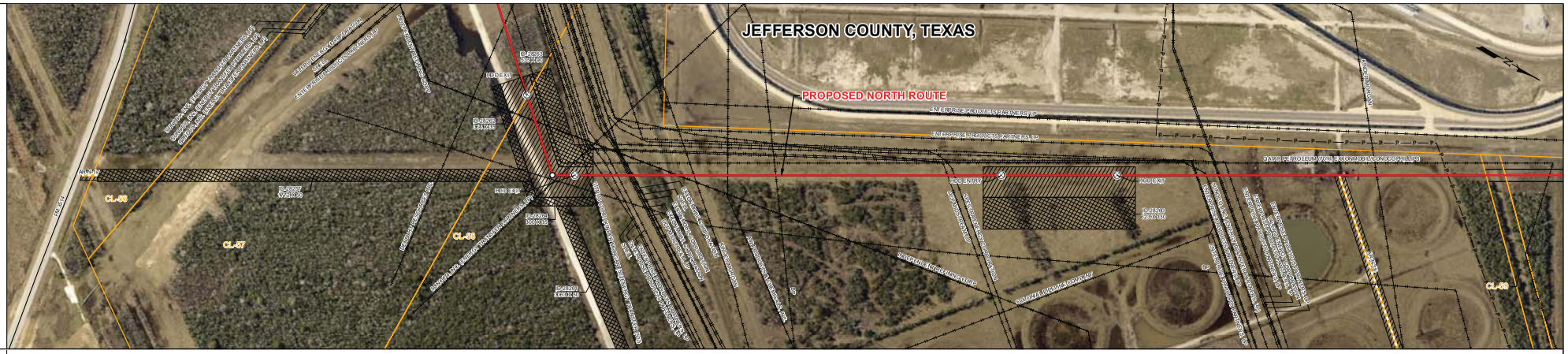
DRAWING NO. 22670-505-HDW-12008 REV. A

2769

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 6/12/2015)


JEFFERSON COUNTY, TEXAS
PROPOSED NORTH ROUTE
CL-53
CL-54
CL-55
CL-56
CL-57
CL-58
CL-59
CL-61
CL-62
ENTERPRISE PRODUCTS PARTNERS, LP
KINDER MORGAN
EXXONMOBIL CORPORATION
SHELL
CENTURY RESOURCES INC
ENTERPRISE PRODUCTS TRANSPORTATION, LLC
ENTERPRISE PRODUCTS PIPELINE CO.
ENTERPRISE PRODUCTS HOUSTON (III)
ENTERPRISE PRODUCTS HOUSTON (II)
ENTERPRISE PRODUCTS HOUSTON (I)
ENTERPRISE PRODUCTS TEXAS PIPELINE, LP
ENTERPRISE PRODUCTS WATERWAYS, LP
ENTERPRISE PRODUCTS PARTNERS, LP
ENTERPRISE PRODUCTS TEXAS PIPELINE, LP
ENTERPRISE PRODUCTS WATERWAYS, LP
ENTERPRISE PRODUCTS PIPELINE CO.
ENTERPRISE PRODUCTS TRANSPORTATION, LLC
ENTERPRISE PRODUCTS HOUSTON (III)
ENTERPRISE PRODUCTS HOUSTON (II)
ENTERPRISE PRODUCTS HOUSTON (I)
ENTERPRISE PRODUCTS PARTNERS

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/26/2015)



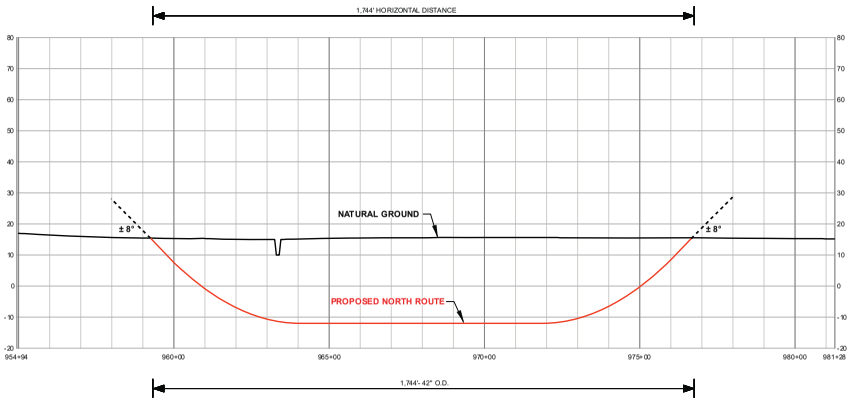
PRELIM. DATA

STATIONING

959+24 HDD EXIT

976+68 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS	GENERAL NOTES
		1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS. 2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA. 3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS. 4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT). 5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING	DISCLAIMER
		UNIVERSALPEGASUS INTERNATIONAL MAKES NO WARRANTY (EXPRESSED, IMPLIED OR OTHERWISE) THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE AS TO ANY AND ALL SUBSURFACE CONDITIONS AND CONFORMATION. ANY RELIANCE CONTRACTOR PLACES ON THE INFORMATION CONTAINED HEREIN AS TO SUCH CONDITIONS, IS DONE SO AT ITS OWN RISK AND EXPENSE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.
PIPE ASSEMBLIES	PIPE COATING DATA	

LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	BJV	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	010 OF 024

JOB NO. 22670
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. # F-1942

	APPROVAL	COMPANY
ENVIRONMENTAL		
LAND		

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 959+24 TO 976+68

0 200 400 800
FEET

PORT ARTHUR PIPELINE TEXAS CONNECTOR (PAPTC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED NORTH ROUTE
FOREIGN PIPELINES

JEFFERSON COUNTY TEXAS

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

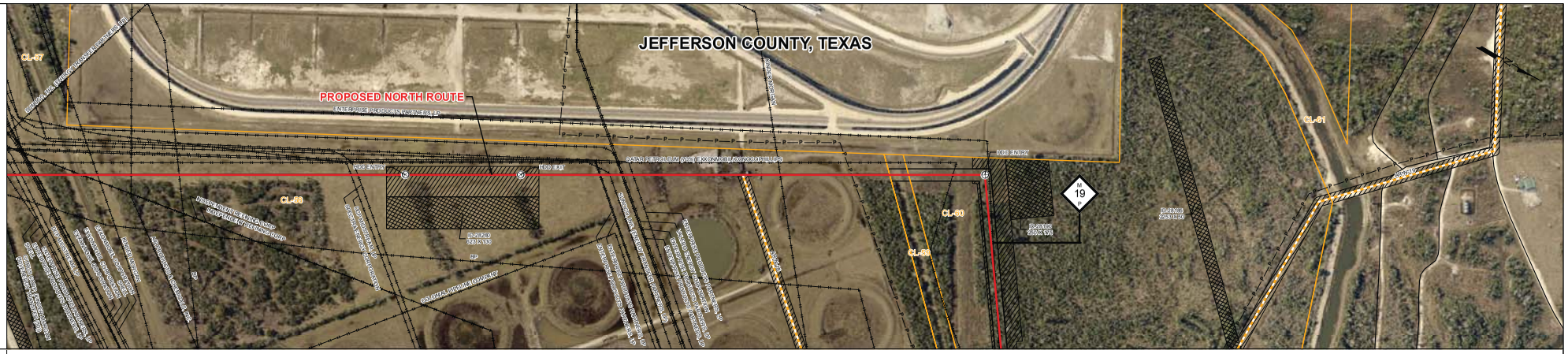
Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	BJV	FAT

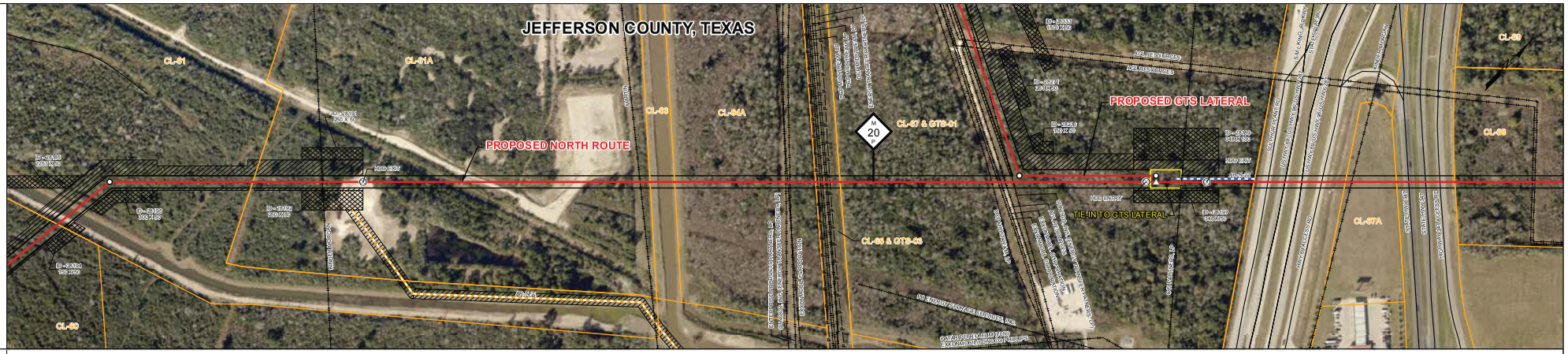
DRAWING NO. 22670-505-HDW-12010 REV. A

2771

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/26/2015)

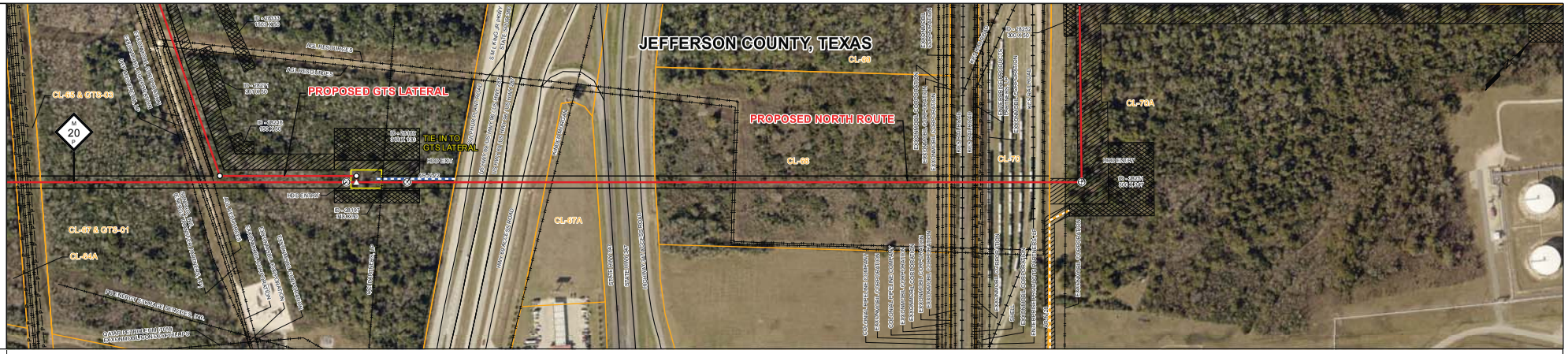

JEFFERSON COUNTY, TEXAS
PROPOSED NORTH ROUTE
(NEW USE PROPOSED PAYNE'S LP)
CL-87
CL-88
CL-89
CL-90
CL-91
HDD ENTRY
HDD EXIT
ACE ENTRY
ACE EXIT
EL PASO 22" NATURAL GAS PIPELINE
EL PASO 22" NATURAL GAS PIPELINE
EL PASO 22" NATURAL GAS PIPELINE

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/26/2015)


JEFFERSON COUNTY, TEXAS
CL-61
CL-61A
CL-63
CL-64A
CL-67 & GTS-01
CL-68
CL-67A
CL-64 & GTS-02
CL-60
PROPOSED NORTH ROUTE
PROPOSED GTS LATERAL
TIE IN TO GTS LATERAL
HDD EXIT
HDD ENTRY
LNVA CANAL
ATLANTIC PIPELINE
ATLANTIC PIPELINE
ATLANTIC PIPELINE

SCALE: 1" = 200'

(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/26/2015)

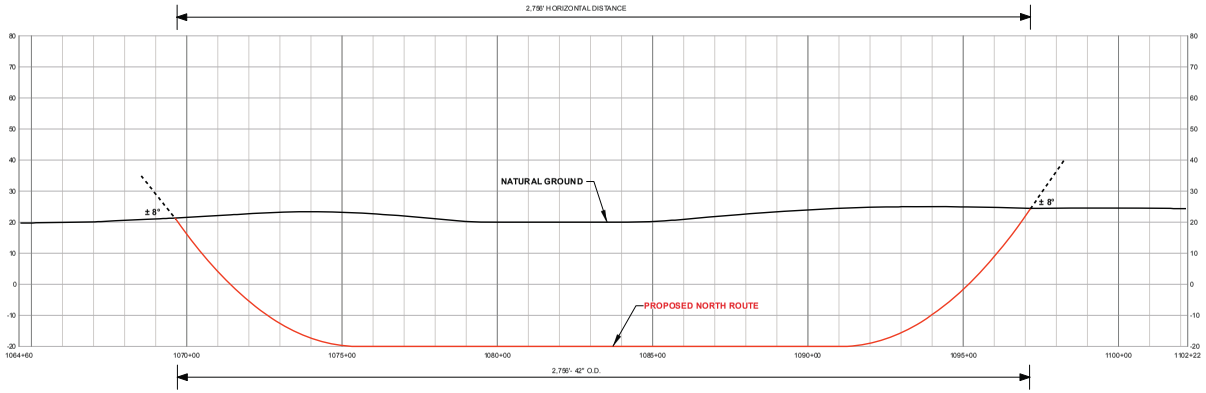


PRELIM. DATA

STATIONING

1068+61 HDD EXIT
1072+12 SULPHUR PLANT ROAD
1072+61 US HWY 69 / US HWY 96 / US HWY 287
1073+50 US HWY 69 / US HWY 96 / US HWY 287
1074+31 HWY 69 ACCESS ROAD
1077+88 STATE HWY 347
1078+56 STATE HWY 347
1079+14 HIGHWAY 347 ACCESS ROAD
1092+26 KCS RAILROAD
1092+63 KCS RAILROAD
1095+19 KCS RAILROAD
1097+17 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS.
4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT).
5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.

DISCLAIMER

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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	BJV	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	013 OF 024

JOB NO. 22670

CLIENT SEMPRA LNG AND MIDSTREAM

UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. #F-1942

	APPROVAL	COMPANY
ENVIRONMENTAL		
LAND		

MIN. TEST PRESSURE ### PSIG | DESIGN PRESSURE 1440 PSIG

STA. 1069+61 TO 1097+17

0 200 400 800 FEET

PORT ARTHUR PIPELINE TEXAS CONNECTOR (PAPTC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED NORTH ROUTE
US HWY 69/96/287, FOREIGN PIPELINES, KCS RR

JEFFERSON COUNTY TEXAS

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	BJV	FAT

DRAWING NO. 22670-505-HDW-12013 REV. A

277

J-1-13

Document Path: I:\hou\ln\GIS\Projects\Projects\22670_Sempra_Port_Arthur_Pt\Maps\MXD\Dwg\22670-505-HDW-12013.mxd

SCALE: 1" = 200'
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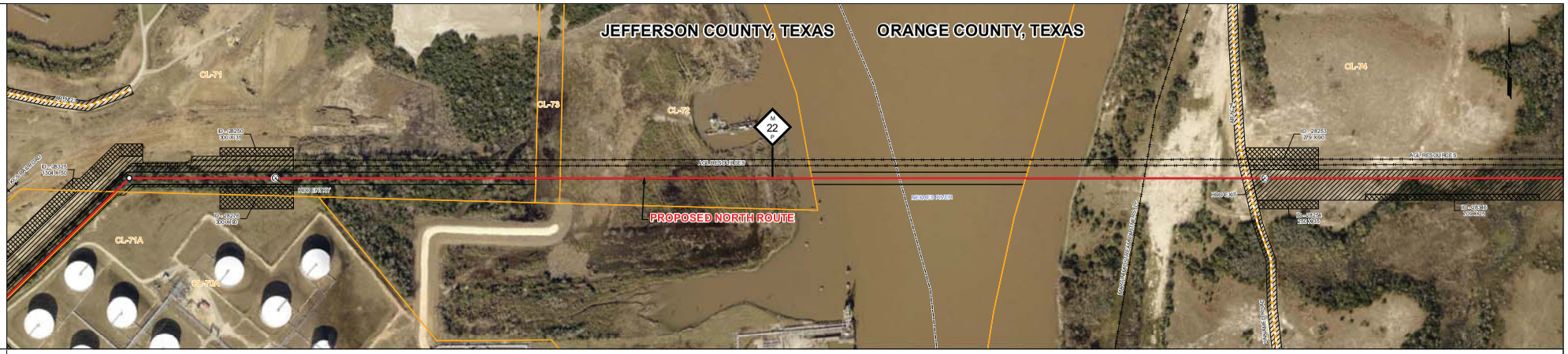


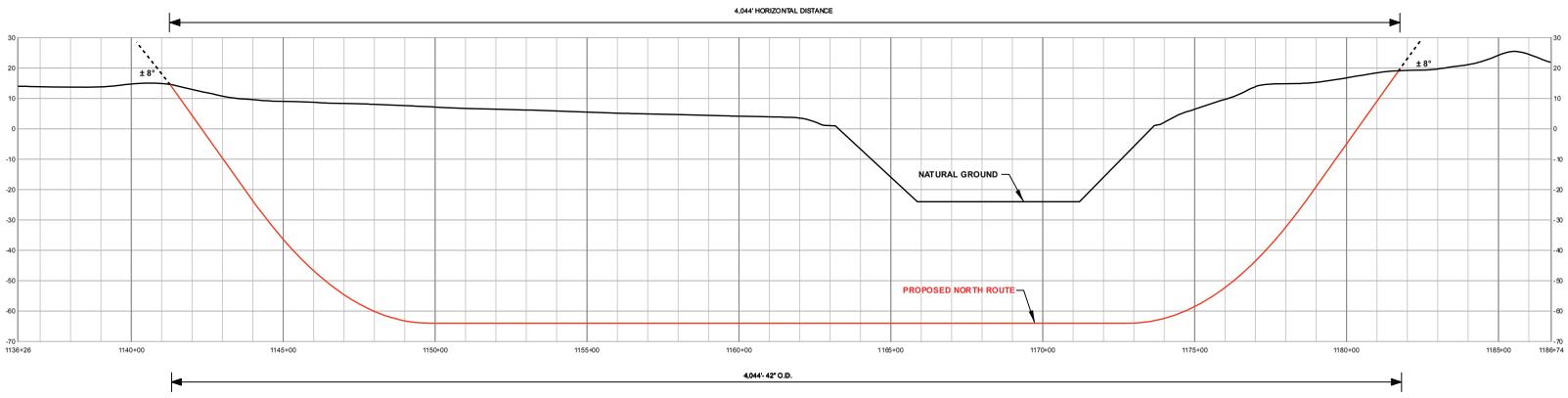
PRELIM. DATA

STATIONING

1141+28 HDD ENTRY

1181+00 AR-N-24
1181+01 UNNAMED ROAD
1181+72 HDD EXIT

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS

FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING

PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS.
4. MAP PROJECTION: NAD 1983 UTM ZONE 16N (US FOOT).
5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.

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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	BJV	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	014 OF 024

JOB NO. 22670
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. #F-1942

	APPROVAL	COMPANY
ENVIRONMENTAL		
LAND		

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 1141+28 TO 1181+72

0 200 400 800
FEET

PORT ARTHUR PIPELINE TEXAS CONNECTOR (PAPTC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED NORTH ROUTE
NECHES RIVER

JEFFERSON COUNTY / ORANGE COUNTY TEXAS

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

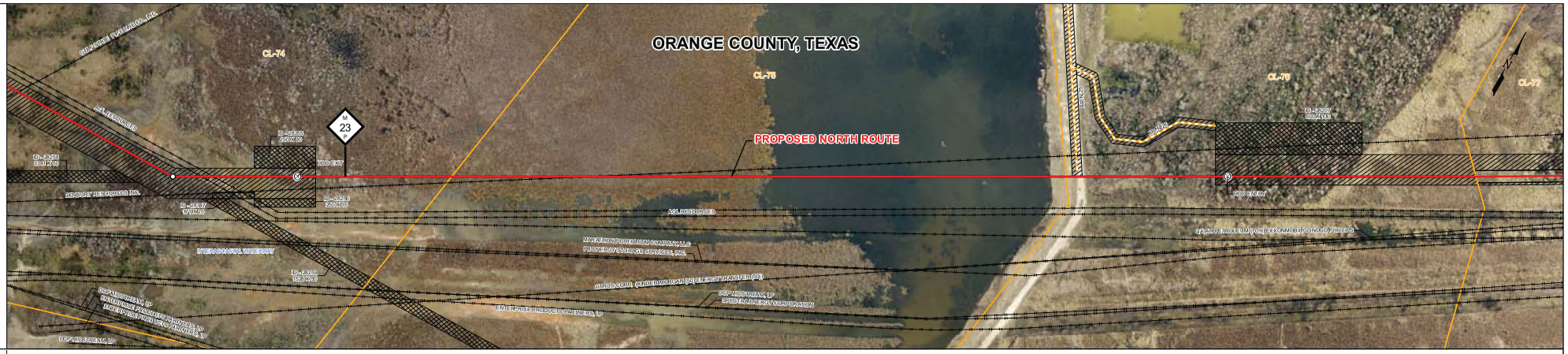
Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	BJV	FAT

DRAWING NO. 22670-505-HDW-12014 REV. A

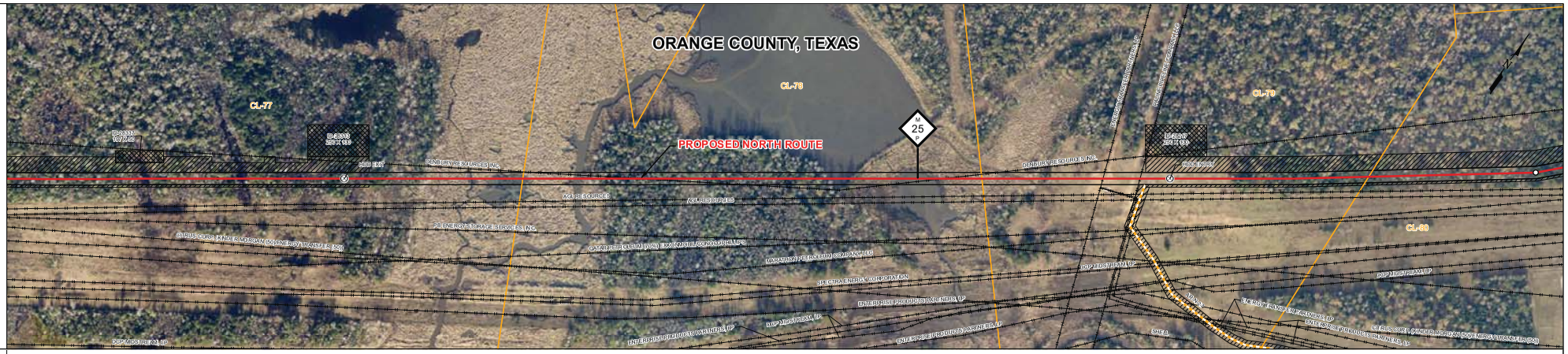
2775

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/29/2015)

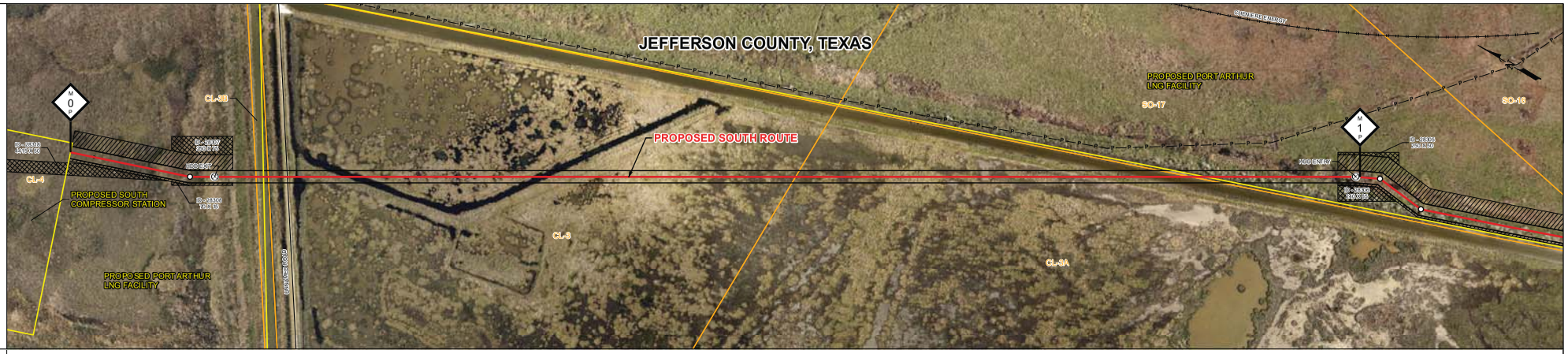

ORANGE COUNTY, TEXAS
CL-74
CL-75
CL-76
CL-77
PROPOSED NORTH ROUTE
M 23 P
ID: 4+25.65
100.0' EXIST
ID: 4+25.65
600.4' NEW
ID: 4+25.65
600.4' NEW
ID: 4+25.65
600.4' NEW

SCALE: 1" = 200'

(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/29/2015)

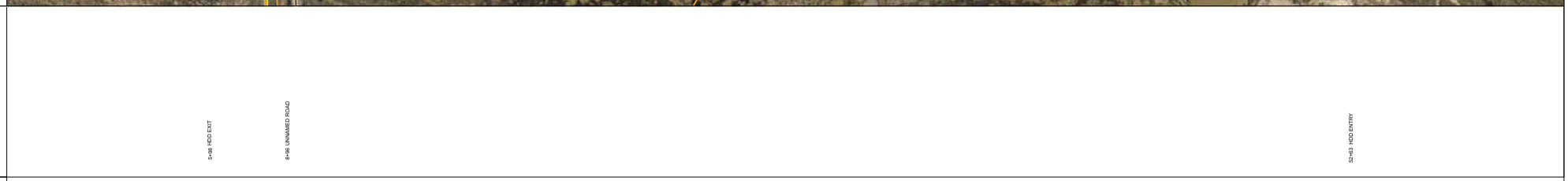

ORANGE COUNTY, TEXAS
CL-77
CL-78
CL-79
CL-80
PROPOSED NORTH ROUTE
M 25 P
MAINLINE VALVE (MLV)
MAINLINE VALVE (MLV)
KINDER MORGAN
DUNEGAN BEGGING & INC.
ENTERPRISE PRODUCTS PARTNERS LP
ENTERPRISE PRODUCTS PARTNERS LP
WATER SOURCE
WATER SOURCES
PB ENERGY STORAGE SERVICES, INC.
CITRUS CORP. KINDER MORGAN SOUTHERN PASS TRANSFER, KPL
EXXONMOBIL CORP.
CHEVRON PIPE LINE COMPANY
MARATHON PETROLEUM COMPANY LLC
BP PIPELINES (NORTH AMERICA) INC.
ENTERPRISE PRODUCTS PARTNERS LP
BP PIPELINES (NORTH AMERICA) INC.
ENTERPRISE PRODUCTS PARTNERS LP
ENTERPRISE PRODUCTS PARTNERS LP
SHELL
CHEVRON PIPE LINE COMPANY
ENTERPRISE PRODUCTS PARTNERS LP
CITRUS CORP. (KINDER MORGAN SOUTHERN PASS TRANSFER, KPL)
ENTERPRISE PRODUCTS PARTNERS LP
ENTERPRISE PRODUCTS PARTNERS LP
ENTERPRISE PRODUCTS PARTNERS LP

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/26/2015)

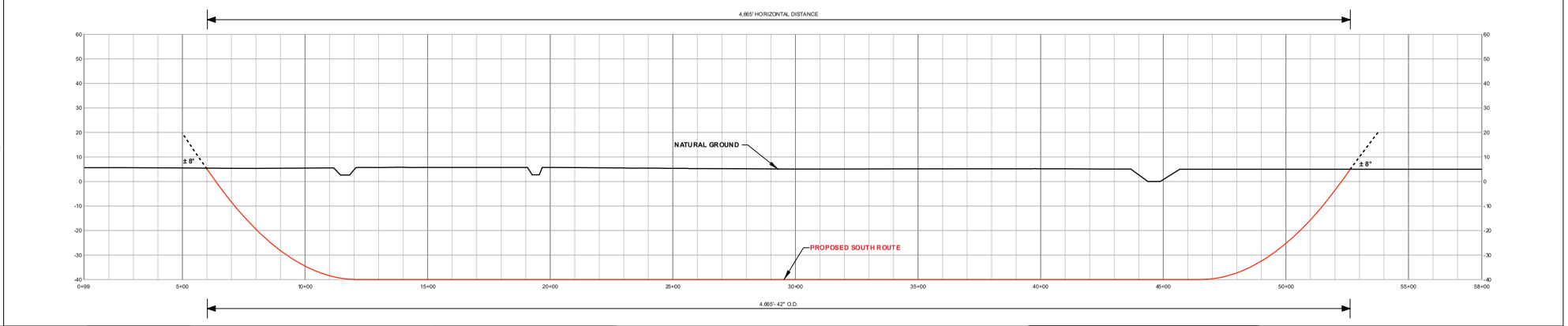


PRELIM. DATA

STATIONING



GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS.
4. MAP PROJECTION: NAD 1983 UTM ZONE 19N (US FOOT).
5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.

DISCLAIMER

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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	BJV	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	017 OF 024

JOB NO. 22670

CLIENT SEMPRA LNG AND MIDSTREAM

UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. # F-1942

	APPROVAL	COMPANY
ENVIRONMENTAL		
LAND		

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 5+98 TO 52+63

0 200 400 800
FEET

PORT ARTHUR PIPELINE TEXAS CONNECTOR (PAPTC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED SOUTH ROUTE
CANALS

JEFFERSON COUNTY TEXAS

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

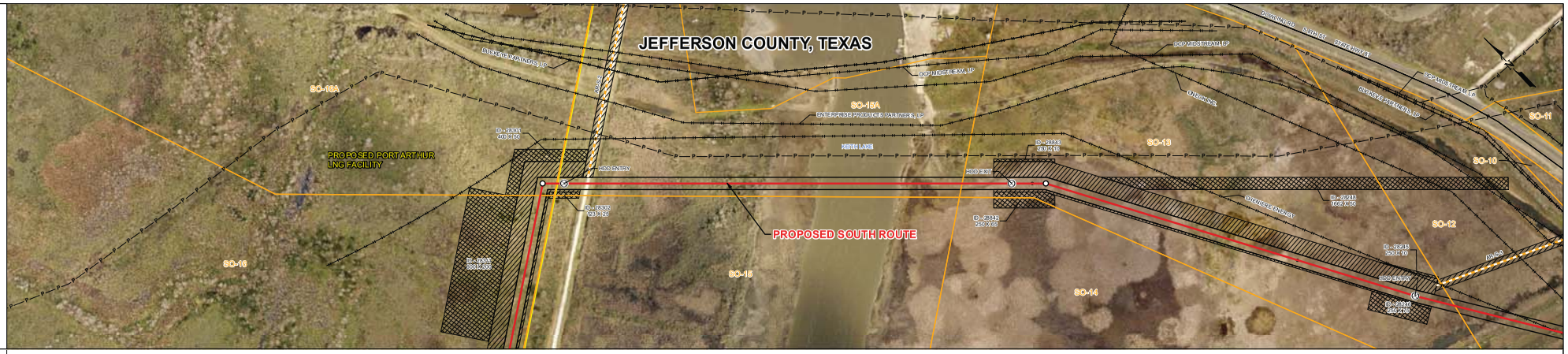
Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	BJV	FAT

DRAWING NO. 22670-505-HDW-12017 REV. A

2778

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/29/2015)



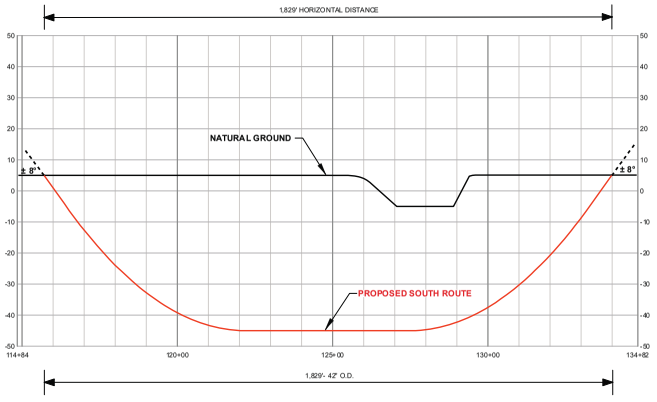
PRELIM. DATA

STATIONING

115+70 HDD ENTRY

133+99 HDD EXIT

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2348)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS	GENERAL NOTES
		1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS. 2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA. 3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS. 4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT). 5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING	DISCLAIMER
		UNIVERSALPEGASUS INTERNATIONAL MAKES NO WARRANTY (EXPRESSED, IMPLIED OR OTHERWISE) THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE AS TO ANY AND ALL SUBSURFACE CONDITIONS AND CONFORMATION. ANY RELIANCE CONTRACTOR PLACES ON THE INFORMATION CONTAINED HEREIN AS TO SUCH CONDITIONS, IS DONE SO AT ITS OWN RISK AND EXPENSE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.
PIPE ASSEMBLIES	PIPE COATING DATA	

1,829'- 42" O.D.

LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	BJV	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	018 OF 024

JOB NO. 22670
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. # F-1942

	APPROVAL	COMPANY
ENVIRONMENTAL		
LAND		

MIN. TEST PRESSURE #### PSIG | DESIGN PRESSURE 1440 PSIG

STA. 115+70 TO 133+99

0 200 400 800
FEET

PORT ARTHUR PIPELINE TEXAS CONNECTOR (PAPTC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED SOUTH ROUTE
KEITH LAKE

JEFFERSON COUNTY TEXAS

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	BJV	FAT

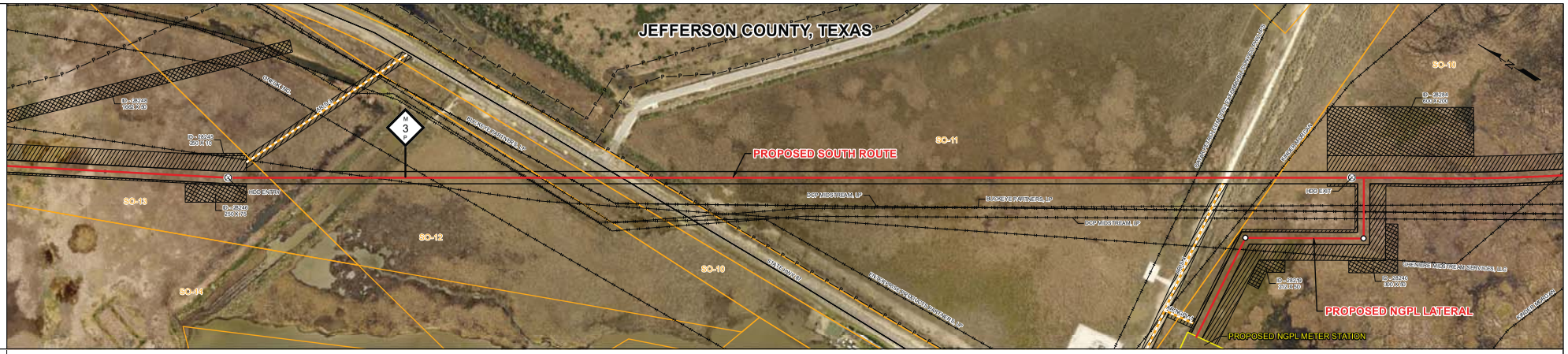
DRAWING NO. 22670-505-HDW-12018 REV. A

2779

J-1-18

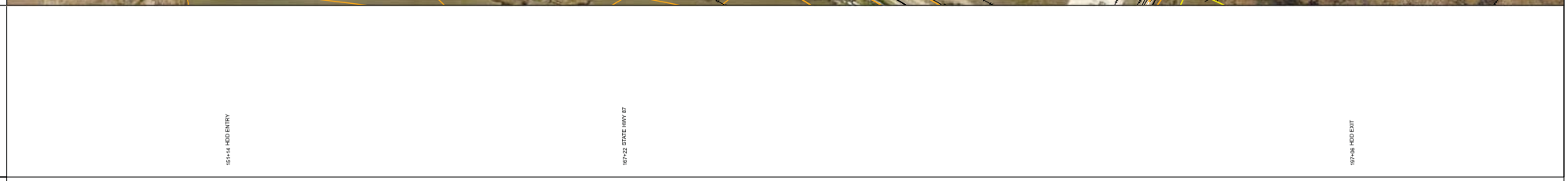
Document Path: \\ua-fs-01\GIS\Projects\Projects\2670_Sempra_Port_Arthur_FS-Master\EDO\ua-dt\2670-505-HDW-12018.mxd

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/26/2015)

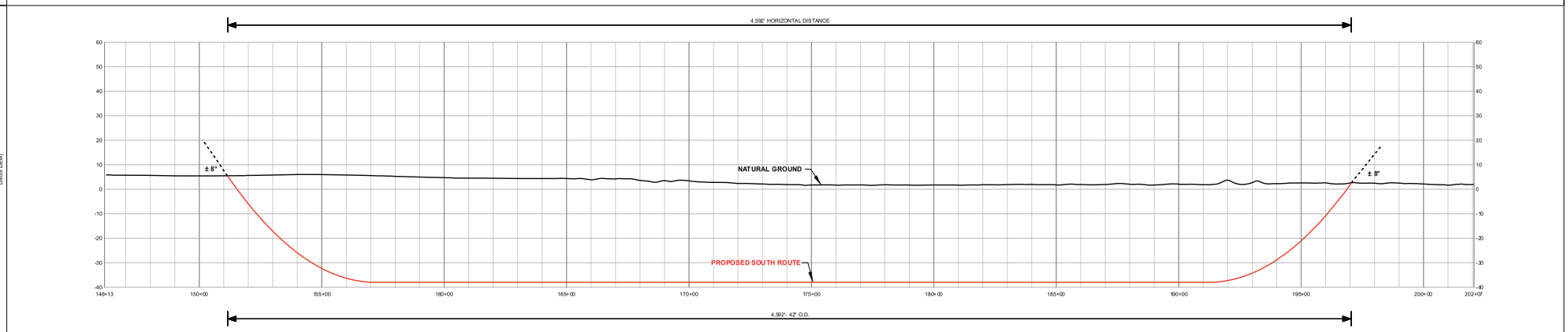


PRELIM. DATA

STATIONING



GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS	GENERAL NOTES
		1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS. 2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA. 3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS. 4. MAP PROJECTION: NAD 1983 UTM ZONE 19N (US FOOT). 5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING	DISCLAIMER
		UNIVERSALPEGASUS INTERNATIONAL MAKES NO WARRANTY (EXPRESSED, IMPLIED OR OTHERWISE) THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE AS TO ANY AND ALL SUBSURFACE CONDITIONS AND CONFORMATION. ANY RELIANCE CONTRACTOR PLACES ON THE INFORMATION CONTAINED HEREIN AS TO SUCH CONDITIONS, IS DONE SO AT ITS OWN RISK AND EXPENSE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.
PIPE ASSEMBLIES	PIPE COATING DATA	

LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	BJV	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	019 OF 024

JOB NO. 22670

CLIENT SEMPRA LNG AND MIDSTREAM

UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. # F-1942

	APPROVAL	COMPANY
ENVIRONMENTAL		
LAND		

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 151+14 TO 197+06

0 200 400 800
FEET

PORT ARTHUR PIPELINE TEXAS CONNECTOR (PAPTC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED SOUTH ROUTE
FOREIGN PIPELINES, STATE HWY 87

JEFFERSON COUNTY TEXAS

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

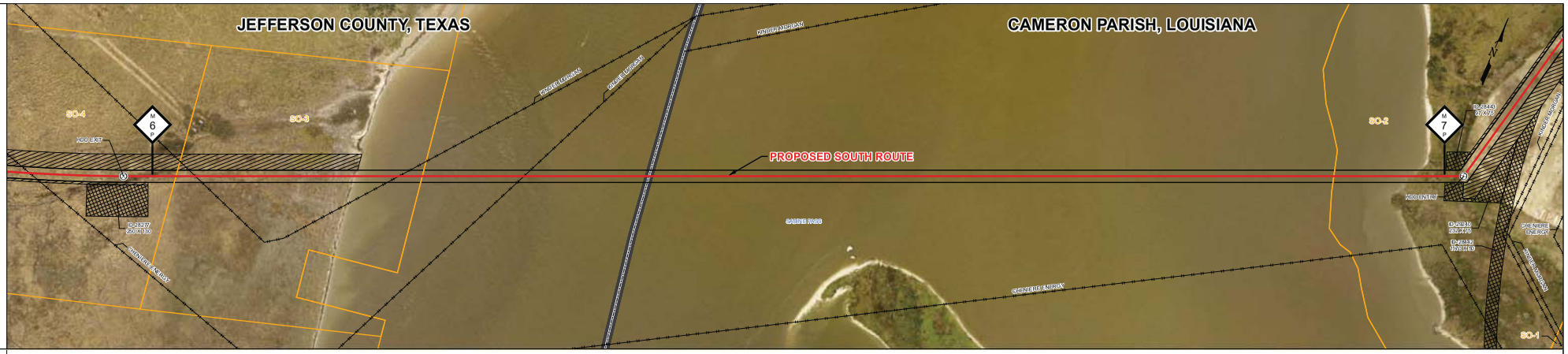
Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	BJV	FAT

DRAWING NO. 22670-505-HDW-12019 REV. A

2780

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/29/2015)



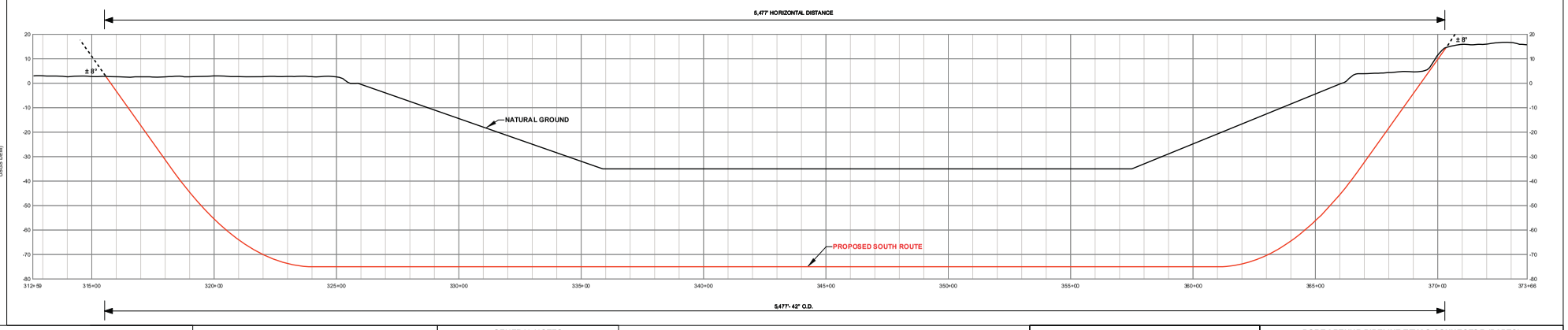
PRELIM. DATA

STATIONING

315+61 HDD EXIT

370+38 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2348)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS	GENERAL NOTES
		1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS. 2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA. 3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS. 4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT). 5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING	DISCLAIMER
		UNIVERSALPEGASUS INTERNATIONAL MAKES NO WARRANTY (EXPRESSED, IMPLIED OR OTHERWISE) THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE AS TO ANY AND ALL SUBSURFACE CONDITIONS AND CONFORMATION. ANY RELIANCE CONTRACTOR PLACES ON THE INFORMATION CONTAINED HEREIN AS TO SUCH CONDITIONS, IS DONE SO AT ITS OWN RISK AND EXPENSE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.
PIPE ASSEMBLIES	PIPE COATING DATA	

LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	BJV	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	020 OF 024

JOB NO. 22670
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. # F-1942
UNIVERSAL ENSCO, INC. - LOUISIANA ENGINEERING FIRM LIC. # EF.0001688

	APPROVAL	COMPANY
ENVIRONMENTAL		
LAND		

MIN. TEST PRESSURE #### PSIG | DESIGN PRESSURE 1440 PSIG

STA. 315+61 TO 370+38

0 200 400 800
FEET

PORT ARTHUR PIPELINE TEXAS CONNECTOR (PAPTC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED SOUTH ROUTE
SABINE PASS

JEFFERSON COUNTY, TEXAS
CAMERON PARISH, LOUISIANA

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

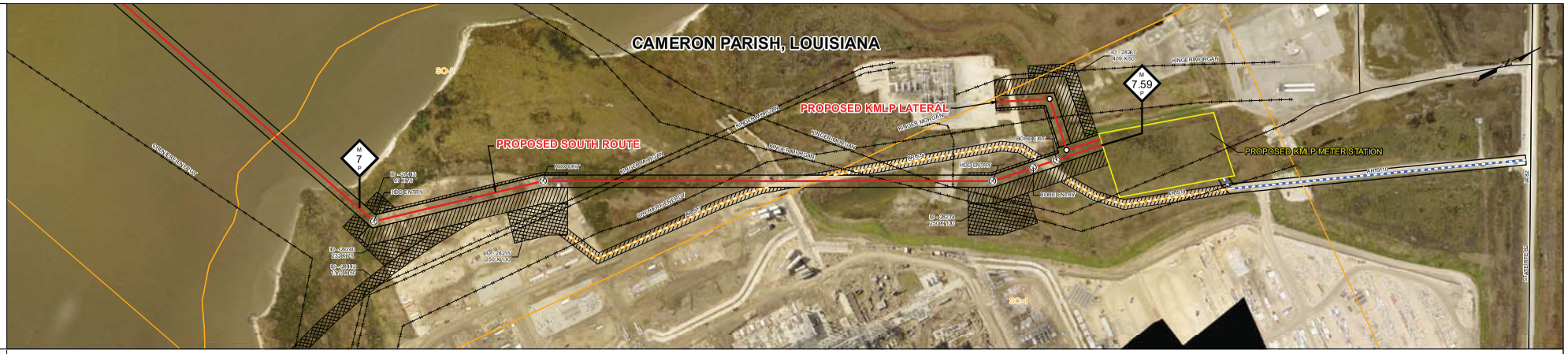
NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	BJV	FAT

DRAWING NO. 22670-505-HDW-12020
REV. A

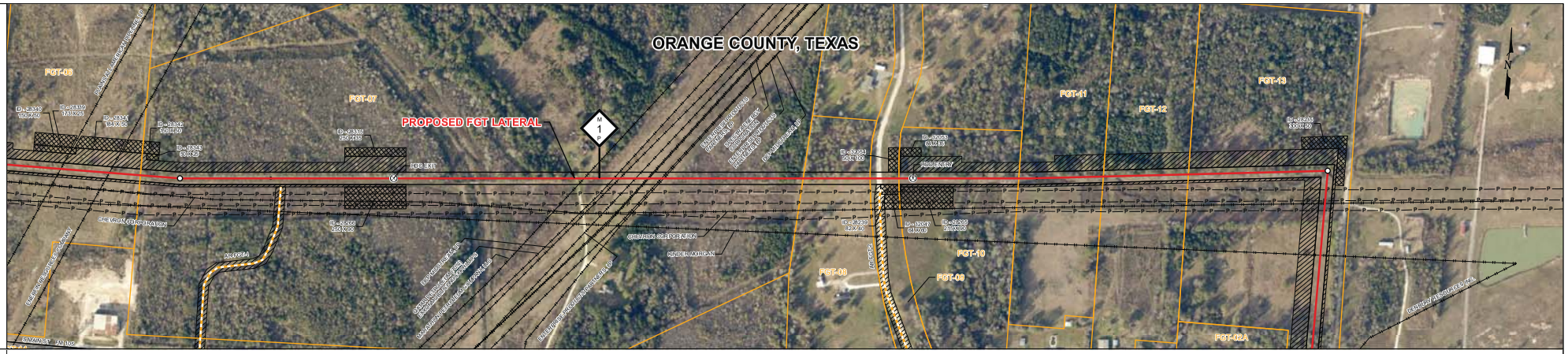
278

Document Path: \\hou-fs1\GIS\Projects\Projects\22670_Sempra_Port_Arthur_P2\Maps\505\Docs\22670-505-HDW-12020.mxd

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/28/2015)


CAMERON PARISH, LOUISIANA
PROPOSED KMLP LATERAL
PROPOSED SOUTH ROUTE
PROPOSED KMLP METER STATION
M 7 P
M 7.59 P
HDD ENTRY
HDD EXIT
KINDER MORGAN
SO-1
SO-2
ID = 2820
250 X 0
ID = 2820
250 X 0
ID = 2820
250 X 0

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/26/2015)



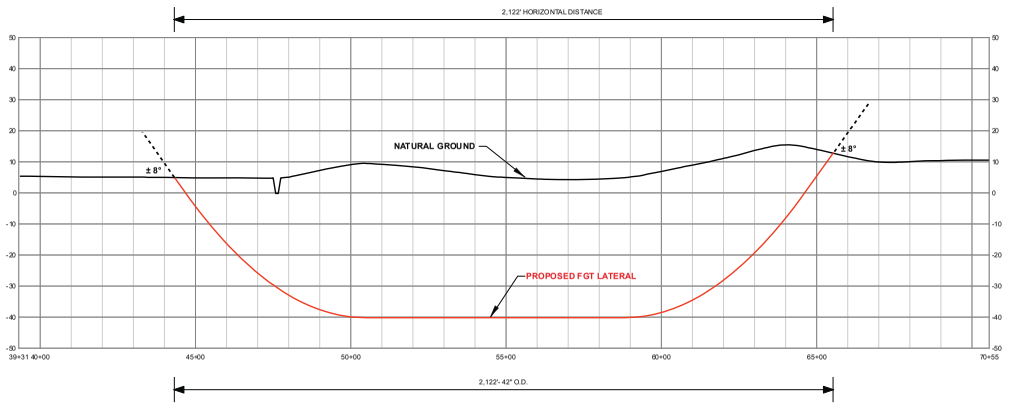
PRELIM. DATA

STATIONING

44+32 HDD EXIT

65+54 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS	GENERAL NOTES
		1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS. 2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA. 3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS. 4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT). 5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.
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PIPE ASSEMBLIES	PIPE COATING DATA	UNIVERSALPEGASUS INTERNATIONAL MAKES NO WARRANTY (EXPRESSED, IMPLIED OR OTHERWISE) THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE AS TO ANY AND ALL SUBSURFACE CONDITIONS AND CONFORMATION. ANY RELIANCE CONTRACTOR PLACES ON THE INFORMATION CONTAINED HEREIN AS TO SUCH CONDITIONS, IS DONE SO AT ITS OWN RISK AND EXPENSE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.

LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	BJV	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	022 OF 024

JOB NO. 22670
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. # F-1942

	APPROVAL	COMPANY
ENVIRONMENTAL		
LAND		

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 44+32 TO 65+54

0 200 400 800
FEET

PORT ARTHUR PIPELINE TEXAS CONNECTOR (PAPTC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED FGT LATERAL
FOREIGN PIPELINES

ORANGE COUNTY TEXAS

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

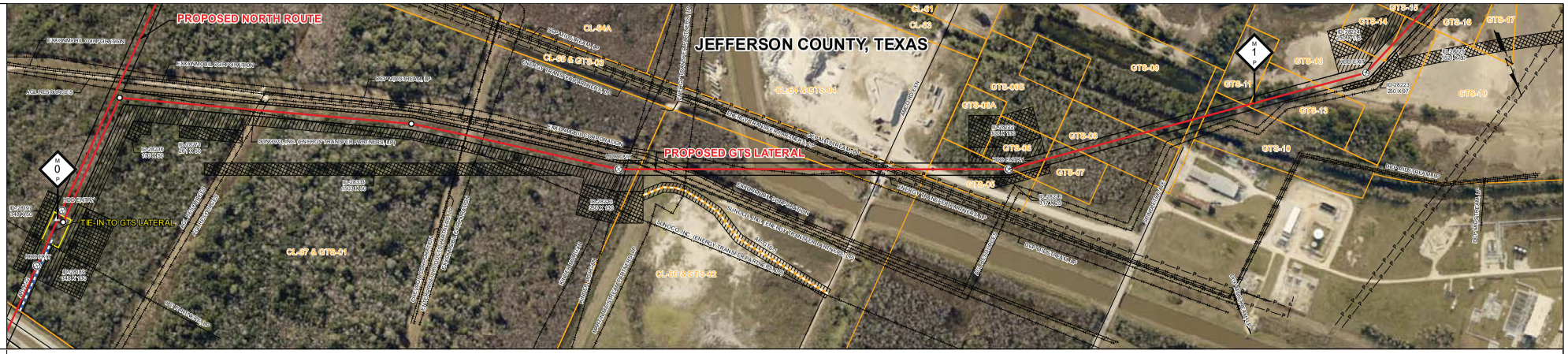
Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	BJV	FAT

DRAWING NO. 22670-505-HDW-12022 REV. A

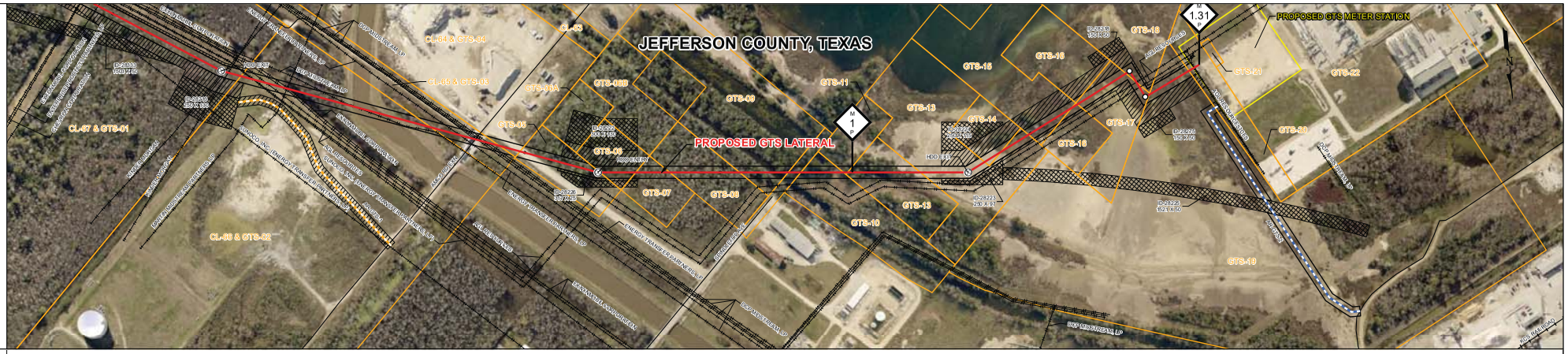
2783

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/29/2015)


PROPOSED NORTH ROUTE
JEFFERSON COUNTY, TEXAS
PROPOSED GTS LATERAL
TIE-IN TO GTS LATERAL
HDD ENTRY
HDD EXIT
CL-01
CL-03
CL-04A
CL-03 & GTS-04
CL-01 & GTS-01
CL-07 & GTS-01
CL-03 & GTS-02
GTS-01
GTS-02
GTS-03
GTS-03A
GTS-03B
GTS-04
GTS-05
GTS-06
GTS-07
GTS-08
GTS-09
GTS-10
GTS-11
GTS-12
GTS-13
GTS-14
GTS-15
GTS-16
GTS-17
GTS-18
GTS-19
ENTERPRISE PRODUCTS OPERATING LLC
ENTERPRISE TEXAS PIPELINE LLC
SEMPRA LNG & MIDSTREAM
SEMPRA PIPELINES & STORAGE
SEMPRA GAS & POWER
ENERGY TRANSFER PARTNERS, LP
ENERGY TRANSFER FUEL, LP
ENERGY TRANSFER TEXAS, LP
ENERGY TRANSFER INTERSTATE HOLDINGS, LLC
ENTERPRISE TEXAS PIPELINE LLC
ENTERPRISE PRODUCTS OPERATING LLC
ENTERPRISE CRUDE PIPELINE LLC
ENTERPRISE TEXAS PIPELINE LLC
ENTERPRISE PRODUCTS OPERATING LLC
ENTERPRISE TEXAS PIPELINE LLC
ENTERPRISE CRUDE PIPELINE LLC
ENTERPRISE PRODUCTS OPERATING LLC
ENTERPRISE TEXAS

SCALE: 1" = 200'

IMAGERY DATA SOURCE: PICTOMETRY INTERNATIONAL - 01/26/2015)



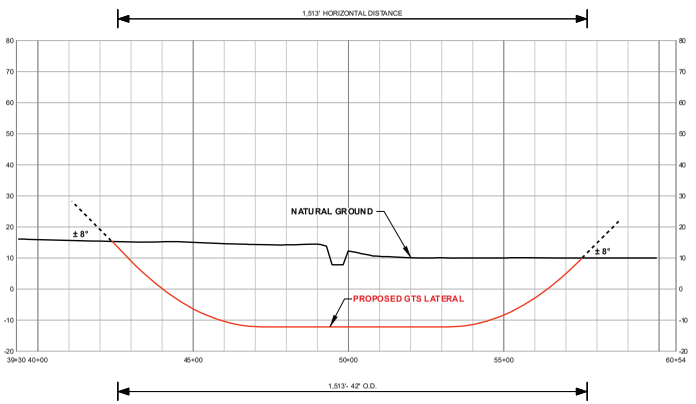
PRELIM. DATA

STATIONING

42+39 HDD ENTRY

57+52 HDD EXIT

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS	GENERAL NOTES
		1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS. 2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA. 3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS. 4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT). 5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.
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PIPE ASSEMBLIES	PIPE COATING DATA	

LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	BJV	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	024 OF 024

JOB NO. 22670

CLIENT SEMPRA LNG AND MIDSTREAM

UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. # F-1942

	APPROVAL	COMPANY
ENVIRONMENTAL		
LAND		

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 42+39 TO 57+52

0 200 400 800
FEET

PORT ARTHUR PIPELINE TEXAS CONNECTOR (PAPTC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED GTS LATERAL
UNNAMED WATERBODY

JEFFERSON COUNTY TEXAS

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

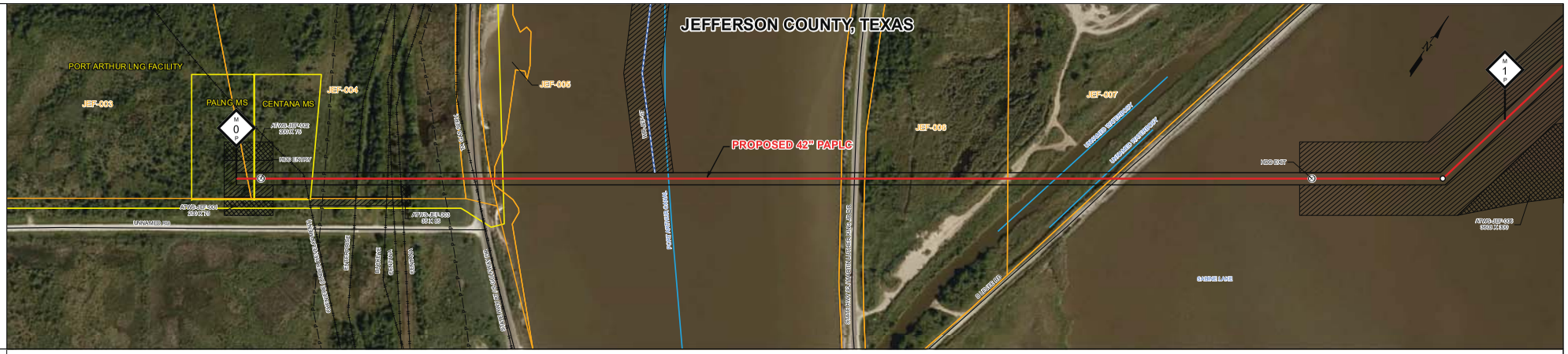
NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	BJV	FAT

DRAWING NO. 22670-505-HDW-12024 REV. A

2785

LOUISIANA CONNECTOR PROJECT

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: XCOS IMAGING, INC. - 04/24/2017)

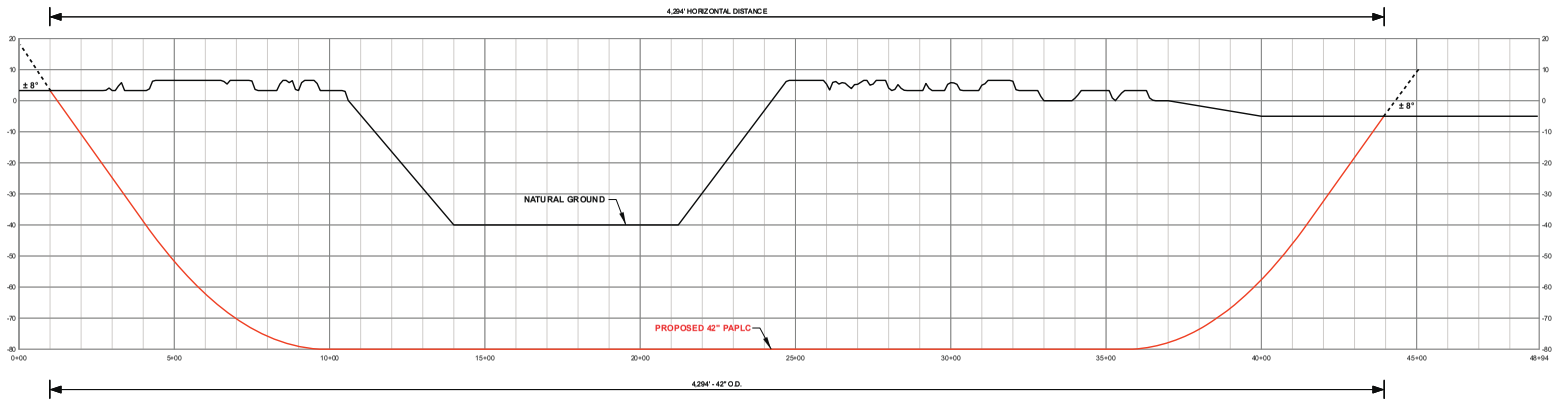


PRELIM. DATA

STATIONING

1+00 HDD ENTRY
9+82 STATE HWY 87 / S GULFWAY DR
17+65 PORT ARTHUR CANAL
25+25 STATE HWY 82 / MARTIN LUTHER KING JR DR
33+48 UNNAMED WATERBODY
35+33 UNNAMED WATERBODY
36+03 S LEVEE RD
43+94 HDD EXIT

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS	GENERAL NOTES
		1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS. 2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA. 3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS. 4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT). 5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.
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PIPE ASSEMBLIES	PIPE COATING DATA	

LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	001 OF 026

JOB NO. 23707
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. # F- 1942

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PIEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 1+00 TO 43+94

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
STATE HWY 87 / S GULFWAY DR, PORT ARTHUR CANAL, STATE HWY 82 / MARTIN LUTHER KING JR DR, S LEVEE RD
JEFFERSON COUNTY TEXAS

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12001 REV. A

27827

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SCALE: 1" = 200'
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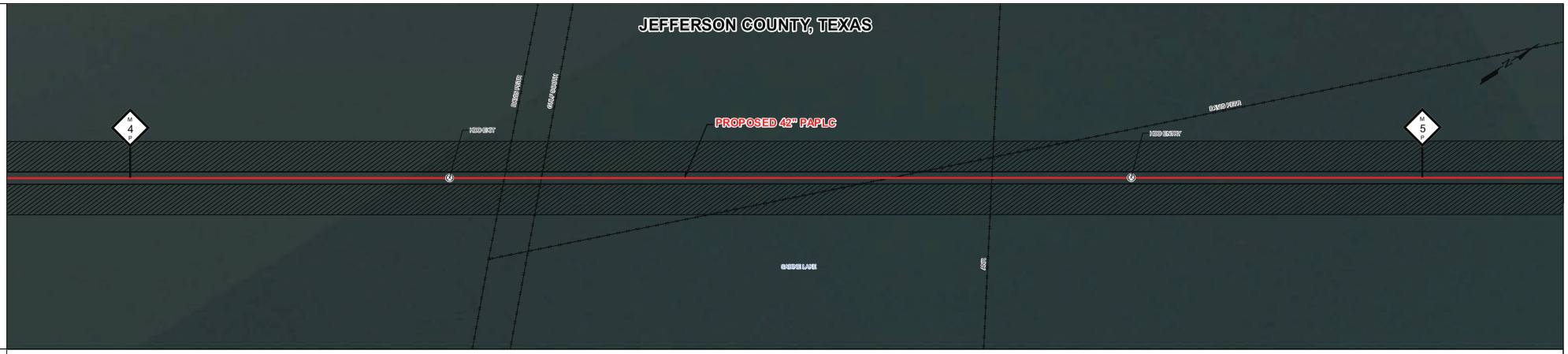
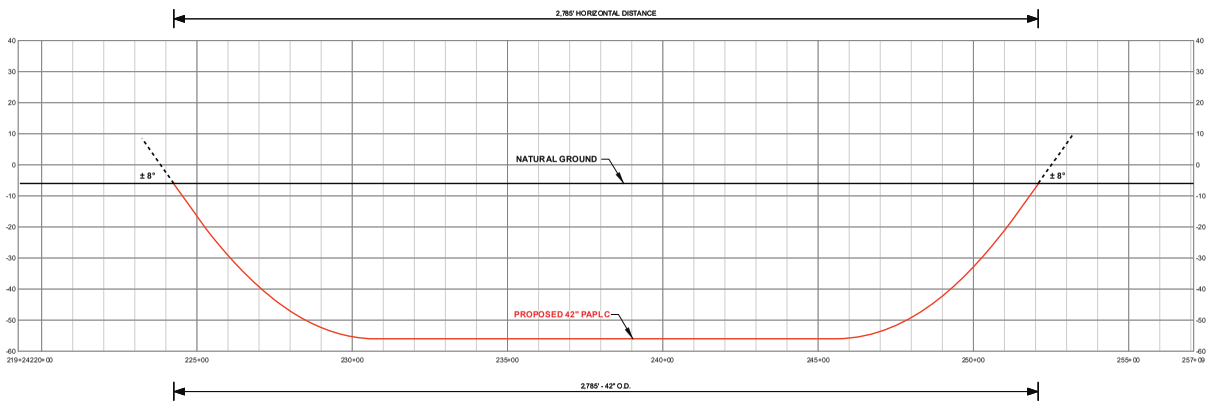


PRELIM. DATA

STATIONING



GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2326)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	002 OF 026

JOB NO. 23707
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. - TEXAS ENGINEERING FIRM LIC. # F- 1942

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PIEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 224+24 TO 252+09

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
FOREIGN PIPELINES

JEFFERSON COUNTY TEXAS

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12002 REV. A

2788

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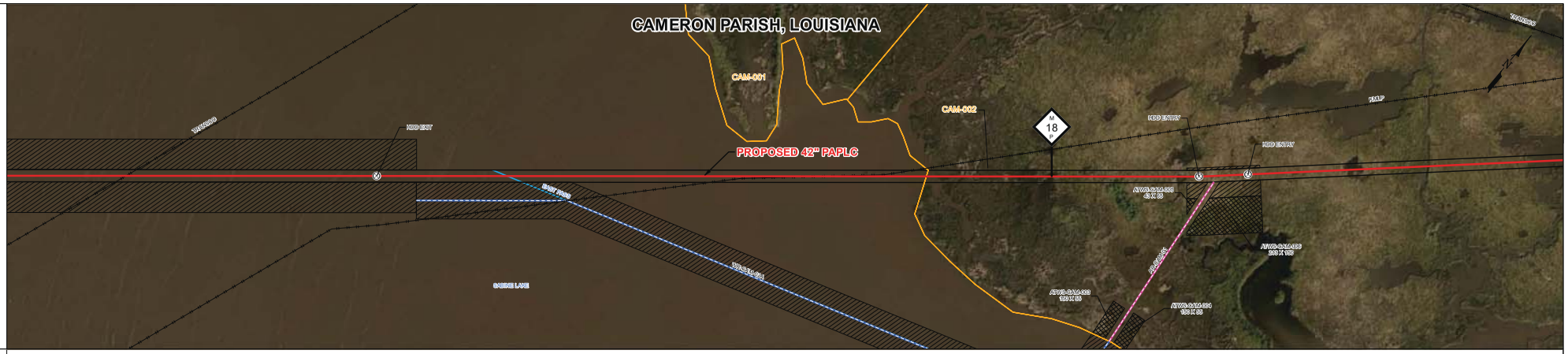
SCALE: 1" = 200'
(IMAGERY DATA SOURCE: XCOS IMAGING, INC. - 04/24/2017)



PRELIM. DATA

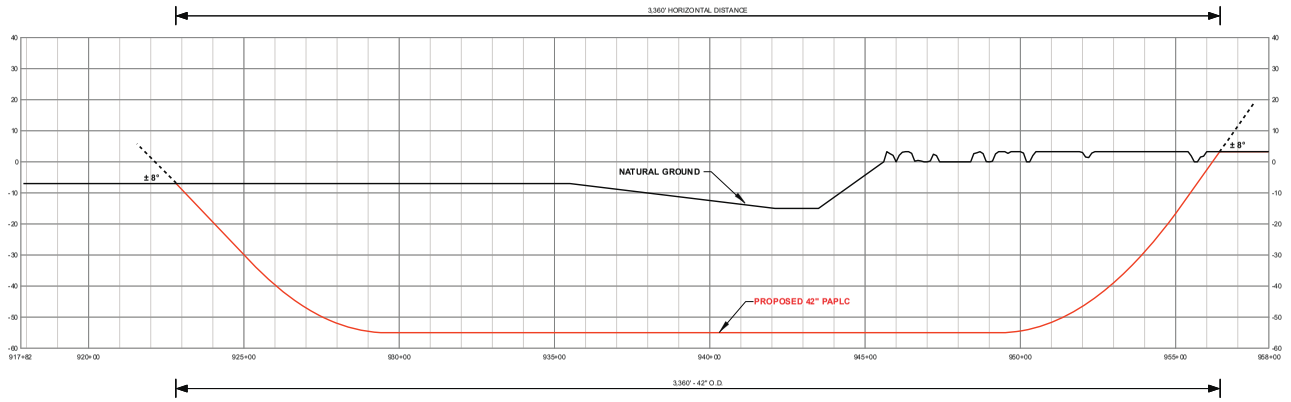
STATIONING

922+82 HDD EXIT

928+16 EAST PASS

956+42 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2348)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS.
4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT).
5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.

DISCLAIMER

UNIVERSALPEGASUS INTERNATIONAL MAKES NO WARRANTY (EXPRESSED, IMPLIED OR OTHERWISE) THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE AS TO ANY AND ALL SUBSURFACE CONDITIONS AND CONFORMATION. ANY RELIANCE CONTRACTOR PLACES ON THE INFORMATION CONTAINED HEREIN AS TO SUCH CONDITIONS, IS DONE SO AT ITS OWN RISK AND EXPENSE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.

LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	003 OF 026

JOB NO. 23707
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING F R M LIC. # EF.0001688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE #### PSIG | DESIGN PRESSURE 1440 PSIG

STA. 922+82 TO 956+42

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
SABINE LAKE

CAMERON PARISH — LOUISIANA

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12003 REV. A

2789

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SCALE: 1" = 200'

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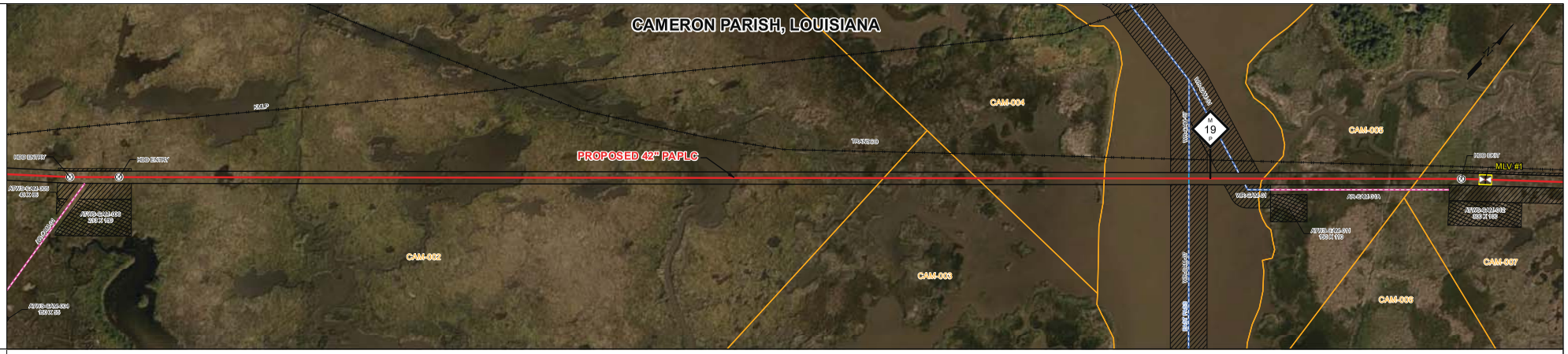


PRELIM. DATA

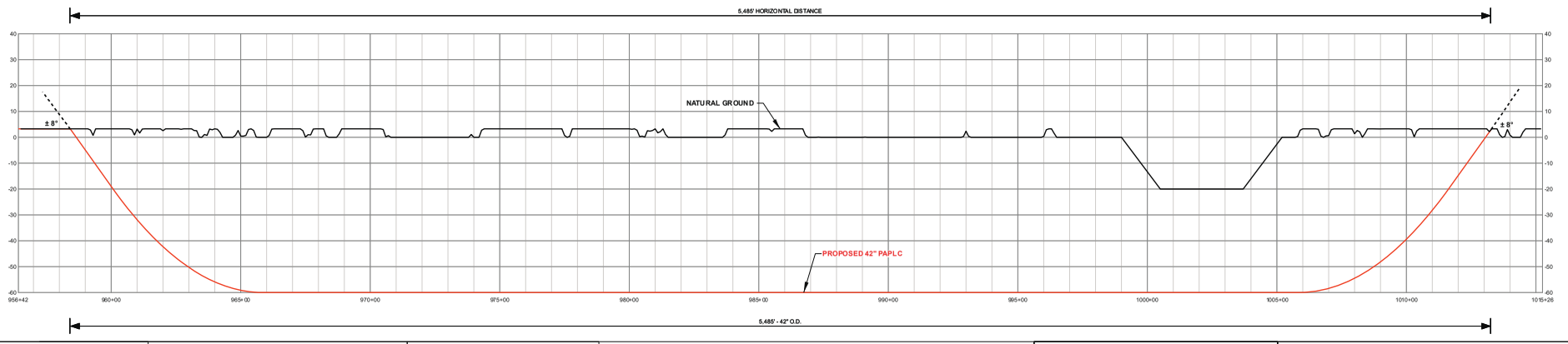
STATIONING

956+42 HDD ENTRY

1002+14 EAST PASS

1015+27 HDD EXIT

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2M)



BILL OF MATERIALS

MISCELLANEOUS MATERIALS

FITTINGS SUMMARY

CONTINUOUS CONCRETE COATING

PIPE ASSEMBLIES

PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS.
4. MAP PROJECTION: NAD 1983 UTM ZONE 19N (US FOOT).
5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.

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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	004 OF 026

JOB NO. 23707

CLIENT SEMPRA LNG AND MIDSTREAM

UNIVERSAL ENSCO, INC. - LOUISIANA ENGINEERING FIRM LIC. # EF.0001688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 958+42 TO 1013+27

0 200 400 800

FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
EAST PASS

CAMERON PARISH LOUISIANA

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12004 REV. A

2790

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SCALE: 1" = 200'

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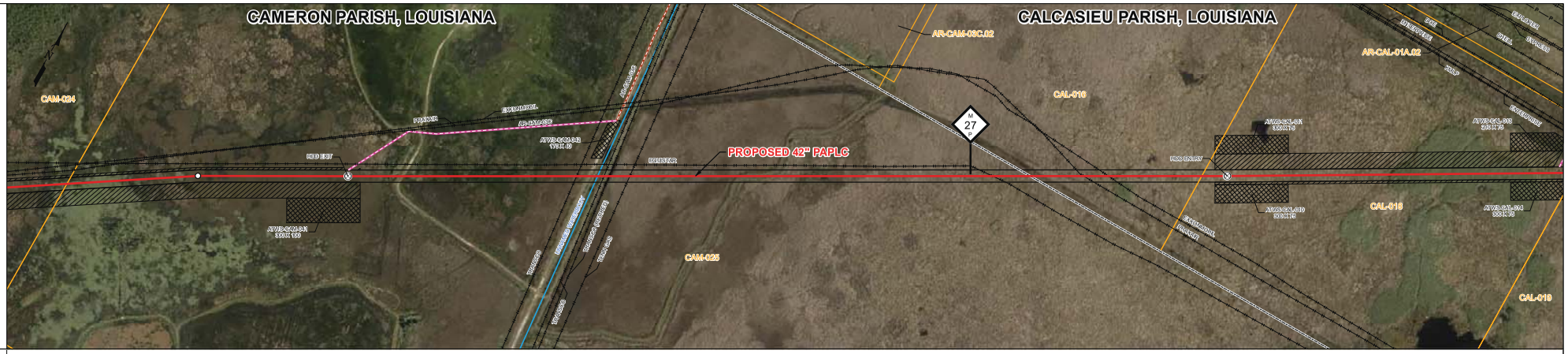


PRELIM. DATA

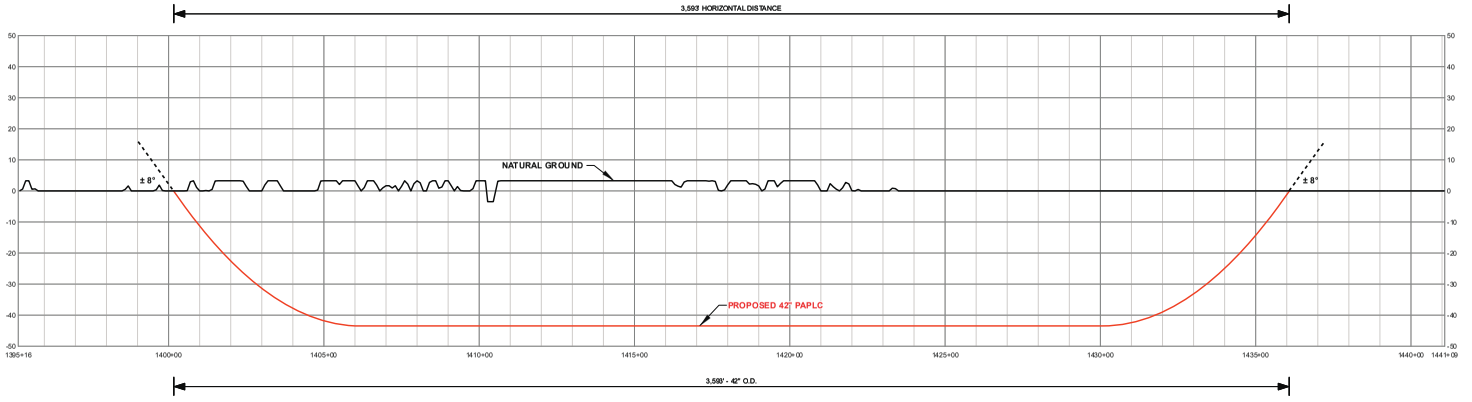
STATIONING

1400+16 HDD EXIT

1410+37 UNNAMED WATERBODY

1436+69 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2326)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	005 OF 026

JOB NO. 23707

CLIENT SEMPRA LNG AND MIDSTREAM

UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING FIRM LIC. # EF.0001688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PIEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE #### PSIG | DESIGN PRESSURE 1440 PSIG

STA. 1400+16 TO 1436+09

0 200 400 800

FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
FOREIGN PIPELINES

CAMERON PARISH / CALCASIEU PARISH — LOUISIANA

UniversalPegasus INTERNATIONAL — A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12005 REV. A

2791

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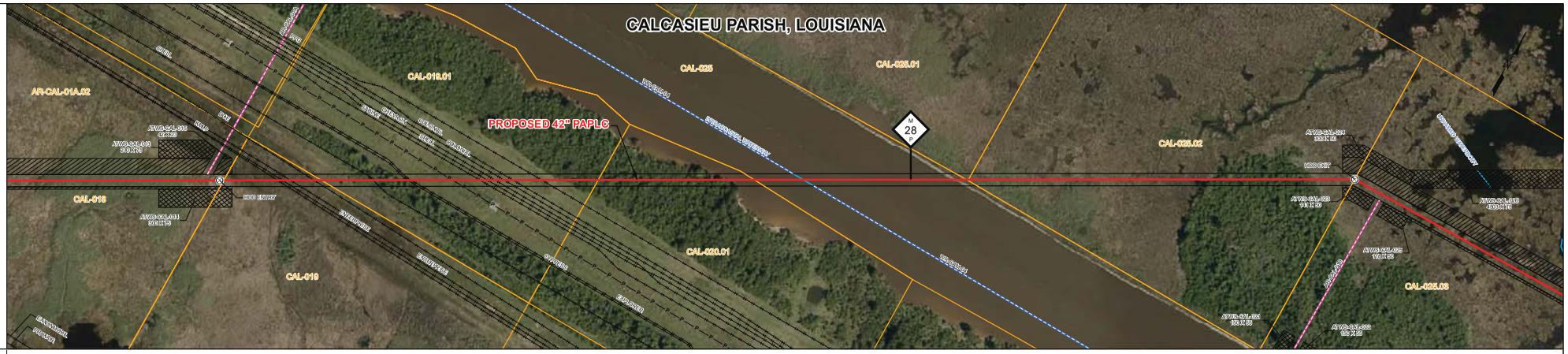
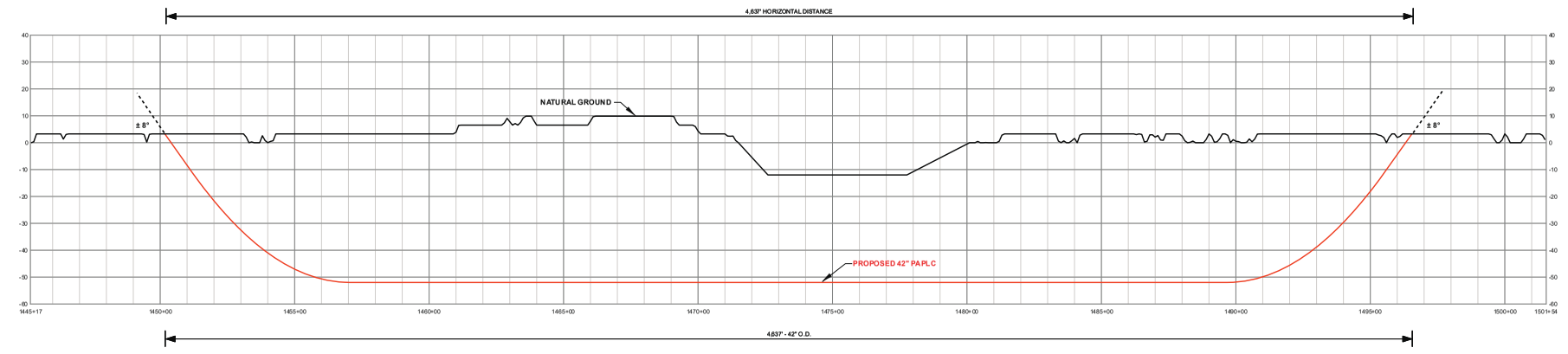


PRELIM. DATA

STATIONING

1450+17 HDD ENTRY | 1474+52 INTRACOASTAL WATERWAY | 1496+54 HDD EXIT

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2326)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS	GENERAL NOTES
		1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS. 2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA. 3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS. 4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT). 5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING	DISCLAIMER
		UNIVERSALPEGASUS INTERNATIONAL MAKES NO WARRANTY (EXPRESSED, IMPLIED OR OTHERWISE) THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE AS TO ANY AND ALL SUBSURFACE CONDITIONS AND CONFORMATION. ANY RELIANCE CONTRACTOR PLACES ON THE INFORMATION CONTAINED HEREIN AS TO SUCH CONDITIONS, IS DONE SO AT IT'S OWN RISK AND EXPENSE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.
PIPE ASSEMBLIES	PIPE COATING DATA	

LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	006 OF 026

JOB NO. 23707
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING FIRM LIC. # EF.000 1688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PIEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE #### PSIG | DESIGN PRESSURE 1440 PSIG

STA. 1450+17 TO 1496+54

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
INTRACOASTAL WATERWAY

CALCASIEU PARISH — LOUISIANA

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12006 REV. A

2792

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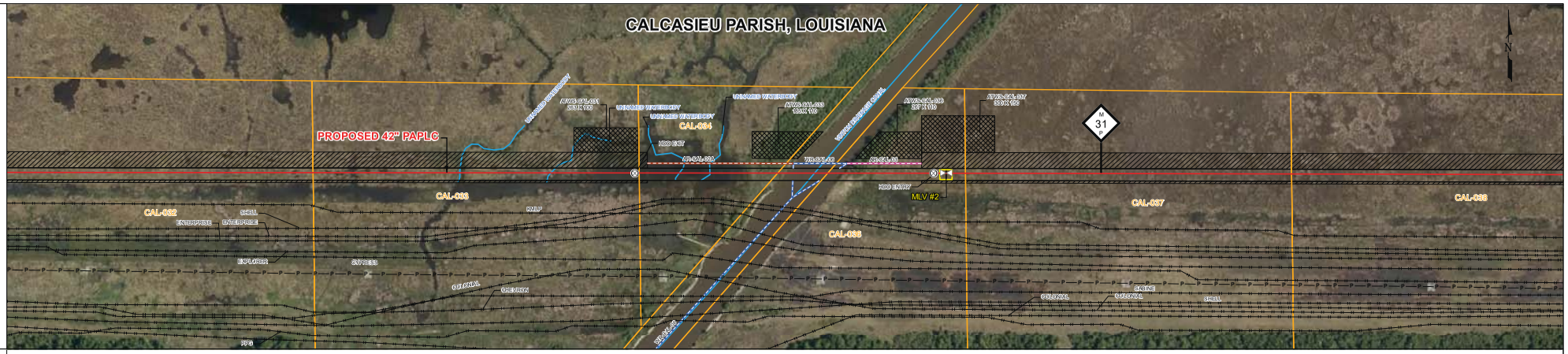
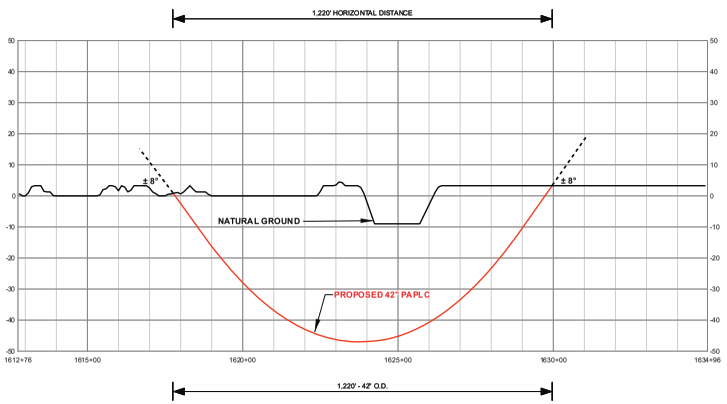


PRELIM. DATA

STATIONING

1617+76 HDD EXIT
1619+52 UNNAMED WATERBODY
1620+81 UNNAMED WATERBODY
1625+04 VINTON DRAINAGE CANAL
1629+96 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
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4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT).
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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
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- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
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- POWERLINE
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- ROAD
- WATER CENTERLINE
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- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	09/17/2017
CHKD	CAS	DATE	09/17/2017
APPD	FAT	DATE	09/17/2017
SCALE	1 IN = 200 FT	SHEET	007 OF 026

JOB NO. 23707
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING FIRM LIC. # EF.000 1688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE ### PSIG | DESIGN PRESSURE 1440 PSIG

STA. 1617+76 TO 1629+96

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
VINTON DRAINAGE CANAL

CALCASIEU PARISH LOUISIANA

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12007 REV. A

27933

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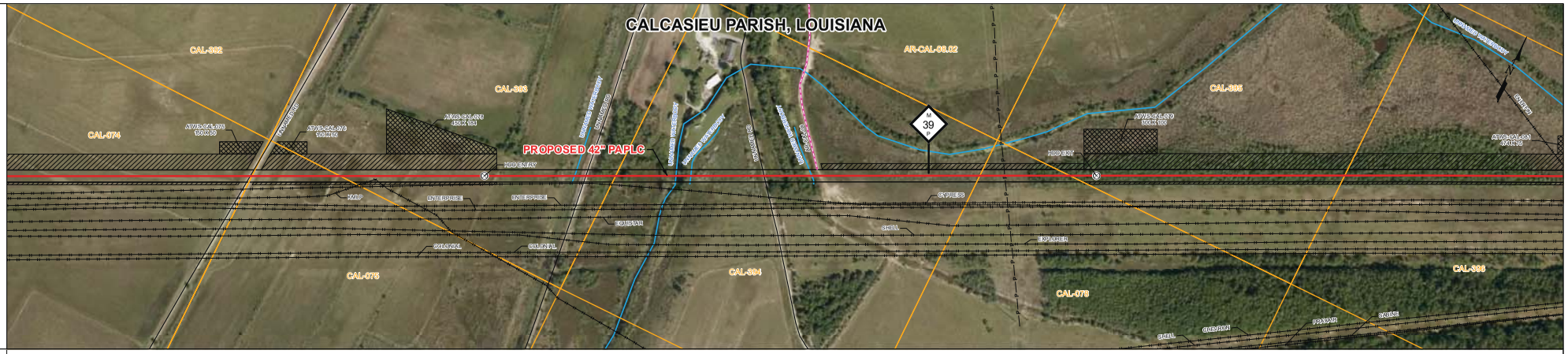
SCALE: 1" = 200'
(IMAGERY DATA SOURCE: XCEL MAGING, INC. - 04/24/2017)

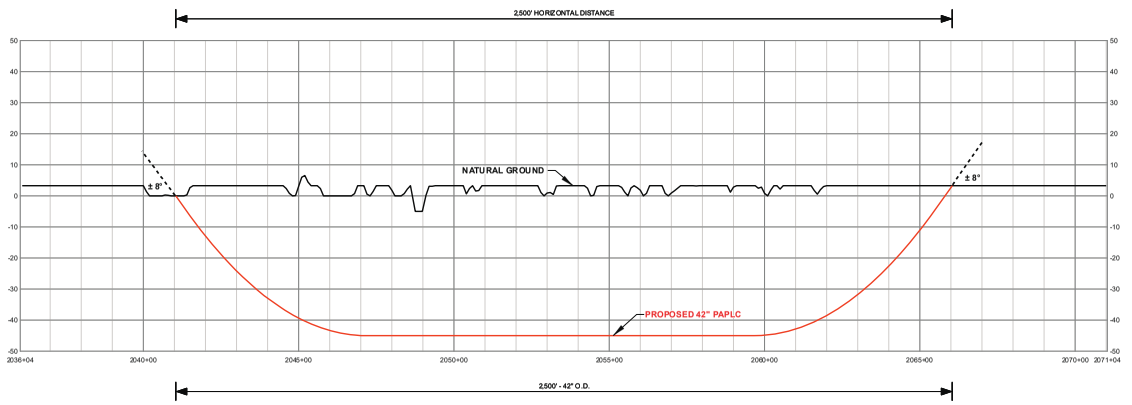


PRELIM. DATA

STATIONING

2041+04 HDD ENTRY
2044+73 UNNAMED WATERBODY
2045+20 UNNAMED RD
2048+87 UNNAMED WATERBODY
2049+48 UNNAMED WATERBODY
2052+48 UNNAMED RD
2054+42 UNNAMED WATERBODY
2065+04 HDD EXIT

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2536)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
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- WATER CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	09/17/2017
CHKD	CAS	DATE	09/17/2017
APPD	FAT	DATE	09/17/2017
SCALE	1 IN = 200 FT	SHEET	008 OF 026

JOB NO. 23707
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING FIRM LIC. # EF.0001688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE ### PSIG | DESIGN PRESSURE 1440 PSIG

STA. 2041+04 TO 2066+04

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
UNNAMED WATERBODY

CALCASIEU PARISH LOUISIANA

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12008 REV. A

27941

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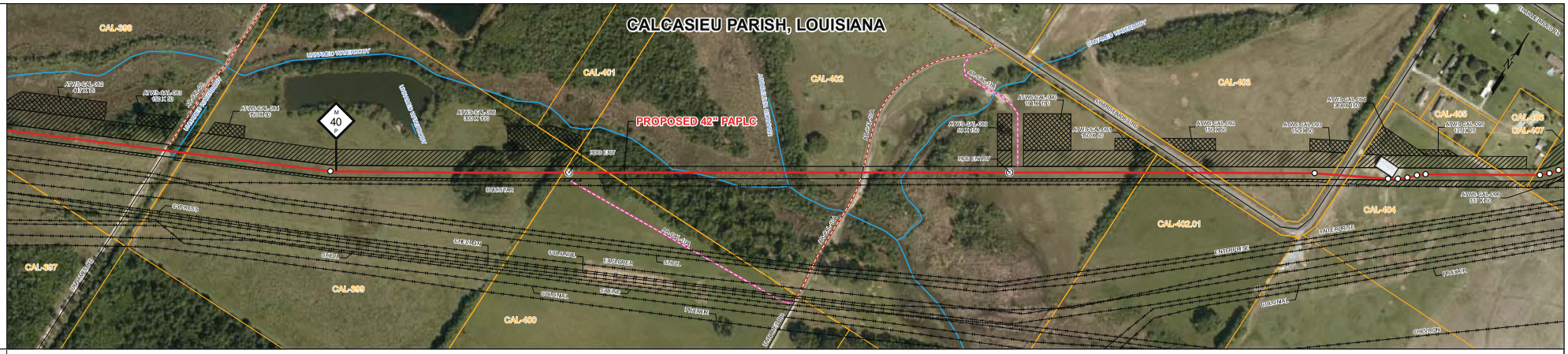
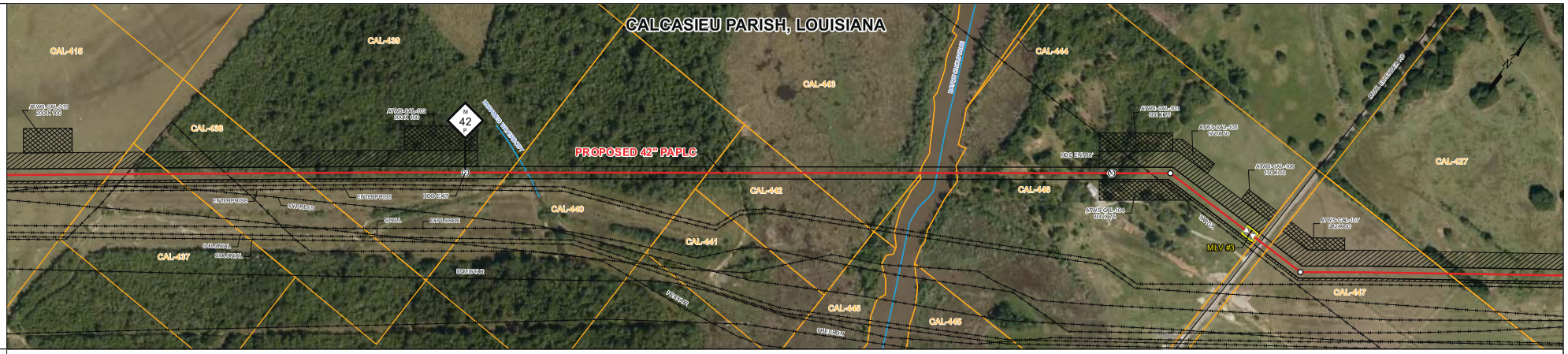
SCALE: 1" = 200'
(IMAGERY DATA SOURCE: XCOS IMAGING, INC. - 04/24/2017)


CALCASIEU PARISH, LOUISIANA
PROPOSED 42" PAPLC
CAL-399
CAL-401
CAL-402
CAL-403
CAL-404
CAL-405
CAL-406
CAL-407
CAL-397
CAL-398
CAL-400
CAL-402.01
UNNAMED WATERBODY
UNNAMED WATERBODY (3)
UNNAMED RD
HDD EXIT
HDD ENTRY
ATWS-CAL-402 47X15
ATWS-CAL-403 15X15
ATWS-CAL-401 15X15
ATWS-CAL-402 15X15
ATWS-CAL-403 15X15
ATWS-CAL-401 15X15
ATWS-CAL-402 15X15
ATWS-CAL-401 15X20
ATWS-CAL-402 15X15
ATWS-CAL-403 15X15
ATWS-CAL-404 47X15
ATWS-CAL-405 15X15
ATWS-CAL-406 15X15
ATWS-CAL-407 15X15
ATWS-CAL-404 37X15
CYPRESS
CHESTNUT
OLEANDER
EASTOVER
ELM
SALEM
ASHLAND
PECAN
ENTERPRISE
BREEDLOVE
PINEHILL
MAGNOLIA
COUNTRYSIDE
CREEKSIDE
EDGEWATER
ROSEMARY
PARK
ROSEMARY
MAGNOLIA
PINEHILL
MAGNOLIA
PINEHILL
MAGNOLIA
PINEHILL

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: XCOS IMAGING, INC. - 04/24/2017)

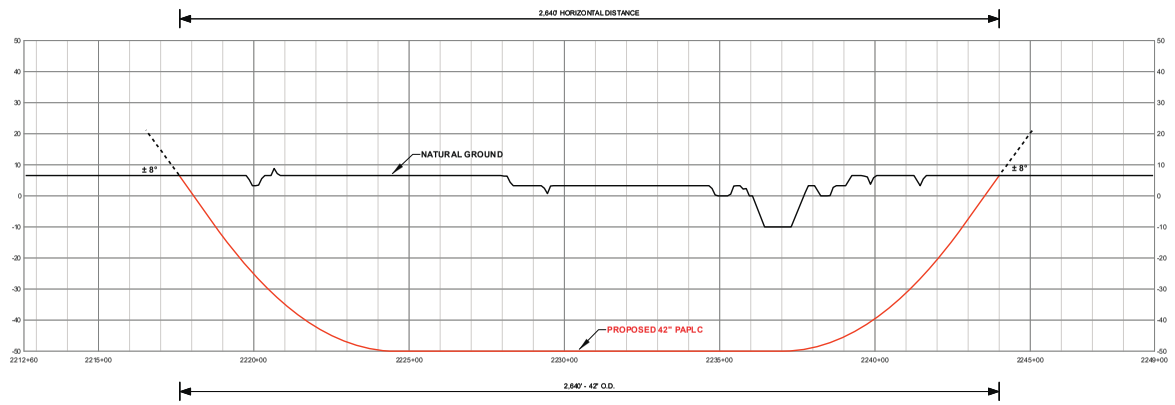


PRELIM. DATA

STATIONING

2217+68 HDD EXIT
2220+13 UNNAMED WATERBODY
2236+87 BAYOU CHOUPIQUE
2244+00 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS.
4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT).
5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.

DISCLAIMER

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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	010 OF 026

JOB NO. 23707
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING FIRM LIC. # EF.000 1688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE ### PSIG | DESIGN PRESSURE 1440 PSIG

STA. 2217+60 TO 2244+00

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
BAYOU CHOUPIQUE

CALCASIEU PARISH LOUISIANA

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12010 REV. A

2796

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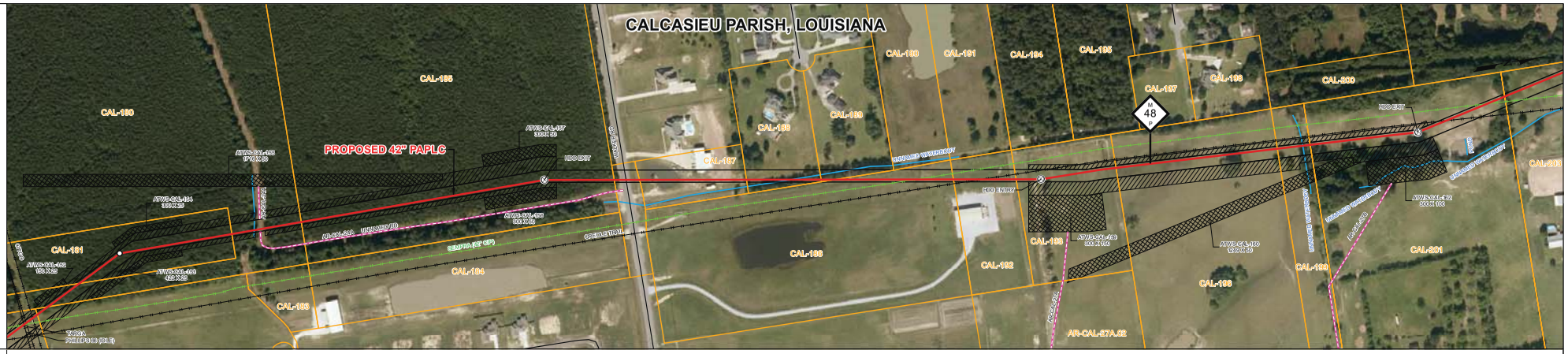
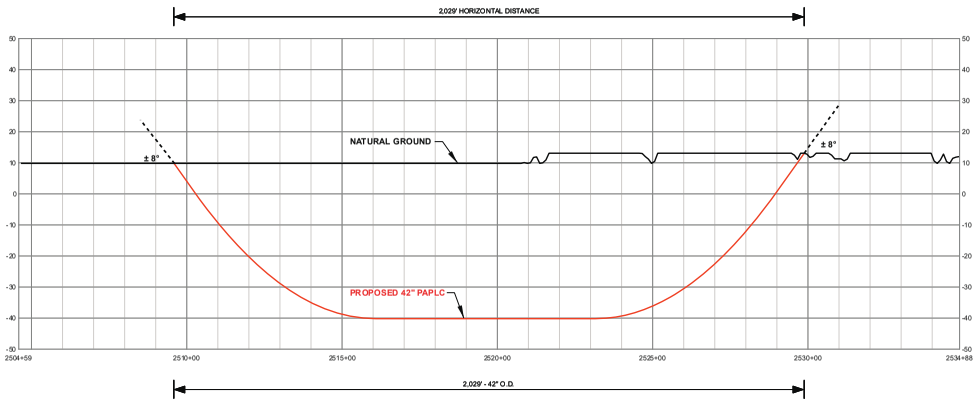


PRELIM. DATA

STATIONING

2509+59 HDD EXIT
2512+94 WALKER RD
2519+70 UNNAMED WATERBODY
2529+88 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS.
4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT).
5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.

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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	09/17/2017
CHKD	CAS	DATE	09/17/2017
APPD	FAT	DATE	09/17/2017
SCALE	1 IN = 200 FT	SHEET	011 OF 026

JOB NO. 23707
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING FIRM LIC. # EF.0001688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE ### PSIG | DESIGN PRESSURE 1440 PSIG
STA. 2509+59 TO 2529+88

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
WALKER RD, FOREIGN PIPELINES

CALCASIEU PARISH LOUISIANA

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12011 REV. A

2797

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SCALE: 1" = 200'

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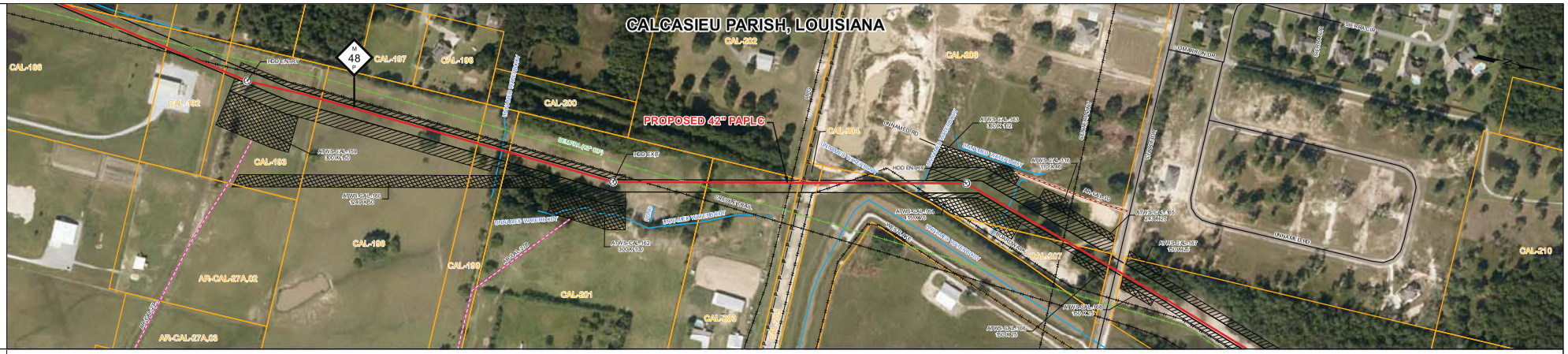
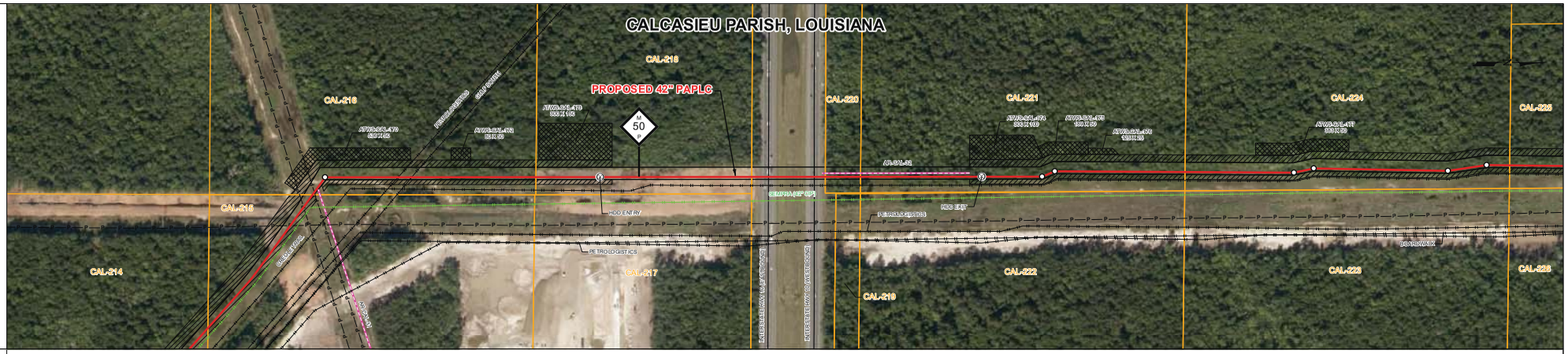

CALCASIEU PARISH, LOUISIANA
PROPOSED 42" PAPLC
HDD EXIT
HDD ENTRY
CAL-198
CAL-197
CAL-199
CAL-192
CAL-200
CAL-202
CAL-204
CAL-206
CAL-207
CAL-210
CAL-201
CAL-203
AR-CAL-27A.02
AR-CAL-27A.03
UNNAMED WATERBODY
UNNAMED WATERBODY
UNNAMED WATERBODY
UNNAMED WATERBODY
DRAINAGE DITCH
DRAINAGE DITCH
DRAINAGE DITCH
DRAINAGE DITCH
STEPHENS RD
STEPHENS RD
SHERWOOD DR
SHERWOOD DR
SHERWOOD DR

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: XCOS IMAGING, INC. - 04/24/2017)

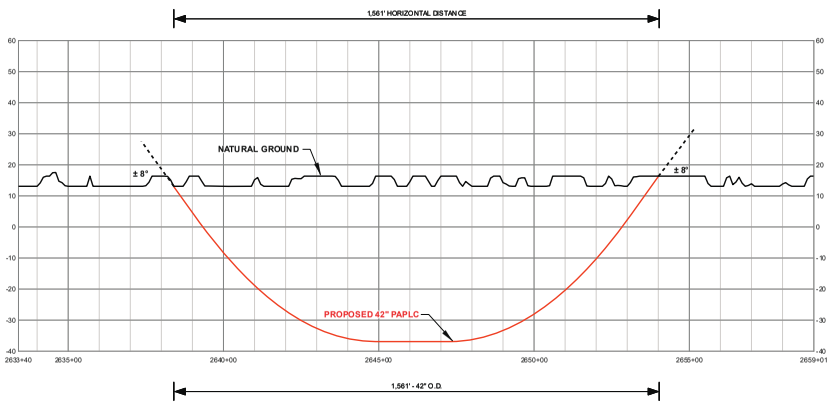


PRELIM. DATA

STATIONING

2638+40 HDD ENTRY
2645+29 INTERSTATE HWY 10 (EASTBOUND)
2647+16 INTERSTATE HWY 10 (WESTBOUND)
2654+01 HDD EXIT

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2348)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
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4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT).
5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.

DISCLAIMER

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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	013 OF 026

JOB NO. 23707
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING FIRM LIC. # EF.0001688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE #### PSIG | DESIGN PRESSURE 1440 PSIG

STA. 2638+40 TO 2654+01

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
INTERSTATE HWY 10

CALCASIEU PARISH LOUISIANA

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12013 REV. A

2799

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SCALE: 1" = 200'
(IMAGERY DATA SOURCE: XCOS IMAGING, INC. - 04/24/2017)

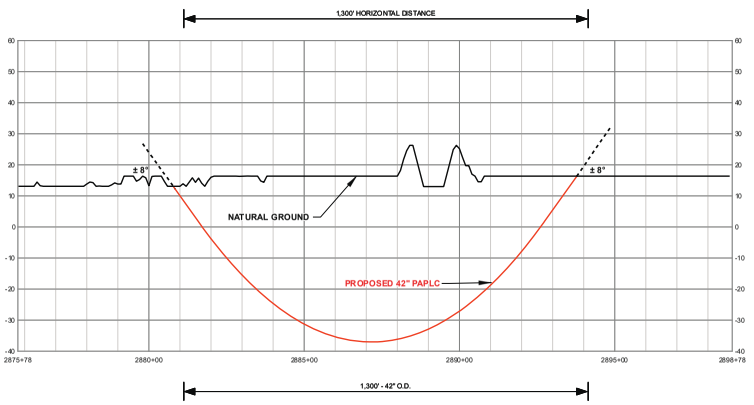


PRELIM. DATA

STATIONING

2880+78 HDD ENTRY
2887+64 UNNAMED WATERBODY
2889+17 HOUSTON RIVER CANAL
2890+56 UNNAMED WATERBODY
2893+78 HDD EXIT

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2348)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS	GENERAL NOTES
		1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS. 2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA. 3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS. 4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT). 5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING	DISCLAIMER
		UNIVERSALPEGASUS INTERNATIONAL MAKES NO WARRANTY (EXPRESSED, IMPLIED OR OTHERWISE) THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE AS TO ANY AND ALL SUBSURFACE CONDITIONS AND CONFORMATION. ANY RELIANCE CONTRACTOR PLACES ON THE INFORMATION CONTAINED HEREIN AS TO SUCH CONDITIONS, IS DONE SO AT ITS OWN RISK AND EXPENSE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.
PIPE ASSEMBLIES	PIPE COATING DATA	

LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	014 OF 026

JOB NO. 23707
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING F R M LIC. # EF.0001688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE #### PSIG | DESIGN PRESSURE 1440 PSIG

STA. 2880+78 TO 2893+78

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
HOUSTON RIVER CANAL

CALCASIEU PARISH LOUISIANA

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12014 REV. A

2800

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SCALE: 1" = 200'
(IMAGERY DATA SOURCE: XCOS IMAGING, INC. - 04/24/2017)


CALCASIEU PARISH, LOUISIANA
CAL-308
CAL-313
CAL-314
CAL-316
CAL-317
CAL-318
CAL-319
CAL-320
CAL-310
CAL-311
CAL-312
CAL-315
CAL-312.01
CAL-312.02
CAL-310.01
CAL-315.01
AR-CAL-47.03
AR-CAL-47.04
CAL-320.01
HOUSTON RIVER
M 57 P
SEMPRA (16" GP)
SEMPRA (20" LPG)
HDD ENTRY
HDD EXIT
PROPOSED 42" PAPLC
ATWS-CAL-310 100X100
ATWS-CAL-311 125X125
ATWS-CAL-312 142 X 50
ATWS-CAL-313 125X125
ATWS-CAL-314 125X125
ATWS-CAL-315 125X125
ATWS-CAL-316 125X125
ATWS-CAL-317 125X125
ATWS-CAL-318 125X125
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ATWS-CAL-347 125X125
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ATWS-CAL-349 125X125

SCALE: 1" = 200'
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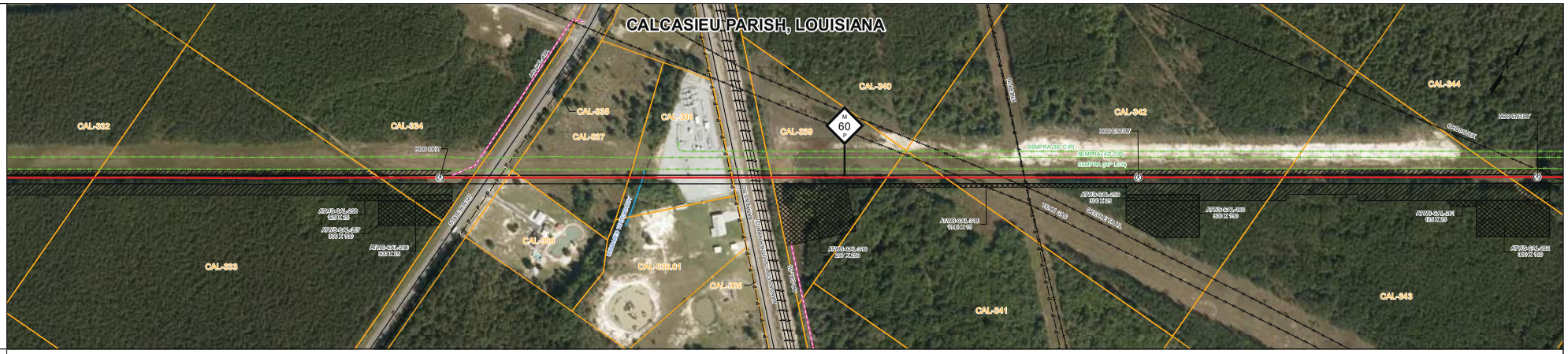
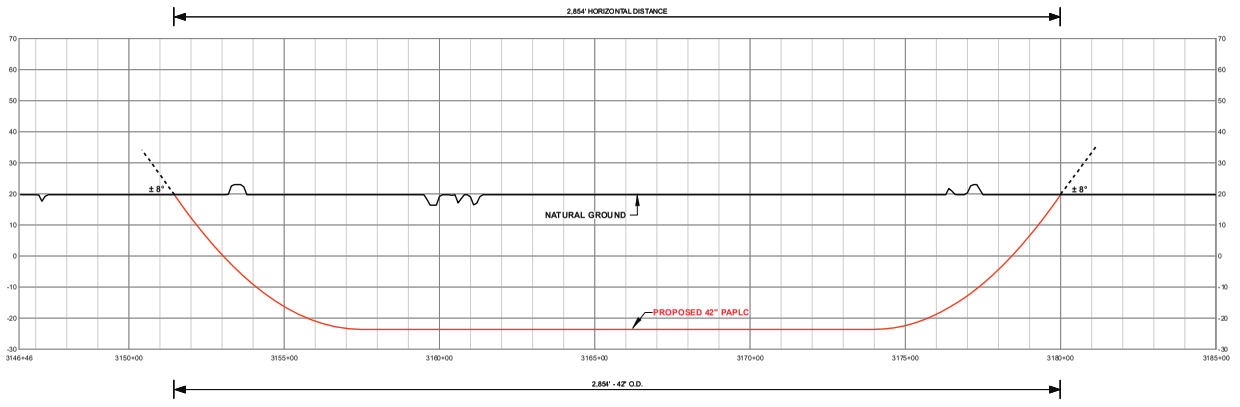


PRELIM. DATA

STATIONING

3151+46 HDD EXIT
3153+43 STATE RTE 27
3159+75 UNNAMED WATERBODY
3164+06 BANKENS RD
3164+20 KANSAS CITY SOUTHERN RR
3164+38 KANSAS CITY SOUTHERN RR
3164+54 KANSAS CITY SOUTHERN RR
3180+00 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2348)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS.
4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT).
5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.

DISCLAIMER

UNIVERSALPEGASUS INTERNATIONAL MAKES NO WARRANTY (EXPRESSED, IMPLIED OR OTHERWISE) THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE AS TO ANY AND ALL SUBSURFACE CONDITIONS AND CONFORMATION. ANY RELIANCE CONTRACTOR PLACES ON THE INFORMATION CONTAINED HEREIN AS TO SUCH CONDITIONS, IS DONE SO AT ITS OWN RISK AND EXPENSE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.

LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	016 OF 026

JOB NO. 23707
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING F R M LIC. # EF.0001688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 3151+46 TO 3180+00

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
STATE RTE 27, BANKENS RD, KANSAS CITY SOUTHERN RR
CALCASIEU PARISH LOUISIANA

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

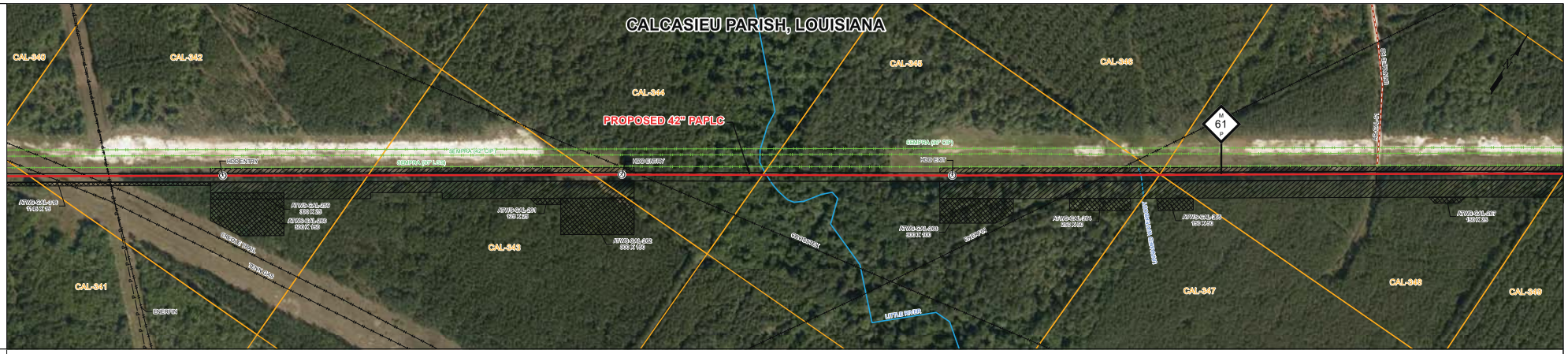
Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12016 REV. A

2802

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: XCSS IMAGING, INC. - 04/24/2017)

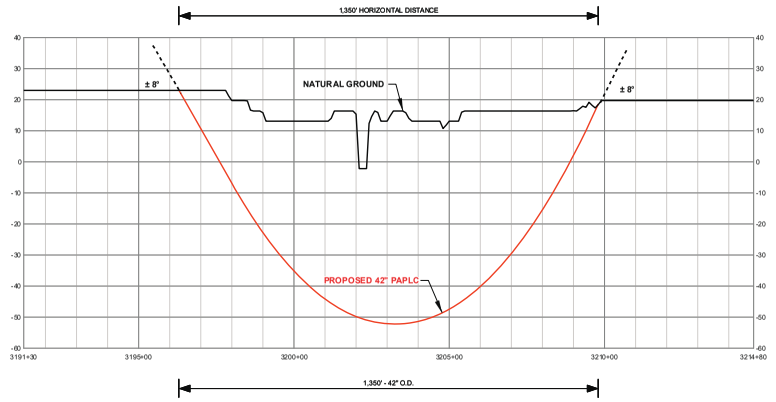


PRELIM. DATA

STATIONING

3196+50 HDD ENTRY
3202+22 LITTLE RIVER
3209+60 HDD EXIT

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS	GENERAL NOTES
		1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS. 2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA. 3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS. 4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT). 5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING	DISCLAIMER
		UNIVERSALPEGASUS INTERNATIONAL MAKES NO WARRANTY (EXPRESSED, IMPLIED OR OTHERWISE) THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE AS TO ANY AND ALL SUBSURFACE CONDITIONS AND CONFORMATION. ANY RELIANCE CONTRACTOR PLACES ON THE INFORMATION CONTAINED HEREIN AS TO SUCH CONDITIONS, IS DONE SO AT ITS OWN RISK AND EXPENSE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.
PIPE ASSEMBLIES	PIPE COATING DATA	

LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	017 OF 026

JOB NO. 23707
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING FIRM LIC. # EF.0001688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PIEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 3196+30 TO 3209+80

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
LITTLE RIVER

CALCASIEU PARISH LOUISIANA

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12017 REV. A

2803

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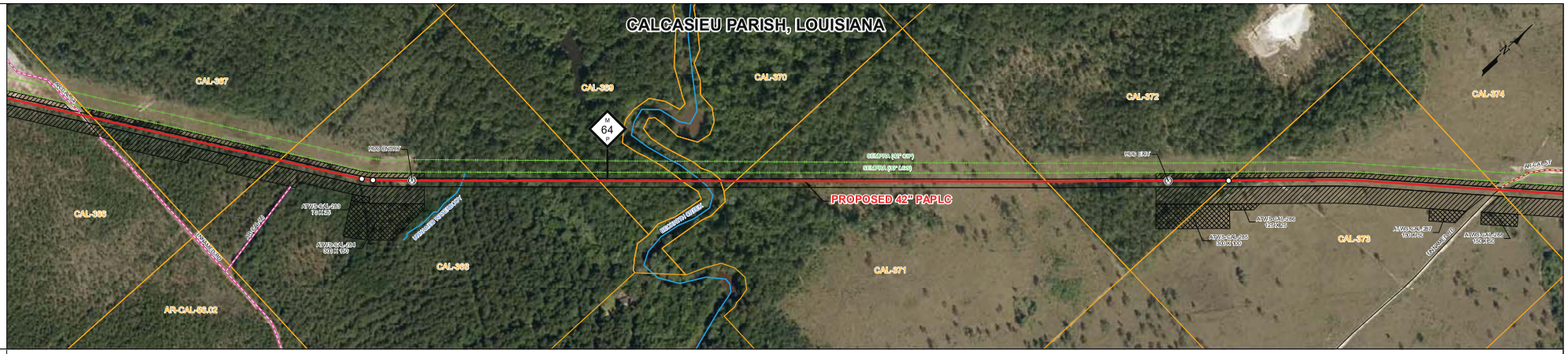
SCALE: 1" = 200'

(IMAGERY DATA SOURCE: XCOS IMAGING, INC. - 04/24/2017)



PRELIM. DATA

STATIONING

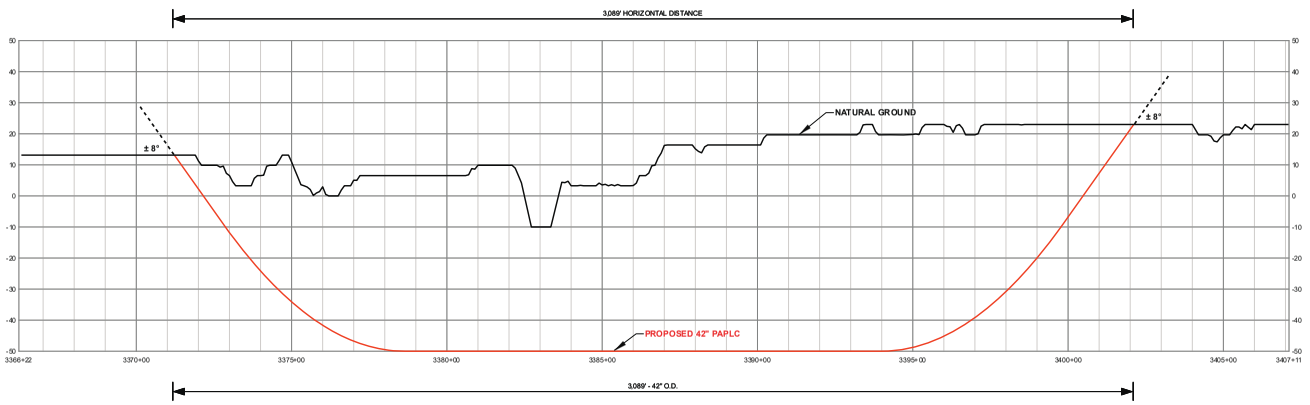
3371+22 HDD ENTRY

3373+28 UNNAMED WATERBODY

3383+03 BECKWITH CREEK

3402+11 HDD EXIT

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
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- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	018 OF 026

JOB NO. 23707

CLIENT SEMPRA LNG AND MIDSTREAM

UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING FIRM LIC. # EF.0001688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PIEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE #### PSIG | DESIGN PRESSURE 1440 PSIG

STA. 3371+22 TO 3402+11

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
BECKWITH CREEK

CALCASIEU PARISH — LOUISIANA

UniversalPegasus INTERNATIONAL — A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12018 REV. A

28041

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SCALE: 1" = 200'
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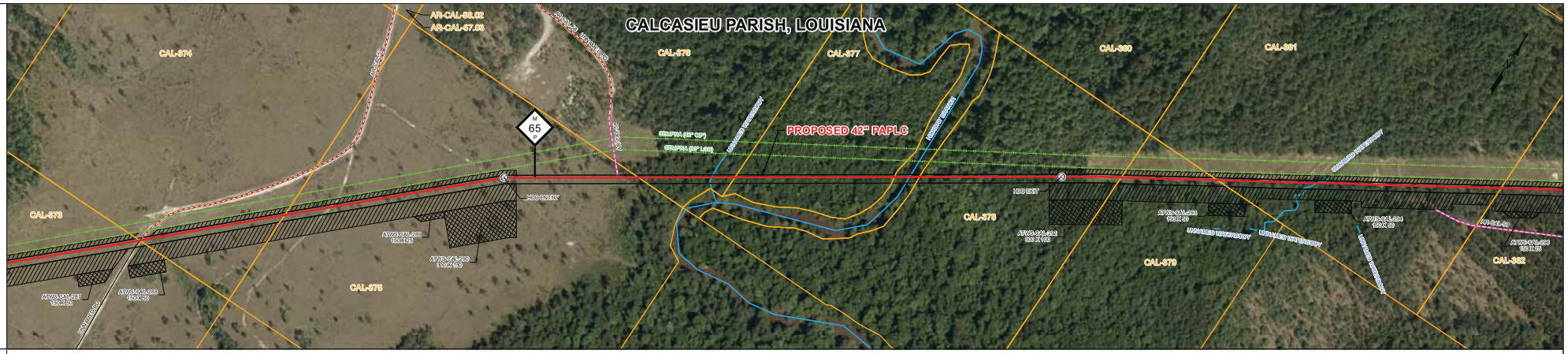
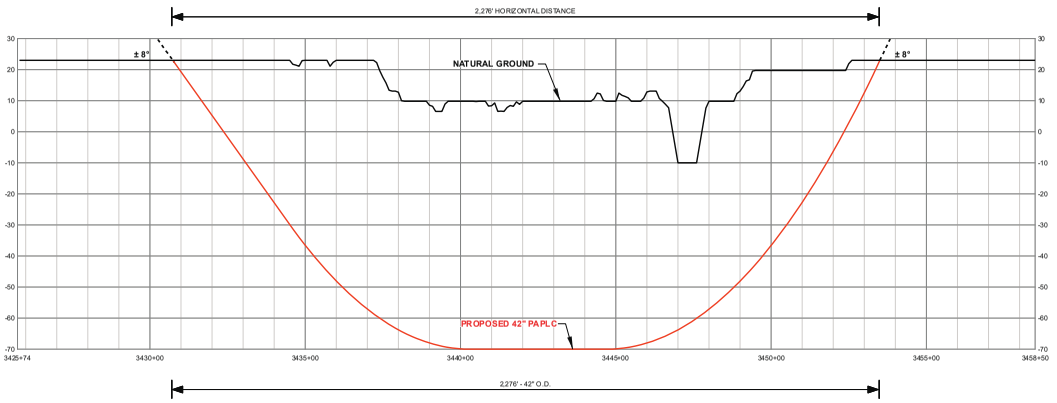


PRELIM. DATA

STATIONING

3430+74 HDD ENTRY
3439+23 UNNAMED WATERBODY
3447+30 HICKORY BRANCH
3453+50 HDD EXIT

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
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- ROAD
- WATER CENTERLINE
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- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	019 OF 026

JOB NO. 23707
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING FIRM LIC. # EF.000 1688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE ### PSIG DESIGN PRESSURE 1440 PSIG

STA. 3430+74 TO 3453+50

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
HICKORY BRANCH

CALCASIEU PARISH LOUISIANA

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12019 REV. A

28055

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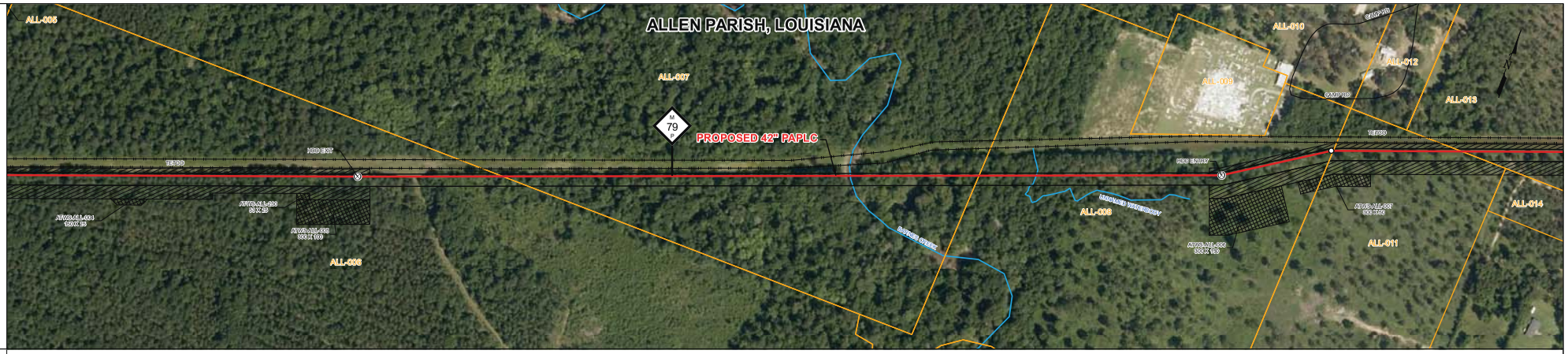
SCALE: 1" = 200'
(IMAGERY DATA SOURCE: XEOS IMAGING, INC. - 04/24/2017)



PRELIM. DATA

STATIONING

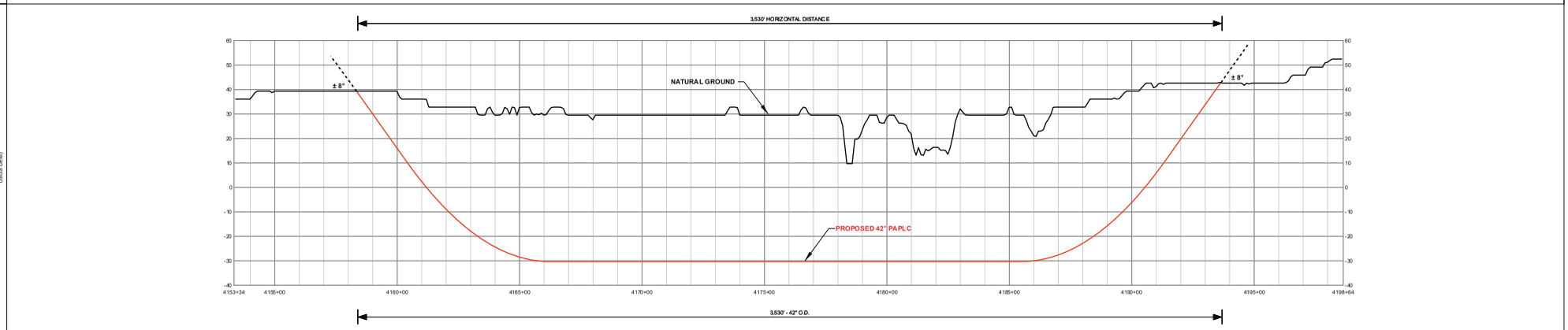
4158+34 HDD EXIT

4178+47 BARNES CREEK

4186+07 UNNAMED WATERBODY

4193+64 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS	GENERAL NOTES
		1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS. 2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA. 3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS. 4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT). 5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.
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PIPE ASSEMBLIES	PIPE COATING DATA	

LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	020 OF 026

JOB NO. 23707

CLIENT SEMPRA LNG AND MIDSTREAM

UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING FIRM LIC. #EF0001688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 4158+34 TO 4193+64

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
BARNES CREEK

ALLEN PARISH LOUISIANA

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

2806

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12020 REV. A

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: XCOS IMAGING, INC. - 04/24/2017)



SCALE: 1" = 200'
(IMAGERY DATA SOURCE: XEOS IMAGING, INC. - 04/24/2017)

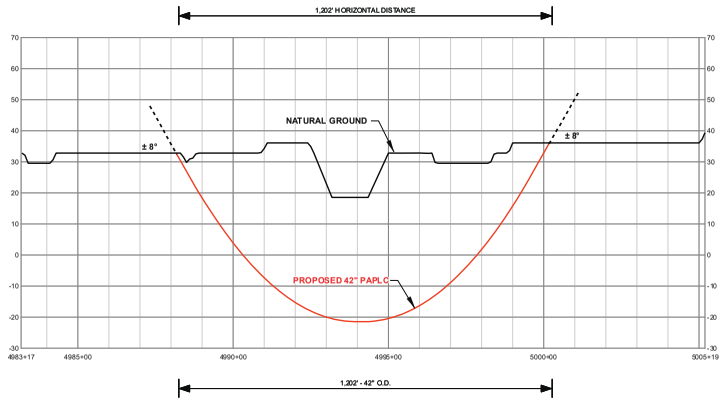


PRELIM. DATA

STATIONING

4988+17 PI 3°38'53" RT
4988+17 HDD EXIT
4993+78 CALCASIEU RIVER
5000+19 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS	GENERAL NOTES
		1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS. 2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA. 3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS. 4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT). 5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.
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PIPE ASSEMBLIES	PIPE COATING DATA	

LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
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- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	022 OF 026

JOB NO. 23707
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING FIRM LIC. # EF.0001688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PIEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG
STA. 4988+17 TO 5000+19

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
CALCASIEU RIVER

ALLEN PARISH LOUISIANA

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12022 REV. A

2808

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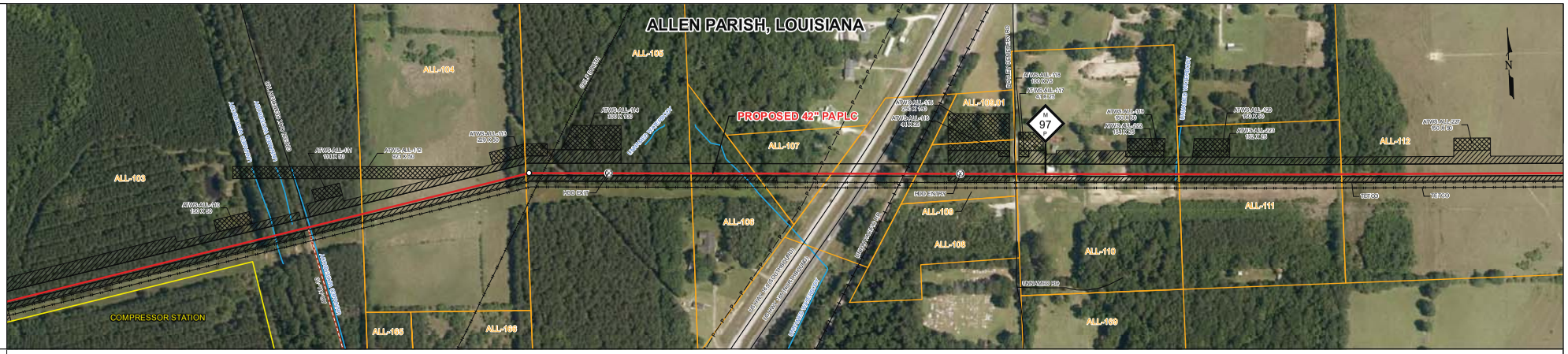
SCALE: 1" = 200'

(IMAGERY DATA SOURCE: XCOS IMAGING, INC. - 04/24/2017)

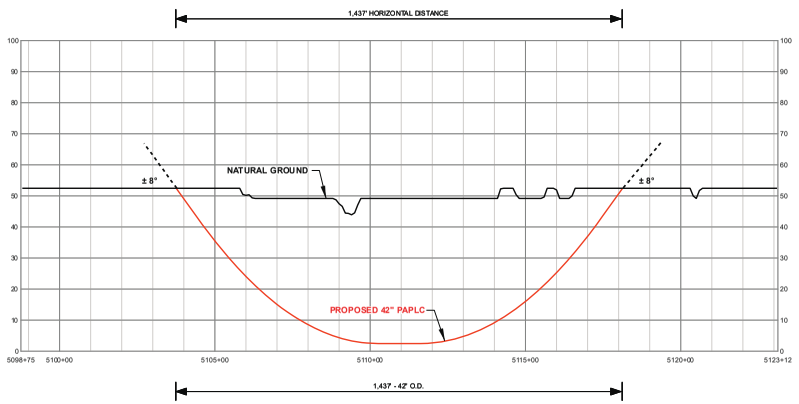


PRELIM. DATA

STATIONING

5103+75 HDD EXIT | 5109+15 UNNAMED WATERBODY | 5113+63 US HWY 165 (SOUTHBOUND) | 5114+43 US HWY 165 (NORTHBOUND) | 5115+64 UNION PACIFIC RR | 5118+12 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2348)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

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3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS.
4. MAP PROJECTION: NAD 1983 UTM ZONE 19N (US FOOT).
5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.

DISCLAIMER

UNIVERSALPEGASUS INTERNATIONAL MAKES NO WARRANTY (EXPRESSED, IMPLIED OR OTHERWISE) THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE AS TO ANY AND ALL SUBSURFACE CONDITIONS AND CONFORMATION. ANY RELIANCE CONTRACTOR PLACES ON THE INFORMATION CONTAINED HEREIN AS TO SUCH CONDITIONS, IS DONE SO AT ITS OWN RISK AND EXPENSE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.

LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	023 OF 026

JOB NO. 23707

CLIENT SEMPRA LNG AND MIDSTREAM

UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING F R M LIC. # EF.0001688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE #### PSIG | DESIGN PRESSURE 1440 PSIG

STA. 5103+75 TO 5118+12

0 200 400 800 FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
US HWY 165, UNION PACIFIC RR

ALLEN PARISH LOUISIANA

UniversalPegasus INTERNATIONAL — A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12023 REV. A

2809

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: XCOS IMAGING, INC. - 04/24/2017)

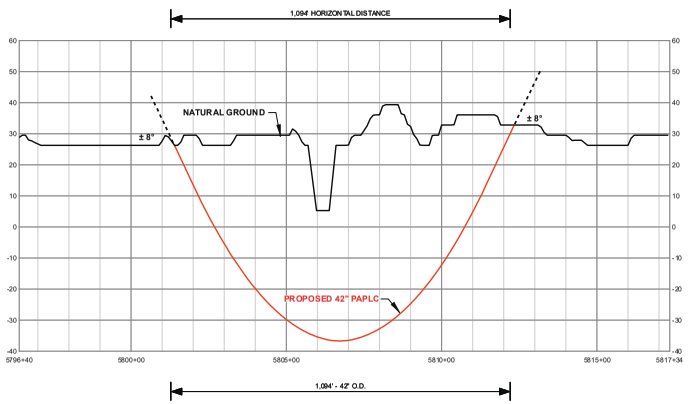


PRELIM. DATA

STATIONING

5801+40 HDD EXIT
5802+53 UNNAMED WATERBODY
5806+20 BAYOU NEZPIQUE
5812+34 HDD ENTRY

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2348)



BILL OF MATERIALS

MISCELLANEOUS MATERIALS

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS.
4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT).
5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.

FITTINGS SUMMARY

CONTINUOUS CONCRETE COATING

DISCLAIMER

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PIPE ASSEMBLIES

PIPE COATING DATA

LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
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- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	024 OF 026

JOB NO. 23707
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING F R M LIC. # EF.0001688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 5801+40 TO 5812+34

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
BAYOU NEZPIQUE

ALLEN PARISH / EVANGELINE PARISH — LOUISIANA

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12024 REV. A

2810

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: XCOS IMAGING, INC. - 04/24/2017)



PRELIM. DATA

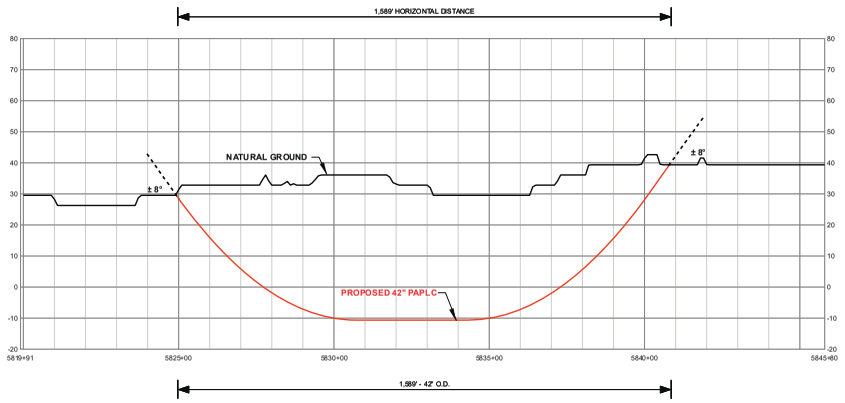
STATIONING

S824+91 PI 19°27'3" RT
S824+91 HDD ENTRY

S826+19 HUNTER RD

S840+80 PI 25°6'24" LT
S840+80 HDD EXIT

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2DEM)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING
PIPE ASSEMBLIES	PIPE COATING DATA

GENERAL NOTES

1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS.
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LEGEND

- MILE POST
- HDD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE (TWS)
- ADDITIONAL TWS
- SITE
- WATERBODY
- WETLAND
- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
- STATE BOUNDARY

APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	025 OF 026

JOB NO. 23707
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING FIRM LIC. # EF.0001688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PIEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE #### PSIG DESIGN PRESSURE 1440 PSIG

STA. 5824+91 TO 5840+80

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
HUNTER RD, POND

EVANGELINE PARISH LOUISIANA

UniversalPegasus INTERNATIONAL
A Subsidiary of Huntington Ingalls Industries

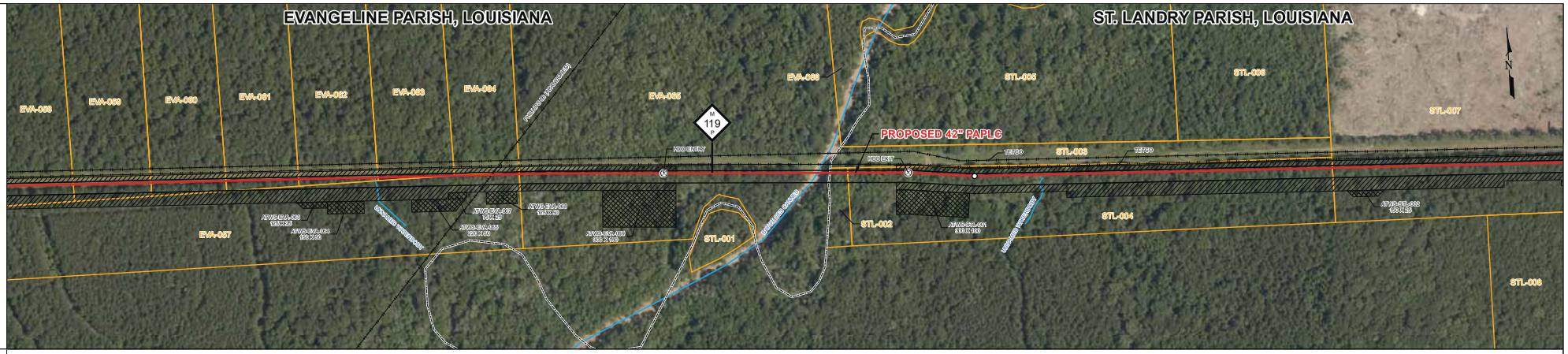
Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	09/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12025 REV. A

281

SCALE: 1" = 200'
(IMAGERY DATA SOURCE: XCOS IMAGING, INC. - 04/24/2017)

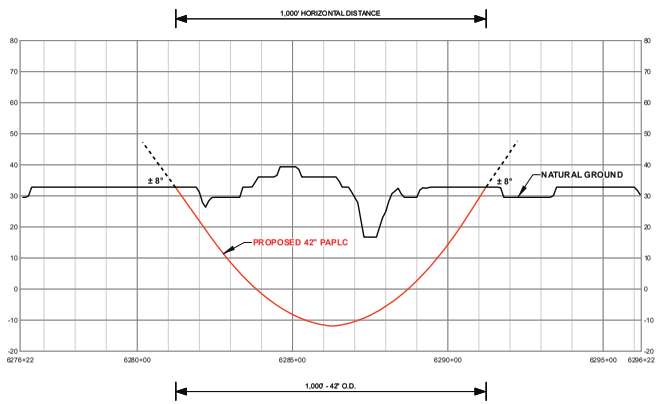


PRELIM. DATA

STATIONING

6281+22 HDD ENTRY
6287+50 BAYOU DES CANNES
6291+22 HDD EXIT

GROUND PROFILE
HORIZ: 1" = 200'
VERT: 1" = 20'
(ELEVATION DATA SOURCE: USGS 2348)



BILL OF MATERIALS	MISCELLANEOUS MATERIALS	GENERAL NOTES
		1. THE MINIMUM PIPELINE DEPTH OF COVER SHALL BE PER THE CODE OF FEDERAL REGULATIONS. 2. THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA. 3. THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS. 4. MAP PROJECTION: NAD 1983 UTM ZONE 15N (US FOOT). 5. THE HDD PIPELINE PROFILE WILL NOT EXTEND TO THE NATURAL GRADE AS SHOWN. IT WILL BE TIED-IN BELOW GRADE TO THE MAINLINE.
FITTINGS SUMMARY	CONTINUOUS CONCRETE COATING	DISCLAIMER
		UNIVERSALPEGASUS INTERNATIONAL MAKES NO WARRANTY (EXPRESSED, IMPLIED OR OTHERWISE) THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE AS TO ANY AND ALL SUBSURFACE CONDITIONS AND CONFORMATION. ANY RELIANCE CONTRACTOR PLACES ON THE INFORMATION CONTAINED HEREIN AS TO SUCH CONDITIONS, IS DONE SO AT ITS OWN RISK AND EXPENSE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.
PIPE ASSEMBLIES	PIPE COATING DATA	

LEGEND

- MILE POST
- HD ENTRY / EXIT
- CONTROL POINT (PI)
- MAINLINE VALVE (MLV)
- PROPOSED ROUTE
- IMPROVED ACCESS ROAD
- NON-IMPROVED ACCESS ROAD
- WATER ACCESS ROUTE
- EXISTING SEMPRA PIPELINE
- FOREIGN PIPELINE
- POWERLINE
- RAILROAD
- ROAD
- WATER CENTERLINE
- PERMANENT EASEMENT
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- PARCEL TRACT
- PARISH/COUNTY BOUNDARY
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APPROVALS

DRAWN	GLE	DATE	08/17/2017
CHKD	CAS	DATE	08/17/2017
APPD	FAT	DATE	08/17/2017
SCALE	1 IN = 200 FT	SHEET	026 OF 026

JOB NO. 23707
CLIENT SEMPRA LNG AND MIDSTREAM
UNIVERSAL ENSCO, INC. – LOUISIANA ENGINEERING F R M LIC. # EF.0001688

	APPROVAL	COMPANY
ENVIRONMENTAL		CK ASSOCIATES
LAND		PEHLER & ASSOCIATES, LLC

MIN. TEST PRESSURE #### PSIG | DESIGN PRESSURE 1440 PSIG

STA. 6281+22 TO 6291+22

0 200 400 800
FEET

PORT ARTHUR PIPELINE LOUISIANA CONNECTOR (PAPLC)

HORIZONTAL DIRECTIONAL DRILL CROSSING
PROPOSED 42" PAPLC
BAYOU DES CANNES

EVANGELINE PARISH / ST. LANDRY PARISH — LOUISIANA

UniversalPegasus INTERNATIONAL — A Subsidiary of Huntington Ingalls Industries
Port Arthur Pipeline

NO	REVISION	DATE	DRAWN	CHKD	APPD
A	ISSUE FOR PERMITTING	08/21/2017	GLE	CAS	FAT

DRAWING NO. 23707-507-HDW-12026 REV. A

2812

APPENDIX K

WETLANDS AFFECTED BY THE TEXAS CONNECTOR AND LOUISIANA CONNECTOR PROJECTS

WETLANDS AFFECTED BY THE TEXAS CONNECTOR PROJECT

APPENDIX K.1

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
Northern Pipeline									
0.2	ESS	TX	Jefferson	Wetland 2	46.8	HDD	0.1	0.1	0.0
0.5	ESS	TX	Jefferson	Wetland 2	1,191.4	Push	1.1	1.1	0.0
0.5	ESS	TX	Jefferson	Wetland 2	0.0	NA	0.3	0.0	0.0
0.9	PEM	TX	Jefferson	Wetland 3	0.0	NA	1.2	0.0	0.0
1.0	PEM	TX	Jefferson	Wetland 1	0.0	NA	6.6	0.0	0.0
1.1	PEM	TX	Jefferson	Wetland 3	748.6	Push	1.5	1.5	0.0
1.5	PEM	TX	Jefferson	Wetland 1	638.0	Push	0.7	0.7	0.0
1.5	PEM	TX	Jefferson	Wetland 1	0.0	NA	0.1	0.0	0.0
1.5	PEM	TX	Jefferson	Wetland 1	70.4	HDD	0.1	0.1	0.0
1.6	PEM	TX	Jefferson	Wetland 3	0.0	NA	0.0	0.0	0.0
1.6	PEM	TX	Jefferson	Wetland 3	130.6	HDD	0.2	0.2	0.0
2.1	ESS	TX	Jefferson	North Route Wetland 24	3,226.6	HDD	3.7	3.7	0.0
2.4	EEM	TX	Jefferson	North Route Wetland 25	192.0	HDD	0.2	0.2	0.0
2.6	EEM	TX	Jefferson	North Route Wetland 26	353.6	HDD	0.4	0.4	0.0
2.7	EEM	TX	Jefferson	North Route Wetland 26	0.0	NA	2.2	0.0	0.0
2.7	EEM	TX	Jefferson	North Route Wetland 26	0.0	NA	0.3	0.0	0.0
2.8	EEM	TX	Jefferson	North Route Wetland 26	1,291.0	Push	1.5	1.5	0.0
3.5	PEM	TX	Jefferson	North Route Wetland 27	6,320.1	Push	7.3	7.3	0.0
3.5	PEM	TX	Jefferson	North Route Wetland 27	0.0	NA	9.6	0.0	0.0
3.5	PEM	TX	Jefferson	North Route Wetland 27	0.0	NA	1.5	0.0	0.0
4.5	PEM	TX	Jefferson	North Route Wetland 27	4,398.2	HDD	5.1	5.1	0.0
5.0	PSS	TX	Jefferson	North Route Wetland 30	0.0	NA	0.0	0.0	0.0
5.2	PSS	TX	Jefferson	North Route Wetland 31	682.7	HDD	0.8	0.8	0.0
5.3	PSS	TX	Jefferson	North Route Wetland 32	127.4	HDD	0.2	0.2	0.0
5.5	PEM	TX	Jefferson	North Route Wetland 33	1,293.7	HDD	1.5	1.5	0.0
5.6	PSS	TX	Jefferson	North Route Wetland 34	195.7	HDD	0.2	0.2	0.0
5.7	PSS	TX	Jefferson	North Route Wetland 35	254.7	HDD	0.3	0.3	0.0
5.7	PUB	TX	Jefferson	North Route Wetland 36	23.4	HDD	0.0	0.0	0.0

APPENDIX K.1 (cont'd)

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
5.9	PEM	TX	Jefferson	North Route Wetland 37	1,537.7	HDD	1.8	1.8	0.0
6.1	PEM	TX	Jefferson	North Route Wetland 38	491.8	HDD	0.6	0.6	0.0
6.2	PEM	TX	Jefferson	North Route Wetland 43	514.5	HDD	0.6	0.6	0.0
6.7	PEM	TX	Jefferson	North Route Wetland 43	0.0	NA	1.2	0.0	0.0
6.7	PEM	TX	Jefferson	North Route Wetland 43	0.0	NA	8.0	0.0	0.0
6.7	PEM	TX	Jefferson	North Route Wetland 43	5,223.2	Push	6.0	6.0	0.0
7.3	PEM	TX	Jefferson	North Route Wetland 44	0.0	NA	0.2	0.0	0.0
7.3	PEM	TX	Jefferson	North Route Wetland 44	930.2	Push	1.1	1.1	0.0
7.3	PEM	TX	Jefferson	North Route Wetland 44	0.0	NA	1.4	0.0	0.0
7.4	PEM	TX	Jefferson	North Route Wetland 51	0.0	NA	0.0	0.0	0.0
7.4	PEM	TX	Jefferson	North Route Wetland 51	0.0	NA	0.0	0.0	0.0
7.4	PEM	TX	Jefferson	North Route Wetland 52	451.2	Push	0.5	0.5	0.0
7.4	PEM	TX	Jefferson	North Route Wetland 52	0.0	NA	0.1	0.0	0.0
7.4	PEM	TX	Jefferson	North Route Wetland 52	0.0	NA	0.9	0.0	0.0
7.5	PSS	TX	Jefferson	North Route Wetland 53	0.0	NA	0.1	0.0	0.0
7.5	PSS	TX	Jefferson	North Route Wetland 53	645.0	Push	0.7	0.7	0.0
7.5	PSS	TX	Jefferson	North Route Wetland 53	0.0	NA	0.8	0.0	0.0
7.7	PEM	TX	Jefferson	North Route Wetland 50	0.0	NA	0.2	0.0	0.0
7.7	PEM	TX	Jefferson	North Route Wetland 50	956.0	Push	1.1	1.1	0.0
7.7	PEM	TX	Jefferson	North Route Wetland 50	0.0	NA	1.9	0.0	0.0
7.8	PEM	TX	Jefferson	North Route Wetland 50	154.7	Trench	0.2	0.2	0.0
7.9	PEM	TX	Jefferson	North Route Wetland 54	0.0	NA	0.2	0.0	0.0
7.9	PEM	TX	Jefferson	North Route Wetland 54	0.0	NA	0.0	0.0	0.0
8.1	PEM	TX	Jefferson	North Route Wetland 55	1,914.8	Trench	2.2	2.2	0.0
8.1	PEM	TX	Jefferson	North Route Wetland 55	0.0	NA	2.9	0.0	0.0

APPENDIX K.1 (cont'd)

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
8.1	PEM	TX	Jefferson	North Route Wetland 55	0.0	NA	0.5	0.0	0.0
8.3	PEM	TX	Jefferson	North Route Wetland 55	311.6	HDD	0.4	0.4	0.0
8.3	PEM	TX	Jefferson	North Route Wetland 62	3.0	HDD	0.0	0.0	0.0
8.8	PEM	TX	Jefferson	North Route Wetland 66	455.4	HDD	0.5	0.5	0.0
8.9	PSS	TX	Jefferson	North Route Wetland 67	132.4	HDD	0.2	0.2	0.0
8.9	PEM	TX	Jefferson	North Route Wetland 68	205.1	HDD	0.2	0.2	0.0
9.0	PEM	TX	Jefferson	North Route Wetland 68	0.0	NA	0.1	0.0	0.0
9.0	PEM	TX	Jefferson	North Route Wetland 68	0.0	NA	0.9	0.0	0.0
9.0	PEM	TX	Jefferson	North Route Wetland 68	539.9	Push	0.6	0.6	0.0
9.0	PEM	TX	Jefferson	North Route Wetland 58	0.0	NA	0.0	0.0	0.0
9.1	PEM	TX	Jefferson	North Route Wetland 72	0.0	NA	0.2	0.0	0.0
9.1	PEM	TX	Jefferson	North Route Wetland 72	766.0	Push	0.9	0.9	0.0
9.1	PEM	TX	Jefferson	North Route Wetland 72	0.0	NA	1.1	0.0	0.0
9.5	PEM	TX	Jefferson	North Route Wetland 6	2,903.1	Push	3.3	3.3	0.0
9.5	PEM	TX	Jefferson	North Route Wetland 6	0.0	NA	0.9	0.0	0.0
9.5	PEM	TX	Jefferson	North Route Wetland 6	0.0	NA	5.3	0.0	0.0
9.8	PEM	TX	Jefferson	North Route Wetland 6	707.5	Trench	0.8	0.8	0.0
10.0	PSS	TX	Jefferson	North Route Wetland 77	0.0	NA	1.2	0.0	0.0
10.0	PSS	TX	Jefferson	North Route Wetland 77	0.0	NA	0.2	0.0	0.0
10.0	PSS	TX	Jefferson	North Route Wetland 77	695.9	Trench	0.5	0.5	0.0
10.0	PSS	TX	Jefferson	North Route Wetland 77	772.8	HDD	1.2	1.2	0.0
10.2	PEM	TX	Jefferson	North Route Wetland 78	71.1	HDD	0.1	0.1	0.0
10.3	PSS	TX	Jefferson	North Route Wetland 79	417.7	HDD	0.5	0.5	0.0
10.4	PSS	TX	Jefferson	North Route Wetland 80	844.9	HDD	1.0	1.0	0.0
10.5	PEM	TX	Jefferson	North Route Wetland 73	43.6	HDD	0.0	0.0	0.0

APPENDIX K.1 (cont'd)

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
10.5	PEM	TX	Jefferson	North Route Wetland 81	40.7	HDD	0.1	0.1	0.0
10.5	PEM	TX	Jefferson	North Route Wetland 82	27.3	HDD	0.0	0.0	0.0
10.6	PEM	TX	Jefferson	North Route Wetland 83	130.8	HDD	0.3	0.3	0.0
10.6	PEM	TX	Jefferson	North Route Wetland 84	607.1	HDD	0.6	0.6	0.0
10.7	PUB	TX	Jefferson	North Route Wetland 85	921.5	HDD	1.0	1.0	0.0
10.9	PEM	TX	Jefferson	North Route Wetland 87	174.9	HDD	0.2	0.2	0.0
10.9	PEM	TX	Jefferson	North Route Wetland 87	0.0	NA	0.1	0.0	0.0
10.9	PEM	TX	Jefferson	North Route Wetland 87	0.0	NA	0.1	0.0	0.0
10.9	PEM	TX	Jefferson	North Route Wetland 87	124.6	Trench	0.1	0.1	0.0
10.9	PEM	TX	Jefferson	North Route Wetland 88	0.0	NA	0.0	0.0	0.0
11.1	PEM	TX	Jefferson	North Route Wetland 89	0.0	NA	0.1	0.0	0.0
11.1	PEM	TX	Jefferson	North Route Wetland 89	738.2	Trench	0.9	0.9	0.0
11.1	PEM	TX	Jefferson	North Route Wetland 89	0.0	NA	1.8	0.0	0.0
11.3	PEM	TX	Jefferson	North Route Wetland 91	0.0	NA	0.1	0.0	0.0
11.3	PEM	TX	Jefferson	North Route Wetland 91	0.0	NA	0.0	0.0	0.0
11.3	PEM	TX	Jefferson	North Route Wetland 96	2.7	Trench	0.0	0.0	0.0
11.3	PEM	TX	Jefferson	North Route Wetland 96	0.0	NA	0.0	0.0	0.0
11.3	PEM	TX	Jefferson	North Route Wetland 95	0.0	NA	0.8	0.0	0.0
11.3	PEM	TX	Jefferson	North Route Wetland 95	626.6	Trench	0.7	0.7	0.0
11.4	PEM	TX	Jefferson	North Route Wetland 95	0.0	NA	0.1	0.0	0.0
11.4	PEM	TX	Jefferson	North Route Wetland 97	298.8	Trench	0.3	0.3	0.0
11.4	PEM	TX	Jefferson	North Route Wetland 97	0.0	NA	0.1	0.0	0.0
11.5	PEM	TX	Jefferson	North Route Wetland 97	0.0	NA	0.5	0.0	0.0
11.6	PEM	TX	Jefferson	North Route Wetland 98	0.0	NA	0.0	0.0	0.0
11.6	PEM	TX	Jefferson	North Route Wetland 98	163.7	HDD	0.2	0.2	0.0

APPENDIX K.1 (cont'd)

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
11.7	PSS	TX	Jefferson	North Route Wetland 99	332.6	HDD	0.4	0.4	0.0
11.9	PEM	TX	Jefferson	North Route Wetland 100	763.6	HDD	0.9	0.9	0.0
12.1	PEM	TX	Jefferson	North Route Wetland 102	869.6	HDD	1.0	1.0	0.0
12.3	PEM	TX	Jefferson	North Route Wetland 102	0.0	NA	0.2	0.0	0.0
12.3	PEM	TX	Jefferson	North Route Wetland 102	835.3	Trench	0.9	0.9	0.0
12.3	PEM	TX	Jefferson	North Route Wetland 102	0.0	NA	0.9	0.0	0.0
12.7	PEM	TX	Jefferson	North Route Wetland 105	0.0	NA	0.1	0.0	0.0
12.7	PEM	TX	Jefferson	North Route Wetland 105	398.6	Trench	0.5	0.5	0.0
12.7	PEM	TX	Jefferson	North Route Wetland 105	0.0	NA	0.4	0.0	0.0
13.1	PEM	TX	Jefferson	North Route Wetland 111	397.9	HDD	0.5	0.5	0.0
13.2	PEM	TX	Jefferson	North Route Wetland 112	17.4	HDD	0.0	0.0	0.0
13.3	PEM	TX	Jefferson	North Route Wetland 114	77.9	HDD	0.1	0.1	0.0
13.3	PUB	TX	Jefferson	North Route Wetland 113	0.0	NA	0.0	0.0	0.0
13.3	PEM	TX	Jefferson	North Route Wetland 114	0.0	NA	0.0	0.0	0.0
13.3	PEM	TX	Jefferson	North Route Wetland 114	0.0	NA	0.0	0.0	0.0
13.3	PEM	TX	Jefferson	North Route Wetland 115	0.0	NA	0.0	0.0	0.0
13.6	PEM	TX	Jefferson	North Route Wetland 117	0.0	NA	0.0	0.0	0.0
13.6	PEM	TX	Jefferson	North Route Wetland 117	0.0	NA	0.0	0.0	0.0
13.7	PEM	TX	Jefferson	North Route Wetland 124	37.1	Trench	0.0	0.0	0.0
14.0	PEM	TX	Jefferson	North Route Wetland 126	0.0	NA	0.1	0.1	0.0
14.0	PEM	TX	Jefferson	North Route Wetland 126	0.0	NA	0.0	0.0	0.0
14.1	PEM	TX	Jefferson	North Route Wetland 128	0.0	NA	0.0	0.0	0.0
14.2	PEM	TX	Jefferson	North Route Wetland 129	0.0	NA	0.0	0.0	0.0
14.2	PUB	TX	Jefferson	North Route Wetland 130	220.4	HDD	0.1	0.1	0.0
16.1	PEM	TX	Jefferson	North Route Wetland 132	0.0	NA	0.4	0.0	0.0

APPENDIX K.1 (cont'd)

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
16.1	PEM	TX	Jefferson	North Route Wetland 132	1,998.4	Trench	2.3	2.3	0.0
16.1	PEM	TX	Jefferson	North Route Wetland 132	0.0	NA	2.0	0.0	0.0
16.5	PEM	TX	Jefferson	North Route Wetland 133	0.0	NA	0.7	0.0	0.0
16.5	PEM	TX	Jefferson	North Route Wetland 133	336.3	Trench	0.4	0.4	0.0
16.6	PEM	TX	Jefferson	North Route Wetland 134	111.9	Trench	0.3	0.3	0.0
16.6	PEM	TX	Jefferson	North Route Wetland 134	0.0	NA	0.6	0.0	0.0
16.7	PEM	TX	Jefferson	North Route Wetland 135	0.0	NA	0.0	0.0	0.0
16.8	PEM	TX	Jefferson	North Route Wetland 136	202.3	Trench	0.3	0.3	0.0
16.8	PEM	TX	Jefferson	North Route Wetland 136	0.0	NA	0.5	0.0	0.0
16.9	PEM	TX	Jefferson	North Route Wetland 137	0.0	NA	0.0	0.0	0.0
16.9	PEM	TX	Jefferson	North Route Wetland 137	0.0	NA	0.0	0.0	0.0
16.9	PEM	TX	Jefferson	North Route Wetland 138	52.9	Trench	0.1	0.1	0.0
16.9	PEM	TX	Jefferson	North Route Wetland 138	0.0	NA	0.0	0.0	0.0
17.2	PEM	TX	Jefferson	North Route Wetland 140	0.0	NA	0.0	0.0	0.0
17.2	PEM	TX	Jefferson	North Route Wetland 140	0.0	NA	0.1	0.0	0.0
17.5	PEM	TX	Jefferson	North Route Wetland 141	0.0	NA	0.0	0.0	0.0
17.8	PFO	TX	Jefferson	North Route Wetland 144	0.0	NA	0.0	0.0	0.0
17.8	PEM	TX	Jefferson	North Route Wetland 143	423.4	HDD	0.2	0.2	0.0
18.0	PEM	TX	Jefferson	North Route Wetland 145	791.7	HDD	0.1	0.1	0.0
18.1	PFO	TX	Jefferson	North Route Wetland 146	306.4	HDD	0.0	0.0	0.0
18.1	PFO	TX	Jefferson	North Route Wetland 146	0.0	NA	0.2	0.0	0.0
18.1	PFO	TX	Jefferson	North Route Wetland 146	0.0	NA	0.2	0.0	0.0
18.1	PFO	TX	Jefferson	North Route Wetland 146	247.2	Trench	0.0	0.0	0.0
18.1	PEM	TX	Jefferson	North Route Wetland 147	0.0	NA	0.2	0.0	0.0
18.1	PEM	TX	Jefferson	North Route Wetland 145	0.0	NA	0.2	0.0	0.0

APPENDIX K.1 (cont'd)

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
18.1	PEM	TX	Jefferson	North Route Wetland 145	0.0	NA	0.3	0.0	0.0
18.1	PEM	TX	Jefferson	North Route Wetland 145	142.4	Trench	0.0	0.0	0.0
18.2	PFO	TX	Jefferson	North Route Wetland 150	0.0	NA	0.0	0.0	0.0
18.2	PEM	TX	Jefferson	North Route Wetland 145	118.3	HDD	0.0	0.0	0.0
18.3	PEM	TX	Jefferson	North Route Wetland 151	54.7	HDD	0.0	0.0	0.0
18.5	PEM	TX	Jefferson	North Route Wetland 153	0.0	NA	0.2	0.0	0.0
18.5	PEM	TX	Jefferson	North Route Wetland 153	159.2	Trench	0.0	0.0	0.0
18.6	PEM	TX	Jefferson	North Route Wetland 153	0.0	NA	0.4	0.0	0.0
18.8	PEM	TX	Jefferson	North Route Wetland 155	177.8	HDD	0.0	0.0	0.0
19.0	PSS	TX	Jefferson	North Route Wetland 159	0.0	NA	0.1	0.0	0.0
19.0	PSS	TX	Jefferson	North Route Wetland 159	8.1	HDD	0.1	0.1	0.0
19.0	PSS	TX	Jefferson	North Route Wetland 159	0.0	NA	0.0	0.0	0.0
19.2	PFO	TX	Jefferson	North Route Wetland 160	0.0	NA	0.2	0.0	0.0
19.2	PFO	TX	Jefferson	North Route Wetland 160	933.7	Trench	1.1	1.1	1.1
19.2	PFO	TX	Jefferson	North Route Wetland 160	0.0	NA	0.7	0.0	0.0
19.3	PFO	TX	Jefferson	North Route Wetland 162	0.0	NA	0.4	0.0	0.0
19.3	PFO	TX	Jefferson	North Route Wetland 162	464.9	Trench	0.5	0.5	0.5
19.3	PFO	TX	Jefferson	North Route Wetland 162	0.0	NA	0.1	0.0	0.0
19.4	PFO	TX	Jefferson	North Route Wetland 163	0.0	NA	0.9	0.0	0.0
19.4	PFO	TX	Jefferson	North Route Wetland 163	595.7	Trench	0.7	0.7	0.7
19.4	PFO	TX	Jefferson	North Route Wetland 163	0.0	NA	0.1	0.0	0.0
19.9	PFO	TX	Jefferson	North Route Wetland 166	395.5	HDD	0.5	0.5	0.5
19.9	PEM	TX	Jefferson	North Route Wetland 169	56.0	HDD	0.1	0.1	0.0
20.0	PFO	TX	Jefferson	North Route Wetland 170	91.7	HDD	0.1	0.1	0.1
20.0	PEM	TX	Jefferson	North Route Wetland 171	22.3	HDD	0.0	0.0	0.0

APPENDIX K.1 (cont'd)

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
20.0	PEM	TX	Jefferson	North Route Wetland 172	34.5	HDD	0.0	0.0	0.0
20.7	PEM	TX	Jefferson	North Route Wetland 178	60.0	HDD	0.1	0.1	0.0
21.1	PFO	TX	Jefferson	North Route Wetland 179	0.0	NA	3.0	0.0	0.0
21.2	PEM	TX	Jefferson	North Route Wetland 180	0.0	NA	0.0	0.0	0.0
21.2	PEM	TX	Jefferson	North Route Wetland 180	46.1	Trench	0.0	0.0	0.0
21.2	PEM	TX	Jefferson	North Route Wetland 180	0.0	NA	0.0	0.0	0.0
21.3	PEM	TX	Jefferson	North Route Wetland 181	0.0	NA	0.1	0.0	0.0
21.3	PEM	TX	Jefferson	North Route Wetland 181	44.6	Trench	0.0	0.0	0.0
21.5	PFO	TX	Jefferson	North Route Wetland 182	0.0	NA	0.0	0.0	0.0
21.5	PFO	TX	Jefferson	North Route Wetland 182	0.0	NA	0.1	0.0	0.0
21.6	PSS	TX	Jefferson	North Route Wetland 184	68.5	Trench	0.1	0.1	0.0
21.6	PSS	TX	Jefferson	North Route Wetland 184	0.0	NA	0.1	0.0	0.0
22.5	PFO	TX	Orange	North Route Wetland 192	0.0	NA	0.7	0.0	0.0
22.6	PFO	TX	Orange	North Route Wetland 192	285.8	Trench	0.0	0.0	0.0
22.6	PFO	TX	Orange	North Route Wetland 192	0.0	NA	0.2	0.0	0.0
22.9	PEM	TX	Orange	North Route Wetland 193	0.0	NA	0.3	0.0	0.0
22.9	PEM	TX	Orange	North Route Wetland 193	312.1	Trench	0.0	0.0	0.0
22.9	PEM	TX	Orange	North Route Wetland 193	0.0	NA	0.6	0.0	0.0
23.0	PSS	TX	Orange	North Route Wetland 194	98.9	Trench	0.0	0.0	0.0
23.0	PSS	TX	Orange	North Route Wetland 194	0.0	NA	0.2	0.0	0.0
23.0	PSS	TX	Orange	North Route Wetland 194	0.0	NA	0.2	0.0	0.0
23.1	PSS	TX	Orange	North Route Wetland 194	1,913.9	HDD	0.2	0.2	0.0
23.4	PUB	TX	Orange	North Route Wetland 197	1,167.6	HDD	0.1	0.1	0.0
23.6	PFO	TX	Orange	North Route Wetland 214	580.5	HDD	0.1	0.1	0.1
23.7	PFO	TX	Orange	North Route Wetland 214	0.0	NA	0.4	0.0	0.0

APPENDIX K.1 (cont'd)

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
23.7	PFO	TX	Orange	North Route Wetland 214	459.7	Trench	0.0	0.0	0.0
23.7	PFO	TX	Orange	North Route Wetland 214	0.0	NA	1.1	0.0	0.0
23.8	PEM	TX	Orange	North Route Wetland 215	0.0	NA	0.1	0.0	0.0
23.8	PEM	TX	Orange	North Route Wetland 215	116.6	Trench	0.0	0.0	0.0
23.8	PEM	TX	Orange	North Route Wetland 215	0.0	NA	0.2	0.0	0.0
23.8	PSS	TX	Orange	North Route Wetland 216	245.1	Trench	0.0	0.0	0.0
23.8	PSS	TX	Orange	North Route Wetland 216	0.0	NA	0.4	0.0	0.0
23.9	PSS	TX	Orange	North Route Wetland 216	0.0	NA	1.2	0.0	0.0
23.9	PSS	TX	Orange	North Route Wetland 216	444.0	Push	0.3	0.3	0.0
24.0	PFO	TX	Orange	North Route Wetland 217	853.2	Push	1.0	1.0	1.0
24.0	PFO	TX	Orange	North Route Wetland 217	0.0	NA	0.2	0.0	0.0
24.0	PFO	TX	Orange	North Route Wetland 217	0.0	NA	1.4	0.0	0.0
24.3	PSS	TX	Orange	North Route Wetland 218	0.0	NA	0.5	0.0	0.0
24.3	PSS	TX	Orange	North Route Wetland 218	323.4	Push	0.4	0.4	0.0
24.3	PSS	TX	Orange	North Route Wetland 218	0.0	NA	0.1	0.0	0.0
24.4	PSS	TX	Orange	North Route Wetland 221	41.4	Push	0.1	0.1	0.0
24.4	PSS	TX	Orange	North Route Wetland 221	0.0	NA	0.1	0.0	0.0
24.4	PSS	TX	Orange	North Route Wetland 221	0.0	NA	0.0	0.0	0.0
24.4	PSS	TX	Orange	North Route Wetland 221	27.5	Trench	0.0	0.0	0.0
24.5	PFO	TX	Orange	North Route Wetland 222	0.0	NA	0.1	0.0	0.0
24.5	PFO	TX	Orange	North Route Wetland 222	74.3	Trench	0.1	0.1	0.1
24.5	PFO	TX	Orange	North Route Wetland 222	0.0	NA	0.0	0.0	0.0
24.5	PFO	TX	Orange	North Route Wetland 223	0.0	NA	0.1	0.0	0.0
24.5	PFO	TX	Orange	North Route Wetland 223	172.4	Trench	0.3	0.3	0.3
24.5	PFO	TX	Orange	North Route Wetland 223	0.0	NA	0.3	0.0	0.0

APPENDIX K.1 (cont'd)

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
24.6	PFO	TX	Orange	North Route Wetland 226B	145.3	HDD	0.2	0.2	0.2
24.7	PUB	TX	Orange	North Route Wetland 227	121.4	HDD	0.1	0.1	0.0
24.7	PEM	TX	Orange	North Route Wetland 226	550.8	HDD	0.7	0.7	0.0
24.9	PUB	TX	Orange	North Route Wetland 228	181.6	HDD	0.2	0.2	0.0
25.0	PUB	TX	Orange	North Route Wetland 230	168.5	HDD	0.2	0.2	0.0
25.0	PEM	TX	Orange	North Route Wetland 229	620.4	HDD	0.7	0.7	0.0
				Subtotal	**67,529.6**		**145.0**	**69.8**	**4.5**
Northern Pipeline Access Roads									
AR-N-1	PEM	TX	Jefferson	North Route Wetland 22	0.0	Access Road Construction	0.3	0.0	0.0
AR-N-1	PEM	TX	Jefferson	Wetland 1	0.0	Access Road Construction	1.2	0.0	0.0
AR-N-1	PEM	TX	Jefferson	Wetland 3	0.0	Access Road Construction	1.5	0.0	0.0
AR-N-10	PEM	TX	Jefferson	North Route Wetland 103	0.0	Access Road Construction	0.4	0.0	0.0
AR-N-10	PEM	TX	Jefferson	North Route Wetland 104	0.0	Access Road Construction	0.1	0.0	0.0
AR-N-11	PEM	TX	Jefferson	North Route Wetland 106	0.0	Access Road Construction	0.2	0.0	0.0
AR-N-11	PEM	TX	Jefferson	North Route Wetland 110	0.0	Access Road Construction	0.1	0.0	0.0
AR-N-12	PEM	TX	Jefferson	North Route Wetland 117	0.0	Access Road Construction	0.8	0.0	0.0
AR-N-12	PEM	TX	Jefferson	North Route Wetland 118	0.0	Access Road Construction	0.1	0.0	0.0
AR-N-12	PEM	TX	Jefferson	North Route Wetland 119	0.0	Access Road Construction	0.2	0.0	0.0
AR-N-12	PEM	TX	Jefferson	North Route Wetland 120	0.0	Access Road Construction	0.2	0.0	0.0
AR-N-12	PEM	TX	Jefferson	North Route Wetland 121	0.0	Access Road Construction	2.4	0.0	0.0

APPENDIX K.1 (cont'd)

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
AR-N-12	PFO	TX	Jefferson	North Route Wetland 122	0.0	Access Road Construction	0.6	0.0	0.0
AR-N-19	PEM	TX	Jefferson	North Route Wetland 161	0.0	Access Road Construction	0.0	0.0	0.0
AR-N-2	PEM	TX	Jefferson	North Route Wetland 37	0.0	Access Road Construction	0.0	0.0	0.0
AR-N-2	PEM	TX	Jefferson	North Route Wetland 39	0.0	Access Road Construction	0.5	0.0	0.0
AR-N-2	PEM	TX	Jefferson	North Route Wetland 42	0.0	Access Road Construction	0.2	0.0	0.0
AR-N-2	PSS	TX	Jefferson	North Route Wetland 40	0.0	Access Road Construction	0.7	0.0	0.0
AR-N-24	PEM	TX	Orange	North Route Wetland 199	0.0	Access Road Construction	0.1	0.0	0.0
AR-N-24	PEM	TX	Orange	North Route Wetland 200	0.0	Access Road Construction	0.2	0.0	0.0
AR-N-24	PEM	TX	Orange	North Route Wetland 202	0.0	Access Road Construction	0.0	0.0	0.0
AR-N-24	PFO	TX	Orange	North Route Wetland 191	0.0	Access Road Construction	0.1	0.0	0.0
AR-N-24	PFO	TX	Orange	North Route Wetland 203	0.0	Access Road Construction	0.0	0.0	0.0
AR-N-24	PSS	TX	Orange	North Route Wetland 189	0.0	Access Road Construction	0.0	0.0	0.0
AR-N-24	PSS	TX	Orange	North Route Wetland 198	0.0	Access Road Construction	0.6	0.0	0.0
AR-N-25	PUB	TX	Orange	North Route Wetland 205	0.0	Access Road Construction	0.2	0.0	0.0
AR-N-25	PEM	TX	Orange	North Route Wetland 207	0.0	Access Road Construction	0.0	0.0	0.0
AR-N-25	PEM	TX	Orange	North Route Wetland 212	0.0	Access Road Construction	0.4	0.0	0.0
AR-N-25	PFO	TX	Orange	North Route Wetland 206	0.0	Access Road Construction	0.1	0.0	0.0

APPENDIX K.1 (cont'd)

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
AR-N-25	PFO	TX	Orange	North Route Wetland 208	0.0	Access Road Construction	0.1	0.0	0.0
AR-N-25	PFO	TX	Orange	North Route Wetland 211	0.0	Access Road Construction	0.1	0.0	0.0
AR-N-25	PFO	TX	Orange	North Route Wetland 204	0.0	Access Road Construction	0.3	0.0	0.0
AR-N-25	PFO	TX	Orange	North Route Wetland 209	0.0	Access Road Construction	3.7	0.0	0.0
AR-N-25	PFO	TX	Orange	North Route Wetland 210	0.0	Access Road Construction	0.1	0.0	0.0
AR-N-26	PFO	TX	Orange	North Route Wetland 214	0.0	Access Road Construction	0.7	0.0	0.0
AR-N-27	PEM	TX	Orange	North Route Wetland 232	0.0	Access Road Construction	0.0	0.0	0.0
AR-N-3	PEM	TX	Jefferson	North Route Wetland 44	0.0	Access Road Construction	0.0	0.0	0.0
AR-N-3	PEM	TX	Jefferson	North Route Wetland 49	0.0	Access Road Construction	0.1	0.0	0.0
AR-N-3	PEM	TX	Jefferson	North Route Wetland 50	0.0	Access Road Construction	0.1	0.0	0.0
AR-N-5	PEM	TX	Jefferson	North Route Wetland 60	0.0	Access Road Construction	0.0	0.0	0.0
AR-N-6	PEM	TX	Jefferson	North Route Wetland 58	0.0	Access Road Construction	0.1	0.0	0.0
AR-N-6	PEM	TX	Jefferson	North Route Wetland 68	0.0	Access Road Construction	0.3	0.0	0.0
AR-N-6	PEM	TX	Jefferson	North Route Wetland 72	0.0	Access Road Construction	0.1	0.0	0.0
AR-N-6	PEM	TX	Jefferson	North Route Wetland 72	0.0	Access Road Construction	0.2	0.0	0.0
AR-N-6	PEM	TX	Jefferson	North Route Wetland 75	0.0	Access Road Construction	0.2	0.0	0.0
AR-N-6	PEM	TX	Jefferson	North Route Wetland 76	0.0	Access Road Construction	0.2	0.0	0.0

APPENDIX K.1 (cont'd)

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
AR-N-6	PEM	TX	Jefferson	North Route Wetland 56	0.0	Access Road Construction	0.0	0.0	0.0
AR-N-6	PEM	TX	Jefferson	North Route Wetland 57	0.0	Access Road Construction	0.2	0.0	0.0
AR-N-6	PEM	TX	Jefferson	North Route Wetland 67	0.0	Access Road Construction	0.2	0.0	0.0
AR-N-6	PEM	TX	Jefferson	North Route Wetland 74	0.0	Access Road Construction	0.4	0.0	0.0
AR-N-7	PEM	TX	Jefferson	North Route Wetland 6	0.0	Access Road Construction	0.1	0.0	0.0
AR-N-8	PUB	TX	Jefferson	North Route Wetland 93	0.0	Access Road Construction	0.1	0.0	0.0
AR-N-8	PUB	TX	Jefferson	North Route Wetland 94	0.0	Access Road Construction	0.0	0.0	0.0
AR-N-9	PSS	TX	Jefferson	North Route Wetland 99	0.0	Access Road Construction	0.0	0.0	0.0
AR-S-1	ESS	TX	Jefferson	Wetland 2	0.0	Access Road Construction	0.1	0.0	0.0
						Subtotal	**18.0**	**0.0**	**0.0**
Southern Pipeline									
0.0	EEM	TX	Jefferson	South Route Wetland 22a	302.8	HDD	0.4	0.4	0.0
0.0	EEM	TX	Jefferson	South Route Wetland 22a	0.0	NA	0.2	0.0	0.0
0.0	ESS	LA	Jefferson	South Route Wetland 24	0.0	NA	0.0	0.0	0.0
0.0	ESS	TX	Jefferson	South Route Wetland 24	197.5	Trench	0.2	0.2	0.0
0.0	ESS	LA	Jefferson	South Route Wetland 24	0.0	NA	0.3	0.0	0.0
0.0	ESS	TX	Jefferson	South Route Wetland 24	56.1	Bore	0.1	0.1	0.0
0.0	EEM	TX	Jefferson	South Route Wetland 5a	174.3	Trench	0.2	0.2	0.0
0.0	EEM	LA	Jefferson	South Route Wetland 5a	0.0	NA	0.1	0.0	0.0
0.1	EEM	LA	Jefferson	South Route Wetland 5a	0.0	NA	0.1	0.0	0.0
0.1	EEM	TX	Jefferson	South Route Wetland 5	0.0	NA	0.0	0.0	0.0
0.1	EEM	TX	Jefferson	South Route Wetland 22a	0.0	NA	0.3	0.0	0.0

APPENDIX K.1 (cont'd)

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
0.2	EEM	TX	Jefferson	Wetland 2a	7.7	HDD	0.0	0.0	0.0
0.4	EEM	TX	Jefferson	South Route Wetland 9	1,943.0	HDD	2.2	2.2	0.0
2.2	EEM	TX	Jefferson	South Route Wetland 14a	0.0	NA	0.0	0.0	0.0
2.2	EEM	TX	Jefferson	South Route Wetland 14a	39.1	HDD	0.0	0.0	0.0
2.2	EEM	TX	Jefferson	South Route Wetland 14a	0.0	NA	0.1	0.0	0.0
2.2	EEM	TX	Jefferson	South Route Wetland 14	0.0	NA	0.0	0.0	0.0
2.2	EEM	TX	Jefferson	South Route Wetland 14	33.1	HDD	0.0	0.0	0.0
2.2	EEM	TX	Jefferson	South Route Wetland 14	0.0	NA	0.0	0.0	0.0
2.2	PEM	TX	Jefferson	South Route Wetland 15	20.6	HDD	0.0	0.0	0.0
2.3	ESS	TX	Jefferson	South Route Wetland 16	729.9	HDD	0.8	0.8	0.0
2.4	EEM	TX	Jefferson	South Route Wetland 17	213.7	HDD	0.2	0.2	0.0
2.5	PEM	TX	Jefferson	South Route Wetland 18	212.1	HDD	0.2	0.2	0.0
2.5	EEM	TX	Jefferson	South Route Wetland 19	206.5	HDD	0.2	0.2	0.0
2.7	EEM	TX	Jefferson	South Route Wetland 19	0.0	NA	0.4	0.0	0.0
2.7	EEM	TX	Jefferson	South Route Wetland 19	0.0	NA	2.8	0.0	0.0
2.7	EEM	TX	Jefferson	South Route Wetland 19	1,715.6	Trench	2.0	2.0	0.0
3.0	EEM	TX	Jefferson	South Route Wetland 19	1,272.6	HDD	1.5	1.5	0.0
3.1	EEM	TX	Jefferson	South Route Wetland 19a	208.1	HDD	0.2	0.2	0.0
3.4	ESS	TX	Jefferson	South Route Wetland 4	2,604.3	HDD	3.0	3.0	0.0
3.6	ESS	TX	Jefferson	South Route Wetland 4	0.0	NA	0.1	0.0	0.0
3.8	EEM	TX	Jefferson	South Route Wetland 22a	0.0	NA	2.4	0.0	0.0
4.0	EEM	TX	Jefferson	South Route Wetland 22a	0.0	NA	3.8	0.0	0.0
4.0	EEM	TX	Jefferson	South Route Wetland 22a	2,574.9	Push	2.9	2.9	0.0
4.4	PEM	TX	Jefferson	South Route Wetland 22	1,058.6	Push	1.2	1.2	0.0
4.4	PEM	TX	Jefferson	South Route Wetland 22	0.0	NA	1.4	0.0	0.0

APPENDIX K.1 (cont'd)

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
4.4	PEM	TX	Jefferson	South Route Wetland 22	0.0	NA	0.2	0.0	0.0
4.9	EEM	TX	Jefferson	South Route Wetland 22b	0.0	NA	6.6	0.0	0.0
4.9	EEM	TX	Jefferson	South Route Wetland 22b	4,864.6	Push	5.6	5.6	0.0
4.9	EEM	TX	Jefferson	South Route Wetland 22b	0.0	NA	1.1	0.0	0.0
5.6	PEM	TX	Jefferson	South Route Wetland 23	0.0	NA	3.5	0.0	0.0
5.6	PEM	TX	Jefferson	South Route Wetland 23	2,403.2	Push	2.8	2.8	0.0
5.6	PEM	TX	Jefferson	South Route Wetland 23	0.0	NA	0.6	0.0	0.0
7.5	EEM	TX	Jefferson	South Route Wetland 5a	512.0	HDD	0.5	0.5	0.0
7.5	EEM	LA	Cameron	South Route Wetland 5a	0.0	NA	0.6	0.0	0.0
7.5	EEM	TX	Jefferson	South Route Wetland 5a	43.9	Bore	0.1	0.1	0.0
7.5	ESS	LA	Cameron	South Route Wetland 24	0.0	NA	0.0	0.0	0.0
7.6	EEM	LA	Cameron	South Route Wetland 5a	0.0	NA	0.8	0.0	0.0
				Subtotal	**21,394.4**		**49.6**	**24.4**	**0.0**
Southern Segment – Access Roads									
AR-NGPL-1	EEM	TX	Jefferson	South Route Wetland 22a	0.0	Access Road Construction	0.1	0.0	0.0
AR-NGPL-1	ESS	TX	Jefferson	South Route Wetland 4	0.0	Access Road Construction	0.0	0.0	0.0
AR-S-1	EEM	TX	Jefferson	South Route Wetland 9	0.0	Access Road Construction	0.2	0.0	0.0
AR-S-10	ESS	LA	Cameron	South Route Wetland 24	0.0	Access Road Construction	0.0	0.0	0.0
AR-S-10	ESS	LA	Cameron	South Route Wetland 24	0.0	Access Road Construction	0.0	0.0	0.0
AR-S-10	EEM	LA	Cameron	South Route Wetland 5a	0.0	Access Road Construction	0.3	0.3	0.0
AR-S-10	PSS	LA	Cameron	South Route Wetland 26	0.0	Access Road Construction	0.3	0.3	0.0
AR-S-2	EEM	TX	Jefferson	South Route Wetland 14	0.0	Access Road Construction	0.1	0.0	0.0

APPENDIX K.1 (cont'd)

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
AR-S-2	EEM	TX	Jefferson	South Route Wetland 14a	0.0	Access Road Construction	0.3	0.0	0.0
AR-S-2	ESS	TX	Jefferson	South Route Wetland 16	0.0	Access Road Construction	0.2	0.0	0.0
AR-S-2	PEM	TX	Jefferson	South Route Wetland 15	0.0	Access Road Construction	0.1	0.0	0.0
AR-S-3	EEM	TX	Jefferson	South Route Wetland 19	0.0	Access Road Construction	0.5	0.0	0.0
AR-S-3	EEM	TX	Jefferson	South Route Wetland 21a	0.0	Access Road Construction	0.1	0.0	0.0
AR-S-3	PEM	TX	Jefferson	South Route Wetland 21	0.0	Access Road Construction	0.0	0.0	0.0
AR-S-4	EEM	TX	Jefferson	South Route Wetland 22a	0.0	Access Road Construction	0.0	0.0	0.0
AR-S-4	ESS	TX	Jefferson	South Route Wetland 4	0.0	Access Road Construction	0.0	0.0	0.0
AR-S-4	ESS	TX	Jefferson	South Route Wetland 4	0.0	Access Road Construction	0.2	0.0	0.0
AR-S-5	EEM	TX	Jefferson	South Route Wetland 22a	0.0	Access Road Construction	0.1	0.1	0.0
AR-S-6	EEM	TX	Jefferson	South Route Wetland 22b	0.0	Access Road Construction	1.0	0.0	0.0
AR-S-8	ESS	LA	Cameron	South Route Wetland 24	0.0	Access Road Construction	0.0	0.0	0.0
AR-S-8	EEM	LA	Cameron	South Route Wetland 5	0.0	Access Road Construction	0.0	0.0	0.0
AR-S-8	EEM	LA	Cameron	South Route Wetland 5a	0.0	Access Road Construction	0.3	0.0	0.0
AR-S-9	ESS	LA	Cameron	South Route Wetland 24	0.0	Access Road Construction	0.1	0.0	0.0
AR-S-9	EEM	LA	Cameron	South Route Wetland 5a	0.0	Access Road Construction	0.5	0.0	0.0
						Subtotal	**4.6**	**0.7**	**0.0**
FGT Lateral									
0.0	PFO	TX	Orange	FGT Route Wetland 1	13.7	Trench	0.0	0.0	0.0

APPENDIX K.1 (cont'd)

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
0.0	PFO	TX	Orange	FGT Route Wetland 1	0.0	NA	0.0	0.0	0.0
0.6	PFO	TX	Orange	FGT Route Wetland 7	0.0	NA	0.0	0.0	0.0
0.6	PEM	TX	Orange	FGT Route Wetland 6	0.0	NA	0.1	0.0	0.0
0.6	PEM	TX	Orange	FGT Route Wetland 6	135.6	Trench	0.1	0.1	0.0
0.8	PFO	TX	Orange	FGT Route Wetland 9	0.0	NA	1.1	0.0	0.0
0.8	PFO	TX	Orange	FGT Route Wetland 9	14.6	Trench	0.5	0.5	0.5
1.1	PEM	TX	Orange	FGT Route Wetland 12	30.8	HDD	0.0	0.0	0.0
1.1	PFO	TX	Orange	FGT Route Wetland 13	51.3	HDD	0.0	0.0	0.0
1.3	PFO	TX	Orange	FGT Route Wetland 15	0.0	NA	0.4	0.0	0.0
1.3	PFO	TX	Orange	FGT Route Wetland 15	341.1	Trench	0.4	0.4	0.4
1.3	PFO	TX	Orange	FGT Route Wetland 15	0.0	NA	0.1	0.0	0.0
1.3	PUB	TX	Orange	FGT Route Wetland 16	0.0	NA	0.1	0.0	0.0
1.3	PUB	TX	Orange	FGT Route Wetland 16	47.9	Trench	0.0	0.0	0.0
				Subtotal	**634.9**		**2.9**	**1.1**	**0.9**
FGT Lateral Access Roads									
AR-FGT-1	PFO	TX	Orange	FGT Route Wetland 10	0.0	Access Road Construction	0.2	0.0	0.0
AR-FGT-1	PFO	TX	Orange	FGT Route Wetland 11	0.0	Access Road Construction	0.1	0.0	0.0
AR-FGT-2	PFO	TX	Orange	FGT Route Wetland 14	0.0	Access Road Construction	0.3	0.0	0.0
						Subtotal	**0.5**	**0.0**	**0.0**
GTS Lateral									
0.3	PFO	TX	Jefferson	GTS Lateral Wetland 2	0.0	NA	0.0	0.0	0.0
0.4	PFO	TX	Jefferson	GTS Lateral Wetland 6	0.0	NA	0.0	0.0	0.0
0.5	PFO	TX	Orange	GTS Lateral Wetland 6	530.7	Trench	0.6	0.6	0.6
0.5	PFO	TX	Jefferson	GTS Lateral Wetland 6	0.0	NA	0.7	0.0	0.0
0.5	PFO	TX	Orange	GTS Lateral Wetland 6	80.4	HDD	0.1	0.1	0.1

APPENDIX K.1 (cont'd)

Wetlands Affected by the Texas Connector Project

Milepost or Access Road	Wetland Type [a]	State	County or Parish	Wetland Identification Number	Length Crossed (feet)	Proposed Crossing Method	Construction Impacts	Acres of Wetlands within Permanent ROW	PFO Conversion (Acres) [b]
0.5	PEM	TX	Jefferson	GTS Lateral Wetland 9	0.0	NA	0.0	0.0	0.0
0.5	PEM	TX	Jefferson	GTS Lateral Wetland 9	0.0	NA	0.1	0.0	0.0
0.5	PEM	TX	Orange	GTS Lateral Wetland 9	39.5	HDD	0.1	0.1	0.0
0.6	PSS	TX	Orange	GTS Lateral Wetland 11	98.8	HDD	0.1	0.1	0.0
0.9	PFO	TX	Orange	GTS Lateral Wetland 12	78.8	HDD	0.1	0.1	0.1
20.1	PFO	TX	Orange	GTS Lateral Wetland 2	777.7	Trench	0.9	0.9	0.9
20.1	PFO	TX	Jefferson	GTS Lateral Wetland 2	0.0	NA	0.8	0.0	0.0
				Subtotal	**1,605.7**		**3.3**	**1.8**	**1.6**
KMPL Lateral									
0.0	ESS	TX	Jefferson	South Route Wetland 24	165.0	Trench	0.1	0.1	0.0
0.0	ESS	LA	Cameron	South Route Wetland 24	15.6	Trench	0.0	0.0	0.0
0.1	EEM	LA	Cameron	South Route Wetland 5a	405.5	Trench	0.5	0.5	0.0
				Subtotal	**586.1**		**0.6**	**0.6**	**0.0**
NGPL Lateral									
0.0	EEM	TX	Jefferson	South Route Wetland 22a	53.8	Trench	0.1	0.1	0.0
0.0	EES	TX	Jefferson	South Route Wetland 4	61.3	Bore	0.1	0.1	0.0
0.0	EES	TX	Jefferson	South Route Wetland 4	16.3	Trench	0.0	0.0	0.0
3.6	EEM	TX	Jefferson	South Route Wetland 22a	59.1	Bore	0.1	0.1	0.0
3.7	EEM	TX	Jefferson	South Route Wetland 22a	1179.7	Trench	1.4	1.4	0.0
				Subtotal	**1370.2**		**1.6**	**1.6**	**0.0**

[a] Key:
PEM – Palustrine Emergent
PSS – Palustrine Scrub Shrub
PFO – Palustrine Forested
PUB – Palustrine Unconsolidated Bottom
EEM – Estuarine Emergent
ESS – Estuarine Scrub-Shrub

[b] PFO Conversion (Acres) - Acres of forested wetland that will be convert to PEM or PSS within the permanent easement.

WETLANDS AFFECTED BY THE LOUISIANA CONNECTOR PROJECT

APPENDIX K.2

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
0.0	JEF-WL-001	ATWS	PEM	0.0	0.1	0.0	-
18.1	CAM-WL-001	ATWS	EEM	0.0	0.2	0.0	-
18.1	CAM-WL-001	ATWS	EEM	0.0	0.2	0.0	-
18.1	CAM-WL-001	ATWS	EEM	0.0	0.0	0.0	-
18.1	CAM-WL-001	Perm. Easement	EEM	300.0	0.3	0.3	-
18.1	CAM-WL-001	Temp. Easement	EEM	0.0	0.1	0.0	-
18.1	CAM-WL-001	Temp. Easement	EEM	0.0	0.1	0.0	-
18.1	CAM-WL-001	Access Road	EEM	0.0	0.7	0.0	-
18.1	CAM-WL-001	ATWS	EEM	0.0	0.9	0.0	-
18.2	CAM-WL-001	Temp. Easement	EEM	0.0	0.3	0.0	-
19.0	CAM-WL-004	Temp. Easement	EEM	0.0	0.1	0.0	-
19.1	CAM-WL-004	Access Road	EEM	0.0	0.7	0.0	-
19.1	CAM-WL-004	ATWS	EEM	0.0	0.4	0.0	-
19.2	CAM-WL-004	ATWS	EEM	0.0	0.7	0.0	-
19.2	CAM-WL-004	Perm. Easement	EEM	975.9	1.1	1.1	-
19.2	CAM-WL-004	Temp. Easement	EEM	0.0	1.4	0.0	-
19.4	CAM-WL-004	Temp. Easement	EEM	0.0	0.2	0.0	-
19.4	CAM-WL-005	Perm. Easement	EEM	5,166.3	5.9	5.9	-
19.6	CAM-WL-005	ATWS	EEM	0.0	0.1	0.0	-
19.8	CAM-WL-005	Temp. Easement	EEM	0.0	7.6	0.0	-
20.3	CAM-WL-005	Access Road	EEM	0.0	0.0	0.0	-
20.3	CAM-WL-006	Access Road	EEM	0.0	1.5	0.0	-
20.3	CAM-WL-006	ATWS	EEM	0.0	0.3	0.0	-
20.3	CAM-WL-006	Temp. Easement	EEM	0.0	0.0	0.0	-
20.4	CAM-WL-005	Temp. Easement	EEM	0.0	0.0	0.0	-
20.4	CAM-WL-005	Temp. Easement	EEM	0.0	1.1	0.0	-
20.4	CAM-WL-006	Temp. Easement	EEM	0.0	0.0	0.0	-
20.4	CAM-WL-006	ATWS	EEM	0.0	0.2	0.0	-
20.4	CAM-WL-007	Perm. Easement	EEM	1,391.2	1.6	1.6	-
20.4	CAM-WL-007	Temp. Easement	EEM	0.0	2.0	0.0	-
20.4	CAM-WL-006	Temp. Easement	EEM	0.0	0.0	0.0	-
20.4	CAM-WL-006	ATWS	EEM	0.0	0.2	0.0	-
20.5	CAM-WL-006	ATWS	EEM	0.0	0.2	0.0	-
20.6	CAM-WL-007	Temp. Easement	EEM	0.0	0.3	0.0	-
20.7	CAM-WL-008	Perm. Easement	EEM	1,145.2	1.3	1.3	-
20.7	CAM-WL-008	Temp. Easement	EEM	0.0	1.8	0.0	-
20.8	CAM-WL-008	ATWS	EEM	0.0	0.1	0.0	-
20.8	CAM-WL-008	Temp. Easement	EEM	0.0	0.3	0.0	-
20.9	CAM-WL-008	Perm. Easement	EEM	28.5	0.0	0.0	-
21.0	CAM-WL-009	Perm. Easement	EEM	1,210.3	1.4	1.4	-
21.1	CAM-WL-009	Temp. Easement	EEM	0.0	1.8	0.0	-
21.1	CAM-WL-009	Temp. Easement	EEM	0.0	0.3	0.0	-
21.2	CAM-WL-010	Perm. Easement	EEM	561.1	0.7	0.7	-
21.2	CAM-WL-010	Temp. Easement	EEM	0.0	0.9	0.0	-
21.3	CAM-WL-010	Temp. Easement	EEM	0.0	0.1	0.0	-
21.3	CAM-WL-012	Perm. Easement	EEM	1,971.1	2.3	2.3	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
21.3	CAM-WL-012	Temp. Easement	EEM	0.0	0.5	0.0	-
21.4	CAM-WL-012	Temp. Easement	EEM	0.0	2.9	0.0	-
21.5	WR-CAM-02	ATWS	EEM	0.0	0.2	0.0	-
21.6	WR-CAM-02	ATWS	EEM	0.0	0.2	0.0	-
21.7	CAM-WL-013	Perm. Easement	EEM	1,084.3	1.2	1.2	-
21.7	CAM-WL-013	Temp. Easement	EEM	0.0	1.5	0.0	-
21.9	CAM-WL-013	Temp. Easement	EEM	0.0	0.3	0.0	-
21.9	CAM-WL-014	Perm. Easement	EEM	1,290.8	2.7	2.7	-
21.9	CAM-WL-014	Temp. Easement	EEM	0.0	3.5	0.0	-
21.9	CAM-WL-014	ATWS	EEM	0.0	0.1	0.0	-
22.1	CAM-WL-014	Temp. Easement	EEM	0.0	0.2	0.0	-
22.2	CAM-WL-014	ATWS	EEM	0.0	0.1	0.0	-
22.3	CAM-WL-014	ATWS	EEM	0.0	0.1	0.0	-
22.3	CAM-WL-014	ATWS	EEM	0.0	0.1	0.0	-
22.3	CAM-WL-014	ATWS	EEM	0.0	0.1	0.0	-
22.3	CAM-WL-014	Temp. Easement	EEM	0.0	0.3	0.0	-
22.4	CAM-WL-015	Temp. Easement	EEM	0.0	0.0	0.0	-
22.4	CAM-WL-015	Perm. Easement	EEM	5.2	0.0	0.0	-
22.4	CAM-WL-016	Perm. Easement	EEM	1,104.4	1.3	1.3	-
22.6	CAM-WL-016	ATWS	EEM	0.0	0.1	0.0	-
22.6	CAM-WL-016	Temp. Easement	EEM	0.0	1.9	0.0	-
22.6	CAM-WL-016	Temp. Easement	EEM	0.0	0.3	0.0	-
22.7	CAM-WL-017	Perm. Easement	EEM	544.3	0.6	0.6	-
22.7	CAM-WL-017	Temp. Easement	EEM	0.0	0.1	0.0	-
22.8	CAM-WL-017	Temp. Easement	EEM	0.0	0.8	0.0	-
23.0	CAM-WL-018	Perm. Easement	EEM	20.6	0.0	0.0	-
23.0	CAM-WL-018	Temp. Easement	EEM	0.0	0.2	0.0	-
23.2	CAM-WL-019	Perm. Easement	EEM	889.5	1.0	1.0	-
23.4	CAM-WL-019	Temp. Easement	EEM	0.0	1.3	0.0	-
23.4	CAM-WL-019	Temp. Easement	EEM	0.0	0.2	0.0	-
23.5	CAM-WL-020	Perm. Easement	EEM	660.9	0.8	0.8	-
23.5	CAM-WL-020	Temp. Easement	EEM	0.0	1.1	0.0	-
23.5	CAM-WL-020	Temp. Easement	EEM	0.0	0.1	0.0	-
23.5	CAM-WL-020	ATWS	EEM	0.0	0.1	0.0	-
23.6	CAM-WL-020	Temp. Easement	EEM	0.0	0.0	0.0	-
23.8	CAM-WL-021	Perm. Easement	EEM	166.7	0.2	0.2	-
23.8	CAM-WL-021	Temp. Easement	EEM	0.0	0.2	0.0	-
23.8	CAM-WL-021	Temp. Easement	EEM	0.0	0.0	0.0	-
24.0	CAM-WL-022	Perm. Easement	EEM	288.9	0.3	0.3	-
24.0	CAM-WL-022	Temp. Easement	EEM	0.0	0.1	0.0	-
24.1	CAM-WL-022	Temp. Easement	EEM	0.0	0.4	0.0	-
24.1	CAM-WL-022	ATWS	EEM	0.0	0.1	0.0	-
24.1	CAM-WL-022	Perm. Easement	EEM	1,301.9	1.5	1.5	-
24.1	CAM-WL-022	Temp. Easement	EEM	0.0	1.9	0.0	-
24.2	CAM-WL-022	Temp. Easement	EEM	0.0	0.3	0.0	-
24.7	CAM-WL-024	Temp. Easement	EEM	0.0	0.2	0.0	-
24.8	CAM-WL-025	Perm. Easement	EEM	274.4	0.3	0.3	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
24.8	CAM-WL-025	Temp. Easement	EEM	0.0	0.4	0.0	-
24.8	CAM-WL-025	Temp. Easement	EEM	0.0	0.1	0.0	-
24.8	CAM-WL-026	Perm. Easement	PSS	101.5	0.4	0.4	-
24.8	CAM-WL-026	Temp. Easement	PSS	0.0	0.7	0.0	-
24.9	CAM-WL-026	ATWS	PSS	0.0	0.1	0.0	-
24.9	CAM-WL-026	Temp. Easement	PSS	0.0	0.1	0.0	-
24.9	CAM-WL-026	Perm. Easement	PSS	101.5	0.1	0.1	-
24.9	CAM-WL-026	Temp. Easement	PSS	0.0	0.1	0.0	-
24.9	CAM-WL-026	Temp. Easement	PSS	0.0	0.0	0.0	-
24.9	CAM-WL-027	Perm. Easement	EEM	101.5	1.8	1.8	-
24.9	CAM-WL-027	Temp. Easement	EEM	0.0	2.3	0.0	-
24.9	CAM-WL-027	Temp. Easement	EEM	0.0	0.4	0.0	-
25.2	CAM-WL-028	Perm. Easement	EEM	254.1	0.3	0.3	-
25.2	CAM-WL-028	Temp. Easement	EEM	0.0	0.4	0.0	-
25.2	CAM-WL-028	Temp. Easement	EEM	0.0	0.1	0.0	-
25.5	CAM-WL-029	Perm. Easement	PSS	807.1	0.9	0.9	-
25.6	CAM-WL-029	Temp. Easement	PSS	0.0	0.2	0.0	-
25.6	CAM-WL-029	Temp. Easement	PSS	0.0	1.2	0.0	-
25.7	CAM-WL-040	Access Road	PEM	0.0	0.2	0.0	-
25.7	CAM-WL-040	Access Road	PEM	0.0	0.5	0.0	-
25.8	CAM-WL-030	Temp. Easement	EEM	0.0	0.3	0.0	-
25.8	CAM-WL-030	Perm. Easement	EEM	1,062.9	1.2	1.2	-
25.8	CAM-WL-040	Access Road	PEM	0.0	1.5	0.0	-
25.9	CAM-WL-030	Temp. Easement	EEM	0.0	1.5	0.0	-
26.1	CAL-WL-230	Access Road	PEM	0.0	0.9	0.0	-
26.1	CAM-WL-030	Temp. Easement	EEM	0.0	0.1	0.0	-
26.1	CAM-WL-031	Perm. Easement	EEM	31.9	0.0	0.0	-
26.1	CAM-WL-030	Perm. Easement	EEM	31.9	0.0	0.0	-
26.1	CAM-WL-031	Temp. Easement	EEM	0.0	0.1	0.0	-
26.1	CAM-WL-031	ATWS	EEM	0.0	0.1	0.0	-
26.1	CAM-WL-031	Temp. Easement	EEM	0.0	0.0	0.0	-
26.1	CAM-WL-032	Perm. Easement	EEM	65.6	0.1	0.1	-
26.1	CAM-WL-032	Temp. Easement	EEM	0.0	0.1	0.0	-
26.1	CAM-WL-032	ATWS	EEM	0.0	0.0	0.0	-
26.1	CAM-WL-033	Perm. Easement	PSS	553.1	0.4	0.4	-
26.1	CAM-WL-032	Temp. Easement	EEM	0.0	0.0	0.0	-
26.1	CAM-WL-033	ATWS	PSS	0.0	0.3	0.0	-
26.2	CAM-WL-033	Temp. Easement	PSS	0.0	0.1	0.0	-
26.2	CAM-WL-033	Temp. Easement	PSS	0.0	0.6	0.0	-
26.2	CAM-WL-034	Perm. Easement	EEM	1,181.2	0.6	0.6	-
26.2	CAM-WL-034	Temp. Easement	EEM	0.0	0.1	0.0	-
26.2	CAM-WL-034	ATWS	EEM	0.0	0.1	0.0	-
26.3	CAM-WL-034	Temp. Easement	EEM	0.0	0.8	0.0	-
26.3	CAM-WL-035	Temp. Easement	EEM	0.0	1.9	0.0	-
26.3	CAM-WL-035	Perm. Easement	EEM	1,181.2	1.4	1.4	-
26.3	CAM-WL-035	Temp. Easement	EEM	0.0	0.3	0.0	-
26.5	CAM-WL-036	Temp. Easement	EEM	0.0	0.0	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
26.5	CAM-WL-036	Perm. Easement	EEM	1,181.2	0.1	0.1	-
26.5	CAM-WL-036	Access Road	EEM	0.0	0.0	0.0	-
26.5	CAM-WL-036	Access Road	EEM	0.0	0.3	0.3	-
26.5	CAM-WL-035	ATWS	EEM	0.0	0.7	0.0	-
26.5	CAM-WL-036	Temp. Easement	EEM	0.0	0.0	0.0	-
26.5	CAM-WL-036	Temp. Easement	EEM	0.0	0.0	0.0	-
26.6	CAM-WL-036	Access Road	EEM	0.0	0.7	0.7	-
26.7	CAM-WL-036	ATWS	EEM	0.0	0.1	0.0	-
26.8	CAL-WL-231	Access Road	EEM	0.0	0.2	0.2	-
27.2	CAL-WL-001	Perm. Easement	EEM	1,508.0	1.7	1.7	-
27.2	CAL-WL-001	ATWS	EEM	0.0	0.5	0.0	-
27.2	CAL-WL-001	Temp. Easement	EEM	0.0	0.2	0.0	-
27.2	CAL-WL-001	Temp. Easement	EEM	0.0	2.1	0.0	-
27.2	CAL-WL-001	ATWS	EEM	0.0	0.5	0.0	-
27.4	CAL-WL-002	Perm. Easement	EEM	0.0	0.0	0.0	-
27.4	CAL-WL-002	Temp. Easement	EEM	0.0	0.0	0.0	-
27.4	CAL-WL-001	Temp. Easement	EEM	0.0	0.1	0.0	-
27.5	CAL-WL-001	ATWS	EEM	0.0	0.4	0.0	-
27.5	CAL-WL-001	Access Road	EEM	0.0	0.3	0.0	-
27.5	CAL-WL-001	ATWS	EEM	0.0	0.5	0.0	-
27.5	CAL-WL-001	ATWS	EEM	0.0	0.0	0.0	-
27.5	CAL-WL-001	Temp. Easement	EEM	0.0	0.1	0.0	-
27.5	CAL-WL-232	Access Road	PEM	0.0	0.4	0.4	-
28.3	CAL-WL-006	ATWS	EEM	0.0	0.1	0.0	-
28.3	CAL-WL-006	Access Road	PSS	0.0	0.1	0.0	-
28.3	CAL-WL-006	Access Road	EEM	0.0	0.0	0.0	-
28.3	CAL-WL-006	ATWS	PSS	0.0	0.1	0.0	-
28.3	CAL-WL-006	ATWS	EEM	0.0	0.0	0.0	-
28.3	CAL-WL-006	ATWS	PSS	0.0	0.1	0.0	-
28.3	CAL-WL-006	ATWS	EEM	0.0	0.2	0.0	-
28.3	CAL-WL-006	Perm. Easement	EEM	1,179.6	1.3	1.3	-
28.3	CAL-WL-006	Temp. Easement	EEM	0.0	0.0	0.0	-
28.4	CAL-WL-006	ATWS	EEM	0.0	0.7	0.0	-
28.4	CAL-WL-006	Temp. Easement	EEM	0.0	1.6	0.0	-
28.4	CAL-WL-006	Access Road	PSS	0.0	0.2	0.0	-
28.4	CAL-WL-006	Access Road	EEM	0.0	0.2	0.0	-
28.4	CAL-WL-006	Access Road	EEM	0.0	0.1	0.0	-
28.4	CAL-WL-006	ATWS	EEM	0.0	0.1	0.0	-
28.5	CAL-WL-007	ATWS	EEM	0.0	0.4	0.0	-
28.6	CAL-WL-006	Temp. Easement	EEM	0.0	0.2	0.0	-
28.6	CAL-WL-008	Temp. Easement	EEM	0.0	0.0	0.0	-
28.6	CAL-WL-008	Temp. Easement	EEM	0.0	0.1	0.0	-
28.6	CAL-WL-234	ATWS	EEM	0.0	0.3	0.0	-
28.6	CAL-WL-009	Perm. Easement	EEM	100.1	0.1	0.1	-
28.6	CAL-WL-009	Temp. Easement	EEM	0.0	0.0	0.0	-
28.6	CAL-WL-009	Temp. Easement	EEM	0.0	0.1	0.0	-
28.7	CAL-WL-010	Perm. Easement	EEM	94.9	0.1	0.1	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
28.7	CAL-WL-235	ATWS	EEM	0.0	1.0	0.0	-
28.7	CAL-WL-010	Temp. Easement	EEM	0.0	0.0	0.0	-
28.7	CAL-WL-010	Temp. Easement	EEM	0.0	0.3	0.0	-
28.7	CAL-WL-010	Perm. Easement	EEM	199.6	0.0	0.0	-
28.7	CAL-WL-010	Temp. Easement	EEM	0.0	0.0	0.0	-
28.7	CAL-WL-011	Perm. Easement	EEM	131.3	0.2	0.2	-
28.7	CAL-WL-011	Temp. Easement	EEM	0.0	0.0	0.0	-
28.7	CAL-WL-011	ATWS	EEM	0.0	0.1	0.0	-
28.8	CAL-WL-012	Perm. Easement	EEM	131.3	0.2	0.2	-
28.8	CAL-WL-012	Temp. Easement	EEM	0.0	0.0	0.0	-
28.8	CAL-WL-011	Perm. Easement	EEM	4,757.4	4.9	4.9	-
28.8	CAL-WL-012	Temp. Easement	EEM	0.0	0.0	0.0	-
28.8	CAL-WL-011	Temp. Easement	EEM	0.0	6.8	0.0	-
28.8	CAL-WL-236	ATWS	EEM	0.0	3.1	0.0	-
29.4	CAL-WL-011	ATWS	EEM	0.0	0.1	0.0	-
29.6	CAL-WL-011	Temp. Easement	EEM	0.0	1.0	0.0	-
29.6	CAL-WL-013	Perm. Easement	EEM	4,757.4	5.5	5.5	-
29.6	CAL-WL-013	Temp. Easement	EEM	0.0	1.1	0.0	-
29.8	CAL-WL-013	Temp. Easement	EEM	0.0	7.2	0.0	-
30.0	CAL-WL-013	ATWS	EEM	0.0	0.1	0.0	-
30.5	CAL-WL-015	Perm. Easement	EEM	4,757.4	0.1	0.1	-
30.5	CAL-WL-015	Temp. Easement	EEM	0.0	0.0	0.0	-
30.5	CAL-WL-015	Temp. Easement	EEM	0.0	0.1	0.0	-
30.5	CAL-WL-015	Perm. Easement	EEM	329.1	0.4	0.4	-
30.5	CAL-WL-015	Temp. Easement	EEM	0.0	0.6	0.0	-
30.6	CAL-WL-015	Temp. Easement	EEM	0.0	0.1	0.0	-
30.6	CAL-WL-015	Temp. Easement	EEM	0.0	0.1	0.0	-
30.6	CAL-WL-015	ATWS	EEM	0.0	0.0	0.0	-
30.6	CAL-WL-015	Temp. Easement	EEM	0.0	0.4	0.0	-
30.6	CAL-WL-015	ATWS	EEM	0.0	0.1	0.0	-
30.6	CAL-WL-015	Perm. Easement	EEM	297.9	0.4	0.4	-
30.6	CAL-WL-015	ATWS	EEM	0.0	0.0	0.0	-
30.6	CAL-WL-015	ATWS	EEM	0.0	0.2	0.0	-
30.7	CAL-WL-015	Access Road	EEM	0.0	0.1	0.0	-
30.7	CAL-WL-015	Access Road	EEM	0.0	0.1	0.0	-
30.7	CAL-WL-16	Access Road	EEM	0.0	0.2	0.0	-
30.7	CAL-WL-016	Access Road	PFO	0.0	0.1	0.0	-
30.7	CAL-WL-16	ATWS	EEM	0.0	0.3	0.0	-
30.8	CAL-WL-016	ATWS	PFO	0.0	0.3	0.0	-
30.8	CAL-WL-017	Access Road	EEM	0.0	0.2	0.0	-
30.9	CAL-WL-017	ATWS	EEM	0.0	1.3	0.0	-
30.9	CAL-WL-017	Perm. Easement	EEM	3,740.2	4.2	4.2	-
30.9	CAL-WL-017	Temp. Easement	EEM	0.0	0.5	0.0	-
31.2	CAL-WL-017	Temp. Easement	EEM	0.0	5.6	0.0	-
31.3	CAL-WL-018	Perm. Easement	PEM	0.0	0.1	0.1	-
31.3	CAL-WL-018	Temp. Easement	PEM	0.0	0.1	0.0	-
31.5	CAL-WL-017	ATWS	EEM	0.0	0.1	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
31.5	CAL-WL-017	Temp. Easement	EEM	0.0	0.3	0.0	-
31.6	CAL-WL-019	Temp. Easement	PEM	0.0	0.2	0.0	-
31.6	CAL-WL-019	Perm. Easement	PEM	561.4	0.6	0.6	-
31.6	CAL-WL-019	Temp. Easement	PEM	0.0	0.8	0.0	-
31.7	CAL-WL-020	Perm. Easement	PFO	561.4	0.6	0.6	0.6
31.7	CAL-WL-020	Temp. Easement	PFO	0.0	0.8	0.0	-
31.8	CAL-WL-020	Temp. Easement	PFO	0.0	0.1	0.0	-
31.8	CAL-WL-021	Perm. Easement	PFO	561.4	0.2	0.2	0.2
31.8	CAL-WL-021	Temp. Easement	PFO	0.0	0.0	0.0	-
31.8	CAL-WL-022	Perm. Easement	PEM	2,235.3	8.6	8.6	-
31.8	CAL-WL-021	Temp. Easement	PFO	0.0	0.3	0.0	-
31.8	CAL-WL-022	Temp. Easement	PEM	0.0	0.9	0.0	-
31.8	CAL-WL-022	Temp. Easement	PEM	0.0	11.1	0.0	-
32.3	CAL-WL-022	ATWS	PEM	0.0	0.1	0.0	-
32.6	CAL-WL-023	Perm. Easement	PEM	0.0	0.0	0.0	-
32.6	CAL-WL-023	Temp. Easement	PEM	0.0	0.0	0.0	-
32.6	CAL-WL-022	Temp. Easement	PEM	0.0	0.8	0.0	-
32.9	CAL-WL-022	Access Road	PEM	0.0	0.1	0.1	-
32.9	CAL-WL-024	Access Road	PEM	0.0	0.1	0.1	-
33.0	CAL-WL-022	ATWS	PEM	0.0	0.1	0.0	-
33.2	CAL-WL-022	Perm. Easement	PEM	2,235.3	2.6	2.6	-
33.2	CAL-WL-022	Temp. Easement	PEM	0.0	0.5	0.0	-
33.3	CAL-WL-022	Temp. Easement	PEM	0.0	3.4	0.0	-
33.7	CAL-WL-022	Perm. Easement	PEM	2,235.3	0.1	0.1	-
33.7	CAL-WL-022	Temp. Easement	PEM	0.0	0.1	0.0	-
33.7	CAL-WL-022	Temp. Easement	PEM	0.0	0.0	0.0	-
33.7	CAL-WL-027	Perm. Easement	PEM	444.6	1.2	1.2	-
33.7	CAL-WL-027	Access Road	PEM	0.0	0.2	0.2	-
33.7	CAL-WL-028	Access Road	PEM	0.0	0.1	0.1	-
33.7	CAL-WL-027	Temp. Easement	PEM	0.0	1.5	0.0	-
33.8	CAL-WL-027	ATWS	PEM	0.0	0.6	0.0	-
33.9	CAL-WL-027	Temp. Easement	PEM	0.0	0.2	0.0	-
33.9	CAL-WL-028	Perm. Easement	PFO	1,752.3	0.5	0.5	0.5
33.9	CAL-WL-028	Temp. Easement	PFO	0.0	0.1	0.0	-
33.9	CAL-WL-028	Temp. Easement	PFO	0.0	0.6	0.0	-
34.0	CAL-WL-029	Perm. Easement	PFO	1,752.3	2.0	2.0	2.0
34.0	CAL-WL-029	Temp. Easement	PFO	0.0	0.4	0.0	-
34.0	CAL-WL-032	Access Road	PEM	0.0	0.0	0.0	-
34.1	CAL-WL-029	Temp. Easement	PFO	0.0	2.7	0.0	-
34.1	CAL-WL-033	Access Road	PEM	0.0	0.0	0.0	-
34.4	CAL-WL-030	Temp. Easement	PEM	0.0	0.2	0.0	-
34.4	CAL-WL-030	Perm. Easement	PEM	869.4	1.0	1.0	-
34.5	CAL-WL-030	Temp. Easement	PEM	0.0	1.3	0.0	-
34.8	CAL-WL-240	ATWS	PFO	0.0	0.2	0.0	-
34.8	CAL-WL-240	ATWS	PFO	0.0	0.2	0.0	-
34.8	CAL-WL-031	Perm. Easement	PEM	1,030.0	1.2	1.2	-
34.9	CAL-WL-031	Temp. Easement	PEM	0.0	0.2	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
35.0	CAL-WL-034	Access Road	PEM	0.0	0.0	0.0	-
35.0	CAL-WL-031	Temp. Easement	PEM	0.0	2.2	0.0	-
35.0	CAL-WL-031	ATWS	PEM	0.0	0.2	0.0	-
35.0	CAL-WL-031	Perm. Easement	PEM	0.0	0.0	0.0	-
35.1	CAL-WL-035	Perm. Easement	PEM	30.5	0.0	0.0	-
35.1	CAL-WL-036	Perm. Easement	PEM	218.3	0.3	0.3	-
35.1	CAL-WL-036	Temp. Easement	PEM	0.0	0.1	0.0	-
35.1	CAL-WL-036	ATWS	PEM	0.0	0.1	0.0	-
35.1	CAL-WL-036	ATWS	PEM	0.0	0.0	0.0	-
35.1	CAL-WL-036	Temp. Easement	PEM	0.0	0.6	0.0	-
35.1	CAL-WL-036	ATWS	PEM	0.0	0.0	0.0	-
35.1	CAL-WL-036	Temp. Easement	PEM	0.0	0.0	0.0	-
35.1	CAL-WL-036	Perm. Easement	PEM	73.3	0.1	0.1	-
35.2	CAL-WL-036	Perm. Easement	PEM	360.4	1.0	1.0	-
35.2	CAL-WL-036	Temp. Easement	PEM	0.0	0.0	0.0	-
35.2	CAL-WL-038	Perm. Easement	PEM	0.0	0.0	0.0	-
35.2	CAL-WL-038	Temp. Easement	PEM	0.0	0.0	0.0	-
35.2	CAL-WL-036	Temp. Easement	PEM	0.0	0.0	0.0	-
35.2	CAL-WL-036	Temp. Easement	PEM	0.0	0.4	0.0	-
35.2	CAL-WL-036	Temp. Easement	PEM	0.0	0.0	0.0	-
35.3	CAL-WL-036	Temp. Easement	PEM	0.0	0.3	0.0	-
35.3	CAL-WL-036	Temp. Easement	PEM	0.0	0.4	0.0	-
35.4	CAL-WL-036	Temp. Easement	PEM	0.0	0.1	0.0	-
35.4	CAL-WL-036	Perm. Easement	PEM	982.9	1.1	1.1	-
35.4	CAL-WL-036	Temp. Easement	PEM	0.0	0.2	0.0	-
35.5	CAL-WL-036	Temp. Easement	PEM	0.0	0.8	0.0	-
35.6	CAL-WL-036	Temp. Easement	PEM	0.0	0.7	0.0	-
35.6	CAL-WL-036	Perm. Easement	PEM	149.4	0.2	0.2	-
35.6	CAL-WL-036	Temp. Easement	PEM	0.0	0.0	0.0	-
35.6	CAL-WL-040	Temp. Easement	PEM	0.0	0.1	0.0	-
35.6	CAL-WL-040	Perm. Easement	PEM	280.5	0.3	0.3	-
35.6	CAL-WL-040	Temp. Easement	PEM	0.0	0.3	0.0	-
35.7	CAL-WL-040	Perm. Easement	PEM	249.0	0.3	0.3	-
35.8	CAL-WL-040	Temp. Easement	PEM	0.0	0.2	0.0	-
35.8	CAL-WL-040	Temp. Easement	PEM	0.0	0.1	0.0	-
35.8	CAL-WL-237	Access Road	PEM	0.0	0.0	0.0	-
35.8	CAL-WL-041	ATWS	PEM	0.0	0.0	0.0	-
35.8	CAL-WL-042	ATWS	PEM	0.0	0.0	0.0	-
35.8	CAL-WL-041	Perm. Easement	PEM	10.9	0.0	0.0	-
35.8	CAL-WL-041	Temp. Easement	PEM	0.0	0.0	0.0	-
35.8	CAL-WL-042	Perm. Easement	PEM	18.1	0.0	0.0	-
35.8	CAL-WL-042	Temp. Easement	PEM	0.0	0.0	0.0	-
35.8	CAL-WL-042	Temp. Easement	PEM	0.0	0.0	0.0	-
35.9	CAL-WL-043	Perm. Easement	PEM	47.2	0.1	0.1	-
35.9	CAL-WL-043	Temp. Easement	PEM	0.0	0.0	0.0	-
35.9	CAL-WL-043	Temp. Easement	PEM	0.0	0.3	0.0	-
35.9	CAL-WL-043	Perm. Easement	PEM	1,603.2	0.1	0.1	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
35.9	CAL-WL-043	Temp. Easement	PEM	0.0	0.0	0.0	-
35.9	CAL-WL-044	Perm. Easement	PSS	527.2	1.8	1.8	-
36.2	CAL-WL-044	Temp. Easement	PSS	0.0	0.4	0.0	-
36.2	CAL-WL-044	Temp. Easement	PSS	0.0	2.5	0.0	-
36.2	CAL-WL-045	Temp. Easement	PEM	0.0	0.1	0.0	-
36.2	CAL-WL-045	Perm. Easement	PEM	293.5	0.6	0.6	-
36.3	CAL-WL-045	Temp. Easement	PEM	0.0	0.7	0.0	-
36.3	CAL-WL-046	Perm. Easement	PEM	293.5	0.3	0.3	-
36.3	CAL-WL-046	Temp. Easement	PEM	0.0	0.4	0.0	-
36.3	CAL-WL-046	ATWS	PEM	0.0	0.6	0.0	-
36.3	CAL-WL-046	Temp. Easement	PEM	0.0	0.1	0.0	-
36.4	CAL-WL-046	ATWS	PEM	0.0	0.0	0.0	-
36.4	CAL-WL-046	Perm. Easement	PEM	293.5	0.1	0.1	-
36.4	CAL-WL-046	Temp. Easement	PEM	0.0	0.0	0.0	-
36.4	CAL-WL-046	Temp. Easement	PEM	0.0	0.1	0.0	-
36.4	CAL-WL-047	Perm. Easement	PEM	473.6	0.5	0.5	-
36.4	CAL-WL-047	Temp. Easement	PEM	0.0	0.8	0.0	-
36.4	CAL-WL-047	ATWS	PEM	0.0	0.7	0.0	-
36.5	CAL-WL-047	ATWS	PEM	0.0	0.2	0.0	-
36.5	CAL-WL-239	Access Road	PEM	0.0	0.0	0.0	-
36.5	CAL-WL-239	Access Road	PEM	0.0	0.0	0.0	-
36.5	CAL-WL-047	Temp. Easement	PEM	0.0	0.1	0.0	-
36.5	CAL-WL-239	Access Road	PEM	0.0	0.0	0.0	-
36.5	CAL-WL-048	Perm. Easement	PEM	116.5	1.3	1.3	-
36.5	CAL-WL-048	Temp. Easement	PEM	0.0	0.3	0.0	-
36.5	CAL-WL-239	Access Road	PEM	0.0	0.0	0.0	-
36.5	CAL-WL-048	ATWS	PEM	0.0	0.2	0.0	-
36.5	CAL-WL-238	Access Road	PEM	0.0	0.0	0.0	-
36.7	CAL-WL-048	ATWS	PEM	0.0	0.3	0.0	-
36.7	CAL-WL-048	ATWS	PEM	0.0	0.0	0.0	-
36.7	CAL-WL-048	ATWS	PFO	0.0	0.1	0.0	-
36.7	CAL-WL-048	Temp. Easement	PEM	0.0	1.6	0.0	-
36.7	CAL-WL-048	ATWS	PEM	0.0	0.1	0.0	-
36.7	CAL-WL-048	Perm. Easement	PFO	116.5	0.1	0.1	0.1
36.7	CAL-WL-048	ATWS	PFO	0.0	0.0	0.0	-
36.7	CAL-WL-048	Temp. Easement	PFO	0.0	0.2	0.0	-
36.7	CAL-WL-048	Temp. Easement	PFO	0.0	0.0	0.0	-
36.8	CAL-WL-049	Perm. Easement	PEM	3,623.0	4.2	4.2	-
36.8	CAL-WL-049	ATWS	PEM	0.0	0.5	0.0	-
36.9	CAL-WL-049	ATWS	PEM	0.0	0.3	0.0	-
36.9	CAL-WL-049	Temp. Easement	PEM	0.0	0.8	0.0	-
37.1	CAL-WL-049	Temp. Easement	PEM	0.0	5.2	0.0	-
37.4	CAL-WL-049	ATWS	PEM	0.0	0.1	0.0	-
37.5	CAL-WL-050	Temp. Easement	PEM	0.0	0.4	0.0	-
37.5	CAL-WL-050	ATWS	PEM	0.0	0.2	0.0	-
37.5	CAL-WL-050	Perm. Easement	PEM	117.4	0.1	0.1	-
37.5	CAL-WL-050	Temp. Easement	PEM	0.0	0.0	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
37.5	CAL-WL-051	Perm. Easement	PEM	790.7	0.9	0.9	-
37.5	CAL-WL-051	Temp. Easement	PEM	0.0	1.2	0.0	-
37.5	CAL-WL-051	ATWS	PEM	0.0	0.2	0.0	-
37.6	CAL-WL-051	ATWS	PEM	0.0	0.2	0.0	-
37.6	CAL-WL-051	Temp. Easement	PEM	0.0	0.2	0.0	-
37.6	CAL-WL-052	Perm. Easement	PEM	5,435.4	6.2	6.2	-
37.7	CAL-WL-052	ATWS	PEM	0.0	0.2	0.0	-
38.0	CAL-WL-052	Temp. Easement	PEM	0.0	0.7	0.0	-
38.0	CAL-WL-052	Temp. Easement	PEM	0.0	6.6	0.0	-
38.5	CAL-WL-052	ATWS	PEM	0.0	0.2	0.0	-
38.5	CAL-WL-052	Temp. Easement	PEM	0.0	0.2	0.0	-
38.5	CAL-WL-052	Temp. Easement	PEM	0.0	1.4	0.0	-
38.5	CAL-WL-052	ATWS	PEM	0.0	0.2	0.0	-
38.7	CAL-WL-052	ATWS	PEM	0.0	1.1	0.0	-
38.9	CAL-WL-057	Access Road	PEM	0.0	0.4	0.4	-
38.9	CAL-WL-057	Access Road	PEM	0.0	0.1	0.1	-
38.9	CAL-WL-057	Temp. Easement	PEM	0.0	0.1	0.0	-
39.1	CAL-WL-057	Temp. Easement	PEM	0.0	0.4	0.0	-
39.1	CAL-WL-057	Temp. Easement	PEM	0.0	0.0	0.0	-
39.1	CAL-WL-059	Perm. Easement	PSS	1,908.7	2.2	2.2	-
39.2	CAL-WL-057	ATWS	PEM	0.0	0.7	0.0	-
39.2	CAL-WL-059	ATWS	PSS	0.0	0.0	0.0	-
39.2	CAL-WL-059	Temp. Easement	PEM	0.0	0.0	0.0	-
39.3	CAL-WL-059	Temp. Easement	PEM	0.0	0.0	0.0	-
39.4	CAL-WL-059	Temp. Easement	PSS	0.0	2.8	0.0	-
39.5	CAL-WL-059	Temp. Easement	PSS	0.0	0.5	0.0	-
39.5	CAL-WL-059	ATWS	PEM	0.0	0.7	0.0	-
39.5	CAL-WL-059	Perm. Easement	PEM	1,908.7	1.2	1.2	-
39.6	CAL-WL-059	Temp. Easement	PEM	0.0	1.0	0.0	-
39.7	CAL-WL-059	Perm. Easement	PEM	1,65.6	0.5	0.5	-
39.7	CAL-WL-059	Temp. Easement	PEM	0.0	0.8	0.0	-
39.8	CAL-WL-059	Temp. Easement	PEM	0.0	0.8	0.0	-
39.8	CAL-WL-059	ATWS	PEM	0.0	0.7	0.0	-
39.8	CAL-WL-059	ATWS	PEM	0.0	0.0	0.0	-
40.2	CAL-WL-061	ATWS	PFO	0.0	0.3	0.0	-
40.2	CAL-WL-061	Temp. Easement	PFO	0.0	0.1	0.0	-
40.5	CAL-WL-065	Access Road	PEM	0.0	0.1	0.1	-
40.5	CAL-WL-065	Access Road	PEM	0.0	0.0	0.0	-
40.5	CAL-WL-065	ATWS	PEM	0.0	0.2	0.0	-
40.5	CAL-WL-065	Perm. Easement	PEM	556.0	0.6	0.6	-
40.5	CAL-WL-065	Temp. Easement	PEM	0.0	0.1	0.0	-
40.5	CAL-WL-065	Temp. Easement	PEM	0.0	0.1	0.0	-
40.5	CAL-WL-065	Access Road	PEM	0.0	0.2	0.2	-
40.5	CAL-WL-065	ATWS	PEM	0.0	0.7	0.0	-
40.6	CAL-WL-065	Temp. Easement	PEM	0.0	0.7	0.0	-
40.6	CAL-WL-065	ATWS	PEM	0.0	0.1	0.0	-
40.7	CAL-WL-066	ATWS	PEM	0.0	0.0	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
40.7	CAL-WL-066	Perm. Easement	PEM	17.6	0.0	0.0	-
40.7	CAL-WL-066	Perm. Easement	PEM	32.3	0.1	0.1	-
40.7	CAL-WL-066	Temp. Easement	PEM	0.0	0.0	0.0	-
40.7	CAL-WL-066	Temp. Easement	PEM	0.0	0.4	0.0	-
40.8	CAL-WL-066	ATWS	PEM	0.0	0.0	0.0	-
40.8	CAL-WL-066	Perm. Easement	PEM	35.8	0.1	0.1	-
40.8	CAL-WL-066	Temp. Easement	PEM	0.0	0.0	0.0	-
40.8	CAL-WL-066	Temp. Easement	PEM	0.0	0.2	0.0	-
40.8	CAL-WL-066	ATWS	PEM	0.0	0.0	0.0	-
40.8	CAL-WL-067	Temp. Easement	PEM	0.0	0.3	0.0	-
40.8	CAL-WL-067	Perm. Easement	PEM	376.4	0.4	0.4	-
40.9	CAL-WL-067	ATWS	PEM	0.0	0.3	0.0	-
40.9	CAL-WL-067	Temp. Easement	PEM	0.0	0.3	0.0	-
41.0	CAL-WL-068	Perm. Easement	PEM	366.7	0.4	0.4	-
41.1	CAL-WL-068	ATWS	PEM	0.0	0.2	0.0	-
41.1	CAL-WL-068	Temp. Easement	PEM	0.0	0.1	0.0	-
41.1	CAL-WL-068	Temp. Easement	PEM	0.0	0.4	0.0	-
41.3	CAL-WL-069	Temp. Easement	PFO	0.0	0.1	0.0	-
41.8	CAL-WL-072	Perm. Easement	PEM	409.6	0.5	0.5	-
41.8	CAL-WL-072	Perm. Easement	PFO	0.0	0.1	0.1	0.1
41.8	CAL-WL-072	Temp. Easement	PFO	0.0	0.3	0.0	0.0
41.8	CAL-WL-072	Temp. Easement	PEM	0.0	0.1	0.0	-
41.8	CAL-WL-072	Perm. Easement	PFO	409.6	0.3	0.3	0.3
41.9	CAL-WL-072	Temp. Easement	PEM	0.0	0.3	0.0	-
41.9	CAL-WL-072	Perm. Easement	PFO	497.0	0.4	0.4	0.4
42.0	CAL-WL-072	ATWS	PFO	0.0	0.7	0.0	-
42.0	CAL-WL-072	Perm. Easement	PEM	0.0	0.2	0.2	-
42.0	CAL-WL-072	Temp. Easement	PFO	0.0	1.6	0.0	-
42.5	CAL-WL-075	Perm. Easement	PEM	577.4	0.7	0.7	-
42.5	CAL-WL-075	Temp. Easement	PEM	0.0	0.1	0.0	-
42.5	CAL-WL-075	ATWS	PEM	0.0	0.3	0.0	-
42.6	CAL-WL-075	Temp. Easement	PEM	0.0	0.9	0.0	-
42.6	CAL-WL-075	ATWS	PEM	0.0	0.4	0.0	-
42.6	CAL-WL-075	ATWS	PEM	0.0	0.2	0.0	-
42.6	CAL-WL-076	Perm. Easement	PEM	1,288.2	1.5	1.5	-
42.6	CAL-WL-076	Temp. Easement	PEM	0.0	0.3	0.0	-
42.7	CAL-WL-076	ATWS	PEM	0.0	0.3	0.0	-
42.7	CAL-WL-076	Temp. Easement	PEM	0.0	1.8	0.0	-
42.9	CAL-WL-077	Perm. Easement	PSS	285.2	0.6	0.6	-
43.0	CAL-WL-077	ATWS	PSS	0.0	0.1	0.0	-
43.0	CAL-WL-077	Temp. Easement	PSS	0.0	0.1	0.0	-
43.0	CAL-WL-077	Temp. Easement	PSS	0.0	0.8	0.0	-
43.0	CAL-WL-077	Perm. Easement	PSS	285.2	0.3	0.3	-
43.0	CAL-WL-077	Temp. Easement	PSS	0.0	0.1	0.0	-
43.0	CAL-WL-077	Temp. Easement	PSS	0.0	0.4	0.0	-
43.1	CAL-WL-078	Perm. Easement	PSS	49.9	0.1	0.1	-
43.1	CAL-WL-078	Temp. Easement	PSS	0.0	0.0	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
43.1	CAL-WL-078	Temp. Easement	PSS	0.0	0.2	0.0	-
43.1	CAL-WL-078	ATWS	PSS	0.0	0.0	0.0	-
43.1	CAL-WL-078	ATWS	PSS	0.0	0.0	0.0	-
43.1	CAL-WL-078	ATWS	PSS	0.0	0.2	0.0	-
43.1	CAL-WL-078	Perm. Easement	PSS	57.2	0.0	0.0	-
43.1	CAL-WL-078	Temp. Easement	PSS	0.0	0.0	0.0	-
43.1	CAL-WL-079	ATWS	PSS	0.0	0.0	0.0	-
43.1	CAL-WL-079	Temp. Easement	PSS	0.0	0.1	0.0	-
43.2	CAL-WL-079	Perm. Easement	PSS	34.4	0.1	0.1	-
43.2	CAL-WL-079	Temp. Easement	PSS	0.0	0.0	0.0	-
43.2	CAL-WL-080	Perm. Easement	PFO	127.0	0.2	0.2	0.2
43.2	CAL-WL-080	Temp. Easement	PFO	0.0	0.0	0.0	-
43.2	CAL-WL-080	Access Road	PFO	0.0	0.0	0.0	-
43.2	CAL-WL-080	Access Road	PEM	0.0	0.1	0.1	-
43.2	CAL-WL-080	ATWS	PFO	0.0	0.5	0.0	-
43.2	CAL-WL-080	Temp. Easement	PFO	0.0	0.3	0.0	-
43.2	CAL-WL-080	Access Road	PEM	0.0	0.1	0.1	-
43.2	CAL-WL-080	ATWS	PEM	0.0	0.0	0.0	-
43.2	CAL-WL-080	Perm. Easement	PEM	127.0	0.5	0.5	-
43.2	CAL-WL-080	Temp. Easement	PEM	0.0	0.1	0.0	-
43.2	CAL-WL-080	Access Road	PEM	0.0	0.2	0.2	-
43.2	CAL-WL-080	Temp. Easement	PEM	0.0	0.6	0.0	-
43.3	CAL-WL-080	ATWS	PEM	0.0	1.2	0.0	-
43.3	CAL-WL-080	Temp. Easement	PEM	0.0	0.1	0.0	-
43.3	CAL-WL-081	Temp. Easement	PFO	0.0	0.0	0.0	-
43.3	CAL-WL-081	Perm. Easement	PFO	53.5	0.1	0.1	0.1
43.3	CAL-WL-081	Perm. Easement	PEM	53.5	0.3	0.3	-
43.4	CAL-WL-081	Temp. Easement	PEM	0.0	0.1	0.0	-
43.4	CAL-WL-081	Temp. Easement	PEM	0.0	0.3	0.0	-
43.4	CAL-WL-081	ATWS	PEM	0.0	0.0	0.0	-
43.4	CAL-WL-081	ATWS	PEM	0.0	0.4	0.0	-
43.4	CAL-WL-081	Perm. Easement	PEM	254.4	0.8	0.8	-
43.4	CAL-WL-081	Temp. Easement	PEM	0.0	0.2	0.0	-
43.4	CAL-WL-081	ATWS	PSS	0.0	0.2	0.0	-
43.4	CAL-WL-081	Perm. Easement	PSS	615.1	0.4	0.4	-
43.4	CAL-WL-081	Temp. Easement	PSS	0.0	1.1	0.0	-
43.5	CAL-WL-081	Temp. Easement	PEM	0.0	0.3	0.0	-
43.5	CAL-WL-081	ATWS	PSS	0.0	0.1	0.0	-
43.5	CAL-WL-081	ATWS	PEM	0.0	0.2	0.0	-
43.6	CAL-WL-081	Temp. Easement	PEM	0.0	0.2	0.0	-
43.6	CAL-WL-081	Perm. Easement	PEM	0.0	0.0	0.0	-
43.8	CAL-WL-082	Temp. Easement	PEM	0.0	0.0	0.0	-
43.8	CAL-WL-082	Temp. Easement	PEM	0.0	0.0	0.0	-
43.9	CAL-WL-083	Perm. Easement	PEM	2,921.9	3.7	3.7	-
43.9	CAL-WL-083	ATWS	PEM	0.0	0.6	0.0	-
44.2	CAL-WL-083	ATWS	PEM	0.0	0.3	0.0	-
44.3	CAL-WL-083	Temp. Easement	PEM	0.0	1.8	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
44.4	CAL-WL-083	ATWS	PEM	0.0	0.2	0.0	-
44.4	CAL-WL-083	Temp. Easement	PEM	0.0	4.6	0.0	-
44.4	CAL-WL-083	ATWS	PEM	0.0	0.3	0.0	-
44.5	CAL-WL-083	ATWS	PEM	0.0	0.2	0.0	-
44.6	CAL-WL-084	ATWS	PEM	0.0	0.1	0.0	-
44.6	CAL-WL-084	Perm. Easement	PEM	447.7	0.3	0.3	-
44.6	CAL-WL-084	Temp. Easement	PEM	0.0	0.3	0.0	-
44.6	CAL-WL-084	ATWS	PEM	0.0	0.2	0.0	-
44.6	CAL-WL-084	Temp. Easement	PEM	0.0	0.5	0.0	-
44.7	CAL-WL-085	ATWS	PEM	0.0	0.2	0.0	-
44.7	CAL-WL-085	Perm. Easement	PEM	57.7	0.4	0.4	-
44.7	CAL-WL-085	Temp. Easement	PEM	0.0	0.4	0.0	-
44.8	CAL-WL-085	ATWS	PEM	0.0	0.2	0.0	-
44.8	CAL-WL-085	Temp. Easement	PEM	0.0	0.9	0.0	-
44.8	CAL-WL-085	Perm. Easement	PSS	57.7	0.0	0.0	-
44.8	CAL-WL-085	Temp. Easement	PSS	0.0	0.0	0.0	-
44.8	CAL-WL-085	Temp. Easement	PSS	0.0	0.0	0.0	-
44.8	CAL-WL-085	Temp. Easement	PSS	0.0	0.1	0.0	-
45.1	CAL-WL-086	Perm. Easement	PEM	741.8	1.9	1.9	-
45.1	CAL-WL-086	Temp. Easement	PEM	0.0	1.4	0.0	-
45.1	CAL-WL-086	ATWS	PEM	0.0	0.2	0.0	-
45.3	CAL-WL-086	Temp. Easement	PEM	0.0	2.6	0.0	-
45.5	CAL-WL-086	ATWS	PEM	0.0	0.8	0.0	-
45.6	CAL-WL-087	ATWS	PFO	0.0	0.1	0.0	-
45.6	CAL-WL-087	Perm. Easement	PFO	83.2	0.1	0.1	0.1
45.6	CAL-WL-087	Temp. Easement	PFO	0.0	0.0	0.0	-
45.6	CAL-WL-087	Temp. Easement	PFO	0.0	0.1	0.0	-
45.6	CAL-WL-087	Perm. Easement	PFO	105.5	0.4	0.4	0.4
45.6	CAL-WL-087	Temp. Easement	PFO	0.0	0.3	0.0	-
45.7	CAL-WL-087	Temp. Easement	PFO	0.0	0.0	0.0	-
46.0	CAL-WL-088	Perm. Easement	PEM	310.0	0.2	0.2	-
46.0	CAL-WL-088	Temp. Easement	PEM	0.0	0.1	0.0	-
46.1	CAL-WL-088	ATWS	PEM	0.0	0.0	0.0	-
46.1	CAL-WL-088	Temp. Easement	PEM	0.0	0.0	0.0	-
46.1	CAL-WL-089	ATWS	PEM	0.0	0.2	0.0	-
46.1	CAL-WL-089	Perm. Easement	PEM	885.8	1.5	1.5	-
46.1	CAL-WL-089	ATWS	PEM	0.0	0.1	0.0	-
46.2	CAL-WL-089	ATWS	PEM	0.0	0.1	0.0	-
46.2	CAL-WL-089	Temp. Easement	PEM	0.0	0.6	0.0	-
46.3	CAL-WL-089	ATWS	PEM	0.0	0.3	0.0	-
46.3	CAL-WL-089	Temp. Easement	PEM	0.0	0.9	0.0	-
46.3	CAL-WL-090	Perm. Easement	PEM	885.8	1.1	1.1	-
46.3	CAL-WL-090	ATWS	PEM	0.0	0.4	0.0	-
46.4	CAL-WL-090	Temp. Easement	PEM	0.0	0.4	0.0	-
46.4	CAL-WL-090	ATWS	PEM	0.0	0.4	0.0	-
46.4	CAL-WL-090	Temp. Easement	PEM	0.0	0.7	0.0	-
46.7	CAL-WL-091	Perm. Easement	PEM	453.9	0.7	0.7	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
46.7	CAL-WL-091	Temp. Easement	PEM	0.0	0.4	0.0	-
46.7	CAL-WL-091	Temp. Easement	PEM	0.0	0.7	0.0	-
46.7	CAL-WL-091	ATWS	PEM	0.0	0.5	0.0	-
46.8	CAL-WL-092	Perm. Easement	PEM	25.7	1.5	1.5	-
47.0	CAL-WL-092	Temp. Easement	PEM	0.0	0.6	0.0	-
47.0	CAL-WL-092	Access Road	PEM	0.0	0.9	0.9	-
47.0	CAL-WL-092	Temp. Easement	PEM	0.0	0.6	0.0	-
47.0	CAL-WL-092	Temp. Easement	PEM	0.0	0.4	0.0	-
47.1	CAL-WL-092	ATWS	PEM	0.0	0.5	0.0	-
47.1	CAL-WL-092	ATWS	PEM	0.0	0.0	0.0	-
47.1	CAL-WL-092	Perm. Easement	PEM	25.7	0.0	0.0	-
47.1	CAL-WL-092	Temp. Easement	PEM	0.0	0.1	0.0	-
47.1	CAL-WL-092	ATWS	PEM	0.0	0.0	0.0	-
47.1	CAL-WL-092	Temp. Easement	PEM	0.0	0.0	0.0	-
47.1	CAL-WL-093	ATWS	PEM	0.0	0.0	0.0	-
47.1	CAL-WL-094	ATWS	PFO	0.0	0.0	0.0	-
47.1	CAL-WL-094	Perm. Easement	PFO	158.8	0.2	0.2	0.2
47.2	CAL-WL-094	Temp. Easement	PFO	0.0	0.0	0.0	-
47.2	CAL-WL-094	Temp. Easement	PFO	0.0	0.1	0.0	-
47.2	CAL-WL-094	Temp. Easement	PFO	0.0	0.0	0.0	-
47.2	CAL-WL-095	Perm. Easement	PFO	77.2	0.1	0.1	0.1
47.2	CAL-WL-095	Temp. Easement	PFO	0.0	0.0	0.0	-
47.2	CAL-WL-095	ATWS	PFO	0.0	0.5	0.0	-
47.2	CAL-WL-095	ATWS	PFO	0.0	0.2	0.0	-
47.2	CAL-WL-095	Temp. Easement	PFO	0.0	0.3	0.0	-
47.2	CAL-WL-095	Perm. Easement	PFO	430.0	0.5	0.5	0.5
47.2	CAL-WL-095	ATWS	PFO	0.0	0.2	0.0	-
47.2	CAL-WL-095	ATWS	PFO	0.0	0.1	0.0	-
47.3	CAL-WL-095	ATWS	PFO	0.0	0.1	0.0	-
47.3	CAL-WL-095	Temp. Easement	PFO	0.0	0.3	0.0	-
47.3	CAL-WL-095	ATWS	PFO	0.0	0.1	0.0	-
47.3	CAL-WL-096	Temp. Easement	PFO	0.0	0.2	0.0	-
47.3	CAL-WL-096	Temp. Easement	PFO	0.0	0.1	0.0	-
47.3	CAL-WL-096	Access Road	PFO	0.0	0.0	0.0	-
47.4	CAL-WL-096	Access Road	PFO	0.0	0.0	0.0	-
47.4	CAL-WL-096	Temp. Easement	PFO	0.0	0.1	0.0	-
47.4	CAL-WL-096	Temp. Easement	PFO	0.0	0.1	0.0	-
47.4	CAL-WL-096	Access Road	PEM	0.0	0.1	0.1	-
47.4	CAL-WL-096	ATWS	PFO	0.0	0.6	0.0	-
47.4	CAL-WL-096	Temp. Easement	PFO	0.0	0.1	0.0	-
47.5	CAL-WL-096	Access Road	PEM	0.0	0.0	0.0	-
47.5	CAL-WL-096	Temp. Easement	PFO	0.0	0.1	0.0	-
47.5	CAL-WL-096	ATWS	PFO	0.0	0.2	0.0	-
47.5	CAL-WL-096	Access Road	PFO	0.0	0.0	0.0	-
47.5	CAL-WL-096	Access Road	PEM	0.0	0.0	0.0	-
47.5	CAL-WL-096	Access Road	PFO	0.0	0.0	0.0	0.0
47.5	CAL-WL-096	ATWS	PFO	0.0	0.3	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
47.5	CAL-WL-096	Perm. Easement	PFO	141.9	0.2	0.2	0.2
47.5	CAL-WL-096	Temp. Easement	PFO	0.0	0.1	0.0	-
47.5	CAL-WL-096	Temp. Easement	PFO	0.0	0.6	0.0	-
47.5	CAL-WL-096	ATWS	PFO	0.0	0.0	0.0	-
47.6	CAL-WL-096	Access Road	PFO	0.0	0.0	0.0	-
47.9	CAL-WL-097	Access Road	PEM	0.0	0.3	0.0	-
47.9	CAL-WL-097	Access Road	PEM	0.0	0.0	0.0	-
47.9	CAL-WL-097	Access Road	PEM	0.0	0.1	0.0	-
47.9	CAL-WL-097	Access Road	PEM	0.0	0.2	0.0	-
48.0	CAL-WL-097	ATWS	PEM	0.0	0.3	0.0	-
48.0	CAL-WL-097	ATWS	PEM	0.0	0.1	0.0	-
48.0	CAL-WL-097	ATWS	PEM	0.0	0.0	0.0	-
48.1	CAL-WL-098	ATWS	PFO	0.0	0.0	0.0	-
48.1	CAL-WL-098	Perm. Easement	PFO	0.0	0.0	0.0	0.0
48.1	CAL-WL-098	Temp. Easement	PFO	0.0	0.0	0.0	-
48.1	CAL-WL-098	Temp. Easement	PEM	0.0	0.0	0.0	-
48.1	CAL-WL-098	Access Road	PEM	0.0	0.1	0.0	-
48.1	CAL-WL-098	ATWS	PFO	0.0	0.0	0.0	-
48.2	CAL-WL-098	Perm. Easement	PEM	49.2	0.1	0.1	-
48.2	CAL-WL-098	Temp. Easement	PEM	0.0	0.0	0.0	-
48.2	CAL-WL-098	Access Road	PEM	0.0	0.1	0.0	-
48.2	CAL-WL-098	Perm. Easement	PEM	0.0	0.0	0.0	-
48.2	CAL-WL-098	Temp. Easement	PEM	0.0	0.0	0.0	-
48.2	CAL-WL-098	Access Road	PEM	0.0	0.1	0.0	-
48.2	CAL-WL-098	ATWS	PEM	0.0	0.0	0.0	-
48.2	CAL-WL-098	ATWS	PEM	0.0	0.0	0.0	-
48.5	CAL-WL-102	ATWS	PEM	0.0	0.0	0.0	-
48.5	CAL-WL-102	Temp. Easement	PEM	0.0	0.0	0.0	-
48.6	CAL-WL-103	Perm. Easement	PEM	57.2	0.0	0.0	-
48.6	CAL-WL-104	ATWS	PFO	0.0	0.1	0.0	-
48.6	CAL-WL-104	Perm. Easement	PFO	1,845.7	0.3	0.3	0.3
48.6	CAL-WL-104	ATWS	PFO	0.0	0.0	0.0	-
48.6	CAL-WL-104	ATWS	PEM	0.0	0.1	0.0	-
48.6	CAL-WL-104	Temp. Easement	PFO	0.0	0.1	0.0	-
48.7	CAL-WL-104	ATWS	PEM	0.0	0.0	0.0	-
48.7	CAL-WL-104	Perm. Easement	PEM	1,845.7	1.8	1.8	-
48.7	CAL-WL-104	Temp. Easement	PFO	0.0	0.2	0.0	-
48.7	CAL-WL-104	Temp. Easement	PEM	0.0	0.0	0.0	-
48.7	CAL-WL-104	Temp. Easement	PEM	0.0	0.1	0.0	-
48.7	CAL-WL-104	Perm. Easement	PFO	0.0	0.3	0.3	0.3
48.7	CAL-WL-104	Temp. Easement	PFO	0.0	0.7	0.0	-
48.9	CAL-WL-104	ATWS	PEM	0.0	0.0	0.0	-
48.9	CAL-WL-104	ATWS	PFO	0.0	0.3	0.0	-
48.9	CAL-WL-104	Temp. Easement	PEM	0.0	0.2	0.0	-
49.0	CAL-WL-104	Perm. Easement	PFO	0.0	0.1	0.1	0.1
49.0	CAL-WL-104	Temp. Easement	PEM	0.0	1.1	0.0	-
49.0	CAL-WL-104	Temp. Easement	PEM	0.0	0.0	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
49.0	CAL-WL-104	Perm. Easement	PFO	0.0	0.0	0.0	0.0
49.0	CAL-WL-104	Temp. Easement	PFO	0.0	0.6	0.0	-
49.1	CAL-WL-104	Temp. Easement	PEM	0.0	0.0	0.0	-
49.1	CAL-WL-104	Temp. Easement	PFO	0.0	0.4	0.0	-
49.1	CAL-WL-104	Temp. Easement	PEM	0.0	0.1	0.0	-
49.1	CAL-WL-104	Perm. Easement	PEM	343.7	0.4	0.4	-
49.1	CAL-WL-104	Temp. Easement	PEM	0.0	0.3	0.0	-
49.1	CAL-WL-104	Temp. Easement	PEM	0.0	0.1	0.0	-
49.2	CAL-WL-104	Temp. Easement	PEM	0.0	0.0	0.0	-
49.2	CAL-WL-104	Temp. Easement	PEM	0.0	0.1	0.0	-
49.2	CAL-WL-104	Perm. Easement	PFO	0.0	0.1	0.1	0.1
49.2	CAL-WL-104	Temp. Easement	PFO	0.0	0.4	0.0	-
49.2	CAL-WL-105	Temp. Easement	PEM	0.0	0.0	0.0	-
49.2	CAL-WL-104	Perm. Easement	PFO	0.0	0.0	0.0	0.0
49.2	CAL-WL-106	Perm. Easement	PFO	170.9	0.1	0.1	0.1
49.2	CAL-WL-104	Temp. Easement	PFO	0.0	0.0	0.0	-
49.3	CAL-WL-106	Temp. Easement	PEM	0.0	0.1	0.0	-
49.3	CAL-WL-106	Temp. Easement	PEM	0.0	0.0	0.0	-
49.3	CAL-WL-106	Temp. Easement	PFO	0.0	0.1	0.0	-
49.3	CAL-WL-241	Access Road	PEM	0.0	0.0	0.0	-
49.3	CAL-WL-106	Perm. Easement	PFO	0.0	0.0	0.0	0.0
49.3	CAL-WL-241	Access Road	PEM	0.0	0.0	0.0	-
49.3	CAL-WL-106	Temp. Easement	PFO	0.0	0.4	0.0	-
49.3	CAL-WL-106	Temp. Easement	PEM	0.0	0.1	0.0	-
49.4	CAL-WL-106	Perm. Easement	PFO	88.5	0.1	0.1	0.1
49.4	CAL-WL-106	Temp. Easement	PFO	0.0	0.0	0.0	-
49.4	CAL-WL-106	Temp. Easement	PEM	0.0	0.0	0.0	-
49.4	CAL-WL-106	Perm. Easement	PFO	31.2	0.0	0.0	0.0
49.4	CAL-WL-106	Temp. Easement	PEM	0.0	0.0	0.0	-
49.4	CAL-WL-106	Temp. Easement	PFO	0.0	0.1	0.0	-
49.4	CAL-WL-106	Temp. Easement	PFO	0.0	0.0	0.0	-
49.4	CAL-WL-106	Temp. Easement	PEM	0.0	0.0	0.0	-
49.4	CAL-WL-107	Temp. Easement	PFO	0.0	0.0	0.0	-
49.4	CAL-WL-107	Perm. Easement	PFO	0.0	0.0	0.0	0.0
49.4	CAL-WL-107	Temp. Easement	PEM	0.0	0.0	0.0	-
49.4	CAL-WL-107	Temp. Easement	PEM	0.0	0.0	0.0	-
49.4	CAL-WL-107	Temp. Easement	PFO	0.0	0.0	0.0	-
49.5	CAL-WL-107	Perm. Easement	PEM	10.4	0.0	0.0	-
49.5	CAL-WL-107	Temp. Easement	PFO	0.0	0.1	0.0	-
49.5	CAL-WL-107	Perm. Easement	PEM	41.1	0.0	0.0	-
49.5	CAL-WL-107	Perm. Easement	PFO	0.0	0.0	0.0	0.0
49.5	CAL-WL-107	Temp. Easement	PEM	0.0	0.0	0.0	-
49.5	CAL-WL-107	Temp. Easement	PEM	0.0	0.1	0.0	-
49.5	CAL-WL-107	Perm. Easement	PEM	155.2	0.1	0.1	-
49.5	CAL-WL-107	Temp. Easement	PFO	0.0	0.3	0.0	-
49.5	CAL-WL-107	Temp. Easement	PEM	0.0	0.0	0.0	-
49.5	CAL-WL-107	Perm. Easement	PFO	0.0	0.1	0.1	0.1

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
49.5	CAL-WL-107	Temp. Easement	PEM	0.0	0.0	0.0	-
49.5	CAL-WL-107	Perm. Easement	PEM	44.8	0.0	0.0	-
49.5	CAL-WL-107	Perm. Easement	PFO	0.0	0.0	0.0	0.0
49.5	CAL-WL-107	Temp. Easement	PEM	0.0	0.0	0.0	-
49.6	CAL-WL-107	Temp. Easement	PEM	0.0	0.0	0.0	-
49.6	CAL-WL-107	Perm. Easement	PFO	102.5	0.1	0.1	0.1
49.6	CAL-WL-107	Temp. Easement	PEM	0.0	0.0	0.0	-
49.6	CAL-WL-107	Temp. Easement	PFO	0.0	0.1	0.0	-
49.6	CAL-WL-107	Temp. Easement	PEM	0.0	0.1	0.0	-
49.6	CAL-WL-113	Access Road	PEM	0.0	2.3	2.3	-
49.6	CAL-WL-107	Temp. Easement	PFO	0.0	0.0	0.0	-
49.6	CAL-WL-107	Temp. Easement	PEM	0.0	0.0	0.0	-
49.6	CAL-WL-112	Access Road	PEM	0.0	0.3	0.3	-
49.6	CAL-WL-107	Perm. Easement	PEM	105.6	0.0	0.0	-
49.6	CAL-WL-107	Temp. Easement	PEM	0.0	0.1	0.0	-
49.7	CAL-WL-107	Temp. Easement	PEM	0.0	0.0	0.0	-
49.7	CAL-WL-107	Perm. Easement	PFO	0.0	0.1	0.1	0.1
49.7	CAL-WL-107	Temp. Easement	PFO	0.0	0.2	0.0	-
49.7	CAL-WL-111	Access Road	PEM	0.0	0.4	0.4	-
49.7	CAL-WL-107	Perm. Easement	PEM	160.5	0.1	0.1	-
49.7	CAL-WL-107	Temp. Easement	PEM	0.0	0.0	0.0	-
49.7	CAL-WL-107	Temp. Easement	PEM	0.0	0.0	0.0	-
49.7	CAL-WL-107	Temp. Easement	PEM	0.0	0.1	0.0	-
49.7	CAL-WL-107	Temp. Easement	PEM	0.0	0.1	0.0	-
49.7	CAL-WL-110	Access Road	PEM	0.0	0.2	0.2	-
49.7	CAL-WL-107	Access Road	PEM	0.0	0.1	0.1	-
49.7	CAL-WL-107	Perm. Easement	PEM	65.1	0.0	0.0	-
49.7	CAL-WL-107	Temp. Easement	PEM	0.0	0.0	0.0	-
49.7	CAL-WL-107	Temp. Easement	PEM	0.0	0.0	0.0	-
49.8	CAL-WL-108	ATWS	PEM	0.0	0.0	0.0	-
49.8	CAL-WL-108	ATWS	PEM	0.0	0.0	0.0	-
49.8	CAL-WL-108	ATWS	PEM	0.0	0.0	0.0	-
49.8	CAL-WL-107	Temp. Easement	PEM	0.0	0.0	0.0	-
49.8	CAL-WL-107	Temp. Easement	PEM	0.0	0.0	0.0	-
49.8	CAL-WL-114	Perm. Easement	PEM	39.0	0.0	0.0	-
49.8	CAL-WL-114	Temp. Easement	PEM	0.0	0.0	0.0	-
49.8	CAL-WL-114	ATWS	PFO	0.0	0.0	0.0	-
49.8	CAL-WL-114	ATWS	PSS	0.0	0.1	0.0	-
49.8	CAL-WL-114	Perm. Easement	PSS	0.0	0.1	0.1	-
49.8	CAL-WL-114	Perm. Easement	PEM	86.2	0.0	0.0	-
49.8	CAL-WL-114	Temp. Easement	PEM	0.0	0.1	0.0	-
49.8	CAL-WL-114	Temp. Easement	PSS	0.0	0.1	0.0	-
49.8	CAL-WL-114	Perm. Easement	PEM	0.0	0.0	0.0	-
49.8	CAL-WL-114	Temp. Easement	PSS	0.0	0.1	0.0	-
49.9	CAL-WL-114	ATWS	PSS	0.0	0.0	0.0	-
49.9	CAL-WL-114	Perm. Easement	PSS	0.0	0.0	0.0	-
49.9	CAL-WL-115	Perm. Easement	PFO	63.2	0.2	0.2	0.2

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
49.9	CAL-WL-115	Temp. Easement	PFO	0.0	0.0	0.0	-
49.9	CAL-WL-115	Temp. Easement	PFO	0.0	0.0	0.0	-
49.9	CAL-WL-115	ATWS	PFO	0.0	0.6	0.0	-
49.9	CAL-WL-115	Perm. Easement	PEM	66.7	0.1	0.1	-
49.9	CAL-WL-115	Temp. Easement	PEM	0.0	0.0	0.0	-
50.0	CAL-WL-115	Temp. Easement	PFO	0.0	0.3	0.0	-
50.0	CAL-WL-115	Perm. Easement	PEM	39.0	0.0	0.0	-
50.0	CAL-WL-115	Perm. Easement	PFO	0.0	0.0	0.0	0.0
50.0	CAL-WL-115	Temp. Easement	PEM	0.0	0.0	0.0	-
50.3	CAL-WL-117	ATWS	PFO	0.0	0.1	0.0	-
50.3	CAL-WL-117	ATWS	PFO	0.0	0.1	0.0	-
50.3	CAL-WL-117	Temp. Easement	PFO	0.0	0.0	0.0	-
50.3	CAL-WL-117	ATWS	PFO	0.0	0.1	0.0	-
50.3	CAL-WL-117	Temp. Easement	PFO	0.0	0.0	0.0	-
50.4	CAL-WL-119	Perm. Easement	PFO	46.5	0.1	0.1	0.1
50.4	CAL-WL-119	Temp. Easement	PFO	0.0	0.1	0.0	-
50.4	CAL-WL-119	ATWS	PFO	0.0	0.0	0.0	-
50.4	CAL-WL-119	Temp. Easement	PFO	0.0	0.1	0.0	-
50.4	CAL-WL-119	ATWS	PFO	0.0	0.0	0.0	-
50.4	CAL-WL-119	Perm. Easement	PFO	35.8	0.0	0.0	0.0
50.4	CAL-WL-120	Temp. Easement	PFO	0.0	0.0	0.0	-
50.4	CAL-WL-120	Perm. Easement	PFO	22.2	0.0	0.0	0.0
50.4	CAL-WL-120	Temp. Easement	PFO	0.0	0.0	0.0	-
50.4	CAL-WL-120	Perm. Easement	PEM	22.2	0.7	0.7	-
50.4	CAL-WL-120	Perm. Easement	PFO	0.0	0.3	0.3	0.3
50.4	CAL-WL-120	Temp. Easement	PFO	0.0	0.0	0.0	-
50.5	CAL-WL-120	Temp. Easement	PFO	0.0	0.6	0.0	-
50.5	CAL-WL-120	ATWS	PFO	0.0	0.3	0.0	-
50.5	CAL-WL-120	Temp. Easement	PEM	0.0	0.3	0.0	-
50.6	CAL-WL-120	Temp. Easement	PEM	0.0	0.1	0.0	-
50.6	CAL-WL-120	Perm. Easement	PEM	358.0	0.2	0.2	-
50.6	CAL-WL-120	Perm. Easement	PFO	0.0	0.1	0.1	0.1
50.6	CAL-WL-120	Temp. Easement	PFO	0.0	0.1	0.0	-
50.7	CAL-WL-120	Temp. Easement	PEM	0.0	0.1	0.0	-
50.7	CAL-WL-120	Perm. Easement	PFO	0.0	0.0	0.0	0.0
50.7	CAL-WL-120	Temp. Easement	PFO	0.0	0.0	0.0	-
50.7	CAL-WL-120	Perm. Easement	PFO	34.4	0.6	0.6	0.6
50.7	CAL-WL-120	Temp. Easement	PFO	0.0	0.1	0.0	-
50.7	CAL-WL-120	Temp. Easement	PFO	0.0	0.1	0.0	-
50.8	CAL-WL-120	Temp. Easement	PFO	0.0	0.0	0.0	-
50.8	CAL-WL-120	Temp. Easement	PFO	0.0	0.1	0.0	-
50.8	CAL-WL-122	Perm. Easement	PEM	34.4	0.0	0.0	-
50.8	CAL-WL-122	Temp. Easement	PEM	0.0	0.0	0.0	-
50.8	CAL-WL-120	Temp. Easement	PFO	0.0	0.0	0.0	-
50.8	CAL-WL-120	Temp. Easement	PFO	0.0	0.0	0.0	-
50.8	CAL-WL-122	Perm. Easement	PEM	34.4	0.1	0.1	-
50.8	CAL-WL-122	Temp. Easement	PEM	0.0	0.1	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
50.8	CAL-WL-122	Temp. Easement	PEM	0.0	0.0	0.0	-
50.8	CAL-WL-122	Temp. Easement	PFO	0.0	0.4	0.0	-
50.9	CAL-WL-122	Perm. Easement	PFO	38.4	0.5	0.5	0.5
50.9	CAL-WL-122	Perm. Easement	PEM	38.4	0.1	0.1	-
50.9	CAL-WL-122	Temp. Easement	PEM	0.0	0.1	0.0	-
50.9	CAL-WL-124	Access Road	PFO	0.0	0.1	0.1	0.1
50.9	CAL-WL-124	Access Road	PEM	0.0	0.2	0.2	-
50.9	CAL-WL-125	Access Road	PEM	0.0	0.0	0.0	-
50.9	CAL-WL-125	Perm. Easement	PEM	162.0	0.1	0.1	-
50.9	CAL-WL-125	Temp. Easement	PEM	0.0	0.1	0.0	-
51.0	CAL-WL-125	Perm. Easement	PFO	0.0	0.1	0.1	0.1
51.0	CAL-WL-125	Temp. Easement	PFO	0.0	0.1	0.0	-
51.0	CAL-WL-126	Perm. Easement	PEM	294.6	0.1	0.1	-
51.0	CAL-WL-126	Temp. Easement	PEM	0.0	0.1	0.0	-
51.0	CAL-WL-126	Temp. Easement	PFO	0.0	0.1	0.0	-
51.0	CAL-WL-126	Access Road	PEM	0.0	0.1	0.0	-
51.0	CAL-WL-126	Perm. Easement	PFO	0.0	0.2	0.2	0.2
51.1	CAL-WL-128	Perm. Easement	PEM	51.7	0.1	0.1	-
51.1	CAL-WL-128	Temp. Easement	PEM	0.0	0.0	0.0	-
51.1	CAL-WL-128	Temp. Easement	PEM	0.0	0.1	0.0	-
51.3	CAL-WL-129	ATWS	PFO	0.0	0.1	0.0	-
51.3	CAL-WL-129	Perm. Easement	PFO	357.7	1.3	1.3	1.3
51.3	CAL-WL-129	ATWS	PFO	0.0	0.1	0.0	-
51.4	CAL-WL-129	ATWS	PFO	0.0	0.4	0.0	-
51.5	CAL-WL-129	Temp. Easement	PFO	0.0	0.8	0.0	-
51.5	CAL-WL-129	Temp. Easement	PFO	0.0	0.5	0.0	-
51.5	CAL-WL-129	ATWS	PFO	0.0	0.2	0.0	-
51.5	CAL-WL-129	ATWS	PEM	0.0	0.0	0.0	-
51.5	CAL-WL-129	ATWS	PEM	0.0	0.0	0.0	-
51.5	CAL-WL-129	Perm. Easement	PEM	165.6	0.4	0.4	-
51.5	CAL-WL-129	Temp. Easement	PEM	0.0	0.3	0.0	-
51.6	CAL-WL-129	ATWS	PEM	0.0	0.1	0.0	-
51.6	CAL-WL-129	ATWS	PEM	0.0	0.0	0.0	-
51.6	CAL-WL-129	ATWS	PFO	0.0	0.1	0.0	-
51.6	CAL-WL-129	ATWS	PEM	0.0	0.0	0.0	-
51.6	CAL-WL-129	ATWS	PEM	0.0	0.0	0.0	-
51.6	CAL-WL-129	Temp. Easement	PEM	0.0	0.2	0.0	-
51.6	CAL-WL-129	ATWS	PFO	0.0	0.1	0.0	-
51.6	CAL-WL-129	Perm. Easement	PFO	165.6	0.2	0.2	0.2
51.6	CAL-WL-129	Temp. Easement	PFO	0.0	0.1	0.0	-
51.6	CAL-WL-129	Temp. Easement	PFO	0.0	0.1	0.0	-
51.6	CAL-WL-130	ATWS	PFO	0.0	0.0	0.0	-
51.6	CAL-WL-130	Perm. Easement	PFO	476.6	0.6	0.6	0.6
51.7	CAL-WL-130	Temp. Easement	PFO	0.0	0.2	0.0	-
51.7	CAL-WL-130	Temp. Easement	PFO	0.0	0.1	0.0	-
51.7	CAL-WL-130	Temp. Easement	PFO	0.0	0.2	0.0	-
51.7	CAL-WL-130	Temp. Easement	PFO	0.0	0.1	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
51.7	CAL-WL-130	ATWS	PFO	0.0	0.1	0.0	-
51.7	CAL-WL-130	ATWS	PFO	0.0	0.1	0.0	-
51.7	CAL-WL-131	ATWS	PFO	0.0	0.1	0.0	-
51.7	CAL-WL-131	ATWS	PFO	0.0	0.1	0.0	-
51.7	CAL-WL-131	Perm. Easement	PFO	417.0	0.5	0.5	0.5
51.7	CAL-WL-131	Temp. Easement	PFO	0.0	0.2	0.0	-
51.8	CAL-WL-131	ATWS	PFO	0.0	0.3	0.0	-
51.8	CAL-WL-131	ATWS	PFO	0.0	0.1	0.0	-
51.8	CAL-WL-131	Temp. Easement	PFO	0.0	0.2	0.0	-
51.8	CAL-WL-131	Perm. Easement	PEM	417.0	0.1	0.1	-
51.8	CAL-WL-131	Temp. Easement	PEM	0.0	0.0	0.0	-
51.8	CAL-WL-131	Temp. Easement	PEM	0.0	0.0	0.0	-
51.9	CAL-WL-132	Perm. Easement	PFO	1,551.0	1.8	1.8	1.8
51.9	CAL-WL-132	ATWS	PFO	0.0	0.2	0.0	-
51.9	CAL-WL-132	Temp. Easement	PFO	0.0	1.0	0.0	-
52.1	CAL-WL-132	ATWS	PFO	0.0	0.0	0.0	-
52.1	CAL-WL-132	ATWS	PFO	0.0	0.2	0.0	-
52.1	CAL-WL-132	Temp. Easement	PFO	0.0	0.0	0.0	-
52.1	CAL-WL-132	Temp. Easement	PFO	0.0	0.7	0.0	-
52.3	CAL-WL-133	Perm. Easement	PEM	58.5	0.3	0.3	-
52.3	CAL-WL-133	Temp. Easement	PEM	0.0	0.1	0.0	-
52.3	CAL-WL-133	ATWS	PEM	0.0	0.0	0.0	-
52.3	CAL-WL-133	Temp. Easement	PEM	0.0	0.1	0.0	-
52.3	CAL-WL-133	ATWS	PEM	0.0	0.3	0.0	-
52.3	CAL-WL-133	Perm. Easement	PSS	130.4	0.2	0.2	-
52.3	CAL-WL-133	Temp. Easement	PSS	0.0	0.0	0.0	-
52.3	CAL-WL-133	Temp. Easement	PEM	0.0	0.2	0.0	-
52.3	CAL-WL-133	Temp. Easement	PSS	0.0	0.0	0.0	-
52.3	CAL-WL-133	Temp. Easement	PSS	0.0	0.0	0.0	-
52.3	CAL-WL-133	Perm. Easement	PEM	0.0	0.0	0.0	-
52.3	CAL-WL-133	Temp. Easement	PSS	0.0	0.0	0.0	-
52.4	CAL-WL-133	ATWS	PEM	0.0	0.0	0.0	-
52.4	CAL-WL-133	Perm. Easement	PEM	18.1	0.1	0.1	-
52.4	CAL-WL-133	Temp. Easement	PEM	0.0	0.1	0.0	-
52.4	CAL-WL-134	Perm. Easement	PFO	0.0	0.0	0.0	0.0
52.4	CAL-WL-134	Temp. Easement	PFO	0.0	0.0	0.0	-
52.4	CAL-WL-135	Perm. Easement	PSS	24.8	0.0	0.0	-
52.4	CAL-WL-135	Temp. Easement	PSS	0.0	0.0	0.0	-
52.4	CAL-WL-135	Temp. Easement	PSS	0.0	0.0	0.0	-
52.4	CAL-WL-135	ATWS	PSS	0.0	0.0	0.0	-
52.4	CAL-WL-135	ATWS	PFO	0.0	0.0	0.0	-
52.5	CAL-WL-135	ATWS	PFO	0.0	0.1	0.0	-
52.5	CAL-WL-135	ATWS	PFO	0.0	0.1	0.0	-
52.5	CAL-WL-135	Perm. Easement	PFO	243.2	0.3	0.3	0.3
52.5	CAL-WL-135	Temp. Easement	PFO	0.0	0.1	0.0	-
52.5	CAL-WL-135	Temp. Easement	PFO	0.0	0.1	0.0	-
52.5	CAL-WL-136	Perm. Easement	PFO	193.6	0.2	0.2	0.2

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
52.5	CAL-WL-136	Temp. Easement	PFO	0.0	0.0	0.0	-
52.5	CAL-WL-136	Temp. Easement	PFO	0.0	0.0	0.0	-
52.6	CAL-WL-136	Temp. Easement	PFO	0.0	0.1	0.0	-
52.6	CAL-WL-136	Temp. Easement	PFO	0.0	0.0	0.0	-
52.6	CAL-WL-136	Perm. Easement	PFO	23.5	0.0	0.0	0.0
52.6	CAL-WL-136	Temp. Easement	PFO	0.0	0.0	0.0	-
52.6	CAL-WL-136	ATWS	PFO	0.0	0.0	0.0	-
52.6	CAL-WL-136	ATWS	PFO	0.0	0.0	0.0	-
52.6	CAL-WL-136	ATWS	PFO	0.0	0.1	0.0	-
52.6	CAL-WL-136	Perm. Easement	PFO	0.0	0.0	0.0	-
52.6	CAL-WL-136	Temp. Easement	PFO	0.0	0.1	0.0	-
52.6	CAL-WL-136	Perm. Easement	PFO	21.3	0.0	0.0	0.0
52.6	CAL-WL-136	Temp. Easement	PFO	0.0	0.0	0.0	-
52.7	CAL-WL-137	ATWS	PFO	0.0	0.0	0.0	-
52.7	CAL-WL-137	Perm. Easement	PFO	16.4	0.0	0.0	0.0
52.7	CAL-WL-137	Temp. Easement	PFO	0.0	0.0	0.0	-
52.7	CAL-WL-137	Temp. Easement	PFO	0.0	0.0	0.0	-
52.7	CAL-WL-137	ATWS	PFO	0.0	0.0	0.0	-
52.7	CAL-WL-137	Perm. Easement	PFO	28.4	0.0	0.0	0.0
52.7	CAL-WL-138	Temp. Easement	PFO	0.0	0.0	0.0	-
52.7	CAL-WL-137	Temp. Easement	PFO	0.0	0.0	0.0	-
52.7	CAL-WL-137	Temp. Easement	PFO	0.0	0.0	0.0	-
52.7	CAL-WL-138	Perm. Easement	PFO	74.4	0.3	0.3	0.3
52.7	CAL-WL-138	Temp. Easement	PFO	0.0	0.0	0.0	-
52.7	CAL-WL-138	Temp. Easement	PFO	0.0	0.0	0.0	-
52.7	CAL-WL-138	Temp. Easement	PFO	0.0	0.1	0.0	-
52.7	CAL-WL-138	Temp. Easement	PFO	0.0	0.0	0.0	-
52.8	CAL-WL-139	Perm. Easement	PFO	50.6	1.7	1.7	1.7
53.0	CAL-WL-139	ATWS	PFO	0.0	0.2	0.0	-
53.0	CAL-WL-139	Temp. Easement	PFO	0.0	0.7	0.0	-
53.0	CAL-WL-139	ATWS	PFO	0.0	0.1	0.0	-
53.0	CAL-WL-139	Temp. Easement	PFO	0.0	1.0	0.0	-
53.0	CAL-WL-139	ATWS	PEM	0.0	0.0	0.0	-
53.0	CAL-WL-139	Perm. Easement	PEM	235.3	0.1	0.1	-
53.0	CAL-WL-139	Temp. Easement	PEM	0.0	0.0	0.0	-
53.0	CAL-WL-139	ATWS	PFO	0.0	0.0	0.0	-
53.0	CAL-WL-139	ATWS	PFO	0.0	0.0	0.0	-
53.0	CAL-WL-139	ATWS	PEM	0.0	0.0	0.0	-
53.0	CAL-WL-139	Perm. Easement	PFO	235.3	0.3	0.3	0.3
53.0	CAL-WL-139	Temp. Easement	PFO	0.0	0.1	0.0	-
53.0	CAL-WL-139	Temp. Easement	PEM	0.0	0.0	0.0	-
53.1	CAL-WL-139	Temp. Easement	PFO	0.0	0.1	0.0	-
53.1	CAL-WL-139	ATWS	PFO	0.0	0.1	0.0	-
53.1	CAL-WL-139	ATWS	PFO	0.0	0.1	0.0	-
53.1	CAL-WL-140	ATWS	PFO	0.0	0.2	0.0	-
53.1	CAL-WL-140	Perm. Easement	PFO	307.0	0.3	0.3	0.3
53.1	CAL-WL-140	Temp. Easement	PFO	0.0	0.1	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
53.2	CAL-WL-140	Temp. Easement	PFO	0.0	0.2	0.0	-
53.2	CAL-WL-140	Perm. Easement	PFO	0.0	0.0	0.0	-
53.2	CAL-WL-140	Temp. Easement	PFO	0.0	0.0	0.0	-
53.2	CAL-WL-141	Perm. Easement	PFO	92.9	0.1	0.1	0.1
53.2	CAL-WL-141	ATWS	PFO	0.0	0.1	0.0	-
53.2	CAL-WL-141	Temp. Easement	PFO	0.0	0.1	0.0	-
53.2	CAL-WL-141	Temp. Easement	PFO	0.0	0.0	0.0	-
53.2	CAL-WL-141	Temp. Easement	PFO	0.0	0.0	0.0	-
53.3	CAL-WL-141	Perm. Easement	PFO	186.0	0.2	0.2	0.2
53.3	CAL-WL-141	Temp. Easement	PFO	0.0	0.1	0.0	-
53.3	CAL-WL-141	Temp. Easement	PFO	0.0	0.1	0.0	-
53.3	CAL-WL-141	Perm. Easement	PFO	97.1	0.3	0.3	0.3
53.3	CAL-WL-141	Temp. Easement	PFO	0.0	0.2	0.0	-
53.3	CAL-WL-141	Temp. Easement	PFO	0.0	0.1	0.0	-
53.4	CAL-WL-141	ATWS	PFO	0.0	0.0	0.0	-
53.4	CAL-WL-141	ATWS	PFO	0.0	0.1	0.0	-
53.4	CAL-WL-141	Perm. Easement	PFO	97.1	0.1	0.1	0.1
53.4	CAL-WL-141	Temp. Easement	PFO	0.0	0.1	0.0	-
53.4	CAL-WL-141	ATWS	PEM	0.0	0.0	0.0	-
53.4	CAL-WL-141	ATWS	PEM	0.0	0.0	0.0	-
53.4	CAL-WL-141	Temp. Easement	PEM	0.0	0.0	0.0	-
53.4	CAL-WL-141	Perm. Easement	PEM	0.0	0.0	0.0	-
53.4	CAL-WL-141	Temp. Easement	PEM	0.0	0.0	0.0	-
53.4	CAL-WL-142	Perm. Easement	PEM	0.0	0.0	0.0	-
53.4	CAL-WL-142	Perm. Easement	PFO	234.3	0.2	0.2	0.2
53.5	CAL-WL-142	Temp. Easement	PFO	0.0	0.1	0.0	-
53.5	CAL-WL-142	Temp. Easement	PEM	0.0	0.1	0.0	-
53.5	CAL-WL-142	Perm. Easement	PFO	0.0	0.0	0.0	0.0
53.5	CAL-WL-142	Perm. Easement	PEM	0.0	0.0	0.0	-
53.5	CAL-WL-142	Perm. Easement	PFO	25.5	0.0	0.0	0.0
53.5	CAL-WL-142	Temp. Easement	PEM	0.0	0.0	0.0	-
53.5	CAL-WL-142	Temp. Easement	PFO	0.0	0.0	0.0	-
53.5	CAL-WL-142	Perm. Easement	PFO	92.4	0.1	0.1	0.1
53.5	CAL-WL-142	Perm. Easement	PEM	0.0	0.0	0.0	-
53.5	CAL-WL-142	Temp. Easement	PFO	0.0	0.0	0.0	-
53.5	CAL-WL-142	Temp. Easement	PEM	0.0	0.0	0.0	-
53.5	CAL-WL-142	Temp. Easement	PEM	0.0	0.0	0.0	-
53.6	CAL-WL-143	Temp. Easement	PFO	0.0	0.1	0.0	-
53.6	CAL-WL-143	Perm. Easement	PFO	41.5	0.2	0.2	0.2
53.6	CAL-WL-143	Temp. Easement	PEM	0.0	0.0	0.0	-
53.6	CAL-WL-143	Perm. Easement	PEM	0.0	0.0	0.0	-
53.6	CAL-WL-143	Perm. Easement	PEM	0.0	0.0	0.0	-
53.6	CAL-WL-143	Temp. Easement	PEM	0.0	0.0	0.0	-
53.6	CAL-WL-143	Temp. Easement	PFO	0.0	0.1	0.0	-
53.6	CAL-WL-143	Temp. Easement	PEM	0.0	0.0	0.0	-
53.6	CAL-WL-143	Perm. Easement	PFO	85.7	0.1	0.1	0.1
53.6	CAL-WL-143	Temp. Easement	PFO	0.0	0.1	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
53.6	CAL-WL-143	Temp. Easement	PEM	0.0	0.0	0.0	-
53.7	CAL-WL-143	Perm. Easement	PEM	85.7	0.0	0.0	-
53.7	CAL-WL-143	Perm. Easement	PFO	0.0	0.0	0.0	0.0
53.7	CAL-WL-143	Perm. Easement	PEM	42.3	0.1	0.1	-
53.7	CAL-WL-143	Perm. Easement	PFO	0.0	0.1	0.1	0.1
53.7	CAL-WL-143	Temp. Easement	PFO	0.0	0.1	0.0	-
53.7	CAL-WL-143	Perm. Easement	PFO	0.0	0.1	0.1	0.1
53.7	CAL-WL-143	Temp. Easement	PFO	0.0	0.0	0.0	-
53.7	CAL-WL-143	Perm. Easement	PEM	48.8	0.0	0.0	-
53.7	CAL-WL-146	Temp. Easement	PFO	0.0	0.0	0.0	-
53.7	CAL-WL-143	Temp. Easement	PEM	0.0	0.3	0.0	-
53.8	CAL-WL-147	Temp. Easement	PFO	0.0	0.0	0.0	-
53.8	CAL-WL-149	Perm. Easement	PEM	16.9	0.0	0.0	-
53.8	CAL-WL-149	Temp. Easement	PFO	0.0	0.0	0.0	-
53.8	CAL-WL-149	Temp. Easement	PEM	0.0	0.0	0.0	-
53.8	CAL-WL-149	Perm. Easement	PFO	0.0	0.0	0.0	0.0
53.8	CAL-WL-149	Perm. Easement	PEM	16.9	0.0	0.0	-
53.8	CAL-WL-149	Temp. Easement	PEM	0.0	0.0	0.0	-
53.8	CAL-WL-150	Perm. Easement	PEM	23.7	0.0	0.0	-
53.8	CAL-WL-150	Temp. Easement	PEM	0.0	0.0	0.0	-
53.8	CAL-WL-150	Temp. Easement	PFO	0.0	0.0	0.0	-
53.9	CAL-WL-150	Perm. Easement	PEM	55.7	0.0	0.0	-
53.9	CAL-WL-150	Perm. Easement	PFO	0.0	0.0	0.0	0.0
53.9	CAL-WL-150	Temp. Easement	PEM	0.0	0.0	0.0	-
53.9	CAL-WL-150	Perm. Easement	PEM	0.0	0.0	0.0	-
53.9	CAL-WL-150	Temp. Easement	PEM	0.0	0.0	0.0	-
53.9	CAL-WL-150	Temp. Easement	PFO	0.0	0.0	0.0	-
53.9	CAL-WL-150	Perm. Easement	PEM	463.8	0.1	0.1	-
53.9	CAL-WL-150	Temp. Easement	PFO	0.0	0.0	0.0	-
53.9	CAL-WL-150	Perm. Easement	PFO	0.0	0.1	0.1	0.1
53.9	CAL-WL-150	Temp. Easement	PFO	0.0	0.2	0.0	-
53.9	CAL-WL-150	ATWS	PFO	0.0	0.1	0.0	-
54.0	CAL-WL-150	Temp. Easement	PEM	0.0	0.2	0.0	-
54.0	CAL-WL-150	Perm. Easement	PFO	0.0	0.2	0.2	0.2
54.0	CAL-WL-150	ATWS	PFO	0.0	0.0	0.0	-
54.0	CAL-WL-150	Temp. Easement	PFO	0.0	0.0	0.0	-
54.0	CAL-WL-151	Perm. Easement	PEM	11.7	0.0	0.0	-
54.0	CAL-WL-151	Temp. Easement	PEM	0.0	0.0	0.0	-
54.0	CAL-WL-152	Perm. Easement	PEM	0.0	0.0	0.0	-
54.0	CAL-WL-152	Perm. Easement	PFO	113.3	0.2	0.2	0.2
54.0	CAL-WL-152	Temp. Easement	PEM	0.0	0.1	0.0	-
54.0	CAL-WL-152	Temp. Easement	PFO	0.0	0.2	0.0	-
54.1	CAL-WL-152	Perm. Easement	PEM	0.0	0.0	0.0	-
54.1	CAL-WL-152	Temp. Easement	PEM	0.0	0.1	0.0	-
54.1	CAL-WL-152	ATWS	PFO	0.0	0.1	0.0	-
54.1	CAL-WL-152	Perm. Easement	PEM	0.0	0.0	0.0	-
54.1	CAL-WL-152	Perm. Easement	PFO	109.2	0.1	0.1	0.1

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
54.1	CAL-WL-152	Temp. Easement	PEM	0.0	0.1	0.0	-
54.1	CAL-WL-152	Temp. Easement	PFO	0.0	0.1	0.0	-
54.1	CAL-WL-152	ATWS	PFO	0.0	0.1	0.0	-
54.1	CAL-WL-152	Perm. Easement	PEM	0.0	0.0	0.0	-
54.1	CAL-WL-152	Perm. Easement	PFO	78.0	0.1	0.1	0.1
54.1	CAL-WL-152	Temp. Easement	PFO	0.0	0.1	0.0	-
54.1	CAL-WL-152	ATWS	PFO	0.0	0.1	0.0	-
54.2	CAL-WL-152	Perm. Easement	PFO	33.4	0.1	0.1	0.1
54.2	CAL-WL-152	Perm. Easement	PEM	24.6	0.0	0.0	-
54.2	CAL-WL-152	Temp. Easement	PEM	0.0	0.0	0.0	-
54.2	CAL-WL-152	Temp. Easement	PEM	0.0	0.0	0.0	-
54.2	CAL-WL-152	Temp. Easement	PEM	0.0	0.0	0.0	-
54.2	CAL-WL-152	Temp. Easement	PEM	0.0	0.0	0.0	-
54.2	CAL-WL-152	Perm. Easement	PFO	24.6	0.2	0.2	0.2
54.2	CAL-WL-152	Temp. Easement	PEM	0.0	0.1	0.0	-
54.2	CAL-WL-152	Perm. Easement	PFO	183.7	0.3	0.3	0.3
54.2	CAL-WL-152	Temp. Easement	PFO	0.0	0.2	0.0	-
54.2	CAL-WL-152	Perm. Easement	PEM	0.0	0.0	0.0	-
54.2	CAL-WL-152	Temp. Easement	PFO	0.0	0.0	0.0	-
54.3	CAL-WL-152	Perm. Easement	PEM	0.0	0.0	0.0	-
54.3	CAL-WL-152	Temp. Easement	PEM	0.0	0.1	0.0	-
54.3	CAL-WL-152	Temp. Easement	PFO	0.0	0.1	0.0	-
54.3	CAL-WL-152	Perm. Easement	PFO	69.5	0.1	0.1	0.1
54.3	CAL-WL-152	Perm. Easement	PEM	0.0	0.0	0.0	-
54.3	CAL-WL-152	Temp. Easement	PEM	0.0	0.0	0.0	-
54.3	CAL-WL-152	Temp. Easement	PFO	0.0	0.1	0.0	-
54.3	CAL-WL-152	Perm. Easement	PFO	20.1	0.0	0.0	0.0
54.3	CAL-WL-154	Temp. Easement	PEM	0.0	0.0	0.0	-
54.3	CAL-WL-154	Perm. Easement	PEM	0.0	0.0	0.0	-
54.3	CAL-WL-152	Temp. Easement	PFO	0.0	0.0	0.0	-
54.3	CAL-WL-154	Temp. Easement	PFO	0.0	0.0	0.0	-
54.4	CAL-WL-154	Perm. Easement	PFO	0.0	0.0	0.0	-
54.4	CAL-WL-156	Temp. Easement	PEM	0.0	0.0	0.0	-
54.4	CAL-WL-156	Perm. Easement	PEM	0.0	0.0	0.0	-
54.4	CAL-WL-156	Temp. Easement	PFO	0.0	0.0	0.0	-
54.4	CAL-WL-156	Perm. Easement	PFO	34.4	0.0	0.0	0.0
54.4	CAL-WL-156	Perm. Easement	PEM	0.0	0.0	0.0	-
54.4	CAL-WL-156	Temp. Easement	PEM	0.0	0.0	0.0	-
54.4	CAL-WL-157	Temp. Easement	PFO	0.0	0.6	0.0	-
54.4	CAL-WL-157	Perm. Easement	PFO	313.2	1.0	1.0	1.0
54.4	CAL-WL-157	Temp. Easement	PEM	0.0	0.1	0.0	-
54.4	CAL-WL-157	ATWS	PFO	0.0	0.3	0.0	-
54.4	CAL-WL-157	Perm. Easement	PEM	0.0	0.0	0.0	-
54.5	CAL-WL-157	Temp. Easement	PFO	0.0	0.1	0.0	-
54.5	CAL-WL-157	Temp. Easement	PFO	0.0	0.0	0.0	-
54.5	CAL-WL-157	ATWS	PFO	0.0	0.2	0.0	-
54.6	CAL-WL-157	ATWS	PFO	0.0	0.1	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
54.6	CAL-WL-157	ATWS	PFO	0.0	0.0	0.0	-
54.6	CAL-WL-157	Temp. Easement	PFO	0.0	0.0	0.0	-
54.6	CAL-WL-157	ATWS	PFO	0.0	0.1	0.0	-
54.6	CAL-WL-157	ATWS	PFO	0.0	0.0	0.0	-
54.6	CAL-WL-157	Temp. Easement	PFO	0.0	0.1	0.0	-
54.8	CAL-WL-158	ATWS	PFO	0.0	0.1	0.0	-
54.8	CAL-WL-158	ATWS	PFO	0.0	0.1	0.0	-
54.8	CAL-WL-158	Perm. Easement	PFO	890.9	0.1	0.1	0.1
54.8	CAL-WL-158	Temp. Easement	PFO	0.0	0.1	0.0	-
54.8	CAL-WL-158	Temp. Easement	PFO	0.0	0.0	0.0	-
54.8	CAL-WL-158	Perm. Easement	PEM	20.5	1.0	1.0	-
54.8	CAL-WL-158	Temp. Easement	PEM	0.0	0.0	0.0	-
54.8	CAL-WL-158	Temp. Easement	PEM	0.0	0.6	0.0	-
54.8	CAL-WL-158	Access Road	PEM	0.0	0.1	0.1	-
54.8	CAL-WL-158	ATWS	PEM	0.0	0.1	0.0	-
54.8	CAL-WL-158	ATWS	PEM	0.0	0.5	0.0	-
54.8	CAL-WL-158	ATWS	PEM	0.0	0.0	0.0	-
54.9	CAL-WL-158	ATWS	PEM	0.0	0.0	0.0	-
54.9	CAL-WL-158	Access Road	PEM	0.0	1.0	1.0	-
54.9	CAL-WL-158	ATWS	PEM	0.0	0.0	0.0	-
54.9	CAL-WL-158	ATWS	PEM	0.0	0.0	0.0	-
54.9	CAL-WL-158	ATWS	PFO	0.0	0.2	0.0	-
54.9	CAL-WL-158	ATWS	PEM	0.0	1.0	0.0	-
55.0	CAL-WL-158	Perm. Easement	PFO	20.5	0.0	0.0	0.0
55.0	CAL-WL-158	Temp. Easement	PEM	0.0	0.1	0.0	-
55.0	CAL-WL-158	Temp. Easement	PFO	0.0	0.0	0.0	-
55.0	CAL-WL-158	Temp. Easement	PEM	0.0	0.2	0.0	-
55.0	CAL-WL-158	Perm. Easement	PEM	20.5	0.8	0.8	-
55.0	CAL-WL-158	Temp. Easement	PFO	0.0	0.0	0.0	-
55.0	CAL-WL-158	Temp. Easement	PFO	0.0	0.0	0.0	-
55.0	CAL-WL-158	Temp. Easement	PEM	0.0	0.5	0.0	-
55.1	CAL-WL-158	Temp. Easement	PEM	0.0	0.2	0.0	-
55.1	CAL-WL-158	Temp. Easement	PEM	0.0	0.1	0.0	-
55.5	CAL-WL-159	Perm. Easement	PEM	164.1	0.7	0.7	-
55.5	CAL-WL-159	Temp. Easement	PEM	0.0	0.5	0.0	-
55.6	CAL-WL-159	Temp. Easement	PEM	0.0	0.2	0.0	-
55.7	CAL-WL-159	Temp. Easement	PEM	0.0	0.9	0.0	-
55.7	CAL-WL-159	Temp. Easement	PEM	0.0	0.3	0.0	-
55.8	CAL-WL-159	ATWS	PEM	0.0	0.2	0.0	-
55.8	CAL-WL-160	Perm. Easement	PEM	115.4	0.1	0.1	-
55.8	CAL-WL-160	Temp. Easement	PEM	0.0	0.1	0.0	-
55.8	CAL-WL-160	ATWS	PEM	0.0	0.1	0.0	-
55.8	CAL-WL-160	Temp. Easement	PEM	0.0	0.2	0.0	-
55.8	CAL-WL-160	Temp. Easement	PEM	0.0	0.1	0.0	-
55.8	CAL-WL-160	Perm. Easement	PEM	105.7	0.1	0.1	-
55.8	CAL-WL-160	Temp. Easement	PEM	0.0	0.1	0.0	-
55.9	CAL-WL-160	Perm. Easement	PEM	194.9	0.2	0.2	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
55.9	CAL-WL-160	Temp. Easement	PEM	0.0	0.1	0.0	-
55.9	CAL-WL-160	Temp. Easement	PEM	0.0	0.3	0.0	-
56.0	CAL-WL-160	Perm. Easement	PEM	237.8	0.2	0.2	-
56.0	CAL-WL-160	Temp. Easement	PEM	0.0	0.1	0.0	-
56.0	CAL-WL-160	Temp. Easement	PEM	0.0	0.2	0.0	-
56.0	CAL-WL-161	Perm. Easement	PEM	22.6	0.1	0.1	-
56.1	CAL-WL-161	Temp. Easement	PEM	0.0	0.3	0.0	-
56.2	CAL-WL-162	Perm. Easement	PEM	317.4	0.3	0.3	-
56.2	CAL-WL-162	Temp. Easement	PEM	0.0	0.3	0.0	-
56.2	CAL-WL-162	Perm. Easement	PFO	0.0	0.0	0.0	-
56.2	CAL-WL-162	Temp. Easement	PEM	0.0	0.2	0.0	-
56.2	CAL-WL-162	Temp. Easement	PFO	0.0	0.0	0.0	-
56.2	CAL-WL-162	Temp. Easement	PFO	0.0	0.0	0.0	-
56.3	CAL-WL-162	ATWS	PFO	0.0	0.1	0.0	-
56.3	CAL-WL-162	ATWS	PEM	0.0	0.0	0.0	-
56.3	CAL-WL-162	Perm. Easement	PEM	0.0	0.0	0.0	-
56.3	CAL-WL-162	Temp. Easement	PEM	0.0	0.0	0.0	-
56.3	CAL-WL-163	Temp. Easement	PEM	0.0	0.0	0.0	-
56.5	CAL-WL-164	Perm. Easement	PFO	187.0	0.2	0.2	0.2
56.5	CAL-WL-164	Temp. Easement	PFO	0.0	0.1	0.0	-
56.6	CAL-WL-164	ATWS	PFO	0.0	0.0	0.0	-
56.6	CAL-WL-164	Temp. Easement	PFO	0.0	0.1	0.0	-
56.6	CAL-WL-164	ATWS	PFO	0.0	0.1	0.0	-
56.7	CAL-WL-165	Perm. Easement	PEM	215.2	0.3	0.3	-
56.7	CAL-WL-165	Temp. Easement	PEM	0.0	0.2	0.0	-
56.7	CAL-WL-165	Temp. Easement	PEM	0.0	0.2	0.0	-
56.7	CAL-WL-165	ATWS	PEM	0.0	0.2	0.0	-
56.7	CAL-WL-165	Access Road	PEM	0.0	0.3	0.3	-
56.7	CAL-WL-165	ATWS	PEM	0.0	0.0	0.0	-
56.7	CAL-WL-165	Temp. Easement	PEM	0.0	0.0	0.0	-
57.3	CAL-WL-168	Access Road	PFO	0.0	0.0	0.0	0.0
57.4	CAL-WL-169	Access Road	PFO	0.0	0.1	0.1	0.1
57.4	CAL-WL-169	Access Road	PFO	0.0	0.1	0.1	0.1
57.9	CAL-WL-170	Temp. Easement	PFO	0.0	0.0	0.0	-
58.1	CAL-WL-171	Perm. Easement	PFO	70.9	0.1	0.1	0.1
58.1	CAL-WL-171	Temp. Easement	PFO	0.0	0.1	0.0	-
58.1	CAL-WL-171	Temp. Easement	PFO	0.0	0.0	0.0	-
58.5	CAL-WL-172	Perm. Easement	PFO	0.0	0.0	0.0	0.0
58.5	CAL-WL-172	Temp. Easement	PFO	0.0	0.1	0.0	-
58.5	CAL-WL-172	Perm. Easement	PFO	0.0	0.0	0.0	0.0
58.5	CAL-WL-172	Temp. Easement	PFO	0.0	0.1	0.0	-
58.6	CAL-WL-242	Contractor Yd	PEM	0.0	2.5	0.0	-
58.8	CAL-WL-173	Access Road	PEM	0.0	0.0	0.0	-
58.8	CAL-WL-243	Contractor Yd	PEM	0.0	0.5	0.0	-
59.1	CAL-WL-174	ATWS	PFO	0.0	0.1	0.0	-
59.1	CAL-WL-174	Perm. Easement	PEM	171.1	0.1	0.1	-
59.1	CAL-WL-174	Temp. Easement	PEM	0.0	0.1	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
59.1	CAL-WL-174	Temp. Easement	PFO	0.0	0.2	0.0	-
59.2	CAL-WL-174	Perm. Easement	PFO	0.0	0.0	0.0	-
59.2	CAL-WL-175	Perm. Easement	PEM	307.0	0.2	0.2	-
59.2	CAL-WL-175	Temp. Easement	PFO	0.0	0.3	0.0	-
59.3	CAL-WL-175	Temp. Easement	PEM	0.0	0.1	0.0	-
59.3	CAL-WL-175	Perm. Easement	PFO	0.0	0.0	0.0	0.0
59.3	CAL-WL-176	Perm. Easement	PEM	1,429.1	0.7	0.7	-
59.5	CAL-WL-176	Temp. Easement	PEM	0.0	0.8	0.0	-
59.5	CAL-WL-176	Temp. Easement	PFO	0.0	2.0	0.0	-
59.6	CAL-WL-176	Perm. Easement	PFO	68.2	0.8	0.8	0.8
59.6	CAL-WL-176	Perm. Easement	PFO	68.2	0.1	0.1	0.1
59.6	CAL-WL-176	Temp. Easement	PEM	0.0	0.1	0.0	-
59.7	CAL-WL-176	ATWS	PFO	0.0	0.6	0.0	-
59.7	CAL-WL-176	ATWS	PFO	0.0	0.3	0.0	-
59.7	CAL-WL-176	Perm. Easement	PEM	68.2	0.1	0.1	-
59.7	CAL-WL-176	Temp. Easement	PFO	0.0	0.2	0.0	-
59.7	CAL-WL-176	Temp. Easement	PEM	0.0	0.0	0.0	-
59.7	CAL-WL-176	Access Road	PEM	0.0	0.3	0.3	-
60.0	CAL-WL-179	ATWS	PEM	0.0	0.3	0.0	-
60.0	CAL-WL-179	Access Road	PEM	0.0	0.6	0.6	-
60.0	CAL-WL-179	ATWS	PFO	0.0	0.4	0.0	-
60.0	CAL-WL-179	ATWS	PFO	0.0	0.4	0.0	-
60.1	CAL-WL-181	ATWS	PEM	0.0	0.2	0.0	-
60.2	CAL-WL-182	ATWS	PFO	0.0	0.0	0.0	-
60.2	CAL-WL-183	Perm. Easement	PEM	155.8	0.1	0.1	-
60.2	CAL-WL-183	Perm. Easement	PFO	0.0	0.1	0.1	0.1
60.2	CAL-WL-183	Temp. Easement	PFO	0.0	0.1	0.0	-
60.3	CAL-WL-183	ATWS	PFO	0.0	0.0	0.0	-
60.3	CAL-WL-183	Perm. Easement	PEM	87.5	0.0	0.0	-
60.3	CAL-WL-183	Temp. Easement	PEM	0.0	0.1	0.0	-
60.3	CAL-WL-183	Perm. Easement	PFO	0.0	0.0	0.0	0.0
60.3	CAL-WL-184	Temp. Easement	PFO	0.0	0.0	0.0	-
60.3	CAL-WL-184	Perm. Easement	PEM	28.0	0.1	0.1	-
60.3	CAL-WL-184	Perm. Easement	PFO	17.8	0.0	0.0	0.0
60.3	CAL-WL-184	Temp. Easement	PFO	0.0	0.0	0.0	-
60.3	CAL-WL-178	Perm. Easement	PEM	28.0	0.0	0.0	-
60.3	CAL-WL-184	Perm. Easement	PFO	54.6	0.0	0.0	0.0
60.3	CAL-WL-184	Temp. Easement	PFO	0.0	0.0	0.0	-
60.3	CAL-WL-184	Perm. Easement	PFO	108.4	0.0	0.0	0.0
60.4	CAL-WL-184	Perm. Easement	PFO	113.0	0.1	0.1	0.1
60.4	CAL-WL-184	Temp. Easement	PFO	0.0	0.1	0.0	-
60.4	CAL-WL-184	Temp. Easement	PEM	0.0	0.2	0.0	-
60.4	CAL-WL-184	Perm. Easement	PFO	25.5	0.0	0.0	0.0
60.4	CAL-WL-184	Perm. Easement	PEM	0.0	0.0	0.0	-
60.4	CAL-WL-184	Temp. Easement	PEM	0.0	0.2	0.0	-
60.5	CAL-WL-184	Perm. Easement	PEM	58.1	0.1	0.1	-
60.5	CAL-WL-185	Perm. Easement	PEM	278.5	0.2	0.2	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
60.5	CAL-WL-185	Temp. Easement	PEM	0.0	0.0	0.0	-
60.5	CAL-WL-185	Temp. Easement	PEM	0.0	0.2	0.0	-
60.8	CAL-WL-187	ATWS	PFO	0.0	0.1	0.0	-
61.7	CAL-WL-188	Temp. Easement	PEM	0.0	0.8	0.0	-
61.7	CAL-WL-188	Perm. Easement	PEM	293.1	0.1	0.1	-
61.8	CAL-WL-188	Temp. Easement	PFO	0.0	0.4	0.0	-
61.8	CAL-WL-188	Perm. Easement	PFO	293.1	0.3	0.3	0.3
61.9	CAL-WL-188	Perm. Easement	PEM	300.2	0.1	0.1	-
61.9	CAL-WL-188	Perm. Easement	PFO	0.0	0.1	0.1	0.1
61.9	CAL-WL-188	Temp. Easement	PFO	0.0	0.3	0.0	-
61.9	CAL-WL-188	ATWS	PFO	0.0	0.2	0.0	-
61.9	CAL-WL-189	Perm. Easement	PEM	638.1	0.2	0.2	-
61.9	CAL-WL-189	Perm. Easement	PFO	638.1	0.1	0.1	0.1
62.0	CAL-WL-189	ATWS	PFO	0.0	0.1	0.0	-
62.0	CAL-WL-189	Perm. Easement	PFO	0.0	0.0	0.0	-
62.0	CAL-WL-189	Temp. Easement	PFO	0.0	0.6	0.0	-
62.1	CAL-WL-189	Perm. Easement	PFO	0.0	0.1	0.1	0.1
62.1	CAL-WL-189	Temp. Easement	PEM	0.0	0.3	0.0	-
62.1	CAL-WL-190	Perm. Easement	PFO	125.7	0.1	0.1	0.1
62.1	CAL-WL-190	Perm. Easement	PEM	0.0	0.0	0.0	-
62.1	CAL-WL-190	Temp. Easement	PFO	0.0	0.2	0.0	-
62.1	CAL-WL-190	Temp. Easement	PEM	0.0	0.1	0.0	-
62.3	CAL-WL-191	Temp. Easement	PFO	0.0	0.2	0.0	-
62.3	CAL-WL-191	Perm. Easement	PFO	79.6	0.1	0.1	0.1
62.3	CAL-WL-191	Temp. Easement	PFO	0.0	0.0	0.0	-
62.4	CAL-WL-192	Perm. Easement	PSS	165.9	0.1	0.1	-
62.4	CAL-WL-192	Temp. Easement	PSS	0.0	0.1	0.0	-
62.4	CAL-WL-192	Temp. Easement	PEM	0.0	0.1	0.0	-
62.4	CAL-WL-193	Perm. Easement	PFO	41.1	0.0	0.0	0.0
62.4	CAL-WL-193	Perm. Easement	PEM	0.0	0.0	0.0	-
62.4	CAL-WL-193	Temp. Easement	PFO	0.0	0.1	0.0	-
62.4	CAL-WL-193	Temp. Easement	PEM	0.0	0.0	0.0	-
62.7	CAL-WL-194	Perm. Easement	PEM	12.2	0.0	0.0	-
62.7	CAL-WL-194	Temp. Easement	PSS	0.0	0.1	0.0	-
62.7	CAL-WL-194	Temp. Easement	PEM	0.0	0.0	0.0	-
62.7	CAL-WL-194	Perm. Easement	PSS	12.2	0.1	0.1	-
62.7	CAL-WL-194	ATWS	PSS	0.0	0.0	0.0	-
62.8	CAL-WL-195	Perm. Easement	PEM	117.5	0.0	0.0	-
62.8	CAL-WL-195	Perm. Easement	PSS	117.5	0.1	0.1	-
62.8	CAL-WL-195	Temp. Easement	PEM	0.0	0.1	0.0	-
62.8	CAL-WL-195	Temp. Easement	PSS	0.0	0.0	0.0	-
62.8	CAL-WL-195	Temp. Easement	PSS	0.0	0.0	0.0	-
62.8	CAL-WL-196	ATWS	PFO	0.0	0.1	0.0	-
62.8	CAL-WL-196	Perm. Easement	PFO	0.0	0.1	0.1	0.1
62.8	CAL-WL-196	Temp. Easement	PFO	0.0	0.2	0.0	-
62.9	CAL-WL-197	Perm. Easement	PEM	0.0	0.0	0.0	-
62.9	CAL-WL-197	Perm. Easement	PFO	0.0	0.0	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
62.9	CAL-WL-197	Temp. Easement	PFO	0.0	0.0	0.0	-
62.9	CAL-WL-198	Perm. Easement	PFO	0.0	0.0	0.0	0.0
62.9	CAL-WL-198	Perm. Easement	PEM	0.0	0.0	0.0	-
62.9	CAL-WL-198	Temp. Easement	PEM	0.0	0.0	0.0	-
62.9	CAL-WL-198	ATWS	PFO	0.0	0.1	0.0	-
62.9	CAL-WL-198	Temp. Easement	PFO	0.0	0.2	0.0	-
63.0	CAL-WL-198	Perm. Easement	PFO	0.0	0.0	0.0	-
63.0	CAL-WL-199	ATWS	PFO	0.0	0.2	0.0	-
63.0	CAL-WL-199	Perm. Easement	PFO	0.0	0.0	0.0	0.0
63.0	CAL-WL-199	Temp. Easement	PFO	0.0	0.7	0.0	-
63.1	CAL-WL-199	Perm. Easement	PFO	146.3	0.1	0.1	0.1
63.1	CAL-WL-199	Temp. Easement	PFO	0.0	0.0	0.0	-
63.1	CAL-WL-199	Perm. Easement	PFO	10.4	0.1	0.1	0.1
63.1	CAL-WL-199	Perm. Easement	PEM	10.4	0.0	0.0	-
63.1	CAL-WL-199	Temp. Easement	PEM	0.0	0.1	0.0	-
63.1	CAL-WL-199	Perm. Easement	PEM	30.8	0.0	0.0	-
63.1	CAL-WL-199	Perm. Easement	PFO	30.8	0.0	0.0	0.0
63.1	CAL-WL-199	Temp. Easement	PEM	0.0	0.0	0.0	-
63.1	CAL-WL-199	Temp. Easement	PFO	0.0	0.0	0.0	-
63.1	CAL-WL-200	Perm. Easement	PFO	133.1	0.1	0.1	0.1
63.1	CAL-WL-200	Perm. Easement	PEM	0.0	0.0	0.0	-
63.1	CAL-WL-200	Temp. Easement	PEM	0.0	0.0	0.0	-
63.2	CAL-WL-200	Temp. Easement	PFO	0.0	0.2	0.0	-
63.2	CAL-WL-201	Perm. Easement	PFO	73.8	0.1	0.1	0.1
63.2	CAL-WL-201	Temp. Easement	PFO	0.0	0.0	0.0	-
63.2	CAL-WL-201	Temp. Easement	PEM	0.0	0.0	0.0	-
63.3	CAL-WL-202	Perm. Easement	PFO	544.9	0.4	0.4	0.4
63.3	CAL-WL-202	Temp. Easement	PFO	0.0	0.0	0.0	-
63.3	CAL-WL-202	Temp. Easement	PFO	0.0	0.6	0.0	-
63.4	CAL-WL-202	Temp. Easement	PEM	0.0	0.2	0.0	-
63.4	CAL-WL-202	Perm. Easement	PEM	0.0	0.0	0.0	-
63.5	CAL-WL-203	Perm. Easement	PFO	39.8	0.0	0.0	0.0
63.5	CAL-WL-203	Temp. Easement	PFO	0.0	0.0	0.0	-
63.5	CAL-WL-203	Perm. Easement	PEM	7.7	0.0	0.0	-
63.5	CAL-WL-203	Temp. Easement	PEM	0.0	0.0	0.0	-
63.5	CAL-WL-203	Temp. Easement	PFO	0.0	0.4	0.0	-
63.6	CAL-WL-203	Perm. Easement	PFO	7.7	0.1	0.1	0.1
63.7	CAL-WL-204	Perm. Easement	PFO	164.9	0.1	0.1	0.1
63.7	CAL-WL-204	Perm. Easement	PEM	164.9	0.0	0.0	-
63.7	CAL-WL-204	Temp. Easement	PFO	0.0	0.1	0.0	-
63.7	CAL-WL-204	Temp. Easement	PEM	0.0	0.1	0.0	-
63.8	CAL-WL-205	Access Road	PFO	0.0	0.1	0.0	-
63.8	CAL-WL-205	Temp. Easement	PEM	0.0	0.0	0.0	-
63.8	CAL-WL-205	Perm. Easement	PEM	33.2	0.0	0.0	-
63.8	CAL-WL-205	Perm. Easement	PFO	0.0	0.0	0.0	0.0
63.8	CAL-WL-205	Temp. Easement	PFO	0.0	0.2	0.0	-
63.8	CAL-WL-205	ATWS	PFO	0.0	0.2	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
63.8	CAL-WL-205	Perm. Easement	PFO	0.0	0.0	0.0	-
63.8	CAL-WL-205	Perm. Easement	PEM	37.4	0.0	0.0	-
63.8	CAL-WL-205	Temp. Easement	PEM	0.0	0.0	0.0	-
63.8	CAL-WL-205	Temp. Easement	PEM	0.0	0.0	0.0	-
63.8	CAL-WL-206	ATWS	PSS	0.0	0.1	0.0	-
63.8	CAL-WL-206	Temp. Easement	PSS	0.0	0.0	0.0	-
64.5	CAL-WL-210	Perm. Easement	PEM	10.2	0.0	0.0	-
64.5	CAL-WL-210	Temp. Easement	PEM	0.0	0.0	0.0	-
65.6	CAL-WL-214	Temp. Easement	PFO	0.0	0.0	0.0	-
65.6	CAL-WL-214	ATWS	PFO	0.0	0.0	0.0	-
65.6	CAL-WL-214	ATWS	PFO	0.0	0.0	0.0	-
65.6	CAL-WL-214	Perm. Easement	PFO	31.0	0.1	0.1	0.1
65.6	CAL-WL-214	Temp. Easement	PFO	0.0	0.1	0.0	-
65.7	CAL-WL-215	Perm. Easement	PFO	0.0	0.0	0.0	0.0
65.7	CAL-WL-215	Temp. Easement	PFO	0.0	0.0	0.0	-
65.8	CAL-WL-216	Perm. Easement	PEM	21.2	0.0	0.0	-
65.8	CAL-WL-216	Temp. Easement	PEM	0.0	0.1	0.0	-
65.8	CAL-WL-216	Temp. Easement	PEM	0.0	0.0	0.0	-
65.8	CAL-WL-216	Access Road	PEM	0.0	0.1	0.0	-
65.9	CAL-WL-217	Access Road	PEM	0.0	0.1	0.0	-
65.9	CAL-WL-217	Perm. Easement	PEM	151.6	0.1	0.1	-
65.9	CAL-WL-217	Temp. Easement	PFO	0.0	0.2	0.0	-
65.9	CAL-WL-217	Temp. Easement	PEM	0.0	0.1	0.0	-
65.9	CAL-WL-217	Perm. Easement	PFO	0.0	0.1	0.1	0.1
66.1	CAL-WL-229	Access Road	PEM	0.0	0.0	0.0	-
66.1	CAL-WL-218	ATWS	PFO	0.0	0.3	0.0	-
66.1	CAL-WL-218	Temp. Easement	PFO	0.0	0.1	0.0	-
66.1	CAL-WL-218	Temp. Easement	PEM	0.0	0.0	0.0	-
66.1	CAL-WL-218	Perm. Easement	PFO	0.0	0.0	0.0	0.0
66.1	CAL-WL-218	ATWS	PEM	0.0	0.0	0.0	-
66.1	CAL-WL-218	Perm. Easement	PEM	17.5	0.1	0.1	-
66.1	CAL-WL-218	Temp. Easement	PEM	0.0	0.1	0.0	-
66.1	CAL-WL-218	Access Road	PFO	0.0	0.0	0.0	-
66.2	CAL-WL-219	Access Road	PEM	0.0	0.0	0.0	-
66.2	CAL-WL-219	ATWS	PEM	0.0	0.0	0.0	-
66.2	CAL-WL-219	Perm. Easement	PEM	14.2	0.0	0.0	-
66.2	CAL-WL-219	Temp. Easement	PEM	0.0	0.0	0.0	-
66.2	CAL-WL-219	Temp. Easement	PEM	0.0	0.0	0.0	-
66.2	CAL-WL-224	Access Road	PEM	0.0	0.0	0.0	-
66.2	CAL-WL-225	Access Road	PEM	0.0	0.2	0.0	-
66.2	CAL-WL-226	Access Road	PEM	0.0	0.0	0.0	-
66.2	CAL-WL-226	Access Road	PEM	0.0	0.1	0.0	-
66.2	CAL-WL-226	Access Road	PEM	0.0	0.1	0.0	-
66.2	CAL-WL-226	Access Road	PEM	0.0	0.0	0.0	-
66.4	CAL-WL-220	ATWS	PFO	0.0	0.0	0.0	-
66.4	CAL-WL-220	Temp. Easement	PFO	0.0	0.1	0.0	-
66.4	CAL-WL-220	Temp. Easement	PEM	0.0	0.0	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
66.4	CAL-WL-220	Perm. Easement	PEM	19.9	0.1	0.1	-
66.4	CAL-WL-220	Temp. Easement	PFO	0.0	0.0	0.0	-
66.4	CAL-WL-220	Temp. Easement	PEM	0.0	0.0	0.0	-
66.4	CAL-WL-220	Temp. Easement	PEM	0.0	0.0	0.0	-
66.4	CAL-WL-221	Perm. Easement	PEM	19.6	0.0	0.0	-
66.4	CAL-WL-221	Temp. Easement	PFO	0.0	0.0	0.0	-
66.4	CAL-WL-221	Temp. Easement	PEM	0.0	0.0	0.0	-
66.4	CAL-WL-221	Temp. Easement	PEM	0.0	0.0	0.0	-
66.4	CAL-WL-222	Perm. Easement	PEM	10.4	0.0	0.0	-
66.4	CAL-WL-222	Temp. Easement	PEM	0.0	0.0	0.0	-
66.5	CAL-WL-222	Temp. Easement	PFO	0.0	0.1	0.0	-
66.5	CAL-WL-222	Temp. Easement	PEM	0.0	0.0	0.0	-
67.0	CAL-WL-223	Perm. Easement	PEM	83.2	0.1	0.1	-
67.0	CAL-WL-223	Temp. Easement	PEM	0.0	0.0	0.0	-
67.1	CAL-WL-223	Temp. Easement	PFO	0.0	0.7	0.0	-
67.1	CAL-WL-223	Perm. Easement	PFO	0.0	0.2	0.2	0.2
67.5	BEA-WL-002	Perm. Easement	PEM	41.3	0.6	0.6	-
67.5	BEA-WL-002	Temp. Easement	PEM	0.0	0.0	0.0	-
67.6	BEA-WL-002	Temp. Easement	PEM	0.0	0.8	0.0	-
67.6	BEA-WL-002	Temp. Easement	PEM	0.0	0.2	0.0	-
67.6	BEA-WL-002	Temp. Easement	PEM	0.0	0.1	0.0	-
67.6	BEA-WL-002	Temp. Easement	PSS	0.0	0.2	0.0	-
67.6	BEA-WL-002	Perm. Easement	PSS	0.0	0.1	0.1	-
67.7	BEA-WL-002	Temp. Easement	PEM	0.0	0.0	0.0	-
67.7	BEA-WL-002	Perm. Easement	PEM	0.0	0.0	0.0	-
67.7	BEA-WL-002	Perm. Easement	PEM	36.0	0.0	0.0	-
67.7	BEA-WL-002	Temp. Easement	PEM	0.0	0.0	0.0	-
67.7	BEA-WL-003	Perm. Easement	PSS	0.0	0.0	0.0	-
67.7	BEA-WL-003	Temp. Easement	PSS	0.0	0.0	0.0	-
67.8	BEA-WL-004	Perm. Easement	PSS	0.0	0.0	0.0	-
67.8	BEA-WL-004	Perm. Easement	PEM	51.3	0.0	0.0	-
67.8	BEA-WL-004	Temp. Easement	PSS	0.0	0.1	0.0	-
67.8	BEA-WL-004	Temp. Easement	PEM	0.0	0.0	0.0	-
67.8	BEA-WL-004	Temp. Easement	PEM	0.0	0.0	0.0	-
67.8	BEA-WL-004	Access Road	PSS	0.0	0.0	0.0	-
68.0	BEA-WL-057	Access Road	PEM	0.0	0.0	0.0	-
68.0	BEA-WL-007	Perm. Easement	PEM	30.0	0.0	0.0	-
68.0	BEA-WL-007	Temp. Easement	PFO	0.0	0.0	0.0	-
68.0	BEA-WL-007	Perm. Easement	PEM	0.7	0.0	0.0	-
68.0	BEA-WL-007	Temp. Easement	PEM	0.0	0.0	0.0	-
68.0	BEA-WL-008	Temp. Easement	PEM	0.0	0.2	0.0	-
68.0	BEA-WL-008	Perm. Easement	PFO	0.0	0.0	0.0	0.0
68.0	BEA-WL-008	Perm. Easement	PEM	171.4	0.1	0.1	-
68.0	BEA-WL-008	Temp. Easement	PFO	0.0	0.0	0.0	-
68.0	BEA-WL-008	Perm. Easement	PFO	0.0	0.0	0.0	-
68.0	BEA-WL-008	Temp. Easement	PFO	0.0	0.0	0.0	-
68.1	BEA-WL-008	Perm. Easement	PFO	0.0	0.0	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
68.1	BEA-WL-008	Temp. Easement	PFO	0.0	0.0	0.0	-
68.1	BEA-WL-008	Perm. Easement	PEM	47.1	0.0	0.0	-
68.1	BEA-WL-008	Perm. Easement	PEM	170.7	0.1	0.1	-
68.1	BEA-WL-008	Perm. Easement	PFO	0.0	0.0	0.0	0.0
68.1	BEA-WL-008	Perm. Easement	PFO	0.0	0.1	0.1	0.1
68.2	BEA-WL-008	Temp. Easement	PFO	0.0	0.2	0.0	-
68.2	BEA-WL-008	Temp. Easement	PEM	0.0	0.1	0.0	-
68.2	BEA-WL-008	Access Road	PEM	0.0	0.0	0.0	-
68.2	BEA-WL-008	ATWS	PFO	0.0	0.1	0.0	-
68.2	BEA-WL-008	Temp. Easement	PFO	0.0	0.0	0.0	-
68.9	BEA-WL-009	Temp. Easement	PEM	0.0	0.0	0.0	-
68.9	BEA-WL-009	Perm. Easement	PEM	9.2	0.0	0.0	-
68.9	BEA-WL-010	Temp. Easement	PFO	0.0	0.2	0.0	-
68.9	BEA-WL-009	Temp. Easement	PEM	0.0	0.0	0.0	-
69.0	BEA-WL-010	Perm. Easement	PFO	0.0	0.0	0.0	0.0
69.0	BEA-WL-011	Perm. Easement	PEM	308.2	0.2	0.2	-
69.0	BEA-WL-011	Temp. Easement	PEM	0.0	0.2	0.0	-
69.1	BEA-WL-011	Temp. Easement	PEM	0.0	0.2	0.0	-
69.3	BEA-WL-012	Access Road	PSS	0.0	0.0	0.0	-
69.3	BEA-WL-012	Perm. Easement	PEM	1,062.3	0.7	0.7	-
69.3	BEA-WL-012	Temp. Easement	PSS	0.0	1.0	0.0	-
69.5	BEA-WL-012	Perm. Easement	PSS	0.0	0.2	0.2	-
69.5	BEA-WL-012	Temp. Easement	PEM	0.0	0.5	0.0	-
69.6	BEA-WL-013	Perm. Easement	PEM	774.5	0.5	0.5	-
69.6	BEA-WL-013	Perm. Easement	PFO	0.0	0.1	0.1	0.1
69.7	BEA-WL-013	Temp. Easement	PFO	0.0	0.9	0.0	-
69.7	BEA-WL-013	Temp. Easement	PEM	0.0	0.0	0.0	-
69.7	BEA-WL-013	Temp. Easement	PEM	0.0	0.4	0.0	-
69.7	BEA-WL-013	Perm. Easement	PFO	129.9	0.2	0.2	0.2
69.7	BEA-WL-013	Temp. Easement	PFO	0.0	0.1	0.0	-
69.7	BEA-WL-013	ATWS	PFO	0.0	0.1	0.0	-
69.8	BEA-WL-012	ATWS	PFO	0.0	0.1	0.0	-
69.8	BEA-WL-012	Perm. Easement	PFO	129.9	0.1	0.1	0.1
69.8	BEA-WL-012	Temp. Easement	PFO	0.0	0.1	0.0	-
69.8	BEA-WL-012	Temp. Easement	PFO	0.0	0.1	0.0	-
69.8	BEA-WL-014	ATWS	PFO	0.0	0.2	0.0	-
69.8	BEA-WL-014	Perm. Easement	PFO	208.0	0.2	0.2	0.2
69.8	BEA-WL-014	Temp. Easement	PFO	0.0	0.2	0.0	-
69.8	BEA-WL-014	Temp. Easement	PFO	0.0	0.1	0.0	-
70.1	BEA-WL-016	Perm. Easement	PEM	83.9	1.0	1.0	-
70.1	BEA-WL-015	Access Road	PEM	0.0	0.0	0.0	-
70.1	BEA-WL-016	ATWS	PEM	0.0	0.3	0.0	-
70.2	BEA-WL-016	Temp. Easement	PEM	0.0	1.2	0.0	-
70.2	BEA-WL-016	Temp. Easement	PEM	0.0	0.5	0.0	-
70.3	BEA-WL-016	Temp. Easement	PEM	0.0	0.0	0.0	-
70.3	BEA-WL-017	Temp. Easement	PEM	0.0	0.1	0.0	-
70.3	BEA-WL-017	ATWS	PEM	0.0	0.1	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
70.5	BEA-WL-018	Perm. Easement	PEM	175.6	0.3	0.3	-
70.5	BEA-WL-018	Temp. Easement	PEM	0.0	0.4	0.0	-
70.5	BEA-WL-018	Temp. Easement	PEM	0.0	0.1	0.0	-
70.5	BEA-WL-018	ATWS	PEM	0.0	0.5	0.0	-
70.6	BEA-WL-018	Temp. Easement	PEM	0.0	0.1	0.0	-
70.6	BEA-WL-019	Perm. Easement	PEM	22.2	0.0	0.0	-
70.6	BEA-WL-020	Perm. Easement	PEM	41.9	0.0	0.0	-
70.6	BEA-WL-020	Temp. Easement	PEM	0.0	0.0	0.0	-
70.6	BEA-WL-021	Temp. Easement	PEM	0.0	0.0	0.0	-
70.8	BEA-WL-022	Perm. Easement	PEM	0.0	0.0	0.0	-
70.8	BEA-WL-022	Temp. Easement	PEM	0.0	0.0	0.0	-
70.8	BEA-WL-023	Perm. Easement	PEM	0.0	0.0	0.0	-
70.8	BEA-WL-023	Perm. Easement	PEM	97.6	0.1	0.1	-
70.8	BEA-WL-023	Temp. Easement	PFO	0.0	0.1	0.0	-
70.8	BEA-WL-023	Temp. Easement	PEM	0.0	0.0	0.0	-
70.8	BEA-WL-023	Temp. Easement	PEM	0.0	0.1	0.0	-
70.8	BEA-WL-023	ATWS	PFO	0.0	0.0	0.0	-
70.8	BEA-WL-023	Perm. Easement	PFO	0.0	0.0	0.0	0.0
71.0	BEA-WL-024	Perm. Easement	PEM	43.9	0.1	0.1	-
71.0	BEA-WL-024	Temp. Easement	PEM	0.0	0.1	0.0	-
71.1	BEA-WL-024	Temp. Easement	PEM	0.0	0.0	0.0	-
71.1	BEA-WL-025	Perm. Easement	PEM	6.2	0.0	0.0	-
71.1	BEA-WL-025	Temp. Easement	PEM	0.0	0.0	0.0	-
71.1	BEA-WL-026	Perm. Easement	PEM	779.6	0.9	0.9	-
71.1	BEA-WL-025	Temp. Easement	PEM	0.0	0.0	0.0	-
71.1	BEA-WL-026	ATWS	PEM	0.0	0.2	0.0	-
71.2	BEA-WL-026	ATWS	PEM	0.0	0.2	0.0	-
71.2	BEA-WL-026	Temp. Easement	PEM	0.0	0.5	0.0	-
71.2	BEA-WL-026	Temp. Easement	PEM	0.0	0.4	0.0	-
71.7	BEA-WL-027	Perm. Easement	PEM	194.8	0.1	0.1	-
71.7	BEA-WL-027	Temp. Easement	PEM	0.0	0.1	0.0	-
71.7	BEA-WL-027	Temp. Easement	PEM	0.0	0.1	0.0	-
72.3	BEA-WL-028	Perm. Easement	PEM	458.2	0.5	0.5	-
72.3	BEA-WL-028	Temp. Easement	PEM	0.0	0.1	0.0	-
72.3	BEA-WL-028	Temp. Easement	PEM	0.0	0.1	0.0	-
72.3	BEA-WL-028	Access Road	PEM	0.0	0.0	0.0	-
72.4	BEA-WL-028	Temp. Easement	PEM	0.0	0.1	0.0	-
72.4	BEA-WL-028	Temp. Easement	PEM	0.0	0.0	0.0	-
72.4	BEA-WL-029	Perm. Easement	PEM	133.9	0.1	0.1	-
72.4	BEA-WL-029	Temp. Easement	PEM	0.0	0.1	0.0	-
72.4	BEA-WL-029	Temp. Easement	PEM	0.0	0.1	0.0	-
72.7	BEA-WL-030	Perm. Easement	PEM	12.9	0.0	0.0	-
72.7	BEA-WL-030	Temp. Easement	PEM	0.0	0.0	0.0	-
72.7	BEA-WL-030	Temp. Easement	PEM	0.0	0.0	0.0	-
72.8	BEA-WL-031	ATWS	PEM	0.0	0.0	0.0	-
72.8	BEA-WL-031	Perm. Easement	PEM	14.2	0.0	0.0	-
72.8	BEA-WL-031	Temp. Easement	PEM	0.0	0.0	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
72.8	BEA-WL-031	Temp. Easement	PEM	0.0	0.0	0.0	-
73.0	BEA-WL-032	Perm. Easement	PEM	238.9	0.3	0.3	-
73.0	BEA-WL-032	Temp. Easement	PEM	0.0	0.1	0.0	-
73.0	BEA-WL-032	Temp. Easement	PEM	0.0	0.2	0.0	-
73.2	BEA-WL-033	Perm. Easement	PFO	192.9	0.2	0.2	0.2
73.2	BEA-WL-033	Temp. Easement	PFO	0.0	0.1	0.0	-
73.2	BEA-WL-033	Temp. Easement	PFO	0.0	0.1	0.0	-
73.2	BEA-WL-033	ATWS	PFO	0.0	0.1	0.0	-
73.2	BEA-WL-034	Temp. Easement	PEM	0.0	0.1	0.0	-
73.3	BEA-WL-035	Temp. Easement	PFO	0.0	0.2	0.0	-
73.3	BEA-WL-035	Perm. Easement	PFO	995.4	1.1	1.1	1.1
73.3	BEA-WL-035	Temp. Easement	PFO	0.0	0.7	0.0	-
73.3	BEA-WL-035	ATWS	PFO	0.0	0.2	0.0	-
73.4	BEA-WL-035	Temp. Easement	PEM	0.0	0.3	0.0	-
73.7	BEA-WL-037	Perm. Easement	PFO	52.3	0.1	0.1	0.1
73.7	BEA-WL-037	Temp. Easement	PEM	0.0	0.0	0.0	-
73.7	BEA-WL-037	Temp. Easement	PFO	0.0	0.0	0.0	-
73.7	BEA-WL-037	Temp. Easement	PFO	0.0	0.1	0.0	-
73.8	BEA-WL-037	Temp. Easement	PFO	0.0	0.0	0.0	-
73.8	BEA-WL-037	Perm. Easement	PFO	36.7	0.0	0.0	0.0
73.8	BEA-WL-037	Temp. Easement	PEM	0.0	0.0	0.0	-
73.8	BEA-WL-037	Temp. Easement	PFO	0.0	0.0	0.0	-
73.9	BEA-WL-038	Perm. Easement	PFO	21.2	0.2	0.2	0.2
73.9	BEA-WL-038	Access Road	PEM	0.0	0.1	0.1	-
73.9	BEA-WL-038	Temp. Easement	PEM	0.0	0.0	0.0	-
73.9	BEA-WL-038	Temp. Easement	PFO	0.0	0.0	0.0	-
74.0	BEA-WL-038	Temp. Easement	PFO	0.0	0.0	0.0	-
74.0	BEA-WL-038	Temp. Easement	PFO	0.0	0.1	0.0	-
74.0	BEA-WL-038	Temp. Easement	PFO	0.0	0.0	0.0	-
74.0	BEA-WL-038	Access Road	PEM	0.0	0.1	0.1	-
74.0	BEA-WL-039	Temp. Easement	PFO	0.0	0.1	0.0	-
74.0	BEA-WL-039	Perm. Easement	PFO	138.6	0.2	0.2	0.2
74.0	BEA-WL-039	Temp. Easement	PEM	0.0	0.0	0.0	-
74.0	BEA-WL-039	Temp. Easement	PFO	0.0	0.0	0.0	-
74.1	BEA-WL-040	Perm. Easement	PFO	15.4	0.1	0.1	0.1
74.1	BEA-WL-040	Temp. Easement	PEM	0.0	0.0	0.0	-
74.1	BEA-WL-040	Temp. Easement	PFO	0.0	0.0	0.0	-
74.1	BEA-WL-040	Temp. Easement	PFO	0.0	0.0	0.0	-
74.1	BEA-WL-040	Temp. Easement	PFO	0.0	0.0	0.0	-
74.1	BEA-WL-041	Perm. Easement	PFO	126.1	0.2	0.2	0.2
74.1	BEA-WL-041	Temp. Easement	PFO	0.0	0.1	0.0	-
74.1	BEA-WL-041	Temp. Easement	PEM	0.0	0.0	0.0	-
74.1	BEA-WL-041	Temp. Easement	PFO	0.0	0.0	0.0	-
74.2	BEA-WL-042	Perm. Easement	PFO	188.2	0.2	0.2	0.2
74.2	BEA-WL-042	Temp. Easement	PFO	0.0	0.1	0.0	-
74.2	BEA-WL-042	Temp. Easement	PEM	0.0	0.1	0.0	-
74.2	BEA-WL-042	Temp. Easement	PFO	0.0	0.2	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
74.3	BEA-WL-042	Perm. Easement	PFO	27.3	0.0	0.0	0.0
74.3	BEA-WL-042	Temp. Easement	PFO	0.0	0.0	0.0	-
74.3	BEA-WL-043	Temp. Easement	PFO	0.0	0.0	0.0	-
74.3	BEA-WL-043	Perm. Easement	PFO	246.8	0.7	0.7	0.7
74.3	BEA-WL-043	Temp. Easement	PFO	0.0	0.4	0.0	-
74.3	BEA-WL-043	Temp. Easement	PFO	0.0	0.0	0.0	-
74.4	BEA-WL-043	Temp. Easement	PFO	0.0	0.0	0.0	-
74.4	BEA-WL-043	Temp. Easement	PEM	0.0	0.2	0.0	-
74.4	BEA-WL-043	Perm. Easement	PFO	12.9	0.0	0.0	0.0
74.4	BEA-WL-043	Temp. Easement	PFO	0.0	0.0	0.0	-
74.5	BEA-WL-047	Perm. Easement	PFO	162.4	0.2	0.2	0.2
74.5	BEA-WL-047	Temp. Easement	PFO	0.0	0.0	0.0	-
74.6	BEA-WL-047	Perm. Easement	PFO	118.2	0.2	0.2	0.2
74.6	BEA-WL-047	Temp. Easement	PEM	0.0	0.0	0.0	-
74.6	BEA-WL-047	Temp. Easement	PFO	0.0	0.0	0.0	-
74.6	BEA-WL-047	Temp. Easement	PFO	0.0	0.3	0.0	-
74.6	BEA-WL-047	Temp. Easement	PEM	0.0	0.1	0.0	-
74.6	BEA-WL-048	Access Road	PEM	0.0	0.0	0.0	-
74.7	BEA-WL-049	Access Road	PEM	0.0	0.2	0.0	-
74.8	BEA-WL-051	Perm. Easement	PSS	84.6	1.8	1.8	-
74.8	BEA-WL-051	Temp. Easement	PSS	0.0	0.2	0.0	-
74.9	BEA-WL-051	Temp. Easement	PSS	0.0	0.7	0.0	-
74.9	BEA-WL-051	Temp. Easement	PEM	0.0	0.1	0.0	-
74.9	BEA-WL-051	Temp. Easement	PSS	0.0	0.1	0.0	-
75.0	BEA-WL-051	Temp. Easement	PSS	0.0	0.3	0.0	-
75.0	BEA-WL-051	Temp. Easement	PSS	0.0	0.0	0.0	-
75.0	BEA-WL-051	Perm. Easement	PSS	0.0	0.0	0.0	-
75.0	BEA-WL-051	Temp. Easement	PSS	0.0	0.0	0.0	-
75.1	BEA-WL-051	Temp. Easement	PEM	0.0	0.1	0.0	-
75.1	BEA-WL-051	Temp. Easement	PSS	0.0	0.1	0.0	-
75.1	BEA-WL-052	Perm. Easement	PEM	42.5	0.0	0.0	-
75.1	BEA-WL-052	Temp. Easement	PEM	0.0	0.0	0.0	-
75.1	BEA-WL-052	Perm. Easement	PEM	163.9	0.1	0.1	-
75.1	BEA-WL-052	Temp. Easement	PEM	0.0	0.0	0.0	-
75.1	BEA-WL-052	Temp. Easement	PEM	0.0	0.1	0.0	-
75.2	BEA-WL-052	Temp. Easement	PEM	0.0	0.0	0.0	-
75.2	BEA-WL-052	Perm. Easement	PEM	54.4	0.1	0.1	-
76.0	BEA-WL-054	ATWS	PEM	0.0	0.0	0.0	-
76.0	BEA-WL-054	Perm. Easement	PEM	37.3	0.0	0.0	-
76.0	BEA-WL-054	Temp. Easement	PEM	0.0	0.0	0.0	-
76.0	BEA-WL-054	Temp. Easement	PEM	0.0	0.0	0.0	-
76.1	BEA-WL-054	Perm. Easement	PEM	23.9	0.0	0.0	-
76.1	BEA-WL-054	Temp. Easement	PEM	0.0	0.0	0.0	-
76.1	BEA-WL-054	ATWS	PEM	0.0	0.0	0.0	-
76.4	BEA-WL-055	Perm. Easement	PEM	15.2	0.0	0.0	-
76.4	BEA-WL-055	Temp. Easement	PEM	0.0	0.0	0.0	-
76.4	BEA-WL-055	ATWS	PEM	0.0	0.1	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
76.4	BEA-WL-055	ATWS	PEM	0.0	0.1	0.0	-
76.4	BEA-WL-055	Perm. Easement	PEM	461.5	0.5	0.5	-
76.4	BEA-WL-055	Temp. Easement	PEM	0.0	0.2	0.0	-
76.5	BEA-WL-055	Temp. Easement	PEM	0.0	0.4	0.0	-
76.5	BEA-WL-055	Perm. Easement	PSS	461.5	0.3	0.3	-
76.5	BEA-WL-055	Temp. Easement	PSS	0.0	0.0	0.0	-
76.6	BEA-WL-055	Temp. Easement	PSS	0.0	0.0	0.0	-
76.6	BEA-WL-055	ATWS	PSS	0.0	0.0	0.0	-
76.6	BEA-WL-055	Perm. Easement	PSS	267.9	0.2	0.2	-
76.6	BEA-WL-055	Temp. Easement	PSS	0.0	0.2	0.0	-
76.6	BEA-WL-055	Temp. Easement	PSS	0.0	0.2	0.0	-
76.6	BEA-WL-055	ATWS	PSS	0.0	0.1	0.0	-
78.2	ALL-WL-001	Perm. Easement	PEM	54.4	0.0	0.0	-
78.2	ALL-WL-001	Perm. Easement	PFO	0.0	0.1	0.1	0.1
78.2	ALL-WL-001	Temp. Easement	PEM	0.0	0.0	0.0	-
78.2	ALL-WL-001	Temp. Easement	PFO	0.0	0.0	0.0	-
78.4	ALL-WL-002	Perm. Easement	PFO	67.9	0.1	0.1	0.1
78.4	ALL-WL-002	Temp. Easement	PEM	0.0	0.0	0.0	-
78.4	ALL-WL-002	Perm. Easement	PEM	0.0	0.0	0.0	-
78.4	ALL-WL-002	Temp. Easement	PFO	0.0	0.1	0.0	-
78.7	ALL-WL-003	Perm. Easement	PEM	0.0	0.0	0.0	-
78.7	ALL-WL-003	Perm. Easement	PFO	213.7	0.2	0.2	0.2
78.7	ALL-WL-003	Temp. Easement	PFO	0.0	0.2	0.0	-
78.7	ALL-WL-003	Temp. Easement	PEM	0.0	0.1	0.0	-
78.7	ALL-WL-003	ATWS	PFO	0.0	0.1	0.0	-
79.4	ALL-WL-007	ATWS	PFO	0.0	0.0	0.0	-
79.4	ALL-WL-007	Temp. Easement	PFO	0.0	0.0	0.0	-
79.5	ALL-WL-007	Perm. Easement	PFO	25.7	0.0	0.0	0.0
80.6	ALL-WL-008	Perm. Easement	PSS	47.9	0.1	0.1	-
80.6	ALL-WL-008	Temp. Easement	PSS	0.0	0.0	0.0	-
80.6	ALL-WL-008	Temp. Easement	PSS	0.0	0.0	0.0	-
81.1	ALL-WL-009	Perm. Easement	PFO	11.6	0.0	0.0	0.0
81.1	ALL-WL-009	Temp. Easement	PFO	0.0	0.0	0.0	-
81.1	ALL-WL-009	Temp. Easement	PFO	0.0	0.0	0.0	-
81.1	ALL-WL-010	Perm. Easement	PFO	1278.7	1.4	1.4	1.4
81.2	ALL-WL-010	Temp. Easement	PFO	0.0	0.7	0.0	-
81.3	ALL-WL-010	ATWS	PFO	0.0	0.1	0.0	-
81.4	ALL-WL-011	Temp. Easement	PFO	0.0	0.6	0.0	-
81.4	ALL-WL-010	Temp. Easement	PFO	0.0	0.6	0.0	-
81.4	ALL-WL-011	Perm. Easement	PFO	717.6	0.8	0.8	0.8
81.5	ALL-WL-011	ATWS	PFO	0.0	0.2	0.0	-
81.5	ALL-WL-011	Temp. Easement	PEM	0.0	0.0	0.0	-
81.5	ALL-WL-012	Temp. Easement	PFO	0.0	0.1	0.0	-
81.5	ALL-WL-012	Perm. Easement	PFO	0.0	0.0	0.0	0.0
81.6	ALL-WL-013	Perm. Easement	PEM	665.6	0.3	0.3	-
81.6	ALL-WL-012	ATWS	PFO	0.0	0.2	0.0	-
81.6	ALL-WL-013	ATWS	PEM	0.0	0.0	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
81.6	ALL-WL-013	ATWS	PFO	0.0	0.1	0.0	-
81.6	ALL-WL-013	Temp. Easement	PEM	0.0	0.1	0.0	-
81.6	ALL-WL-013	Temp. Easement	PEM	0.0	0.2	0.0	-
81.6	ALL-WL-013	Perm. Easement	PFO	665.6	0.7	0.7	0.7
81.6	ALL-WL-013	Temp. Easement	PFO	0.0	0.3	0.0	-
81.7	ALL-WL-013	ATWS	PFO	0.0	0.1	0.0	-
81.7	ALL-WL-013	Temp. Easement	PFO	0.0	0.3	0.0	-
81.7	ALL-WL-014	Perm. Easement	PFO	858.9	1.0	1.0	1.0
81.7	ALL-WL-014	Temp. Easement	PFO	0.0	0.6	0.0	-
81.9	ALL-WL-014	Temp. Easement	PFO	0.0	0.4	0.0	-
82.1	ALL-WL-015	ATWS	PFO	0.0	0.0	0.0	-
82.1	ALL-WL-015	ATWS	PFO	0.0	0.0	0.0	-
82.1	ALL-WL-015	Perm. Easement	PFO	14.4	0.0	0.0	0.0
82.1	ALL-WL-015	Temp. Easement	PFO	0.0	0.0	0.0	-
82.1	ALL-WL-015	Perm. Easement	PFO	51.3	0.0	0.0	0.0
82.1	ALL-WL-015	Temp. Easement	PFO	0.0	0.0	0.0	-
82.1	ALL-WL-015	Temp. Easement	PFO	0.0	0.0	0.0	-
82.1	ALL-WL-015	Perm. Easement	PFO	17.7	0.0	0.0	0.0
82.1	ALL-WL-015	Temp. Easement	PFO	0.0	0.1	0.0	-
82.1	ALL-WL-015	Perm. Easement	PFO	39.4	0.0	0.0	0.0
82.1	ALL-WL-015	Temp. Easement	PFO	0.0	0.0	0.0	-
82.1	ALL-WL-015	Temp. Easement	PFO	0.0	0.0	0.0	-
82.1	ALL-WL-015	Perm. Easement	PFO	86.0	0.2	0.2	0.2
82.1	ALL-WL-015	Temp. Easement	PFO	0.0	0.0	0.0	-
82.1	ALL-WL-015	Temp. Easement	PFO	0.0	0.0	0.0	-
82.2	ALL-WL-015	Temp. Easement	PFO	0.0	0.0	0.0	-
82.2	ALL-WL-015	Temp. Easement	PFO	0.0	0.2	0.0	-
82.2	ALL-WL-016	Perm. Easement	PFO	15.0	0.0	0.0	0.0
82.2	ALL-WL-016	Temp. Easement	PFO	0.0	0.0	0.0	-
82.2	ALL-WL-017	Perm. Easement	PFO	179.0	0.2	0.2	0.2
82.2	ALL-WL-017	Temp. Easement	PFO	0.0	0.1	0.0	-
82.2	ALL-WL-017	Temp. Easement	PFO	0.0	0.0	0.0	-
82.2	ALL-WL-017	Temp. Easement	PFO	0.0	0.0	0.0	-
82.2	ALL-WL-017	Temp. Easement	PFO	0.0	0.1	0.0	-
82.3	ALL-WL-018	Perm. Easement	PFO	26.6	0.0	0.0	0.0
82.3	ALL-WL-018	Temp. Easement	PFO	0.0	0.0	0.0	-
82.3	ALL-WL-018	Temp. Easement	PFO	0.0	0.0	0.0	-
82.3	ALL-WL-019	ATWS	PFO	0.0	0.0	0.0	-
82.3	ALL-WL-019	Temp. Easement	PFO	0.0	0.0	0.0	-
82.3	ALL-WL-020	Perm. Easement	PFO	79.9	0.1	0.1	0.1
82.3	ALL-WL-020	Temp. Easement	PFO	0.0	0.1	0.0	-
82.3	ALL-WL-020	ATWS	PFO	0.0	0.0	0.0	-
82.3	ALL-WL-020	Temp. Easement	PFO	0.0	0.1	0.0	-
82.3	ALL-WL-020	Temp. Easement	PFO	0.0	0.0	0.0	-
82.3	ALL-WL-021	ATWS	PFO	0.0	0.0	0.0	-
82.3	ALL-WL-022	Perm. Easement	PFO	30.1	0.0	0.0	0.0
82.3	ALL-WL-022	Temp. Easement	PFO	0.0	0.0	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
82.8	ALL-WL-023	Perm. Easement	PFO	111.3	0.1	0.1	0.1
82.8	ALL-WL-023	Temp. Easement	PFO	0.0	0.1	0.0	-
82.8	ALL-WL-023	Temp. Easement	PFO	0.0	0.0	0.0	-
84.1	ALL-WL-024	Temp. Easement	PFO	0.0	0.8	0.0	-
84.1	ALL-WL-024	Perm. Easement	PEM	0.0	0.0	0.0	-
84.1	ALL-WL-024	Perm. Easement	PFO	1,185.7	1.3	1.3	1.3
84.3	ALL-WL-024	Temp. Easement	PEM	0.0	0.6	0.0	-
84.9	ALL-WL-025	Temp. Easement	PFO	0.0	0.0	0.0	-
84.9	ALL-WL-025	Perm. Easement	PFO	57.6	0.2	0.2	0.2
84.9	ALL-WL-025	Temp. Easement	PEM	0.0	0.1	0.0	-
84.9	ALL-WL-025	Temp. Easement	PFO	0.0	0.2	0.0	-
84.9	ALL-WL-025	Perm. Easement	PEM	57.6	0.0	0.0	-
84.9	ALL-WL-025	ATWS	PFO	0.0	0.1	0.0	-
85.6	ALL-WL-026	Perm. Easement	PEM	15.4	0.2	0.2	-
85.6	ALL-WL-026	Temp. Easement	PEM	0.0	0.2	0.0	-
85.6	ALL-WL-026	Temp. Easement	PEM	0.0	0.1	0.0	-
85.6	ALL-WL-026	Temp. Easement	PFO	0.0	0.2	0.0	-
85.6	ALL-WL-026	Perm. Easement	PFO	15.4	0.3	0.3	0.3
85.6	ALL-WL-027	Temp. Easement	PEM	0.0	0.1	0.0	-
85.6	ALL-WL-027	Perm. Easement	PFO	359.9	0.4	0.4	0.4
85.6	ALL-WL-027	Perm. Easement	PEM	0.0	0.0	0.0	-
85.6	ALL-WL-027	Temp. Easement	PFO	0.0	0.3	0.0	-
85.7	ALL-WL-027	Temp. Easement	PFO	0.0	0.0	0.0	-
85.7	ALL-WL-029	Access Road	PEM	0.0	0.0	0.0	-
85.7	ALL-WL-027	Perm. Easement	PEM	0.0	0.0	0.0	-
85.7	ALL-WL-027	Temp. Easement	PEM	0.0	0.0	0.0	-
85.7	ALL-WL-028	Perm. Easement	PEM	13.9	0.0	0.0	-
85.7	ALL-WL-028	Temp. Easement	PEM	0.0	0.1	0.0	-
85.8	ALL-WL-030	ATWS	PEM	0.0	0.1	0.0	-
85.8	ALL-WL-030	ATWS	PEM	0.0	0.1	0.0	-
85.8	ALL-WL-030	Perm. Easement	PEM	521.8	0.6	0.6	-
85.8	ALL-WL-030	Temp. Easement	PEM	0.0	0.2	0.0	-
85.8	ALL-WL-030	Temp. Easement	PEM	0.0	0.3	0.0	-
85.9	ALL-WL-032	Temp. Easement	PEM	0.0	0.0	0.0	-
85.9	ALL-WL-032	Perm. Easement	PEM	18.5	0.0	0.0	-
85.9	ALL-WL-032	Temp. Easement	PEM	0.0	0.0	0.0	-
85.9	ALL-WL-033	Temp. Easement	PEM	0.0	0.1	0.0	-
85.9	ALL-WL-033	Perm. Easement	PEM	116.8	0.1	0.1	-
85.9	ALL-WL-033	Temp. Easement	PEM	0.0	0.1	0.0	-
85.9	ALL-WL-034	Perm. Easement	PEM	210.7	0.2	0.2	-
86.0	ALL-WL-034	Temp. Easement	PEM	0.0	0.1	0.0	-
86.0	ALL-WL-034	Temp. Easement	PEM	0.0	0.2	0.0	-
86.0	ALL-WL-035	Temp. Easement	PEM	0.0	0.1	0.0	-
86.0	ALL-WL-035	Perm. Easement	PEM	93.9	0.1	0.1	-
86.0	ALL-WL-035	Temp. Easement	PEM	0.0	0.0	0.0	-
86.0	ALL-WL-036	Temp. Easement	PEM	0.0	0.0	0.0	-
86.0	ALL-WL-036	Perm. Easement	PEM	3.0	0.3	0.3	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
86.0	ALL-WL-036	Temp. Easement	PEM	0.0	0.0	0.0	-
86.0	ALL-WL-036	Temp. Easement	PEM	0.0	0.1	0.0	-
86.1	ALL-WL-036	Temp. Easement	PEM	0.0	0.0	0.0	-
86.1	ALL-WL-036	Temp. Easement	PEM	0.0	0.0	0.0	-
86.1	ALL-WL-036	Temp. Easement	PEM	0.0	0.0	0.0	-
86.1	ALL-WL-036	Temp. Easement	PSS	0.0	0.2	0.0	-
86.1	ALL-WL-036	ATWS	PSS	0.0	0.0	0.0	-
86.1	ALL-WL-036	Perm. Easement	PSS	12.2	0.2	0.2	-
86.1	ALL-WL-036	Perm. Easement	PEM	0.0	0.0	0.0	-
86.1	ALL-WL-036	Temp. Easement	PEM	0.0	0.1	0.0	-
86.3	ALL-WL-037	Perm. Easement	PEM	291.0	0.4	0.4	-
86.3	ALL-WL-037	ATWS	PEM	0.0	0.3	0.0	-
86.3	ALL-WL-037	Temp. Easement	PEM	0.0	0.1	0.0	-
86.3	ALL-WL-037	Temp. Easement	PEM	0.0	0.2	0.0	-
86.4	ALL-WL-038	Perm. Easement	PFO	66.5	0.1	0.1	0.1
86.4	ALL-WL-038	Perm. Easement	PEM	0.0	0.0	0.0	-
86.4	ALL-WL-038	Temp. Easement	PFO	0.0	0.0	0.0	-
86.4	ALL-WL-038	Perm. Easement	PEM	66.5	0.2	0.2	-
86.4	ALL-WL-038	Temp. Easement	PEM	0.0	0.1	0.0	-
86.5	ALL-WL-192	Access Road	PEM	0.0	0.0	0.0	-
86.5	ALL-WL-038	Temp. Easement	PFO	0.0	0.0	0.0	-
86.5	ALL-WL-038	Temp. Easement	PFO	0.0	0.0	0.0	-
86.5	ALL-WL-038	Perm. Easement	PFO	0.0	0.1	0.1	0.1
86.5	ALL-WL-038	Perm. Easement	PFO	0.0	0.0	0.0	-
86.5	ALL-WL-038	Perm. Easement	PFO	0.0	0.0	0.0	0.0
86.5	ALL-WL-038	Temp. Easement	PFO	0.0	0.1	0.0	-
86.5	ALL-WL-038	Temp. Easement	PEM	0.0	0.2	0.0	-
86.5	ALL-WL-039	Perm. Easement	PFO	157.6	0.2	0.2	0.2
86.5	ALL-WL-039	Perm. Easement	PEM	0.0	0.0	0.0	-
86.5	ALL-WL-039	Temp. Easement	PEM	0.0	0.2	0.0	-
86.5	ALL-WL-039	Perm. Easement	PFO	72.2	0.1	0.1	0.1
86.5	ALL-WL-039	Perm. Easement	PEM	0.0	0.0	0.0	-
86.6	ALL-WL-039	Perm. Easement	PFO	40.3	0.0	0.0	0.0
86.6	ALL-WL-039	Perm. Easement	PEM	0.0	0.0	0.0	-
86.6	ALL-WL-039	Perm. Easement	PEM	0.0	0.0	0.0	-
86.6	ALL-WL-039	Perm. Easement	PFO	220.4	0.2	0.2	0.2
86.6	ALL-WL-039	Temp. Easement	PEM	0.0	0.1	0.0	-
86.6	ALL-WL-039	Temp. Easement	PFO	0.0	0.3	0.0	-
86.6	ALL-WL-039	Temp. Easement	PFO	0.0	0.0	0.0	-
86.6	ALL-WL-039	Temp. Easement	PFO	0.0	0.0	0.0	-
86.7	ALL-WL-040	Perm. Easement	PFO	121.4	1.3	1.3	1.3
86.7	ALL-WL-040	Perm. Easement	PEM	0.0	0.0	0.0	-
86.7	ALL-WL-040	Temp. Easement	PEM	0.0	0.5	0.0	-
86.7	ALL-WL-040	Temp. Easement	PFO	0.0	0.1	0.0	-
86.7	ALL-WL-040	Temp. Easement	PFO	0.0	0.3	0.0	-
86.7	ALL-WL-040	Temp. Easement	PFO	0.0	0.1	0.0	-
86.8	ALL-WL-191	Access Road	PEM	0.0	0.1	0.1	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
86.8	ALL-WL-040	Temp. Easement	PFO	0.0	0.3	0.0	-
86.9	ALL-WL-040	Temp. Easement	PFO	0.0	0.0	0.0	-
86.9	ALL-WL-041	Perm. Easement	PEM	18.0	0.0	0.0	-
86.9	ALL-WL-041	Temp. Easement	PEM	0.0	0.0	0.0	-
86.9	ALL-WL-043	Perm. Easement	PFO	17.9	0.0	0.0	0.0
86.9	ALL-WL-042	Temp. Easement	PFO	0.0	0.0	0.0	-
86.9	ALL-WL-043	Temp. Easement	PFO	0.0	0.0	0.0	-
86.9	ALL-WL-043	Temp. Easement	PFO	0.0	0.0	0.0	-
87.1	ALL-WL-044	Perm. Easement	PFO	291.3	0.3	0.3	0.3
87.1	ALL-WL-044	Temp. Easement	PFO	0.0	0.1	0.0	-
87.1	ALL-WL-044	Access Road	PFO	0.0	0.0	0.0	0.0
87.1	ALL-WL-044	Access Road	PFO	0.0	0.2	0.2	0.2
87.1	ALL-WL-044	Access Road	PEM	0.0	0.1	0.1	-
87.1	ALL-WL-044	ATWS	PFO	0.0	0.1	0.0	-
87.1	ALL-WL-044	Temp. Easement	PFO	0.0	0.2	0.0	-
87.1	ALL-WL-044	Temp. Easement	PFO	0.0	0.1	0.0	-
87.4	ALL-WL-045	Perm. Easement	PEM	54.5	0.1	0.1	-
87.4	ALL-WL-045	ATWS	PFO	0.0	0.2	0.0	-
87.4	ALL-WL-045	Temp. Easement	PFO	0.0	0.3	0.0	-
87.5	ALL-WL-045	Perm. Easement	PFO	54.5	0.2	0.2	0.2
87.5	ALL-WL-045	Temp. Easement	PEM	0.0	0.1	0.0	-
87.5	ALL-WL-045	Temp. Easement	PEM	0.0	0.1	0.0	-
87.5	ALL-WL-045	ATWS	PEM	0.0	0.1	0.0	-
87.5	ALL-WL-045	Perm. Easement	PEM	252.9	0.2	0.2	-
87.5	ALL-WL-045	Perm. Easement	PFO	0.0	0.1	0.1	0.1
87.5	ALL-WL-045	Temp. Easement	PEM	0.0	0.1	0.0	-
87.6	ALL-WL-045	Temp. Easement	PFO	0.0	0.3	0.0	-
88.1	ALL-WL-047	Temp. Easement	PEM	0.0	0.1	0.0	-
88.1	ALL-WL-047	Perm. Easement	PEM	82.6	0.1	0.1	-
88.1	ALL-WL-047	Temp. Easement	PEM	0.0	0.0	0.0	-
88.2	ALL-WL-048	Perm. Easement	PEM	41.9	0.1	0.1	-
88.2	ALL-WL-048	Temp. Easement	PEM	0.0	0.1	0.0	-
88.2	ALL-WL-049	Perm. Easement	PFO	196.9	0.3	0.3	0.3
88.2	ALL-WL-049	Perm. Easement	PEM	196.9	0.1	0.1	-
88.2	ALL-WL-049	Temp. Easement	PFO	0.0	0.2	0.0	-
88.3	ALL-WL-049	Temp. Easement	PEM	0.0	0.5	0.0	-
88.3	ALL-WL-049	Perm. Easement	PEM	0.0	0.0	0.0	-
88.3	ALL-WL-049	Perm. Easement	PEM	0.0	0.0	0.0	-
88.3	ALL-WL-049	Perm. Easement	PEM	49.4	0.1	0.1	-
88.4	ALL-WL-049	Perm. Easement	PEM	0.0	0.0	0.0	-
88.4	ALL-WL-049	Perm. Easement	PEM	9.4	0.0	0.0	-
88.4	ALL-WL-049	Perm. Easement	PEM	0.0	0.0	0.0	-
88.4	ALL-WL-050	Temp. Easement	PFO	0.0	0.0	0.0	-
88.4	ALL-WL-049	Perm. Easement	PEM	0.0	0.0	0.0	-
88.4	ALL-WL-049	Perm. Easement	PEM	0.0	0.0	0.0	-
88.4	ALL-WL-051	Perm. Easement	PFO	76.0	0.2	0.2	0.2
88.4	ALL-WL-051	Temp. Easement	PEM	0.0	0.0	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
88.4	ALL-WL-051	Temp. Easement	PEM	0.0	0.2	0.0	-
88.4	ALL-WL-051	Temp. Easement	PFO	0.0	0.2	0.0	-
88.5	ALL-WL-051	Perm. Easement	PFO	25.7	0.1	0.1	0.1
88.5	ALL-WL-051	Temp. Easement	PFO	0.0	0.0	0.0	-
88.5	ALL-WL-052	Perm. Easement	PFO	0.4	0.0	0.0	0.0
88.5	ALL-WL-052	Temp. Easement	PFO	0.0	0.0	0.0	-
88.6	ALL-WL-052	Perm. Easement	PFO	133.6	0.1	0.1	0.1
88.6	ALL-WL-052	Temp. Easement	PFO	0.0	0.0	0.0	-
88.6	ALL-WL-052	Temp. Easement	PFO	0.0	0.0	0.0	-
88.6	ALL-WL-052	Perm. Easement	PFO	0.0	0.0	0.0	-
88.6	ALL-WL-052	Temp. Easement	PFO	0.0	0.0	0.0	-
88.6	ALL-WL-052	Perm. Easement	PFO	79.3	0.1	0.1	0.1
88.6	ALL-WL-052	Perm. Easement	PEM	0.0	0.0	0.0	-
88.6	ALL-WL-052	Perm. Easement	PEM	17.0	0.0	0.0	-
88.6	ALL-WL-052	Perm. Easement	PEM	0.0	0.0	0.0	-
88.6	ALL-WL-052	Perm. Easement	PFO	145.7	0.2	0.2	0.2
88.6	ALL-WL-052	Temp. Easement	PEM	0.0	0.3	0.0	-
88.7	ALL-WL-052	Perm. Easement	PEM	0.0	0.0	0.0	-
88.7	ALL-WL-052	Temp. Easement	PFO	0.0	0.1	0.0	-
88.7	ALL-WL-053	Perm. Easement	PEM	15.6	1.5	1.5	-
88.7	ALL-WL-053	Temp. Easement	PEM	0.0	0.9	0.0	-
88.7	ALL-WL-052	Temp. Easement	PFO	0.0	0.0	0.0	-
88.9	ALL-WL-053	Temp. Easement	PEM	0.0	0.6	0.0	-
88.9	ALL-WL-053	Temp. Easement	PEM	0.0	0.0	0.0	-
88.9	ALL-WL-054	Perm. Easement	PEM	885.8	1.1	1.1	-
88.9	ALL-WL-054	Temp. Easement	PEM	0.0	0.2	0.0	-
89.0	ALL-WL-054	Temp. Easement	PEM	0.0	0.7	0.0	-
89.1	ALL-WL-054	Temp. Easement	PEM	0.0	0.4	0.0	-
89.1	ALL-WL-054	ATWS	PEM	0.0	0.2	0.0	-
89.1	ALL-WL-055	Perm. Easement	PEM	170.3	0.1	0.1	-
89.1	ALL-WL-055	Temp. Easement	PEM	0.0	0.1	0.0	-
89.2	ALL-WL-056	Perm. Easement	PFO	28.8	0.1	0.1	0.1
89.2	ALL-WL-056	Perm. Easement	PEM	0.0	0.0	0.0	-
89.2	ALL-WL-056	Temp. Easement	PEM	0.0	0.0	0.0	-
89.2	ALL-WL-056	Temp. Easement	PFO	0.0	0.1	0.0	-
89.3	ALL-WL-057	Perm. Easement	PEM	8.4	0.0	0.0	-
89.3	ALL-WL-057	Temp. Easement	PEM	0.0	0.0	0.0	-
89.4	ALL-WL-058	Perm. Easement	PEM	0.0	0.1	0.1	-
89.4	ALL-WL-058	Temp. Easement	PEM	0.0	0.0	0.0	-
89.4	ALL-WL-058	Temp. Easement	PEM	0.0	0.0	0.0	-
89.5	ALL-WL-060	Perm. Easement	PEM	1,401.1	1.2	1.2	-
89.5	ALL-WL-060	Temp. Easement	PEM	0.0	0.0	0.0	-
89.6	ALL-WL-060	Temp. Easement	PEM	0.0	0.0	0.0	-
89.7	ALL-WL-060	Perm. Easement	PFO	0.0	0.0	0.0	0.0
89.7	ALL-WL-060	Temp. Easement	PFO	0.0	0.3	0.0	-
89.7	ALL-WL-060	Temp. Easement	PEM	0.0	0.1	0.0	-
89.7	ALL-WL-060	Temp. Easement	PEM	0.0	0.5	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
89.7	ALL-WL-060	Temp. Easement	PEM	0.0	0.0	0.0	-
89.7	ALL-WL-060	Temp. Easement	PEM	0.0	0.1	0.0	-
89.8	ALL-WL-061	Perm. Easement	PEM	58.0	0.0	0.0	-
89.8	ALL-WL-061	Temp. Easement	PEM	0.0	0.0	0.0	-
89.8	ALL-WL-062	Perm. Easement	PFO	0.0	0.0	0.0	-
89.8	ALL-WL-062	Temp. Easement	PFO	0.0	0.1	0.0	-
90.1	ALL-WL-063	Temp. Easement	PFO	0.0	0.6	0.0	-
90.2	ALL-WL-063	Perm. Easement	PFO	0.0	0.1	0.1	0.1
90.2	ALL-WL-064	Perm. Easement	PEM	91.6	0.1	0.1	-
90.2	ALL-WL-064	Temp. Easement	PEM	0.0	0.0	0.0	-
90.3	ALL-WL-064	Perm. Easement	PFO	0.0	0.0	0.0	0.0
90.3	ALL-WL-064	Temp. Easement	PFO	0.0	0.0	0.0	-
90.4	ALL-WL-065	Perm. Easement	PEM	53.1	0.1	0.1	-
90.4	ALL-WL-065	Temp. Easement	PEM	0.0	0.0	0.0	-
90.4	ALL-WL-066	Perm. Easement	PFO	0.0	0.0	0.0	-
90.4	ALL-WL-066	Perm. Easement	PEM	219.6	0.2	0.2	-
90.5	ALL-WL-066	Temp. Easement	PFO	0.0	0.1	0.0	-
90.5	ALL-WL-066	Temp. Easement	PEM	0.0	0.1	0.0	-
90.5	ALL-WL-066	Perm. Easement	PFO	0.0	0.1	0.1	0.1
90.6	ALL-WL-067	Perm. Easement	PEM	22.5	0.0	0.0	-
90.6	ALL-WL-067	Temp. Easement	PEM	0.0	0.0	0.0	-
90.6	ALL-WL-067	Temp. Easement	PEM	0.0	0.0	0.0	-
90.6	ALL-WL-067	ATWS	PEM	0.0	0.0	0.0	-
90.6	ALL-WL-068	Perm. Easement	PEM	87.2	0.0	0.0	-
90.6	ALL-WL-068	Temp. Easement	PEM	0.0	0.1	0.0	-
90.7	ALL-WL-069	ATWS	PFO	0.0	0.1	0.0	-
90.7	ALL-WL-069	Perm. Easement	PFO	0.0	0.1	0.1	0.1
90.7	ALL-WL-069	Perm. Easement	PEM	194.8	0.1	0.1	-
90.7	ALL-WL-069	Temp. Easement	PFO	0.0	0.1	0.0	-
90.7	ALL-WL-069	Temp. Easement	PEM	0.0	0.1	0.0	-
90.7	ALL-WL-070	Perm. Easement	PFO	6.4	0.0	0.0	-
90.7	ALL-WL-070	Temp. Easement	PFO	0.0	0.0	0.0	-
90.9	ALL-WL-071	Perm. Easement	PFO	1,136.3	1.2	1.2	1.2
90.9	ALL-WL-071	Temp. Easement	PFO	0.0	0.5	0.0	-
90.9	ALL-WL-071	ATWS	PFO	0.0	0.3	0.0	-
91.0	ALL-WL-071	Temp. Easement	PFO	0.0	0.6	0.0	-
91.1	ALL-WL-072	ATWS	PFO	0.0	0.1	0.0	-
91.1	ALL-WL-071	ATWS	PFO	0.0	0.4	0.0	-
91.1	ALL-WL-071	Temp. Easement	PFO	0.0	0.1	0.0	-
91.1	ALL-WL-071	Perm. Easement	PFO	0.0	0.1	0.1	0.1
91.2	ALL-WL-073	Perm. Easement	PEM	42.3	0.0	0.0	-
91.2	ALL-WL-073	Perm. Easement	PFO	0.0	0.0	0.0	0.0
91.2	ALL-WL-073	Temp. Easement	PFO	0.0	0.0	0.0	-
91.2	ALL-WL-073	Temp. Easement	PEM	0.0	0.0	0.0	-
91.2	ALL-WL-073	Perm. Easement	PEM	659.5	0.3	0.3	-
91.2	ALL-WL-073	Temp. Easement	PFO	0.0	0.7	0.0	-
91.3	ALL-WL-073	ATWS	PFO	0.0	1.1	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
91.3	ALL-WL-073	Perm. Easement	PFO	659.5	0.9	0.9	0.9
91.3	ALL-WL-073	Temp. Easement	PEM	0.0	0.5	0.0	-
91.3	ALL-WL-073	Temp. Easement	PFO	0.0	0.0	0.0	-
91.4	ALL-WL-073	ATWS	PFO	0.0	0.1	0.0	-
91.4	ALL-WL-073	ATWS	PFO	0.0	0.5	0.0	-
91.4	ALL-WL-073	Perm. Easement	PFO	0.0	0.1	0.1	0.1
91.4	ALL-WL-073	Perm. Easement	PEM	659.5	0.1	0.1	-
91.5	ALL-WL-073	Perm. Easement	PEM	131.6	0.1	0.1	-
91.5	ALL-WL-073	Temp. Easement	PEM	0.0	0.0	0.0	-
91.5	ALL-WL-073	Temp. Easement	PFO	0.0	0.2	0.0	-
91.7	ALL-WL-074	Perm. Easement	PEM	148.4	0.1	0.1	-
91.7	ALL-WL-074	Perm. Easement	PFO	0.0	0.1	0.1	0.1
91.7	ALL-WL-074	Temp. Easement	PFO	0.0	0.1	0.0	-
91.7	ALL-WL-074	Temp. Easement	PEM	0.0	0.1	0.0	-
92.5	ALL-WL-075	Perm. Easement	PEM	0.0	0.0	0.0	-
92.5	ALL-WL-075	Perm. Easement	PFO	0.0	0.0	0.0	0.0
92.5	ALL-WL-075	Temp. Easement	PEM	0.0	0.1	0.0	-
92.5	ALL-WL-075	Temp. Easement	PFO	0.0	0.0	0.0	-
92.5	ALL-WL-075	Perm. Easement	PEM	66.2	0.0	0.0	-
92.7	ALL-WL-076	Perm. Easement	PEM	272.0	0.2	0.2	-
92.7	ALL-WL-076	Temp. Easement	PFO	0.0	0.2	0.0	-
92.7	ALL-WL-076	Perm. Easement	PFO	0.0	0.1	0.1	0.1
92.7	ALL-WL-076	Temp. Easement	PEM	0.0	0.1	0.0	-
92.8	ALL-WL-076	Temp. Easement	PFO	0.0	0.2	0.0	-
92.8	ALL-WL-076	Perm. Easement	PEM	191.6	0.2	0.2	-
92.8	ALL-WL-076	Perm. Easement	PFO	0.0	0.1	0.1	0.1
92.8	ALL-WL-076	Temp. Easement	PEM	0.0	0.1	0.0	-
93.0	ALL-WL-077	Perm. Easement	PEM	120.1	0.1	0.1	-
93.0	ALL-WL-077	Temp. Easement	PEM	0.0	0.1	0.0	-
93.0	ALL-WL-077	Temp. Easement	PFO	0.0	0.1	0.0	-
93.0	ALL-WL-077	Perm. Easement	PFO	0.0	0.1	0.1	0.1
93.3	ALL-WL-078	Temp. Easement	PFO	0.0	0.0	0.0	-
93.3	ALL-WL-078	ATWS	PFO	0.0	0.0	0.0	-
93.3	ALL-WL-078	ATWS	PFO	0.0	0.0	0.0	-
93.3	ALL-WL-078	ATWS	PFO	0.0	0.1	0.0	-
93.4	ALL-WL-078	Temp. Easement	PFO	0.0	0.2	0.0	-
93.7	ALL-WL-079	Perm. Easement	PFO	0.0	0.1	0.1	0.1
93.7	ALL-WL-079	Perm. Easement	PEM	95.4	0.1	0.1	-
93.7	ALL-WL-079	Temp. Easement	PEM	0.0	0.0	0.0	-
93.7	ALL-WL-079	Temp. Easement	PFO	0.0	0.1	0.0	-
93.8	ALL-WL-080	Perm. Easement	PEM	178.4	1.6	1.6	-
93.8	ALL-WL-080	Perm. Easement	PFO	0.0	0.5	0.5	0.5
93.9	ALL-WL-080	Access Road	PEM	0.0	0.1	0.1	-
93.9	ALL-WL-080	Access Road	PEM	0.0	0.2	0.2	-
93.9	ALL-WL-080	Temp. Easement	PEM	0.0	0.0	0.0	-
94.1	ALL-WL-080	Perm. Easement	PFO	178.4	2.2	2.2	2.2
94.2	ALL-WL-080	ATWS	PFO	0.0	0.1	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
94.5	ALL-WL-080	ATWS	PFO	0.0	0.7	0.0	-
94.5	ALL-WL-080	Temp. Easement	PFO	0.0	2.5	0.0	-
94.5	ALL-WL-080	Temp. Easement	PEM	0.0	1.7	0.0	-
94.7	ALL-WL-082	ATWS	PFO	0.0	0.0	0.0	-
94.8	ALL-WL-083	ATWS	PFO	0.0	0.0	0.0	-
94.9	ALL-WL-084	Perm. Easement	PFO	131.6	0.2	0.2	0.2
94.9	ALL-WL-084	Temp. Easement	PFO	0.0	0.1	0.0	-
94.9	ALL-WL-084	Temp. Easement	PFO	0.0	0.1	0.0	-
95.0	ALL-WL-085	Temp. Easement	PFO	0.0	0.0	0.0	-
95.0	ALL-WL-085	Perm. Easement	PFO	271.1	0.3	0.3	0.3
95.0	ALL-WL-085	Temp. Easement	PFO	0.0	0.1	0.0	-
95.1	ALL-WL-085	Temp. Easement	PFO	0.0	0.2	0.0	-
95.1	ALL-WL-085	Perm. Easement	PFO	257.6	0.3	0.3	0.3
95.1	ALL-WL-085	Temp. Easement	PFO	0.0	0.1	0.0	-
95.1	ALL-WL-085	Temp. Easement	PFO	0.0	0.2	0.0	-
95.3	ALL-WL-086	Temp. Easement	PFO	0.0	0.3	0.0	-
95.3	ALL-WL-086	Perm. Easement	PFO	371.3	0.4	0.4	0.4
95.4	ALL-WL-086	Temp. Easement	PFO	0.0	0.2	0.0	-
95.4	ALL-WL-086	Perm. Easement	PFO	233.6	0.4	0.4	0.4
95.4	ALL-WL-086	Temp. Easement	PFO	0.0	0.1	0.0	-
95.5	ALL-WL-086	Temp. Easement	PFO	0.0	0.1	0.0	-
95.5	ALL-WL-086	Temp. Easement	PFO	0.0	0.1	0.0	-
95.7	ALL-WL-087	Perm. Easement	PFO	24.7	0.0	0.0	0.0
95.7	ALL-WL-087	Temp. Easement	PFO	0.0	0.0	0.0	-
95.8	ALL-WL-087	Temp. Easement	PFO	0.0	0.0	0.0	-
96.0	ALL-WL-088	Perm. Easement	PFO	63.0	0.1	0.1	0.1
96.0	ALL-WL-088	Temp. Easement	PFO	0.0	0.0	0.0	-
96.0	ALL-WL-088	Perm. Easement	PFO	0.0	0.0	0.0	-
96.0	ALL-WL-088	Temp. Easement	PFO	0.0	0.1	0.0	-
96.1	ALL-WL-089	Perm. Easement	PFO	0.0	0.0	0.0	-
96.1	ALL-WL-089	Temp. Easement	PFO	0.0	0.0	0.0	-
96.1	ALL-WL-190	ATWS	PFO	0.0	0.0	0.0	-
96.2	ALL-WL-190	Perm. Easement	PFO	16.2	0.0	0.0	0.0
96.2	ALL-WL-190	Temp. Easement	PFO	0.0	0.0	0.0	-
96.2	ALL-WL-190	Interconnect	PFO	0.0	0.0	0.0	-
96.2	ALL-WL-190	Interconnect	PEM	0.0	0.0	0.0	-
96.2	ALL-WL-190	Perm. Easement	PFO	14.1	0.0	0.0	0.0
96.2	ALL-WL-190	Temp. Easement	PFO	0.0	0.0	0.0	-
96.2	ALL-WL-190	Temp. Easement	PFO	0.0	0.0	0.0	-
96.2	ALL-WL-091	Comp. Station	PFO	0.0	0.0	0.0	-
96.3	ALL-WL-091	Comp. Station	PFO	0.0	0.0	0.0	-
96.3	ALL-WL-092	Perm. Easement	PFO	259.6	0.3	0.3	0.3
96.4	ALL-WL-091	Comp. Station	PEM	0.0	0.0	0.0	-
96.4	ALL-WL-092	ATWS	PFO	0.0	0.2	0.0	-
96.4	ALL-WL-093	ATWS	PEM	0.0	0.0	0.0	-
96.4	ALL-WL-093	Perm. Easement	PEM	9.6	0.0	0.0	-
96.4	ALL-WL-092	Temp. Easement	PFO	0.0	0.1	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
96.4	ALL-WL-092	Temp. Easement	PFO	0.0	0.2	0.0	-
96.4	ALL-WL-093	Temp. Easement	PEM	0.0	0.0	0.0	-
96.4	ALL-WL-093	Temp. Easement	PEM	0.0	0.0	0.0	-
96.4	ALL-WL-094	Perm. Easement	PEM	13.0	0.0	0.0	-
96.4	ALL-WL-094	Temp. Easement	PEM	0.0	0.0	0.0	-
96.4	ALL-WL-094	Perm. Easement	PEM	32.8	0.0	0.0	-
96.4	ALL-WL-094	Temp. Easement	PEM	0.0	0.0	0.0	-
96.5	ALL-WL-096	Perm. Easement	PEM	37.1	0.0	0.0	-
96.5	ALL-WL-096	Temp. Easement	PEM	0.0	0.0	0.0	-
96.5	ALL-WL-096	ATWS	PEM	0.0	0.1	0.0	-
96.5	ALL-WL-096	Perm. Easement	PEM	27.3	0.7	0.7	-
96.5	ALL-WL-096	Temp. Easement	PEM	0.0	0.0	0.0	-
96.5	ALL-WL-096	Temp. Easement	PEM	0.0	0.3	0.0	-
96.6	ALL-WL-096	ATWS	PEM	0.0	0.4	0.0	-
96.6	ALL-WL-096	ATWS	PEM	0.0	0.1	0.0	-
96.6	ALL-WL-096	Temp. Easement	PEM	0.0	0.4	0.0	-
96.6	ALL-WL-096	ATWS	PFO	0.0	0.1	0.0	-
96.6	ALL-WL-096	Perm. Easement	PFO	27.3	0.0	0.0	0.0
96.6	ALL-WL-096	Temp. Easement	PFO	0.0	0.0	0.0	-
96.6	ALL-WL-096	Temp. Easement	PFO	0.0	0.0	0.0	-
96.8	ALL-WL-097	Temp. Easement	PFO	0.0	0.1	0.0	-
97.0	ALL-WL-098	Perm. Easement	PEM	4.0	0.0	0.0	-
97.0	ALL-WL-099	Perm. Easement	PEM	0.6	0.0	0.0	-
97.1	ALL-WL-100	ATWS	PFO	0.0	0.2	0.0	-
97.1	ALL-WL-100	Temp. Easement	PFO	0.0	0.1	0.0	-
97.1	ALL-WL-100	Perm. Easement	PFO	69.4	0.1	0.1	0.1
97.1	ALL-WL-100	Temp. Easement	PFO	0.0	0.0	0.0	-
97.1	ALL-WL-101	ATWS	PFO	0.0	0.0	0.0	-
97.1	ALL-WL-101	ATWS	PFO	0.0	0.2	0.0	-
97.1	ALL-WL-101	Perm. Easement	PFO	307.8	0.5	0.5	0.5
97.2	ALL-WL-101	Temp. Easement	PFO	0.0	0.3	0.0	-
97.2	ALL-WL-101	Temp. Easement	PFO	0.0	0.2	0.0	-
97.2	ALL-WL-101	Temp. Easement	PFO	0.0	0.0	0.0	-
97.2	ALL-WL-101	Perm. Easement	PFO	307.8	0.4	0.4	0.4
97.2	ALL-WL-101	Temp. Easement	PFO	0.0	0.2	0.0	-
97.3	ALL-WL-101	Temp. Easement	PFO	0.0	0.1	0.0	-
97.3	ALL-WL-101	Perm. Easement	PEM	307.8	0.2	0.2	-
97.3	ALL-WL-101	Temp. Easement	PEM	0.0	0.1	0.0	-
97.3	ALL-WL-101	Temp. Easement	PEM	0.0	0.1	0.0	-
97.4	ALL-WL-102	Perm. Easement	PEM	161.4	0.2	0.2	-
97.4	ALL-WL-102	Temp. Easement	PEM	0.0	0.1	0.0	-
97.4	ALL-WL-102	Temp. Easement	PEM	0.0	0.1	0.0	-
97.4	ALL-WL-103	Temp. Easement	PEM	0.0	0.5	0.0	-
97.4	ALL-WL-103	Perm. Easement	PEM	645.2	0.8	0.8	-
97.5	ALL-WL-103	Temp. Easement	PEM	0.0	0.3	0.0	-
97.7	ALL-WL-104	Temp. Easement	PEM	0.0	0.1	0.0	-
97.7	ALL-WL-104	Perm. Easement	PEM	153.2	0.2	0.2	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
97.7	ALL-WL-104	Temp. Easement	PEM	0.0	0.1	0.0	-
97.8	ALL-WL-105	Perm. Easement	PFO	85.1	0.1	0.1	0.1
97.8	ALL-WL-105	Temp. Easement	PFO	0.0	0.0	0.0	-
97.8	ALL-WL-105	Temp. Easement	PFO	0.0	0.0	0.0	-
97.9	ALL-WL-106	Perm. Easement	PFO	19.1	0.0	0.0	0.0
97.9	ALL-WL-106	Temp. Easement	PEM	0.0	0.0	0.0	-
97.9	ALL-WL-106	Temp. Easement	PFO	0.0	0.0	0.0	-
97.9	ALL-WL-106	Temp. Easement	PFO	0.0	0.0	0.0	-
98.2	ALL-WL-107	ATWS	PSS	0.0	0.0	0.0	-
98.2	ALL-WL-107	ATWS	PFO	0.0	0.2	0.0	-
98.2	ALL-WL-107	Perm. Easement	PFO	683.0	0.8	0.8	0.8
98.2	ALL-WL-107	Temp. Easement	PFO	0.0	0.2	0.0	-
98.3	ALL-WL-107	ATWS	PFO	0.0	0.2	0.0	-
98.4	ALL-WL-107	Temp. Easement	PEM	0.0	0.1	0.0	-
98.4	ALL-WL-107	Temp. Easement	PFO	0.0	0.5	0.0	-
98.4	ALL-WL-108	Perm. Easement	PFO	762.4	0.9	0.9	0.9
98.4	ALL-WL-108	Temp. Easement	PFO	0.0	0.1	0.0	-
98.4	ALL-WL-108	Temp. Easement	PFO	0.0	0.5	0.0	-
98.4	ALL-WL-108	ATWS	PFO	0.0	0.2	0.0	-
98.5	ALL-WL-108	Temp. Easement	PEM	0.0	0.3	0.0	-
98.5	ALL-WL-108	Perm. Easement	PFO	762.4	3.0	3.0	3.0
98.5	ALL-WL-108	Temp. Easement	PEM	0.0	0.8	0.0	-
98.6	ALL-WL-108	ATWS	PFO	0.0	0.1	0.0	-
99.0	ALL-WL-108	Temp. Easement	PFO	0.0	0.4	0.0	-
99.0	ALL-WL-108	Perm. Easement	PFO	685.5	0.8	0.8	0.8
99.0	ALL-WL-108	Temp. Easement	PFO	0.0	1.8	0.0	-
99.1	ALL-WL-108	Temp. Easement	PFO	0.0	0.4	0.0	-
99.1	ALL-WL-108	Temp. Easement	PEM	0.0	0.2	0.0	-
99.1	ALL-WL-108	Temp. Easement	PFO	0.0	0.1	0.0	-
99.4	ALL-WL-109	ATWS	PFO	0.0	0.0	0.0	-
99.4	ALL-WL-109	Perm. Easement	PFO	0.0	0.0	0.0	0.0
99.4	ALL-WL-109	Temp. Easement	PFO	0.0	0.1	0.0	-
99.5	ALL-WL-110	Perm. Easement	PFO	133.7	0.3	0.3	0.3
99.5	ALL-WL-110	Temp. Easement	PEM	0.0	0.0	0.0	-
99.5	ALL-WL-110	Temp. Easement	PFO	0.0	0.0	0.0	-
99.6	ALL-WL-110	Temp. Easement	PFO	0.0	0.5	0.0	-
99.6	ALL-WL-110	Perm. Easement	PEM	196.7	0.2	0.2	-
99.6	ALL-WL-110	Temp. Easement	PEM	0.0	0.1	0.0	-
99.7	ALL-WL-110	Temp. Easement	PEM	0.0	0.0	0.0	-
99.7	ALL-WL-110	ATWS	PFO	0.0	0.1	0.0	-
99.8	ALL-WL-111	ATWS	PFO	0.0	0.0	0.0	-
99.8	ALL-WL-112	Temp. Easement	PFO	0.0	0.0	0.0	0.0
99.9	ALL-WL-112	Perm. Easement	PFO	31.1	0.0	0.0	0.0
99.9	ALL-WL-112	Temp. Easement	PFO	0.0	0.0	0.0	-
100.1	ALL-WL-113	Temp. Easement	PFO	0.0	0.0	0.0	-
100.1	ALL-WL-113	Perm. Easement	PFO	14.4	0.0	0.0	0.0
100.1	ALL-WL-114	Perm. Easement	PEM	1,211.9	1.4	1.4	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
100.1	ALL-WL-113	Temp. Easement	PFO	0.0	0.0	0.0	-
100.1	ALL-WL-114	Temp. Easement	PEM	0.0	0.8	0.0	-
100.1	ALL-WL-114	Temp. Easement	PEM	0.0	0.6	0.0	-
100.3	ALL-WL-114	Temp. Easement	PFO	0.0	0.4	0.0	-
100.3	ALL-WL-114	Perm. Easement	PFO	1,211.9	0.3	0.3	0.3
100.3	ALL-WL-114	Temp. Easement	PFO	0.0	0.1	0.0	-
100.4	ALL-WL-114	Perm. Easement	PFO	0.0	0.0	0.0	0.0
100.4	ALL-WL-114	Perm. Easement	PFO	77.7	0.7	0.7	0.7
100.5	ALL-WL-114	Temp. Easement	PFO	0.0	0.2	0.0	-
100.5	ALL-WL-114	Perm. Easement	PEM	77.7	0.1	0.1	-
100.5	ALL-WL-114	Temp. Easement	PEM	0.0	0.0	0.0	-
100.5	ALL-WL-114	Temp. Easement	PFO	0.0	0.4	0.0	-
100.5	ALL-WL-114	Access Road	PFO	0.0	0.0	0.0	0.0
100.5	ALL-WL-114	Access Road	PEM	0.0	0.0	0.0	-
100.5	ALL-WL-114	Temp. Easement	PFO	0.0	0.1	0.0	-
100.5	ALL-WL-114	Temp. Easement	PFO	0.0	0.1	0.0	-
100.6	ALL-WL-115	Perm. Easement	PFO	109.1	0.1	0.1	0.1
100.6	ALL-WL-115	ATWS	PFO	0.0	0.1	0.0	-
100.6	ALL-WL-115	Temp. Easement	PFO	0.0	0.0	0.0	-
100.6	ALL-WL-115	Temp. Easement	PFO	0.0	0.1	0.0	-
100.7	ALL-WL-116	Perm. Easement	PFO	111.1	0.1	0.1	0.1
100.7	ALL-WL-116	ATWS	PFO	0.0	0.0	0.0	-
100.7	ALL-WL-116	Temp. Easement	PFO	0.0	0.1	0.0	-
100.7	ALL-WL-116	Temp. Easement	PFO	0.0	0.1	0.0	-
100.7	ALL-WL-117	ATWS	PFO	0.0	0.0	0.0	-
100.7	ALL-WL-117	Perm. Easement	PFO	0.0	0.0	0.0	-
100.7	ALL-WL-117	Temp. Easement	PFO	0.0	0.0	0.0	-
100.8	ALL-WL-117	Perm. Easement	PEM	0.0	0.0	0.0	-
100.8	ALL-WL-117	Temp. Easement	PEM	0.0	0.0	0.0	-
100.9	ALL-WL-118	ATWS	PFO	0.0	0.2	0.0	-
100.9	ALL-WL-118	Perm. Easement	PFO	116.1	0.1	0.1	0.1
100.9	ALL-WL-118	Temp. Easement	PFO	0.0	0.1	0.0	-
100.9	ALL-WL-118	Temp. Easement	PFO	0.0	0.1	0.0	-
101.0	ALL-WL-119	Temp. Easement	PFO	0.0	0.0	0.0	-
101.0	ALL-WL-119	Perm. Easement	PFO	17.5	0.1	0.1	0.1
101.0	ALL-WL-119	Temp. Easement	PFO	0.0	0.0	0.0	-
101.0	ALL-WL-119	Temp. Easement	PFO	0.0	0.1	0.0	-
101.1	ALL-WL-119	Perm. Easement	PFO	38.0	0.1	0.1	0.1
101.1	ALL-WL-119	Temp. Easement	PFO	0.0	0.0	0.0	-
101.1	ALL-WL-121	Temp. Easement	PFO	0.0	0.0	0.0	-
101.1	ALL-WL-121	Perm. Easement	PFO	15.0	0.0	0.0	0.0
101.1	ALL-WL-121	Perm. Easement	PFO	39.5	0.0	0.0	0.0
101.1	ALL-WL-121	Temp. Easement	PFO	0.0	0.1	0.0	-
101.3	ALL-WL-122	Perm. Easement	PSS	346.8	0.4	0.4	-
101.3	ALL-WL-122	Temp. Easement	PSS	0.0	0.0	0.0	-
101.3	ALL-WL-122	Temp. Easement	PSS	0.0	0.2	0.0	-
101.4	ALL-WL-122	Temp. Easement	PSS	0.0	0.2	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
101.8	ALL-WL-123	Access Road	PEM	0.0	0.0	0.0	-
101.8	ALL-WL-123	Access Road	PEM	0.0	0.0	0.0	-
101.8	ALL-WL-123	Access Road	PEM	0.0	0.0	0.0	-
101.8	ALL-WL-124	Perm. Easement	PEM	6.2	0.0	0.0	-
101.8	ALL-WL-124	Temp. Easement	PEM	0.0	0.0	0.0	-
101.8	ALL-WL-124	Temp. Easement	PEM	0.0	0.0	0.0	-
101.8	ALL-WL-125	Perm. Easement	PFO	83.5	0.1	0.1	0.1
101.8	ALL-WL-125	Temp. Easement	PFO	0.0	0.0	0.0	-
101.8	ALL-WL-125	Temp. Easement	PEM	0.0	0.0	0.0	-
101.9	ALL-WL-126	Temp. Easement	PFO	0.0	0.1	0.0	-
101.9	ALL-WL-127	Temp. Easement	PFO	0.0	0.0	0.0	-
101.9	ALL-WL-127	Perm. Easement	PFO	119.5	0.3	0.3	0.3
101.9	ALL-WL-127	Temp. Easement	PFO	0.0	0.0	0.0	-
101.9	ALL-WL-127	Temp. Easement	PFO	0.0	0.0	0.0	-
101.9	ALL-WL-127	Temp. Easement	PFO	0.0	0.0	0.0	-
101.9	ALL-WL-127	Temp. Easement	PFO	0.0	0.0	0.0	-
101.9	ALL-WL-127	Perm. Easement	PEM	0.0	0.0	0.0	-
101.9	ALL-WL-127	Temp. Easement	PEM	0.0	0.1	0.0	-
101.9	ALL-WL-127	Temp. Easement	PFO	0.0	0.0	0.0	-
102.1	ALL-WL-128	Perm. Easement	PEM	13.0	0.0	0.0	-
102.1	ALL-WL-128	Temp. Easement	PEM	0.0	0.0	0.0	-
102.1	ALL-WL-128	Temp. Easement	PEM	0.0	0.0	0.0	-
102.1	ALL-WL-129	Perm. Easement	PEM	16.4	0.0	0.0	-
102.1	ALL-WL-129	Temp. Easement	PEM	0.0	0.0	0.0	-
102.1	ALL-WL-129	Temp. Easement	PEM	0.0	0.0	0.0	-
102.2	ALL-WL-130	Temp. Easement	PEM	0.0	0.1	0.0	-
102.2	ALL-WL-130	Perm. Easement	PFO	214.3	0.3	0.3	0.3
102.3	ALL-WL-130	Temp. Easement	PFO	0.0	0.2	0.0	-
102.3	ALL-WL-132	Access Road	PEM	0.0	0.1	0.0	-
102.3	ALL-WL-132	Access Road	PEM	0.0	0.1	0.0	-
102.3	ALL-WL-131	Access Road	PEM	0.0	0.0	0.0	-
102.3	ALL-WL-131	Access Road	PEM	0.0	0.0	0.0	-
102.3	ALL-WL-131	Perm. Easement	PEM	9.0	0.0	0.0	-
102.3	ALL-WL-131	Temp. Easement	PEM	0.0	0.0	0.0	-
102.3	ALL-WL-131	Temp. Easement	PEM	0.0	0.0	0.0	-
102.3	ALL-WL-131	Access Road	PEM	0.0	0.0	0.0	-
102.3	ALL-WL-131	Access Road	PEM	0.0	0.0	0.0	-
102.3	ALL-WL-131	Access Road	PEM	0.0	0.0	0.0	-
102.3	ALL-WL-131	Access Road	PEM	0.0	0.0	0.0	-
102.3	ALL-WL-131	Perm. Easement	PEM	7.5	0.0	0.0	-
102.3	ALL-WL-131	Temp. Easement	PEM	0.0	0.0	0.0	-
102.3	ALL-WL-131	Temp. Easement	PEM	0.0	0.0	0.0	-
102.6	ALL-WL-131	Temp. Easement	PEM	0.0	0.0	0.0	-
102.6	ALL-WL-131	Temp. Easement	PEM	0.0	0.0	0.0	-
102.6	ALL-WL-131	Perm. Easement	PEM	12.0	0.0	0.0	-
102.6	ALL-WL-131	Temp. Easement	PEM	0.0	0.0	0.0	-
103.1	ALL-WL-133	Perm. Easement	PFO	7.9	0.0	0.0	0.0

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
103.1	ALL-WL-133	Temp. Easement	PFO	0.0	0.0	0.0	-
103.1	ALL-WL-133	Temp. Easement	PFO	0.0	0.0	0.0	-
103.1	ALL-WL-134	Perm. Easement	PEM	4.5	0.0	0.0	-
103.1	ALL-WL-134	Temp. Easement	PEM	0.0	0.0	0.0	-
103.1	ALL-WL-134	Temp. Easement	PEM	0.0	0.0	0.0	-
103.6	ALL-WL-135	Perm. Easement	PEM	111.6	0.0	0.0	-
103.6	ALL-WL-135	Perm. Easement	PFO	111.6	0.2	0.2	0.2
103.6	ALL-WL-135	Temp. Easement	PFO	0.0	0.1	0.0	-
103.6	ALL-WL-135	Temp. Easement	PEM	0.0	0.1	0.0	-
103.9	ALL-WL-136	Perm. Easement	PSS	57.0	0.1	0.1	-
103.9	ALL-WL-136	Temp. Easement	PEM	0.0	0.0	0.0	-
103.9	ALL-WL-136	Temp. Easement	PSS	0.0	0.0	0.0	-
103.9	ALL-WL-136	Temp. Easement	PSS	0.0	0.0	0.0	-
103.9	ALL-WL-136	Temp. Easement	PEM	0.0	0.0	0.0	-
103.9	ALL-WL-136	Perm. Easement	PSS	35.2	0.1	0.1	-
103.9	ALL-WL-136	Temp. Easement	PSS	0.0	0.1	0.0	-
103.9	ALL-WL-136	Temp. Easement	PSS	0.0	0.0	0.0	-
104.0	ALL-WL-137	Perm. Easement	PFO	123.6	0.1	0.1	0.1
104.0	ALL-WL-137	Temp. Easement	PFO	0.0	0.1	0.0	-
104.0	ALL-WL-137	Temp. Easement	PFO	0.0	0.1	0.0	-
104.1	ALL-WL-138	Perm. Easement	PFO	83.9	0.1	0.1	0.1
104.1	ALL-WL-138	Temp. Easement	PFO	0.0	0.1	0.0	-
104.1	ALL-WL-138	Temp. Easement	PFO	0.0	0.0	0.0	-
104.3	ALL-WL-139	Perm. Easement	PFO	107.7	0.3	0.3	0.3
104.3	ALL-WL-139	Perm. Easement	PFO	302.5	0.0	0.0	0.0
104.3	ALL-WL-139	Temp. Easement	PFO	0.0	0.0	0.0	-
104.3	ALL-WL-139	Temp. Easement	PFO	0.0	0.0	0.0	-
104.3	ALL-WL-139	Temp. Easement	PFO	0.0	0.2	0.0	-
104.3	ALL-WL-139	ATWS	PFO	0.0	0.1	0.0	-
104.4	ALL-WL-139	ATWS	PFO	0.0	0.2	0.0	-
104.4	ALL-WL-139	Temp. Easement	PFO	0.0	0.0	0.0	-
104.4	ALL-WL-139	Temp. Easement	PFO	0.0	0.1	0.0	-
104.4	ALL-WL-139	ATWS	PFO	0.0	0.1	0.0	-
104.4	ALL-WL-139	Perm. Easement	PFO	107.7	0.1	0.1	0.1
104.4	ALL-WL-139	Perm. Easement	PFO	0.0	0.0	0.0	0.0
104.4	ALL-WL-139	Temp. Easement	PFO	0.0	0.1	0.0	-
104.4	ALL-WL-139	Temp. Easement	PFO	0.0	0.1	0.0	-
104.4	ALL-WL-140	Perm. Easement	PFO	470.0	0.5	0.5	0.5
104.4	ALL-WL-140	ATWS	PFO	0.0	0.1	0.0	-
104.4	ALL-WL-140	Temp. Easement	PFO	0.0	0.3	0.0	-
104.5	ALL-WL-140	ATWS	PFO	0.0	0.1	0.0	-
104.5	ALL-WL-140	ATWS	PFO	0.0	0.0	0.0	-
104.5	ALL-WL-140	Temp. Easement	PFO	0.0	0.2	0.0	-
104.5	ALL-WL-141	Perm. Easement	PFO	123.8	0.1	0.1	0.1
104.5	ALL-WL-141	Temp. Easement	PFO	0.0	0.1	0.0	-
104.5	ALL-WL-141	Temp. Easement	PFO	0.0	0.1	0.0	-
104.5	ALL-WL-142	Temp. Easement	PFO	0.0	0.2	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
104.6	ALL-WL-142	Perm. Easement	PFO	80.5	0.2	0.2	0.2
104.6	ALL-WL-142	Temp. Easement	PFO	0.0	0.0	0.0	-
104.7	ALL-WL-143	ATWS	PFO	0.0	0.0	0.0	-
104.7	ALL-WL-143	Perm. Easement	PFO	71.9	0.1	0.1	0.1
104.7	ALL-WL-143	Temp. Easement	PFO	0.0	0.0	0.0	-
104.7	ALL-WL-143	Temp. Easement	PFO	0.0	0.1	0.0	-
104.7	ALL-WL-144	Perm. Easement	PFO	38.6	0.4	0.4	0.4
104.7	ALL-WL-144	ATWS	PFO	0.0	0.2	0.0	-
104.7	ALL-WL-144	Temp. Easement	PFO	0.0	0.1	0.0	-
104.7	ALL-WL-144	Temp. Easement	PFO	0.0	0.3	0.0	-
104.7	ALL-WL-144	ATWS	PFO	0.0	0.1	0.0	-
104.8	ALL-WL-145	Perm. Easement	PFO	143.5	0.2	0.2	0.2
104.8	ALL-WL-145	Temp. Easement	PFO	0.0	0.1	0.0	-
104.8	ALL-WL-145	ATWS	PFO	0.0	0.0	0.0	-
104.8	ALL-WL-145	Temp. Easement	PFO	0.0	0.1	0.0	-
104.9	ALL-WL-146	ATWS	PFO	0.0	0.1	0.0	-
104.9	ALL-WL-146	Temp. Easement	PFO	0.0	0.0	0.0	-
104.9	ALL-WL-147	ATWS	PFO	0.0	0.1	0.0	-
105.0	ALL-WL-147	ATWS	PFO	0.0	0.1	0.0	-
105.0	ALL-WL-147	Temp. Easement	PFO	0.0	0.1	0.0	-
105.0	ALL-WL-147	Perm. Easement	PFO	0.0	0.0	0.0	0.0
105.1	ALL-WL-148	Perm. Easement	PFO	1,051.1	1.1	1.1	1.1
105.1	ALL-WL-148	Temp. Easement	PFO	0.0	0.5	0.0	-
105.1	ALL-WL-148	ATWS	PFO	0.0	0.2	0.0	-
105.3	ALL-WL-148	Temp. Easement	PFO	0.0	0.7	0.0	-
105.8	ALL-WL-149	Temp. Easement	PFO	0.0	0.0	0.0	-
105.9	ALL-WL-149	Temp. Easement	PFO	0.0	0.0	0.0	-
106.1	ALL-WL-150	Contractor Yd	PSS	0.0	0.0	0.0	-
106.3	ALL-WL-151	Contractor Yd	PSS	0.0	0.3	0.0	-
106.8	ALL-WL-152	Perm. Easement	PFO	17.5	0.0	0.0	0.0
106.8	ALL-WL-152	Temp. Easement	PFO	0.0	0.0	0.0	-
106.8	ALL-WL-152	Temp. Easement	PFO	0.0	0.0	0.0	-
106.8	ALL-WL-154	Perm. Easement	PFO	160.3	0.2	0.2	0.2
106.8	ALL-WL-154	Temp. Easement	PFO	0.0	0.0	0.0	-
106.9	ALL-WL-154	Temp. Easement	PFO	0.0	0.1	0.0	-
106.9	ALL-WL-154	Temp. Easement	PFO	0.0	0.2	0.0	-
107.1	ALL-WL-155	ATWS	PFO	0.0	0.0	0.0	-
107.1	ALL-WL-155	Temp. Easement	PFO	0.0	0.1	0.0	-
107.5	ALL-WL-159	Access Road	PEM	0.0	0.0	0.0	-
108.2	ALL-WL-160	Perm. Easement	PSS	16.2	0.0	0.0	-
108.2	ALL-WL-160	Temp. Easement	PSS	0.0	0.0	0.0	-
108.2	ALL-WL-160	Temp. Easement	PSS	0.0	0.0	0.0	-
108.4	ALL-WL-161	Perm. Easement	PFO	220.7	0.3	0.3	0.3
108.4	ALL-WL-161	Temp. Easement	PFO	0.0	0.1	0.0	-
108.4	ALL-WL-161	ATWS	PFO	0.0	0.2	0.0	-
108.4	ALL-WL-161	Temp. Easement	PFO	0.0	0.6	0.0	-
108.4	ALL-WL-161	Perm. Easement	PFO	1,288.4	1.4	1.4	1.4

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
108.4	ALL-WL-161	Temp. Easement	PFO	0.0	0.2	0.0	-
108.5	ALL-WL-161	ATWS	PFO	0.0	0.2	0.0	-
108.6	ALL-WL-161	Temp. Easement	PFO	0.0	0.9	0.0	-
108.7	ALL-WL-161	ATWS	PFO	0.0	0.2	0.0	-
108.7	ALL-WL-161	Perm. Easement	PFO	755.3	0.9	0.9	0.9
108.7	ALL-WL-161	Temp. Easement	PFO	0.0	0.4	0.0	-
108.7	ALL-WL-161	ATWS	PFO	0.0	0.2	0.0	-
108.8	ALL-WL-161	ATWS	PFO	0.0	0.2	0.0	-
108.8	ALL-WL-161	Temp. Easement	PFO	0.0	0.5	0.0	-
108.8	ALL-WL-161	Perm. Easement	PFO	1,145.7	1.3	1.3	1.3
108.8	ALL-WL-161	Temp. Easement	PFO	0.0	0.5	0.0	-
108.8	ALL-WL-161	Temp. Easement	PFO	0.0	0.5	0.0	-
108.8	ALL-WL-161	ATWS	PFO	0.0	0.2	0.0	-
109.0	ALL-WL-161	Temp. Easement	PFO	0.0	0.2	0.0	-
109.1	ALL-WL-162	Perm. Easement	PFO	17.1	0.0	0.0	0.0
109.1	ALL-WL-162	Temp. Easement	PFO	0.0	0.0	0.0	-
109.1	ALL-WL-162	Temp. Easement	PFO	0.0	0.0	0.0	-
109.5	ALL-WL-163	Perm. Easement	PFO	349.8	0.3	0.3	0.3
109.5	ALL-WL-163	Temp. Easement	PFO	0.0	0.1	0.0	-
109.6	ALL-WL-163	Temp. Easement	PFO	0.0	0.0	0.0	-
109.6	ALL-WL-163	Temp. Easement	PFO	0.0	0.2	0.0	-
109.6	ALL-WL-164	Perm. Easement	PFO	36.8	0.0	0.0	0.0
109.6	ALL-WL-164	Temp. Easement	PFO	0.0	0.0	0.0	-
109.6	ALL-WL-164	Temp. Easement	PFO	0.0	0.0	0.0	-
109.6	ALL-WL-165	Temp. Easement	PFO	0.0	0.0	0.0	-
109.7	ALL-WL-165	ATWS	PFO	0.0	0.0	0.0	-
109.7	ALL-WL-165	Perm. Easement	PFO	19.7	0.1	0.1	0.1
109.7	ALL-WL-165	Temp. Easement	PFO	0.0	0.0	0.0	-
109.7	ALL-WL-165	Temp. Easement	PFO	0.0	0.0	0.0	-
109.7	ALL-WL-166	Perm. Easement	PFO	114.1	0.1	0.1	0.1
109.7	ALL-WL-166	Temp. Easement	PFO	0.0	0.1	0.0	-
109.7	ALL-WL-166	Temp. Easement	PFO	0.0	0.1	0.0	-
109.7	ALL-WL-166	ATWS	PFO	0.0	0.1	0.0	-
109.8	ALL-WL-168	Perm. Easement	PEM	21.6	0.0	0.0	-
109.8	ALL-WL-168	Temp. Easement	PEM	0.0	0.0	0.0	-
109.8	ALL-WL-169	ATWS	PFO	0.0	0.1	0.0	-
109.8	ALL-WL-169	Temp. Easement	PEM	0.0	0.0	0.0	-
109.8	ALL-WL-169	Perm. Easement	PEM	30.2	0.0	0.0	-
109.8	ALL-WL-169	Temp. Easement	PEM	0.0	0.0	0.0	-
109.8	ALL-WL-169	Temp. Easement	PFO	0.0	0.0	0.0	-
109.8	ALL-WL-169	ATWS	PFO	0.0	0.0	0.0	-
109.8	ALL-WL-169	Perm. Easement	PFO	204.4	0.1	0.1	0.1
109.8	ALL-WL-169	Temp. Easement	PFO	0.0	0.1	0.0	-
109.9	ALL-WL-169	ATWS	PFO	0.0	0.0	0.0	-
109.9	ALL-WL-170	ATWS	PFO	0.0	0.2	0.0	-
109.9	ALL-WL-170	Temp. Easement	PFO	0.0	0.0	0.0	-
110.1	EVA-WL-001	Perm. Easement	PFO	61.2	0.1	0.1	0.1

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
110.1	EVA-WL-001	Temp. Easement	PFO	0.0	0.0	0.0	-
110.1	EVA-WL-001	Temp. Easement	PFO	0.0	0.1	0.0	-
110.3	EVA-WL-003	ATWS	PFO	0.0	0.0	0.0	-
110.3	EVA-WL-003	Temp. Easement	PFO	0.0	0.1	0.0	-
110.3	EVA-WL-002	Perm. Easement	PFO	38.9	0.0	0.0	0.0
110.3	EVA-WL-003	Perm. Easement	PFO	11.1	0.0	0.0	0.0
110.3	EVA-WL-002	Temp. Easement	PFO	0.0	0.0	0.0	-
110.3	EVA-WL-003	Temp. Easement	PFO	0.0	0.0	0.0	-
110.6	EVA-WL-005	ATWS	PSS	0.0	0.0	0.0	-
110.6	EVA-WL-005	Temp. Easement	PSS	0.0	0.0	0.0	-
111.9	EVA-WL-006	ATWS	PFO	0.0	0.0	0.0	-
111.9	EVA-WL-006	Perm. Easement	PFO	44.5	0.1	0.1	0.1
111.9	EVA-WL-006	Temp. Easement	PFO	0.0	0.0	0.0	-
111.9	EVA-WL-006	Temp. Easement	PFO	0.0	0.0	0.0	-
111.9	EVA-WL-007	Perm. Easement	PEM	1,290.7	1.5	1.5	-
111.9	EVA-WL-007	Temp. Easement	PEM	0.0	0.6	0.0	-
112.1	EVA-WL-007	ATWS	PEM	0.0	0.2	0.0	-
112.2	EVA-WL-007	Temp. Easement	PEM	0.0	0.9	0.0	-
112.7	EVA-WL-008	Temp. Easement	PEM	0.0	0.0	0.0	-
112.7	EVA-WL-009	Temp. Easement	PEM	0.0	0.0	0.0	-
115.2	EVA-WL-010	Perm. Easement	PEM	18.1	0.1	0.1	-
115.2	EVA-WL-010	Temp. Easement	PEM	0.0	0.0	0.0	-
115.2	EVA-WL-010	Temp. Easement	PEM	0.0	0.2	0.0	-
115.3	EVA-WL-010	Perm. Easement	PEM	0.0	0.0	0.0	-
115.3	EVA-WL-010	Temp. Easement	PEM	0.0	0.0	0.0	-
115.3	EVA-WL-010	Access Road	PEM	0.0	0.1	0.1	-
115.3	EVA-WL-011	Access Road	PEM	0.0	0.0	0.0	-
115.3	EVA-WL-010	Temp. Easement	PEM	0.0	0.0	0.0	-
115.5	EVA-WL-012	Perm. Easement	PEM	57.7	0.1	0.1	-
115.5	EVA-WL-012	Temp. Easement	PEM	0.0	0.0	0.0	-
115.5	EVA-WL-012	Temp. Easement	PEM	0.0	0.0	0.0	-
115.5	EVA-WL-013	Perm. Easement	PEM	400.3	0.3	0.3	-
115.5	EVA-WL-013	Temp. Easement	PEM	0.0	0.0	0.0	-
115.5	EVA-WL-013	Temp. Easement	PEM	0.0	0.3	0.0	-
115.6	EVA-WL-013	Perm. Easement	PEM	145.6	0.2	0.2	-
115.6	EVA-WL-014	ATWS	PEM	0.0	0.0	0.0	-
115.6	EVA-WL-013	Temp. Easement	PEM	0.0	0.0	0.0	-
115.6	EVA-WL-013	Perm. Easement	PEM	69.1	0.1	0.1	-
115.6	EVA-WL-013	Temp. Easement	PEM	0.0	0.1	0.0	-
117.9	EVA-WL-015	Perm. Easement	PEM	0.0	0.0	0.0	-
117.9	EVA-WL-015	Temp. Easement	PEM	0.0	0.0	0.0	-
118.0	EVA-WL-016	Perm. Easement	PEM	59.9	0.1	0.1	-
118.0	EVA-WL-016	Temp. Easement	PEM	0.0	0.0	0.0	-
118.0	EVA-WL-016	ATWS	PEM	0.0	0.0	0.0	-
118.0	EVA-WL-016	Temp. Easement	PEM	0.0	0.1	0.0	-
118.0	EVA-WL-017	Perm. Easement	PEM	0.0	0.0	0.0	-
118.0	EVA-WL-017	Perm. Easement	PEM	103.7	0.0	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
118.1	EVA-WL-017	Temp. Easement	PEM	0.0	0.2	0.0	-
118.1	EVA-WL-017	Perm. Easement	PEM	0.0	0.0	0.0	-
118.1	EVA-WL-018	Perm. Easement	PFO	0.0	0.0	0.0	-
118.1	EVA-WL-018	Temp. Easement	PFO	0.0	0.0	0.0	-
118.1	EVA-WL-018	Perm. Easement	PEM	416.5	0.3	0.3	-
118.1	EVA-WL-018	Perm. Easement	PFO	0.0	0.0	0.0	0.0
118.1	EVA-WL-018	Temp. Easement	PFO	0.0	0.0	0.0	-
118.2	EVA-WL-018	Temp. Easement	PEM	0.0	0.2	0.0	-
118.2	EVA-WL-018	Temp. Easement	PFO	0.0	0.1	0.0	-
118.2	EVA-WL-018	Perm. Easement	PFO	0.0	0.0	0.0	0.0
118.2	EVA-WL-019	Perm. Easement	PFO	0.0	0.0	0.0	0.0
118.2	EVA-WL-019	Perm. Easement	PFO	0.0	0.0	0.0	0.0
118.2	EVA-WL-019	Temp. Easement	PFO	0.0	0.0	0.0	-
118.3	EVA-WL-020	Perm. Easement	PEM	0.0	0.0	0.0	-
118.3	EVA-WL-020	Perm. Easement	PFO	0.0	0.0	0.0	0.0
118.3	EVA-WL-020	Temp. Easement	PFO	0.0	0.0	0.0	-
118.3	EVA-WL-021	Temp. Easement	PEM	0.0	0.0	0.0	-
118.3	EVA-WL-022	Temp. Easement	PFO	0.0	0.0	0.0	-
118.3	EVA-WL-022	ATWS	PFO	0.0	0.0	0.0	-
118.3	EVA-WL-022	ATWS	PFO	0.0	0.0	0.0	-
118.3	EVA-WL-022	Temp. Easement	PFO	0.0	0.0	0.0	-
118.4	EVA-WL-023	Perm. Easement	PEM	183.3	0.1	0.1	-
118.4	EVA-WL-023	Perm. Easement	PFO	0.0	0.1	0.1	0.1
118.4	EVA-WL-023	Temp. Easement	PFO	0.0	0.1	0.0	-
118.4	EVA-WL-023	ATWS	PFO	0.0	0.0	0.0	-
118.4	EVA-WL-023	Perm. Easement	PFO	0.0	0.0	0.0	0.0
118.4	EVA-WL-023	Temp. Easement	PFO	0.0	0.0	0.0	-
118.4	EVA-WL-023	Temp. Easement	PEM	0.0	0.1	0.0	-
118.8	EVA-WL-024	ATWS	PFO	0.0	0.0	0.0	-
118.8	EVA-WL-024	Perm. Easement	PFO	876.2	1.0	1.0	1.0
118.8	EVA-WL-024	ATWS	PFO	0.0	0.1	0.0	-
118.9	EVA-WL-024	Temp. Easement	PFO	0.0	0.6	0.0	-
118.9	EVA-WL-024	Temp. Easement	PFO	0.0	0.4	0.0	-
118.9	EVA-WL-024	ATWS	PFO	0.0	1.0	0.0	-
119.2	STL-WL-001	ATWS	PFO	0.0	0.7	0.0	-
119.2	STL-WL-001	Perm. Easement	PFO	672.0	0.8	0.8	0.8
119.2	STL-WL-001	Temp. Easement	PFO	0.0	0.4	0.0	-
119.3	STL-WL-001	Temp. Easement	PFO	0.0	0.0	0.0	-
119.3	STL-WL-001	Temp. Easement	PFO	0.0	0.3	0.0	-
119.6	STL-WL-002	Temp. Easement	PFO	0.0	0.1	0.0	-
119.6	STL-WL-002	Perm. Easement	PFO	94.5	0.1	0.1	0.1
119.6	STL-WL-002	Temp. Easement	PFO	0.0	0.0	0.0	-
119.7	STL-WL-003	Perm. Easement	PFO	29.2	0.1	0.1	0.1
119.7	STL-WL-003	Temp. Easement	PFO	0.0	0.0	0.0	-
119.7	STL-WL-003	Temp. Easement	PFO	0.0	0.0	0.0	-
119.8	STL-WL-004	Perm. Easement	PFO	43.5	0.0	0.0	0.0
119.8	STL-WL-004	Temp. Easement	PFO	0.0	0.1	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
119.8	STL-WL-004	Temp. Easement	PFO	0.0	0.0	0.0	-
119.8	STL-WL-004	Perm. Easement	PFO	0.0	0.0	0.0	-
120.7	STL-WL-005	Perm. Easement	PFO	0.0	0.0	0.0	0.0
120.7	STL-WL-005	Temp. Easement	PFO	0.0	0.0	0.0	-
120.7	STL-WL-006	Perm. Easement	PFO	11.0	0.0	0.0	0.0
120.7	STL-WL-006	Temp. Easement	PFO	0.0	0.0	0.0	-
120.7	STL-WL-007	Perm. Easement	PFO	0.0	0.0	0.0	0.0
120.7	STL-WL-007	Temp. Easement	PFO	0.0	0.1	0.0	-
120.7	STL-WL-007	ATWS	PFO	0.0	0.0	0.0	-
120.8	STL-WL-008	Perm. Easement	PEM	60.0	0.1	0.1	-
120.8	STL-WL-008	Temp. Easement	PEM	0.0	0.0	0.0	-
120.8	STL-WL-008	Temp. Easement	PEM	0.0	0.0	0.0	-
120.9	STL-WL-009	ATWS	PEM	0.0	0.0	0.0	-
120.9	STL-WL-009	Perm. Easement	PEM	9.2	0.0	0.0	-
120.9	STL-WL-009	Temp. Easement	PEM	0.0	0.0	0.0	-
120.9	STL-WL-009	Temp. Easement	PEM	0.0	0.0	0.0	-
123.0	STL-WL-010	Perm. Easement	PEM	1,797.0	2.1	2.1	-
123.4	STL-WL-010	Access Road	PEM	0.0	0.0	0.0	-
123.4	STL-WL-010	ATWS	PEM	0.0	0.2	0.0	-
123.4	STL-WL-010	Temp. Easement	PEM	0.0	1.2	0.0	-
123.4	STL-WL-010	Temp. Easement	PEM	0.0	0.8	0.0	-
125.3	STL-WL-011	Perm. Easement	PEM	442.3	0.4	0.4	-
125.3	STL-WL-011	Temp. Easement	PEM	0.0	0.1	0.0	-
125.3	STL-WL-011	Temp. Easement	PEM	0.0	0.1	0.0	-
127.2	STL-WL-012	Perm. Easement	PFO	1,745.8	0.2	0.2	0.2
127.2	STL-WL-012	Temp. Easement	PFO	0.0	0.0	0.0	-
127.2	STL-WL-012	Temp. Easement	PFO	0.0	0.3	0.0	-
127.2	STL-WL-013	Perm. Easement	PEM	1,745.8	1.9	1.9	-
127.3	STL-WL-013	ATWS	PEM	0.0	0.2	0.0	-
127.5	STL-WL-013	Temp. Easement	PEM	0.0	1.0	0.0	-
127.5	STL-WL-013	ATWS	PEM	0.0	0.4	0.0	-
127.5	STL-WL-013	Temp. Easement	PEM	0.0	0.8	0.0	-
127.5	STL-WL-014	Perm. Easement	PEM	934.6	1.1	1.1	-
127.5	STL-WL-014	Temp. Easement	PEM	0.0	0.4	0.0	-
127.6	STL-WL-014	Temp. Easement	PEM	0.0	0.6	0.0	-
127.6	STL-WL-014	ATWS	PEM	0.0	0.5	0.0	-
127.7	STL-WL-015	Perm. Easement	PEM	609.7	0.7	0.7	-
127.7	STL-WL-015	Temp. Easement	PEM	0.0	0.3	0.0	-
127.8	STL-WL-015	Temp. Easement	PEM	0.0	0.4	0.0	-
127.8	STL-WL-016	Perm. Easement	PEM	393.3	0.5	0.5	-
127.9	STL-WL-016	Temp. Easement	PEM	0.0	0.3	0.0	-
127.9	STL-WL-016	Temp. Easement	PEM	0.0	0.2	0.0	-
127.9	STL-WL-017	Perm. Easement	PEM	722.0	0.8	0.8	-
127.9	STL-WL-017	Temp. Easement	PEM	0.0	0.3	0.0	-
128.0	STL-WL-017	Temp. Easement	PEM	0.0	0.5	0.0	-
128.0	STL-WL-018	Perm. Easement	PEM	516.6	0.7	0.7	-
128.0	STL-WL-018	Temp. Easement	PEM	0.0	0.2	0.0	-

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
128.1	STL-WL-018	ATWS	PEM	0.0	0.5	0.0	-
128.2	STL-WL-018	Temp. Easement	PEM	0.0	0.5	0.0	-
128.2	STL-WL-019	Perm. Easement	PEM	420.1	2.1	2.1	-
128.3	STL-WL-019	ATWS	PEM	0.0	0.2	0.0	-
128.5	STL-WL-019	Temp. Easement	PEM	0.0	1.2	0.0	-
128.5	STL-WL-020	Perm. Easement	PFO	420.1	0.5	0.5	0.5
128.5	STL-WL-019	Temp. Easement	PEM	0.0	1.5	0.0	-
128.6	STL-WL-020	Temp. Easement	PFO	0.0	0.1	0.0	-
128.6	STL-WL-022	Perm. Easement	PSS	420.1	1.5	1.5	-
128.6	STL-WL-020	Temp. Easement	PFO	0.0	0.4	0.0	-
128.7	STL-WL-022	Temp. Easement	PSS	0.0	0.0	0.0	-
128.7	STL-WL-022	Temp. Easement	PSS	0.0	0.0	0.0	-
128.7	STL-WL-019	Perm. Easement	PEM	0.0	0.1	0.1	-
128.8	STL-WL-022	ATWS	PSS	0.0	0.6	0.0	-
128.8	STL-WL-022	Temp. Easement	PSS	0.0	0.7	0.0	-
128.9	STL-WL-022	Temp. Easement	PSS	0.0	0.3	0.0	-
128.9	STL-WL-023	Perm. Easement	PSS	624.1	0.7	0.7	-
129.0	STL-WL-023	ATWS	PSS	0.0	0.1	0.0	-
129.0	STL-WL-023	Temp. Easement	PEM	0.0	0.1	0.0	-
129.0	STL-WL-023	Temp. Easement	PSS	0.0	0.4	0.0	-
129.0	STL-WL-023	Temp. Easement	PSS	0.0	0.2	0.0	-
129.0	STL-WL-024	ATWS	PSS	0.0	0.1	0.0	-
129.1	STL-WL-024	Perm. Easement	PSS	48.5	0.1	0.1	-
129.1	STL-WL-024	Temp. Easement	PEM	0.0	0.0	0.0	-
129.1	STL-WL-024	Temp. Easement	PSS	0.0	0.1	0.0	-
129.1	STL-WL-024	Temp. Easement	PSS	0.0	0.0	0.0	-
129.1	STL-WL-025	Perm. Easement	PSS	897.7	1.0	1.0	-
129.1	STL-WL-025	ATWS	PSS	0.0	0.2	0.0	-
129.2	STL-WL-025	Temp. Easement	PSS	0.0	0.6	0.0	-
129.2	STL-WL-025	Temp. Easement	PSS	0.0	0.1	0.0	-
129.2	STL-WL-025	Perm. Easement	PFO	897.7	0.6	0.6	0.6
129.3	STL-WL-025	Temp. Easement	PEM	0.0	0.5	0.0	-
129.3	STL-WL-025	Temp. Easement	PFO	0.0	0.4	0.0	-
129.3	STL-WL-025	Temp. Easement	PFO	0.0	0.0	0.0	-
129.7	STL-WL-026	Temp. Easement	PEM	0.0	0.1	0.0	-
129.7	STL-WL-027	Perm. Easement	PEM	958.0	1.1	1.1	-
129.7	STL-WL-027	Temp. Easement	PEM	0.0	0.4	0.0	-
129.7	STL-WL-026	ATWS	PEM	0.0	0.1	0.0	-
129.8	STL-WL-027	ATWS	PEM	0.0	0.1	0.0	-
129.9	STL-WL-027	Temp. Easement	PEM	0.0	0.5	0.0	-
129.9	STL-WL-027	Perm. Easement	PEM	975.4	1.1	1.1	-
129.9	STL-WL-027	Temp. Easement	PEM	0.0	0.4	0.0	-
129.9	STL-WL-027	ATWS	PEM	0.0	0.2	0.0	-
130.1	STL-WL-027	ATWS	PEM	0.0	0.2	0.0	-
130.1	STL-WL-027	Temp. Easement	PEM	0.0	0.6	0.0	-
130.3	STL-WL-028	Temp. Easement	PEM	0.0	0.0	0.0	-
		Total Project		**188,074.4**	**636.2**	**244.1**	**68.6**

APPENDIX K.2 (cont'd)

Wetlands Affected by the Louisiana Connector Project

Milepost	Wetland ID	Site Type	Wetland Type [a]	Length Crossed (feet)	Construction (acres)	Operation (acres)	PFO Conversion (acres) [b]
			EEM	47,457.1	143.8	50.4	0.0
			PEM	79,673.2	283.6	110.2	0.0
			PSS	9,154.2	36.3	14.8	0.0
			PFO	51,789.9	172.5	68.6	68.6
		Pipeline Total		**188,074.4**	**611.8**	**232.3**	**68.0**
			EEM	47,457.1	138.6	49.2	0.0
			PEM	79,673.2	265.8	100.4	0.0
			PSS	9,154.2	35.7	14.8	0.0
			PFO	51,789.9	171.8	68.0	68.0
		Compressor Station Interconnect Total			**0.0**	**0.0**	**0.0**
			PEM	0.0	0.0	0.0	0.0
			PFO	0.0	0.0	0.0	0.0
		Access Roads Total			**21.1**	**11.7**	**0.6**
			EEM	0.0	5.2	1.2	0.0
			PEM	0.0	14.9	9.8	0.0
			PSS	0.0	0.3	0.0	0.0
			PFO	0.0	0.8	0.6	0.6
		Contractor Yards Total			**3.3**	**0.0**	**0.0**
			EEM	0.0	0.0	0.0	0.0
			PEM	0.0	2.9	0.0	0.0
			PSS	0.0	0.3	0.0	0.0
			PFO	0.0	0.0	0.0	0.0

[a] Key:
PEM – Palustrine Emergent
PSS – Palustrine Scrub Shrub
PFO – Palustrine Forested
PUB – Palustrine Unconsolidated Bottom
EEM – Estuarine Emergent
ESS – Estuarine Scrub-Shrub

[b] PFO Conversion (Acres) - Acres of forested wetland that will be convert to PEM or PSS within the permanent easement.

APPENDIX L

TEXAS CONNECTOR AND LOUISIANA CONNECTOR PROJECTS COLLOCATION WITH EXISTING UTILITY RIGHTS-OF-WAY

TEXAS CONNECTOR PROJECT COLLOCATION WITH EXISTING UTILITY RIGHTS-OF-WAY

APPENDIX L.1

Texas Connector Project Collocation with Existing Utility Rights-of-Way

Utility Name	Begin Milepost [a]	End Milepost [a]	Total Collocation Length (miles) [b]
Northern Pipeline			
Golden Pass Pipeline, LLC	7.7	7.9	0.3
Golden Pass Pipeline, LLC	8.9	18.9	10.0
Buckeye Development & Logistics I, LLC	11.1	11.2	<0.1
US Department of Energy	11.4	11.8	0.4
DCP NGL Operating, LLC	15.6	16.2	0.6
Centana Interstate Pipeline, LLC	15.6	16.2	0.6
Independent Refining Corp	17.2	17.3	0.1
Shell Pipeline Company, LP	17.4	17.5	0.1
Enterprise Products Operating LP	17.4	17.5	0.1
Shell Pipeline Company, LP	17.7	17.8	0.1
Denbury Green Pipeline-Texas, LLC	18.0	18.1	<0.1
BP Pipelines (North America), Inc.	18.1	18.2	0.1
Independent Refining Corp	18.2	18.3	0.1
Enterprise Products Operating LLC	18.2	18.7	0.5
Enterprise Products Operating LLC	18.2	18.7	0.4
Sunoco Pipeline, LP	18.4	18.7	0.3
Centana Intrastate Pipeline, LLC	18.4	18.5	0.1
Texas Eastern Transmission, LP	18.4	18.5	<0.1
Enterprise Products Operating LLC	18.5	18.7	0.2
Enterprise Products Operating LP	19.0	19.2	0.2
Mobil Vanderbilt-Beaumont P/L Co	20.8	20.9	0.2
Golden Triangle Storage, Inc.	20.9	22.9	2.0
Golden Triangle Storage, Inc.	20.9	22.9	2.0
Denbury Green Pipeline-Texas, LLC	22.9	23.6	0.8
Denbury Green Pipeline-Texas, LLC	24.5	25.2	0.7
Golden Triangle Storage, Inc.	24.6	25.5	0.9
Golden Triangle Storage, Inc.	25.0	25.5	0.5
Houston Pipe Line Company, LP	25.1	25.2	<0.1
Houston Pipe Line Company, LP	25.1	25.2	<0.1
Northern Segment Subtotal			**21.4**
Southern Segment			
Cheniere Midstream Services, LLC	2.8	3.1	0.3
Southern Segment Subtotal	**2.8**	**3.1**	**0.3**
FGT Lateral			
Chevron Corporation	0.0	0.9	0.9
UNKNOWN	0.0	1.6	1.6
GTS Lateral			
ExxonMobil Corporation	0.1	0.6	0.5
Golden Triangle Storage, Inc.	0.2	0.6	0.4
Golden Triangle Storage, Inc.	0.2	0.6	0.4
Centana Intrastate Pipeline, LLC	0.2	0.7	0.5
Sunoco Pipeline, LP	0.4	0.6	0.2
Golden Triangle Storage, Inc.	0.9	1.3	0.4
Golden Triangle Storage, Inc.	0.9	1.3	0.4

APPENDIX L.1 (cont'd)

Texas Connector Project Collocation with Existing Utility Rights-of-Way

Utility Name	Begin Milepost [a]	End Milepost [a]	Total Collocation Length (miles) [b]
KMLP Lateral			
Cheniere Creole Trail Pipeline, L.P.	0.1	0.1	0.1
NGPL Lateral			
Centana Intrastate Pipeline, LLC	<0.1	0.1	0.1
Cheniere Midstream Services, LLC	0.1	0.2	0.1
Laterals Subtotal			**5.4**
Texas Connector Project Collocation with Existing Rights-of-Way Total			**27.1**

[a] Approximate mileposts along the pipeline rounded to the nearest tenths.

[b] Collocation lengths have not been adjusted to reflect areas where multiple utility rights-of-way are shared. See section 2.1.2 for details on pipeline and lateral collocation totals.

Note: Addends may not sum due to rounding.

LOUISIANA CONNECTOR PROJECT
COLLOCATION WITH EXISTING UTILITY RIGHTS-OF-WAY

APPENDIX L.2

Louisiana Connector Project Collocation with Existing Utility Rights-of-Way

Utility Name/Owner	Begin Milepost [a]	End Milepost [a]	Total Collocation Length (miles)
Transco	18.7	21.1	2.5
Praxair, Enterprise, ExxonMobil	23.5	24.2	0.8
Enterprise, Praxair, ExxonMobil	24.2	25.7	1.5
Praxair, ExxonMobil, Equistar	25.7	26.4	0.7
Equistar	26.4	27.0	0.6
Enterprise (2), Shell, Explorer, Cypress, Entergy Powerline	28.8	29.3	0.5
Enterprise (2), Shell, Explorer, Cypress, Entergy Powerline, Sabine, Colonial, Shell, Colonial, Chevron, PPG	29.3	30.0	0.7
Enterprise (2), Shell, Explorer, Cypress, Entergy Powerline, Sabine, Colonial, Shell, Colonial, Chevron, PPG	30.0	33.7	3.8
KMLP, Cypress, Enterprise (2), Shell, Explorer, Colonial (2)	33.7	34.5	0.7
KMLP, Cypress, Enterprise (2), Equistar, Explorer, Shell, Colonial (2)	34.5	36.6	2.2
KMLP, Cypress, Enterprise (2), Equistar, Explorer, Shell, Colonial (2)	36.9	38.5	1.6
Enterprise (2), Cypress, Equistar, Shell, Explorer, Colonial (2)	38.5	40.0	1.5
Equistar	40.0	40.9	0.9
Enterprise, Shell, Cypress, Explorer, Praxair, Colonial (2)	41.2	41.7	0.5
Enterprise (2), Cypress, Shell, Explorer, Colonial (2)	41.7	41.9	0.2
Enterprise (2), Cypress, Explorer, Colonial (2), Shell, Praxair, Equistar	41.9	42.1	0.2
Targa	42.6	42.7	0.1
Enterprise, Shell, Cypress, Enterprise, Equistar, Explorer, Colonial (2), Chevron, Praxair	42.7	43.6	0.9
Powerline	43.6	43.8	0.3
Enterprise, Cypress, Enterprise, Explorer, Equistar, Shell, Colonial, Chevron, Colonial, Praxair	44.2	44.4	0.2
Sempra	44.4	45.4	1.0
Creole Trail, Sempra	45.4	46.3	0.8
Creole Trail	46.3	46.5	0.3
Sempra	46.5	46.7	0.2
Creole Trail, Sempra	46.7	47.1	0.3
Creole Trail, Sempra	47.9	48.2	0.3
Boardwalk, Sempra, Creole Trail	48.7	48.9	0.3
Sempra, Creole Trail, Gulf South, Boardwalk	48.9	49.2	0.2
Sempra, Creole Trail, PetroLogistics (2), Gulf South, PetroLogistics, Boardwalk	49.2	49.8	0.6

APPENDIX L.2 (cont'd)

Louisiana Connector Project Collocation with Existing Utility Rights-of-Way

Utility Name/Owner	Beginning Milepost [a]	Ending Milepost [a]	Total Collocation Length (miles)
Creole Trail, Sempra, Entergy Powerline, PetroLogistics (2), Boardwalk	49.8	50.9	1.2
Boardwalk, Creole Trail, Sempra, Entergy Powerline, PetroLogistics (2)	50.9	51.1	0.2
Entergy Powerline, Sempra (2), Creole Trail	53.4	54.4	1.1
Sempra (2)	55.2	56.3	1.0
Denbury, Sempra (2), Air Products	56.3	56.5	0.2
Sempra (2)	56.8	59.9	3.1
Sempra (3)	59.9	63.4	3.6
Sempra (2)	63.4	66.1	2.7
Creole Trail, Sempra (2), Entergy Powerline, Varibus	66.1	66.4	0.3
Creole Trail, Sempra (2), Entergy Powerline	66.4	66.8	0.4
Sempra (2), Entergy Corporation	66.8	68.8	2.0
Sempra (2), TETCO, Starks Header	68.8	69.9	1.1
Sempra (2)	70.1	70.9	0.8
Creole Trail	70.9	71.2	0.3
Creole Trail, Sempra, TETCO, Starks Header	71.2	71.4	0.2
Sempra, TETCO, Starks	71.5	72.2	0.7
Transco (4)	72.3	72.4	0.1
Starks Header	72.4	72.5	0.2
TETCO	72.7	75.7	3.0
TETCO (2)	76.7	79.2	2.4
TETCO (2)	79.5	81.5	2.0
TETCO (2)	82.6	85.6	3.1
TETCO (2)	85.9	98.1	12.2
TETCO (2)	98.2	104.4	6.2
TETCO (2)	105.1	109.9	4.8
TETCO (2)	110.0	110.1	0.1
TETCO (2)	110.6	113.2	2.6
TETCO (2)	114.7	127.5	12.8
TETCO (2)	127.6	130.5	2.9
Total Louisiana Connector Project Collocation with Existing Rights-of-Way			**95.4**

[a] Approximate mileposts along the pipeline rounded to the nearest tenths.

Note: Addends may not sum due to rounding.

APPENDIX M

ADDITIONAL TEMPORARY WORKSPACES LOCATED IN WETLANDS FOR THE TEXAS CONNECTOR AND LOUISIANA CONNECTOR PROJECTS

ADDITIONAL TEMPORARY WORKSPACES LOCATED IN WETLANDS FOR THE TEXAS CONNECTOR PROJECT

APPENDIX M.1

Additional Temporary Workspaces Located in Wetlands for the Texas Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion
Northern Segment				
0.1	VI.B.1.a	ATWS within Wetland	Tie into Compressor Station	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
1.5	VI.B.1.a	ATWS within Wetland	Push Section/Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
1.5	VI.B.1.a	ATWS within Wetland	Push Section/Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
1.5	VI.B.1.a	ATWS within Wetland	Push Section/Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
1.5	VI.B.1.a	ATWS within Wetland	Push Section/Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
1.5	VI.B.1.a	ATWS within Wetland	Push Section/Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
1.5	VI.B.1.a	ATWS within Wetland	Water Access	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
1.5	VI.B.1.a	ATWS within Wetland	Water Access	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
1.5	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
1.5	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
1.6	VI.B.1.a	ATWS within Wetland	Water Access Necessary to tie-in pipeline at a point of intersection (PI), after a long HDD across Intracoastal Waterway; spoil storage, assembly of pipe, parking, and through access for equipment and personnel. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
2.6	VI.B.1.a	ATWS within Wetland	Water Access OSHA Type C Soil conditions are likely in saturated wetlands. Based off of experience from prior construction projects, these soil conditions make it difficult to maintain slope stability of the pipeline trench and to contain trench spoil within a 75-foot temporary construction ROW. Contractors will ensure that excavated material does not flow into adjacent wetlands.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.1 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Texas Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion
2.7	VI.B.1.a	ATWS within Wetland	HDD Entry/Push Section Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
4.1	VI.B.1.a	ATWS within Wetland	Water Access Necessary to tie-in pipeline at a point of intersection (PI), after a long HDD across Intracoastal Waterway; spoil storage, assembly of pipe, parking, and through access for equipment and personnel. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
4.1	VI.B.1.a	ATWS within Wetland	Water Access Necessary to tie-in pipeline at a point of intersection (PI), after a long HDD across Intracoastal Waterway; spoil storage, assembly of pipe, parking, and through access for equipment and personnel.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
4.1	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
5.2	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
5.2	VI.B.1.a	ATWS within Wetland	Water Access Necessary to tie-in pipeline at a point of intersection (PI), after a long HDD across Intracoastal Waterway; spoil storage, assembly of pipe, parking, and through access for equipment and personnel. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
5.2	VI.B.1.a	ATWS within Wetland	HDD Entry/Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.1 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Texas Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion
5.3	VI.B.1.a	ATWS within Wetland	HDD Entry/Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
6.2	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
6.2	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
7.7	VI.B.1.a	ATWS within Wetland	Push Section Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
7.8	VI.B.1.a	ATWS within Wetland	Road Entry, parking, spoil storage, maintain through access for equipment and personnel.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
7.9	VI.B.1.a	ATWS within Wetland	RO Road AD Entry, parking, spoil storage, maintain through access for equipment and personnel.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
8.2	VI.B.1.a	ATWS within Wetland	PI/Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
8.2	VI.B.1.a	ATWS within Wetland	PI/Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
8.2	VI.B.1.a	ATWS within Wetland	PI/Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
8.3	VI.B.1.a	ATWS within Wetland	HDD Exit/Access Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The HDD pad in this area was placed so that it would have the least impact on surrounding wetlands. The surrounding wetlands were unavoidable in the area.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
8.9	VI.B.1.a	ATWS within Wetland	HDD Entry/Push Section Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.1 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Texas Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion
8.9	VI.B.1.a	ATWS within Wetland	HDD Entry/Push Section Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
8.9	VI.B.1.a	ATWS within Wetland	HDD Entry/Push Section Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
9.6	VI.B.1.a	ATWS within Wetland	Staging Area Additional staging area and equipment needs including parking and equipment turnaround. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
10.0	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
10.9	VI.B.1.a	ATWS within Wetland	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. A large canal to the south, a wetland area to the west, and the location of the HDD restrict the workspace in this area.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
10.9	VI.B.1.a	ATWS within Wetland	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
11.3	VI.B.1.a	ATWS within Wetland	PI Additional staging area and equipment needs, to include turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
11.6	VI.B.1.a	ATWS within Wetland	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
12.2	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.1 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Texas Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion
12.4	VI.B.1.a	ATWS within Wetland	Canal/Road Additional staging area and equipment needs. Entry, parking, spoil storage, maintain through access for equipment and personnel.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
12.4	VI.B.1.a	ATWS within Wetland	Canal/Road Additional staging area and equipment needs. Entry, parking, spoil storage, maintain through access for equipment and personnel. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
12.6	VI.B.1.a	ATWS within Wetland	Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
12.6	VI.B.1.a	ATWS within Wetland	PI Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
12.7	VI.B.1.a	ATWS within Wetland	PI Additional staging area and equipment needs which includes turning radius for stringing trucks, welding pads, larger ditch sizing, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
13.6	VI.B.1.a	ATWS within Wetland	Float Pipeline Equipment necessary to float pipeline requires typical 125-foot construction ROW and additional staging area.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
13.7	VI.B.1.a	ATWS within Wetland	Float Pipeline Equipment necessary to float pipeline requires typical 125-foot construction ROW and additional staging area.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
14.2	VI.B.1.a	ATWS within Wetland	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
14.4	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
14.5	VI.B.1.a	ATWS within Wetland	Float Pipeline Equipment necessary to float pipeline requires typical 125-foot construction ROW and additional staging area.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
14.5	VI.B.1.a	ATWS within Wetland	Float Pipeline Equipment necessary to float pipeline requires typical 125-foot construction ROW and additional staging area.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.1 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Texas Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion
14.9	VI.B.1.a	ATWS within Wetland	Road/ FPL/ PI Additional staging area and equipment needs. Equipment necessary to float pipeline requires typical 125-foot construction ROW and additional staging area.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
16.2	VI.B.1.a	ATWS within Wetland	PI Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
16.4	VI.B.1.a	ATWS within Wetland	PI Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
16.4	VI.B.1.a	ATWS within Wetland	PI Additional staging area and equipment needs which includes turning radius for stringing trucks, welding pads, larger ditch sizing, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
16.6	VI.B.1.a	ATWS within Wetland	Float Pipeline Equipment necessary to float pipeline requires typical 125-foot construction ROW and additional staging area.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
16.7	VI.B.1.a	ATWS within Wetland	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
16.9	VI.B.1.a	ATWS within Wetland	Canal/Foreign Pipeline Additional area needs for canal include equipment and personnel parking/staging, parallel pipeline stringing, bore pit, extra bore pit spoil, and bore rig area. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.1 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Texas Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion
16.9	VI.B.1.a	ATWS within Wetland	Canal/Foreign Pipeline Additional area needs for canal include equipment and personnel parking/staging, parallel pipeline stringing, bore pit, extra bore pit spoil, and bore rig area. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
17.2	VI.B.1.a	ATWS within Wetland	Float Pipeline Equipment necessary to float pipeline requires typical 125-foot construction ROW and additional staging area.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
17.3	VI.B.1.a	ATWS within Wetland	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
18.1	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
18.1	VI.B.1.a	ATWS within Wetland	HDD Exit/Pull String Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
18.1	VI.B.1.a	ATWS within Wetland	HDD Exit/Pull String Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
18.1	VI.B.1.a	ATWS within Wetland	HDD Exit/Pull String Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
18.1	VI.B.1.a	ATWS within Wetland	HDD Exit/Pull String Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
18.1	VI.B.1.a	ATWS within Wetland	HDD Exit/Pull String Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.1 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Texas Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion
18.1	VI.B.1.a	ATWS within Wetland	HDD Exit/Pull String Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
18.2	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
18.2	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
18.2	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
18.2	VI.B.1.a	ATWS within Wetland	Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
18.2	VI.B.1.a	ATWS within Wetland	Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
18.2	VI.B.1.a	ATWS within Wetland	Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
18.5	VI.B.1.a	ATWS within Wetland	HDD Entry/Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDDs and the foreign pipeline restricts the location of the ATWS. Therefore, the wetlands in this area are unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
19.1	VI.B.1.a	ATWS within Wetland	PI Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
19.4	VI.B.1.a	ATWS within Wetland	Canal	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
19.4	VI.B.1.a	ATWS within Wetland	Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
19.4	VI.B.1.a	ATWS within Wetland	Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
19.4	VI.B.1.a	ATWS within Wetland	Canal/PI Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.1 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Texas Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion
19.6	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, sidebooms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
21.3	VI.B.1.a	ATWS within Wetland	PI Additional staging area and equipment needs which includes turning radius for stringing trucks, welding pads, larger ditch sizing, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
21.6	VI.B.1.a	ATWS within Wetland	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD in the area restrict the placement of the ATWS and make the wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
22.5	VI.B.1.a	ATWS within Wetland	Construction Conditions Additional staging area and equipment needs. Permanent and temporary workspace is necked down due to landowner constraints and existing foreign pipeline; therefore, ATWS was added to compensate for restricted existing conditions. The entire surrounding area is wetlands. This and the construction conditions make wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
22.8	VI.B.1.a	ATWS within Wetland	Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
22.9	VI.B.1.a	ATWS within Wetland	Construction Conditions Additional staging area and equipment needs. Permanent and temporary workspace is necked down due to landowner constraints and existing foreign pipeline; therefore, ATWS was added to compensate for restricted existing conditions.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
23.0	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.1 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Texas Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion
23.0	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
23.0	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
23.7	VI.B.1.a	ATWS within Wetland	HDD Entry/Push Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
24.4	VI.B.1.a	ATWS within Wetland	Tie-In Additional staging area and equipment needs for tie-in including bell hole installation for the T section and additional spoil area. The entire surrounding area is wetland. This makes wetland impacts unavoidable by an ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
24.6	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
26.1	VI.B.1.a	ATWS within Wetland	Construction Conditions Additional staging area and equipment needs. Permanent and temporary workspace is necked down due to landowner constraints and existing foreign pipeline; therefore, ATWS was added to compensate for restricted existing conditions.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
26.2	VI.B.1.a	ATWS within Wetland	Construction Conditions Additional staging area and equipment needs. Permanent and temporary workspace is necked down due to landowner constraints and existing foreign pipeline; therefore, ATWS was added to compensate for restricted existing conditions.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
Southern Pipeline				
0.1	VI.B.1.a	ATWS within Wetland	Tie into Compressor Station	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
0.1	VI.B.1.a	ATWS within Wetland	Tie into Compressor Station	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
2.2	VI.B.1.a	ATWS within Wetland	PI Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.1 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Texas Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion
2.2	VI.B.1.a	ATWS within Wetland	PI Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
2.2	VI.B.1.a	ATWS within Wetland	South Route Staging Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
2.2	VI.B.1.a	ATWS within Wetland	South Route Staging Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
2.6	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
2.6	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
2.6	VI.B.1.a	ATWS within Wetland	Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
2.9	VI.B.1.a	ATWS within Wetland	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
2.9	VI.B.1.a	ATWS within Wetland	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
3.8	VI.B.1.a	ATWS within Wetland	HDD Exit/ Push Section Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
3.8	VI.B.1.a	ATWS within Wetland	HDD Exit/ Push Section Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
3.8	VI.B.1.a	ATWS within Wetland	HDD Exit/ Push Section Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
5.0	VI.B.1.a	ATWS within Wetland	Road Entry, parking, spoil storage, maintain through access for equipment and personnel.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
5.0	VI.B.1.a	ATWS within Wetland	Road Entry, parking, spoil storage, maintain through access for equipment and personnel.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.1 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Texas Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion
7.5	VI.B.1.a	ATWS within Wetland	HDD Entry Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The entire surrounding area is wetland. This makes wetland impacts unavoidable by any ATWS configuration at this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
FGT Lateral				
0.6	VI.B.1.a	ATWS within Wetland	Foreign Pipeline Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
0.6	VI.B.1.a	ATWS within Wetland	Float Pipeline Equipment necessary to float pipeline requires typical 125-foot construction ROW and additional staging area.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
0.6	VI.B.1.a	ATWS within Wetland	Float Pipeline Equipment necessary to float pipeline requires typical 125-foot construction ROW and additional staging area.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
0.6	VI.B.1.a	ATWS within Wetland	Float Pipeline Equipment necessary to float pipeline requires typical 125-foot construction ROW and additional staging area.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
0.7	VI.B.1.a	ATWS within Wetland	Float Pipeline Equipment necessary to float pipeline requires typical 125-foot construction ROW and additional staging area.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
0.8	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
GTS Lateral				
0.2	VI.B.1.a	ATWS within 50ft of Wetland	Pull String Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
0.5	VI.B.1.a	ATWS within Wetland	Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
0.5	VI.B.1.a	ATWS within Wetland	Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
0.5	VI.B.1.a	ATWS within Wetland	Pull String Additional staging area and equipment needs.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.1 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Texas Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion
0.5	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
0.5	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
1.1	VI.B.1.a	ATWS within Wetland	HDD Exit Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
1.1	VI.B.1.a	ATWS within Wetland	Pull String Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
1.2	VI.B.1.a	ATWS within Wetland	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
1.3	VI.B.1.a	ATWS within Wetland	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
HPL Lateral				
1.0	VI.B.1.a	ATWS within Wetland	Pull String Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the pipestring restrict the placement of the ATWS and makes the wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
NGPL Lateral				
0.1	VI.B.1.a	ATWS within Wetland	PI Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetland. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.1 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Texas Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion
[a]	Although adequate justification has been provided for these alternative measures, PAPL would be required to comply with other requirements of the FERC Procedures. Erosion and sedimentation control devices should be monitored and maintained in these areas more frequently than the minimum time intervals required by the FERC Procedures until final grading and revegetation have been completed.			

ADDITIONAL TEMPORARY WORKSPACES LOCATED IN WETLANDS FOR THE LOUISIANA CONNECTOR PROJECT

APPENDIX M.2

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
0.01	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment and parking. Pipeline initiation point is surrounded by wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
18.04	VI.B.1.a	ATWS within Wetland	Additional material staging area and equipment needs including barge offloading equipment, parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
18.06	VI.B.1.a	ATWS within Wetland	Additional material staging area and equipment needs including barge offloading equipment, parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
18.11	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
18.14	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
19.06	VI.B.1.a	ATWS within Wetland	Additional material staging area and equipment needs including barge offloading equipment, material staging, parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
19.21	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
19.63	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
20.35	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
20.36	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
20.44	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
20.46	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
20.77	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
21.92	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
22.23	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil storage for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
22.24	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil storage for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
22.27	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil storage for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
22.28	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil storage for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
22.57	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
23.53	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
24.15	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
24.86	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
25.65	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. Location is critical to allowing vehicles and equipment to turn around or pass on the working side of the ROW near the access road. The location of the foreign pipelines and multitude of wetlands in the area restrict the placement of this ATWS pad and makes the wetland impacts unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
26.10	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. Location was selected in an existing, cleared ROW and existing access route from the Intercoastal Waterway to avoid vegetation clearing. The location of the foreign pipelines and multitude of wetlands in the area restrict the placement of this ATWS pad and makes the wetland impacts unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
26.17	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. This location will also be used to stage material and equipment for the push/pull installation method. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
26.50	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
26.72	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area as well as material staging to construct the access road to the West. Site was selected to utilize existing raised berm and road. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
27.22	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
27.22	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
27.44	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD entry and at end of access road. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
27.45	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
27.47	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD entry and at end of access road. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
28.29	VI.B.1.a	ATWS within Wetland	Additional material staging area and equipment needs including barge offloading equipment, parking and equipment turn-around area. Location was selected for shortest path between HDD exit and Intercoastal Waterway to reduce vegetation clearing and wetland impacts. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
28.30	VI.B.1.a	ATWS within Wetland	Additional material staging area and equipment needs including barge offloading equipment, parking and equipment turn-around area. Location was selected for shortest path between HDD exit and Intercoastal Waterway to reduce vegetation clearing and wetland impacts. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
28.35	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD was selected to reduce the need for tree and vegetation clearing. Due to the multitude of wetlands in the area,it is unavoidable for the location of the ATWS pad to not impact wetlands.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
28.35	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD was selected to reduce the need for tree and vegetation clearing. Due to the multitude of wetlands in the area,it is unavoidable for the location of the ATWS pad to not impact wetlands.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
28.38	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
28.38	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD was selected to reduce the need for tree and vegetation clearing. Due to the multitude of wetlands in the area,it is unavoidable for the location of the ATWS pad to not impact wetlands.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
28.73	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
29.45	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
30.02	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
30.62	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. Due to the multitude of wetlands in the area,it is unavoidable for the location of the ATWS pad to not impact wetlands.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
30.75	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
30.84	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. Area will also be used for barge/marsh buggy offloading and material staging for push/pull section. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
30.89	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. Additional staging and area for equipment is required for the installation of MLV #2. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
31.54	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
32.28	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
32.86	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking, materials, and equipment turn-around area. Location was selected in an existing, cleared ROW to reduce tree clearing. The additional area is also required to assist stringing trucks going around the 90° turn in access road AR-CAL-04. The location of the foreign pipelines and multitude of wetlands in the area restrict the placement of this ATWS pad and makes the wetland impacts unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
32.87	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking, materials, and equipment turn-around area. Location was selected in an existing, cleared ROW to reduce tree clearing. The additional area is also required to assist stringing trucks going around the 90° turn in access road AR-CAL-04. The location of the foreign pipelines and multitude of wetlands in the area restrict the placement of this ATWS pad and makes the wetland impacts unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
33.01	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
33.72	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
34.79	VI.B.1.a	ATWS within Wetland	Additional material staging area and equipment needs including barge offloading equipment, parking and equipment turn-around area. This location was selected to utilize existing road and dock to reduce clearing and the need for a new dock. The surrounding area is mostly wetlands. This makes wetland impacts nearly unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
34.81	VI.B.1.a	ATWS within Wetland	Additional material staging area and equipment needs including barge offloading equipment, parking and equipment turn-around area. This location was selected to utilize existing road and dock to reduce clearing and the need for a new dock. The surrounding area is mostly wetlands. This makes wetland impacts nearly unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
35.03	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road, powerline, and multitude of wetlands in the area restrict the placement of this ATWS pad and makes the wetland impacts unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
35.10	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road, powerline, and multitude of wetlands in the area restrict the placement of this ATWS pad and makes the wetland impacts unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
35.50	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The pad is located outside the wetlands but is surrounded by wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
35.80	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, spoil storage, and temporary bypass equipment. The pad is located to abutt the road ROW. Moving farther away would reduce the benefit for nearby spoil storage for the road crossing.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
35.84	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, spoil storage, and temporary bypass equipment. The pad is located to abutt the road ROW. Moving farther away would reduce the benefit for nearby spoil storage for the road crossing.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
36.33	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
36.41	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
36.46	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
36.50	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
36.64	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
36.69	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
36.70	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
36.77	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
36.92	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
37.37	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
37.44	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
37.50	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
37.61	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
37.66	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
38.47	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
38.51	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
38.61	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for HDD rig and associated equipment, storage of drill pipe, staging equipment and parking. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
39.15	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and surrounding wetlands restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
39.52	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
39.78	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
39.86	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Location is limited to the north side of the pipeline ROW due to foreign pipelines. Wetlands are all around the proposed ATWS pad. This makes wetland impacts unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
40.16	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD, foreign pipeline to the south, and multiple wetlands in the area restrict the location of the ATWS pad.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
40.52	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
40.55	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
40.61	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Due to the paralleled foreign pipeline directly to the south, the ATWS pad for road bore must be to the north side of the ROW. Multiple wetlands are on the north side making it unavoidable to impact wetlands.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
40.66	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Due to the paralleled foreign pipeline directly to the south, the ATWS pad for road bore must be to the north side of the ROW. Multiple wetlands are on the north side making it unavoidable to impact wetlands.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
40.77	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Due to the paralleled foreign pipeline directly to the south, the ATWS pad for road bore must be to the north side of the ROW. Multiple wetlands are on the north side making it unavoidable to impact wetlands.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
40.82	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Due to the paralleled foreign pipeline directly to the south, the ATWS pad for road bore must be to the north side of the ROW. Multiple wetlands are on the north side making it unavoidable to impact wetlands.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
40.85	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Due to the paralleled foreign pipeline directly to the south, the ATWS pad for road bore must be to the north side of the ROW. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
40.98	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for multiple PIs which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PIs, and extra track hoe requirements. ATWS pad is located between foreign pipelines and wetland on the south side of the ROW. The north side of the ROW is restricted by multiple residences making the wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
41.05	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. ATWS pad is located between on the north side of the ROW. The south side of the ROW is restricted by foreign pipelines and an existing above grade facility/valve site. Due to this restriction and the multiple wetlands and residences in the area, impacts to the wetland are unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
41.45	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Due to the paralleled foreign pipeline directly to the south, the ATWS pad for road bore must be to the north side of the ROW. Multiple wetlands are on the north side making it unavoidable to impact wetlands.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
41.98	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and surrounding wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
42.52	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the HDD and surrounding wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
42.52	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the HDD and surrounding wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
42.55	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
42.62	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The entire surrounding area is wetlands and the south side is restricted due to foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
42.68	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit and PI: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil, turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands and the south side is restricted due to foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
42.97	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands and the south side is restricted due to foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
43.09	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The surrounding area includes a multitude of wetlands and the south side is restricted due to foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
43.19	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands and the south side is restricted due to foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
43.26	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands and the south side is restricted due to foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
43.39	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands and the south side is restricted due to foreign pipelines. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
43.53	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands and the south side is restricted due to foreign pipelines. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
43.82	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit and PI: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil, turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location is critical to avoid existing WRP lands. Wetland impacts are unavoidable due to the manmade ditch which intersects the road.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
43.86	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit and PI: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil, turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location is critical to avoid existing WRP lands. Wetland impacts are unavoidable due to the manmade ditch which intersects the road.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
43.89	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit and PI: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil, turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location is critical to avoid existing WRP lands. Wetland impacts are unavoidable due to the manmade ditch which intersects the road.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
44.22	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands and the south side is restricted due to foreign pipelines. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
44.40	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the PI, pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
44.43	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the PI, pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
44.52	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The entire surrounding area is wetlands and the west side is restricted due to a pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
44.56	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The entire surrounding area is wetlands and the west side is restricted due to a pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
44.62	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands and the west side is restricted due to a pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
44.67	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands and the west side is restricted due to a paralleling pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
44.77	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Location was selected to reduce vegetation clearing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
45.06	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment.Location was selected to reduce vegetation clearing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
45.47	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
45.56	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
45.72	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The location was selected near the transition to TWS neckdown area for vehicle/equipment to be able to pass on the working side and assist with an open cut water crossing. Additional area includes parallel foreign pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
46.04	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. ATWS pad location was restricted to the east side due to the paralleling foreign pipeline on the west side. Moving the ATWS further to the south would hinder its ability to aid in construction as the distance from the foreign pipeline would be too far to transfer spoil.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
46.04	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. ATWS pad location was restricted to the east side due to the paralleling foreign pipeline on the west side. Moving the ATWS further to the south would hinder its ability to aid in construction as the distance from the foreign pipeline would be too far to transfer spoil.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
46.07	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
46.11	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
46.21	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
46.26	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
46.35	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
46.42	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
46.46	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
46.76	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
47.05	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI, bore entry/exit, and foreign pipeline crossing which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI and bore pit, extra spoil, parallel pipe stringing, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
47.07	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI, bore entry/exit, and foreign pipeline crossing which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI and bore pit, extra spoil, parallel pipe stringing, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands and the west side is restricted due to a paralleling foreign pipeline. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
47.14	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Additional staging area and equipment needs including parking and equipment turn-around area. The surrounding area includes a multitude of wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
47.21	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI, bore entry/exit, and foreign pipeline crossing which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI and bore pit, extra spoil, parallel pipe stringing, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The surrounding area includes a multitude of wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
47.22	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The surrounding area includes a multitude of wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
47.45	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. In addition, the area is surrounded with a multitude of wetlands. The wetland impact is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
47.51	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
47.51	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
47.93	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
48.16	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
48.20	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
48.50	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
48.60	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
48.63	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
48.64	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
48.93	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
49.37	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
49.77	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
49.86	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
49.95	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
50.28	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
50.33	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
50.36	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
50.52	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
51.28	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
51.33	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
51.33	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
51.48	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the PI,several foreign pipelines crossing, the location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
51.49	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
51.56	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines crossing, the location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
51.57	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines crossing, the location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
51.60	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines crossing, the location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
51.62	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines crossing, the location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
51.71	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
51.71	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
51.75	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
51.75	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
51.80	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
51.87	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the railroad and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
52.13	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
52.31	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
52.35	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
52.46	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
52.46	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
52.62	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
52.63	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
52.67	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
52.68	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
52.98	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
53.00	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
53.07	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
53.07	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
53.10	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
53.15	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
53.22	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
53.36	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
53.37	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
53.80	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
53.94	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
53.96	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
54.08	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
54.15	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and parallelling in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
54.22	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and parallelling in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
54.43	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
54.54	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
54.56	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
54.82	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
54.82	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
54.85	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
54.86	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
55.14	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
55.75	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
55.80	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
56.25	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
56.53	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
56.54	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
56.57	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
56.72	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
56.74	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
58.51	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
59.12	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and parallelling the Sempra pipeline in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
59.63	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
59.67	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
59.67	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
59.98	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
60.11	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
60.25	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
60.25	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
60.81	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
61.91	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
61.97	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
62.73	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
62.82	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
62.95	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
63.00	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
63.81	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
63.82	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
65.54	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
65.62	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
66.09	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Existing foreign pipelines and multitude of wetlands in the area restrict the placement of the ATWS in this area, making this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
66.09	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Existing foreign pipelines and multitude of wetlands in the area restrict the placement of the ATWS in this area, making this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
66.14	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Existing foreign pipelines and multitude of wetlands in the area restrict the placement of the ATWS in this area, making this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
66.14	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Existing foreign pipelines and multitude of wetlands in the area restrict the placement of the ATWS in this area, making this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
66.17	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
66.17	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
66.36	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and parallelling in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
66.36	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and parallelling in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
68.01	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
68.20	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
68.24	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
69.74	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
69.80	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
70.02	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
70.04	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
70.06	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
70.34	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and parallelling in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
70.53	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
70.53	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
70.84	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the PI, Foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
70.84	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the PI, Foreign pipeline crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
71.03	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. Moving the ATWS would not assist with the waterbody crossing and is restricted by foreign pipelines.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
71.06	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
71.11	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
71.20	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
71.21	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
72.37	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
72.74	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
72.74	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
72.76	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and parallelling the Sempra pipeline in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
72.77	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and parallelling the Sempra pipeline in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
73.23	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
73.30	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
73.61	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would not assist with the waterbody crossing and is restricted by foreign pipelines.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
74.05	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
74.10	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would not assist with the waterbody crossing and is restricted by foreign pipelines.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
74.17	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would not assist with the waterbody crossing and is restricted by foreign pipelines.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
75.07	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and parallelling the Sempra pipeline in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
75.10	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and parallelling the Sempra pipeline in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
75.11	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines both crossing and parallelling the Sempra pipeline in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
76.02	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
76.02	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
76.03	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
76.07	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
76.08	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
76.45	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
76.45	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
76.59	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
76.62	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
78.71	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
78.74	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
79.44	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Moving the ATWS would reduce the benefit for nearby spoil storage for the road crossing.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
81.28	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
81.53	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
81.56	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
81.58	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
81.66	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional staging area,equipment storage for pipeline mats, and parallel pipeline stringing. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
82.05	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Moving the would reduce the benefit for nearby spoil storage for the road crossing.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
82.05	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Moving the ATWS would reduce the benefit for nearby spoil storage for the road crossing.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
82.10	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
82.15	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
82.27	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
82.35	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would not assist with the waterbody crossing .	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
84.84	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would not assist with the waterbody crossing and is restricted by foreign pipelines.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
84.84	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
84.92	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
85.81	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
85.82	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
86.12	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
86.13	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
86.27	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
87.08	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
87.43	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
87.49	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
89.12	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
89.29	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
89.41	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
89.45	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
90.61	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
90.62	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
90.66	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road crossing and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
90.92	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
91.07	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
91.26	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
91.32	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
91.41	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
91.47	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
91.51	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
92.63	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The location of the road and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
93.30	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
93.33	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
94.20	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
94.45	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
94.72	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
94.76	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI, foreign pipeline crossing and the multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
94.82	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the PI, foreign pipeline crossing and the multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
96.14	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody crossing and the multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
96.37	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
96.55	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
96.60	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
96.65	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
96.95	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
96.97	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
96.98	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Existing structures and the multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
96.99	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Existing structures and the multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
97.08	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
97.08	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
97.13	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
97.13	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
97.57	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would not assist with the waterbody crossing and is restricted by foreign pipelines.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
97.72	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Moving the ATWS would not assist with the waterbody crossing and is restricted by foreign pipelines.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
98.21	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the PI,foreign pipelines parallelling the Sempra pipeline and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
98.22	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The location of the PI, foreign pipelines parallelling the Sempra pipeline and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
98.32	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
98.40	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
98.55	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
99.37	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would not assist with the waterbody crossing and is restricted by foreign pipelines.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
99.71	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
99.78	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
99.85	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs including parking and equipment turn-around area. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
100.56	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
100.58	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
100.73	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The location of the waterbody and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
100.92	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
100.92	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
103.60	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Moving the ATWS would not assist with the road crossing and is restricted by foreign pipelines.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
103.61	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. Moving the ATWS would not assist with the road crossing and is restricted by foreign pipelines.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
104.34	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
104.41	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
104.44	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
104.47	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
104.59	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
104.65	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
104.69	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
104.73	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
104.79	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
104.89	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The location of the road and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
104.95	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
105.05	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
105.10	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
107.10	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
108.39	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
108.45	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
108.64	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
108.70	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
108.78	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
108.83	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
109.67	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
109.73	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
109.79	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for pull string includes pull-back pipe on rollers, HDD aboveground pre-test equipment and pipe string, and travel lanes for other equipment. The location of the HDD and length of the drill string restrict the placement of the ATWS in this area. The wetland impact is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
109.82	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
109.87	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The location of the PI and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
109.87	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
109.87	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
110.08	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. Foreign pipelines parallelling the Sempra pipeline and the location of the HDD restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
110.27	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would reduce the benefit for nearby spoil storage for the waterbody crossing.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
110.65	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
111.87	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS would reduce the benefit for nearby spoil storage for the waterbody crossing.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
112.15	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
112.64	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS farther away would reduce the benefit for nearby spoil storage for the waterbody crossing.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
115.59	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
115.61	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for tie-in including bell hole installation for the T section and additional spoil area. The location of the tie-in and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
117.98	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS farther away would reduce the benefit for nearby spoil storage for the waterbody crossing.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
118.24	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
118.30	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
118.38	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS farther away would reduce the benefit for nearby spoil storage for the waterbody crossing.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
118.79	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
118.80	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
118.84	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
118.94	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs. Worksite must be level for drilling rig and associated equipment, storage of drill pipe, parking, pull-back area. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
119.17	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for HDD aboveground pre-test equipment and pipe material, side-booms, cranes for HDD pullback loading at an inclined angle, and personnel vehicle parking. The location of the HDD and multitude of wetlands in the area restrict the location of the ATWS pad and make this wetland impact unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
120.66	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
120.70	VI.B.1.a	ATWS within Wetland	Additional area needs for foreign pipeline crossings include spoil needs for daylighting foreign pipelines, additional equipment storage for pipeline mats, and parallel pipeline stringing. Several foreign pipelines in the area, both crossing and paralleling the Sempra pipeline dictate the necessity for this ATWS and restrict the area which it can be placed. Therefore, the wetland impact here is unavoidable.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
120.80	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit and PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI,: personnel parking/staging, parallel pipeline stringing, bore pit, extra bore pit spoil, daylighting foreign pipeline spoil. Moving the ATWS farther away would reduce the benefit pipeline construction.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
120.94	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Moving the ATWS farther away would reduce the benefit for nearby spoil storage for the road crossing.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
120.95	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. Moving the ATWS farther away would reduce the benefit for nearby spoil storage for the road crossing.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
123.35	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil. The entire surrounding area is wetlands. Moving the ATWS to the East is restricted by existing structures. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
127.35	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
127.48	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
127.56	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional staging area and equipment needs for Bore entry/exit: personnel parking/staging, parallel pipeline stringing, bore pit, and extra bore pit spoil.. Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
128.11	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
128.30	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
128.82	VI.B.1.a	ATWS within Wetland	Additional staging area and equipment needs for PI which includes turning radius for stringing trucks, welding pads, larger ditch sizing for installing PI, and extra track hoe requirements. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
128.99	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
129.04	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
129.09	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
129.69	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
129.83	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

APPENDIX M.2 (cont'd)

Additional Temporary Workspaces Located in Wetlands for the Louisiana Connector Project

Milepost	Procedures Section Reference	Deviation Description	Justification	FERC Conclusion [a]
129.89	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
130.04	VI.B.1.a	ATWS within Wetland	Maintain through access for equipment and personnel. Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, and temporary bypass equipment. The entire surrounding area is wetlands. This makes wetland impacts unavoidable by any ATWS configuration in this location.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.
130.33	VI.B.1.a	ATWS within Wetland	Additional area includes equipment and personnel parking/staging, parallel pipeline stringing, additional spoil storage, and temporary bypass equipment. Moving the ATWS to the North side would not assist with the waterbody crossing and is restricted by foreign pipelines.	Sufficiently justified. A suitable upland alternative location for the ATWS is not available.

[a] Although adequate justification has been provided for these alternative measures, PAPL would be required to comply with other requirements of the FERC Procedures. Erosion and sedimentation control devices should be monitored and maintained in these areas more frequently than the minimum time intervals required by the FERC Procedures until final grading and revegetation have been completed.

APPENDIX N

BIRDS OF CONSERVATION CONCERN WITHIN BCR 37 – GULF COASTAL PRAIRIE IN THE PROJECTS AREA

APPENDIX N

Birds of Conservation Concern within BCR 37 – Gulf Coastal Prairie in the Projects Area [a]

Common Name [b]	Scientific Name
Audubon's Shearwater (nb)	*Puffinus lherminieri*
Band-rumped Storm-Petrel (nb)	*Oceanodroma castro*
American Bittern	*Botaurus lentiginosus*
Least Bittern	*Ixobrychus exilis*
Reddish Egret	*Egretta rufescens*
Swallow-tailed Kite	*Elanoides forficatus*
Bald Eagle (b)	*Haliaeetus leucocephalus*
White-tailed Hawk	*Geranoaetus albicaudatus*
Peregrine Falcon (b) (nb)	*Falco peregrinus*
Yellow Rail	*Coturnicops noveboracensis*
Black Rail	*Laterallus jamaicensis*
Snowy Plover (c)	*Charadrius nivosus*
Wilson's Plover	*Charadrius wilsonia*
Mountain Plover (nb)	*Charadrius montanus*
American Oystercatcher	*Haematopus palliatus*
Solitary Sandpiper (nb)	*Tringa solitaria*
Lesser Yellowlegs (nb)	*Tringa flavipes*
Upland Sandpiper (nb)	*Bartramia longicauda*
Whimbrel (nb)	*Numenius phaeopus*
Long-billed Curlew	*Numenius americanus*
Hudsonian Godwit (nb)	*Limosa haemastica*
Marbled Godwit (nb)	*Limosa fedoa*
Red Knot (roselaari ssp.) (nb)	*Calidris canutus roselaari*
Red Knot (rufa ssp.) (a) (nb)	*Calidris canutus rufa*
Buff-breasted Sandpiper (nb)	*Tryngites subruficollis*
Short-billed Dowitcher (nb)	*Limnodromus griseus*
Least Tern (c)	*Sternula antillarum*
Gull-billed Tern	*Gelochelidon nilotica*
Sandwich Tern	*Thalasseus sandvicensis*
Black Skimmer	*Rynchops niger*
Short-eared Owl (nb)	*Asio flammeus*
Loggerhead Shrike	*Lanius ludovicianus*
Sedge Wren (nb)	*Cistothorus platensis*
Sprague's Pipit (nb)	*Anthus spragueii*
Prothonotary Warbler	*Protonotaria citrea*
Swainson's Warbler	*Limnothlypis swainsonii*
Botteri's Sparrow	*Peucaea botterii*
Grasshopper Sparrow	*Ammodramus savannarum*
Henslow's Sparrow (nb)	*Ammodramus henslowii*
LeConte's Sparrow (nb)	*LeConte's Sparrow (nb)*
Nelson's Sharp-tailed Sparrow (nb)	*Ammodramus nelsoni*
Seaside Sparrow (c)	*Ammodramus maritimus*
Painted Bunting	*Passerina ciris*
Dickcissel	*Spiza americana*

[a] U.S. Fish and Wildlife Service. 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. 85 pp. [Online version available at <http://www.fws.gov/migratorybirds/>]

[b] Species status within the BCR:
(b) ESA delisted
(c) non-listed subspecies or population of Threatened or Endangered species
(nb) non-breeding in this BCR

APPENDIX O

DETERMINATIONS OF NO EFFECT ON FEDERALLY LISTED SPECIES AND CRITICAL HABITAT FOR THE PROJECTS

APPENDIX O

Justification for Determinations of No Effect on Federally Listed Species and Critical Habitat for the Projects

Common Name *Scientific Name*	Federal Status[a] – Parish/County[b]	Justification for Determination of No Effect
Pallid sturgeon *Scaphirhynchus albus*	E - STL	The pallid sturgeon is a bottom-oriented, fish that inhabits large river systems from Montana to Louisiana. Within this range, pallid sturgeon tends to select main channel habitats in the Mississippi River and main channel areas with islands or sand bars in the upper Missouri River. In Louisiana, it occurs in the Atchafalaya and Mississippi Rivers, and below Lock and Dam Number 3 on the Red River (with known concentrations in the vicinity of the Old River Control Structure Complex) (FWS, 2016a). The Louisiana Connector Project would not occur within suitable habitat for the pallid sturgeon.
Gulf sturgeon *Acipenser oxyrinchus desotoi*	T – N/A	Gulf sturgeon are an anadromous fish, which means they can live in both fresh and saltwater. They have a relatively complex life history that includes spawning and juvenile rearing in rivers followed by migrating to saltwater to feed, grow, and mature before returning to freshwater to spawn. They are a long-lived, slow-growing fish. They are vulnerable to many stressors and threats including blocked access to spawning grounds and habitat degradation caused by dams and culverts. The Projects are located outside of the species range (NMFS, 2007; NMFS, 2018). Although there is a possibility that some LNG vessel transit routes could traverse through the coastal waters of the northeastern Gulf of Mexico, inhabited by the Gulf sturgeon, the Gulf sturgeon are bottom-oriented species that primarily inhabit shallow coastal and estuarine habitats, and are not known to be affected by large, ocean-going vessels (NMFS, 2018). Therefore, the Gulf sturgeon is not expected to be exposed to any direct or indirect effects of the Liquefaction Project.
Oceanic whitetip shark *Carcharhinus longimanus*	T – N/A[c]	The oceanic whitetip shark is found throughout the world in tropical and sub-tropical waters. It is a pelagic species, generally remaining offshore in the open ocean, on the outer continental shelf, or around oceanic islands in water depths greater than 600 feet. They live from the surface of the water to at least 498 feet deep. The primary threat to the oceanic whitetip shark is incidental bycatch in commercial fisheries (NMFS, n.d.-h). Given that sharks are not known to be susceptible to vessel strikes, the oceanic whitetip shark is not expected to be exposed to any direct or indirect effects of the Liquefaction Project.
Piping plover *Charadrius melodus*	CH - CA	On July 10, 2001, the FWS designated critical habitat for wintering piping plovers (Federal Register Volume 66, No. 132), including seven critical habitat units in Louisiana, with one of those units in Cameron Parish (LA-1) (FWS, 2001a). The Texas Connector and Louisiana Connector Projects do not occur within the designated critical habitat unit in Cameron Parish.
Lobed star coral *Orbicella annularis*	T – N/A[c]	Lobed star coral grows in lobes, and the surface usually does not have ridges or bumps (NMFS, n.d.-c). This species grows in waters 2 to 270 feet deep. Given that there would be no reef disturbance associated with the minor increase in vessel traffic in the Gulf of Mexico associated with LNG vessels calling on the Liquefaction Project facility (about three to four carriers per week), coral species are not expected to be exposed to any direct or indirect effects of the Liquefaction Project.
Mountainous star coral *Orbicella faveolata*	T – N/A[c]	Mountainous star coral grows in heads or sheets, and the surface can be smooth, bumpy, or ridged. This species grows in waters 2 to 270 feet deep (NMFS, n.d.-c). Given that there would be no reef disturbance associated with the minor increase in vessel traffic in the Gulf of Mexico associated with LNG vessels calling on the Liquefaction Project facility (about three to four carriers per week), coral species are not expected to be exposed to any direct or indirect effects of the Liquefaction Project.

APPENDIX O (cont'd)

Justification for Determinations of No Effect on Federally Listed Species and Critical Habitat for the Projects

Common Name *Scientific Name*	Federal Status[a] – Parish/County[b]	Justification for Determination of No Effect
Boulder star coral *Orbicella franksi*	T – N/A[c]	Boulder star coral has large, unevenly-arranged polyps that make the surface of the coral look irregular and grows in waters 2 to 270 feet deep (NMFS, n.d.-c). Given that there would be no reef disturbance associated with the minor increase in vessel traffic in the Gulf of Mexico associated with LNG vessels calling on the Liquefaction Project facility (about three to four carriers per week), coral species are not expected to be exposed to any direct or indirect effects of the Liquefaction Project.
Elkhorn coral *Acropora palmata*	T – N/A[c]	Elkhorn coral is the largest of all species of *Acropora* (NMFS, 2012). Colonies are flattened to near round with frond-like branches. Branches typically radiate outward from a central trunk (NMFS, n.d.-c). Elkhorn coral generally grows in water 3 to 15 feet deep on the seaward face of the reef (NMFS, 2012). Given that there would be no reef disturbance associated with the minor increase in vessel traffic in the Gulf of Mexico associated with LNG vessels calling on the Liquefaction Project facility (about three to four carriers per week), coral species are not expected to be exposed to any direct or indirect effects of the Liquefaction Project.

[a] Federal status includes: Endangered (E) and Critical Habitat (CH).

[b] Parish/County: Orange County (OR), Cameron Parish (CA), St. Landry Parish (STL)

[c] Oceanic whitetip shark listed for the States of Texas and Louisiana (NMFS, n.d.-a; n.d.-b); coral species listed for the State of Texas (NMFS, n.d.-a).

APPENDIX P

STATE-LISTED AND RARE SPECIES POTENTIALLY OCCURRING IN THE VICINITY OF THE PROJECTS

APPENDIX P

State-listed and Rare Species Potentially Occurring in the Vicinity of the Projects

Common Name *Scientific Name*	State Status[a] Parish/County[b]	Project Components	Range/Habitat	Potential Impact
BIRDS				
American peregrine falcon [c, d] *Falco peregrinus anatum*	T – JE, OR	Liquefaction Texas Connector	The Texas coastline plays an important role in the survival of migrating peregrine falcons. Falcons assemble on the Texas coast to take advantage of the abundant prey along the open coastline and tidal flats. Preferred hunting habitats in the Project area include coastal prairies and marshes (TPWD, 2016).	Suitable nesting habitat is not present in the Liquefaction or Texas Connector Projects area. However, suitable foraging habitat for this species is present in both project areas. Therefore, the projects may affect this species through reducing quality and/or availability of foraging habitat.
Arctic peregrine falcon [c] *Falco peregrinus tundrius*	R – JE, OR	Liquefaction Texas Connector	Arctic Peregrines migrate through Texas twice a year to and from their wintering areas in South America and stop on the Texas Coast to feed before continuing their migration. Foraging habitats include meadows, river bottoms, croplands, marshes, and lakes (TPWD, 2017a).	Suitable foraging habitat for this species is found in the Liquefaction and Texas Connector Projects area. Therefore, the Projects may affect this species through reducing quality and/or availability of foraging habitat.
*Brown pelican [c, e] *Pelecanus occidentalis*	R – JE, OR	Louisiana Connector	Found in largely coastal and near shore areas, where it nests on small, isolated coastal islands, safe from predators such as raccoons and coyotes (TPWD, 2017a).	The Louisiana Connector Project would not impact suitable habitat for this species.
*Reddish egret [c, d, e] *Egretta rufescens*	T - JE	Louisiana Connector	Found along the Gulf Coast of Texas and some parts of Louisiana and southern Florida. Nests are built mostly on the ground near a bush or prickly pear cactus or on an oyster shell beach (TPWD, 2017a).	Louisiana Connector Project activities in Jefferson County would occur within the previously disturbed Liquefaction facility; therefore, suitable habitat would not be present for this species and impacts are not anticipated.
Swallow-tailed kite [c, d] *Elanoides forficatus*	T – JE, OR	Liquefaction Texas Connector	Currently nests only in the states along the Gulf Coast and other adjacent states; which is less than half of its historical U.S. breeding range. Occasionally, kites are seen statewide in Texas during spring and fall migration as well as all along the Gulf Coast. When nesting in Texas, swallow-tailed kites are most likely to be seen near large rivers, particularly the lower Trinity, lower Neches and lower Sabine river watersheds and associated bottomland hardwood forests (TPWD, 2017b).	Suitable habitat for this species exists in the Liquefaction and Texas Connector Projects area. Therefore, the projects may affect this species through reducing quality and/or availability of habitat. Direct mortality of individuals during construction activities is also possible if activities are conducted during the nesting season.
White-faced ibis [c, d, e] *Plegadis chihi*	T – JE, OR	Liquefaction Texas Connector Louisiana Connector [f]	In Texas, they breed and winter along the Gulf Coast and may occur as migrants in the Panhandle and West Texas. Frequents marshes, swamps, ponds and rivers; and seems to prefer freshwater marshes, where it can find insects, newts, leeches, earthworms, snails and especially crayfish, frogs and fish. They roost on low platforms of dead reed stems or on mud banks. During the nesting season, they are colonial and will construct a deep cup of dead reeds among beds of bulrushes, on floating mats of dead plants or they may nest in trees (TPWD, 2017a).	Suitable habitat for this species exists in the Liquefaction and Texas Connector Projects area. Therefore, the projects may affect this species through reducing quality and/or availability of habitat. Direct mortality of individuals during construction activities is also possible if activities are conducted during the nesting season.

APPENDIX P (cont'd)

State-listed and Rare Species Potentially Occurring in the Vicinity of the Projects

Common Name *Scientific Name*	State Status[a] Parish/County[b]	Project Components	Range/Habitat	Potential Impact
Wood stork [c, d, e] *Mycteria americana*	T – JE, OR	Liquefaction Texas Connector Louisiana Connector [f]	Breeds in Mexico and migrates to the Gulf states for foraging; there have been no breeding records in Texas since 1960 (Texas A&M, 2017). The wood stork is associated with various habitats featuring shallow, standing water; including prairie ponds, ditches, mudflats, flooded fields, and natural wetlands. The wood stork will utilize both freshwater and saltwater systems, located in either open or forested areas. The wood stork roosts communally in snags, sometimes in association with other species of wading birds (TPWD, 2016).	Suitable foraging habitat for this species is found in the Liquefaction and Texas Connector Projects areas. Therefore, the projects may affect this species through reducing quality and/or availability of foraging habitat.
Black rail [c, d, e] *Laterallus jamaicensis*	R – JE	Liquefaction Texas Connector Louisiana Connector [f]	Inhabits marshes (salt, brackish, and freshwater), pond borders, wet meadows, and grassy swamps and feeds on small invertebrates and seeds. A year-round resident of central coastal Texas, black rails nest in May and June, typically building well-concealed ground nests in clumps of vegetation (Texas A&M, 2017).	Suitable habitat for this species exists in the Liquefaction and Texas Connector Projects area. Therefore, the projects may affect this species through reducing quality and/or availability of habitat. Direct mortality of individuals during construction activities is also possible if activities are conducted during the nesting season. On October 9, 2018, the FWS proposed the eastern black rail for listing as threatened under the ESA; therefore, this species is further addressed in section 4.7.3.
Henslow's sparrow [c, d, e] *Ammodramus henslowii*	R – JE, OR	Liquefaction Texas Connector Louisiana Connector [f]	Winter non-breeding range extends from coastal North Carolina west to central Texas. Prefers dense grass and forb cover in longleaf/slash pine savanna; wet meadows, often dominated by broomsedge (*Andropogon virginicus*) and wiregrass (*Aristida* spp.) within longleaf pine savanna; pitcher plant (*Sarracenia* spp.) bogs; moist grassy un-mowed fields, rights-of-way, and prairies (Cornell Lab of Ornithology, 2017).	Suitable foraging habitat for this species is found in the Liquefaction and Texas Connector Projects area. Therefore, the projects may affect this species through reducing quality and/or availability of foraging habitat.
*Snowy plover [c, d, e] *Charadrius alexandrinus*	R – JE	Liquefaction Texas Connector Louisiana Connector [f]	In Texas, it is typically observed along the southern half of the coastline (Texas A&M, 2017). Snowy Plovers breed in Texas from near sea level to about 1200 m (3900 ft) on bare upper beaches and sandy flats along the coast and sandy shores of large alkaline, saline or freshwater lakes (Oberholser 1974).	The Liquefaction, Texas Connector, and Louisiana Connector Projects would not impact suitable habitat for this species.
*Sooty tern [c, d] *Sterna fuscata*	T – OR	Texas Connector	Typically observed along the southern half of the Texas coastline. Sooty terns are pelagic, spending more than half of their life at sea. This species is typically observed in Texas from March to October, breeding between late April and early July. They tend to breed on small coastal islands in small colonies in open areas (Texas A&M, 2017).	The Texas Connector Project would not impact suitable habitat for this species.

APPENDIX P (cont'd)

State-listed and Rare Species Potentially Occurring in the Vicinity of the Projects

Common Name *Scientific Name*	State Status[a] Parish/County[b]	Project Components	Range/Habitat	Potential Impact
Crested Caracara [c, g] *Caracara cheriway*	R – CAM, CAL	Louisiana Connector	Occurs mainly in southeast Texas and Florida, with the Louisiana population limited to the extreme southwest portion of the state, particularly Cameron Parish. Occurs in open areas such as prairies or rangeland with scattered trees (LDWF, 2017a).	Suitable habitat for this species is found in Louisiana Connector Project area. Therefore, the projects may affect this species through reducing quality and/or availability of habitat. See section 4.7.4 for a discussion of impacts on this species.
Rafinesque's big-eared bat [d] *Corynorhinus rafinesquii*	T – JE, OR	Liquefaction Texas Connector	In the southeastern United States, they reach the westernmost portion of their range in the pine forests of East Texas. Roost in cave entrances, in hollow trees, in man-made structures such as abandoned buildings, and under bridges (TPDW, 2017).	Suitable roosting and foraging habitat is present in the Liquefaction and Texas Connector Projects area. Therefore, the projects may affect this species through reducing quality and/or availability of habitat. Direct mortality of individuals during construction activities is also possible.
Plains spotted skunk [d, e] *Spilogale putorius interrupta*	R – JE, OR	Liquefaction Texas Connector Louisiana Connector [f]	Distribution in Texas includes Fort Bend, Harris, Haskell, Jones, Lubbock (possibly extirpated), San Jacinto, Taylor, and Waller Counties (NatureServe, 2017). Found most commonly in open grasslands, brushy areas and cultivated land. Their dens are located below ground in grassy banks, rocky crevices or along fence rows, as well as above ground in hay stacks, woodpiles, hollow logs or trees or brush heaps (MDC, 2017).	Suitable habitat for this species is found in both the Liquefaction and Texas Connector Projects area. Therefore, the projects may affect this species through reducing quality and/or availability of habitat. Direct mortality of individuals during construction activities is also possible.
Southeastern myotis bat [d] *Myotis austroriparius*	R – JE, OR	Liquefaction Texas Connector	The southeastern myotis lives in the southeastern United States, from coastal North Carolina south into peninsular Florida, west through Louisiana and into eastern Texas and southeastern Arkansas. It also lives along the lower Ohio River Valley in Kentucky, Indiana, and Illinois. In Texas this species occurs westward to the Pineywoods region of East Texas. Roosts in a variety of shelters including caves, mines, bridges, buildings, culverts, and tree hollows. It prefers oak-hickory to mixed conifer-hardwood habitats and is often associated with human habitations near streams or lakes (TPWD, 2017a).	Suitable roosting habitat not anticipated in the Liquefaction or Texas Connector Projects area. This species likely uses the Liquefaction and Texas Connector Projects area for foraging habitat. Therefore, the projects may affect this species through reducing quality and/or availability of habitat.
Alligator snapping turtle [e] *Macrochelys temminckii*	T – JE, OR	Liquefaction Texas Connector Louisiana Connector	In North America, the distribution includes much of the Mississippi River Valley (known historically as far north as Iowa and Illinois) and adjacent drainages of the southeastern United States. Frequents the bottom of rivers, lakes, sloughs, swamps and bayous (Herps of Texas, 2017a).	Suitable habitat for this species is found in all Projects area. Therefore, the projects may affect this species through reducing quality and/or availability of habitat. Direct mortality of individuals during construction activities is also possible.
Northern scarlet snake [d] *Cemophora coccinea copei*	T – JE, OR	Liquefaction Texas Connector	Found from New Jersey, along the Atlantic Coast to Florida, and west to Texas and Oklahoma. Prefer soft, sandy or loamy soils for burrowing, occurring in forested areas as well as open areas such as agricultural fields and along borders of swamps and stream banks (Herps of Texas, 2017b).	Suitable habitat for this species is found in the Texas Connector Project area. Therefore, project may affect this species through reducing quality and/or availability of habitat. Direct mortality of individuals during construction activities is also possible.

APPENDIX P (cont'd)

State-listed and Rare Species Potentially Occurring in the Vicinity of the Projects

Common Name *Scientific Name*	State Status[a] Parish/County[b]	Project Components	Range/Habitat	Potential Impact
*Texas horned lizard [d] *Phrynosoma cornutum*	T – JE, OR	Liquefaction Texas Connector	Found from Kansas to Louisiana through Texas to New Mexico and northern Mexico. Prefers warm, sandy, arid environments and is typically found in flat, open areas with little vegetation. Breeding occurs in late spring upon emergence from hibernation. Females lay eggs in burrows (Herps of Texas, 2017c).	Suitable habitat for this species is not present in the Liquefaction or Texas Connector Projects area.
Timber rattlesnake [d] *Crotalus horridus*	T – JE, OR	Liquefaction Texas Connector Louisiana Connector [f]	Found in upland woods and rocky ridges in the eastern United States; the eastern third of Texas. Prefers moist lowland forests and hilly woodlands or thickets near permanent water sources such as rivers, lakes, ponds, streams and swamps where tree stumps, logs and branches provide refuge. They do not lay eggs; instead eggs are kept inside female's body until ready to hatch (TPWD, 2017a).	Suitable habitat for this species is found in the Liquefaction and Texas Connector Projects area. Therefore, these projects may affect this species through reducing quality and/or availability of habitat. Direct mortality of individuals during construction activities is also possible.
Texas diamondback terrapin [d, e] *Malaclemys terrapin littoralis*	R – JE, OR RH - CA	Liquefaction Texas Connector Louisiana Connector [f]	Found along the Atlantic and Gulf Coast shores of the United States, from Texas to Cape Cod and lives exclusively in brackish water, being the only turtle found in estuaries and saltwater marshes. Mating occurs in spring, and females nest in lightly vegetated, gently sloping shorelines above the high tide line (Herps of Texas, 2017d).	Suitable habitat for this species is found in the Liquefaction and Texas Connector Projects area. Therefore, these projects may affect this species through reducing quality and/or availability of habitat. Direct mortality of individuals during construction activities is also possible.
Bay skipper [d, e] *Euphyes bayensis*	R – JE	Liquefaction Texas Connector Louisiana Connector [f]	Lives only in tidal sawgrass marshes in Mississippi and Texas. Larval hostplant is unconfirmed but is likely sawgrass (*Cladium* sp.). There are two distinct flight periods, in late May and September. The separation between these suggests that the larvae may aestivate between the two, as well as hibernate during the winter. Both aestivation and hibernation are done as larvae, probably in the third or fourth instar (Vaughan and Shepherd, 2005).	Suitable habitat for this species is found in the Texas Connector Project area. Therefore, the project may affect this species through reducing quality and/or availability of habitat. Direct mortality of individuals during construction activities is also possible.
Southern crawfish frog [d, e] *Lithobates areolatus*	R – JE	Liquefaction Texas Connector Louisiana Connector [f]	Found in eastern Oklahoma and Texas, as well as in western Louisiana. In Texas, found in scattered populations across the eastern third of the state. Habitat includes abandoned crawfish holes, small mammal burrows, and storm sewers. Nocturnal and rarely seen outside of burrows except during breeding season. Egg masses are laid in shallow water (Herps of Texas, 2017e).	Suitable habitat for this species is found in the Texas Connector Project area. Therefore, the project may affect this species through reducing quality and/or availability of habitat. Direct mortality of individuals during construction activities is also possible.
*Chapman's orchid [d] *Platanthera chapmanii*	R – JE, OR	Liquefaction Texas Connector	Found in open wet meadows and savannas in the southern U.S., pine flatwoods, as well as in roadside ditches and on hillside seeps (Goedeke et al., 2015).	Suitable habitat for this species does not occur in the Texas Connector Project area. Therefore, impacts on this species are not expected.

APPENDIX P (cont'd)

State-listed and Rare Species Potentially Occurring in the Vicinity of the Projects

Common Name *Scientific Name*	State Status[a] Parish/County[b]	Project Components	Range/Habitat	Potential Impact
Awnless bluestem [d, e] *Bothriochloa exaristata*	R – JE	Liquefaction Texas Connector Louisiana Connector [f]	Found only along upper Gulf Coast from Brazoria and Fort Bend Counties northward, mostly in heavy, moist, black, clayey soils (Hatch et al., 1999).	Suitable habitat for this species is found in the Liquefaction and Texas Connector Projects area; however, individuals were not observed within the Projects area. Therefore, no direct impacts on this species are expected.
Large beakrush [d] *Rhynchospora macra*	R – JE	Liquefaction Texas Connector	Range includes Georgia, Florida panhandle to eastern Texas. Found in bogs and wet pine savannas and flatwoods (Godfrey and Wooten, 1979).	Suitable habitat for this species is found in the Texas Connector Project area; however, individuals were not observed during surveys and, therefore, no direct impacts on this species are expected.
Long-sepaled false dragon-head [d] *Physostegia longisepala*	R – OR	Texas Connector	Range includes West Gulf Coastal Plain of Louisiana and Texas in Hardin, Jasper, Newton, Orange, and Tyler Counties (Poole et al., 2007). Inhabits wet woods and ditches (Neyland, 2009).	Suitable habitat for this species is found in the Texas Connector Project area; however, individuals were not observed during surveys. Therefore, no direct impacts on this species are expected.
Gayfeather [g] *Liatris punctata*	R - CAL	Louisiana Connector	Native to North America, where it occurs throughout the plains of central Canada, the central United States, and northern Mexico. Habitat includes loess hills and prairies; prefers well-drained, sandy, calcareous soils (LBJWC, 2016).	Suitable habitat for this species is found in the Louisiana Connector Project area; however, individuals were not observed during surveys. Therefore, no direct impacts on this species are expected.
Purple false-foxglove [g] *Agalinis filicaulis*	R – AL, BE, CAL	Louisiana Connector	Range includes Alabama, Florida, Louisiana, and Mississippi. Inhabits wet longleaf pine flatwoods savannahs and hillside seepage bogs (LDWF, 2017b).	Suitable habitat for this species is found in the Louisiana Connector Project area; however, individuals were not observed during surveys. Therefore, no direct impacts on this species are expected.
Salt flat-grass [g] *Monanthochloe littoralis*	R – CAM	Louisiana Connector	Range includes California, Florida, Louisiana, Texas, Mexico, and Cuba. Inhabits coastal saline mud flats and salt marshes on bay shores and behind beaches (LDWF, 2017b).	Suitable habitat for this species is found in the Louisiana Connector Project area; however, individuals were not observed during surveys. Therefore, no direct impacts on this species are expected.
Silveus dropseed [g] *Sporobolus silveanus*	R – BE, CAL	Louisiana Connector	Occurs in Louisiana and Texas. Inhabits wet or sandy soils in pinewoods or on blackland prairies(LBJWC, 2010).	Suitable habitat for this species is found in the Louisiana Connector Project area; however, individuals were not observed during surveys. Therefore, no direct impacts on this species are expected.
Thyme-leaf pinweed [g] *Lechea minor*	R – CAL	Louisiana Connector	In dry open grounds, in eastern Massachusetts to Michigan, south to Florida and Louisiana. Habitat includes full sun in dry, sandy woods, clearings, roadside banks (NatureServe, 2017).	Suitable habitat for this species is found in the Louisiana Connector Project area; however, individuals were not observed during surveys. Therefore, no direct impacts on this species are expected.

APPENDIX P (cont'd)

State-listed and Rare Species Potentially Occurring in the Vicinity of the Projects

Common Name *Scientific Name*	State Status[a] Parish/County[b]	Project Components	Range/Habitat	Potential Impact
Woolly plantain [g] *Plantago patagonica*	R – AL	Louisiana Connector	Native to much of North America and grows in many types of habitats including grassland and woodlands (USGS, 2018).	Suitable habitat for this species is found in the Louisiana Connector Project area; however, individuals were not observed during surveys. Therefore, no direct impacts on this species are expected.
Smalltooth sawfish [d] *Pristis pectinata*	E – JE	Liquefaction	Once prevalent throughout Florida and were commonly encountered from Texas to North Carolina. Currently, smalltooth sawfish can only be found with any regularity in south Florida between the Caloosahatchee River and the Florida Keys. Juvenile smalltooth sawfish generally inhabit the shallow coastal waters of bays, banks, estuaries, and river mouths, particularly shallow mud banks and mangrove habitats. Larger animals can be found in the same habitat but are also found offshore at depths up to at least 122 meters (NMFS, 2009).	Suitable habitat for this species is found in the Liquefaction Project area; however, this species is unlikely to be present in the Liquefaction Project area. Therefore, impacts on this species are not expected.
American eel [d, e] *Anguilla rostrata*	R – JE, OR	Liquefaction Texas Connector Louisiana Connector [f]	American eels can live in the saltwater Gulf, brackish coastal marshes or freshwater rivers and streams (TPWD, 2017c). Distribution in Texas includes Red River (from the mouth upstream to and including the Kiamichi River), Sabine Lake (including minor coastal drainages west to Galveston Bay), Galveston Bay (including minor coastal drainages west to mouth of Brazos River), Brazos River, Colorado River, San Antonio Bay (including minor coastal drainages west of mouth of Colorado River to mouth of Nueces River), Nueces River (Hassan-Williams and Bonner, 2007).	Suitable habitat for this species is found in the Liquefaction and Texas Connector Projects area. Therefore, the projects may affect this species through reducing quality and/or availability of habitat. Direct mortality of individuals during construction activities is also possible.
*Ironcolor shiner [d] *Notropis chalybaeus*	R – OR	Texas Connector	Found only in northeastern streams from the Sabine to the Red River apart from an isolated population found in the San Marcos River headwaters. Distribution in Texas includes the following drainage units: Red River (from the mouth upstream to and including the Kiamichi River), Sabine Lake (including minor coastal drainages west to Galveston Bay), San Antonio Bay (including minor coastal drainages west of mouth of Colorado River to mouth of Nueces River). Commonly inhabits small to medium sized streams that drain pine woodlands (Hassan-Williams and Bonner, 2007).	Suitable habitat for this species does not occur in the Texas Connector Project area. Therefore, impacts on this species are not expected.
Old prairie crawfish [g] *Fallicambarus macneesei*	R – CAL, STL	Louisiana Connector	This species is known from four localities in Calcasieu and Lafayette Parishes, and has recently been found in Jefferson Davis, Acadia, and St. Landry Parishes, Louisiana. This freshwater species is a primary burrower in temporary road side ditches with heavy alluvial clay substrates (Crandall and Johnson, 2010).	Species may occur in the Louisiana Connector Project area. See section 4.7.4 for a discussion of impacts on this species.

APPENDIX P (cont'd)

State-listed and Rare Species Potentially Occurring in the Vicinity of the Projects

Common Name *Scientific Name*	State Status[a] Parish/County[b]	Project Components	Range/Habitat	Potential Impact
Louisiana pigtoe [d] *Pleurobema riddellii*	T – JE, OR	Liquefaction Texas Connector	Ranged from eastern Texas drainages into Louisiana but has been exceptionally rare in recent decades. Since the mid-1990s, small numbers of living specimens have been found in the Neches River and some of its tributaries and the Angelina River. Inhabits streams and moderate sized rivers usually with flowing water atop substrates of mud, sand, and gravel (TPWD, 2009).	Species may occur in waterbodies crossed by the Texas Connector Project. See section 4.7.4 for a discussion of impacts on this species.
Sandbank pocketbook [d, g] *Lampsilis satura*	T – JE, OR R – AL, BE, CAL	Liquefaction Texas Connector Louisiana Connector	Known from southern portions of the Mississippi interior basin and western Gulf drainages of Arkansas, Mississippi, Louisiana, and Texas, considered rare in all states from which it has been recorded. Observed in east Texas, south of Sulfur through the San Jacinto River basin as well as in the Neches River. Inhabits small to large rivers with moderate flows and swift currents atop gravel, gravel-sand, and sand substrates (TPWD, 2009).	Species may occur in waterbodies crossed by the Texas Connector and Louisiana Connector Projects. In Louisiana, suitable habitat occurs within Ouski Chitto Creek; however, impacts on this species would be minimized by use of the HDD crossing method at this waterbody. See section 4.6.2.2 regarding potential impacts due to inadvertent release of drilling mud during HDD. See section 4.7.4 for a discussion of impacts on this species.
*Southern hickorynut [d] *Obovaria jacksoniana*	T – JE, OR	Liquefaction Texas Connector	If the species still occurs in Texas at all, it may only persist on Village Creek. Observed in the Neches, Sabine, and Cypress River basins. Inhabits waterways with low to moderate currents atop medium sized gravel substrates (TPWD, 2009).	Suitable habitat for this species does not occur in the Texas Connector Project area. Therefore, impacts on this species are not expected.
Texas heelsplitter [d] *Potamilus amphichaenus*	T – JE, OR	Liquefaction Texas Connector	Restricted to the Sabine, Neches, and Trinity rivers of Texas. Inhabits waterways with low to moderate currents atop medium sized gravel substrates (TPWD, 2009).	Species may occur in waterbodies crossed by the Texas Connector Project. See section 4.7.4 for a discussion of impacts on this species.
*Texas pigtoe [d] *Fusconaia askewi*	T – JE, OR	Liquefaction Texas Connector	A regional endemic limited to a relatively small area in Texas and Louisiana, including the Trinity River above Lake Livingston, a tributary of the West Branch San Jacinto River, and the Sabine River above Toledo Bend Reservoir. Inhabits rivers with mixed mud, sand, and fine gravel substrate. This species is associated with protected areas that have fallen trees or other structures (TPWD, 2009).	Suitable habitat for this species does not occur in the Texas Connector Project area. Therefore, impacts on this species are not expected.
*Triangle pigtoe [d] *Fusconia lananensis*	T – JE, OR	Liquefaction Texas Connector	Endemic to the Neches and San Jacinto Rivers and Village Creek in eastern Texas, but extant populations are limited, and the ecological security of most occupied sites is marginal (TPWD, 2009). Inhabits rivers with mixed mud, sand, and fine gravel substrate (Howells, et al., 1996).	Suitable habitat for this species does not occur in the Texas Connector Project area. Therefore, impacts on this species are not expected.

APPENDIX P (cont'd)

State-listed and Rare Species Potentially Occurring in the Vicinity of the Projects

Common Name *Scientific Name*	State Status[a] Parish/County[b]	Project Components	Range/Habitat	Potential Impact

[a] State status includes: Endangered (E), Threatened (T), Rare (R), Restricted Harvest (RH).

[b] Parishes/counties include Cameron (CAM), Calcasieu (CAL), Beauregard (BE), Allen (AL), Evangeline (EV), and St. Landry (STL) parishes, Louisiana; Jefferson (JE) and Orange (OR) Counties, Texas.

[c] Species protected under the Migratory Bird Treaty Act (see section 4.5.3).

[d] Species identified as potentially occurring within the Texas Connector Project and Liquefaction Project areas by TPWD (letters dated May 9, 2016 and August 3, 2017, respectively).

[e] Species identified as potentially occurring within the Louisiana Connector Project area by TPWD (letter dated May 8, 2017).

[f] The Texas portion of the Louisiana Connector Project would be limited to workspace associated with the HDD, beginning within the proposed liquefaction site (which would largely be cleared of vegetation, converted to mixed industrial use, prior to construction of the Louisiana Connector Project) and exiting in Sabine Lake. Therefore, no impacts on the state-listed species identified by the TPWD are anticipated, and the Texas portion of the Louisiana Connector Project is not discussed further in this table.

[g] Species identified as potentially occurring within the Louisiana Connector Project area by LDWF (letter dated June 12, 2017).

APPENDIX Q

ROADS AND RAILROADS CROSSED BY THE TEXAS CONNECTOR AND LOUISIANA CONNECTOR PROJECTS

APPENDIX Q

Roads and Railroads Crossed by the Texas Connector and Louisiana Connector Projects

Milepost	Road/Railroad Name	Roadway Type	Crossing Method
TEXAS CONNECTOR PROJECT			
Southern Pipeline			
0.2	Unnamed/AR-S-1	Unpaved	HDD
2.2	Unnamed/ AR-S-2	Unpaved	HDD
3.2	State Hwy 87, Dowling Rd., S. 8th St., S. Gulfway Dr.	Paved	HDD
3.6	Unnamed/AR-S-4	Unpaved	HDD
5.0	Unnamed/AR-S-6	Unpaved	Push
7.3	Unnamed facility road/ AR-S-7	Unpaved	HDD
7.5	Unnamed facility road/ AR-S-8	Unpaved	Bore
Northern Pipeline			
1.8	Unnamed access /two track	Unpaved	HDD
2.4	Unnamed access /two track	Unpaved	HDD
5.3	Unnamed access /two track	Unpaved	HDD
5.6	Unnamed access /two track	Unpaved	HDD
6.0	Unnamed / AR-N-2	Unpaved	HDD
7.2	Unnamed/AR-N-3	Unpaved	Push
7.9	Unnamed/ AR-N-3	Unpaved	Open Cut
7.9	Unnamed/ AR-N-4	Unpaved	Open Cut
8.3	State Hwy 73	Paved	HDD
8.3	State Hwy 73/HO Mills Hwy	Paved	HDD
8.8	Unnamed access /two track	Unpaved	HDD
10.3	Unnamed access /two track	Unpaved	HDD
10.5	Unnamed access /two track	Unpaved	HDD
10.6	Unnamed access /two track	Unpaved	HDD
10.8	Unnamed access /two track	Unpaved	HDD
10.9	Unnamed access /two track	Unpaved	HDD
10.9	Unnamed access /two track	Unpaved	HDD
11.6	Unnamed access /two track /AR-N-9	Unpaved	HDD
11.7	Hwy 365/FM 365 Rd.	Paved	HDD
12.0	Unnamed access /two track	Unpaved	HDD
12.4	Unnamed/AR-N-10	Unpaved	Open Cut
13.1	Unnamed access/two track	Unpaved	HDD
13.1	Unnamed access/two track	Unpaved	HDD
13.2	Unnamed access/two track	Unpaved	HDD
14.8	Unnamed/ AR-N-14	Unpaved	Bore
15.3	Knauth Rd	Paved	Bore
15.3	Knauth Rd.	Paved	Bore
15.7	Unnamed/AR-N-15	Unpaved	Open cut
17.1	Hebert Rd.	Paved	Bore
17.4	Unnamed/AR-N-16	Unpaved	Open cut
17.6	State Spur 93	Paved	HDD
17.6	W Port Arthur Rd/State Spur 93	Paved	HDD
17.7	Unnamed	Unpaved	HDD
17.7	Unnamed access/two track	Unpaved	HDD
17.8	Unnamed access/two track	Unpaved	HDD
18.8	Unnamed/ AR-N-18	Unpaved	HDD
19.3	Unnamed/ AR-N-19	Unpaved	Open Cut
19.4	Unnamed	Unpaved	Open Cut

APPENDIX Q (cont'd)

Roads and Railroads Crossed by the Texas Connector and Louisiana Connector Projects

Milepost	Road/Railroad Name	Roadway Type	Crossing Method
19.7	Unnamed	Unpaved	Open Cut
19.8	Unnamed access/two track	Unpaved	HDD
20.0	Unnamed access/two track	Unpaved	HDD
20.1	Unnamed	Unpaved	HDD
20.3	Sulphur Plant Rd.	Paved	HDD
20.3	Sulphur Plant Rd	Paved	HDD
20.3	US Hwy 69	Paved	HDD
20.3	US Hwy 287	Paved	HDD
20.3	US Hwy 69	Paved	HDD
20.3	US Hwy 96	Paved	HDD
20.3	US Hwy 287	Paved	HDD
20.4	US Hwy 69 Access Rd.	Paved	HDD
20.3	Hwy 69 Access Rd.	Paved	HDD
20.4	State Hwy 347	Paved	HDD
20.4	State Hwy 347	Paved	HDD
20.4	State Hwy 347	Paved	HDD
20.4	State Hwy 347	Paved	HDD
20.4	Hwy 380 Access Rd.	Paved	HDD
20.4	Highway 380 Access Rd.	Paved	HDD
20.8	Unnamed	Paved	HDD
22.4	Unnamed/ AR-N-24	Unpaved	HDD
23.5	Unnamed/ AR-N-25	Unpaved	HDD
26.4	S Mansfield Ferry Rd	Paved	Bore
26.4	S. Mansfield Ferry Rd.	Paved	Bore
FGT Lateral			
0.3	S. Main St/FM 105	Paved	Bore
0.5	Byron Rd.	Unpaved	Open Cut
1.0	Unnamed	Unpaved	HDD
1.2	Unnamed/ AR-FGT-2	Unpaved	HDD
1.8	S. Main St./FM 105/AR-FGT-3	Paved	Bore
TETCO Lateral			
0.0	S. Mansfield Ferry Rd.	Paved	Bore
HPL Lateral			
0.1	S. Mansfield Ferry Rd.	Paved	Bore
0.1	S. Mansfield Ferry Rd	Paved	Bore
GTS Lateral			
0.4	Unnamed access/two track	Unpaved	Open Cut
0.7	Amco Rd Exn	Unpaved	HDD
0.7	Unnamed facility road	Unpaved	HDD
0.7	Unnamed facility road	Unpaved	HDD
0.8	Unnamed facility road	Unpaved	HDD
1.0	Spindletop Ave.	Unpaved	HDD
NGPL Lateral			
0.0	Unnamed/ AR-S-4	Unpaved	Bore
KMLP Lateral			
0.0	Unnamed facility road	Unpaved	Open Cut
0.1	Unnamed facility road	Unpaved	Open Cut
LOUISIANA CONNECTOR PROJECT			
0.2	State Hwy 87 / S Gulfway Dr	Paved	HDD

APPENDIX Q (cont'd)

Roads and Railroads Crossed by the Texas Connector and Louisiana Connector Projects

Milepost	Road/Railroad Name	Roadway Type	Crossing Method
0.5	State Hwy 82 / Martin Luther King Jr Dr	Paved	HDD
0.7	S Levee Rd	Unpaved	HDD
26.1	Unnamed Rd	Unpaved	Upland
35.1	Gum Cove Rd	Unpaved	Bore
35.8	Unnamed Rd	Unpaved	Open Cut
36.5	Unnamed Rd	Unpaved	Open Cut
36.7	Unnamed Rd	Unpaved	Open Cut
37.6	Unnamed Rd	Unpaved	Open Cut
38.5	Unnamed Rd	Unpaved	Open Cut
38.7	Unnamed Rd	Unpaved	HDD
38.9	Unnamed Rd	Unpaved	HDD
39.9	Unnamed Rd	Unpaved	Open Cut
40.4	Unnamed Rd	Unpaved	HDD
40.7	Charlie Moss Rd	Paved	Bore
40.8	Charlie Moss Rd	Paved	Bore
41.1	Choupique Rd	Paved	Bore
41.2	Unnamed Rd	Unpaved	Open Cut
41.5	Unnamed Rd	Unpaved	Open Cut
42.6	Murl Ellender Rd	Paved	Bore
43.9	John Brannon Rd	Paved	Bore
44.5	State Rte 108	Paved	Bore
45.0	Augie Lyons Rd	Paved	Bore
45.6	W Cotton Vincent Rd	Paved	Bore
45.8	Deere Ln	Paved	Bore
46.6	W Dave Dugas Rd	Paved	Bore
47.6	Walker Rd	Paved	HDD
48.6	Currie Dr	Paved	Bore
50.1	Interstate Hwy 10 (Eastbound)	Paved	HDD
50.1	Interstate Hwy 10 (Westbound)	Paved	HDD
51.3	US Hwy 90 / W Napoleon St	Paved	Bore
51.7	Kim St	Paved	Bore
51.8	Union Pacific Railroad	Railroad	Bore
52.2	W Burton St	Paved	Bore
52.8	Unnamed Rd	Unpaved	Upland
53.1	Unnamed Rd	Unpaved	Open Cut
55.4	W Houston River Rd	Paved	Bore
56.6	Koonce Rd	Paved	Bore
57.4	Unnamed Rd	Unpaved	HDD
57.9	Unnamed Rd	Unpaved	Upland
59.0	Unnamed Rd	Unpaved	Open Cut
59.7	State Rte 27	Paved	HDD
59.9	Bankens Rd	Paved	HDD
59.9	Kansas City Southern Railroad	Railroad	HDD
59.9	Kansas City Southern Railroad	Railroad	HDD
59.9	Kansas City Southern Railroad	Railroad	HDD
61.1	Unnamed Rd	Unpaved	Upland
61.6	Unnamed Rd	Unpaved	Open Cut
63.0	Holbrook Park Rd	Paved	Bore
63.6	Unnamed Rd	Unpaved	Upland

APPENDIX Q (cont'd)

Roads and Railroads Crossed by the Texas Connector and Louisiana Connector Projects

Milepost	Road/Railroad Name	Roadway Type	Crossing Method
64.7	Unnamed Rd	Unpaved	Open Cut
66.1	Unnamed Rd	Unpaved	Open Cut
66.1	Unnamed Rd	Unpaved	Open Cut
68.2	Unnamed Rd	Unpaved	Open Cut
68.4	Parish Rd 125 / Camp Edgewood Rd	Paved	Bore
70.6	US Hwy 171 (Southbound)	Paved	Bore
70.6	US Hwy 171 (Northbound)	Paved	Bore
71.4	Unnamed Rd	Unpaved	Upland
72.6	Parish Rd 138 / Coanie Jackson Rd	Paved	Bore
76.4	Parish Rd 152 / Texas Eastern Rd	Paved	Bore
76.7	Edna Guillery Rd	Unpaved	Open Cut
77.6	Unnamed Rd	Unpaved	Upland
77.9	Unnamed Rd	Unpaved	Upland
79.8	Topsy Bel Rd	Paved	Bore
80.4	Lyles Cemetery Rd	Paved	Open Cut
81.4	Unnamed Rd	Unpaved	Upland
81.5	Unnamed Rd	Unpaved	Upland
81.9	Unnamed Rd	Unpaved	Open Cut
83.0	Lyles St	Paved	Open Cut
85.0	AR-ALL-04	Unpaved	Upland
85.8	Snooky's Rd	Paved	Bore
86.2	Geeter Parker Rd	Unpaved	Open Cut
87.4	Union Pacific Railroad	Railroad	Bore
87.4	US Hwy 190	Paved	Bore
88.1	Parish Rd 105 / Walker Rd	Paved	Bore
89.4	Methodist Camp Rd	Paved	Bore
89.9	Gill Rd	Paved	Open Cut
90.7	Shorty Rawlings Rd	Unpaved	Open Cut
90.8	J Potter Rd	Unpaved	Open Cut
92.6	Carpenters Bridge Rd	Paved	Open Cut
93.1	Rester Rd	Paved	Bore
93.5	Dempsey Langley Rd	Paved	Open Cut
95.7	Green Oak Rd	Paved	Bore
96.4	Green Oak Cemetery Rd	Unpaved	Open Cut
96.9	US Hwy 165 (Southbound)	Paved	HDD
96.9	US Hwy 165 (Northbound)	Paved	HDD
96.9	Union Pacific Railroad	Railroad	HDD
97.0	Botley Cemetery Rd	Paved	Open Cut
97.7	Botley Cemetery Rd	Unpaved	Open Cut
98.0	Unnamed Rd	Unpaved	Open Cut
99.8	Parish Rd 4-190E / Lauderdale Woodyard Rd	Paved	Bore
101.2	Unnamed Rd	Unpaved	Upland
101.8	Unnamed Rd	Unpaved	Upland
102.3	Unnamed Rd	Unpaved	Upland
102.9	Parish Rd 193 / Powell Rd	Paved	Bore
103.5	Ethel Williams Rd	Paved	Bore
103.6	Lafleur Rd	Unpaved	Open Cut
104.9	Bel Oil Rd	Paved	Bore
106.0	State Rte 26	Paved	Bore

APPENDIX Q (cont'd)

Roads and Railroads Crossed by the Texas Connector and Louisiana Connector Projects

Milepost	Road/Railroad Name	Roadway Type	Crossing Method
107.0	Miller Rd	Unpaved	Open Cut
108.0	Briscoe Rd	Paved	Bore
110.3	Hunter Rd	Paved	HDD
110.9	Unnamed Rd	Unpaved	Upland
111.5	L'anse de Haissable Rd	Unpaved	Open Cut
112.2	Ruby Rd	Unpaved	Open Cut
113.2	Unnamed Rd	Unpaved	Open Cut
113.3	Unnamed Rd	Unpaved	Open Cut
113.4	L'anse aux Vaches Rd	Unpaved	Open Cut
114.1	State Rte 3277 / George Soileau Rd	Paved	Bore
114.7	Lucky Ln	Unpaved	Open Cut
115.7	Valentine Rd	Unpaved	Open Cut
116.8	Emery Rd	Unpaved	Open Cut
117.3	McClelland Rd	Paved	Bore
117.6	Unnamed Rd	Unpaved	Open Cut
117.8	Plenny Rd	Unpaved	Open Cut
120.9	State Rte 13	Paved	Bore
121.2	Unnamed Rd	Unpaved	Upland
121.7	Parish Rd 6-275 / Soileau Rd	Paved	Bore
121.8	Unnamed Rd	Unpaved	Open Cut
122.0	Parish Rd 6-280 / Bobby Rd	Unpaved	Open Cut
122.4	Unnamed Rd	Unpaved	Upland
123.5	Parish Rd 6-270 / Carl Loewer Rd	Paved	Bore
123.7	State Rte 29	Paved	Bore
125.0	Rougeau Rd	Unpaved	Open Cut
125.5	Parish Rd 6-265-1 / Brown Rd	Unpaved	Open Cut
125.8	State Rte 758	Paved	Bore
127.5	State Rte 95 / Etienne Rd	Paved	Bore
129.6	Parish Rd 6-110 / Joe W Rd	Unpaved	Open Cut
130.1	Parish Rd 6-105 / Belleau Rd	Unpaved	Open Cut
130.6	Parish Rd 6-90-1 / Pitre Ln	Paved	Bore
Egan Lateral			
0.0	L'anse aux Vaches Rd	Unpaved	Upland
Pine Prairie Tie-in #1			
0.0	Lucky Ln	Unpaved	Upland
Pine Prairie Tie-in #2			
0.0	Lucky Ln	Unpaved	Upland

APPENDIX R

REFERENCES

Appendix R

References

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APPENDIX S

LIST OF PREPARERS

Appendix S

List of Preparers

Federal Energy Regulatory Commission

Hanobic, David – Environmental Project Manager
B.S., Biology, 2003, Lock Haven University of Pennsylvania

Yuan, Julia – Deputy Project Manager; Socioeconomics; Cumulative Impacts
M.P.S., Natural Resources Management, 2003, State University of New York, College of Environmental Science and Forestry
B.S., Environmental Biology/Forestry, 1999, State University of New York, College of Environmental Science and Forestry

Balsom, Arianne – Aquatic Resources; EFH
M.S. Ecology and Evolutionary Biology, University of Tennessee, 2003
B.S. Ecology and Evolutionary Biology, University of Tennessee, 2000
B.A. Marine Biology, University of Tennessee, 2000

Boros, Laurie – Cultural Resources
B.A., Anthropology/Archaeology, 1980, Queens College, City University of New York

Dague, Brady, PE – Reliability and Safety
B.S. Civil Engineering, 2010, University of Maryland

Fox-Fernandez, Nancy – Vegetation; Wildlife; Threated and Endangered Species
M.S., Natural Resources: Wildlife, 2006, Humboldt State University
B.A., Psychology, 1993, Skidmore College

Kragie, S. Xiah, P.E. –Air Quality and Noise
M.A., Geochemistry, 2013, Columbia University
M.P.H., Global Environmental Health, 2008, Emory University
B.S., Civil & Environmental Engineering, 2006, University of Maryland

Peng, Andrew – Reliability and Safety
B.C.E., Civil Engineering, 2014, University of Delaware

Silvera, Liliana – LNG Reliability and Safety
B.S., Chemical Engineering, 2003, University of Maryland

Abdi, Solomon – LNG Reliability and Safety
M.S., Mechanical Engineering, 2004, Southern University and A&M College

Schreiber, Seth, P.E. – LNG Reliability and Safety
M.S., Chemical Engineering, 2005, Washington University in St. Louis

FERC Consultants

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B.S., Chemical Engineering, University of Salford, England, 1968

Robert Bachman – LNG Reliability and Safety
M.S., Structural Engineering, University of California at Berkeley, 1968

Appendix S

List of Preparers

B.S., Civil Engineering, University of California at Berkeley, 1967

Kul Bhushan – LNG Reliability and Safety
Ph.D., Geotechnical Engineering, Duke University, 1970
M.S., Highway Engineering, Panjab University, India, 1963
B.S., Civil Engineering, Panjab University, India, 1962

U.S. Army Corps of Engineers

Dodson, Felicity (Galveston District)

U.S. Coast Guard

LT Mitchell, Ryan

U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration

Battams, Ahuva
Nguyen, Thach

U.S. Department of Energy

Lavoie, Brian

U.S. Environmental Protection Agency, Region 6

Merjent, Inc.

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B.A., Anthropology/Archaeology, Moorhead State University, 1994

Book, Graham – Deputy Project Manager; Proposed Action
B.A., English, St. Olaf College, 2008

DeName, Kristina – Vegetation; Wildlife; Aquatic Resources; EFH
B.S., Environmental and Forest Biology, SUNY-College of Environmental Science and Forestry, 2010

Durand, Angela – Threatened and Endangered Species
B.S., Natural Resources and Environmental Studies, University of Minnesota, 1999

Galer, Bruce – Geology; Groundwater
B.A., Geology, University of Minnesota, Morris, 1991

Gawtry, Bec – Vegetation; Wildlife
B.A., Biology, St. Olaf College, Northfield, Minnesota, 2005

Krause, Kari – Cultural Resources
M.S., Archaeological Resource Management, Ball State University, 1995
B.A., Anthropology/History, Ripon College, 1993

Appendix S

List of Preparers

Warner, Casey – Socioeconomics
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B.A., Urban and Community Studies, University of Connecticut, 2003

Entinger, Monica – Surface Waters; Wetlands
M.S., Science Technology and Environmental Policy, University of Minnesota, 2011
B.S. Ecology, Minnesota State University, Mankato, 2007

Hansen, Shannon – Land Use, Recreation, and Visual Resources
B.S., Natural Resources & Environmental Studies, University of Minnesota, 1999

Hambleton, Suzanne – Air Quality and Noise
B.S., Chemical Engineering, University of Minnesota – Minneapolis, 2002
B.S., Chemistry, University of Minnesota – Minneapolis, 2002

Preszler, Christina – Air Quality and Noise
B.S., Chemical Engineering, University of Iowa, 2003

Schwitzer, Luke – Soils
M.S. coursework in Natural Resources Science and Management, University of Minnesota, 2009-2011
B.S., Environmental Design, University of Minnesota, 2008

Beard, Scott – Pipeline Reliability and Safety
B.S., Chemical Engineering, University of Minnesota – Duluth, 2010

Solberg, Kyle – GIS Support
B.S., Geography (Resource Management), University of Wisconsin - Eau Claire, 2004

Merjent, Inc. is a third party contractor assisting the Commission staff in reviewing the environmental aspects of the project application and preparing the environmental documents required by NEPA. Third party contractors are selected by Commission staff and funded by project applicants. Per the procedures in 40 CFR 1506.5(c), third party contractors execute a disclosure statement specifying that they have no financial or other conflicting interest in the outcome of the project. Third party contractors are required to self-report any changes in financial situation and to refresh their disclosure statements annually. The Commission staff solely directs the scope, content, quality, and schedule of the contractor's work. The Commission staff independently evaluates the results of the third-party contractor's work and the Commission, through its staff, bears ultimate responsibility for full compliance with the requirements of NEPA.

APPENDIX T

RESPONSE TO PUBLIC COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

INDIVIDUAL COMMENTS

From: Kenneth Teague
Sent: Tuesday, October 9, 2018 12:33 PM
To: swg_public_notice@usace.army.mil; Kaspar.Paul@epa.gov; martinez.maria@epa.gov; Rusty.Swafford@noaa.gov; david_hoth@fws.gov; 401certs@tceq.texas.gov; Rebecca Hensley; brandtshnfbt@juno.com; leslie.savage@rrc.texas.gov
Subject: Comments on PN SWG-2008-00497

Dear Sir/Ms: I have reviewed the very limited information provided with this PN, and I have the following comments:

Comments

The 404(b)(1) Guidelines require consideration of alternatives, and demonstration of effort to avoid and minimize impacts to wetlands and other waters of the U.S. Keep in mind that 1921.71 acres of wetlands are proposed to be destroyed by this project. And yet, the sum total of information provided in this PN, regarding alternatives, avoidance and minimization, is the following:

- ***AVOIDANCE AND MINIMIZATION:*** *The applicant stated that they considered both onsite and offsite alternatives for the proposed project, in addition to alternative facility configurations. The applicant indicated that they selected the proposed site because the site contains previously disturbed wetlands, a low percentage of tidal wetlands (compared to other sites considered), existing dock structures that can be modified to meet project needs, as well as patches of upland habitat.*

IND1-1

- The PN provides no information regarding the suitability of dredged material for disposal in waters of the U.S., or in upland confined disposal facilities. Sabine Lake and the surrounding area is highly industrialized, and has been for a century or more. There are many areas in this estuarine/wetland system in which sediments are known to be contaminated. Old dredged material, similar to what is proposed to be dredged and used to create mitigation wetlands (and nearby), has in the past sometimes appeared to be contaminated, based on testing using methods of unknown quality. Therefore, clearly, there is sufficient "reason to believe" that the material proposed to be dredged by this project may be contaminated, and therefore, should be tested prior to disposal, according to the Inland Testing Manual and/or the Upland Testing Manual, depending on the disposal method (both open water and upland disposal are proposed).
- The PN provides no information regarding impacts of the proposed project on water bodies, including tidal waters, and freshwater streams and rivers.
- The only information provided regarding estimation of project impacts on wetlands or waters of the U.S is the following:
  - *The applicant made their determination of credits by running several functional assessment methods (iHGM, HGM, LRAM, TXRAM, WVA, and UMAM) and averaging the resulting ratios to arrive at a combined ratio average of 1.62 for the proposed project.*
- The PN provides almost no information regarding proposed mitigation. The so-called "mitigation plan" submitted with this PN consists of 3 maps, which only show the

IND1-1 FERC notes that these comments are regarding the U.S. Army Corps of Engineers' Public Notice and would be addressed as part of that agency's permitting process.

INDIVIDUAL COMMENTS

IND1-1 (cont'd)

location of the proposed project, and the generalized location of mitigation marshes. No information is provided regarding the actual proposed location of mitigation marshes, what type of marsh this would be created/restored for mitigation, or what the functional quality of these marshes would be. No information is provided to demonstrate that the dredged material with which these mitigation wetlands would be created is suitable for disposal in the aquatic environment (e.g. Is it contaminated?).

Recommendations

Do not permit the proposed project unless and until the following is done, and results indicate that issuance of a permit is appropriate:

- The applicant must be required to demonstrate that the 404(b)(1) Guidelines have been met, and such documentation must be provided to the public for review and comment. Currently the PN does not demonstrate that the applicant has met the requirements of the Guidelines.
    - The applicant must be required to demonstrate that they have considered all practicable alternatives to the proposed project. This documentation must be provided to the public for review and comment. Currently, the PN does not demonstrate they have considered alternatives at all.
    - The applicant must be required to demonstrate that they have taken actual concrete steps to avoid and minimize impacts to wetlands and waters of the U.S., and this documentation must be provided to the public for review and comment. Currently, the PN does not demonstrate they have done anything to avoid and minimize impacts to weltands and waters of the U.S.
- The applicant must provide detailed information regarding the wetland proposed to be destroyed, including what types of wetland they are, exactly where they are, and estimates of their quality/functionality. In addition, the applicant must provide estimates of the loss rates of the wetlands at the facility site over time, for use in estimating mitigation requirements. This information must be provided to the public for review and comment.
- The applicant must provide detailed information regarding the mitigation proposed for compensation for destruction of wetlands on the facility site, as well as those proposed to be destroyed by the pipelines. The applicant must provide information regarding the location, type, quality, and future loss rates of the proposed tidal mitigation wetlands. The applicant must provide information regarding target wetland elevation at a specific year, initial fill elevation, and settlement curves, in order to assess whether the proposed wetlands are likely to be successful. This information must be provided to the public for review and comment.
- Under no circumstances should a permit be issued for this proposed project without testing the dredged material to be disposed. Testing should include, at a minimum, bulk chemical analysis and elutriate testing, for a broad suite of contaminants. However, additional testing may be required, as per the appropriate testing manuals. In addition, the applicant would be well advised to protect themselves by testing sediments in the proposed area for marsh creation. Previous marsh creation efforts were carried out nearby even though dredged material testing data indicated very high concentrations of legacy

INDIVIDUAL COMMENTS

IND1-1 (cont'd)

pesticides. While there are questions regarding the quality of the laboratory analytical methods, there has been no testing of soils of the wetlands that were created using the potentially contaminated dredged material.

- Under no circumstances should a permit be issued for this proposed project without much more information regarding project impacts to wetlands and other waters of the U.S.
- Under no circumstances should a permit be issued for this project without much more information regarding proposed compensatory mitigation.
- FERC and the applicant should be informed immediately regarding the inadequacy of the information the applicant has apparently provided in support of the Clean Water Act Section 404 permit.

Sincerely,
Kenneth G. Teague, PWS, Certified Senior Ecologist
Austin, TX

Sent from Mail for Windows 10

INDIVIDUAL COMMENTS

20181022-0006 FERC PDF (Unofficial) 10/22/2018

FEDERAL ENERGY REGULATORY COMMISSION
PORT ARTHUR LIQUEFACTION PROJECT, TEXAS CONNECTOR PROJECT, AND LOUISIANA CONNECTOR PROJECT

Comments can be: (1) left with a FERC representative; (2) mailed to the addresses below; or (3) electronically filed.[1]

If by mail, please send one copy referencing Docket Nos. CP17-20-000, CP17-21-000, CP17-21-001, or CP18-7-000 to:

For Official Filing:
Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, DC 20426

ORIGINAL

2018 OCT 22 A 8:48

Please indicate the public scoping session that you attended:

- ☐ October 16, 2018 in Kinder, LA
- ☐ October 17, 2018 in Port Arthur, TX
- ☒ October 18, 2018 in Sulphur, LA

COMMENTS: (PLEASE PRINT) [*continue on back of page if necessary*]

Sempra Cameron LNG has been a positive investment in SWLA.
IND2-1 I'm the closest resident to the plant. All construction matters are handled in a professional manner with great concern for the private community. They always are willing to hear concerns and act on correcting them.

Commenter's Name and Mailing Address (***Please Print***)

Sheron Faulk
4313 Lake St
Lake Charles LA 70605

[1] **The Commission strongly encourages electronic filing of any comments or interventions or protests to this proceeding. See 18 CFR 385.2001(a)(1)(iii) and the instructions on the Commission's web site at http://www.ferc.gov under the "e-Filing" link and the link to the User's Guide. Before you can file comments you will need to create a free account by clicking on "Login to File" and then "New User Account".**

IND2-1 Comments noted. Socioeconomic effects are discussed in section 4.9.

INDIVIDUAL COMMENTS

ORIGINAL

CP18-7-000

IND3-1 Photos and a map of an alternative submitted by Chester Wimberly during the public comment session in Kinder, Louisiana on October 16, 2018. These items are supported by Mr. Wimberly's comments, which will appear in the transcript (when available) from the public comment session.

2018 OCT 22 A 8:52

IND3-1 Comment noted. Section 3.4 of the final EIS has been updated to include an analysis of this proposed alternative.

INDIVIDUAL COMMENTS



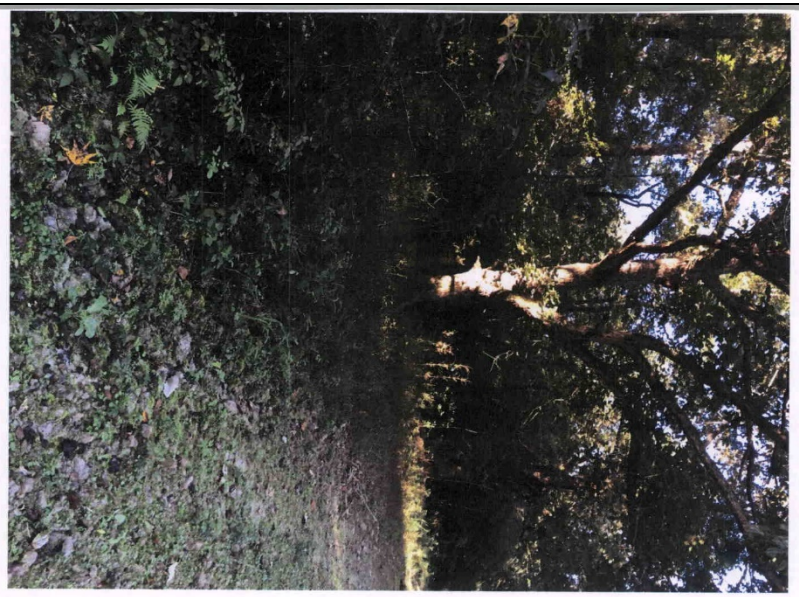
INDIVIDUAL COMMENTS



INDIVIDUAL COMMENTS



INDIVIDUAL COMMENTS



INDIVIDUAL COMMENTS



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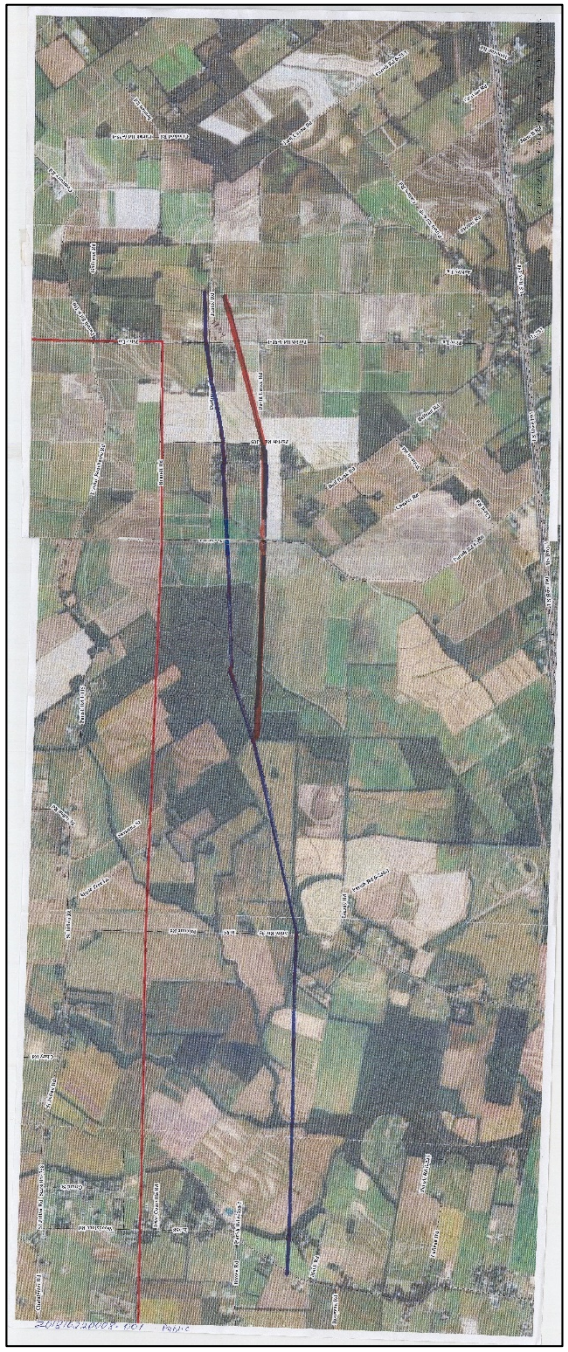


INDIVIDUAL COMMENTS

Sheila Faske, Rose City, TX.

IND4-1 As our area recovers from the Hurricane Harvey disaster, the Port Arthur LNG project will bring much needed economic development to our community.

We look forward to the revenues the workers would bring to our local stores, restaurants, and hotels.

The significant new taxes will benefit our schools, parks, ports, waterway, city and county.

IND4-2 The relocation of Highway 87 away from the ship channel will help local traffic flow to the Sabine Pass community. Using the Texas Department of Transportation standards on building the new portion of the highway will benefit the community by reducing the risks of flooding.

IND4-1 (cont'd) We need community investments in our local organizations like chambers, schools and non-profits. In fact, Sempra LNG is already providing contributions to partner with several local businesses and community organizations, as well as the Port Arthur ISD, Sabine Pass ISD and Lamar State College - Port Arthur.

Our families will greatly be helped with the construction and permanent jobs for Port Arthur LNG and associated pipelines. The creation of approximately 3,500 on-site engineering and construction jobs at the peak of construction and an estimated 1,300 jobs averaged over the 4- to 5-year construction will enhance our economy. 200 full-time jobs would be created for operations and maintenance of the facility on a long-term basis. Additional jobs would be created by construction and operation of the proposed pipelines.

Significant new jobs and revenues for businesses that do construction work or provide construction supplies or services for terminal operations like maintenance, security, landscape, shipping, will also be grown.

This project takes a large, non-productive piece of property and turns it into a productive, significant revenue generator.

A multi-billion dollar project, Port Arthur LNG, will create significant new taxes which will benefit our region.

Port Arthur LNG export will contribute to the Golden Triangle's position as a leader in providing energy to the world.

Port Arthur liquefaction has a location advantage due to the natural gas demand driven by gas and LNG exports and other industrial activity in the U.S. Gulf Coast area.

Thank you for your time.

IND4-1 Comments noted. Socioeconomic effects, including tax revenue, job creation, and economic development, are discussed in section 4.9 of the final EIS.

IND4-2 Sections 2.1.4.1, 4.2.1.4, 4.3.2.1, 4.9.6.3, and 4.12.12 of the final EIS have been updated to indicate possible benefits of the relocation of SH 87 as noted by commenters.

INDIVIDUAL COMMENTS

20181101-5072 FERC PDF (Unofficial) 11/1/2018 12:00:33 PM

November 1, 2018

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

OEP/DG2E/Gas 4
Port Arthur LNG, LLC; PALNG Common Facilities Company, LLC;
and Port Arthur Pipeline, LLC
Docket Nos. CP17-20-000, CP17-21-000, CP17-21-001, and CP 18-7-000

Dear Ms. Bose: Please find my comments on the subject docket, enclosed. To summarize, the DEIS is inadequate for several reasons:

- Alternatives were not adequately considered.
- Avoidance and minimization of impacts to aquatic habitats may not be adequate.
- Disclosure of environmental impacts is unacceptable, in view of the fact that the public were not provided any dredged material testing data, but are expected to simply trust that they demonstrate no risk to the environment.
- Proposed future additional dredged material testing fails to provide the public the required opportunity to review and comment on the impacts of the proposed project, as required under NEPA.
- The DEIS does not provide any details regarding the proposed 1200+ acres of estuarine marsh to be constructed using dredged material as mitigation.
- The proposal fails to factually disclose the true impacts of the proposed pipelines, and fails to propose full mitigation for these impacts.
- While FERC's procedures would theoretically provide some avoidance, minimization, and restoration of impacts to waters of the US, the large number of exclusions to these requirements granted to the project sponsor by FERC, render those procedures largely irrelevant.
- The DEIS does not adequately disclose the potential impacts of construction and operation of the liquifaction plant, on nearby water quality.
- FERC's analysis clearly ignored some of these issues.

These comments represent an overview of my concerns for the DEIS. While FERC and other agencies may expect reviewers to document specific sections, pages, paragraphs, and sentences, that represent specific concerns, the effort such a review and comment process would require represents a poor use of my time. FERC staff and their contractors are certainly capable of identifying sections, pages, paragraphs, and sentences of the DEIS on which my more general comments are based. The fact that I am not identifying such specific sections, pages, paragraphs, and sentences in the document, should not detract from the validity of my more general comments.

Sincerely,
Kenneth G. Teague, PWS, Certified Senior Ecologist
Austin, TX

INDIVIDUAL COMMENTS

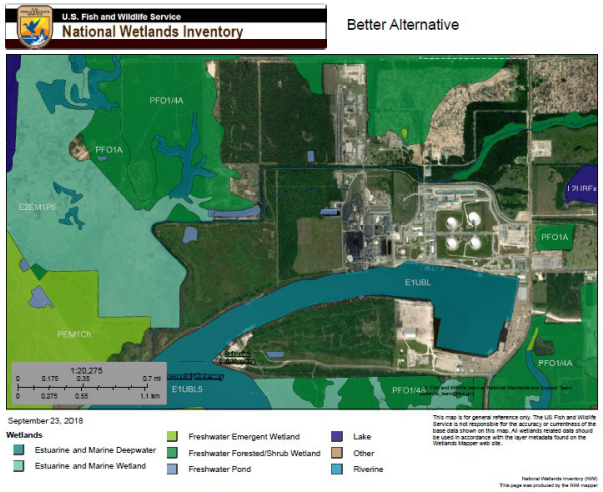
20181101-5072 FERC PDF (Unofficial) 11/1/2018 12:00:33 PM

Comments
Kenneth G. Teague, PWS, Certified Senior Ecologist
November 1, 2018

Port Arthur LNG Project
Draft Environmental Impact Statement
Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector Project
Docket Nos. CP17-20-000, CP17-21-000, CP17-21-001, CP18-7-000
FERC/DEIS-0285D
September, 2018

IND5-1

- **The DEIS does not adequately evaluate all the reasonable alternatives.**
  - The DEIS did not evaluate an obvious alternative to the proposed LNG facility, located about 45.2 mi NE of the proposed site, on the eastern side of the lower Calcasieu River in southwest Louisiana:



The alternative location is the undeveloped upland tract on the N side of the dredged artificial water body in the image above. It seems highly likely that this alternative would impact fewer wetlands.

IND5-1 Section 3.3 of the final EIS has been revised to analyze the suggested alternative liquefaction terminal site.

Also, as noted in its November 19, 2018 supplemental filing with FERC, PALNG reviewed the proposed location's availability of sale and determined the property is owned by the Lake Charles Harbor and Terminal District and the properties on the north bank are currently leased. Entities proposing LNG export terminals under Section 3 of the Natural Gas Act must show that they have or can obtain control of the site they are proposing to utilize for a project.

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IND5-2
- It is not clear if the project sponsor sufficiently considered pipeline route alternatives that would have avoided and minimized impacts to waters of the U.S, more than the proposed alternative.

IND5-3
- The DEIS does not appear to consider pipeline alternatives that are fully compliant with FERC's Plan and Procedures. Since Driftwood requested many deviations from FERC's Plan and Procedures, such alternatives clearly should have been considered. They would almost certainly result in fewer wetland and water body impacts.

IND5-4
- The DEIS does not reflect that the project sponsor considered, when deciding to cross tidal water bodies and estuarine wetlands, the possibility that waters of the US might be impacted less if crossing methods other than were used. HDD is desirable for crossing upland streams in order to minimize impacts to stream habitat, water quality, and riparian wetlands. However, considerations are different in tidal waters and coastal wetlands. The coastal water bodies the proposed pipelines would cross may not contain habitats, other than emergent marsh, and much less likely, oyster reefs, which would warrant use of HDD. Review of the pipeline maps suggests that in these areas, impacts to wetlands at the sites of pipeline insertion and withdrawal, might be greater than the impacts to wetlands using other crossing methods. This needs to be checked. The crossing method with the least impacts to wetlands should be selected, when crossing wetlands.

- **The DEIS does not demonstrate adequate avoidance and minimization of impacts to aquatic habitats.**

IND5-5
  - The project sponsor did not consider the LNG site alternative discussed above.

IND5-6
  - The project sponsor did not consider alternatives that more fully (or fully) implement FERC's Plans and Procedures. Such alternatives would result in fewer impacts to wetlands and water bodies.

IND5-7
  - The DEIS does not include any dredged material testing data, only assertions that it doesn't indicate any concerns.

IND5-8
  - It is not clear that the sponsor correctly assessed the suitability of dredged material for disposal in the aquatic environment. No data were provided. Additional data are proposed, but they will not be made available for public review and comment.

- **The DEIS does not adequately disclose the likely environmental impacts of the proposed project.**

IND5-9
  - The DEIS does not include appropriate dredged material testing data and analysis, for determination of suitability for disposal in the aquatic environment.
    - The DEIS mentions that there is some dredged material testing data, and that it indicates the dredged material is suitable for disposal in the aquatic environment. However, no data are provided. The public is expected to simply trust FERC and the project sponsor that this conclusion is correct. This is not consistent with NEPA. It is also my experience that few people working on the Texas/Louisiana coast understand how to properly test dredged material, and how to interpret the results. In addition, I have no reason to believe that FERC staff working on this EIS have such knowledge.
    - The DEIS proposes the sponsor will conduct additional dredged material testing in the future. However, no commitment to provide these data to the public for review and comment exists in the DEIS. This is not consistent with NEPA.

IND5-2 Applicants are encouraged by FERC to evaluate collocation of their proposed pipelines with existing rights-of-way to reduce overall environmental impacts. PAPL proposes to collocate the Texas Connector Project for about 43 percent of its length and the Louisiana Connector Project for about 73 percent of its total length. Further, applicants often request deviations from a baseline route based on evolving environmental field data, agency consultations, FERC data requests, and input from stakeholders; the proposed route is the result of this process. As discussed in section 2.4.3.1 of the final EIS, PAPL proposes to use the HDD method at 24 locations for the Texas Connector Project and 26 locations for the Louisiana Connector Project to avoid direct impacts on waterbodies and wetlands. In addition, the bore method would also be used at multiple locations, such as roads, to avoid direct impacts on feature crossings.

Use of the HDD method would avoid direct impacts along 26.3 miles of pipeline, including 34 waterbodies and 38.8 acres of wetland along the Texas Connector Project route and 46 waterbodies and 50.8 acres of wetland along the Louisiana Connector Project route. Of the waterbodies and wetlands outside of HDD areas, PAPL would use one of a variety of other crossing methods, as described in section 2.4.3 of the final EIS. PAPL would cross all waterbodies and wetlands in accordance with its *Wetland & Waterbody Construction & Mitigation Procedures* (PAPL's Procedures) that are derived from FERC's Procedures, which were developed as baseline best management practices to minimize or mitigate for impacts on waterbodies and wetlands. No specific alternative wetland or waterbody crossing methods or crossing locations were suggested by stakeholders during scoping, nor were any specific comments received on any of PAPL's proposed variations to its Procedures. Other commenters on the draft EIS have recommended minor variations, which are discussed in the route alternatives section. It is also important to note that although wetlands and waterbodies are very important features, applicants must balance impacts on other resources when routing a pipeline.

IND5-3 This comment references the Driftwood project, which is not the subject of this final EIS.

Sections 4.3.2.3 and 4.4.3.2 of the final EIS discuss PAPL's requested variations to the FERC's Procedures. Section 3.4 has been updated to consider routes that would be fully compliant with FERC's Procedures.

IND5-4 See response to comment IND5-2. Tidal waters, estuarine wetlands, and coastal wetlands were identified through PAPL's agency consultations and field survey results. Impacts on waterbodies, wetlands, and essential fish habitat; PAPL's agency consultations; and PAPL's proposed and our recommended mitigation measures are described throughout sections 4.3.2, 4.4.2, and 4.6.3 of the final EIS. Regarding oyster beds, PAPL would use the HDD method at the shorelines of Sabine Lake to avoid aquatic habitats and oyster beds. Further, as discussed in section 3.4.1 of the final EIS and as a result of its consultations with the LDWF, PAPL adopted a route that would avoid crossing Tier 1 Public Oyster Seed Grounds and Tier 1 level protected oyster habitat in Louisiana. Also see response to comment SA3-3.

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With regards to selecting the crossing method with the least impacts on wetlands, FERC notes that it is responsible for conducting NEPA and disclosing the impacts associated with the proposed action. FERC uses the public scoping process, stakeholder input, and federal and state-agencies, in addition to its own independent review, to identify where alternatives to avoid or minimize impacts on wetlands and/or to identify mitigation measures above those proposed by an applicant. Regardless, as demonstrated in its data requests to the PAPL (for example, February 13, 2017), we identified several areas where ATWS could potentially be modified to avoid impacts on wetlands and waterbodies, and we reviewed and requested justification for PAPL's requests to deviate from the FERC's Procedures. We also note that the commenter does not provide any specific-locations for our analysis; however, when crossing a wetland by HDD, no regular maintenance occurs over the right-of-way. HDD workspace could result in disturbance to wetlands, but that disturbance would be allowed to revert to preconstruction conditions, and be subject to any mitigation required by permitting agencies. All other wetland/waterbody construction methods would require maintenance of the right-of-way for the life of the project. The extent of the maintenance would vary based on the vegetation type, but generally this would result in a greater permanent impact as compared to a crossing using an HDD.

IND5-5 See response to comment IND5-1.

IND5-6 See response to comment IND5-3.

IND5-7 PALNG filed a copy of its site assessment with FERC on October 2, 2017, which is available for public review on FERC's eLibrary. The site assessment provided is the result of several prior site assessments conducted in support of previous iterations of the liquefaction project. The conditions of the project property meet the TCEQ's Tier 1 Commercial/Industrial Protective Concentration Levels for soils and groundwater. The results of the site assessment are summarized in the EIS. As stated in section 4.2.1.7 of the final EIS, PALNG has committed to resampling the area within the ship canal at the marine berth, construction dock, and MOF due to receiving new sediment loads since the original sampling analysis was conducted; resampling sediments at the landward component of the MOF as recommended by the EPA; and conducting this resampling in accordance with the EPA's Inland Testing Manual prior to dredging and disposal. When the applicant files its dredge material testing results, they would be posted to FERC's eLibrary and made available to the public.

IND5-8 See response to comment IND5-7.

IND5-9 See response to comment IND5-7.

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IND5-10
- This dredged material should not be permitted to be disposed of in the aquatic environment until it is demonstrably properly tested according to the Inland Testing Manual, and the results provided to the public for review and comment.
  - A Final EIS must not be produced until the dredged material is properly tested using the Inland Testing Manual, and the results are provided to the public for review and comment.

IND5-11
- The DEIS, similar to other assessments of pipeline impacts I have reviewed recently, does not factually state the real impacts to wetlands.
  - The DEIS asserts that forested wetlands can be destroyed, and they will simply restore themselves if allowed to do so. This cannot be assumed. While it is possible, it is also highly likely that whatever vegetation establishes on these sites will not be similar to what was there before. In addition, even if forested wetlands reestablish here, there will be a highly significant temporal loss of function, perhaps for as long as a century, potentially even more. The sponsor should be required to mitigate fully for all losses of forested wetlands, even if deemed "temporary". Any proposals for restoration of forested wetlands impacted by these pipelines should require vegetative plantings of the tree species that were destroyed by the proposed pipeline, assuming they were representative of the pristine ecosystem at these locations. Plantings should be monitored, and if unsuccessful, they should either be replanted, or other in kind mitigation should be required.

IND5-12
  - The DEIS asserts that shrub wetlands can be destroyed, and they will simply restore themselves if allowed to do so. This cannot be assumed. While it is possible, it is also highly likely that whatever vegetation establishes on these sites will not be similar to what was there before. In addition, even if forested wetlands reestablish here, there will be a significant temporal loss of function, perhaps for as long as several decades. The sponsor should be required to mitigate fully for all losses of shrub wetlands, even if deemed "temporary". Any proposals for restoration of shrub wetlands impacted by these pipelines should require vegetative plantings of the shrub species that were destroyed by the proposed pipeline, assuming they were representative of the pristine ecosystem at these locations. Plantings should be monitored, and if unsuccessful, they should either be replanted, or other in kind mitigation should be required.

IND5-13
  - The DEIS asserts that herbaeous wetlands (marshes) can be destroyed, and they will simply restore themselves if allowed to do so. This cannot be assumed. While it is possible, it is also possibl that whatever vegetation establishes on these sites will not be similar to what was there before. In addition, even if herbaceous wetlands reestablish here, there will be a temporal loss of function, perhaps for as long as a decade. The sponsor should be required to mitigate fully for all losses of herbaceous wetlands, even if deemed "temporary". Any proposals for restoration of herbaceous wetlands impacted by these pipelines should require vegetative plantings of the species that were destroyed by the proposed pipeline, assuming they were representative of the pristine ecosystem at these locations. Plantings should be monitored, and if unsuccessful, they should either be replanted, or other in kind mitigation should be required.

IND5-14
- The DEIS does not disclose, with any meaningful detail, the impacts of the pipeline crossings through water bodies.

IND5-10 Dredge material placement would be conducted in accordance with USACE, Sabine-Neches Navigation District (SNND), TCEQ, and TPWD regulations and requirements. As stated in sections 4.2.1.7 and 5.2 of the final EIS, we are recommending that, as part of any final Order for the Projects, PALNG provide the soil and sediment analysis conducted at the area within the ship canal at the marine berth, construction dock, MOF, and landward component of the MOF to the EPA, USACE, TCEQ, and Texas RRC for review prior to construction. Further, as stated in Environmental Recommendation 17 in section 5.2 of the final EIS, PALNG would file the conclusions of these reviews with the Secretary along with documentation of its consultations with these agencies, including any measures PALNG would need to adopt if the analysis discovers previously unknown contamination.

IND5-11 Section 4.4.2.2 of the final EIS identifies the impacts associated with pipeline construction through forested wetlands, discloses that the impact of construction on forested wetlands would be long term due to the long regeneration period of these vegetation types (30 years or more), and discloses that forested wetlands within the permanent maintained right-of-way would be converted to palustrine or scrub-shrub wetlands. Section 4.4.2.2 of the final EIS states that all temporarily impacted wetlands would be restored to preconstruction contours and allowed to revegetate in accordance with PAPL's *Environmental Plan*, that PAPL is required to consult with federal and state agencies to develop a project-specific restoration plan, and that PAPL would monitor and maintain the site until revegetation has been successful, which is further defined in the final EIS. The final EIS further acknowledges that PSS and PFO wetlands within a 10-foot-wide corridor would be permanently converted to emergent wetland and an additional 20-foot-wide corridor (extending 10 feet on either side of the 10-foot-wide corridor centered over each pipeline) through PFO wetlands would be permanently converted to PSS wetland, and that these changes would represent a potential permanent change in wetland function. Additionally, unavoidable wetland impacts must be offset by the creation, restoration, enhancement, or preservation of at least an equal amount of wetlands, which is referred to by the USACE as compensatory mitigation. PAPL would use credits purchased from USACE-approved mitigation banks and agency in-lieu fee programs to provide compensatory mitigation for both the Louisiana Connector and Texas Connector Projects. As stated in section 5.2, Environmental Recommendation 10 would require PALNG and PAPL to file with the Secretary documentation that they have received all applicable authorizations required under federal law (or evidence of waiver thereof) prior to commencing construction.

Also see response to comment SA3-1 for additional details regarding PAPL's compensatory mitigation plan.

IND5-12 See response to comment IND5-11. Section 4.4.2.2 of the final EIS discloses the impacts associated with scrub-shrub wetlands.

IND5-13 See response to comment IND5-11. Section 4.4.2.2 of the final EIS discloses the impacts associated with herbaceous wetlands.

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IND5-14 Section 2.4.3.1 of the final EIS describes several waterbody crossing methods, while section 4.3.2.2 (Pipeline Installation Methods) identifies the impacts associated with pipeline construction through waterbodies along with the mitigation measures proposed by PAPL.

Also see response to comment SA3-1.

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IND5-14 (cont'd)
- The DEIS does not include any detailed assessment of the impacts of proposed pipeline crossings of upland stream habitats, water quality, or aquatic communities. No mitigation for such impacts is proposed. Based on my experience, this appears to be inconsistent with the policies of the Galveston District, USACE.

IND5-15
- The DEIS does not disclose the impacts of fragmentation of forested wetlands, caused by the proposed pipeline routing.

IND5-16
- The DEIS does not disclose the potential impacts of proposed dredging on dissolved oxygen concentrations in bottom waters. Dredged channels often experience lower DO concentrations in bottom waters than undredged water bodies. Low DO renders aquatic habitat unsuitable for aquatic life.

- **The DEIS does not propose adequate environmental mitigation for project impacts**
  - The mitigation proposed for the proposed pipelines, for impacts to wetlands and stream habitats, is particularly inadequate.

IND5-17
- Due to the long time required for forested wetland restoration, the DEIS should have committed to provide mitigation for temporal impacts, which it does not.

IND5-18
- Rather than requiring the environment to absorb the temporal impacts, Driftwood should be required to expedite restoration of herbaceous wetlands impacted by the proposed pipeline, by vegetative plantings.

IND5-19
- No mitigation is proposed for impacts to water bodies from pipeline crossings.

- **The DEIS is unclear regarding whether the full cost of compensatory mitigation is to be borne by the sponsor, or whether government agencies are planning to bear some of the cost**

IND5-20
  - The DEIS indicates that the project sponsor will provide dredged material for creation/restoration of estuarine marshes on property of Texas Parks and Wildlife Department. However, it is unclear whether the project sponsor will be responsible for all aspects of the required mitigation, or whether the sponsor's mitigation requirement will be subsidized by efforts of Texas Parks and Wildlife Department, and possibly other agencies or government funds (e.g. DU, Restore Act funds). The latter would represent an unacceptable Federal/State subsidy of mitigation costs that is not compliant with the Mitigation Rule.

IND5-21
- **I recommend the project sponsor consider creating/restoring more estuarine marsh than is currently proposed, or provide the dredged material for another organization to do so, provided the dredged material is properly tested and found to be suitable for disposal in the aquatic environment.**

IND5-15 Section 4.6.1.2 of the final EIS discusses the potential impacts of fragmentation of vegetation on wildlife resources, including habitat. This section has been updated to include the words "forested wetlands."

IND5-16 Sections 4.3.2.2 and 4.6.2.2 of the final EIS discuss the impacts of dredging on dissolved oxygen concentrations and the impacts from lower dissolved oxygen concentrations on aquatic life.

IND5-17 See response to comment IND5-11.

IND5-18 This comment references the Driftwood project, which is not the subject of this final EIS.

PALNG and PAPL would adopt the wetland restoration measures identified in their Project-Specific Environmental Plan, which is based on our *Wetland and Waterbody Construction and Mitigation Procedures*, which includes consultation with the appropriate federal or state agencies to develop a project-specific wetland restoration plan that include measures for re-establishing herbaceous and/or woody species, controlling the invasion and spread of invasive species and noxious weeds (e.g., purple loosestrife and *Phragmites*), and monitoring the success of the revegetation and weed control efforts. As discussed in the EIS, a draft wetland compensatory plan has been submitted to the USACE. As stated in section 5.2, Environmental Recommendation 10 would require PALNG and PAPL to file with the Secretary documentation that they have received all applicable authorizations required under federal law (or evidence of waiver thereof) prior to commencing construction, which includes authorizations from the USACE.

IND5-19 FERC notes that mitigation includes avoidance of impacts, reduction of impacts, or compensation (e.g., monetary; creation of new habitat to replace that lost or impacted). As described in section 4.3.2.2 (Texas Connector and Louisiana Connector Projects) of the final EIS, PAPL would reduce impacts on waterbodies by using the HDD method at 50 locations, of which 80 waterbodies would be crossed within these areas. Section 4.3.2.2 further states that PAPL would implement the construction and mitigation measures described in PAPL's *Environmental Plan*, which includes the FERC's Procedures, to minimize impacts on surface waters. Also, as stated in section 5.2, Environmental Recommendation 10 requires that PALNG and PAPL file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof) prior to commencing construction, which includes the appropriate waterbody crossing permits (which may be subject to further mitigation requirements) from the USACE.

IND5-20 Once the dredge material is transferred to the disposal location, it would become the responsibility of the landowner(s) that have voluntarily agreed to receive the material and/or any landowner agreements made with PALNG. Should the landowner require additional considerations, such as monetary compensation for continued maintenance, these would be arranged to during easement negotiation and/or the land-managing agency's permitting process.

IND5-21 Comment noted.

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IND5-22

- **The DEIS does not adequately disclose the potential impacts of construction and operation of the liquifaction plant, on nearby water quality.**
  - The DEIS implies there is no need to evaluate the potential impacts of construction and operation of the liquifaction plant on water quality, because the sponsor asserts that *because the facility is an oil and gas production facility, it is exempt from stormwater runoff regulatory requirements.*

    While I do not know if this is correct, it is a cynical interpretation of the law if it is. Nevertheless, regardless of the law on environmental regulation of oil and gas production facilities, and their interpretation, NEPA law requires disclosure of environmental impacts. Environmental impacts are not only defined by regulatory requirements. Clearly, during construction and operation of the facility, stormwater runoff would carry pollutants into nearby water bodies. In fact, if best management practices to minimize stormwater pollutant loading are not implemented, because they are not required, then the pollutant loadings from stormwater would be even greater, and thus the potential for water quality impacts would be greater. Therefore, I assert that FERC should have disclosed the potential impacts of construction and operation of the liquifaction facility, on water quality, via stormwater runoff.

These comments represent an overview of my concerns for the DEIS. While FERC and other agencies may expect reviewers to document specific sections, pages, paragraphs, and sentences, that represent specific concerns, the effort such a review and comment process would require represents a poor use of my time. FERC staff and their contractors are certainly capable of identifying sections, pages, paragraphs, and sentences of the DEIS on which my more general comments are based. The fact that I am not identifying such specific sections, pages, paragraphs, and sentences in the document, should not detract from the validity of my more general comments.

IND5-22 Section 4.3.2.2 of the final EIS addresses the impacts anticipated from site modification and stormwater runoff. The EIS acknowledges that stormwater runoff may pick up debris, chemicals, soil, and other pollutants before entering directly into a waterbody. The EIS also describes that PALNG would implement a Stormwater Pollution Prevention Plan to minimize impacts from stormwater.

INDIVIDUAL COMMENTS

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Roy Breaux, Port Neches, TX.
COMMENTS ON DRAFT ENVIRONMENTAL IMPACT
STATEMENT FOR PROPOSED PORT ARTHUR PIPELINE
TEXAS CONNECTOR PROJECT, PROJECTS DOCKETS
NO. CP17-20-000, CP17-21-000, AND CP18-7-000
11/9/18
Comments to Volume I of the draft EIS submitted by Roy Breaux follow.
Volume I

IND6-1 • ES-6 – Air Quality and Noise. Excessive dust created during pipeline installation needs to be suppressed.

IND6-2 • 2.4.2.2 – Due to top soil being very thick at Milepost 15, at least two feet of top soils needs to be segregated.

IND6-3 • 4.8.5.2 – The draft EIS states that no planned residential or commercial developments are in the Texas Connector Project. Highland Ranch Subdivision is planned at Milepost 15. The residential and commercial development is located in the Port Arthur City Limits and the Port Arthur Extra-Territorial Jurisdiction (ETJ). The Master Plan for the development was approved by the Port Arthur City Council on 6/16/08. Plans for the development are currently in progress. Location of the pipeline away from the Golden Pass Pipeline easement would result in great economic damage to the development project.

IND6-4 The EIA states that a 125-foot-wide construction width will be required. A 5/10/15 email from Port Arthur Pipeline representative Jason Thornton to Roy Breaux stated that a 300-foot-wide work space would be required. This workspace will completely surround a metal building located along Milepost 15. Mr. Thornton was informed that this unreasonable workspace width was not acceptable and that the pipeline needed to find a route to the west of the property.

The listed 125-foot construction width is much more than 100-foot width that was required by the Golden Pass Pipeline at Milepost 15 for its 42-inch pipeline. The construction width needs to be a maximum of 100 feet.

IND6-5 Pipeline installation equipment operating close to the metal building at Milepost 15 will cause ground movement resulting in settlement of the expansive soil under the building and foundation failure. Any construction equipment close to a building needs to move slow to prevent movement of the ground.

Location of the pipeline to the east of the building would cause fragmentation of the property and greatly reduce its commercial value.

IND6-6 Many workers will be involved in the installation of the proposed pipeline making it difficult for the landowner to know who belongs to the work crews or who is entering the properties to cause damage or steal from the landowner. The pipeline company needs to provide 24-hour security near buildings and landowner equipment.

IND6-1 As discussed in section 4.11.1.3 of the final EIS, PAPL would employ the dust suppression measures in its *Fugitive Dust Control Plans*, such as water suppression, covering truckloads during transit, limiting on-site vehicle speed, paving or grading of roadways, and removing track-out on public roads, where necessary along its workspace.

IND6-2 Section 2.4.2.2 states that PAPL would remove at least the top 12 inches of topsoil where 12 or more inches of topsoil is present; however, as discussed in section 4.8.3, landowners have the opportunity during easement negotiations with the applicant to request measures that go above and beyond those required by FERC.

IND6-3 We contacted the City of Port Arthur Planning and Zoning Department on November 16, 2018, and the Jefferson County Engineering Department on November 27 and 28, 2018, and neither agency had records of the Highland Ranch Subdivision. Regardless, it is possible that construction of the Texas Connector Project could conflict with the planned development. If construction dates were to overlap, conflicts with the developer's planned construction activities at this site could occur on a temporary basis. Landowners would have the opportunity to request that development plans for their property be considered during easement negotiations with PAPL and that specific measures to accommodate future plans be considered. Pipeline infrastructure would generally be consistent with areas already zoned for industrial development, and most land uses within other zoned areas would be allowed to continue during pipeline operation without conflict.

As discussed in section 4.8.1 of the final EIS, to facilitate pipeline inspection, operation, maintenance, and emergency response access, a 50-foot-wide operational right-of-way would be maintained along the pipelines and laterals, which would be routinely cleared of trees. Also, certain activities would be prohibited within the permanent right-of-way, such as the planting of trees or the construction of permanent structures, including houses, house additions, trailers, tool sheds, garages, poles, patios, pools, septic tanks, or other objects not easily removable. All other disturbed areas would be restored to their preconstruction conditions, and land uses would not be precluded from continuing.

Also, as described in section 4.8.3 of the final EIS, PAPL must obtain an easement from a landowner to construct and operate natural gas facilities or acquire the land on which the facilities would be located. If an easement cannot be negotiated with a landowner and the project has been certificated by FERC, an applicant may use the right of eminent domain granted to it to obtain the right-of-way and extra workspace areas. Applicants would still be required to compensate the landowner for the right-of-way and for any damages incurred during construction; however, a court would determine the level of compensation if a Certificate is issued.

IND6-4 As discussed in section 2.2.2.1 of the final EIS, due to the size of the pipe and the soil conditions, PAPL has requested a 125-foot-wide construction right-of-way to adequately contain soils and provide for a safe working surface during construction of the Texas Connector Project. ATWS would also be required as necessary for most road and waterbody crossings. A corridor

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measuring 300 feet wide and centered on the pipeline centerline was surveyed for environmental purposes, but only a portion of this area would be affected by construction. Based on a review of the alignment sheets, which were filed with PAPL's final application and are available on FERC's eLibrary (accession number 20161129-5284), the workspace and an ATWS required for road and utility crossings near MP 15 would be a combined width of 175 feet.

IND6-5 PAPL's workspace and ATWS would be located 55 feet from the shed near MP 15. In accordance with FERC's Plan, which PAPL has adopted, PAPL is required to restore disturbed areas to preconstruction conditions and, amongst other things, address landowner concerns. If the area of construction indicates settlement, the landowner would have the opportunity to request additional restoration efforts. Also in accordance with FERC's Plan, restoration would be considered successful if the right-of-way surface is similar to adjacent undisturbed areas.

IND6-6 No person would be allowed to access the construction right-of-way without first obtaining the appropriate training from PAPL. Any additional requests of PAPL, such as maintaining the security of a property to ensure theft does not occur, would be negotiated with PAPL during the easement negotiations.

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IND6-7 The only pipeline route acceptable to the landowner at Milepost 15 is inside the existing Golden Pass Pipeline easement or the Port Arthur Pipeline centerline being at the east edge of the Golden Pass Pipeline easement. If this route is not approved, Roy Breaux does not approve of the pipeline being located on his property at Milepost 15 due to the excessive workspace width and possible fragmentation of the property.

IND6-1 (cont'd) • 4.11.1.3 – Air Quality Impacts and Mitigation – Fugitive dust from material transfer and construction equipment travel will create excessive dust. Fugitive dust control plans must be made available to landowners so that they will know what will be done to control dust.

IND6-7 Based on a review of PAPL's alignment sheets for the Texas Connector Project and the landowner's property at about MP 15.4, the proposed pipeline would be located on the eastern edge of an existing Qatar Petroleum/ExxonMobil/ConocoPhillips pipeline easement, which are the joint ventures associated with the Golden Pass LNG project and pipeline. As such, PAPL is proposing to locate its pipeline centerline approximately 50 feet from the Golden Pass Pipeline centerline. This offset is generally accepted as industry standard to support operational and maintenance activities when pipelines are owned by different entities.

INDIVIDUAL COMMENTS

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Roy Breaux, Port Neches, TX.
COMMENTS ON DRAFT ENVIRONMENTAL IMPACT
STATEMENT FOR PROPOSED PORT ARTHUR PIPELINE
TEXAS CONNECTOR PROJECT, PROJECTS DOCKETS
NO. CP17-20-000, CP17-21-000, AND CP18-7-000
11/9/18
Comments to Volume I of the draft EIS submitted by Roy Breaux follow.
Volume I

IND7-1

• ES-6 - Air Quality and Noise. Excessive dust created during pipeline installation needs to be suppressed.

• 2.4.2.2 - Due to top soil being very thick at Milepost 15, at least two feet of top soils needs to be segregated.

• 4.8.5.2 - The draft EIS states that no planned residential or commercial developments are in the Texas Connector Project. Highland Ranch Subdivision is planned at Milepost 15. The residential and commercial development is located in the Port Arthur City Limits and the Port Arthur Extra-Territorial Jurisdiction (ETJ). The Master Plan for the development was approved by the Port Arthur City Council on 6/16/08. Plans for the development are currently in progress. Location of the pipeline away from the Golden Pass Pipeline easement would result in great economic damage to the development project.

The EIA states that a 125-foot-wide construction width will be required. A 5/10/15 email from Port Arthur Pipeline representative Jason Thornton to Roy Breaux stated that a 300-foot-wide work space would be required. This workspace will completely surround a metal building located along Milepost 15. Mr. Thornton was informed that this unreasonable workspace width was not acceptable and that the pipeline needed to find a route to the west of the property.

The listed 125-foot construction width is much more than 100-foot width that was required by the Golden Pass Pipeline at Milepost 15 for its 42-inch pipeline. The construction width needs to be a maximum of 100 feet.

Pipeline installation equipment operating close to the metal building at Milepost 15 will cause ground movement resulting in settlement of the expansive soil under the building and foundation failure. Any construction equipment close to a building needs to move slow to prevent movement of the ground.

Location of the pipeline to the east of the building would cause fragmentation of the property and greatly reduce its commercial value.

Many workers will be involved in the installation of the proposed pipeline making it difficult for the landowner to know who belongs to the work crews or who is entering the properties to cause damage or steal from the landowner. The pipeline company needs to provide 24-hour security near buildings and landowner equipment.

IND7-1 See responses to comments for IND6.

INDIVIDUAL COMMENTS

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IND7-1 (cont'd)

The only pipeline route acceptable to the landowner at Milepost 15 is inside the existing Golden Pass Pipeline easement or the Port Arthur Pipeline centerline being at the east edge of the Golden Pass Pipeline easement. If this route is not approved, Roy Breaux does not approve of the pipeline being located on his property at Milepost 15 due to the excessive workspace width and possible fragmentation of the property.

- 4.11.1.3 – Air Quality Impacts and Mitigation – Fugitive dust from material transfer and construction equipment travel will create excessive dust. Fugitive dust control plans must be made available to landowners so that they will know what will be done to control dust.

INDIVIDUAL COMMENTS

20181113-5087 FERC PDF (Unofficial) 11/12/2018 12:44:29 PM

Douglas F. Pedigo
403 Glenchester Drive
Houston, Texas 77079
713-951-5881

November 12, 2018

Federal Energy Regulatory Commission
Washington, DC

Re: Docket Nos. CP17-20-000 et al., Texas Connector Project, Northern Pipeline, Milepost 10.9, Port Arthur Pipeline (PAPL)

Dear Sir or Madam:

I am a landowner in the direct path of the above-referenced pipeline project.

On February 14, 2017, I notified PAPL that the tract of land that PAPL would cross had been enrolled, on March 20, 2006, in the Texas Prairie Wetlands Project ("***TPWP***"), and this seasonal wetland continues to provide critical wintering habitat to large numbers of migratory waterfowl. On April 19, 2017, I was notified by PAPL that PAPL proposed to drill under my property from a pad located on a neighboring property just north of the northern property line of the TPWP tract. On that same day, I notified PAPL that this solution was not acceptable to me unless these activities occurred outside of the October – March timeframe, since 24-hour HDD activities 100-200 feet from my TPWP tract in December and January might as well be smack in the middle of the TPWP, for the effect is exactly the same. I never heard back from PAPL on this issue, nor do I see evidence that PAPL communicated this concern back to FERC.

IND8-1 In the draft Environmental Impact Statement (EIS), at page B-2-5, PAPL shows the HDD entry site just north of the northern property line of the TPWP (approximately milepost 10.9) on property owned by Bradley Burrell. At page D-1-5, PAPL notes, at milepost 10.9, that there will be a worksite for equipment, drill pipe storage, vehicle parking and laydown. PAPL also notes a large canal to the south (on the TPWP) and wetlands to the west. That is a typo – it should say east, which is natural marsh tract owned by me – but notably is silent that the TPWP seasonal wetland is to the immediate south. Moreover, nowhere does PAPL note its close proximity to the

IND8-2 Hillebrandt Unit of the J.D. Murphree Wildlife Refuge ("***JD Murphree***") just to the east of milepost 10.9.

At page 4-242, PAPL discloses that typical equipment used at HDD entry sites includes:

- drilling rig and engine-driven hydraulic power unit;
- engine-driven mud pump(s) and engine-driven generator set(s);
- mud mixing/cleaning equipment;
- mobile equipment including a crane, backhoe, front loader, forklift, and/or trucks;
- frac tanks; and
- engine-driven lights.

IND8-1 Appendix D has been updated to include TPWP lands south of MP 10.9 and the wetlands and Hillebrandt Unit of the J.D. Murphree WMA to the east.

IND8-2 Sections 4.5.2.2, 4.6.2.1, and 4.8.6.2 of the final EIS acknowledge that the Texas Connector Project would cross the J.D. Murphree WMA. We have further revised section 4.8.6.2 to clarify that the project crosses the Hillebrandt Unit between MP 10 and MP 12.

INDIVIDUAL COMMENTS

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IND8-3 Remarkably, further at page 4-242, PAPL concludes "that no significant noise impacts are anticipated from construction of the proposed projects." Nothing could be further from the truth. Moreover, the noise and light pollution impacts on large numbers of migratory waterfowl on the TPWP tract during the months of October – March will be harmful and significant.

IND8-4 According to Table 4.11.2-3, PAPL forecasts HDD activities at milespost 10.9 for **44 days**. At page 4-239, PAPL notes that HDD will require activities for 24-hours at a time, and construction noise levels will be 90 DBA in close proximity to the pad site, but, notably, PAPL does not discuss light pollution and the deleterious effect of parking huge amounts of equipment just feet from a sensitive waterfowl wintering area, whether they are in working mode or not. Incredibly, at page 4-87, PAPL notes that it would attempt to avoid construction during "primary migratory bird nesting season, *March through August*" (emphasis added), but PAPL studiously avoids the much more injurious activities occurring along sensitive seasonal wetlands *October – March*.

At page 4-85, PAPL notes that the Gulf Coast provides wintering habitat to large numbers of wintering ducks and geese, and "the Gulf Coast is considered one of the most important waterfowl areas in North America." The TPWP and JD Murphree typically host significant numbers of snow geese, whitefronted geese, lesser Canada geese, coots, gadwalls, greenwinged teal and shovelers, as well as stilts, plovers, gallinules, snipe, ibis, greater snowy egrets, great blue herons, little blue herons, ospreys, redtailed hawks, Mississippi kites and occasional bald eagles. At page 4-81, PAPL notes "Noise could impact wildlife during all phases of the Texas Connector Project. Certain species rely on hearing for courtship and mating, prey location, predator detection and/or homing. These life functions could be affected by construction and operational noise." PAPL further notes that there will be 24-hour HDD activities.

I submit that PAPL does not adequately address the deleterious impact of its HDD activities at milepost 10.9 on migratory waterfowl utilizing, particularly, the TPWP, but also JD Murphree. I have no objection to the HDD activities as long as they are conducted outside of the October – March time period. PAPL should be constrained to operate outside of this important window, and that includes construction of and activities on the HDD pad, whether HDD activities are then-occurring or not.

Sincerely,

Douglas F. Pedigo

IND8-3 Section 4.6.1.2 discloses the impacts on wildlife as a result of construction of the project, including noise near compressor and meter stations. It also acknowledges that mobile wildlife such as birds would be expected to leave the right-of-way during construction and return to disturbed areas following restoration. Section 4.6.1.3 addresses effects, including noise and light, on migratory birds and PAPL's mitigation measures to reduce those impacts.

IND8-4 PAPL and FERC consulted with the FWS, the agency with regulatory authority of migratory birds (Migratory Bird Treaty Act). The FWS, the agency with statutory authority over the enforcement of the Migratory Bird Treaty Act, recommended avoiding construction from March through August and did identify additional timing restrictions for construction at this location. Further, as a result of consultations with the FWS, wintering piping plover were identified as potentially occurring in the Projects area. As discussed in section 4.7.3.1, the wintering piping plover could occur in Jefferson and Orange Counties, Texas and Cameron Parish, Louisiana, and that during the winter this species could be present along the Texas shorelines near the Projects areas. Section 4.7.3.1 also identifies the mitigation measures PALNG and PAPL would implement to reduce impacts on the species and includes measures such as restricting any temporary lighting associated with the pipeline construction to the boundaries of the pipeline corridor and associated staging areas and pointed downwards. Although these measures were identified to mitigate for impacts on the piping plover, they would also assist in reducing impacts on all migratory bird species.

Artificial lighting and potential impacts on migratory birds is discussed in section 4.6.1.3 of the final EIS. As part of its review of the project, the FWS reviewed potential impacts on migratory birds and waterfowl and recommended that PAPL avoid construction activities from March through August, which PALNG and PAPL have agreed to adopt for the Projects. In addition, FWS did not provide comments regarding effects to TPWP lands.

Also see response to comment IND8-3.

INDIVIDUAL COMMENTS

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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION
Office of Energy Projects

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Port Arthur LNG, LLC Docket Nos. CP17-20-000
PALNG Common Facilities Company, LLC
Port Arthur Pipeline, LLC
- - - - - - - - - - - - - - - x CP17-21-000
CP17-21-001
CP18-7-000

PORT ARTHUR LIQUEFACTION PROJECT
TEXAS CONNECTOR PROJECT
LOUISIANA CONNECTOR PROJECT

Coushatta Golf Course
777 Koasati Drive
Kinder, Louisiana 70648

Tuesday, October 16, 2018

The public comment meeting, pursuant to notice, convened at 4:00 p.m.

INDIVIDUAL COMMENTS

PUBLIC COMMENTS

MR. LANGLEY: My name is Bertney Langley, B E R T N E Y. L A N G L E Y. I'm a Coushatta tribal member. I'm a former secretary-treasurer of the Coushatta tribal council. And also an elder in the tribe and my comments today will reflect some of the elders comments about this pipeline going through our homelands.

IND9-1 The first thing we would like to say is that I understand the draft assessment of the pipeline's impact does not mention our tribal history or cultural resources. This is a mistake. The assessment of the pipeline's impact is wrong because it does not mention the tribes of Louisiana, and the fact that the pipeline's construction can damage important items and places that the Coushatta Tribe left behind. So at this time I've asked my daughter to highlight our concerns as tribal elders and address them at this time.

MS. LANGLEY: My name is Eleyna Langley. E L E Y N A. L A N G L E Y. I'm an enrolled member of the Coushatta Tribe of Louisiana and am a formal tribal princess. I'm very familiar with the tribe's history, and after speaking with our tribal elders, they have some

IND9-2 concerns that need to be addressed. Any significant construction work done along our tribe's migration route has the potential to uncover archaeological material that is

IND9-1 Section 4.10 of the final EIS has been updated to include a history of the Coushatta Tribe of Louisiana and the potential artifacts that could be encountered during construction of the Louisiana Connector Project.

IND9-2 Section 4.10 of the final EIS has been updated to include tribal history and potential artifacts of the Coushatta Tribe of Louisiana that could be encountered during construction of the Louisiana Connector Project. Additionally, per agreements between PAPL and the Coushatta, PAPL has agreed to sponsor a tribal monitoring program that would hire monitors trained by the Coushatta to identify any tribal and cultural artifacts uncovered during construction.

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IND9-2 (cont'd)

significant to our tribe.

We understand that the draft assessment performed by your agency regarding potential impacts of construction along our tribe's migration route fails to mention the impacts construction could have on our tribe's artifacts. This is a significant mistake that should be corrected. The assessment should mention the Coushatta Tribe of Louisiana and should acknowledge the fact that construction along the tribe's migration route has the potential to uncover tribal materials that are culturally and spiritually important to our tribe. That's it.

>>

IND9-3

MR. WIMBERLEY: Chester Wimberley, W I M B E R L E Y. I would like to appeal to you to reroute the proposed pipeline right-of-way. If you remain with the proposed right-of-way you would be destroying virgin woodland, which we have very little of left in our whole area. It cannot be replaced because you cannot plant any trees on a pipeline right-of-way. You will also destroy wildlife habitat which we have built up a herd, a nice herd of deer and squirrels. We had no squirrels 40 years ago. We trapped some and put them in there. Fifty years ago when they came out with the old age pension, all those old -- and they cleaned them up. But anyway, we have squirrels, rabbits, raccoons, and a large variety of birds.

IND9-3 See responses to comment IND3-1.

INDIVIDUAL COMMENTS

IND9-3 (cont'd)

We've made trails throughout there for trout fishing, so we can get to all the areas that we hunt. My sons, I have four sons and I have ten grandchildren, we hunt this place. You know, we just enjoy it, it's right at home. I mean, quarter of a mile from my property, and it's connected property. Have been hunting this since they were kids and now I have great-grandkids coming up that will hunt; and this time we, they only allow whoever has never killed a deer to kill a deer. So we're trying to preserve the herd so we have some for our kids.

I have some -- I don't know if you want to see any of them, I have a bunch of pictures -- pictures right here. This is some pictures, this one was taken the 27th. Eighth month, 27th, there's two bucks right there. This is something, I've been there for a long time and never seen before. Walking in the woods, that's a snapping turtle that was buried down in the sticks with his neck up. I dug him up and I put him in a crawfish pond. This is a picture at night time. This is just a, there's a deer right here. Right up in there. We have cameras, you know, we put up in the trees. This is some of the woodland, the virgin woodland. This is pictures of the virgin woodland. This is all pictures of -- at one of the feeders. This is another picture -- we have some monster trees in there. Of course, the white oak, and hickory, and the whole works. This is a

INDIVIDUAL COMMENTS

IND9-3 (cont'd)

big one right here.

It's all along where they're proposing the paths. This is just another picture. You can have the pictures if you want to put them in.

FERC: Thank you.

MR. WIMBERLEY: If they move the right-of-way a few hundred feet from where they propose to pass it, they will be running in an open rice field, and it would be right along the border of the woods; but it would not disturb the operation as we could just block that off for them and once they've finished they could return it to its normal, you know, present state and you wouldn't even notice it. It wouldn't change the landscape at all. You wouldn't even notice that the pipeline is there because I have other property; Columbia runs through some of my property for the family; we farm right over it with no problems at all. As a matter of fact, I forget it's theirs sometimes.

That's kind of what I'm saying, that it could be returned to the original state and it would not change the landscape at all. And I'm willing, you know, to work with them. You know, I'm not a hard person to - I know we have to, you know, do something for the people and to keep the economy going, and I'm not against that. The only thing I'm against is it passing through those woodlands, and it's so easily, I mean, actually, it's a straight line to where they

INDIVIDUAL COMMENTS

IND9-4 (cont'd)

want; and so I guess that's more or less my, if you want, this is the end of the line. You know. I think I can show you.

[Indicating on his map] This is the end of the line right here. It would be coming across, and I think they want to go right here. There would be from here all the way to just right here. This is actually two maps at this - this is a little larger. This would be the map. The red line would be where I'd like to see it go. And it would bring it right up to where they need to go.

FERC: We will put this into the records. So that's part of the official record.

MR. WIMBERLEY: Thanks.

>>

IND9-5

MS. RODRIGUE: My name is Stephanie Rodrigue, S T E P H A N I E. R O D R I G U E. I am from Cameron, Louisiana. I live in Cameron Parish and I'm here in support of the pipeline. I can tell you from experience with Cameron LNG and we also have Cheniere LNG in our parish now and we have a couple more in process that there are certainly positives that come from partnerships with the LNG industry.

I'm the former superintendent of schools in Cameron Parish have and continue to have a good relationship

IND9-5 See response to comment IND4-1. Sections 4.6.1.2 and 4.8.6 of the final EIS discuss impacts on wildlife and hunting, respectively, from the project.

INDIVIDUAL COMMENTS

IND9-5 (cont'd)

with our current and our hopefully future LNG plants. They are providing jobs for our graduates, but they're also instilling in the graduates, a plan for what many of them would like to stay in Cameron Parish. I'm sure you don't know a lot about our parish but we don't have a lot of opportunities for employment and certainly the LNG plants do offer a variety of opportunities, as do the pipelines. I understand that pipelines, of course, the jobs are different but it's certainly something that our graduates, our Cameron Parish resident graduates, can aspire and can obtain degrees in that area to work for the pipeline.

IND9-6

As far as environmental impact, I clearly remember a few issues with both plants that had to be mitigated and as I recall, I know oyster beds for one and I think that was with Cameron LNG. And at Cheniere, relocation of some of the birds and I think, perhaps turtles. I know that our shrimping and oyster industry, our seafood industry, has continued to thrive. I do readily recall some of the oyster fishermen that I know saying that relocation, their mitigation, made their ability to, the number and quality of the oysters actually +were better once the beds were moved. That was one of the mitigations of Cameron LNG.

IND9-7

I also know that with my experience, all of them have been good stewards of our environment. We obviously

IND9-6 Comments noted. The presence of oysters and potential impacts are discussed in section 4.6.2.1 of the final EIS.

IND9-7 Comments noted. Wildlife is discussed in section 4.6.1 of the final EIS.

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IND9-7 (cont'd)

live in what we consider a sportsman's paradise but it's certainly the, we have a large number of, you know, plants, birds, animals, wildlife, of every sort and we have not see any decrease in any of those populations since the LNG industry has decided to make Cameron Parish their home. So, I'm actually quite pleased that the pipeline will run through Cameron Parish and I'm here today in full support. Thank you.

>>

MS. THOMPSON: [Through Interpreter]: Good afternoon. My mother will be speaking in the Koasati language, which is the Coushatta language.

My name is Deretha Thompson. She is 62 years old. She is a Coushatta tribal member and she is also considered a tribal elder. She has lived in the Allen Parish her entire life. She has grown up in this area since she was a child and from a child she has grown into a tribal elder, and throughout that time she has seen her tribal people, she has seen and has heard where they have traveled and settled. She has seen so much in her years of living in this area. She has heard the stories from where we were originally from to the time that we've settled in the many times we've traveled from those places and then finally settling in our community.

IND9-8

So, she has seen a map of where the pipeline will

IND9-8 Section 3.4 has been updated to include a discussion of alternative routes that would avoid crossing Coushatta ancestral lands.

INDIVIDUAL COMMENTS

IND9-8 (cont'd)

run through. She is all right with the pipeline coming up but she's very unsettled about the idea that the pipeline will be on our ancestral lands or any lands that are related to the Coushatta people. So, she would like to see it moved away. She has not heard until recently about the pipeline's wanting to come through the area, and with that it doesn't feel right to her that she had not known, this was not of her knowledge; and she doesn't like the fact that she's just now finding out about it.

IND9-9

So, her concern with the pipeline that is on the map is anywhere that we've settled, anything we have left behind, anything that was buried, any resources that we may have, all of those things are at risk of being destroyed or disturbed. If you are going to continue with the pipeline, could you all move it in a different direction, away from our lands. Not on our lands, please. Thank you.

>>

MS. LAFONTNO: My name is Raynelle Lafontno. I am 37 years old. I am an enrolled Coushatta tribal member. I still have my grandmother who is still with us, and I've heard many stories of how the land used to be. And in any case, in the United States, I'm aware of all the changes that have occurred with forestry. Some of our natural resources have been depleted because of environmental

IND9-9 See response to comment IND9-2.

INDIVIDUAL COMMENTS

changes, or things in the sake of progress. I'm not against progress, but I am concerned with the pipeline if it were to come through this area how that would affect myself and my mother or our elders, but most importantly, I have four children and my childrens' land is at stake because I don't know the full effects of what may occur if something, if a pipeline were to be placed in this region. I know it will go up, but I would feel more comfortable if it was away from our homelands, our places of work, places of worship.

IND9-10

I'm also concerned with where the map lines, if we had settled or traveled through that area. The risk of uncovering, inadvertent discoveries, anything that was buried that was meant to stay buried, I'm not aware that you may find burials but it's not possible to know if those things would be out there. We feel like, if we bury something then it's meant to stay there. Meant to be untouched, because I know we struggle with that. I work for the heritage department and I've seen firsthand some of the effects that have occurred when people unassumingly dig and disturb burial sites or important landmarks and those sort of things.

IND9-11

And I know that pipelines do have archaeologist and they do have the resources to check, but, and I know that, you know, they go through the channels and the avenues to correct those, but for us it's disheartening when

IND9-10 Comments noted. The EIS discloses the impacts of operation of the project, including safety in section 4.12.10.

IND9-11 See response to comment IND9-2.

INDIVIDUAL COMMENTS

IND9-11 (cont'd)

we find that anything, anything would be uncovered and removed or disturbed. It's bad for us in a sense of spirit. I think that's all.

Can she add to what she said?

All right.

MS. THOMPSON: [Through Interpreter]: All right. My mother, Deretha Thompson, is concerned and she's thinking of her grandchildren and her future grandchildren or great-grandchildren that may come along and how that would effect them and their land.

IND9-12

Her concern -- this is Deretha Thompson again -- her concern is the water. If there were any pollution of the water, any disturbances. We still do water wells and they dig into the water table and do - sometimes it's a hand pump and sometimes it's an electric pump. But that's her concern. That that precious resource of water would be polluted. She's also worried about the soil and any contamination to the soil. Because we do have some that do garden and who rely on fresh vegetables for their sustenance. So, if any soil contamination were to arise they would lose their source of vegetation, food.

All right, that's all. Thank you.

>>

MS. DUNNEHOO: Darlene Dunnehoo. D A R L E N E.

IND9-12 Potential impacts and mitigation measures from the Louisiana Connector Project regarding groundwater and soils are discussed in sections 4.3.1.5 and 4.2.2.2 of the final EIS, respectively.

INDIVIDUAL COMMENTS

D U N N E H O O. My name is Darlene Dunnehoo, I am an enrolled member of the Coushatta Tribe of Louisiana. And I am a tribal elder. I have lived in the Coushatta community my entire life. Growing up I spent a lot of time with my tribal elders, who passed on to me my tribe's history. I know from my elders that the Coushatta people traveled and settled in different places along their route where the Port Arthur Pipeline company wants to build their pipeline.

I saw a map of the areas and saw where the pipeline is supposed to be built. Our people lived in those areas and settled in them for decades and then moved on. The draft environmental statement you published does not mention the impacts that pipeline construction could have on my tribe's sites and artifacts. The statement should be corrected to include my tribe's history and to acknowledge the fact that pipeline construction could have devastating effects on the artifacts left by my tribal ancestors. Thank you.

>>

DR. LANGLEY: My name is Linda Langley. I'm the Tribal Historic Preservation Officer for the Coushatta Tribe of Louisiana. I have a Ph.D. in anthropology plus a post doc. Thirty plus years of experience in the field of

IND9-13 See response to comment IND9-2.

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IND9-14

cultural resources and historic preservation protection. The Coushatta people, the Koasati people have lived and worked, I feel very strongly, all along this area. All along the footprint of the Port Arthur Pipeline Project.

There is the highest probability for cultural resources, not only archaeological sites but traditional cultural properties along this route because we know that the Coushatta people were living and hunting and working in the Sabine River basin, the Calcasieu River basin. The Hickory Branch Lake area. The, what was considered the neutral territory between Spain and France at the time between what's now Texas and Louisiana.

The next part of the pipeline project footprint is along their present tribal lands, Bayou Blue where they've lived just there for almost 150 years. And we know to the east of that Bayou Nezpique, where there are mounds that the tribe also lived; and the former Appaloosa's territory where they enter the historic record in the time of the Spanish occupation of what's now Louisiana.

So, the tribe will be submitting written comments but I'm very concerned that the draft environmental impact statement does not currently mention any of this information, and I believe that the record should be corrected. The draft should be fixed so that some of this information is included and we can protect the tribe's

IND9-14 See response to comment IND9-2.

INDIVIDUAL COMMENTS

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IND9-14 (cont'd)

cultural resources. Thank you.

>>

MS. ZEVIT: My name is Zehava Zevit. That's Z E H A V A. Last name is Z E V I T. I'm an attorney for the Coushatta Tribe of Louisiana. I am making statements on behalf of the Coushatta Tribe. I have two sets of comments on the draft EIS. The first set of comments are procedural comments.

IND9-15

The Coushatta Tribe objects to the Commission's having published the draft EIS prior to meeting with the Coushatta Tribe on a government to government basis. Generally, the Commission is obligated under federal law to meet with the Coushatta Tribe on an ongoing basis to ascertain that the tribe's interest are protected. This obligation stems from federal statutes and regulations and policies and also from the federal government's trust responsibility towards Indian tribes. Some of these obligations are codified in tribal law. For example, at 18CFR Section 2.1C.

In the NEPA regulations, in the NHPA regulations, and also in federal case law, from the various federal circuits. The Commission's obligation to consult with the Coushatta government on a government to government basis is separate and apart from the Commission's obligations under procedural regulations. Here the project's potential

IND9-15 Comments noted. Also see response to comment IND9-2.

INDIVIDUAL COMMENTS

IND9-15 (cont'd)

negative impact on the Coushatta tribe's cultural, historic, and religious interests are required to be addressed in the draft EIS and the final EIS prepared for this project. The Commission has long known that the project could negatively impact Coushatta's cultural resources. In June 2017, FERC staff met with members of the Coushatta government at Coushatta. At that meeting the tribe noted that it had concerns relating to cultural resources. A year later, in June 2018, the tribe requested a government to government meeting with the Commission. The tribe's request for the meeting expressly stated that one of the meetings goals was to discuss the project's potential negative impacts on tribal cultural resources an on the tribe's cultural, historic, and religious interests. That meeting was scheduled for mid-October, thus, when it published the draft EIS in September, the Commission had known for more than a year that the tribe had concerns relating to the project's impacts on cultural resources. The Commission also knew that the tribe wanted to meet on a government to government basis to discuss these concerns. And the Commission knew that a meeting had been set for October 16th to discuss these issues. On September 7th after learning that the Commission had intended to file a draft EIS shortly, the tribe filed a letter specifically requesting that FERC, specifically requesting that FERC refrain from filing its

INDIVIDUAL COMMENTS

IND9-16 (cont'd)

draft EIS until after the previously set October 16th government to government meeting took place. Under these circumstances it was inappropriate for the Commission to finalize and issue a draft EIS without first properly consulting with the tribe regarding cultural resource issues. Publishing the draft EIS without first meeting with the tribe was inappropriate because a draft EIS when done consistently with federal law, should address a project's anticipated negative impacts on tribal cultural, historical, and religious sites, locations and artifacts. The draft EIS is required to reference these impacts so that the tribe can ascertain how the Commission views such impacts and their mitigation. And, if necessary, comment on the Commission's approach for purposes of the final EIS.

A draft that fails to address these issues and accordingly lacks one of the important elements required under the NEPA and the NHPA, is inadequate as a draft because it fails to inform tribes of the Commission's initial thoughts regarding and approaches to tribal cultural mitigation. An inadequate draft violates federal regulations. In short, the draft EIS here should not have been finalized or published until after the Commission Staff met with the Coushatta tribe on a government to government basis and incorporated information regarding Coushatta's cultural resources into the EIS.

INDIVIDUAL COMMENTS

IND9-16

This leads me to my second set of comments regarding to the substance of the draft EIS. As a consequence of the inappropriate completion and publication of the draft EIS, the draft is lacking in significant ways. The proposed project includes construction of new natural gas pipeline facilities in Saint Landry, Evangeline, at Allen, Beuregard, Calcasieu, and Cameron Parishes in Louisiana. The entire project corridor covers lands with which the Coushatta Tribe of Louisiana has a cultural, historic, and religious affiliation. The Coushatta Tribe of Louisiana's long-standing interest in the project corridor is well-documented historically. The Coushatta Tribe of Louisiana initially moved from their villages in the Tennessee River area and settled in villages in the Guntersville Basin area which is now Northern Alabama. Then moved south to join the political organization that became known as the Cree Confederacy. In 1797, the majority of the Coushatta people migrated from Alabama to what was then Spain's Appaloosa District.

From there the Coushatta's migrated and settled in several additional locations along the proposed project corridor. They lived in multiple villages throughout this area, occupied seasonal hunting camps, raised their children, buried their dead, and worshiped in numerous places along this route. The Coushatta Tribe has identified

IND9-16 See response to comment IND9-2.

INDIVIDUAL COMMENTS

IND9-16 (cont'd)

archaeological sites and traditional cultural properties throughout the affected areas. The Coushatta people arrived at their current location in and around the present day town of Elton, Louisiana, in 1880.

The United States Government has recognized and acknowledged the Coushatta Tribe's migrations which create a historic nexus to the lands at issue in the present application. Most recently in the Congressional Record, specifically at 164 congressional record S4502. Published on June 27th, 2018. In a statement Cassidy and Senator Kennedy in which the Senators acknowledged the Coushatta Tribe's history and its migration from Alabama to Texas and back to Louisiana along what is the current project's footprint. The federal government's acknowledgment and recognition of Coushatta migrations is centuries long.

Given the proximity of the applicant's proposed project to significant known tribal locations, project construction could potentially harm archaeological and or culturally, historically, and religiously significant sites and artifacts. Such negative impacts would be irreversibly devastating, potentially annihilating artifacts from and evidence of the tribe's past and erasing significant sites and locations.

The Draft EIS lacks any reference to the Coushatta tribe's history as I just articulated it. And

INDIVIDUAL COMMENTS

IND9-16 (cont'd)

draft, and lacks any reference to the significant nexus the Coushatta has to the land at issue in the present application. The draft EIS also lacks any reference to the project's potential negative impacts on cultural resources found along the project corridor. Accordingly, the draft EIS also does not discuss or require any mitigation matters to address these negative impacts. The draft EIS is thus flawed and should be corrected. The Coushatta tribe will be submitting written comments to more fully detail the project's potential negative effects on tribal cultural resources and to suggest that the applicant engage tribal cultural monitoring, run by the Coushatta tribes in means of mitigating such potential negative impacts.

>>

MR. FEAR: Jay Fear; J a y F e a r. I'm with the Mitigration Group. And I have a meeting with you guys tomorrow, to do some mitigation business. So I'm here; just thought I'd throw in some positive comments while I'm here.

IND9-17

We're in support of the project; we very much see the economic benefit to our community and to the larger nation as a whole, and we are in support of developing the natural gas infrastructure. Clean energy. And we are just proud to host you guys, and we feel like Southwest Louisiana and Southeast Texas is the tip of the spear as far as for

IND9-17 See response to comment IND4-1.

INDIVIDUAL COMMENTS

IND9-17 (cont'd)

the LNG business; and we want to do everything we can to help support you and ensure the successful completion of this project.

[6:10 p.m.] [Pause]

[Whereupon at 6:30 p.m., the verbal comment session concluded.]

INDIVIDUAL COMMENTS

CERTIFICATE OF OFFICIAL REPORTER

This is to certify that the attached proceeding before the FEDERAL ENERGY REGULATORY COMMISSION in the Matter of:

Name of Proceeding: Port Arthur LNG, LLC

Docket No.: CP17-20-000

Place: Kinder, Louisiana

Date: Tuesday, October 16, 2018

were held as herein appears, and that this is the original transcript thereof for the file of the Federal Energy Regulatory Commission, and is a full correct transcription of the proceedings.

Dan Hawkins

Official Reporter

INDIVIDUAL COMMENTS

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION
Office of Energy Projects

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Port Arthur LNG, LLC Docket Nos. CP17-20-000
PALNG Common Facilities Company, LLC
Port Arthur Pipeline, LLC

- - - - - - - - - - - - - - - x CP17-21-000
CP17-21-001
CP18-7-000

PORT ARTHUR LIQUEFACTION PROJECT
TEXAS CONNECTOR PROJECT
LOUISIANA CONNECTOR PROJECT

Hampton Inn & Suites
7660 Memorial Boulevard
Port Arthur, Texas 77642

Wednesday, October 17, 2018

The public comment meeting, pursuant to notice, convened at 4:00 p.m.

INDIVIDUAL COMMENTS

PUBLIC COMMENTS

MR. HAYES: Good afternoon. My name is Jeff Hayes. J E F F. H A Y E S. We appreciate this opportunity to talk about this vital project to our economy, the state economy, national, and even international. As you all know, natural gas is, I guess, the cleanest renewable fuel and I think with this plant, with the mitigation that they will do to build this plant, is that this will actually be good for the environment here and it will certainly be good for the environment wherever this natural gas is sold. because it will probably take the place of coal to make electricity.

As I understand it this multi-billion dollar project will have 3,500 construction jobs at its peak and 200 permanent jobs and that's very important to this community. It will also be very important to the movement of highway 87, south of the Intercoastal Canal because it will make it a safer, a better road. Today it's, you've gone down to Sabine Pass, south of the Intercoastal Canal, you almost feel like you're in the Sabine, nature's waterway.

So, I think those things and Sempra, I don't have to tell you all, is a good corporate citizen in California. They are now, they are the largest provider of electricity and gas in California and also the largest provider of electricity in Texas. And I think you can check on them,

IND10-1 See response to comments IND4-1 and IND4-2.

INDIVIDUAL COMMENTS

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3

IND10-1 (cont'd)

they have a good corporate record. So, with a good company trying to do this much. This is important to this economy and the nation's economy and I think it will be good for the environment. Thank you very much.

JUDGE BRANICK: My name is Jeff. J E F F. Branick. B R A N I C K. I'm the County Judge of Jefferson County. I'm here to speak wholeheartedly in favor of the grant of permitting to Port Arthur LNG for their proposed liquefaction facility and the associated pipeline. I have an eight year history, longer than that, dealing with Sempra and Port Arthur LNG. They are a very responsible

IND10-2

operator, a good corporate citizen. We are excited about the number of jobs that this project is going to involve and the economic benefits that will push through our economy.

This liquefaction facility will help to right America's trade imbalance with other countries. We are already net an export port, having reached that milestone in October of 2017; we're the number one exporter of crude, the number one exporter of LNG through Cheniere Energy, and the addition of Golden Pass and Port Arthur LNG will add several hundred ships to our waterway, and make us the largest port in the country. We're currently the third largest port in section of the Gulf Intercoastal Waterway. Jefferson County it's the busiest for maritime commerce in the United States.

IND10-2 See response to comment IND4-1.

INDIVIDUAL COMMENTS

IND10-2 (cont'd)

So, we're excited about this project. We're excited about their corporate citizenship and the benefits that they're going to add to our economy, and I would mention that the citizens of Jefferson County have the most favorable rating of industry and cooperation with industry of any county in the country. So, our citizens are also highly excited about the project and we look forward to an expeditious grant of their permitting. Thank you.

MR. MCCOY: I am Bill McCoy. I'm the President and CEO of the Greater Port Arthur Chamber of Commerce. I am here to speak in favor of the Port Arthur LNG liquefication project known to us forever as Sempra. I, for the reasons that have been stated, first of all, our county is very proud of our industry because through citizen involvement and industry involvement, Jefferson County is one of the very few attainment counties, maybe in the country, I know in the state of Texas. We meet all emission standards as required by the government. The Port Arthur LNG is very community involved. They're very cognizant of the environment.

IND10-3

Where they're building will be a reconstruction of a wetlands which is important also, and the protection of our coast against storms, marshes, and grasses. The estuaries slow down storm surge. As part of our protection, we do have a seawall in Port Arthur that protects us. As

IND10-3 Section 4.4.2.1 discusses the beneficial reuse of dredge material on the J.D. Murphree WMA.

INDIVIDUAL COMMENTS

IND10-4 the movement of highway 7 inland will also raise that highway. Right now it is the only escape route for Sabine Pass during a hurricane and high tides, even in the recent high tides caused by the hurricane in Florida, it had water over the road in places so that's very important to us. Of

IND10-5 course, the 8 billion dollar construction costs, the 4,000 construction jobs, the 120 to 200 permanent jobs are important in an area which continually has high, a higher rate of unemployment than the surrounding areas.

Our schools, our colleges, some of our companies like ABC, our EDC are all in the process of having programs to train our high school students, our young people, to go into these thousands of construction jobs that are being generated by not only Port Arthur liquid natural gas, but Golden Pass in the future. Cheniere currently, plus the turnarounds of our major corporations and expansion of those Motiva, Valero, we're looking at somewhere around 15 to 20,000 needed jobs in the next five to ten years, and this is a very large part of that project. And any time we can get a company to come into our city and meet all the emission standards to help us with the rebuilding of our marshes and our wetlands. Protecting us from storm surge, providing jobs, taxes, we're very much in favor of it.

The Greater Port Arthur Chamber of Commerce board of directors and their 600 members wholeheartedly endorse

IND10-4 See response to comment IND4-2.

IND10-5 See response to comment IND4-1.

INDIVIDUAL COMMENTS

the completion of this project and the issuing of any permits necessary to get it underway immediately. Thank you.

MR. WOODS: I am Travis Woods with TNL Solutions, LLC. I'm the President of Gulf Coast Industrial Contractors Group in Lake Charles, Louisiana, and I'm the Chairman of the board of the Port Arthur Industrial Contractors Group here in Port Arthur. Between the two groups I represent about 300 industrial contractors, and we're excited about this project coming to town. It has so much economic impact with contractors going to work, with Mom and Pop gas stations, with folks that, the hotels and the local economy. We feel like this project will be a big plus to the local area. And as you well know, there's $220 billion breaking loose between here and Lake Charles and Cameron, Louisiana. And we're so excited about this Sempra project coming to town and being a part of this. And I thank you all very much for your time.

MR. BUSS: Russel, is Russel with one l. R U S S E L. Buss. B U double S. I live at 2810 Las Palmas, that's two words, Port Arthur, Texas. I had worked in the oil and gas industry for most of my career of about 40 years, and so a couple of things about the LNG. I know they're exporting. I hope that some of this LNG can stay here in the United States and fuel vessels like ship vessels

IND10-6 See response to comment IND4-1.

IND10-7 Comments noted. If the applicant proposed to produce LNG for use within the United States, they would need to seek the appropriate authority to do that.

INDIVIDUAL COMMENTS

IND10-7 (cont'd)

and things like that. I know there's a lot of people who work on that, so that's one comment I'd like to make. That some of it, a portion of that LNG used for fuel here in the United States. And I don't know if that makes any difference, but that's one thing.

IND10-8

The other is, I look at things of trying to, to make sure that energy in the process of manufacturing LNG is done efficiently and that you use some of the waste T or other things that occur with that project that could be used in the generation of electric power. All right.

IND10-9

And also other things that could possibly be recovered from the natural, from the natural gas stream like helium. And I'm working at some things, I'm working at looking at an alternative to this would be, there may be some ways that there is a good way to capture the carbon molecules from this process that might be very, might be advantageous. And I don't want to explain at this point but at some point I will alert or we will talk to that.

That's all I've got to say. And, in general, I'm in favor of this other than I think from a - one other thing, from a land use standpoint, I think that involved that last comment that I possibly have ways of utilizing some things that might be processes that could be beneficial to the United States and our area here in the State of Texas in the land associated with the footprint that this plant is

IND10-8 Comments noted.

IND10-9 Comments noted.

INDIVIDUAL COMMENTS

creating.

That's all I got to say. Thank you.

MR. LAMPSON: It's Nick Lampson, N I C K. L A M P S O N. I'm a former Member of the U.S. House of Representatives, citizen of Beaumont, Texas and lifelong resident of Jefferson County.

IND10-10 My interest in being here today is to express support for the project. I've not heard of any objection from any part of my community, and I would look forward to either answer questions over time or be supportive in the event that support becomes necessary. That's all.

[4:30 p.m.] [Pause]

[Whereupon at 6:30 p.m., the verbal comment session concluded.]

IND10-10 Comments noted.

INDIVIDUAL COMMENTS

CERTIFICATE OF OFFICIAL REPORTER

This is to certify that the attached proceeding before the FEDERAL ENERGY REGULATORY COMMISSION in the Matter of:

Name of Proceeding: Port Arthur LNG, LLC

Docket No.: CP17-20-000

Place: Port Arthur, Texas

Date: Wednesday, October 17, 2018

were held as herein appears, and that this is the original transcript thereof for the file of the Federal Energy Regulatory Commission, and is a full correct transcription of the proceedings.

Dan Hawkins

Official Reporter

INDIVIDUAL COMMENTS

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION
Office of Energy Projects

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Port Arthur LNG, LLC Docket Nos. CP17-20-000
PALNG Common Facilities Company, LLC
Port Arthur Pipeline, LLC
- - - - - - - - - - - - - - - x CP17-21-000
CP17-21-001
CP18-7-000

PORT ARTHUR LIQUEFACTION PROJECT
TEXAS CONNECTOR PROJECT
LOUISIANA CONNECTOR PROJECT

Holiday Inn Lake Charles-
West Sulphur
330 Arena Road
Sulphur, Louisiana 70665

Thursday, October 18, 2018

The public comment meeting, pursuant to notice, convened at 4:00 p.m.

INDIVIDUAL COMMENTS

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PUBLIC COMMENTS

[Session opened at 4 p.m.]

[Pause]

[6:30 p.m.]

MR. CHOATE: My name is Tom Choate. I own PH Machine Works, a local contractor/machine works/ fabricator/pipeline welder here in Calcasieu Parish. I wanted to show my support for this Port Arthur LNG project.

For all the reasons -- for economic reasons we support the local -- you'll find that this area is very energy friendly, and there's a tremendous opportunity to expand my business if this goes through; I'm currently at 20 employees; could probably easily put me at 50 to 75 employees. I'm not a major contractor, but I can easily keep guys busy.

Thank you guys for coming down here and giving us the chance to give a public feedback on this project.

[Whereupon, at 6:31 p.m., the public comment session concluded.]

IND11-1 See response to comment IND4-1.

INDIVIDUAL COMMENTS

CERTIFICATE OF OFFICIAL REPORTER

This is to certify that the attached proceeding before the FEDERAL ENERGY REGULATORY COMMISSION in the Matter of:

Name of Proceeding: Port Arthur LNG, LLC

Docket No.: CP17-20-000

Place: Sulphur, Louisiana

Date: Thursday, October 18, 2018

were held as herein appears, and that this is the original transcript thereof for the file of the Federal Energy Regulatory Commission, and is a full correct transcription of the proceedings.

Dan Hawkins

Official Reporter

INDIVIDUAL COMMENTS

20181119-5111 FERC PDF (Unofficial) 11/19/2018 12:40:52 PM

November 19, 2018

Port Arthur Liquefaction Project,
Texas Connector Project, and Louisiana Connector Project
Kimberly D. Bose, Secretary,
Energy Regulatory Commission (FERC)
888 First Street, NE, Room 1A
Washington, DC 20426

OEP/DG2E/Gas4
Port Arthur LNG, LLC; PALNG
Common Facilities Company, LLC; and
Port Arthur Pipeline, LLC

Docket Nos. CP17-20-000, CP17-21-000, CP17-21-001 and CP18-7-000

Dear FERC staff:

The Golden Triangle Sierra Club Group appreciates the opportunity to comment on the Federal Energy Regulatory Commission (FERC) draft environmental impact statement (EIS) for the 1) Port Arthur Liquefaction Project proposed by Port Arthur LNG, LLC and PALNG Common Facilities Company LLC, and the 2) Texas Connector Project and Louisiana Connector Project proposed by Port Arthur Pipeline, (PAPL).

Proposed Projects: Proposed is the construction of a new liquefied natural gas export terminal in Jefferson County with approximately 165 miles of 42-inch-diameter pipeline in Jefferson and Orange Counties, Texas; and Cameron, Calcasieu, Beauregard, Allen, Evangeline, and St. Landry Parishes, Louisiana.

1) **Port Arthur Liquefaction Project** will construct:

a) two liquefaction trains, each with capacity for 6.73 million tons per year of LNG for export;
b) three LNG storage tanks, with 160,000 cubic meters of individual capacity;
c) refrigerant storage area and truck unloading facilities;
d) a condensate storage area and truck loading facilities, and
e) a materials off-loading facility and Pioneer Dock.

2) **Texas Connector Project and Louisiana Connector Project** will construct:

a) 34.2 miles of 42-inch-diameter pipeline to feed gas to the Texas Connector liquefaction facilities;
b) 130.2 miles of 42-inch-diameter pipeline to feed gas to the Louisiana Connector liquefaction facilities;
c) three compressor stations;
d) meter stations at the pipeline interconnects; and other associated utilities, systems and facilities.

Project location: The Port Arthur project is proposed to locate on the Sabine-Neches deep water ship channel within the area of other highly developed port facilities. The proposed Port Arthur Project was previously evaluated and certified by FERC in 2006 for an LNG regasification terminal that was never built. It was also previously approved by the Texas Department of Transportation for the proposed relocation of a portion of Hwy. 87.

1

INDIVIDUAL COMMENTS

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GENERAL COMMENTS

IND12-1 1. **Anticipated impacts**: "Construction of the Liquefaction Project would result in impacts on about 948 acres of open land, road/transportation land, wetlands, and open water; of which about 898 acres would be permanently impacted" from the Executive Summary p. 26. Clearer definitions of the project areas of impact are needed. The JD Murphree Wildlife Management Area wetlands and the Big Hill Bayou Wildlife Management Area abut the project area; clearer definition of these areas in text and figures are needed.

The Liquefaction Project proposes to use dredged sediments from the Port Arthur Canal placed in four locations: Dredge Disposal Areas 8, 9, and 9A, and at the JD Murphree WMA.

IND12-2 a) dredged materials placed in a wetland will permanently alter the surface hydrology,

a) irrevocably affecting the chemistry of nutrient-rich marsh sediments and the ecology of the wetlands,

IND12-3 b) potentially disturbing essential migratory bird flyways associated with the Texas coast, and

IND12-4 c) insufficient scientific support for the application of dredge deposits is offered.

2. **Other Agencies Authorization Comments:** Relocation of SH87 proposed to impact 45.1 acres of wetland...which will be "allowed to revert to preconstruction conditions while forested wetlands would revegetate to palustrine and EEM or scrub-shrub wetlands."

IND12-5 a) Has TXDOT conducted a public meeting to consider all comments regarding this proposition?

IND12-6 b) Has the Army Corps of Engineers issued a 404 permit? With

- on-site and off-site mitigation strategies for public comment,
- an off-site mitigation bank (at cost to the applicant) with performance standards by the applicant to be clearly stipulated,
- the offsite mitigation bank needs to include (CWA) Aquatic Resources of National Importance.

3. **Mitigation strategies:** Permanent impacts to adjacent wetlands are anticipated under the liquefaction and pipeline connector projects. Proposed mitigation strategies are inadequate. USACE Wetlands guidelines restrict application of dredge material where "a less environmentally damaging alternative is feasible" p. 171, was an alternative investigated?

IND12-7

IND12-8 a) dredge discharge within the project is repeatedly referred to as beneficial, but here, it is cited as environmentally damaging: contradictory strategy?

The proposed destruction of several hundred acres of wetlands; whether freshwater, brackish, or saltwater – unidentified by the applicant, is NOT just the cost of doing business.

IND12-9 a) The applicant cannot 'convert' wetlands from ecological status to another simply by overlying dredge material as they state within the document.

IND12-10 b) The applicant must show more than the dredge line and broad outlines of the proposed dredge areas, but must identify the specific vegetative zones and wetlands types to receive dredged materials.

IND12-11 c) The same request is made of pipeline zones; indicate those areas of direct and indirect impact from dredge application.

IND12-12 The Sierra Club, Golden Triangle Group, has concern that no discussion regarding compensatory mitigation is offered in the document. The applicant admits that irrevocable damage will occur to wetlands, but never offers off-site alternatives to develop or protect wetlands in the coastal region to replace or conserve similar environs.

COMMENTS ENVIRONMENTAL IMPACTS

4. **Subsidence impacts:** "Subsidence occurs throughout the Gulf Coast Region as a result of sediment compaction, oil and gas extraction, and groundwater extraction." p. 171

2

IND12-1 The Executive Summary is intended to provide only an overview of potential impacts from the Projects. Additional information can be found throughout sections 2.0 and 4.0. Sections 4.5.2.2, 4.6.2.1, and 4.8.6.2 of the final EIS acknowledge that the Texas Connector Project would cross the J.D. Murphree WMA. We have further revised section 4.8.6.2 to clarify that the project crosses the Big Hill Unit from MP 4.5 to MP 6.0.

IND12-2 Dredge Disposal Areas 8, 9A, and 9B are USACE-approved areas that are designated for and have previously received deposition of dredge materials. These areas are managed by the SNND to maintain wetland functions following dredge material deposition. Section 4.4 of the EIS describes the existing wetlands and the impacts anticipated from placement of dredge material in the J.D. Murphree WMA.

IND12-3 See response to comment IND8-4. Section 4.6.1.3 discusses impacts on migratory birds from the Projects.

IND12-4 Any dredge disposal/beneficial reuse would be coordinated with the USACE and TPWD in accordance with their regulatory requirements. Dredge disposal materials and disposal areas would be managed and maintained by each agency responsible for its respective disposal areas (i.e., USACE or TPWD).

IND12-5 It is unknown to FERC staff if TDOT has conducted any public meetings. TDOT is not a cooperating agency; however, it did file a comment with FERC stating that PALNG must "Fulfill all applicable governmental environmental requirements necessary to begin construction" (FERC E-Library accession number 20180820-0039). Section 2.1.4.1 of the final EIS has been updated to include the TDOT's statement.

IND12-6 PALNG submitted an application and supplemental information for a CWA section 10/404 permit for the Liquefaction Project to the USACE in November 2016 and November 2017, respectively. A Public Notice was issued by the USACE on October 4, 2018, which opened a 45-day public comment period and acknowledged the purchase of wetland banking credits. The USACE is still evaluating the permit application, and final wetland mitigation requirements will be determined as a result of this evaluation.

Also see comment response to SA3-1.

IND12-7 FERC did not receive stakeholder input regarding the suitability of any other specific site for the receipt of dredge material, nor were any presented during the draft EIS comment period. The USACE reviews areas for dredge disposal associated with channel dredging, along with the landowner of the receiving site. The USACE and the TPWD did not request additional analysis of the suitability of other sites as alternatives.

INDIVIDUAL COMMENTS

Section 4.4.2.1 discloses the impacts on wetlands from construction of the LNG terminal, including the beneficial reuse of dredged material. As required by 33 CFR 332.3, PALNG is required to propose compensatory mitigation that is commensurate with the amount and type of impact resulting from construction and operation of the Liquefaction Project. PALNG developed a mitigation plan that would include credit purchases from USACE-approved mitigation banks and permittee-responsible compensatory mitigation, with the amount of compensatory mitigation determined based on the USACE's preliminary jurisdictional determinations. The plan is subject to review and approval by the USACE Galveston District as part of the section 10/404 permit process. PALNG has filed its section 404 permit application with the USACE, Galveston District, and provided a draft Compensatory Mitigation Plan. Compensatory mitigation would be initiated at the time of the first USACE-jurisdictional impact occurs and based on a timeline established by the USACE. The USACE may recommend additional conditions to address components of the Compensatory Mitigation Plan or project authorization.

IND12-8 The commenter mistakes the statement which is part of the requirement of the 404 (b) 1 guidelines that the USACE adopts in its decision-making process. As discussed in section 1.2.2.1 of the EIS, the USACE must assess the proposed project alternatives, and determine the Least Environmentally Damaging Practicable Alternative (LEDPA). The statement in and of itself does not imply damage, it guides the agency to consider an alternative (if one exists) that has lower impacts than the proposed action.

IND12-9 It is not the intent of the EIS to assume that simple placement of the dredge material would instantly create a functional wetland. Section 4.4.2.1 acknowledges that ongoing monitoring for revegetation would go on for a minimum of 5 years, and section 4.2.2.1 acknowledges that the site would be seeded in accordance with the J.D. Murphree WMA recommendations.

IND12-10 The impacts on resources as a result of this dredge placement are discussed and quantified throughout the EIS. For example, tables 4.2.1-1, 4.4.2-1, and 4.5-1, and their associated discussions, address impacts on soils, wetlands, and vegetation, respectively, on the J.D. Murphree WMA and Disposal Areas 8, 9A, and 9B from this activity.

IND12-11 We are unsure of the intent of this comment. No dredge disposal is planned from the pipeline construction, nor would any dredge material be placed on any of PAPL's proposed pipelines. The impacts from dredge placement on all resources is discussed throughout the EIS. Also see response to comment IND12-10.

IND12-12 Section 4.4.2.1 of the EIS provides an overview of the USACE's ongoing review of the project, which would include, as appropriate, compensatory mitigation in accordance with USACE regulations. The compensatory mitigation plan is still in development. We also note that offsite mitigation has been proposed by the applicant through the activities that would take place within the J.D. Murphree WMA. See also response to comments IND12-8 and SA3-1.

INDIVIDUAL COMMENTS

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IND12-13 a) Site-specific environmental discussion for facilities and pipelines overlooks dredge deposition impact, and

IND12-14 b) What study has been completed to measure sediment compaction impact due to layering new sediments atop marshland soils?

"Dredge Disposal Area 8 would also receive material from the project and it is also an active federal placement area for USACE maintenance dredging (USACE, 2018)." p. 135

IND12-15 c) Project proposes to coordinate with the Texas Wildlife and Parks Department for beneficial application of dredge material to limit erosion. Will this change the wetlands hydrology?

IND12-16 d) Use of mulch and or berms will change the surface hydrology of the marshlands, has this been assessed?, and

IND12-17 e) Monitoring for revegetation success for two growing seasons although elsewhere in the document three growing seasons are cited. Is there research to cite for the sufficiency of this mitigation measure?

5. **Wetlands impacts:** "Construction of the Liquefaction Project facilities would permanently convert 725.7 acres of wetlands, including 303.7 acres of PEM wetland, 21.2 acres of EEM wetland, and 400.8 acres PSS wetland." p. 171

IND12-18 a) We agree that "to verify the assumption that the past soil sampling is still valid and site conditions have not changed….that prior to construction of the Liquefaction Project, PALNG should provide the EPA, USACE, TCEQ, and Texas RRC the soil sediment analysis conducted at the area within the ship. canal at the marine berth, construction dock, MOF and landward component of the MOF for review. PALNG should file the conclusions of the reviews with the Secretary along with documentation of its consultations with these agencies including any measures PALNG would need to adopt if the analysis discovers previously unknown contamination." P. 132

IND12-19 b) What are the indirect impacts estimated due to dredge deposition, such as vegetative species loss or habitat isolation?

IND12-20 c) Will potential fragmentation of contiguous wildlife habitats into isolated units and its affect on species survival be studied before application of the dredged sediments?

IND12-21 d) Will impacts to migratory birds and waterfowl in affected by habitat reduction be monitored?

6. **Summary of Environmental Analysis:**

"Construction of the Liquefaction Project facilities would permanently convert 725.7 acres of wetlands, including 303.7 acres of PEM wetlands, 21.2 acres of EEM wetlands, and 400.8 acres of PSS wetlands. Placement of the dredge material would result in the creation of 1,268.8 acres of coastal marsh wetlands." p. 470.

IND12-22 This is NOT the creation of new wetlands. Conversion is a net loss of wetland: The Clean Water Act, Section 404q, Aquatic Resources of National Importance (ARNI) cites mechanisms for compensatory mitigation. PAPL has not conducted due diligence as required under the CWA to find or offer alternatives to avoid or minimize damage or destruction to wetlands.

IND12-23 a) What will PALNG and PAPL in offer of replacement ratios that reflect the lost values and quality of the "converted" wetlands?

IND12-24 b) Since there is a permanent loss of wetlands shouldn't any wetlands mitigation consist of the permanent replacement of wetlands?

IND12-25 "PALNG and PAPL have developed draft compensatory mitigation plans…." p. 471. These plans could not be located in the document. They should be available for public review. The estuarine wetland within the PALNG

IND12-26 is classified as a high quality habitat for water or wading birds (see p. 4 TBS, Appendix 2.A habitat evaluations.)

a) What specific protection will be offered to protect this critical habitat?

3

IND12-13 See response to comment IND12-11.

IND12-14 To our knowledge, no study has occurred. PALNG, in accordance with its permits and landowner agreements related to dredge disposal, could be required to meet conditions related to settlement of materials, should they be a stipulation of the USACE or TPWD permit or negotiations.

IND12-15 Section 4.4.2.1 discusses the beneficial reuse of dredge material on the J.D. Murphree WMA. Section 4.4.2.1 of the EIS has been updated to indicate that the existing EEM wetlands would be altered by the placement of dredge material, which would change the hydrology. PALNG would be required to meet any permit conditions and/or landowner negotiation requirements.

IND12-16 See response to comment IND12-15.

IND12-17 PALNG would also be subject to any permitting requirements of the USACE and negotiated landowner easement requirements.

IND12-18 Comment noted.

IND12-19 The impacts of the dredge disposal on the resources are discussed throughout the EIS. Section 4.5.2.1 discusses the existing vegetation present which would be lost by placement of dredge materials.

IND12-20 Fragmentation of habitat is discussed in section 4.6.1.2. No habitat fragmentation from dredge material placement is anticipated because other surrounding areas currently or have historically served similarly as dredge disposal areas and, based on the conditions at these existing areas, the J.D. Murphree WMA and dredge disposal areas 8, 9A, and 9B are anticipated to continue functioning as wildlife habitat following placement of dredge material.

IND12-21 Section 4.6.1.3 of the EIS discloses impacts on migratory birds and the measures PALNG and PAPL have committed to in order to minimize impacts on migratory birds. No long-term monitoring of migratory birds was required by the FWS; however, PALNG and PAPL must comply with the Migratory Bird Treaty Act throughout the lifecycle of their Projects.

IND12-22 PAPL and PALNG are currently in the USACE's regulatory review process for impacts on wetlands. Should this process determine that PALNG's and PAPL's proposal does not meet the regulatory requirements, they would be required to modify their Projects accordingly or their proposed mitigations.

Section 3.3 discusses alternative liquefaction terminal sites analyzed by PALNG and the FERC. See also response to comments SA3-1 and IND12-6.

IND12-23 See response to comment SA3-1.

IND12-24 See response to comment IND12-23. PAPL and PALNG would be required to comply with 33 CFR 332.3.

IND12-25 PALNG and PAPL provided their respective USACE section 10/404 permit applications and compensatory mitigation plans in their final applications to

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FERC on November 29, 2016, which have been available on FERC's eLibrary for public review (accession numbers 20161129-5254 and 20161129-5284).

IND12-26 Section 4.6.1.3 acknowledges that Round Lake is commonly used by waterfowl species. The section also discusses what measures PALNG would implement to minimize impacts on migratory birds. For example, PALNG would install erosion and sediment control devices in accordance with its Environmental Plan, and a berm exists around Round Lake that would restrict surface water flow into the lake. The FWS, the agency with statutory authority over the enforcement of the Migratory Bird Treaty Act, has recommended measures for the minimization of impacts on migratory birds, which are discussed in section 4.6.1.3.

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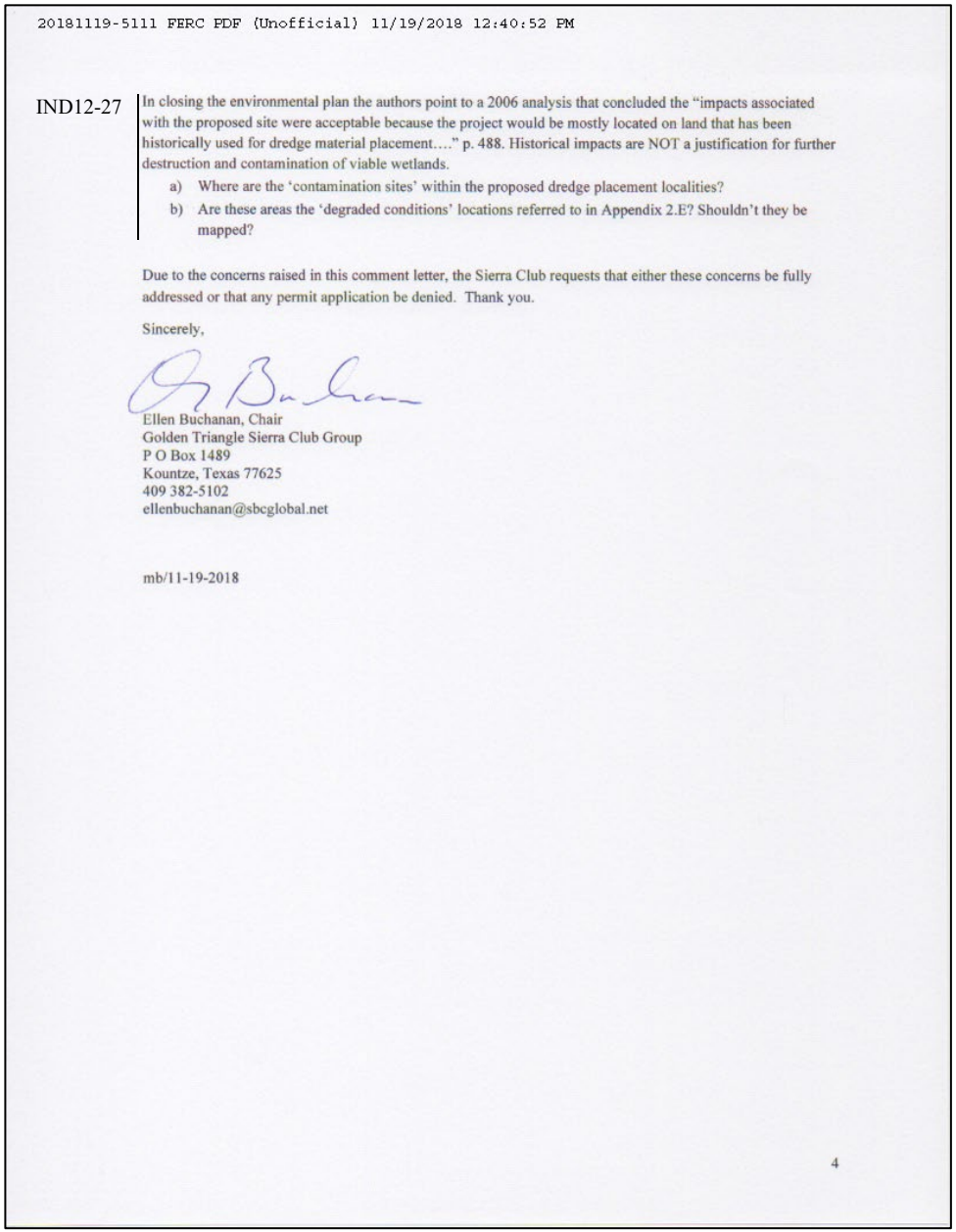

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IND12-27 In closing the environmental plan the authors point to a 2006 analysis that concluded the "impacts associated with the proposed site were acceptable because the project would be mostly located on land that has been historically used for dredge material placement…." p. 488. Historical impacts are NOT a justification for further destruction and contamination of viable wetlands.

a) Where are the 'contamination sites' within the proposed dredge placement localities?

b) Are these areas the 'degraded conditions' locations referred to in Appendix 2.E? Shouldn't they be mapped?

Due to the concerns raised in this comment letter, the Sierra Club requests that either these concerns be fully addressed or that any permit application be denied. Thank you.

Sincerely,

Ellen Buchanan, Chair
Golden Triangle Sierra Club Group
P O Box 1489
Kountze, Texas 77625
409 382-5102
ellenbuchanan@sbcglobal.net

mb/11-19-2018

4

IND12-27 Section 4.2.1.6 of the final EIS discusses soil contamination. We are not aware of any contaminated sites at any of the dredge placement areas. Appendix 2.E of Resource Report 2 contains PAPL's USACE section 10/404 permit application (FERC E-Library accession number 20161129-5254), within which PAPL refers to the J.D. Murphree WMA dredge placement site as "degraded" and goes on to explain that the area has degraded over recent years, due in part to the dredging of the Gulf Intracoastal Waterway and the Sabine-Neches Waterway, which has limited freshwater inflow and increased salt water inflow into the system. Potential for sea-level rise and the lack of new sediment also contributes to the long-term vulnerability of the area. Section 4.2.2.1 of the final EIS, which discusses soil and sediment impacts, has been updated to why the area and associated wetlands have been degraded. The term "degraded" does not appear to refer to any contamination.

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UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Port Arthur LNG, LLC	)	**Docket Nos. CP17–20–000**
PALNG Common Facilities Company LLC	)	**CP17–21–000**
Port Arthur Pipeline, LLC	)	**CP17–21–001**
	)	**CP18-7-000**

MOTION TO INTERVENE AND COMMENTS ON DEIS OF DRIFTWOOD LNG LLC AND DRIFTWOOD PIPELINE LLC

Pursuant to Rules 212 and 214 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission ("Commission" or "FERC")[1] and the Commission's Notice issued in the above-captioned proceedings on September 28, 2018,[2] Driftwood LNG LLC ("DWLNG") and Driftwood Pipeline LLC ("DWPL" and together with DWLNG, "Driftwood") hereby move to intervene in the above-captioned proceedings with all rights of a party,[3] and provide comments to the Draft Environmental Impact Statement for the Proposed Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector Project (the "Port Arthur DEIS").

In support hereof, Driftwood states as follows:

I.
COMMUNICATIONS

Driftwood requests that the following individuals be placed on the Commission's Official Service List and that communications and correspondence in this proceeding be addressed to:

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[1] 18 C.F.R. §§ 385.212 and 385.214 (2018).

[2] Notice of Availability of the Draft Environmental Impact Statement for the Proposed Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector Project, FERC Docket Nos. CP17-20-000, CP17-21-000, CP17-21-001 & CP18-7-000 (October 9, 2018).

[3] On October 19, 2018, Driftwood filed a motion to intervene in FERC Docket No. CP18-7-000, the fourth docket associated with the Notice, and therefore is already a party to that proceeding.

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Ms. Cathy Rourke
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II.
DESCRIPTION OF INTERVENORS

DWPL and DWLNG are each a limited liability company organized under Delaware law, with a principal office located at 1201 Louisiana Street, Suite 3100, Houston, TX 77002, and are each registered to do business in the State of Louisiana. Each entity is an indirect wholly-owned subsidiary of Tellurian Inc.

DWPL does not currently own any pipeline facilities, nor is it currently engaged in any natural gas transportation operations. On March 31, 2017, DWPL filed a Section 7(c) certificate application[4] with FERC under Docket No. CP17-118-000, to construct, own, and operate a new approximately 96-mile-long interstate natural gas pipeline system ("Driftwood Pipeline") which will interconnect with up to 14 existing interstate pipelines to provide feedstock for the proposed Driftwood LNG Facility. Concurrently, DWLNG filed an application[5] with the Commission under Docket No. CP17-117-000, seeking authorization pursuant to Section 3(a) of the NGA to site, construct and operate the proposed Driftwood LNG Facility, to be located in Calcasieu Parish, Louisiana. On May 2, 2017, Port Arthur Pipeline LLC ("PAPL") filed a motion to intervene in

[4] *Driftwood LNG LLC & Driftwood Pipeline LLC*, Application for Authorizations under the Natural Gas Act, FERC Docket Nos. CP17-117-000 & CP17-117-000 (Mar. 31, 2017).

[5] *Id.*

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the Driftwood proceedings stating that its proposed Port Arthur Pipeline Louisiana Connector Project ("PAPLC") will be "impacted by construction activities associated with [DWPL]."[6]

III.
MOTION TO INTERVENE

Driftwood has a general interest in Commission proceedings concerning natural gas pipelines and LNG terminals in the Gulf Coast region, insofar as any determination by the Commission in those proceedings may impact Driftwood's development efforts and plans. Moreover, Driftwood has a particular interest in this proceeding given that the PAPLC route, as proposed, will parallel that of Driftwood Pipeline in certain areas, and therefore, Driftwood Pipeline will be impacted by construction activities associated with PAPLC. Accordingly, Driftwood has a direct and substantial interest in the issues to be reviewed by the Commission in these proceedings and will be directly affected by the outcome of the proceedings. Driftwood's interests will not be represented adequately by any other party to the proceedings. Driftwood reserves its right to supplement its intervention to the extent necessary as the record develops.

IV.
COMMENTS

IND13-1

On September 14, 2018, FERC issued the Draft Environmental Impact Statement for the Driftwood LNG Facility and the Driftwood Pipeline ("Driftwood DEIS").[7] Condition 17 to the Driftwood DEIS states: "Prior to construction, DWPL shall file with the Secretary, for review and written approval by the Director of OEP, a construction coordination plan that identifies the specific construction measures (such as re-use of equipment bridges, coordinated installation of erosion control devices, or restoration commitments) that DWPL and [PAPLC] have agreed to

[6] *Driftwood LNG LLC & Driftwood Pipeline LLC*, Motion to Intervene of Port Arthur Pipeline, LLC, FERC Docket Nos. CP17-117-000 & CP17-118-000 (May 2, 2017).

[7] *Driftwood LNG LLC & Driftwood Pipeline LLC*, Draft Environmental Impact Statement for the Proposed Driftwood LNG Project, FERC Docket Nos. CP17-117-000 & CP17-118-000 (September 14, 2018).

IND13-1 In its supplemental filing with the FERC on November 30, 2018, PAPL stated it would coordinate with Driftwood along the parallel portions of the respective projects, should construction activities take place at the same time. We also note that the referenced Environmental Recommendation has been removed from the Driftwood final EIS based on both parties' agreement to coordinate.

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IND13-1 (cont'd) implement in the construction of the parallel portions of their respective projects between MP 5.6 and MP 16.2 in the non-exclusive easement."("Driftwood Condition 17")[8]

On September 28, 2018, FERC issued the Port Arthur DEIS. Surprisingly, the Port Arthur DEIS did ***not*** include a parallel provision to Driftwood Condition 17. In this regard, in order for DWPL to comply with the construction coordination plan requirements as detailed in Driftwood Condition 17, the Commission must include a parallel provision in the Port Arthur final environmental impact statement ("FEIS") or, in the alternative, Condition 17 should be omitted from the Driftwood FEIS.

IND13-2 Second, should such a condition be included in both the Driftwood FEIS and Port Arthur FEIS, it should be amended to clarify that "Prior to construction" means prior to construction of the parallel portion of the respective projects. This would ensure that the coordination plan is developed in close proximity to actual construction, which should provide greater clarity as to the construction schedules of both projects (including whether both projects are moving forward) and the feasibility and practicality of sharing construction measures such as re-use of equipment bridges, coordinated installation of erosion control devices, or restoration commitments.

IND13-3 Third, the condition should be revised to require that any construction coordination plan include a cost-sharing provision to ensure that costs be fairly divided between the two companies.

[8] *Id.* at 5-21.

IND13-2 See response to comment IND13-1.

IND13-3 See response to comment IND13-1.

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WHEREFORE, for the foregoing reasons, Driftwood respectfully requests that it be granted intervenor status in the above-captioned proceedings and the right to participate fully as a party, and that the Commission accept for consideration the comments provided herein.

Respectfully submitted,

/s/ Lisa M. Tonery
Lisa M. Tonery
Mariah T. Johnston
Attorneys for
Driftwood LNG LLC and
Driftwood Pipeline LLC

Dated: November 19, 2018

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Certificate of Service

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at New York, N.Y. this 19th day of November, 2018.

/s/ Dionne McCallum-George
Dionne McCallum-George
Legal Secretary on behalf of
Driftwood LNG LLC &
Driftwood Pipeline LLC

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UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Port Arthur LNG, LLC	)	**Docket Nos. CP17-20-000**
	)	**CP17-21-000**
	)	**CP17-21-001**
		CP18-7-000

MOTION TO INTERVENE AND COMMENTS
ON DRAFT ENVIRONMENTAL IMPACT STATEMENT

On September 28, 2018, the Staff of the Federal Energy Regulatory Commission ("FERC" or "Commission") published a Draft Environmental Impact Statement ("DEIS") for the Port Arthur Liquefaction, Texas Connector and Louisiana Connector Projects (collectively, the Project), and requested comments by November 19, 2018. The Project would include a new liquefied natural gas ("LNG") export terminal in Jefferson County, Texas, approximately 165 miles of 42-inch-diameter pipeline in Texas and Louisiana, and associated compressor stations, meter stations, access roads, construction workspaces, and appurtenant facilities.

Sabine Pass LNG, L.P., Sabine Pass Liquefaction, LLC, and Cheniere Creole Trail Pipeline, L.P. submit these limited comments regarding certain aspects of the Project that could affect their FERC-jurisdictional facilities, property-rights, and construction activities for the reasons set forth below. We are requesting intervenor status as an affected stakeholder, but do not oppose the Project at this time.

I. INTERVENENTION

Pursuant to Rule 214 of the Rules of Practice and Procedure of the Commission, 18 C.F.R. § 385.214, Sabine Pass LNG, L.P., Sabine Pass Liquefaction, LLC, and Cheniere Creole

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Trail Pipeline, L.P. (collectively, Movants), respectfully move for leave to intervene in the above-captioned proceedings. In support of this motion, each states:

A. COMMUNICATIONS

Communications and correspondence regarding this matter should be directed to:

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karri.mahmoud@cheniere.com

B. DESCRIPTION OF MOVANTS

Sabine Pass LNG, L.P. ("SPLNG") is a limited partnership organized and existing under the laws of Delaware, with its principal place of business in Houston, Texas. Sabine Pass Liquefaction, LLC is a limited liability company organized and existing under the laws of Delaware, with its principal place of business in Houston, Texas. These two companies, (collectively referred to as "Sabine Pass") are engaged primarily in the business of operating the existing Sabine Pass LNG Terminal in Cameron Parish, Louisiana and converting natural gas and LNG for delivery to long-term customers in domestic and international markets. The Sabine Pass LNG Terminal is owned and operated in accordance with FERC Authorizations under the

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Natural Gas Act ("NGA"), Section 3.[1] On October 29, 2018, SPLNG filed an application with FERC for its proposed SPLNG Third Berth Expansion Project.[2]

Cheniere Creole Trail Pipeline, L.P. ("Creole Trail Pipeline") is a limited partnership organized and existing under the laws of Delaware, with its principal place of business in Houston, Texas. Creole Trail Pipeline is engaged primarily in the business of pipeline transportation of natural gas in interstate commerce from upstream delivery points to the Sabine Pass LNG Terminal. Creole Trail Pipeline is owned and operated in accordance with FERC Authorizations under NGA Section 7(c).[3]

Sabine Pass and Creole Trail Pipeline are indirect subsidiaries of Cheniere Energy, Inc., a Houston-based energy company primarily engaged in LNG-related businesses, including businesses responsible for owning an operating the existing Sabine Pass LNG Terminal.

C. MOTION TO INTERVENE

Movants respectfully request to intervene in this proceeding in accordance with the Commission's regulations and policy allowing interested parties to intervene during the comment period on the DEIS.

Good cause exists to grant this motion. Movants rights are implicated by Staff's statement in the DEIS that "coordination among the other projects []…" will be needed in the vicinity of the Sabine Pass LNG Terminal. DEIS at 4-341. Movants only recently became aware of the close proximity of certain Project facilities and the proposal to traverse its NGA Section 3 site upon receiving a hard copy of the DEIS in the mail. And information regarding

[1] Docket Nos. CP04-47-000, CP05-396-000, CP11-72-000, CP13-2-000, CP13-552-000.

[2] Docket No. CP19-11-000.

[3] Docket Nos. P05-357-000, CP12-351-000.

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proximity to Movants' assets has been unclear in the docket to date, contributing to a lack of understanding regarding Movants' need to intervene earlier in these proceedings.[4]

Based on an initial review of the DEIS mailed to our offices, and the record as it stands today which Movants accept, Sabine Pass and Creole Trail Pipeline have substantial interests that may be directly affected by the outcome of this proceeding, which interests cannot be adequately represented by any other party. Accordingly, Movants are entitled to intervene in the above-captioned proceedings, for the reasons set forth below.

II. LIMITED COMMENTS ON THE DEIS

Movants do not oppose the Project, but are concerned about impacts that the Project may have on the construction and operation of its existing certificated pipeline facilities, operating LNG assets, and proposed expansion projects. Movants and Port Arthur have recently initiated contact, and will be engaging in discussions designed to address these concerns; however, the discussions will not be concluded by the comment deadline.

Out of an abundance of caution, Movants submit these timely comments to the FERC record for consideration while discussions between operators advance. Specifically, Movants note that the DEIS does not fully address impacts and conflicting land-uses associated with the Project, to include: (1) cumulative impacts associated with FERC approval of construction adjacent to and on the same site as construction and commissioning associated with Sabine Pass Trains 5 and 6; (2) direct impacts to safety associated with proposed construction of pipelines, metering stations and horizontal directional drill ("HDD") activities alongside the Sabine Pass LNG Terminal, Creole Trail Pipeline, and other existing infrastructure in the area; and (3)

IND14-1

IND14-2

[4] For example, the cumulative impacts table in the DEIS lists the proximity of the pipeline facilities to the Sabine Pass LNG Terminal as 3 miles away, and does not clearly note land use or safety impacts on the Terminal.

IND14-1 Section 4.13 of the final EIS has been updated to discuss the cumulative impacts associated with Sabine Pass LNG, L.P., Sabine Pass Liquefaction, LLC, Cheniere Creole Trail Pipeline, L.P. (collectively, Sabine Pass and Creole Trail) ongoing construction and PAPL's proposed project.

IND14-2 In PAPL's supplemental filing dated November 30, 2018, PAPL expressed its commitment to meet with the Cheniere Entities and to work through the matters raised by the Cheniere Entities. PAPL stated that the parties have begun discussions and were scheduled to have further discussion during the first week of December, in the expectation that these matters would be resolved to all parties' satisfaction.

On November 30, 2018, Sabine Pass and Creole Trail, and Port Arthur LNG, LLC; PALNG Common Facilities Co., LLC; and Port Arthur Pipeline, LLC filed a joint letter with FERC stating that the project teams were scheduled to meet in person in December, and that the parties were "optimistic that further refinement of the issues and a mutual resolution can be reached before Commission issuance of the Final Environmental Impact Statement for the Project. For this reason, the undersigned parties request that the Commission Staff withhold action on the Sabine Pass and Creole Trail requested condition and cumulative impacts analysis pending the outcome of these discussions among the parties."

On December 17, 2018 and January 16, 2019, the affected parties filed joint letters updating the FERC on the status of the parties' consultations, noting that as a result of a December 5, 2018 and January 10, 2019 meeting, the parties reached an initial agreement on procedures and coordination protocols to ensure that the proposed project would not impact Sabine Pass or Creole Trail construction and operation.

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IND14-3 competing land-uses associated with the Project and SPLNG's Third Berth Expansion Project, which was filed with the Commission last month.

IND14-4 For example, "PAPL [Port Arthur Pipeline, LLC] estimates a total of 3,120 vehicles trips per week for the Texas Connector Project along the length of the pipeline route during the 12-month construction period. Of this number, 600 heavy truck trips and 2,520 commuter trips are anticipated. PAPL estimates a total of 626 vehicles trips per week for the Louisiana Connector Project along the length of the pipeline route during the 21-month construction period. Of this number, 91 heavy truck trips and 535 commuter trips are anticipated." DEIS at 5-19. And the DEIS concludes that "Construction activities in the Projects study area would result in temporary effects on local transportation infrastructure and vehicle traffic, including disruptions from increased transportation of construction equipment, materials, and workforce; disruptions from construction of pipeline facilities at or across existing roads; and damage to local roads caused by heavy machinery and materials." DEIS at 5-20. However, the DEIS does *not* discuss cumulative impacts associated with traffic or construction activities conducted alongside activities either already underway or proposed by Sabine Pass or Creole Trail Pipeline.

Movants communicated the concerns presented here to Project representatives prior to filing these comments, and anticipate working to resolve any concerns in the coming weeks and months. Such coordination should be required, and formalized in a mutually agreed to construction and operations management plan, as is typical in the industry, prior to construction. A few examples explaining why this is necessary may be useful.

IND14-5 1. Project proponents have proposed to use the existing Duck Blind Road that runs along the western edge of the Sabine Pass LNG Terminal to obtain access to a

IND14-3 See response to comment IND14-1.

IND14-4 Construction traffic totals described in the EIS are project-wide and would be dispersed along the right-of-way. PAPL has not disclosed the number of workers needed for pipeline construction, but they would represent a fraction of those totals. Section 4.13 of the final EIS has been updated to discuss the cumulative impacts from the project in the vicinity of Sabine Pass and Creole Trail.

See response to comment IND14-2.

IND14-5 Comment noted.

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IND14-5 (cont'd) proposed meter station situated adjacent to the Terminal's secured area, and to stage construction crews and conduct HDD operations.

IND14-6 2. Construction of the meter station and associated pipeline to connect the Project to supplies in Louisiana would traverse Sabine Pass' existing property boundaries, a parcel of land that is currently permitted and used for construction laydown and workspace for the Sabine Pass Terminal (and will be used for construction laydown areas in SPLNG's Third Berth Expansion Project), and will parallel existing portions of the Creole Trail Pipeline, an operating pipeline that is required to maintain access to its facilities and avoid outages that may impact its customers.

IND14-7 3. Significant horizontal directional drilling activities are associated with the Project, including multiple drills in the vicinity of or under existing assets operated by Movants, and under an existing permitted and monitored major outfall at the Sabine Pass LNG Terminal. It is unclear based on our initial review where the HDD pipe will be welded and tested, and whether any spoil from HDD activities will be deposited on Movants' sites.

IND14-8 4. The land uses in this area are subject to numerous existing encumbrances, and Movants would like to work with the Project to address competing land-use concerns.

IND14-9 5. There is significant construction and commissioning activity already underway at the Sabine Pass LNG Terminal. The introduction of third party (Port Arthur) construction contractors on or near our operating facilities while construction is ongoing – operators that are not trained on or subject to Sabine Pass' safety and construction risk management practices – is not consistent with prudent operations.

6

IND14-6 PAPL would coordinate with the landowner, in this case Sabine Pass and Creole Trail, in its proposal to build its pipeline facilities under Section 7 of the Natural Gas Act.

IND14-7 Workspace for the HDDs are shown on PAPL's alignment sheets, which were filed with its final application and are available on FERC's eLibrary (accession number 20161129-5284).

IND14-8 Comment noted.

IND14-9 Comment noted.

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IND14-10

Movants respectfully request that further evaluation, and communication with the Project is needed to facilitate discussions designed to:

- Ensure that Movants retain full rights to undertake, within existing property boundaries and authorizations, modifications and expansions designed to maximize the efficiency of its LNG, pipeline, and associated assets to serve growing customer demand;
- Continue reliable, efficient, and secure operation of the Sabine Pass LNG Terminal and Creole Trail Pipeline in order to comply with FERC certifications and order obligations, to include obligations to prudently operate existing facilities and take reasonable measures to ensure that customers would not suffer as a result of the Project;
- Minimize competing land-use impacts, to include establishing a process through which the parties will establish the responsibilities for operation and maintenance where the Project and Movants share site access and/or will occupy temporary or permanent workspaces going forward;
- Establish mutually agreeable protocols regarding dispute resolution to facilitate settlement of any disputes that may arise out of construction, operation, and/or maintenance activities, including emergency activities of each operator, at adjacent facilities and/or in shared rights of way.

III. RECOMMENDED CONDITION

Movants believe a satisfactory agreement addressing these concerns can be executed in a timely fashion. In order to allow communication on such matters without impacting the FERC notice of schedule in this proceeding, Movants propose that Staff add a condition to the Final Environmental Impact Statement ("FEIS") designed to facilitate timely development of information in the record. Specifically, Movants propose the following additional condition for inclusion in the FEIS for the Project:

IND14-11

> ***Prior to the start of construction***, PAPL shall file with the Secretary a site-specific construction and operations plan which has been mutually agreed to between PAPL, Sabine Pass and Creole Trail Pipeline. The Director of OEP must provide review and written approval prior to authorizing Project-related activities that may affect the Sabine Pass LNG Terminal or Creole Trail Pipeline. This plan shall establish the terms and conditions under which Project-related activities and operations will be conducted. The plan must include procedures for coordination of contractor mobilization, training,

IND14-10 See response to comment IND14-2.

IND14-11 See response to comment IND14-2.

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IND14-11 (cont'd) clearing, pre-construction, construction, commissioning, operation, maintenance, and dispute resolution.

Such an agreement, which will be to the mutual benefit of all operators, is necessary to ensure the Sabine Pass LNG Terminal and Creole Trail Pipeline facilities will not be adversely impacted by ongoing construction and will continue to meet its FERC obligations in a prudent manner. Should the parties fail to reach resolution in a timely fashion, Movants submit that this condition should be required in any Commission order authorizing the Project.

Movants' proposal is consistent with FERC precedent and its approach to mitigating stakeholder impacts through site-specific plans. Such an approach is appropriate here, where Movants do not oppose the Project, provided such terms can be mutually agreed to prior to construction. And notably, Movants are not seeking a condition dissimilar to those already proposed by Staff in the DEIS.[5] Such a condition is consistent with FERC Staff's recognition in the DEIS that "In general, the closer another action is to the Project[], the greater the potential for cumulative impacts."

IV. CONCLUSION

In order to facilitate timely development of information in the record for the Project relating to the cumulative and direct impacts on the Sabine Pass LNG Terminal and Creole Trail

IND14-12 Pipeline, Movants have requested copies of alignment sheets identifying all Project activities and

[5] For example, the DEIS notes that "PAPL would coordinate with landowners during construction and maintain landowner access to fields, storage areas, field access roads, structures…" And PAPL has developed site-specific construction plans for residential structures within 25 feet of its construction work areas. Staff has additionally requested that each of the affected stakeholders provide comments on PAPL's site-specific plans for their property, and required PAPL to "develop a grievance and resolution plan as part of its *Implementation Plan* that identifies how stakeholders can contact pipeline company representatives with questions, concerns, and complaints prior to, during, and after construction."

IND14-12 PAPL's alignment sheets were filed with its final application and are available on FERC's eLibrary (accession number 20161129-5284).

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IND14-12 (cont'd)

assets in the vicinity of or crossing over or under the Sabine Pass LNG Terminal and Creole Trail Pipeline facilities, and look forward to working with Project representatives to resolve any concerns. To ensure timely resolution, Movants also seek a grant of full rights as parties to these proceedings, and adoption of a narrowly tailored condition in the Project FEIS designed to ensure that the Project will not interfere with Movants' existing and proposed facilities.

Respectfully submitted,

/s/ Janna Romaine Chesno

Janna Romaine Chesno
Senior Counsel
Cheniere Energy, Inc.
701 8th Street NW, Suite 810
Washington, D.C. 20001
(202) 442-3064
janna.chesno@cheniere.com

Dated: November 19, 2018

INDIVIDUAL COMMENTS

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CERTIFICATE OF SERVICE

I hereby certify that I have this 19th day of November, 2018, caused to be served a copy of the forgoing upon all parties listed on the official service list compiled by the Secretary of the Federal Energy Regulatory Commission in this proceeding.

/s/ Janna Romaine Chesno

Janna Romaine Chesno
Senior Counsel
Cheniere Energy, Inc.
701 8th Street NW, Suite 810
Washington, D.C. 20001
(202) 442-3064
janna.chesno@cheniere.com

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INDIVIDUAL COMMENTS

ORIGINAL

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SECRETARY OF THE
COMMISSION
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FEDERAL ENERGY
REGULATORY COMMISSION

November 7, 2018

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Dear Secretary Bose:

Please find written comments submitted by the "Teamsters National Pipeline Labor Management Cooperation Trust" on the Request For Comments on the Port Arthur Liquefaction, Texas Connector and Louisiana Connector Projects **(FERC Project Docket Numbers CP17-20-000, CP17-21-000 and CP18-7-000).**

If you have any questions I can be reached at (703) 508-8690.

Sincerely,

Richard Stern, Administrator
Teamsters National Pipeline Labor
Management Cooperation Trust

Enclosures

INDIVIDUAL COMMENTS

Comments submitted to the Federal Energy Regulatory Commission on behalf of the Teamsters National Pipeline Labor Management Cooperation Trust representing over 125 contributing Union Pipeline Contractors affiliated with the Pipeline Contractors Association; the International Brotherhood of Teamsters with over 1.25 million members all who support the construction of the Port Arthur Liquefaction, Texas Connector and Louisiana Connector Projects (herein, referred to as Projects), Docket Nos. CP17-20-000, CP17-21-000 and CP18-7-000).

IND15-1 **The Teamsters and their signatory contractors are committed to building these Projects with well-trained and qualified local workers who can perform their work at a high level to help mitigate any potential environmental concerns.**

These workers have a vested interest in building the projects in an environmentally safe manner since their own families could be affected by these projects.

By utilizing union contractors to build the "Projects" it guarantees that at least 50% of the workers will be local hires.

The collective bargaining agreement between the Teamsters and Pipeline Contractors Association states:

"The words "regular employee" shall mean those who are regularly and customarily employed by the Individual Employer and because of their special knowledge and experience in pipeline construction work, are considered key men. It is anticipated that the number of regular employees shall not be more than a majority of the total number required but there shall be no limitation on the classification of such

IND15-1 Comments noted. FERC does not award work related to the construction of proposed or authorized projects, and any work related to the construction of the facilities would be at the sole discretion of the applicants. We note in section 4.9.1 that PALNG and PAPL estimate that 20 to 40 percent of their construction workforce would be hired locally.

INDIVIDUAL COMMENTS

IND15-1 (cont'd) regular employees, with the understanding that these classifications will be distributed as evenly as possible." (See Exhibit A)

Therefore, when pipelines such as these "Projects" is built using Teamster members at least half of the Teamster pipeline construction workers will be from the local community and have a greater sensitivity for the environment.

These workers have an incentive building the "Projects" environmentally safe because again they live here too.

Thus, any negative environmental impact will be lessened.

You do not get this guarantee with a nonunion pipeline contractor.

IND15-2 We have pipeline contractors who specialize in Horizontal Directional Drilling (HDD) type of work.

HDD is used for the installation of pipelines beneath rivers, highways, and other environmentally sensitive areas requiring technology and equipment that can install pipelines without any disturbance to natural habitats.

Some of our specialized signatory contractors and a more detailed explanation of the work they perform in areas of great environmental concern are included in this submission. (See Exhibit B)

IND15-3 Prior to the construction of these "Projects" we will provide Classroom training programs based on the U.S. Department Transportation's Regulations on "Compliance, Safety and Accountability" (CSA) and also Defensive Driving.

IND15-2 Comments noted. Section 2.4.3.1 of the final EIS describes the HDD crossing method.

IND15-3 See response to comment IND15-1.

INDIVIDUAL COMMENTS

IND15-4 The Teamsters CSA/Defensive Driving Instructor has been cited as a Trend Setter by the "National Safety Council" an Award he has received from them in the past. (See Exhibit C)

Under pages 6 and 7 in the collective bargaining agreement workers must have certain qualifications prior to working on pipeline projects. (See Exhibit D)

Under pages 17 and 18 of the Pipeline Agreement is the language on "Drug and Alcohol Testing" to ensure a drug free work environment and "Training/DOT Rules" to maintain high quality work standards and qualifications. (See Exhibit E)

We believe that if these "Projects" are being constructed with our trained and highly skilled local union workers and specialized union contractors the "Projects" will be built in a safe and environmentally friendly manner and in compliance with all federal and state environmental regulations.

IND15-5 Furthermore, these "Projects" by using Teamster members will provide them with high wages and health insurance and pension benefits. (See Exhibit F)

This translates into more taxes paid to the Federal Government and state and local taxes where applicable.

IND15-6 I have supplied information on our support of Teamster Military Veterans many from Louisiana and Texas who will be working on these projects, if done union. (See Exhibit G)

FERC can show their support for these Veterans by approving the projects and having the construction of the "Projects" awarded to one of our signatory pipeline contractors.

IND15-4 See response to comment IND15-1.

IND15-5 See response to comment IND4-1.

IND15-6 See response to comment IND15-1.

INDIVIDUAL COMMENTS

IND15-6 (cont'd)

Also, there is a brochure on our training program at the end of this submission for your review.

In closing, we support the building of these "Projects" based upon this written submission and its supporting exhibits showing the use of our union contractors and trained Teamster work force most residing in Louisiana and Texas where the project takes place will lessen any environmental concerns.

INDIVIDUAL COMMENTS

EXHIBIT A

INDIVIDUAL COMMENTS

additional pre-job conference will be required if hours of work or work conditions are changed.

No representative of any individual Employer and no representative of the Union or any of its local unions shall demand at the pre-job conference or at any other time during the continuance of the job any term or condition not covered by this Agreement. A copy of the report made of each pre-job conference shall be furnished to the Pipe Line Contractors Association and to the International Brotherhood of Teamsters, and no agreement made at any pre-job conference which adds to or modifies in any way the terms and conditions of this Agreement shall be binding on any individual Employer or the Union, or any of its local unions, unless approved and ratified by the PLCA and the International Brotherhood of Teamsters.

In the event that the Union and the Employer are unable to mutually agree upon layoff procedure at the pre-job conference, the matter will be referred to the Director, Construction Division, International Brotherhood of Teamsters, and the Managing Director, PLCA, for decision along previously established guidelines.

(E) If any individual Employer pays any wages in excess of the wages negotiated in this Agreement in the form of extra money, extra hours, extra travel or stand-by-time, or in the form of a bonus by any subterfuge, and if the PLCA and the International Brotherhood of Teamsters shall jointly determine that such bonus is for the purpose of pirating men from other individual Employers, or results in conditions injurious to the pipeline industry, then such individual Employer shall be required to pay the same extra compensation to all employees classified as Group 1 or Group 2 in this Agreement, and a proportionate additional compensation to all employees classified as Group 3 in this Agreement, and such requirement shall continue until that particular job is completed. It is understood and agreed, however, that any profit-sharing, retirement, or pension plan which an individual Employer may have in effect which has not been set up for that particular job shall not be considered a bonus.

(F) Upon request of the local union having jurisdiction of the job, and upon presentation of proper authorization forms executed by the individual employees, the individual Employer agrees to deduct from the wages of such individual employees Union initiation fees and dues and shall pay over to such local unions the amount so deducted.

(G) The Union agrees to send a copy of this Agreement to each and every one of its locals having jurisdiction over any area in which Employer becomes obligated to construct a pipe line, and agrees that the terms of this Agreement shall be recognized by such local, so that industrial peace will not be disturbed and so that the Employees may perform Employer's work efficiently and continuously. The Employer agrees as well to furnish its supervisory personnel copies of this Agreement so that they may be familiar with the terms.

(H) Employer shall have the right to hire the first driver, the second employee hired shall be the steward. Employer shall have the right to employ, direct and bring into the job men who are regular employees in Employer's work and shall have the right to keep such men in his employ on all work throughout the territory covered by this Agreement.

IND15-7 (I) The words "regular employee" shall mean those who are regularly and customarily employed by the individual Employer and because of their special knowledge and experience in

5

IND15-7 See response to comment IND15-1.

INDIVIDUAL COMMENTS

IND15-7 (cont'd)

pipeline construction work, are considered key men. It is anticipated that the number of regular employees shall not be more than a majority of the total number required but there shall be no limitation on the classification of such regular employees, with the understanding that these classifications will be distributed as evenly as possible.

(J) It is understood and agreed that the above limitations shall not apply to the pipeline stringing operations.

(K) The hiring of men in addition to the Employer's regular employees, either at the start of the job or later, shall be conducted in the following manner:

1. In the event a valid non-discriminatory exclusive referral procedure has been established by collective bargaining between a local of the Union and an association of highway and heavy contractors in the area in which the job is to be done, Union shall notify the Association from time to time as to the existence of such exclusive referral procedures and Employer agrees to utilize such referral procedures upon the following conditions:

a. Nothing in this Agreement shall affect the Employer's inherent right to determine the competence and qualifications of applicants for employment or of his employees and his right to reject or discharge accordingly.

b. The selection of applicants for referral to jobs shall be based on a non-discriminatory basis and shall not be based on or in any way affected by union membership, by-laws, regulations, constitutional provisions, or any other aspect or obligation of union membership, policy or requirement.

c. Workmen referred under Article II to the contractor's job who are not able to perform the job to which they are referred because of their own lack of qualifications, or for some other reason which is the workman's own responsibility, shall not be paid show-up time.

d. Qualified applicants required by Employer at the start of the job must be referred by a local referral office within 48 hours of the receipt of Employer's request; those required by Employer after a job has started must be referred by a local referral office within 24 hours of the receipt of Employer's request. If the local referral office fails to comply with this condition, Employer may secure qualified applicants from any other source. Qualified applicants under this section must have the following:

(i) Proper federal and state licenses;

(ii) Proper OQ credentials where necessary;

(iii) Pipeline or general construction work experience relevant to pipeline work or completion of a certified pipeline training course operated or approved by the Teamsters Pipeline Training Fund. The Teamsters and PLCA also agree they will jointly review the training program on a 6-month basis.

(iv) Compliance with company Employee and safety policy standards. These

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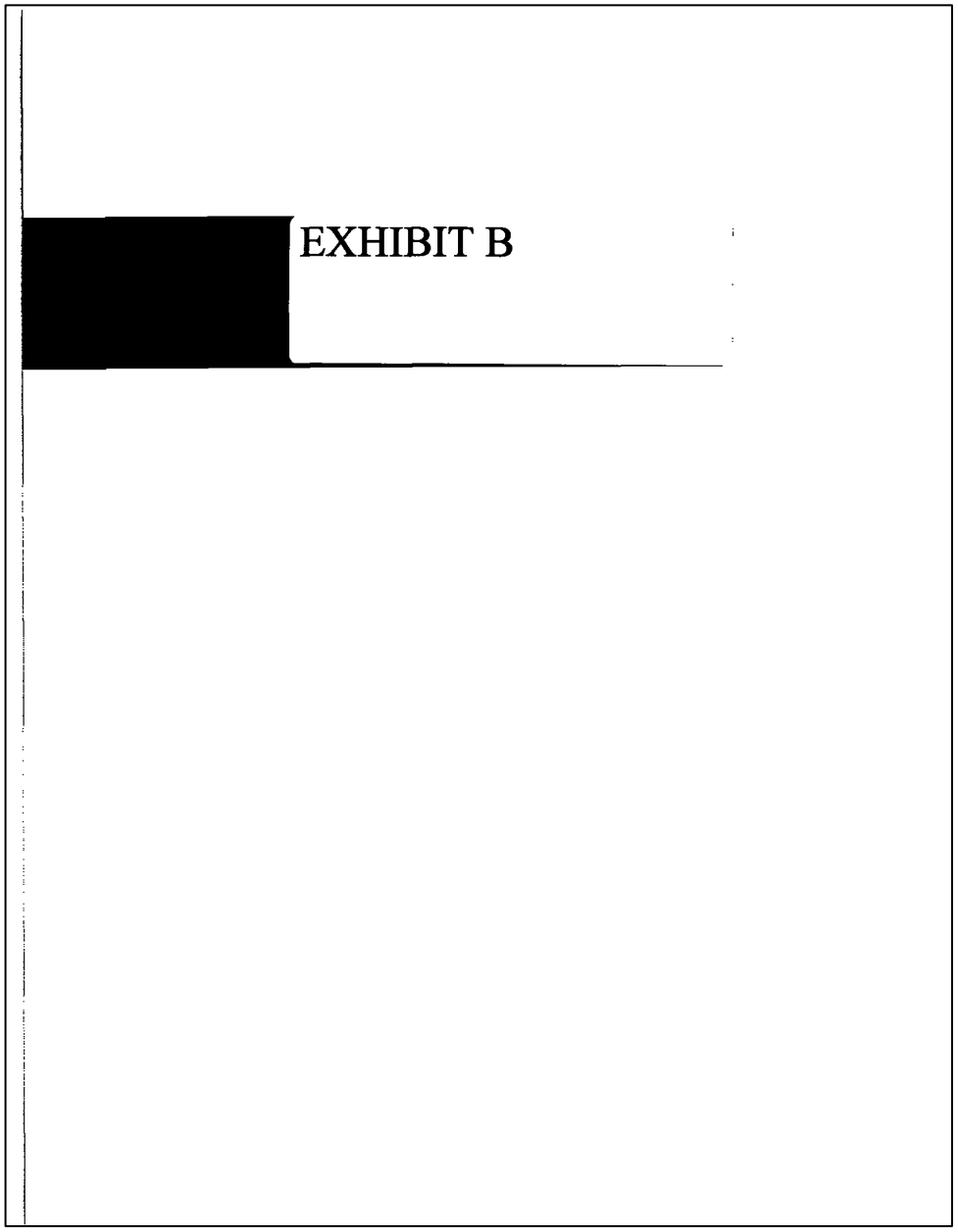
INDIVIDUAL COMMENTS



INDIVIDUAL COMMENTS

SEDD Horizontal Directional Drilling Process : Southeast Directional Drilling 7/28/16, 4:47 PM

CALL US TODAY: 1 520-423-2131

WHAT WE DO COMPANY SAFETY NEWS & EVENTS RESOURCES CONTACT
WHO WE ARE

IND15-8

HORIZONTAL DIRECTIONAL DRILLING

SINCE 1971, AFTER MARTIN CHERRINGTON SUCCESSFULLY DRILLED THE FIRST DIRECTIONAL RIVER CROSSING, THE INDUSTRY HAS BEEN MOVING FORWARD.

Directional Drilling has seemed to be the most preferred method for pipeline construction as of late. The reason being that Directional Drilling can be installed without any disturbance to natural habitats

Directional Drilling has the least environmental impact of any method of construction. By Directional Drilling you are able to be a great deal of depth below the obstacle, providing minimal maintenance cost and up keeping maximum protection. In some cases, Directional Drilling can cost a lot less then most other construction methods and procedures.

STEP 1 - PILOT HOLE

The pilot hole is the beginning of the Directional Drill crossing. The Pilot hole is achieved either by excavation by jetting or by a down hole motor. Depending on the condition of the soil the pilot is drilled along a pre-determined alignment in which the path is selected by traditional methods.

The typical pilot hole on most large rigs is 9 7/8 but can vary depending on the soil conditions and rig size. Drilling fluid is pumped through the drill pipe to the drill head at which time it is jetted through or pumped through a drill motor. The end of the Drill Pipe is to core the pilot hole. The drill fluid lubricates the drill stem and carries out the cutting to the surface.

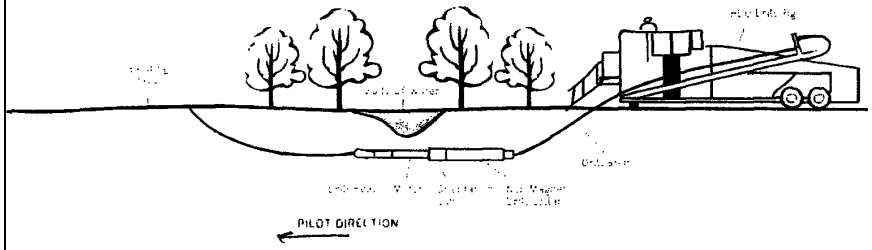
http://www.southeastdrilling.com/drilling/ Page 1 of 6

IND15-8 See response to comment IND15-2.

INDIVIDUAL COMMENTS

IND15-8 (cont'd)

The drill fluid is then recycled and re-injected into the drill stem. The pilot process can take several days, depending on the condition of the soil and may require changing of the drill stem or drill head



STEP 2 - REAMING PROCESS

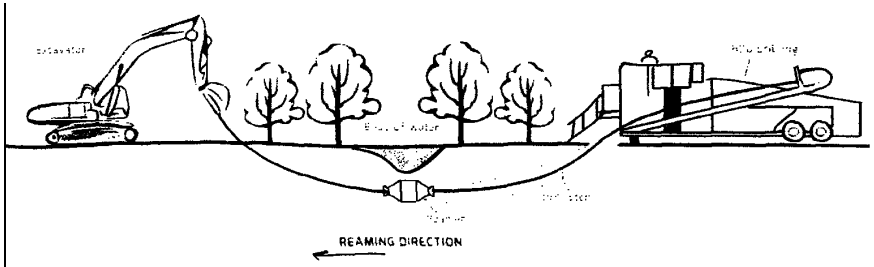
Once the pilot hole has been completed the 2nd step takes place with a reamer, or hole opener. The hole openers come in different shapes and sizes and vary depending on the soil conditions and density of the soil. typically a fly cutter is used in good ground conditions.

The reaming pass is done in several steps depending on the size of the hole, (example: 42" finish hole would be 3 to 5 different ream passes 14", 20", 34" 42"). The reamer is attached to the drill string and is rotated and pushed or pulled while rotating and drill fluid is pumped to the reamer through the drill pipe. The excavated soil is suspended in the drill fluid and then brought to the surface and recycled.

When the reamer is attached to the Drill string there will always be a drill pipe on both sides of the reamer allowing for the drill string to be in the hole at all times. The reaming process can take a significant amount of time depending on the condition of the soil.

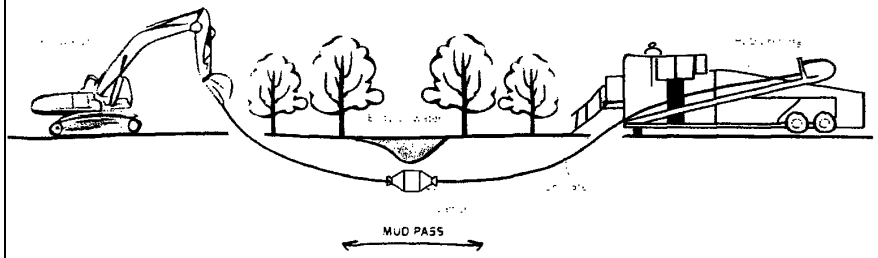
INDIVIDUAL COMMENTS

IND15-8
(cont'd)



STEP 3 – MUD PASS

After the desired hole has been achieved and the reamer has passed through it completely, a mud pass or packer reamer will be done to assure that the hole is clean of all excavated material and that the drill fluid has filled the hole completely, to allow for a smooth lubricated pull back of the pipe, avoiding friction of the pull section.



STEP 4 – PULLBACK PROCESS

The final step now is when the pipe is pulled into the reamed hole. A weld cap is installed on the pipe where a swivel is placed attaching the drill string, thus not allowing any rotation of the pipeline. Depending on the size of the pipe an artificial buoyancy measure might be taken. This is to keep the pipeline as close to neutral

INDIVIDUAL COMMENTS

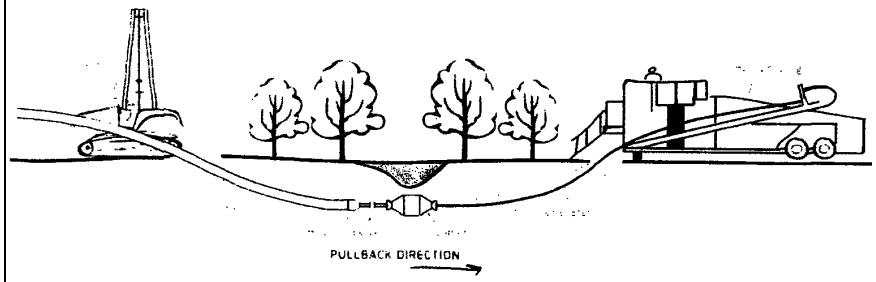
IND15-8 (cont'd)

buoyancy. If no measures are taken several problems may occur (example: coating damage from pipe floating in drill fluid and causing excess friction causing more pull). Most typically buoyancy control is done with pumping water into the pipeline through P.V.C. pipe and checking the gallons pumped.

At completion of directional drill, demobilization and clean-up takes place.

We will be happy to provide you a drilling quote / proposal on any HDD project. Feel free to contact our sales team at any time at 520-423-2131 to request a quote. Here is the following information needed to properly provide a quote:

- Name of Crossing
- Length
- Size
- Location
- How Many Crossings
- Start Date
- Bid Due Date
- Are You the Owner/Engineer/General Contractor?
- Do You Have Any Plans or Specs?
- Do You Have Core Samples?



INDIVIDUAL COMMENTS

IND15-8
(cont'd)



Southeast has the capability to perform directional drilling work in a variety of different territories, such as environmentally sensitive areas, city streets, cross country areas, major river crossings, roadways, railroads, and remote locations. We have experience in all types of soils, including solid rock and fractured formations and we are also capable of drilling in lengths in excess of 8,400 ft, ranging from 2 inches to 56 inches in diameter pipe. Aside from being able to fulfill any possible drilling need, we are committed to maintaining an on time schedule, all while satisfying landowners, environmental monitors, and public agencies.

We look forward to discussing, and bidding, any potential horizontal directional drilling projects your company may require.

PLH Group is a leading full service construction and specialty contractor that serves the electric power line, pipeline, oilfield electrical services and industrial markets. Formed in 2009, PLH Group has assembled a North American team of top quality companies that deliver services covering the broad range of needs of its customers from pipeline construction and related directional drilling, right-of-way clearing/restoration and engineering to electric transmission, distribution and substation construction including specialized foundations and helicopter airborn operations.

PLH GROUP

SEDD Presented Plaque of Appreciation

December 3, 2015

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When our President Todd Barton was approached by Aaron Goranson, father of a boy scout from Troop 993 in Maricopa Arizona, a small community just north of our Casa Grande facilty asking if we could donate a 53' box trailer that was slotted for auction later that month, he said "make it happen". Todd as well as rest of the executive team at SEDD, believes our company should always act as a stewards of our community and of those communities that we work in. "We encourage our employees to promote values, good conduct and respect, in all aspects of our ...

Updated Pictures!!!!

INDIVIDUAL COMMENTS

IND15-8
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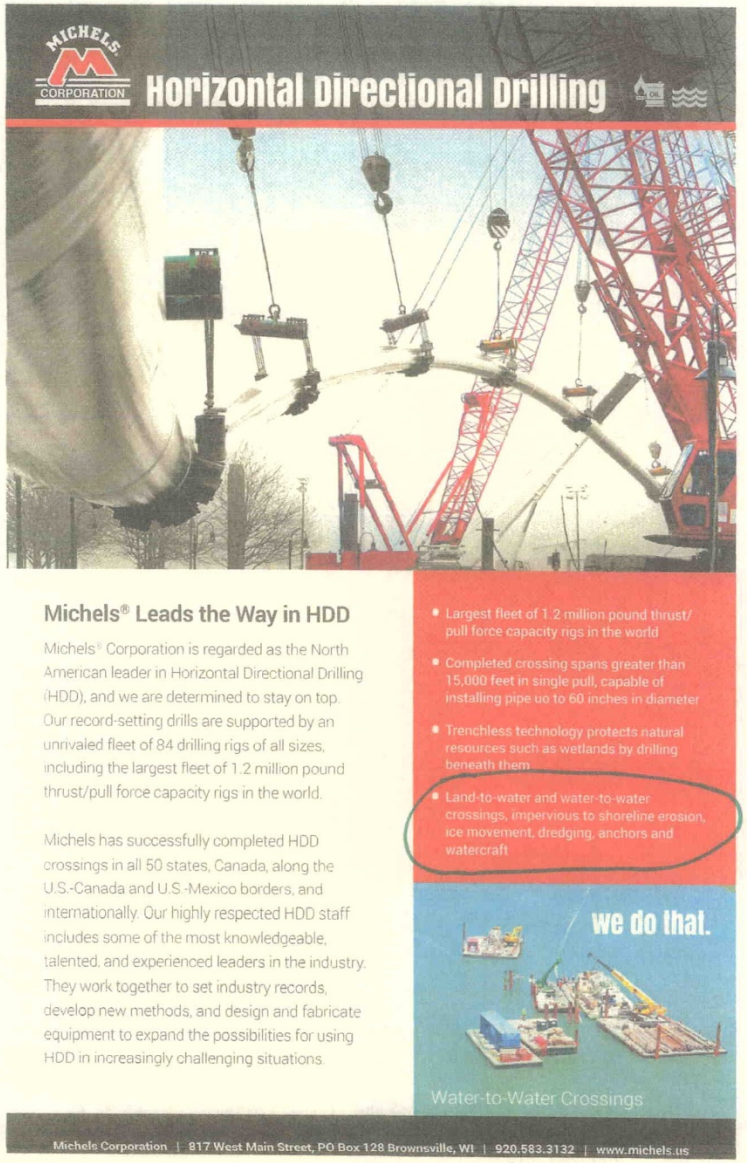

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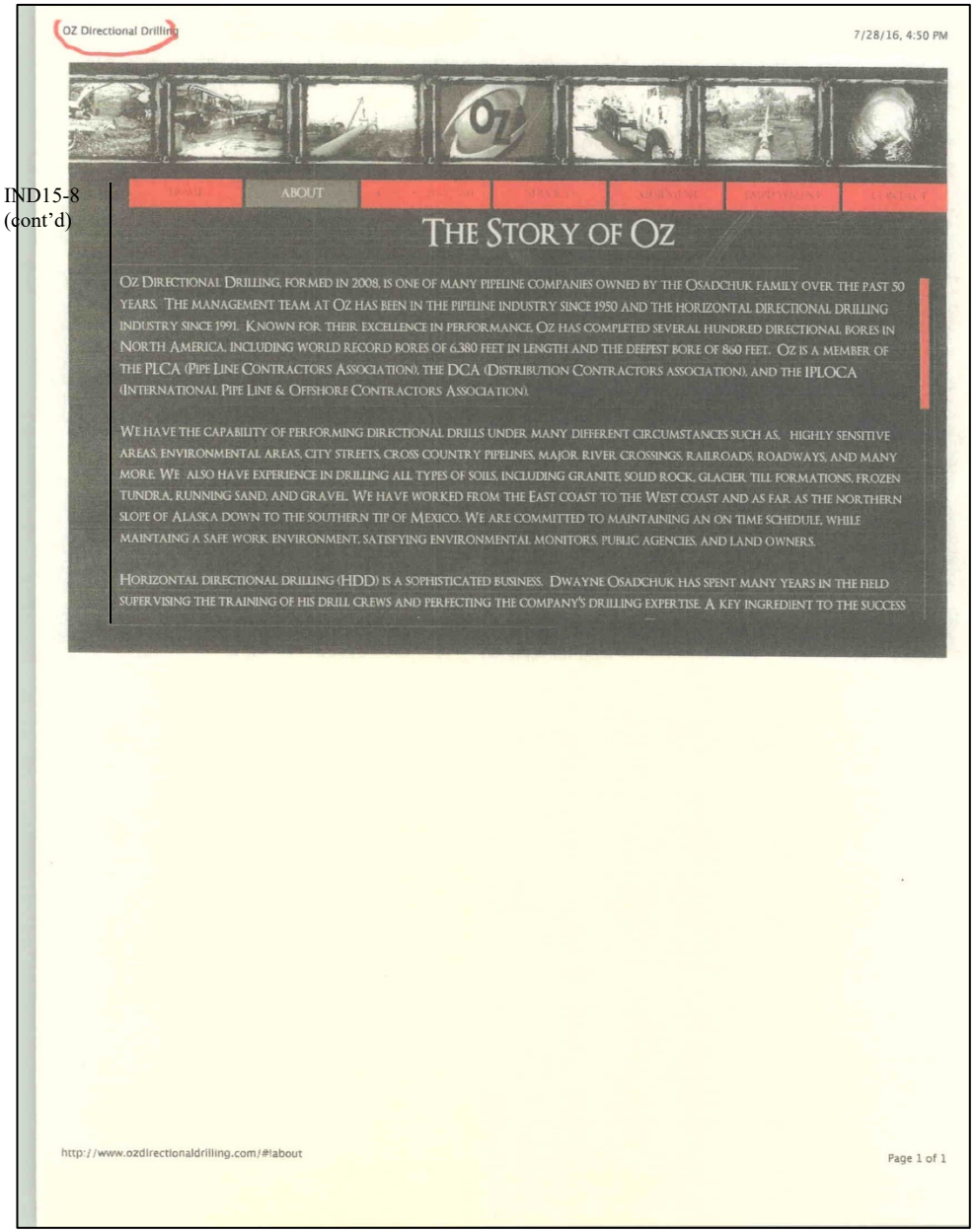

OZ Directional Drilling 7/28/16, 4:50 PM

ABOUT

THE STORY OF OZ

OZ DIRECTIONAL DRILLING, FORMED IN 2008, IS ONE OF MANY PIPELINE COMPANIES OWNED BY THE OSADCHUK FAMILY OVER THE PAST 50 YEARS. THE MANAGEMENT TEAM AT OZ HAS BEEN IN THE PIPELINE INDUSTRY SINCE 1950 AND THE HORIZONTAL DIRECTIONAL DRILLING INDUSTRY SINCE 1991. KNOWN FOR THEIR EXCELLENCE IN PERFORMANCE, OZ HAS COMPLETED SEVERAL HUNDRED DIRECTIONAL BORES IN NORTH AMERICA, INCLUDING WORLD RECORD BORES OF 6,380 FEET IN LENGTH AND THE DEEPEST BORE OF 860 FEET. OZ IS A MEMBER OF THE PLCA (PIPE LINE CONTRACTORS ASSOCIATION), THE DCA (DISTRIBUTION CONTRACTORS ASSOCIATION), AND THE IPLOCA (INTERNATIONAL PIPE LINE & OFFSHORE CONTRACTORS ASSOCIATION).

WE HAVE THE CAPABILITY OF PERFORMING DIRECTIONAL DRILLS UNDER MANY DIFFERENT CIRCUMSTANCES SUCH AS, HIGHLY SENSITIVE AREAS, ENVIRONMENTAL AREAS, CITY STREETS, CROSS COUNTRY PIPELINES, MAJOR RIVER CROSSINGS, RAILROADS, ROADWAYS, AND MANY MORE. WE ALSO HAVE EXPERIENCE IN DRILLING ALL TYPES OF SOILS, INCLUDING GRANITE, SOLID ROCK, GLACIER TILL FORMATIONS, FROZEN TUNDRA, RUNNING SAND, AND GRAVEL. WE HAVE WORKED FROM THE EAST COAST TO THE WEST COAST AND AS FAR AS THE NORTHERN SLOPE OF ALASKA DOWN TO THE SOUTHERN TIP OF MEXICO. WE ARE COMMITTED TO MAINTAINING AN ON TIME SCHEDULE, WHILE MAINTAING A SAFE WORK ENVIRONMENT, SATISFYING ENVIRONMENTAL MONITORS, PUBLIC AGENCIES, AND LAND OWNERS.

HORIZONTAL DIRECTIONAL DRILLING (HDD) IS A SOPHISTICATED BUSINESS. DWAYNE OSADCHUK HAS SPENT MANY YEARS IN THE FIELD SUPERVISING THE TRAINING OF HIS DRILL CREWS AND PERFECTING THE COMPANY'S DRILLING EXPERTISE. A KEY INGREDIENT TO THE SUCCESS

http://www.ozdirectionaldrilling.com/#!about Page 1 of 1

INDIVIDUAL COMMENTS

IND15-8
(cont'd)

Horizontal Directional Drilling

Horizontal Directional Drilling (HDD) is a trenchless method of installing pipelines and conduits in the areas where traditional open cut excavations are not feasible and/or not desired for environmental and/or constructibility reasons. It is commonly used for the installation of pipelines beneath rivers, highways, railroads and other environmentally sensitive areas, or areas where the topography or site conditions along a proposed alignment conflicts with conventional cut and cover installation practices. During the HDD process, a pilot hole is first drilled along a predetermined path. The pilot hole is then enlarged in single or multiple steps (reaming passes) to accommodate the pullback of the carrier pipe into the enlarged hole.

We are presently operating HDD rigs capable of completing projects both large and small with pipe sizes up to 60 inches in diameter and HDD lengths over 15,000 ft.

- Large Rigs: large rigs with pullback of 180K to 1.7M. 4 to 60-in. in diameter up to 15,000 ft. Soft soil to hard rock with ten to twelve people per crew.
- Small Rigs: small rigs with pullback 100K or less. Vermeer D100x140 with small utility and midstream focus. Soft soil to hard rock with four to six people per crew. Our Vermeer rigs are also used for completion of road boring.



Large Rig



Small Rig

INDIVIDUAL COMMENTS

IND15-8
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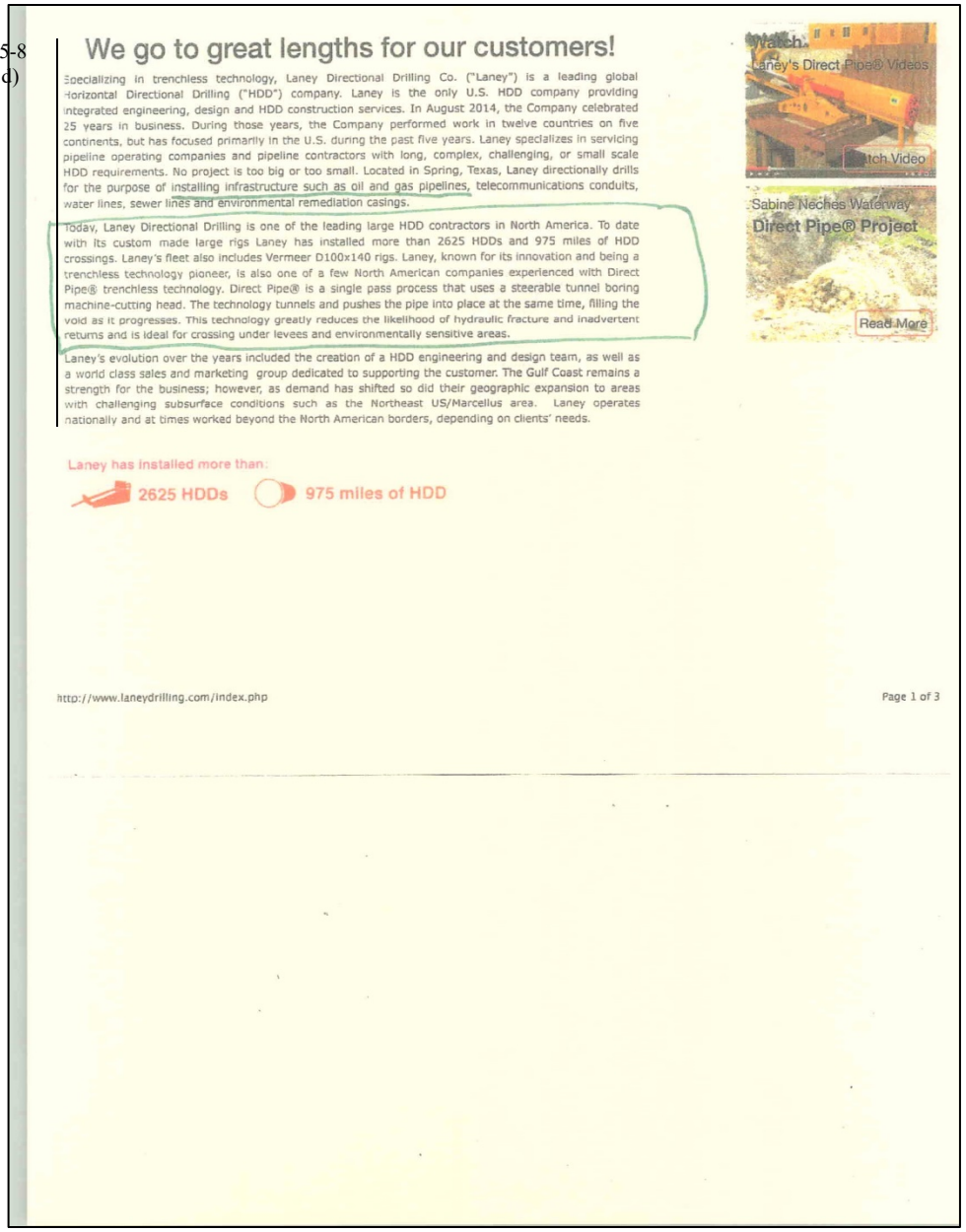


We go to great lengths for our customers!

Specializing in trenchless technology, Laney Directional Drilling Co. ("Laney") is a leading global Horizontal Directional Drilling ("HDD") company. Laney is the only U.S. HDD company providing integrated engineering, design and HDD construction services. In August 2014, the Company celebrated 25 years in business. During those years, the Company performed work in twelve countries on five continents, but has focused primarily in the U.S. during the past five years. Laney specializes in servicing pipeline operating companies and pipeline contractors with long, complex, challenging, or small scale HDD requirements. No project is too big or too small. Located in Spring, Texas, Laney directionally drills for the purpose of installing infrastructure such as oil and gas pipelines, telecommunications conduits, water lines, sewer lines and environmental remediation casings.

Today, Laney Directional Drilling is one of the leading large HDD contractors in North America. To date with its custom made large rigs Laney has installed more than 2625 HDDs and 975 miles of HDD crossings. Laney's fleet also includes Vermeer D100x140 rigs. Laney, known for its innovation and being a trenchless technology pioneer, is also one of a few North American companies experienced with Direct Pipe® trenchless technology. Direct Pipe® is a single pass process that uses a steerable tunnel boring machine-cutting head. The technology tunnels and pushes the pipe into place at the same time, filling the void as it progresses. This technology greatly reduces the likelihood of hydraulic fracture and inadvertent returns and is ideal for crossing under levees and environmentally sensitive areas.

Laney's evolution over the years included the creation of a HDD engineering and design team, as well as a world class sales and marketing group dedicated to supporting the customer. The Gulf Coast remains a strength for the business; however, as demand has shifted so did their geographic expansion to areas with challenging subsurface conditions such as the Northeast US/Marcellus area. Laney operates nationally and at times worked beyond the North American borders, depending on clients' needs.

INDIVIDUAL COMMENTS

EXHIBIT C

INDIVIDUAL COMMENTS

IND15-9 National Safety Council announces local Defensive Driving Course Training Center **IL Teamsters/Employers Apprenticeship & Trng Fund Afftl/Joint Council 25** is an award winner of the following:

Trend Setter NSC PTD

On October 15, 2016 during the National Safety Council's Congress and Exposition in Anaheim, California IL Teamsters/Employers Apprenticeship & Trng Fund Afftl/Joint Councils 25&65 of Joliet, IL will receive honors for their 2015 Defensive Driving Course training.

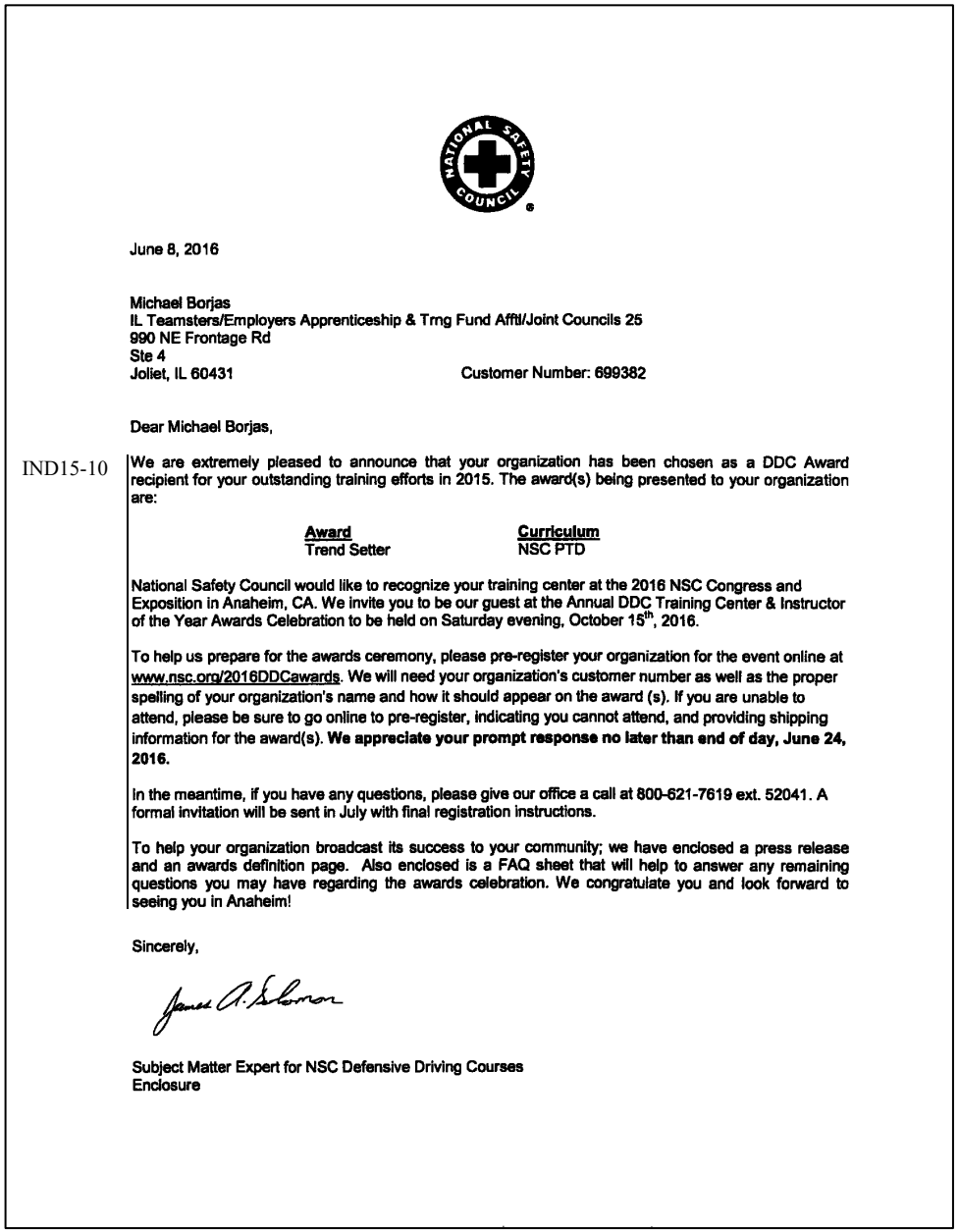
The National Safety Council's Defensive Driving Course, the first name in life saving driver safety courses, began in 1964. With over 8,000 instructors worldwide, the Defensive Driving Courses have graduated over 70,000,000 drivers.

James A. Solomon, Subject Matter Expert for NSC Defensive Driving Courses, will personally congratulate representatives from IL Teamsters/Employers Apprenticeship & Trng Fund Afftl/Joint Councils 25&65 at the Council's Annual DDC Training Center & Instructor of the Year Awards Celebration for their hard work in making the highways safer.

Press Release

IND15-9 See response to comment IND15-1.

INDIVIDUAL COMMENTS



June 8, 2016

Michael Borjas
IL Teamsters/Employers Apprenticeship & Trng Fund Affil/Joint Councils 25
990 NE Frontage Rd
Ste 4
Joliet, IL 60431

Customer Number: 699382

Dear Michael Borjas,

IND15-10 We are extremely pleased to announce that your organization has been chosen as a DDC Award recipient for your outstanding training efforts in 2015. The award(s) being presented to your organization are:

Award	Curriculum
Trend Setter	NSC PTD

National Safety Council would like to recognize your training center at the 2016 NSC Congress and Exposition in Anaheim, CA. We invite you to be our guest at the Annual DDC Training Center & Instructor of the Year Awards Celebration to be held on Saturday evening, October 15th, 2016.

To help us prepare for the awards ceremony, please pre-register your organization for the event online at www.nsc.org/2016DDCawards. We will need your organization's customer number as well as the proper spelling of your organization's name and how it should appear on the award (s). If you are unable to attend, please be sure to go online to pre-register, indicating you cannot attend, and providing shipping information for the award(s). **We appreciate your prompt response no later than end of day, June 24, 2016.**

In the meantime, if you have any questions, please give our office a call at 800-621-7619 ext. 52041. A formal invitation will be sent in July with final registration instructions.

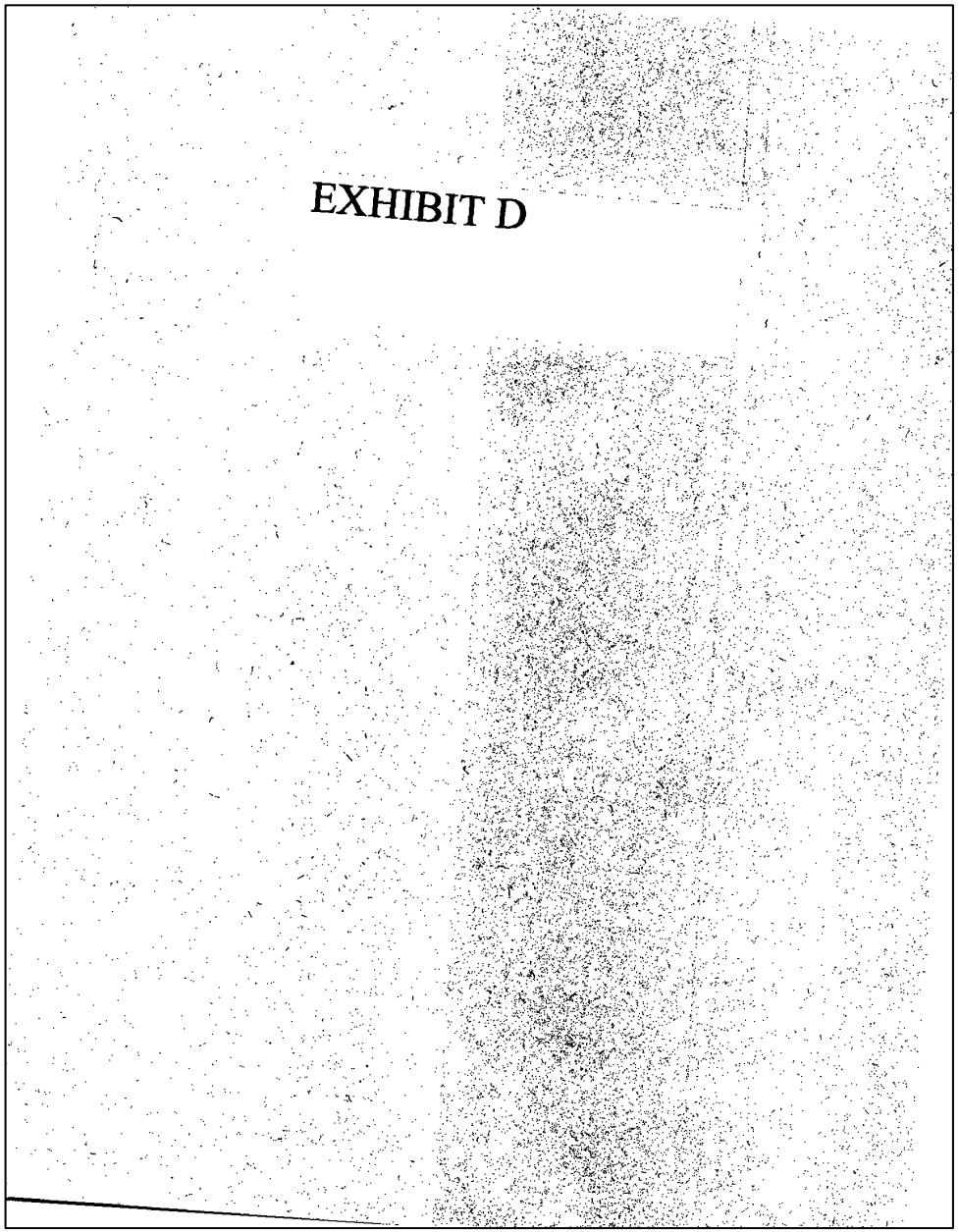
To help your organization broadcast its success to your community; we have enclosed a press release and an awards definition page. Also enclosed is a FAQ sheet that will help to answer any remaining questions you may have regarding the awards celebration. We congratulate you and look forward to seeing you in Anaheim!

Sincerely,

Subject Matter Expert for NSC Defensive Driving Courses
Enclosure

IND15-10 See response to comment IND15-1.

INDIVIDUAL COMMENTS



INDIVIDUAL COMMENTS

IND15-11 pipeline construction work, are considered key men. It is anticipated that the number of regular employees shall not be more than a majority of the total number required but there shall be no limitation on the classification of such regular employees, with the understanding that these classifications will be distributed as evenly as possible.

(J) It is understood and agreed that the above limitations shall not apply to the pipeline stringing operations.

(K) The hiring of men in addition to the Employer's regular employees, either at the start of the job or later, shall be conducted in the following manner:

1. In the event a valid non-discriminatory exclusive referral procedure has been established by collective bargaining between a local of the Union and an association of highway and heavy contractors in the area in which the job is to be done, Union shall notify the Association from time to time as to the existence of such exclusive referral procedures and Employer agrees to utilize such referral procedures upon the following conditions:

a. Nothing in this Agreement shall affect the Employer's inherent right to determine the competence and qualifications of applicants for employment or of his employees and his right to reject or discharge accordingly.

b. The selection of applicants for referral to jobs shall be based on a non-discriminatory basis and shall not be based on or in any way affected by union membership, by-laws, regulations, constitutional provisions, or any other aspect or obligation of union membership, policy or requirement.

c. Workmen referred under Article II to the contractor's job who are not able to perform the job to which they are referred because of their own lack of qualifications, or for some other reason which is the workman's own responsibility, shall not be paid show-up time.

d. Qualified applicants required by Employer at the start of the job must be referred by a local referral office within 48 hours of the receipt of Employer's request; those required by Employer after a job has started must be referred by a local referral office within 24 hours of the receipt of Employer's request. If the local referral office fails to comply with this condition, Employer may secure qualified applicants from any other source. Qualified applicants under this section must have the following:

(i) Proper federal and state licenses;

(ii) Proper OQ credentials where necessary;

(iii) Pipeline or general construction work experience relevant to pipeline work or completion of a certified pipeline training course operated or approved by the Teamsters Pipeline Training Fund. The Teamsters and PLCA also agree they will jointly review the training program on a 6-month basis.

(iv) Compliance with company Employee and safety policy standards. These

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IND15-11 See response to comment IND15-1.

INDIVIDUAL COMMENTS

IND15-11
(cont'd)

policy standards will be provided by each Employer at the pre-job conference.

2. In the event there is no valid exclusive referral procedure established in the area where the particular job is to be done or the proper conditions set out hereinabove have not been met by the referral procedure which has been established, Employer will at the pre-job conference notify Union, as one of the sources from which men are to be recruited, as to the number of men who will be needed in addition to his Regular Employees. Employer shall give preference in employment to men in the area who have had previous pipeline construction experience. It is understood that Employer may also recruit men from other sources, will hire all employees at the job site in a non-discriminatory manner, and shall have the absolute right to determine the competence and qualifications of applicants and employees and to reject and discharge accordingly.

3. Once the original crew has been employed, Employer shall have the right to keep such crew on all the work throughout the territory covered by the particular job for which the pre-job conference was held, regardless of local union jurisdiction.

(L) The Union shall post in places where notices to employees and applicants for employment are customarily posted all provisions relating to the functioning of this hiring arrangement, including the provisions set forth. The Employer shall similarly post in places where notices to employees and applicants for employment are customarily posted all provisions relating to the functioning and operation of the hiring arrangements, including these provisions.

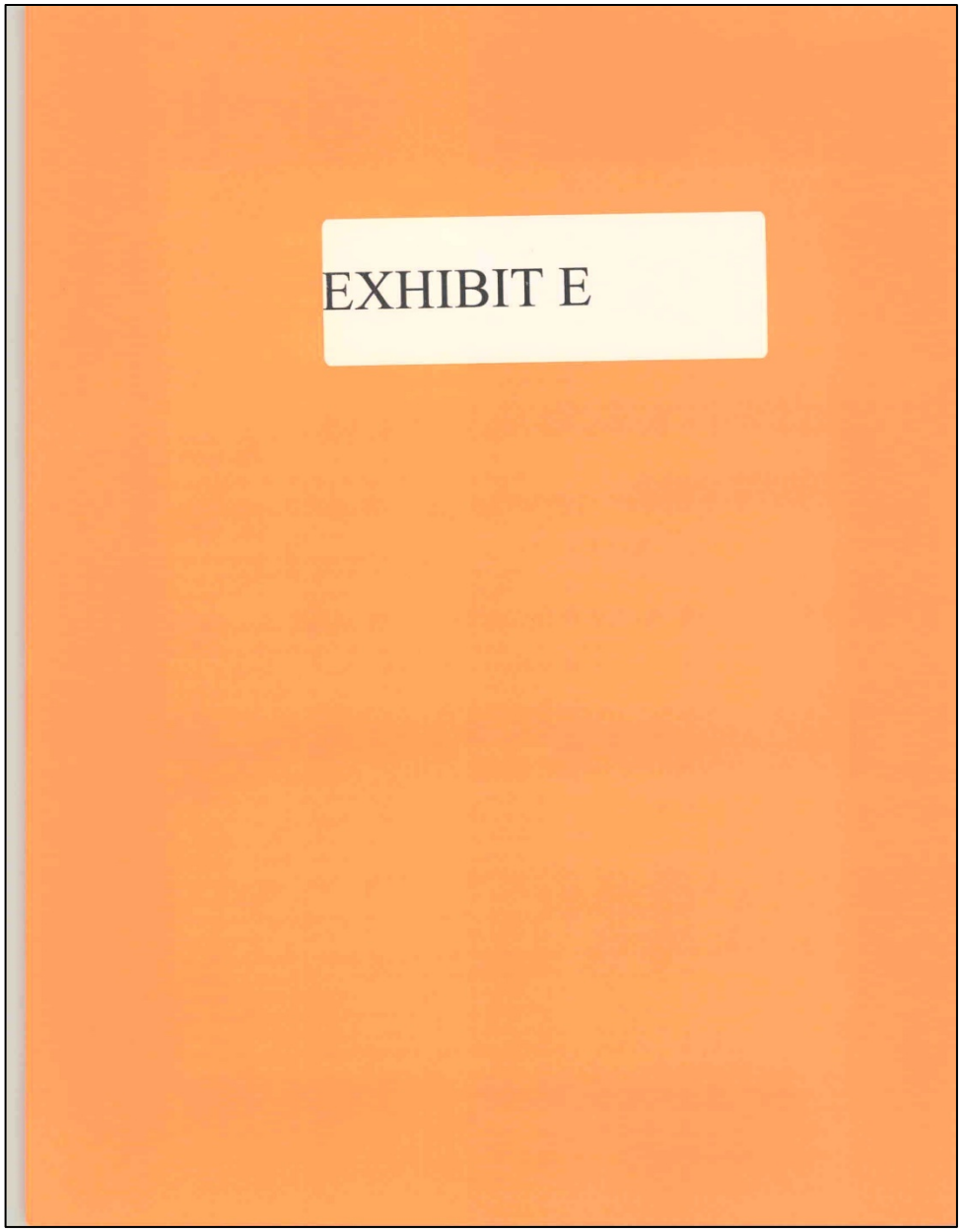
(M) The business representative of the Union shall have access to any job at any time, subject to the owner safety and security rules and Federal and State regulations, and shall notify the field office of his presence on the job prior to entering the job site. The representatives of the Union shall not schedule meetings which could in any way hinder ongoing production.

III.
STEWARDS

As soon as any work starts, including unloading, racking, or stringing of pipe or clearing of right-of-way, the Union may select any Employee of the Employer who shall act as Steward for the Union. It is understood that the Employer will not be required to employ a Steward for any subcontract work prior to the start of operations by the Employer. The Steward shall be paid for the number of hours he actually works each day or for the number of hours for which the job is set up on a daily basis, whichever is greater, except that on those days when no work is performed, then the Reporting Time Pay provisions of Article VIII will apply. The steward shall perform his work for Employer the same as any other worker, and shall be entitled to receive the rate of pay in Article V(C) for the area in which the job is located. Stewards shall not be discharged without forty-eight hours' previous notice to Union. Although it is agreed that there will be no non-working stewards, it is also recognized by the parties that the steward has an important function in maintaining harmony and cooperation on the job, and therefore his assignment should not be such to prevent his normal function as a steward. Therefore, the parties agree that his job assignment will be a subject to be decided at the pre-job conference. The Employer shall provide the steward a weekly record of all Teamster employees listing date of

7

INDIVIDUAL COMMENTS



INDIVIDUAL COMMENTS

IND15-12 procedure set out above, the Association will immediately contact the Federal Mediation and Conciliation Service to obtain a list of three (3) individuals with as much experience and knowledge as possible in the pipeline construction industry. A copy of this list will be furnished to the Union, and thereafter, the PLCA and Union shall attempt to mutually agree upon one (1) of the individuals listed. If no agreement can be reached, the Union and the PLCA will each strike one (1) name from the list and the remaining individual will be the Arbitrator.

3. A statement of the facts shall be presented to the Arbitrator within forty-eight (48) hours after his selection either:

a. Jointly, if the Union and PLCA mutually agree; or

b. Separately, if no mutual agreement, and the Association will submit a written statement setting out the Employer's position and the Union will submit a written statement setting out the Union's position.

4. All information submitted to the Arbitrator will be in writing. No personal appearances or oral testimony will be allowed. The Arbitrator will then issue, within five (5) days, a decision based upon the evidence submitted.

(G) The Union and the Employer involved shall bear the expense of their appointed Arbitrators. In the event an Arbitrator from the Federal Mediation and Conciliation Service is selected, then the Union and the Employer shall be jointly responsible for that person's expenses.

(H) In the event Employer fails or refuses to comply with the grievance procedure set out hereinabove, the provisions of Article IX shall not be binding upon Union. If Union fails or refuses to comply with the grievance procedure set out hereinabove, the Employer shall have the right to declare this entire Agreement null and void.

XII.
SPECIAL CONDITIONS

In order to be more competitive in certain areas of the country, the PLCA and the Union may mutually agree to put into effect special wages and conditions for specific areas or projects. These special wages and conditions will apply to the areas or projects involved for the period of time to be established by the principal parties.

XIII.
DRUG AND ALCOHOL TESTING

(A) A Substance Abuse Policy has been negotiated by the PLCA and the International Brotherhood of Teamsters and is attached hereto and made a part of this Agreement as Schedule "C".

(B) If an Employee fails a pre-employment drug or alcohol test and is so notified by 9:00 a.m. on the fifth business day following the day of taking the test, then the Employee's wage rate shall not be the hourly wage rate set forth in this Agreement. Instead, the Employee shall be paid wages at a flat rate of $90 per day worked (but in no event less than the applicable

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IND15-12 See response to comment IND15-1.

INDIVIDUAL COMMENTS

IND15-12 (cont'd)

minimum wage) for all days worked prior to receiving such notification (not to exceed five (5) days) and for which no wages have yet been paid as required by this Agreement. If subsequent testing reveals a false positive, the Employee will be entitled to full compensation for the period he worked and reinstatement. The results of all tests will be kept confidential between the Employee, the Employer and the Union.

XIV.
TRAINING/DOT RULES

(A) Training – The Trustees of the Teamsters National Pipeline Training Fund will develop a National Pipeline Training Program for Teamsters to train in operating pipeline equipment in areas of high pipeline construction.

(B) DOT Rules – The Trustees of the Teamsters National Pipeline Training Fund will develop a DOT training program to teach Teamsters the necessary skills to comply with DOT driver requirements. Part of this program will be to develop a general pre-dispatch drug and alcohol testing program to be applied to all drivers seeking work under the National Pipe Line Agreement.

(C) Contributions shall be made to the Teamsters National Pipe Line Training Fund and Labor-Management Cooperation Trust in accordance with Schedule "A" and the provisions above. The National Pipe Line Training Fund will establish proficiency training standards to be used in a National Pipeline Training Course, which will include specific Operator Qualification training. Regional training courses also will be set up throughout the country as necessary and will be subject to the proficiency training standards developed by the Fund. A list of Teamsters who have successfully completed the course will be made available to signatory contractors on request. Funds contributed to local training funds for pipeline work covered under the National Pipe Line Agreement should be used by the local funds to provide pipeline and OQ training. Local pipeline training will be monitored by the Teamsters National Pipe Line Training Fund.

XV.
HISTORICAL PRECEDENT

Since the inception of the National Pipe Line Agreements, which cover all main line, cross-country pipeline construction, only four (4) Unions have been recognized, and all work relating to such pipeline construction has been performed by these four (4) Unions. They are: The International Brotherhood of Teamsters, The United Association of Journeyman and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada, The International Union of Operating Engineers, and the Laborers' International Union of North America. The recognition of only these four (4) Unions on such work is hereby reaffirmed.

XVI.
INDIAN PREFERENCE IN EMPLOYMENT

The hiring procedures contained in this Agreement shall not apply in the "territorial jurisdiction" of any Indian Nation which has adopted an Indian Preference in Employment law, provided that those persons covered by the law and seeking covered employment under this

INDIVIDUAL COMMENTS

EXHIBIT F

INDIVIDUAL COMMENTS

IND15-13

NATIONAL PIPELINE AGREEMENT 2014-2017

SOUTHERN RATES (Hourly)

Covers: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee and Texas

	5/30/16-6/4/17	6/5/17-6/4/18	6/4/18-6/3/19	6/4/19-5/31/20
GROUP 1*	$29.18	$30.09	$31.09	$32.06
GROUP 2	$26.09	$26.91	$27.81	$28.68
GROUP 3	$24.78	$25.56	$26.42	$27.25
H&W	$6.90	$7.17	$7.40	$7.70
PENSION	$3.00	$3.25	$3.50	$3.75
TRAINING	$ .20	$.20	$ .20	$ .20
LMCT	$ .20	$.20	$ .20	$ .20

PREMIUMS (National)

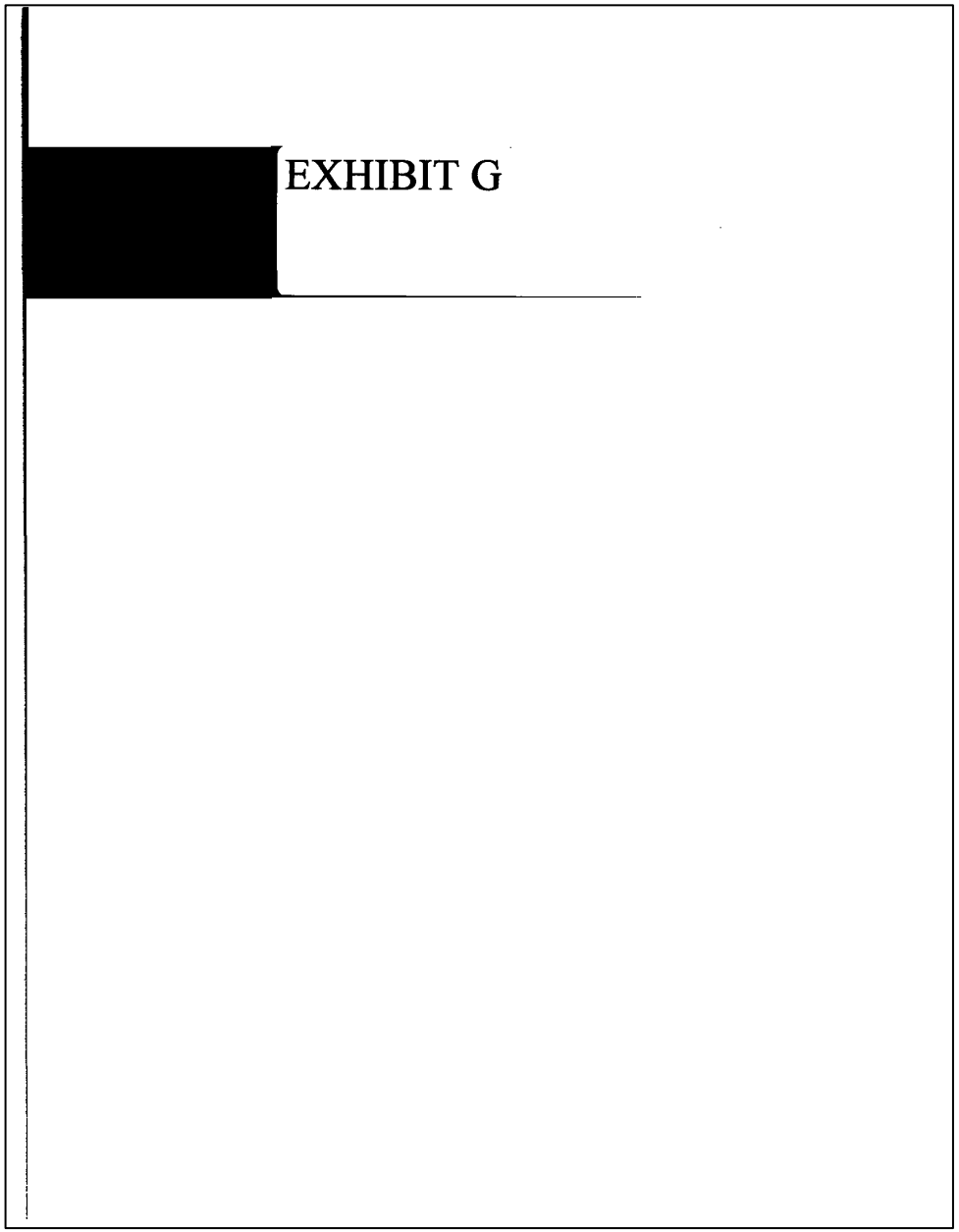
Steward	+ $2.25
Stringing Truck	+ $2.25
Mechanic	+ $3.00
Lowboy	+ $2.25
Fuel Truck	+ $2.25
Haz-Mat	+ $1.00

*Log/Grapple Truck Rate:

Updated 9/12/18

IND15-13 See response to comment IND4-1.

INDIVIDUAL COMMENTS



INDIVIDUAL COMMENTS

IND15-14

TEAMSTERS ASSISTANCE PROGRAM MILITARY

International Brotherhood of Teamsters Veteran Registration

Name: _____ Phone: _____

Address: _____ Cell: _____

_____ E-mail: _____

City State Zip

Are you a veteran? Yes / No What dates did you serve? _____

In which branch of the military did you serve? (Circle one)

Army Marines Navy Coast Guard Air Force

How long have you been a Teamster? _____

What Joint Council are you affiliated with? _____ What is your local? _____

Who is your current employer? _____

Are you currently receiving benefits for service-related disabilities? Yes / No

Do you require assistance to pursue or file a disability claim? Yes / No

Do you want to receive updates on disability benefits or presumptive disease issues? Yes / No

Claims and disability filings will be done through certified claims representatives. All information regarding your filing(s) is confidential between you and a certified claims representative.

Thank you for your service to our country. We hope the resources available are beneficial to you and your family.

Please return your completed form via mail or fax to: *Teamsters Building and Construction Trades Division, 25 Louisiana Avenue, NW, Washington, D.C. 20001, or fax (202) 624-8107.*

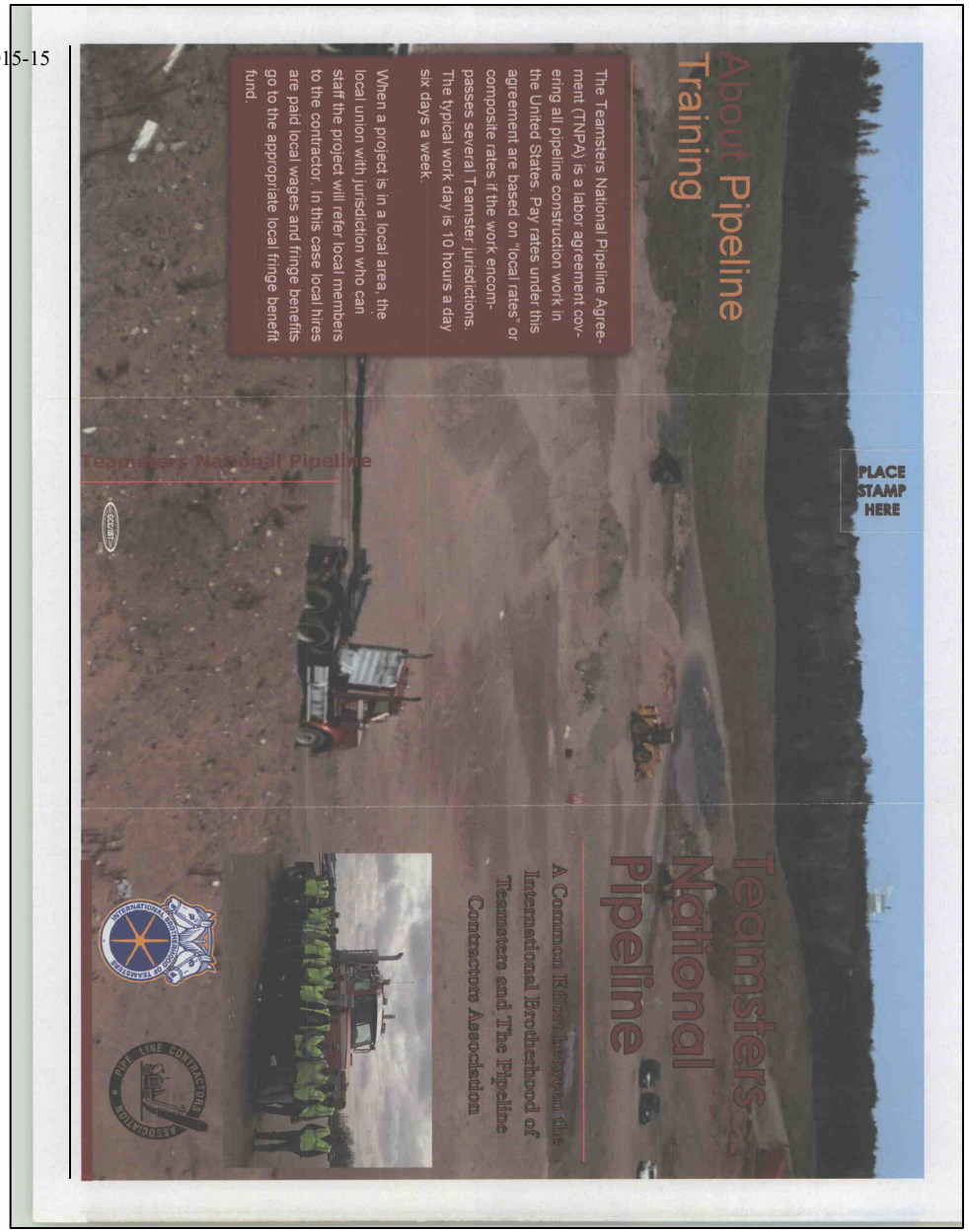
IND15-14 See response to comment IND15-1.

INDIVIDUAL COMMENTS

EXHIBIT H

INDIVIDUAL COMMENTS

IND15-15

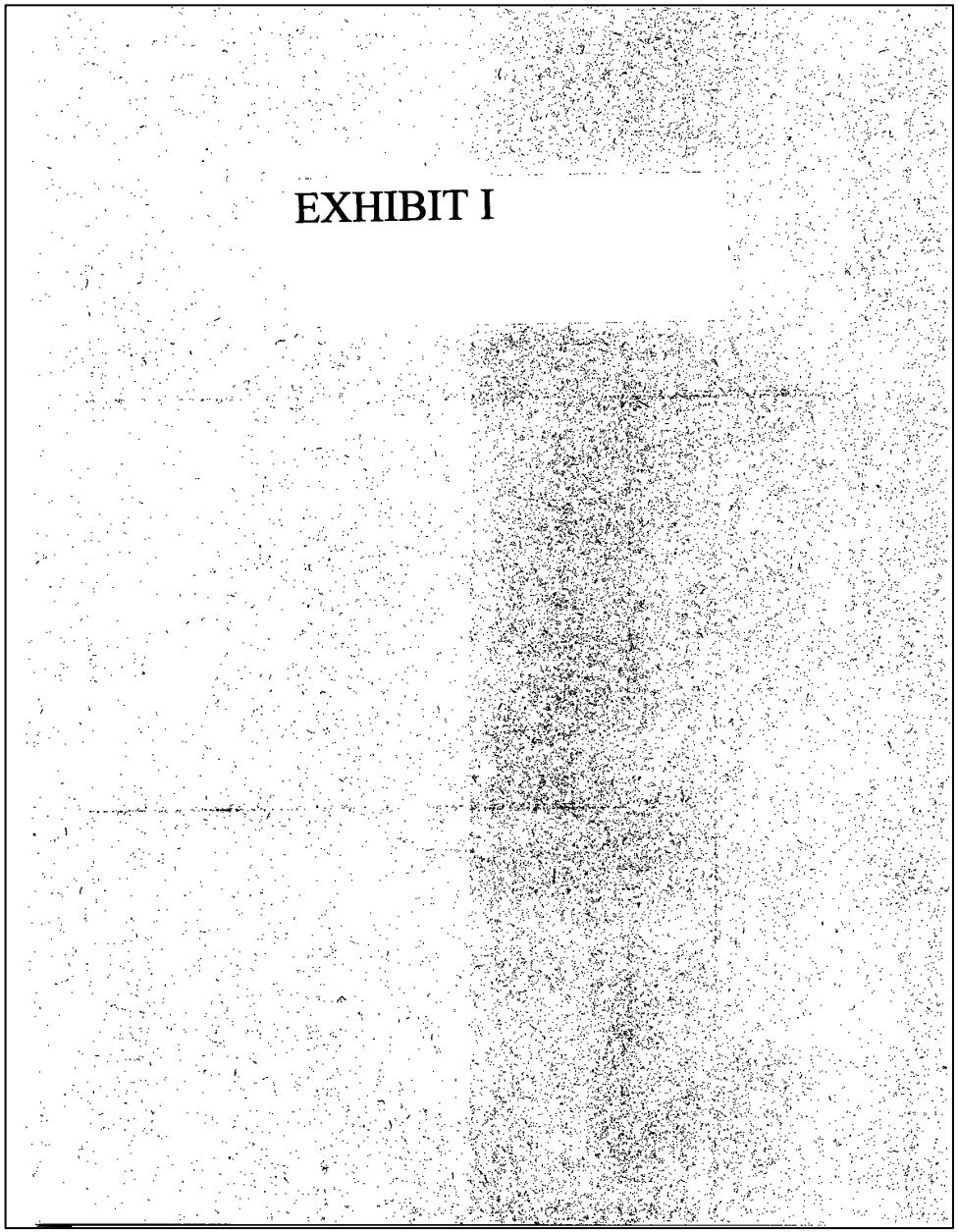


IND15-15 See response to comment IND15-1.

INDIVIDUAL COMMENTS

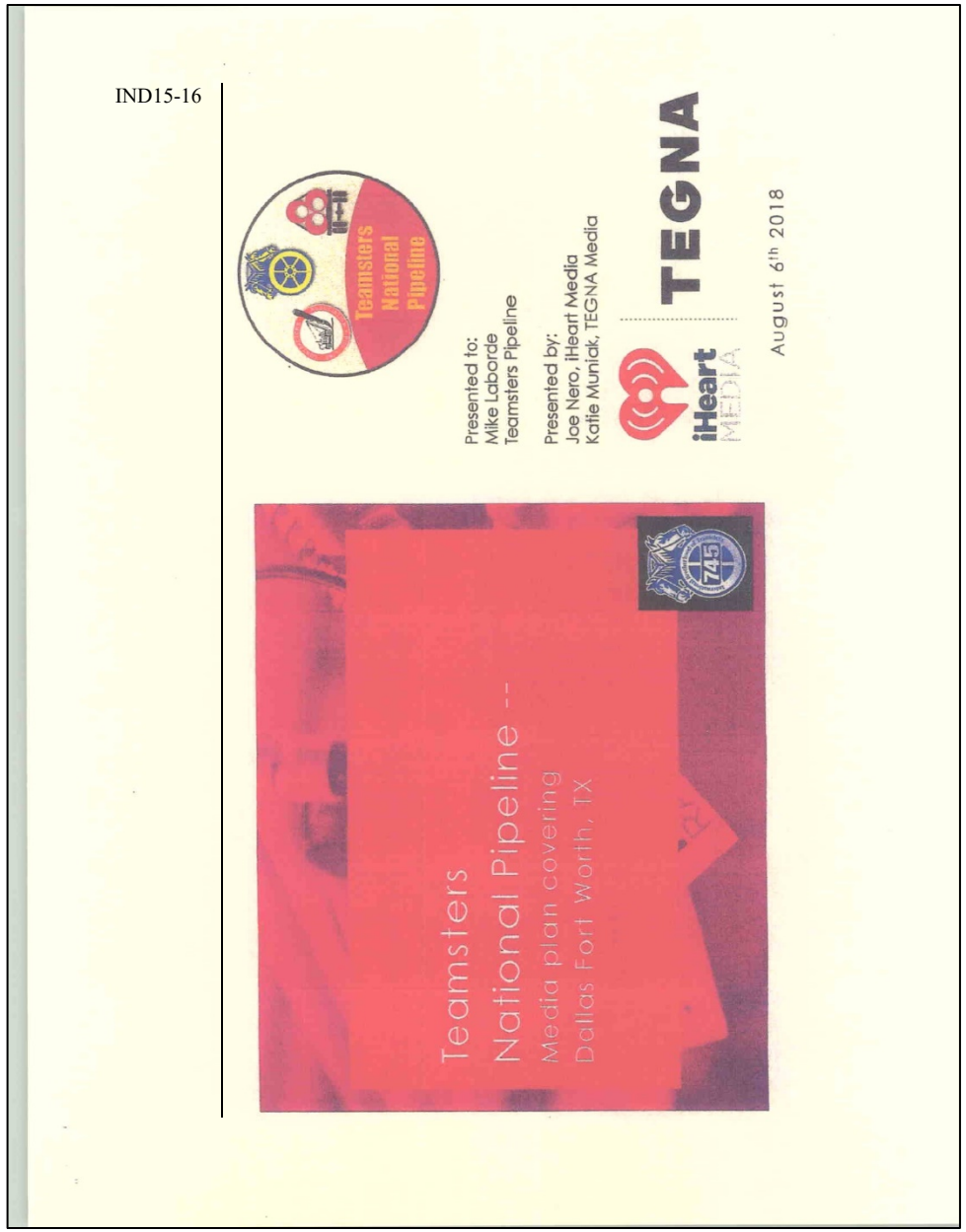
IND15-15
(cont'd)

INDIVIDUAL COMMENTS



INDIVIDUAL COMMENTS

IND15-16



IND15-16 See response to comment IND15-1.

INDIVIDUAL COMMENTS

IND15-16
(cont'd)

Objective...

- Dallas Fort Worth market recruitment Job Fair on Friday August 17th, Saturday August 18th and Sunday August 19th. THE GOAL: driving attendance and traffic to Teamsters Union Hall Local 745 to fill jobs ASAP on Gulf Coast Pipeline.
- Target reach: Men 21 – 64 years (must have CDL)
- Featuring a 9 day high frequency media blitz starting Saturday 8/11/18 – Sunday 8/19/18 cut off at 10am.
- Focusing on media platforms that have brought Teamsters success - Radio, TV, and Streaming TV
- Targeted market: Dallas Fort Worth, TX areas

iHeartMEDIA

2

INDIVIDUAL COMMENTS

IND15-16
(cont'd)

Our "Go to Market" Recommendation...

- Knowing the amount of hires that need to be made, we are recommending at least a 9 day campaign focusing on a dominate presence in the Dallas market using:
  - Radio
  - Local Television
  - Streaming Television – Premion, Facebook, YouTube
- As added value with no additional cost to the Teamsters (Katie Muniak) will write and distribute press release to all local newspapers and media outlets about Atlantic Coast Pipeline project and jobs.
- With radio, we will include again :15 second PSA radio commercials on the stations involved.

iHeartMEDIA

3

INDIVIDUAL COMMENTS

IND15-16 (cont'd)

having unchecked power."

The mayor's position is officially nonpartisan. Nebraska has a two-term limit for both the governor and the state legislators.

—

9:35 a.m.

A Nebraska Public Service Commission candidate who campaigned on her opposition to the Keystone XL pipeline has conceded to a Republican state lawmaker who has supported the project.

Democrat Christa Yoakum, of Lincoln, acknowledged her loss Wednesday to Sen. Dan Watermeier, of Syracuse, in a race that focused heavily on the $8 billion project.

The Public Service Commission approved a route for the pipeline last November, but that decision is under review by the Nebraska Supreme Court.

Yoakum's supporters note that the race was the closest in recent history and vowed to continue fighting the pipeline.

Watermeier has said he ran for reasons unrelated to the pipeline. The commission regulates industries including taxicabs, telephone companies and grain elevators. His District 1 seat includes Lincoln and southeast Nebraska.

—

9:15 a.m.

Democrat Kara Eastman has conceded to Republican U.S. Rep. Don Bacon in the race for Nebraska's 2nd Congressional District.

Eastman said she planned to speak to Bacon Wednesday morning, hours after Bacon was declared

INDIVIDUAL COMMENTS

20181130-5300 FERC PDF (Unofficial) 11/30/2018 4:42:37 PM

Port Arthur LNG

CHENIERE

November 30, 2018

Hon. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: Port Arthur LNG, LLC; PALNG Common Facilities Co., LLC; Port Arthur Pipeline, LLC
Docket Nos. CP17-20-000, CP17-21-000, CP17-21-001 and CP18-7-000
Joint Statement on Cooperation

Dear Ms. Bose:

IND16-1 (cont'd)

On November 19, 2018, Sabine Pass LNG, L.P., Sabine Pass Liquefaction, LLC and Cheniere Creole Trail Pipeline, L.P. (collectively, Sabine Pass and Creole Trail) submitted comments (November 19 Comments) regarding certain limited aspects of the Port Arthur Liquefaction, Texas Connector and Louisiana Connector Projects (the Project). These comments noted that Sabine Pass and Creole Trail are not opposed to the Project, but are working in coordination with Port Arthur LNG, LLC, Port Arthur Common Facilities Co. LLC and Port Arthur Pipeline, LLC (Port Arthur) representatives to resolve potential concerns associated with construction and operation of jurisdictional facilities in close proximity. For its part, although Port Arthur does not agree with the points and requests made in the November 19 Comments, it is committed to working cooperatively to address the comments of Sabine Pass and Creole Trail.

This joint letter provides the Commission with updates on the progress the parties are making to address these matters. Our project teams are scheduled to meet in person during the first week of December. Initial discussions have been cordial, and we are optimistic that further refinement of the issues and a mutual resolution can be reached before Commission issuance of the Final Environmental Impact Statement for the Project. For this reason, the undersigned parties request that the Commission Staff withhold action on the Sabine Pass and Creole Trail requested condition and cumulative impacts analysis pending the outcome of these discussions among the parties.

The parties anticipate filing a status update following the December meeting.

Sincerely,

/s/ Jerrod L. Harrison
Jerrod L. Harrison
Sr. Counsel
Sempra North American Infrastructure
488 8th Avenue
San Diego, CA 92101
(619) 696-2987
jharrison@SempraGlobal.com

Counsel for Port Arthur

/s/ Janna Romaine Chesno
Janna Romaine Chesno
Sr. Counsel
Cheniere Energy, Inc.
701 8th Street NW, Suite 810
Washington, DC 20001
(202) 442-3064
janna.chesno@cheniere.com

Counsel for Sabine Pass and Creole Trail

IND16-1 Comments noted.

FEDERAL AGENCY COMMENTS

20181127-0011 FERC PDF (Unofficial) 11/27/2018

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

FILED
SECRETARY OF THE COMMISSION
2018 NOV 27 P 12:53
REGULATORY COMMISSION

ORIGINAL

November 15, 2018

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, D.C. 20426

Dear Ms. Bose: CP17-20-000

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the Port Arthur LNG and Connector Projects (CEQ No. 20180229) pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations (40 CFR Parts 1500 – 1508), and our NEPA review authority under Section 309 of the Clean Air Act.

The purpose of the proposed action is to construct and operate onshore natural gas liquefaction and associated facilities in Texas to allow the export of liquefied natural gas, and to construct, own, operate, and maintain interstate natural gas pipelines, new compressor stations, and ancillary facilities in Texas and Louisiana. The EPA is a cooperating agency for this project.

FA1-1 EPA's primary concerns are the potential impacts to wetlands. Section 4.4 of the DEIS discusses temporary wetland impacts associated with construction and operation of the proposed action. For scrub-shrub wetlands, the DEIS identifies a timeline of 2 to 4 years to reach functionality similar to preconstruction conditions, and even longer for forested wetlands. Lastly, there are forested wetlands that may be converted into other wetland types. If available at the time the Final Environmental Impact Statement (FEIS) is published, please include the following: compensatory mitigation for each of the impacted wetlands, location of compensatory mitigation sites and demonstration of in-kind or appropriate out-of-kind compensatory mitigation options, the amount of dredge material produced in each area and the projected beneficial use project(s), including location of the dredge placement sites and the resulting acreage produced by the project.

FA1-2 Section 4.9.8.3 identifies the primary project-related health risk associated with an unanticipated failure at the liquefaction terminal, pipelines, or compressor stations. The EPA suggests the FEIS incorporates a map of the population demographics in proximity to the proposed action to further characterize those at potential risk.

Please note that effective October 22, 2018, the EPA no longer includes ratings in our comment letters. Information about this change is explained in the Memorandum on Changes to EPA's Environmental Review Rating Process, available at https://www.epa.gov/nepa/policy-and-procedures-review-federal-actions-impacting-environment-under-section-309-clean-air.

FA1-1 See response to comment SA3-1 regarding compensatory mitigation.

Sections 2.1.1.5, 2.1.1.6, and 2.1.1.7 of the final EIS discuss the locations and amounts of dredge materials removed. Sections 2.1.1.10 and 4.4.2.1 describe the disposal areas and beneficial reuse of dredge materials.

FA1-2 If there were to be a failure of the pipelines or LNG facilities, it would be at a specific point along the pipeline or within the facilities. Consequences from such failures are required to be evaluated under DOT regulations in 49 CFR 192 for pipelines and 49 CFR 193 for the LNG facilities, and require certain provisions be in place based on the consequences. In addition, consequences from accidental and intentional failures of the LNG marine vessels are required to be evaluated under U.S. Coast Guard regulations and are discussed in Section 4.12.

The DOT regulations do not allow for certain credible consequences to extend beyond a property line that can be built upon. In addition, FERC staff evaluates a variety of consequences to ensure the risk of other higher consequences are reduced to insignificant levels. The U.S. Coast Guard also evaluates the consequences from LNG marine vessels to ensure the risk to the public is reduced to an insignificant level.

Section 4.9.8 discusses environmental justice and concludes that no there is no evidence that the Projects would cause a disproportionate share of adverse environmental or socioeconomic impacts on any racial, ethnic, or socioeconomic group. This conclusion takes into account the demographics associated with the census tracts impacted by the Projects. We defer to our analysis in section 4.9.8 of the demographics, and more broadly in section 4.9. Section 4.12 also discusses the safety of the facilities and the regulatory oversight.

FEDERAL AGENCY COMMENTS

20181127-0011 FERC PDF (Unofficial) 11/27/2018

We appreciate the opportunity to provide comments on this document. If you have any questions, please contact Kimeka Price, the lead contact for this project, at (214)665-7438 or price.kimeka@epa.gov.

Sincerely,

Cheryl T. Seager
Director
Compliance Assurance and
Enforcement Division

ec: David Hanobic, FERC, David.Hanobic@ferc.gov

2

STATE AGENCY COMMENTS

20181113-0011 FERC PDF (Unofficial) 11/13/2018

USDA
United States Department of Agriculture

ORIGINAL

Natural Resources Conservation Service
State Office
101 S. Main Street
Temple, TX 76501
Voice 254.742.9800
Fax 254.742.9819

October 30, 2018

2018 NOV 13 A 9:56

Federal Energy Regulatory Commission
888 First St NE, Room 1A
Washington, DC 20426

Attention: Kimberly D. Bose, Secretary

Subject: LNU-Farmland Protection
Port Arthur Liquefaction Project
Docket No. (CP17-20-000, CP17-21-000, CP18-7-000)
NEPA/FPPA Evaluation
Jefferson and Orange Counties, Texas

SA1-1

We have reviewed the information provided in your correspondence dated September 28, 2018 concerning the proposed natural gas pipeline improvements project located in Jefferson and Orange Counties, Texas. This review is part of the National Environmental Policy Act (NEPA) evaluation for the Federal Energy Regulatory Commission (FERC). We have evaluated the proposed site as required by the Farmland Protection Policy Act (FPPA).

The proposed North Compressor Station site contains areas of Statewide Important Farmland and we have completed the Farmland Conversion Impact Rating form (AD-1006) for the proposed site. The combined rating of the site is **88**. The proposed South Compressor Station site does not involve areas of Prime Farmland. The FPPA law states that sites with a rating less than 160 will need no further consideration for protection and no additional evaluation is necessary.

Additionally, the installation of belowground pipelines and appurtenances are not considered a permanent conversion of farmland. Therefore, the corresponding activities of the project are exempt from provisions of FPPA. We urge you to use accepted erosion control methods during construction and to place topsoil back as the surface layer when backfilling trenches.

If you have further questions, please contact me at 254.742.9836 or by email at Carlos.Villarreal@usda.gov (Preferred).

Sincerely,

CARLOS VILLARREAL
Digitally signed by CARLOS VILLARREAL
Date: 2018.10.30 16:06:46 -05'00'

Carlos J. Villarreal
NRCS Soil Scientist

Attachment: **Farmland Conversion Impact Rating form (AD-1006)**

An Equal Opportunity Provider and Employer

SA1-1 Section 4.2.1 of the final EIS has been updated with the information provided.

STATE AGENCY COMMENTS

20181113-0011 FERC PDF (Unofficial) 11/13/2018

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 09/28/2018
Name of Project North Compressor Station	Federal Agency Involved FERC
Proposed Land Use Pipeline compressor unit	County and State Orange County TX
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 10/16/2018 — Person Completing Form: Carlos J. Villarreal

Does the site contain Prime, Unique, Statewide or Local Important Farmland? *(If no, the FPPA does not apply - do not complete additional parts of this form)* YES ☑ NO ☐	Acres Irrigated 388	Average Farm Size 79	
Major Crop(s) Corn, Cotton, Small Grains	Farmable Land In Govt. Jurisdiction Acres: 52799 % 22	Amount of Farmland As Defined in FPPA Acres: NA % NA	
Name of Land Evaluation System Used National Commodity Crop Production Index	Name of State or Local Site Assessment System None	Date Land Evaluation Returned by NRCS 10/30/2018	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	39			
B. Total Acres To Be Converted Indirectly	0			
C. Total Acres In Site	39			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	0			
B. Total Acres Statewide Important or Local Important Farmland	39			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.07			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	20			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)	67			

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	Maximum Points	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)	13			
2. Perimeter In Non-urban Use	(10)	8			
3. Percent Of Site Being Farmed	(20)	0			
4. Protection Provided By State and Local Government	(20)	0			
5. Distance From Urban Built-up Area	(15)	0			
6. Distance To Urban Support Services	(15)	0			
7. Size Of Present Farm Unit Compared To Average	(10)	0			
8. Creation Of Non-farmable Farmland	(10)	0			
9. Availability Of Farm Support Services	(5)	0			
10. On-Farm Investments	(20)	0			
11. Effects Of Conversion On Farm Support Services	(10)	0			
12. Compatibility With Existing Agricultural Use	(10)	0			
TOTAL SITE ASSESSMENT POINTS	160	21	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	67	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	21	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	88	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? YES ☐ NO ☑
Reason For Selection:		
Name of Federal agency representative completing this form:		Date:

(See Instructions on reverse side) Form AD-1006 (03-02)

STATE AGENCY COMMENTS

20181113-0011 FERC PDF (Unofficial) 11/13/2018

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, http://fppa.nrcs.usda.gov/lesa/.

Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s)of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map, or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)

Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.

Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.

Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.

Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office.

Step 7 - The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM
(For Federal Agency)

Part I: When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

Part VI: Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.

2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160.
Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \text{ X } 160 = 144 \text{ points for Site A}$$

For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.

STATE AGENCY COMMENTS

20181119-0024 FERC PDF (Unofficial) 11/19/2018

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FEDERAL ENERGY
REGULATORY COMMISSION

November 2, 2018 ORIGINAL

Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First St NE, Room 1A
Washington, DC 20426

Re: *Draft Environmental Impact Statement for the Proposed Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector Project (CP17-20-000, CP17-21-000, and CP18-7-000), Jefferson and Orange Counties (FERC/106, THC #201900840)*

Dear Kimberly D. Bose:

Thank you for your correspondence describing the above referenced project. This letter serves as comment on the proposed undertaking from Mark Wolfe, Executive Director of the Texas Historical Commission and the State Historic Preservation Officer.

The History Programs Division (HPD) review staff, led by Caitlin Brashear, the Division of Architecture (DOA) review staff, led by Lydia Woods, and the Archeology Division (AD) review staff, led by Maggie Moore and Amy Borgens, have completed their review of the draft environmental impact statement (DEIS) for the proposed Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector Project (CP17-20-000, CP17-21-000, and CP18-7-000. Regarding this review, the THC has the following comments.

SA2-1 Beginning on page 4-211, the DEIS summarizes the archeological investigations that have been conducted to date and the associated review responses from the THC. On page 4-212, the DEIS states that "in a letter dated September 16, 2016, the Texas SHPO concurred with the Phase I Cultural Resources Survey Report's NRHP assessment of not eligible for the identified five historic architecture resources." The THC did not provide concurrence for those five structures in that response letter, however the THC does concur that those five structures are **not eligible** for listing to the National Register of Historic Places (NRHP).

SA2-2 The Texas portion of the Port Arthur Pipeline Project in Sabine Lake was surveyed by T. Baker Smith and R. Christopher Goodwin and Associates, Inc. in August 2017. Comments from the THC were omitted from the DEIS in Section 4.10.1.2 page 4-213, regarding the submerged archeological investigation of the pipeline that extends into Texas waters except to state that the SHPO comments have not been provided—the meaning of which is unclear.

SA2-3 The THC reviewed the draft report for the underwater remote-sensing archeological survey conducted by Goodwin and Associates for Antiquities Permit No. 8060. Additional information was required for magnetometer targets 21, 37, 57, and 59 before the review could be completed. The THC cannot concur "that no submerged cultural resources nor relic geomorphic features with the potential for archaeological deposits were present" until additional information is provided, An inquiry was sent to the archeological contractor on 29 December 2017, 9 February 2018, and again on 22 October 2018 after the DEIS was received.

SA2-4 Our July 28, 2017 letter requesting scraping at Granger Cemetery was in response to an email indicating the line would in fact be placed within 25 feet of the cemetery. Additionally, to date our office has not received reports on the cemetery scraping; survey of the three previously recorded sites 41JF84, 41JF91, and 41OR89; or on the remaining Northern pipeline, laterals, TETCO and NGPL Meter Stations, and access roads. This work is not mentioned in outstanding Section 106 obligations listed in Section 4.10.4.2. Please include the completion of this work prior to construction of facilities or use of staging, storage, or temporary workspaces to Section 4.10.4.2. According to our records, the THC has not received or reviewed an anticipated discovery plan as stated in Section

SA2-1 Section 4.10.1.2 of the final EIS has been updated to reflect the correct date of concurrence for the five historic architecture resources.

SA2-2 To date, PAPL has not provided this information to the FERC.

SA2-3 To date, PAPL has not provided this information to the FERC.

SA2-4 To date, PAPL has not provided this information regarding the Granger Cemetery to the FERC.

Based on information from the Applicants, and as stated in section 4.10.2 of the final EIS, PALNG and PAPL committed to providing its *Unanticipated Discoveries Plans* to the Texas SHPO for review. If additional changes to the *Unanticipated Discoveries Plan* are required, FERC requests that these be directed to PALNG and PAPL. Per Environmental Recommendations 4 and 5, PALNG and PAPL will be required to file all pending agency correspondence and all final survey reports. The *Unanticipated Discoveries Plan* provided to FERC can be found on the FERC eLibrary website using Accession Numbers 20161129-5254 (Liquefaction Project) and 20171212-5147 (Texas Connector Project). Also, PAPL filed a revised *Unanticipated Discoveries Plan (For Project Facilities within the State of Louisiana)* developed with the Coushatta Tribe of Louisiana on January 15, 2019 (FERC Accession No. 20190116-5005). .

STATE AGENCY COMMENTS

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SA2-4 (cont'd) 4.10.2. The THC recommends that an anticipated discovery plan needs to be submitted for review and concurs that any portion of the project that has not yet been surveyed needs to be surveyed and submitted for review by our office.

SA2-5 Finally, it should be noted that a portion of the proposed Texas Connector Project will be located within the *Lucas Gusher, Spindletop Oil Field* (NR# 66000818), which was listed in the National Register as a historic district in 1966. Therefore, a clearer idea of impact on the historic district is needed. In addition, in accordance with Section 110, the National Park Service needs to be involved with this review since the historic district is also a National Historic Landmark.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this federal review process, and for your efforts to preserve the irreplaceable heritage of Texas. If you have any questions concerning our review or if we can be of further assistance, for archeology please contact Maggie Moore at 512-463-6508 or maggie.moore@thc.texas.gov, for marine archeology please contact Amy Borgens at 512-463-9505 or amy.borgens@thc.texas.gov, for architecture please contact Lydia Woods at 512-463-9122 or lydia.woods@thc.texas.gov, or contact Caitlin Brashear at 512-463-5851 or caitlin.brashear@thc.texas.gov.

Sincerely,

Caitlin Brashear

Caitlin Brashear, Historian, Federal Programs
For: Mark Wolfe, State Historic Preservation Officer

cc: Tom Keohan, Historical Architect, National Park Servce, tom_keohan@nps.gov

SA2-1

GREG ABBOTT, GOVERNOR • JOHN L. NAU, III, CHAIR • MARK WOLFE, EXECUTIVE DIRECTOR
P.O BOX 12276 • AUSTIN, TEXAS • 78711-2276 • P 512-463-6100 • F 512-475-4872 • TDD 1-800-735-2989 • thc.texas gov

SA2-5 Section 4.10.1.1 of the final EIS has been updated to describe the impacts from the Texas Connector Project. We acknowledge that the National Park Service would need to be involved regarding the National Historic Landmark.

STATE AGENCY COMMENTS

20181119-5084 FERC PDF (Unofficial) 11/19/2018 10:55:56 AM

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November 19, 2018

VIA ELECTRONIC FILING

The Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, DC 20426

Re: Port Arthur LNG, LLC; PALNG Common Facilities Company, LLC; Port Arthur Pipeline, LLC
Notice of Availability of the Draft Environmental Impact Statement for the Proposed Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector Project
Docket Nos. CP17-20-000
CP17-21-000
CP17-21-001
CP18-7-000

Dear Secretary Bose:

Texas Parks and Wildlife Department (TPWD) has reviewed the subject Draft Environmental Impact Statement (DEIS), dated September, 2018. The overall purpose of the three subject projects is to convert natural gas into liquefied natural gas (LNG) for export. The Liquefaction Project (LP), located in Jefferson County, Texas, would consist of a liquefaction facility that includes two liquefaction trains, a two-berth marine terminal for ship docking and loading, and various other infrastructure components. In addition, the LP would relocate 3.3 miles of State Highway 87 and existing pipelines and utilities that parallel the highway. Natural gas would be supplied to the LP by two, 42-inch-diameter pipelines. The Texas Connector Project (TCP) would include about 34.2 miles of pipeline with associated infrastructure and would be located in Jefferson and Orange Counties, Texas and Cameron Parish, Louisiana. The Louisiana Connector Project (LCP) would include about 130.8 miles of pipeline with associated infrastructure and would be located in Jefferson County, Texas and multiple parishes in Louisiana.

TPWD's comments below on fish and wildlife resources relate only to the Texas portions of the proposed projects.

Compensatory Mitigation for Wetland Impacts

SA3-1 Construction of the projects would impact a total of about 2,105 acres of wetlands in Texas based on data from pages ES-5, ES-6, 4-54 and 4-55. As compensation for the LP's wetland impacts, the applicant proposes placing 2.4 million cubic yards of dredged material into TPWD's J.D. Murphree Wildlife Management Area (WMA) to restore about 1,269 acres of tidally influenced coastal marsh. However, no compensation was proposed for any of the TCP's proposed wetland impacts.

Commissioners
Ralph H. Duggins, Chairman, Fort Worth
S. Reed Morian, Vice-Chairman, Houston
T. Dan Friedkin, Houston
Anna B. Galo, Laredo
Bill Jones, Austin
Jeanne W. Latimer, San Antonio
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Dick Scott, Wimberley
Kelcy L. Warren, Dallas
Lee M. Bass, Chairman-Emeritus, Fort Worth

Carter P. Smith, Executive Director

4200 SMITH SCHOOL ROAD
AUSTIN, TEXAS 78744-3291
512.389.4800
www.tpwd.texas.gov

To manage and conserve the natural and cultural resources of Texas and to provide hunting, fishing and outdoor recreation opportunities for the use and enjoyment of present and future generations.

SA3-1 PAPL has submitted an application to the USACE for compensatory mitigation using wetland mitigation bank credits and agency in-lieu fee programs for the Texas Connector Project, as discussed in section 4.4.2.2 of the final EIS. An USACE-approved Compensatory Mitigation Plan is tied to the USACE's overall consideration of whether to issue section 404 Permits for dredging activities and wetland impacts associated with construction of the Projects, including the Texas Connector Project. The USACE would ultimately determine if the Applicants' proposed mitigation is adequate and that it would compensate for any remaining impacts that can neither be avoided nor minimized such that overall project impacts on the aquatic environment are minimal on both an individual and cumulative basis. Per Environmental Recommendation 10 in section 5.2, PAPL would be required to receive written authorization from the Director of OEP before commencing construction of any project facilities and, to obtain such authorization, PAPL must file documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof), which includes those required by the USACE.

STATE AGENCY COMMENTS

20181119-5084 FERC PDF (Unofficial) 11/19/2018 10:55:56 AM

SA3-1 (cont'd)

Recommendations: The applicant should compensate for all temporary and permanent wetland impacts identified for the TCP as follows:

- Purchase the appropriate amount of in-kind wetland credits from the Pineywoods Mitigation Bank for impacts to forested wetlands and for impacts to freshwater, non-forested wetland impacts occurring within the bank's secondary service area. Specifically, this includes project features associated with the northern pipeline (i.e., milepost 20.1 to 26.55 of the mainline, lateral pipelines, access roads, additional temporary workspaces, contractor yard 3, and the north compressor station).

- Increase the amount of compensation proposed at the WMA by incorporating estuarine wetland impacts.

SA3-2

Compensatory mitigation conducted on TPWD-owned lands must be done in a manner consistent with the mission of TPWD, department policy, and applicable Texas laws (e.g., Chapter 26 of the Parks and Wildlife Code and Chapter 34 of the Natural Resources Code). Specific details of any habitat restoration activity will need to be reviewed on a case-by-case basis, and each project will need to be compatible with the mission, and short-term and long-term restoration needs and goals of TPWD at the time the project is undertaken.

Page 4-20 addresses coordination between TPWD and the applicant regarding placement of dredged material at the WMA for compensatory mitigation. However, page 4-162 states, "PALNG has entered into a lease agreement . . . with the TPWD." Although we have agreed in principle that we will accept dredged material on the WMA, and we have granted the applicant written permission to access the WMA for their planning and data gathering efforts, TPWD does not have any written lease or other agreement with the applicant to conduct compensatory mitigation at this time.

Recommendation: Section 4.8.4.1 be revised to read as follows: "PALNG is negotiating a surface use agreement with the TPWD to use the J.D. Murphree WMA as a site for placement of dredge material."

TPWD does not grant a surface use agreement for third-party habitat restoration projects on the WMA until the work is imminent, TPWD has documentation that the dredge material is clean and usable, a complete mitigation plan is in hand and approved, and a specific location(s) has been determined based on local needs at the time. In addition, TPWD does not grant exclusive access to any one entity for habitat restoration at the WMA and will continue to pursue restoration partnerships with other public and private entities. Therefore, any area(s) within the WMA may, at TPWD discretion, be restored at any time if need and availability of dredge material coincide. This may make areas within the WMA identified in the proposed compensatory mitigation plan unavailable to the applicant.

Recommendation: The applicant should continue coordination with TPWD for use of the WMA as a component of their compensatory mitigation plan.

SA3-2 PALNG has stated it would continue to work with the TPWD to develop a beneficial use of dredge material plan as part of a Surface Use Agreement for placement of material at the J.D. Murphree WMA, as discussed in section 4.2.2.1 of the final EIS.

Section 4.8.4.1 of the final EIS has been revised to reflect the recommended language.

STATE AGENCY COMMENTS

20181119-5084 FERC PDF (Unofficial) 11/19/2018 10:55:56 AM

Oyster Impacts

SA3-3 No explicit statement was provided anywhere within the DEIS on whether oyster habitat would be avoided or impacted. However, TPWD is concerned that proposed construction activities associated with the installation of the LCP pipeline could bury or smother a total of about 2.44 acres of oyster habitat within the Texas portion of Sabine Lake (based on analysis of GIS shape files associated with the applicant's oyster survey assessment dated October, 2017). Specifically, three oyster habitat areas, consisting of 0.502-acre, 0.442-acre, and 0.419-acre patch reefs, were identified in the 300-foot-wide temporary construction workspace[1] east of the horizontal directional drill (HDD) exit at milepost 0.8.

Recommendation: The HDD exit should be relocated about 768 feet toward the northeast (Latitude 30.029614° North, Longitude 95.286616° West) to avoid direct impacts to these three oyster habitat areas.

There are also two oyster habitat areas, 0.783 acre and 0.297 acre, located within the pullback area identified as ATWS-JEF-006.

Recommendation: Direct impacts to these two oyster habitat areas may be avoided by marking these areas during construction as vessel exclusion zones so that pipelines and other equipment are not placed on or dragged over oyster habitat.

SA3-4 TPWD is also concerned that vessel access, travel lanes, and associated activities (e.g., vessels carrying equipment on deck to workspaces or dragging pipes along the lake bottom) could potentially impact oyster habitat outside of the proposed temporary workspaces.

Recommendation: The applicant should develop a vessel access route and plan, and coordinate the proposed plan with the resource agencies, particularly TPWD, so that an appropriate route(s) can be identified that will avoid oyster habitats. TPWD also recommends the proposed plan include the following information:

- A map that identifies the travel lanes for each route in relation to the proposed temporary workspaces, the 50-foot-wide permanent right-of-way, and the pipeline's centerline. The map should also contain geographic coordinates (in decimal degrees) for each travel lane to include the vessel entry point, vessel exit point, and each angle (or bend).
- The designated access route(s) will be marked with reflective PVC pipe, or other suitable material and with numeric labeling, to assure that vessel operators can easily follow the access route.

[1] The 300-foot-wide temporary construction workspace includes the 50-foot-wide permanent right-of-way.

SA3-3 Section 4.6.2.1 of the final EIS has been updated based on PAPL's supplemental filing. PAPL has proposed mitigation measures for potential impacts on oyster resources, including providing compensation to the TPWD towards an oyster restoration project in the watershed, providing suitable material for an oyster cultch plant within the lake to offset impacts, or reseeding the temporary workspace after construction with live oysters or cultch material. If PAPL would modify its proposed HDD location as a result of consultations with the TPWD and to avoid oyster beds, it would be required to file a revised HDD crossing plan for FERC review and approval prior to construction.

SA3-4 See response to comment SA3-3.

STATE AGENCY COMMENTS

20181119-5084 FERC PDF (Unofficial) 11/19/2018 10:55:56 AM

SA3-4 (cont'd)

- All channel markers will be inspected daily, and all missing markers will be replaced within 12 hours.
- Establish a minimum 2.0-foot clearance between the lake bottom and the vessel bottom for all vessel entries and exits.
- Vessel drafts should not exceed the minimum water depths within the project area and access route(s).
- Tide staffs should be placed at key points along the access route(s) for vessel operator reference and record keeping.
- Vessel operators should be required to log the draft of the vessel and the tide level prior to vessel movements.
- Any oyster habitat identified within the proposed pullback area, HDD exit location, and access route(s) should be protected with boom-type silt curtains.
- The applicant should submit pre-project and post-project bottom elevation surveys along the pipeline and access route(s) to verify that no prop/wheel-washing occurred as a result of the project. Transects should be spaced a maximum of 50 feet apart and continual soundings will be taken along those transects. The applicant should take soundings along transects located on the clearly marked access route right-of-way along the centerline and 200 feet on each side of the centerline. All survey results should be submitted to the U.S. Army Corps of Engineers – Galveston District. A GPS plot of the route should be submitted with the survey results.

Essential Fish Habitat-Managed Species

SA3-5 Page 4-110 states that Bull Shark *Carcharhinus leucas* juveniles, neonates, and adults are rare within the Sabine-Neches Waterway. However, this statement is inconsistent with TPWD gillnet sampling data for shark abundances in the Sabine Lake system. Bull Sharks are often present and, in fact, are the most abundant shark species found in the Sabine Lake system.

Recommendation: The term "rare" should be replaced with "often present".

Threatened and Endangered Species

SA3-6 On October 9, 2018, the Eastern Black Rail *Laterallus jamaicensis* was proposed to be listed by the U.S. Fish and Wildlife Service (USFWS) as threatened under the federal Endangered Species Act.

Recommendation: If impacts to Eastern Black Rail are anticipated, then TPWD recommends coordination with USFWS' Texas Coastal Ecological Services Field

SA3-5 Section 4.6.3.1 of the final EIS has been revised to reflect the recommended language.

SA3-6 Section 4.7.3.5 has been added to the final EIS to address the Eastern black rail.

STATE AGENCY COMMENTS

20181119-5084 FERC PDF (Unofficial) 11/19/2018 10:55:56 AM

SA3-6 (cont'd) Office – Houston (281-286-8282), and with TPWD as appropriate, to determine avoidance or other appropriate mitigation strategies.

Texas Natural Diversity Database

SA3-7 TPWD maintains records of occurrence for legally protected and other Species of Greatest Conservation Need within the Texas Natural Diversity Database (TXNDD), and these data are publicly available by request. The TXNDD is intended to assist users in avoiding harm to rare species. The TXNDD is updated continuously and relies partially on information submitted by private parties, such as developers or their consultants. Given the small proportion of public versus private land in Texas, the TXNDD does not include a representative inventory of rare resources in the state.

Recommendation: To aid in the scientific knowledge of a species' status and current range, TPWD encourages reporting encounters of protected and rare species to the TXNDD according to the data submittal instructions located at https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/txndd/submit.phtml.

TPWD advises implementation of our previous recommendations (correspondence dated May 9, 2016 and May 8, 2017) to minimize impacts on fish and wildlife resources that are not otherwise described above.

TPWD requests that all of the above recommendations be incorporated into the Final Environmental Impact Statement. Questions can be directed to Mr. Mike Morgan (281-534-0146) in the Dickinson Marine Lab.

Sincerely,

Rebecca Hensley

Rebecca Hensley
Regional Director, Ecosystem Resources Program
Coastal Fisheries Division

RH:CR:MNM

SA3-7 FERC reviewed the Texas Natural Diversity Database when evaluating the Projects; known occurrences are reported in section 4.6.1.3 of the final EIS.

We encourage the applicant to report any encounters of rare or protected species to the Texas Natural Diversity Database.

LOCAL AGENCY COMMENTS

20181023-0026 FERC PDF (Unofficial) 10/22/2018

Sabine Pass Port Authority
P.O. Box 318
Sabine Pass, TX. 77655
409-971-2411
Mic@sabinepassportauthority.com

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REGULATORY COMMISSION

October 12, 2018

ORIGINAL

Comments on:

Port Arthur Liquefaction Project
Projects docket number CP17-20-000, CP17-21-000 and CP18-7-000

The Sabine Pass Port Authority (SPPA) supports the Port Arthur LNG project. There are several key factors concerning the Port Arthur LNG project that make the project significant to SPPA and the community of Sabine Pass.

LA1-1 First, Sempra's commitment to relocate a section of HWY 87 away from the Sabine Neches ship channel is a significant step in providing a safer route of travel for Sabine Pass residents, visiting tourists and commercial business commuters. This highway is the only route into and out of Sabine Pass and with Sempra's pledge to move the highway to higher ground and improve the roadway it will provide many years of safe, reliable travel.

LA1-2 Second, the economic development benefits of this project will be tremendous, not just during the construction phase but also during the life of the plant's operations. The construction jobs will bring a surge of workers into the area that will buy goods and services from our businesses. It is also anticipated that many of the construction workers will take up residence in our area taking advantage of the many RV camp grounds that Sabine Pass has to offer.

LA1-1 Sections 2.1.4.1, 4.2.1.4, 4.3.2.1, 4.9.6.3, and 4.12.12 of the final EIS have been updated to indicate the possible benefits of the relocation of SH 87 as noted by commenters.

LA1-2 Comments noted. Socioeconomic effects, including tax revenue, job creation, and economic development, are discussed in section 4.9 of the final EIS.

LOCAL AGENCY COMMENTS

20181023-0026 FERC PDF (Unofficial) 10/22/2018

LA1-2 (cont'd) Over the life of the Port Arthur LNG plant, the tax revenue from the plant will enable SPPA to continue to grow which will result in the creation of new jobs and greater opportunities for the residents of Sabine Pass.

Thirdly, Sempra has already proven themselves to be a trusted business partner and community advocate. They are very active in our community and continually provide updates on the project and seek the public's insight into issues that may be of a concern. They have supported our Chamber, Schools and Civic organizations and recently took a leadership role in supporting the Coastal Conservation and Texas Parks Wildlife artificial reef project in the Sabine Pass area.

We look forward to the Port Arthur LNG project being developed in the Sabine Pass area and are confident that Sempra will continue to demonstrate the ethical, professional and community commitment that they are known for.

Sincerely,

Mic Cowart

Mic Cowart
Manager
Sabine Pass Port Authority

LOCAL AGENCY COMMENTS

20181023-0028 FERC PDF (Unofficial) 10/22/2018

ORIGINAL

Greater PORT ARTHUR CHAMBER OF COMMERCE

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October 11, 2018

Secretary Kimberly D. Bose
Federal Energy Regulatory Commission
888 First St. NE, Room 1A
Washington, DC 20426

Port Arthur Liquefaction Project
Projects docket numbers (CP17-20-000, CP17-21-000, and CP18-7-000)

The board of directors of The Greater Port Arthur Chamber of Commerce wish to enter the following comments, in support of, Port Arthur LNG Project. The Greater Port Arthur Chamber of Commerce has supported the economic development of Port Arthur for 118 years, beginning in 1899.

LA2-1 From an economic development perspective, the, multi-billion-dollar, Port Arthur LNG Project will bring new jobs and taxes, directly, to the city, school, county, state and country. The 3500 construction jobs and 200 permanent jobs will support existing local retail and service business such as, restaurants, hotels, etc. and attract new local retail and service businesses.

LA2-2 Due to having to move a 3-mile portion of Highway 87 between the Intracoastal Waterway and Keith Lake Pass, will replace a worn and outdated highway. The new highway will reduce the risk of high tides blocking this important route and benefit Sabine Pass residents and industry located between Sabine Pass and Port Arthur.

LA2-1 (cont'd) Port Arthur LNG is already investing in our community organizations such as, chambers of commerce, school foundations and other non-profit organizations. They contribute directly to Port Arthur ISD, Sabine Pass ISD and Lamar State College – Port Arthur.

LA2-3 While the chamber is a pro-business, economic development corporation it recognizes the need for environmental awareness of our industries. Port Arthur LNG's project will result in the improvement of almost 1,200 acres of degraded marshland. The project will provide for the export of a clean burning fuel to countries that are reliant on oil and coal. This is a positive benefit for our region, country and the world. Sempra LNG & Midstream is partnering with Coastal Conservation Association and the Texas Parks & Wildlife Department to support the Sabine Artificial Reef Project to build a vital habitat for a variety of species along the upper Texas Coast.

LA2-4 The Port Arthur LNG project will help promote the deepening of the channel which will benefit all user of the waterway. All new ships will bring more business, new jobs, growth of revenues to local businesses. The Port of Sabine Pass and Port of Port Arthur will receive new revenue generated from the project and channel improvement as a result there of.

Sincerely,

William B. McCoy

President/CEO

LA2-1 See response to comment LA1-2.

LA2-2 See response to comment LA1-1.

LA2-3 Comments noted. The beneficial use of dredge material to restore marshland at the J.D. Murphree WMA is discussed in sections 2.1.1.10, 4.5.2.1, 4.6.1.1, 4.6.3.2, and 4.8.6.1 of the final EIS.

LA2-4 PALNG would not be deepening the channel but instead creating additional waterway to accommodate its proposed marine berth, MOF, and Pioneer Dock. FERC notes that deepening of the Port Arthur Canal is periodically conducted under the regulatory authority of the USACE.

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Choctaw Nation of Oklahoma
Historic Preservation
P.O. Box 1210 • Durant, OK 74702-1210

Gary Batton
Chief

Jack Austin, Jr.
Assistant Chief

November 6, 2018

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

RE: Docket No.'s: CP17-20-000, CP17-21-000, CP18-7-000, Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector Project

Ms. Bose,

NAT1-1 The Choctaw Nation of Oklahoma thanks FERC for the correspondence regarding the above referenced project. This project lies in the Choctaw Nation's area of historic interest. Based upon the number of Parishes in Louisiana, there is a chance of encountering Choctaw cultural or sacred sites. Before the Choctaw Nation of Oklahoma can provide comments we will need additional information.

The Choctaw Nation Historic Preservation Department requests a copy of the EIS, a copy of the cultural resources survey, and the GIS shapefiles for the project.

If you have any questions, please contact me.

Sincerely,

Lindsey D. Bilyeu

Lindsey D. Bilyeu, MS
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NAT1-1 Sections 4.10.3.1 and 4.10.3.2 of the final EIS note that this information (including GIS shapefiles) was provided to the Choctaw Nation of Oklahoma by PAPL on June 21, 2015, March 17, 2017, and September 12, 2017. On September 28, 2018, FERC issued a *Notice of Availability of the Draft Environmental Impact Statement for the Proposed Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector* and filed the draft EIS with the EPA. This formal notice of availability was issued in the Federal Register and indicated that the draft EIS was available online via FERC's eLibrary (accession number 20180928-3001).

NATIVE AMERICAN TRIBES COMMENTS

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COUSHATTA TRIBE
OF LOUISIANA
HERITAGE DEPARTMENT

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, DC 20426
via e-filing

November 19, 2018

re: Comments on Draft EIS in Docket Nos. CP17-20-000, CP17-21-000, CP17-21-001, and CP18-7-000

Dear Secretary Bose:

On behalf of the Coushatta Tribe of Louisiana, a federally-recognized Indian tribe ("CTOL"), I submit the following comments on the draft EIS issued in connection with the above-referenced dockets.

As the federal government has acknowledged in the past, the Coushatta Tribe of Louisiana has a documented and long-standing cultural, religious, and historical nexus to the lands on which the applicant in docket CP18-7-000 ("PAPL") proposes to construct the Louisiana Connector Project. The people of the Coushatta Tribe of Louisiana spent centuries settling various locations along the proposed pipeline corridor. They lived, hunted, worked, worshipped and buried their dead along this route. There is thus a significant likelihood that Tribal cultural resources, including Tribal artifacts, sites, and locations, are dispersed along the entire proposed pipeline corridor.

NAT2-1 Given the proximity of PAPL's proposed project to significant known Tribal locations, project construction could potentially harm archaeological and/or culturally, historically and religiously significant sites and artifacts. Such negative impacts would be irreversibly devastating, potentially annihilating artifacts from and evidence of the Tribe's past and erasing significant sites and locations.

NAT2-2 Despite the significant impacts such a project would have on CTOL, the Draft EIS fails to mention the Louisiana Connector Project's potential negative impacts on the Coushatta Tribe of Louisiana's cultural resources. In fact, the DEIS fails to identify *any* potential negative impacts on Tribal cultural resources, and accordingly fails to analyze those impacts or require mitigation measures to address them.

The following comments begin with a section detailing the Coushatta Tribe of Louisiana's nexus to the lands underlying the Louisiana Connector Project corridor. Section II discusses the ways in which the Louisiana Connector Project could devastatingly impact CTOL's

NAT2-1 Section 4.10.3.2 of the final EIS has been updated to include a brief history of the Coushatta Tribe of Louisiana and an acknowledgment that potential artifacts could be encountered during construction of the Louisiana Connector Project.

NAT2-2 Section 4.10 of the final EIS has been updated to include an acknowledgement that potential cultural resources of the Coushatta Tribe of Louisiana could be encountered during construction of the Louisiana Connector Project. Additionally, per agreements between PAPL and the Coushatta, PAPL has agreed to sponsor a tribal monitoring program that would hire monitors trained by the Coushatta to identify any tribal and cultural artifacts uncovered during construction. PAPL filed a revised *Unanticipated Discoveries Plan (For Project Facilities within the State of Louisiana)* developed with the Coushatta Tribe of Louisiana on January 15, 2019 (FERC Accession No. 20190116-5005).

NATIVE AMERICAN TRIBES COMMENTS

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cultural resources and outlines the mitigation measures necessary to address the project's anticipated negative impacts. Finally, Section III addresses specific sections in the DEIS that require revision and proposes concrete ways in which those sections should be revised.

In considering and implementing the recommendations below, the FERC is required under federal law to protect and promote CTOL's interests. The Supreme Court has long held that the federal government has trust responsibility to Indian tribes and that federal agencies are required to protect Tribal interests. See, e.g., *Cherokee Nation v. Georgia,* 30 U.S. 1, 17 (1831). Nearly every piece of modern legislation dealing with Indian tribes contains a statement reaffirming the trust relationship between tribes and the federal government. See, e.g., 25 U.S.C. § 458cc, 25 U.S.C. § 3101, 25 U.S.C. § 3701, 25 U.S.C. § 4043, and 20 U.S.C. § 7401. Indeed, the FERC's own policy statement acknowledges the FERC's trust obligations toward Indian tribes: "The Commission acknowledges that, as an independent agency of the federal government, it has a trust responsibility to Indian tribes and this historic relationship requires it to adhere to certain fiduciary standards in its dealings with Indian tribes." 18 C.F.R §2.1c(b).

Before turning to a description of CTOL's historic settlement along the project route, we note that one portion of the proposed pipeline is slated to run directly through the Coushatta Tribe of Louisiana's present-day federal Indian trust land. CTOL has jurisdiction over that land and, accordingly, PAPL will be required to obtain certain Tribal permits as a condition of its construction on that land. It will also be required to negotiate a Right of Way. Further, while working on Tribal land, PAPL will be subject to Tribal jurisdiction. While the majority of proposed revisions in Section III focus on cultural resources issues, some of the proposed revisions focus on ensuring that construction occurring on CTOL's federal Indian trust lands complies with CTOL law, permit requirements, and sovereignty.

I. COUSHATTA TRIBE OF LOUISIANA – HISTORIC SETTLEMENT ALONG THE PROJECT CORRIDOR

NAT2-3 The historic record clearly indicates that the Coushatta people lived along the proposed Louisiana Connector Pipeline corridor for centuries. Indeed, archaeologists and historical linguists place the Coushatta as the northernmost Muskogean group in the Mississippi River valley even prior to recorded European contact (i.e., prior to 1540).[1] Historians further agree that

[1] Examples of cartographic evidence include "Franquelin's 1684 map of Louisiana" which identifies the Tennessee River as the "Caskenampo" River, which means "Many Warriors" in Koasati, the Coushatta Tribe of Louisiana's native language (which is still spoken today among Tribal members). The names of the towns on the Upper Tennessee River were also listed as Caskenampo. The map is available at https://www.loc.gov/resource/g3300.ct000656/?r=0.297,0.301,0.392,0.238,0. Further, the Crisp et.al. Map of 1711 labels the Little Tennessee River as the "River of the Cussates and Hockeleges," and is titled "A compleat [sic] description of the province of Carolina in 3 parts : 1st, the improved part from the surveys of Maurice Mathews & Mr. John Love : 2ly, the west part by Capt. Tho. Nairn : 3ly, a chart of the coast from Virginia to Cape Florida." This map may is available at https://www.loc.gov/item/2004626926/. In addition, the Moll map of 1720 also affirms this location for

NAT2-3 See response to comment NAT2-1.

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NAT2-3 (cont'd)

Spanish explorer Hernando DeSoto encountered the Coushatta in 1540 when they were living on islands in the Tennessee River[2]. In the century following this meeting, the Coushatta migrated to the south in search of better arable lands, as well as to avoid the encroachment of Anglo-European settlers.[3]

In 1701, French explorers encountered the Coushatta within the territory of French Louisiana.[4] During the eighteenth century, all of the colonial groups and numerous explorers

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the Koasati, and also labels the river as "Cussattees or Thegalogos River." The map is available at https://www.loc.gov/resource/g3300.ct000677/?r=0.408,0.278,0.233,0.149,0.

For information on the DeSoto route and early contact between Indians and Europeans, see Hudson, C., *Knights of Spain, Warriors of the Sun* (Univ of Georgia Press, 1997), as well as Hudson, C. & Tesser, C.C., *The Forgotten Centuries: Indians and Europeans in the American South, 1521-1704* (Athens: University of Georgia Press, 1994).

The most complete study on the pre-contact archaeology of the region may be found in Jurney, D., *Diaspora of the Alabama-Koasati Indians across Southeastern North America,* Ph.D. dissertation, Southern Methodist University, December 2001. Jurney and others combine archaeological, historical, and linguistic evidence to place the Koasati within the Dallas, and possibly Mouse Creek archaeological phases in the region. It is also significant that the entire body of Creek Chiefs told President Jefferson's surveyors that they identified the northernmost border of Creek territory as running from "Old Casauda Town on Casauda Island in the Tennessee River" (National Archives, Papers of the War Department, Letters Received by the Office of the Secretary of War Relating to Indian Affairs, 1800-1823," Roll 1, Folder 2, Section J.)

[2] Jacobson, Daniel, "Koasati Culture Changes," PhD. Dissertation, Louisiana State University and Agriculture and Mechanical College, 1954. *Fulton Battise, Chief of the Tribal Council of the Alabama Coushatta Tribes and Ernest Sickey, Chairman of the Tribal Council of the Coushatta Tribe of Louisiana, and All Other Enrolled Members of the Alabama Coushatta Tribes of Texas and the Coushatta Tribe of Louisiana Respectively: Report (to Accompany H. Res. 69).* 1983. Report/ 98th Congress, 1st Session, House of Representatives: No. 98-412. Washington D.C., U.S. G.P.O., 1983.

[3] M. Boyd, "Expedition of Marcos Delgado 1686," The Florida Historical Quarterly 16:2-32. The relevant sections of Delgado's report read as follows:

> "And they replied to me that they were without any corn with which to make dry bread that in the entire year it had not rained in this province and having seen the lack of water in the road over which we passed since we were two days without securing water... On leaving here there is another place at one league distance called Qusate [NB:Coushatta] of an unknown nation which came a great distance from the north, fleeing from the English and the Chichumeco people which are the greatest conquerors *(politica)* among all the nations of Florida. This village has more than 500 warriors and is on the very bank of the river which goes to Mobila... Going from this village to the northwest bend, about 3 good leagues, is a place called Tubani also of the Qusate nation which came from the north because of persecution from the English and Chichumecos and another nation called chalaque [NB: Cherokee] which obliged them to flee from their lands in search of a place to settle, finally arriving at the margins of the river of Mobila. They have more than 200 warriors… Dated in the village of Tuave province of Cosate, Oct. 30, 1686. Marcos Delgado."

[4] In exchange for aid in subsistence, a critical factor for the poorly supplied French colony, and for military alliance, the French offered the gulf tribes protection from larger, more powerful neighboring

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NAT2-3 (cont'd)

and cartographers identify Coushatta villages and hunting camps within the area of French, and later Spanish, colonial Louisiana, i.e., in modern day towns along the proposed project corridor.[5]

Although additional groups of Koasati had migrated to French Louisiana in 1766 at the conclusion of the French and Indian war,[6] the majority of Koasati people at that time still lived in villages located on the Coosa and Tallapoosa rivers near the present-day town of Coosada, Alabama (named for the Tribe). During this time period, the Coushatta were affiliated with the Creek Confederacy, though they maintained their cultural and linguistic independence.[7] In 1797 and 1804, two large group of Coushatta migrated to the Opelousas district in Spanish-controlled Louisiana, comprised of present-day Acadia, Evangeline, St. Landry, Allen, Jeff Davis and Calcasieu Parishes. Over the next fifty years, Coushatta villages were located throughout the PAPL proposed corridor in Louisiana and Texas, including in the Calcasieu River drainage basin, Sabine River basin, Lower Trinity River basin and Mermentau River Basin (including Bayou Nezpique). These villages were predominately located in what was then known as the Neutral Territory, on lands outside the control of French, Spanish, and American colonial governments.[8] In these villages the Coushatta people lived, occupied seasonal hunting camps,

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tribes, which they were careful to identify. On May 28, 1701, the French expedition noted: "On the banks of the River there are 36 nations of Savages in different villages, including Alebamons and Conchaque" (a common French spelling for Koasati). Upon his return to France, Iberville later wrote about this encounter that "The Conchaques and Alibamons … villages may consist of four hundred families; the greater part have guns, are friends of the English and will shortly be ours." Conrad, G. R., ed., *The Historical Journal of the Establishment of the French in Louisiana, 1698-1723,* USL History Series Number 3, Lafayette, LA: 1971, pg. 60.

[5] For example, see Knight, V.J. Jr. and Adams, S. L, "A Voyage to the Mobile and Tomeh in 1700," *Ethnohistory,* xxviii (l 981), pp. 179-194; Conrad 1971, p.17; Swanton, J.R., *Early History of the Creek Indians and Their Neighbors* (Bureau of American Ethnology, Bulletin 73, 1922: 202); Crane, Verner W., *The Southern Frontier. 1670-1732* (Ann Arbor: University of Michigan Press), p. 78; Moore Alexander, *Nairne's Muskhogean Journals, The 1708 Expedition to the Mississippi River* (Jackson: University Press of Mississippi, 1988); McDowell, W.L. Jr., *Documents relating to Indian Affairs, in Colonial Records of South Carolina, 1754-1765* (Columbia: University of South Carolina Press,1970); Villiers du Terrage, Marc de.. *Documents Concernat l'histoiredes Indians de la region orientate de la Louisiana* (Paris: Au siege de la Societe, 1922).

[6] Precis du rensencement general de la Louisiana, [1766], Audencia de Santo Domingo, legajo 2585. Additionally, the January 1766 Census of the Opelousas Post in Louisiana territory included "Alibamons that had been established for one year." Both French and Spanish colonial governments referred to the Koasati, Pacana, Abihka, and Alabama collectively as "Alibamons."

[7] Langley, Linda, "The Tribal Identity of Alexander McGillivray: A Review of the Historical and Ethnographic Data," *Louisiana History: The Journal of the Louisiana Historical Association*, 46, no. 2 (Spring 2005): 231-239.

[8] In 1800 the Spanish government had identified two Coushatta villages on the eastern shores of the Sabine River (AGI, Cuba, legajo 217A, folio 560). Carter, C.E., *The Territorial Papers of the United States, Volume IX: The Territory of New Orleans, 1803-1812* (Washington, D.C.: Government Printing Office, 1940), p. 63. Support for the fact that the Caddo gave permission for the Koasati to settle on their ancestral lands at the Red River may be found in Morse, J., *A Report to the Secretary of War of the United States on Indian Affairs, 1822* (Michigan: Scholarly Press, reprinted in 1972),

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NAT2-3 (cont'd)

raised their children, buried their dead, and worshipped. Oral histories and other primary documents collected by the Coushatta Tribe place these villages at various locations along the proposed project corridor, including the present-day towns of Opelousas, Basile, Elton, Indian Village, Hickory Flats, DeQuincy, Lake Charles and Sulphur Louisiana. The Coushatta Tribe has identified possible archaeological sites and traditional cultural properties throughout the Sabine, Calcasieu and Houston River valleys, along Sabine Lake, along the Creole Trail, and throughout Bayou Blue, Bayou Nezpique, and Bayou Cannes. The Coushatta Tribe's predictive model yields an extremely high likelihood that archaeological sites and other cultural resources exist along the entirety of the proposed route.[9]

After the conclusion of the American Civil War and Texas fight for statehood, the Coushattas returned to Louisiana to live in villages near the present-day town of Indian Village, near Kinder, Louisiana. From there they took advantage of existing laws to get homestead lands

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p. 257. See also Flores, D.L., "The Red River Branch of the Alabama-Coushatta Indians: An Ethnohistory," *Southern Studies,* Spring, 1977, p. 58-60 and Sibley, John, "Historical Sketches of the Several Tribes in Louisiana South of the Arkansas River and Between the Mississippi and Rio Grande" in *American State Papers Relating to Indian Affairs, vol. IV,* p. 724. In June 1807 Indian agent for the Territory of Orleans John Sibley reported that the Coushatta "Were cutting up their corn at their village on the Sabine and were going to abandon it." Berlandier, J.L., *The Indians of Texas in 1830,* Edited and Introduced by John C. Ewers (Washington, D.C.: Smithsonian Institution Press, 1969), pp. 35, 124, 174, Plate 11. Berlandier noted: "Among other peoples, the wife becomes a comrade to her husband, willingly sharing his sorrows and his labors. Unfortunately, this attitude is to be seen only among the Conchates." *The Report of J. Francis Madero, Commissioner of the State of Coahuila and Texas,* in Fomento Archivo, Legajo no. 4, Exp. 10, reproduced from the Holdings of the Texas State Archives. The original report is in Spanish; this translation is found in Smither, H. "The Alabama Indians of Texas," *Southwestern Historical Quarterly* 36 (1932): 83-108. Throughout the Koasati are continuously referred to as a "pacifico" or friendly tribe. Winfrey, D.H., *Texas Indian Papers, Vol. I* (Austin: Texas Printing Office, 1959).

[9] This predictive model includes factors used in locating Coushatta villages from A.D. 1500 on, including but not limited to high elevation, access to both fast-moving and slower moving waterways (often near river bends and islands), arable lands ideal for growing corn, defensible positions, and location in politically neutral Territories. Although the Coushatta's historic choices to live peacefully and diplomatically in the neutral territories between warring groups has made it more difficult to locate their "footprint" during the mid-19th century, noted Texas historian Howard N. Martin has identified the Tribe's movement during this time based on a review of over 3,000 Texas land grants. In the Handbook of Texas history, available at https://tshaonline.org/handbook/online/articles/exc05, Martin states:

> "The Coushatta Trace and the Atascosito Road were the most important roads through Austin's colony… The [Coushatta] trail extended from the Coushatta village on the Sabine River through the area of ten present Texas counties and merged with the Atascosito Road in Colorado County. From the Coushatta village on the Sabine River, one major trail led eastward to Opelousas, Louisiana, and another, the Coushatta-Nacogdoches Trace, extended northwestward to the post of Nacogdoches, where the Coushattas traded and received presents from the Spanish. The Coushatta Trace began at the village on the Sabine and proceeded through the area of present Newton and Jasper counties, using the same path as the Coushatta-Nacogdoches Trace."

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NAT2-3 (cont'd) along Bayou Blue, three miles north of Elton, Louisiana, and ultimately the federal government took land into trust for the Tribe in this area.

The United States Government has long recognized and acknowledged the Coushatta Tribe's migrations, which create an historic nexus to the lands at issue in the PAPL application, most recently in the Congressional Record. *See* 164 Cong. Rec. S4502 (daily ed. June 27, 2018) (Statement of Senator Cassidy and Senator Kennedy) (acknowledging the Coushatta Tribe's history and its migration from Tennessee to Texas and back to Louisiana). The federal government's acknowledgment and recognition of Coushatta's migrations is centuries-long.[10]

In short, the Coushatta Tribe of Louisiana's well-established historical record clearly indicates that, for centuries, the Tribe settled along lands that are within the proposed project corridor.

II. ANTICIPATED NEGATIVE IMPACTS AND PROPOSED MITIGATION MEASURES

NAT2-4 Given the Coushatta Tribe of Louisiana's historic settlement along the proposed project corridor, project construction could potentially harm archaeological and/or culturally, historically and religiously significant sites and artifacts. Such negative impacts would irreversibly damage the Tribe's cultural heritage and the moral fabric of its community, potentially annihilating artifacts from and evidence of the Tribe's past and erasing significant sites and locations. The FERC has a federal trust responsibility to the Tribe to mitigate this potential harm to the greatest extent possible.

In order to mitigate these potentially devastating negative impacts, all ground-disturbing construction activities must be monitored by specially-trained Tribal cultural resource monitors tasked with visually monitoring all ground-disturbing construction activities to determine whether any cultural resources are present. The specialized training required of cultural resource monitors ensures their expertise and professionalism in identifying sites, artifacts and locations that are significant to tribes in general and to the Coushatta Tribe of Louisiana in particular. The presence of such monitors serves two purposes. First, it ensures that to the extent cultural resources are uncovered during construction, individuals trained to identify such resources will be on hand to identify them as such. Second, it ensures that when cultural resources are uncovered and disturbed, they can be documented, preserved and removed (assuming removal is possible and permissible under applicable law) in a timely manner and, upon documentation and removal, construction can resume quickly.

[10] *See, e.g.,* Report of Special Agent John Sibley to Congress (American State Papers, vol. 4:724, Washington, D.C.: Gales & Seaton, 1832) (describing Coushatta's migration from "Bayou Chicot, in Opelousas district" to the "river Sabine … on the east bank, where they now live…"); letter from Ernest Stevens, Acting Commissioner of the Bureau of Indian Affairs to Emery A. Johnson, Director of Indian Health Services, Jan. 5, 1971 (describing the Coushatta migration from Tennessee to Texas and Louisiana); memorandum dated June 13, 1973 from Raymond V. Butler, Acting Director, Office of Indian Services, to the Secretary of the Interior (describing the Coushatta people's migration through Louisiana to eastern Texas and back to Louisiana).

NAT2-4 See response to comment NAT2-2.

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NAT2-4 (cont'd)

In addition to Tribal cultural resource monitors, the Coushatta Tribe of Louisiana THPO must be notified immediately upon discovery of cultural resources, and must be meaningfully involved in the process of identifying such resources, documenting them in situ, and determining their disposition.

Taken together, Tribal cultural resource monitoring during construction and the robust involvement of the CTOL THPO will ensure the documentation and preservation of Tribal cultural resources while enabling construction to proceed with as little disruption as possible.

As of this writing, the Coushatta Tribe of Louisiana is working with the applicant, PAPL, to reach an agreement on the terms of an Unanticipated Discoveries Plan reflecting the mitigation measures discussed here. In a meeting held on October 16th between FERC, CTOL and PAPL, PAPL agreed to file any such plan with FERC by the end of December. If a revised Unanticipated Discoveries Plan is filed by PAPL by the December deadline, as per FERC's direction, that plan will become binding on PAPL and should be referenced in the FEIS as proposed in Section III below. If, however, PAPL does not file such a plan as of the December deadline, CTOL will file its own proposed UDP, including Tribal cultural resource monitoring terms and designation of the Coushatta THPO in handling cultural resource finds. Accordingly, in the event CTOL and PAPL do not reach an agreement, CTOL hereby asks that FERC impose the CTOL plan, and full compliance with it, upon PAPL as a condition of any Certificate or other Authorization for the Louisiana Connector Project.

III. PROPOSED REVISIONS TO DRAFT EIS

In light of the above, we request that the DEIS be revised as follows. Insertions are marked by underline and deletions are marked by ~~strikethrough~~.

Proposed Revisions, Executive Summary:

NAT2-5

Page ES-4. The last paragraph on this page should include the following sentence:

In addition, on June 13, 2017, we attended a meeting hosted by the Coushatta Tribe of Louisiana to discuss the project and the FERC process. During this meeting the Coushatta THPO noted that the project raised concerns relating to cultural resources which required further study and analysis. Representatives from PAPL also attended this meeting. On October 16, 2018, we held a government-to-government meeting with the Coushatta Tribe of Louisiana. At that meeting we discussed, among other things, the project's anticipated negative impacts on Tribal cultural resources and mitigation measures necessary to address such impacts. Also on October 16, 2018, we met with the applicant and the Tribe to address cultural resource impacts and mitigation.

NAT2-5 The Executive Summary of the final EIS has been updated to further describe our meetings with the Coushatta Tribe of Louisiana.

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NAT2-6 **Page ES-5.** Under the heading "PROJECT IMPACTS", in the third paragraph which begins with the words "Construction of the liquefaction Project would result in impacts on ….", add the following:

> "Construction of the Louisiana Connector Project would affect about 2,807 acres of agricultural land, open land, forest land, silviculture land, rangeland, residential land, industrial/commercial land, and open water, of which about 771 acres would be permanently impacted. It would also affect lands to which the Coushatta Tribe of Louisiana has historical, cultural and religious ties, and any Tribal cultural resources located along the project corridor. About 14.7 miles, or 43 percent…"

NAT2-7 **Page ES-5.** The last paragraph under the heading "PROJECT IMPACTS" should read:

> "Based on our analysis, scoping, and agency consultations, the major issues associated with the Projects are impacts on wetlands, visual resources, cultural resources, air quality, noise, and cumulative impacts."

NAT2-8 **Page ES-6.** The following section should be included immediately after the section entitled "VISUAL RESOURCES":

> "CULTURAL RESOURCES
>
> The Louisiana Connector Project corridor is located squarely within lands to which the Coushatta Tribe of Louisiana has extensive historical, cultural and religious ties. The Coushatta people are known to have migrated, temporarily settled and/or lived in and around the project footprint.
>
> A comprehensive account of the Coushatta Tribe of Louisiana's history and nexus to the land at issue is included at Appendix [number]. In summary, the Coushatta Tribe of Louisiana initially moved from their villages in the Tennessee River area and settled in villages in the Guntersville Basin area of what is now northern Alabama, then moved south to join the political organization that became known as the Creek Confederacy. In 1797 the majority of the Coushatta people migrated from Alabama to what was then Spain's Opelousas District (a large Spanish-governed territory prior to the Louisiana Purchase), comprised of present-day Acadia, Evangeline, St. Landry, Allen, Jeff Davis and Calcasieu Parishes, which are squarely within the PAPL project corridor. From there, the Coushattas migrated and settled in several additional locations along the proposed PAPL project corridor, including the Calcasieu River Drainage Basin, Sabine River Basin, Lower Trinity River Basin, and Mermentau River Basin (including Bayou Nezpique). They lived in multiple villages throughout this area, occupied seasonal hunting camps, raised their children, buried their dead, and worshipped in numerous places along this route. The Coushatta Tribe has identified archaeological sites and traditional cultural properties throughout the Sabine, Calcasieu and Houston River

NAT2-6 The Executive Summary is intended to provide an overview of the Projects and does not specifically acknowledge landowners.

NAT2-7 Existing cultural resources and the Projects' potential impacts on cultural resources are addressed in section 4.10 of the final EIS.

NAT2-8 The recommended language has been added to section 4.10.3.2 of the final EIS.

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NAT2-8 (cont'd)

valleys, along Sabine Lake, along the Creole Trail, and throughout Bayou Blue, Bayou Nezpique, and Bayou Cannes. The Coushatta people arrived at their current location, in and around the present-day town of Elton, Louisiana, in 1880.

In light of their centuries-long settlement of lands in and around the PAPL project corridor, there exists a significant and strong likelihood that project construction would disturb and irreversibly destroy Tribal cultural resources."

NAT2-9

Page ES-9. If PAPL files a revised Unanticipated Discoveries Plan that includes an acceptable Tribal cultural resource monitoring program prior to issuance of the FEIS, the bullet-point list on page ES-9 should include the following:

- PAPL's proposed Tribal cultural resources monitoring program in its revised Unanticipated Discoveries Plan would adequately address impacts on Tribal cultural resources.

If, however, PAPL *does not file* a revised Unanticipated Discoveries Plan that includes an acceptable Tribal cultural resource monitoring program prior to issuance of the FEIS, the bullet-point list on page ES-9 should include the following:

- The FERC's condition relating to Tribal cultural resource monitoring during construction of the Louisiana Connector Project, presented in section 5.2 of the EIS, would require and ensure that that appropriate mitigation measures adequately address impacts on Tribal cultural resources.

In addition, if PAPL *does not file* a revised Unanticipated Discoveries Plan that includes an acceptable Tribal cultural resource monitoring program prior to issuance of the FEIS, the final paragraph on page ES-9 should state:

"In addition, we developed site-specific mitigation measures that PALNG and PAPL would implement to further reduce the environmental impacts, including impacts to Tribal cultural resources, that would otherwise result from construction and operation of the projects…"

Proposed Revisions, Section 1:

NAT2-10

Page 1-11. The following text should be added at the end of section 1.3.1.2:

"On June 13, 2017, we attended a meeting hosted by the Coushatta Tribe of Louisiana to discuss the project and FERC process with representatives from PAPL. At that meeting the Coushatta THPO provided comment regarding the Coushatta Tribe's concerns relating to Tribal cultural resources throughout the project corridor.

On October 16, 2018 we held a government-to-government meeting with the Coushatta Tribal Council, the governing body of the Coushatta Tribe of Louisiana. That meeting

NAT2-9 The recommended language has been added to the Conclusions section of the Executive Summary in the final EIS.

NAT2-10 The recommended language has been added to section 1.3.1.2 of the final EIS.

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NAT2-10 (cont'd)

focused primarily on the Tribe's significant historical, archaeological, cultural and religious nexus to the entire pipeline corridor, on the significant Tribal interests that could be negatively impacted during pipeline construction, and on ways such impacts may be mitigated.

Also on October 16, 2018, we met with representatives of PAPL together with Tribal representatives to discuss cultural resource impacts and mitigation issues."

NAT2-11

Page 1-19. Table 1.5-3 indicates that a request for a right of way grant was filed with the Bureau of Indian Affairs as of "June 2018." As of this writing BIA has informed us that no such request has been filed.

In addition, Table 1.5-3 fails to list the Tribal permits PAPL is required to obtain as a condition of construction of that portion of the Louisiana Connector Project slated to traverse the Coushatta Tribe of Louisiana's federal Indian trust land, or even to mention that such permits are required. The Table should, at the very least, indicate that Tribal permits are required prior to construction on Tribal lands.

Proposed Revisions, Section 2:

NAT2-12

Page 2-28. Section 2.4 lists additional plans and measures PAPL would use to avoid or reduce various project impacts. One of the plans listed is the "Unanticipated Discoveries Plan." This reference should be revised to indicate that it refers to that version of the plan that includes Tribal cultural resource monitoring by the Coushatta Tribe. The reference should state:

- *Unanticipated Discoveries Plan (Revised [date])*

To the extent PAPL files a revised Unanticipated Discoveries Plan that includes an acceptable Tribal cultural resource monitoring program prior to finalization of the FEIS, the bullet point list on page 2-28 should reference that plan as noted above. If, however, PAPL does not file a revised Unanticipated Discoveries Plan that includes an acceptable Tribal cultural resource monitoring program prior to finalization of the FEIS, the Coushatta Tribe of Louisiana reserves the right to present such a plan and asks that the FEIS recommend that such plan be included as a condition of PAPL's Certificate or Authorization.

NAT2-13

Page 2-48. Section 2.5.1 addresses compliance monitoring. This section addresses the EI's general responsibilities during construction, but does not specifically reference the EI's involvement in cultural resource monitoring or in ensuring the cultural resource monitoring program is properly implemented. Given the sensitivity relating to cultural resource monitoring, this aspect of the EI's work should be specifically called out. Accordingly, the text in the third paragraph on page 2-48 should be revised as follows:

NAT2-11 Table 1.5-3, which lists the environmental permits and authorizations needed for the Louisiana Connector Project, has been updated to acknowledge that tribal permits are required and pending.

NAT2-12 PAPL field a revised *Unanticipated Discoveries Plan (For Project Facilities within the State of Louisiana)* developed with the Coushatta Tribe of Louisiana on January 15, 2019 (FERC Accession No. 20190116-5005).

NAT2-13 The EI is responsible for ensuring that the environmental obligations of the project are implemented, which would include those described in the *Unanticipated Discoveries Plan*.

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NAT2-13 (cont'd)

"The EI's responsibilities include ensuring the environmental obligations, conditions, and other requirements of permits and authorizations for the Projects are met and that the Unanticipated Discoveries Plan, including its Tribal cultural resource monitoring requirements, are implemented. PALNG's and PAPL's EI's would inspect all construction and mitigation activities to ensure environmental compliance. EI's ~~may~~ would also oversee other cultural resource and/or biological monitors that monitor and evaluate construction impacts on Tribal cultural and other resources as specified in this EIS.

Proposed Revisions, Section 4:

NAT2-14

Page 4-50. Section 4.4, addressing wetlands, does not address the wetlands located on the Coushatta Tribe of Louisiana's federal Indian trust lands because the survey results for those lands had not been filed when the DEIS issued. That survey has been conducted and finalized, and its conclusions regarding wetlands (and other environmental issues) should be included in the Final EIS.

NAT2-15

Pages 4-212, 4-213. Section 4.10.1 addresses cultural resources surveys. The paragraph that begins at the bottom of page 4-212 and continues on page 4-213 describes a Phase I Cultural Resources Survey report conducted for the Louisiana Connector Project and states that the report was provided "to the FERC and Louisiana SHPO."

Importantly, that report was *not* provided to the Coushatta Tribe of Louisiana or its Tribal Historic Preservation Officer prior to its finalization. Further, the report was prepared without any substantive consultation with the Coushatta Tribe of Louisiana's federally-recognized Historic Preservation Officer. Thus, despite CTOL's clear historic nexus to the land at issue in the report, CTOL did not have an opportunity to comment on or contribute to the report or supplement and correct its findings and omissions. Further, even after the report was submitted to the FERC, at which point CTOL became aware of its existence, CTOL asked for a copy of the report but was not given a copy until *after* the draft EIS had issued.

As a result, the Draft EIS was based on a Phase I Cultural Resources report that was fatally flawed: It was focused on lands of tremendous significance to the Coushatta Tribe of Louisiana but was written without substantive consultation with that Tribe, and it completely failed to address the Tribe's historic, cultural and religious interests in and nexus to the lands. In fact, while the report appears to have pulled some paltry and largely insignificant facts about the Coushatta from a tribal website, it does not reflect any significant research on the Tribe or its history or its nexus to the lands at issue in the report. And, more importantly, it fails to discuss CTOL's centuries-long nexus to the land it purported to study. The Coushatta Tribe of Louisiana will file comments on, and supplements to, that report under separate cover.

The text at the very top of page 4-213 should be supplemented as follows:

NAT2-14 This information has not yet been filed with FERC. However, PAPL has filed an application with the USACE, which has jurisdictional authority pursuant to section 404 of the CWA (33 USC 1344) over the discharge of dredged or fill material into WOUS. Section 4.4.2.2 of the final EIS has been updated to note that, based on desktop wetland information provided to FERC and listed in appendix K, the Louisiana Connector Project would cross about 2,893 feet of wetlands on Coushatta tribal trust lands, affecting about 11.6 acres during construction (1.4 acres of PEM wetland and 10.2 acres of PFO wetland) and 5.5 acres (PFO wetland) during operation of the project.

NAT2-15 Section 4.10.1.2 of the final EIS has been updated to acknowledge the status of the cultural resources surveys on Coushatta tribal trust lands.

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NAT2-15 (cont'd)

"PAPL provided the resulting Phase I Cultural Resources Survey report to the FERC and Louisiana SHPO. After issuance of the DEIS, PAPL also provided a copy of the resulting report to the Coushatta Tribe of Louisiana. Upon reviewing the report the Coushatta Tribe of Louisiana identified significant omissions and inaccuracies in the report's account of Tribal history relating to the project corridor and supplemented the report in a separate filing."

NAT2-16

Page 4-214. Section 4.10.2 addresses PAPL's Unanticipated Discoveries Plan. This section should be revised as follows:

If PAPL files a revised Unanticipated Discoveries Plan that includes an acceptable Tribal cultural resource monitoring program prior to finalization of the DEIS, the section should state:

"…We requested revisions to the plan. PAPL provided a revised plan which we ~~find~~ initially thought may be acceptable, but which has since proven to be insufficient because it failed to provide for sufficient involvement of the Coushatta Tribe of Louisiana THPO and to require Tribal cultural resource monitoring during ground-disturbing construction activities. ~~In a letter dated December 5, 2017, the Louisiana SHPO concurred with the plan. The Texas SHPO has not commented on the plan.~~ PAPL subsequently provided a further-revised plan, which includes Tribal cultural resource monitoring and adequate involvement of the Coushatta THPO. We find the further revised plan (dated [date]) acceptable. The Coushatta Tribe of Louisiana THPO concurred with the plan."

If PAPL *does not file* a revised Unanticipated Discoveries Plan that includes an acceptable Tribal cultural resource monitoring program prior to finalization of the DEIS, the section should state:

"…We requested revisions to the plan. PAPL provided a revised plan which we ~~find~~ initially found acceptable, but which has since proven to be insufficient because it failed to provide for sufficient involvement of the Coushatta Tribe of Louisiana THPO and to require Tribal cultural resource monitoring during ground-disturbing construction activities. ~~In a letter dated December 5, 2017, the Louisiana SHPO concurred with the plan. The Texas SHPO has not commented on the plan.~~ We advised PAPL that it should work with the Coushatta Tribe of Louisiana to revise its plan to adequately mitigate anticipated negative impacts on Tribal cultural resources. PAPL failed to revise its plan as required. The Coushatta Tribe of Louisiana submitted a proposed plan that adequately addresses all cultural resource concerns, and we find that plan acceptable. Accordingly, we recommend that the Unanticipated Discoveries Plan attached at Appendix [number] be included as a condition of any Certificate or Authorization issued to PAPL for the Louisiana Connector Project."

NAT2-17

Page 4-215. Section 4.10.3.2 addresses Native American Consultation on the Louisiana Connector Project. The section should be updated as follows, to address the events that occurred

NAT2-16 Section 4.10.2 of the final EIS has been updated to acknowledge the status of the *Unanticipated Discoveries Plan*. PAPL filed a revised *Unanticipated Discoveries Plan (For Project Facilities within the State of Louisiana)* developed with the Coushatta Tribe of Louisiana on January 15, 2019 (FERC Accession No. 20190116-5005).

NAT2-17 Section 4.10.3.2 of the final EIS has been updated to address the government-to-government consultation and revisions to the *Unanticipated Discoveries Plan*.

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NAT2-17 (cont'd)

after the DEIS issued. Starting with the second paragraph on page 4-215, the text should be revised as follows:

> "We attended a meeting on June 13, 2017, hosted by the Coushatta Tribe of Louisiana and PAPL to discuss the status of cultural resources surveys and to offer the Tribe an opportunity to identify traditional cultural properties or provide comments about the Louisiana Connector Project. The Coushatta Tribe of Louisiana indicated that given its history of having lived along the entire project corridor for centuries, it had significant cultural resource concerns with the project as a whole. The CTOL requested, as a first step, that a traditional cultural properties survey be performed.

The following paragraph, commencing with the words "PAPL separately contacted seven tribes," should similarly be revised to include later developments:

> "…PAPL indicated that it employed Coushatta tribal members to participate in surveys on tribal lands, and that it was willing to employ monitors on Coushatta lands. ~~No additional responses have been received~~.
>
> On June 21, 2018 the Coushatta Tribe of Louisiana notified the FERC in writing that it sought to conduct government-to-government consultations to discuss the Louisiana Connector Project, and specifically to discuss the Project's anticipated negative impacts on Tribal cultural resources. A government-to-government meeting was scheduled for October 16, 2018, as was a three-way meeting, between FERC, the Tribe, and PAPL, to discuss cultural resources issues. On September 7, 2018 Coushatta filed a notice again raising concerns regarding Tribal cultural resources, noting that the DEIS should address those concerns, and asking that the FERC refrain from issuing the DEIS until after the October 16th meetings. The DEIS issued on September 28, 2018.
>
> On October 16, 2018, FERC staff met with the Coushatta Tribe of Louisiana on a government-to-government basis.
>
> Also on October 16, 2018, FERC staff met with representatives of both PAPL and the Coushatta Tribe of Louisiana to discuss the project's potential negative impacts on Tribal cultural resources and on ways to mitigate those impacts. FERC staff advised PAPL that it should work with the Coushatta Tribe of Louisiana to revise its Unanticipated Discoveries Plan to adequately mitigate anticipated negative impacts on Coushatta Tribal cultural resources.
>
> On [date] the Coushatta Tribe of Louisiana filed comments supplementing the previously-filed Phase I Cultural Resources survey which had failed to include relevant historical, cultural and religious information about the Tribe's activity on the project corridor.
>
> On [date] [PAPL filed a revised Unanticipated Discoveries Plan, to which the Coushatta Tribe concurred, that included a Tribal cultural resource monitoring program and adequate notification of the Coushatta THPO in the event of unanticipated discoveries.] *Alternatively*:[Although we advised PAPL that it should work with the Coushatta Tribe

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NAT2-17 (cont'd)

of Louisiana to revise its plan to adequately mitigate anticipated negative impacts on Tribal cultural resources. PAPL failed to revise its plan as required. The Coushatta Tribe of Louisiana submitted a proposed plan that adequately addresses all cultural resource concerns, and we find that plan acceptable. Accordingly, we recommend that the Unanticipated Discoveries Plan attached at Appendix [number] be included as a condition of any Certificate or Authorization issued to PAPL for the Louisiana Connector Project.]"

NAT2-18

Page 4-216. The first paragraph in section 4.10.4.2 should be revised as follows:

"The process of complying with section 106 of the NHPA has not been completed for the Texas Connector and Louisiana Connector Projects. PAPL has not completed cultural resources surveys and NHRP evaluations, and consultation with the Texas and Louisiana SHPO's and the Coushatta Tribe of Louisiana THPO is not yet complete."

Further, subsection (a) of the bold-texted recommendation on page 4-216 should be revised as follows:

"a. PAPL files with the Secretary all outstanding survey reports, evaluation reports, special studies, and any required avoidance/treatment plans, and the Texas and Louisiana SHPO's and the Coushatta Tribe of Louisiana THPO's comments (as applicable) on these."

NAT2-19

Page 4-305. Section 4.12.8 includes an analysis of pipeline safety standards. Given that part of the project is slated for construction on the Coushatta Tribe of Louisiana's federal Indian trust lands, over which the Coushatta Tribe of Louisiana has and exercises jurisdiction, the FERC staff's recommendations should include a requirement that the Coushatta Tribe of Louisiana receive the same notifications, and be included in developing the same plans, as other jurisdictions through whose land the pipeline will run.

Thus, for example the final paragraph on page 4-305 discusses a liaison program and meetings with public authorities. The FEIS should explicitly require that CTOL officials be included in the liaison program and consulted in such meetings. Similarly, the first paragraph on page 4-306 discusses the creation of a list of relevant contacts. Coushatta Tribe of Louisiana Tribal officials should be included in that list, including the Tribal Chairperson, Tribal Fire Department, Tribal Police Department, Tribal EMS personnel, and all other relevant Tribal officials and departments. Accordingly, pages 4-305 to 4-306 should be revised to include notification of, and consultation with, CTOL Tribal officials.

NAT2-20

Page 4-341. Section 4.13 deals with cumulative impacts, and section 4.13.2.11 deals specifically with cumulative impacts on cultural resources. The second paragraph of section 4.13.2.11 indicates that PAPL consulted with the Texas and Louisiana SHPOs in regard to the impact of

NAT2-18 Section 4.10.4.2 of the final EIS has been updated to include the recommended language.

NAT2-19 We anticipate that this would include tribal resources (e.g., police, fire, emergency services), but this requirement is under the DOT's jurisdiction, not FERC's; thus, the DOT is the agency responsible for overseeing and enforcing the proper safety notifications. We encourage the Coushatta Tribe of Louisiana to contact PAPL to request this meeting and training.

NAT2-20 Section 4.13.2.11 of the final EIS acknowledges PAPL's development and implementation of a tribal monitoring plan. PAPL filed a revised *Unanticipated Discoveries Plan (For Project Facilities within the State of Louisiana)* developed with the Coushatta Tribe of Louisiana on January 15, 2019 (FERC Accession No. 20190116-5005).

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NAT2-20 (cont'd) pipeline projects. However, the Coushatta THPO was not consulted prior to issuance of the DEIS.

As indicated above, the Coushatta Tribe of Louisiana has historic, cultural and religious ties to the entire Louisiana Connector Project construction corridor. Any projects on or crossing that corridor increase the chances of disturbance and destruction of Tribal cultural resources. The greater the number of projects in the affected area, the greater the cumulative negative impacts of such projects on Tribal resources.

Such cumulative impacts would be significantly reduced by the presence of Tribal cultural resource monitors during any ground-disturbing activities performed in the course of construction. Such monitoring should be required either as a part of a filed Unanticipated Discoveries Plan or as a condition of any Certificate or Authorization.

Proposed Revisions, Section 5:

NAT2-21 **Page 5-7.** Section 5.1 includes a summary of the EIS's environmental analysis. Section 5.1.3.3, discussing impacts to wetlands, should be revised to include the impacts to Tribal wetlands described in the phase I environmental survey conducted on the Coushatta Tribe of Louisiana's federal Indian trust land.

NAT2-22 **Page 5-21.** Section 5.1.11 includes a summary of conclusions relating to cultural resources. The section should be revised to address issues such as the Coushatta Tribe of Louisiana's historic, cultural and religious nexus to the Louisiana Connector Project corridor, the requirement that the Coushatta THPO be notified and consulted with regard to all cultural resource issues, and the requirement that a revised UDP, approved by the Coushatta THPO, include a Tribal cultural resource monitoring plan and timely and adequate notification of the Coushatta THPO in the event of an unanticipated discovery.

The second-to-last paragraph on page 5-21 should be revised in one of two ways. If PAPL files a revised Unanticipated Discoveries Plan that includes an acceptable Tribal cultural resource monitoring program prior to finalization of the FEIS, the paragraph should state:

> "PALNG and PAPL provided FERC and ~~each~~ the Texas SHPO an unanticipated discoveries plan for Texas ~~and Louisiana~~ which would be implemented if cultural resources or human remains are encountered during construction of the Project~~s~~. The plan also provides for the notification of Native American tribes in the event of any discovery. ~~In a letter dated December 15, 2017, the Louisiana SHPO concurred with the plan. The Texas SHPO has not commented on the plan.~~
>
> As to the Louisiana Connector Project, PAPL filed a revised Unanticipated Discoveries Plan on [date], which includes Tribal cultural resource monitoring and adequate involvement of the Coushatta THPO. We find the further revised plan (dated [date]) acceptable. The Coushatta Tribe of Louisiana THPO concurred with the plan."

NAT2-21 Section 4.4.2.2 of the final EIS has been updated to indicate that wetlands would be impacted on tribal lands. Section 5 is meant to provide a general overview of impacts and not the specific analysis contained in section 4.

NAT2-22 Section 5.1.11 of the final EIS has been updated to acknowledge that PAPL filed a revised *Unanticipated Discoveries Plan (For Project Facilities within the State of Louisiana)* developed with the Coushatta Tribe of Louisiana on January 15, 2019 (FERC Accession No. 20190116-5005).

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NAT2-22 (cont'd)

If PAPL *does not file* a revised Unanticipated Discoveries Plan that includes an acceptable Tribal cultural resource monitoring program prior to finalization of the FEIS, the section should state:

> "PALNG and PAPL provided FERC and ~~each~~ the Texas SHPO an unanticipated discoveries plan for Texas ~~and Louisiana~~ which would be implemented if cultural resources or human remains are encountered during construction of the Project~~s~~. The plan also provides for the notification of Native American tribes in the event of any discovery. ~~In a letter dated December 15, 2017, the Louisiana SHPO concurred with the plan. The Texas SHPO has not commented on the plan.~~
>
> As to the Louisiana Connector Project, although we advised PAPL of the need to work with the Coushatta Tribe of Louisiana to file a plan that adequately mitigates anticipated negative impacts on CTOL Tribal cultural resources, PAPL failed to submit a revised plan as required. The Coushatta Tribe of Louisiana submitted a proposed plan that adequately addresses all cultural resource concerns, and we find that plan acceptable. Accordingly, we recommend that the Unanticipated Discoveries Plan attached at Appendix [number] be included as a condition of any Certificate or Authorization issued to PAPL for the Louisiana Connector Project."

NAT2-23

Page 5-22. The first paragraph on page 5-22 should be revised as follows:

> "..which was provided on September 12, 2017. On June 13, 2017, at a meeting with FERC and PAPL hosted by the Coushatta Tribe of Louisiana, the Coushatta THPO provided comment regarding the Coushatta Tribe's concerns relating to Tribal cultural resources throughout the project corridor. In a June 21, 2018 letter, the Coushatta Tribe of Louisiana again raised concerns regarding the project's anticipated impacts on cultural resources and requested government-to-government consultation and a meeting to discuss the project's anticipated negative impacts on Tribal cultural resources and mitigation thereof.
>
> On October 16, 2018 we held a government-to-government meeting with the Coushatta Tribal Council, focusing primarily on the Tribe's significant historical, archaeological, cultural and religious nexus to the entire pipeline corridor, on the significant Tribal interests that could be negatively impacted during pipeline construction, and on ways such impacts may be mitigated. Also on October 16, 2018, we met with representatives of PAPL together with Tribal representatives to discuss cultural resource impacts and mitigation issues. ~~No other responses have been received by FERC to date regarding the Louisiana Connector Project. In addition, we communicated with the Coushatta Tribe of Louisiana in June and August 2018, and have arranged to meet with the Tribe in October 2018.~~

If PAPL files a revised Unanticipated Discoveries Plan that includes an acceptable Tribal cultural resource monitoring program prior to finalization of the FEIS, the next sentence should state:

NAT2-23 Section 5.1.11 of the final EIS has been updated to acknowledge the status of consultations with the Coushatta Tribe of Louisiana.

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NAT2-23 (cont'd)

> On [date] PAPL filed a revised Unanticipated Discoveries Plan, approved by the Coushatta THPO, that incorporates a Tribal cultural monitoring program intended to address the project's negative impacts on Tribal cultural resources.]

Alternatively, if PAPL does not file a revised Unanticipated Discoveries Plan, that includes an acceptable Tribal cultural resource monitoring program prior to finalization of the FEIS, the next sentence should state:

> On [date] the Coushatta Tribe of Louisiana filed a revised Unanticipated Discoveries Plan that incorporates a Tribal cultural monitoring program intended to address the project's negative impacts on Tribal cultural resources. We find that plan, attached hereto at Appendix [number], acceptable and recommend that it be incorporated as a condition of any Certificate or Authorization issued to PAPL for the Louisiana Connector Project."

The next paragraph, at the end of section 5.1.11, should be revised as follows:

> "Because the process of complying with section 106 of the NHPA has not been completed for the Projects, we are recommending that prior to construction, PALNG and PAPL file all outstanding information, survey reports, evaluation reports, special studies, and plans, and the SHPO's and Coushatta THPO's comments on these."

NAT2-24

Page 5-27. Section 5.2 of the DEIS, commencing at page 5-26, includes FERC staff's recommended mitigation measures. Recommendation number 4, on page 5-27, should be revised as follows:

> "PALNG and PAPL shall file affirmative statement with the Secretary, certified by a senior company official, that all company personnel, EIs, and contractor personnel will be informed of the EI's authority, will undergo training with regard to Tribal cultural resources, and have been or will be trained on the implementation of the environmental mitigation measures (including, without limitation, Tribal cultural resource monitoring and THPO notification) appropriate to their jobs **before** becoming involved with construction and restoration activities."

NAT2-25

Pages 5-28, 5-29. Recommendation number 7, which begins on page 5-27 and continues on page 5-28, should be revised as follows:

> "c. the number of EIs assigned per spread and how PALNG and PAPL will ensure that sufficient personnel are available, including Tribal cultural monitors, to implement the environmental mitigation (including cultural resource mitigation)."

Recommendation number 8 should be revised at subsections b and e to provide:

> "b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures including the cultural resource mitigation measures, required in the contract (see condition 7) and any other authorizing document.

NAT2-24 PAPL field a revised *Unanticipated Discoveries Plan (For Project Facilities within the State of Louisiana)* developed with the Coushatta Tribe of Louisiana on January 15, 2019 (FERC Accession No. 20190116-5005). Section 3.1 of PAPL's revised *Unanticipated Discoveries Plan* describes the training, orientation, and responsibilities of construction personnel. For example, the EI will devote adequate time to training Project Personnel on identifying the types of Indian tribal archaeological resources they may encounter during Ground-Disturbing Activities, and training will occur as part of the Project's pre-construction on-site training program for PAPL and/or contractor supervisors and inspectors.

NAT2-25 PAPL field a revised *Unanticipated Discoveries Plan (For Project Facilities within the State of Louisiana)* developed with the Coushatta Tribe of Louisiana on January 15, 2019 (FERC Accession No. 20190116-5005). Section 3.1.2 of PAPL's revised *Unanticipated Discoveries Plan* describes the number of tribal cultural resources monitors (TCRM) that will be used during construction. For example, TCRMs will be present during Ground-Disturbing Activities; to the extent the pipeline route is divided into several concurrent spreads, not less than two TCRMs will perform monitoring activities at each spread; and Coushatta Historic Preservation Office and the EI will work together to determine how many additional TCRMs will be used in additional locations.

The recommended modifications to Environmental Recommendations 8.b and 8.e (with the exception of adding the Coushatta Tribe of Louisiana for Tribal Trust Lands) have not been made as they are already included as part of the broader standard condition.

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e. responsible for documenting compliance with the environmental conditions (including cultural resource conditions) of the Order, as well as any environmental conditions/permit requirements imposed by other federal, state, Coushatta Tribe of Louisiana Tribal, or local agencies; and"

NAT2-26

Page 5-29. Condition number 9 should be revised to include two additional status reports, as follows:

"a listing of all Tribal cultural resources encountered;

a description of actions taken pursuant to any discovery of cultural resources;"

NAT2-27

Page 5-32. Condition number 26, subsection (a), should be revised as follows:

"a. PAPL files with the Secretary all outstanding survey reports, evaluation reports, special studies, and any required avoidance/treatment plans, and the Texas and Louisiana SHPOs' and the Coushatta Tribe of Louisiana THPO's comments (as applicable) on these;"

In addition, if PAPL fails to file a revised Unanticipated Discoveries plan with more robust THPO involvement and Tribal cultural resource monitoring, acceptable to the CTOL THPO, prior to issuance of the FEIS, a further condition should be added to address cultural resource mitigation. One of the following two alternatives should be incorporated after recommendation number 26:

Alternative A:

"PAPL shall **not begin any construction activities** relating to the Louisiana Connector Project unless and until it submits a revised Unanticipated Discoveries Plan, acceptable to the Coushatta Tribe of Louisiana THPO, that provides for more robust involvement of the CTOL THPO upon discovery of cultural resources and that requires Tribal cultural resource monitoring at each construction location."

Alternative B:

"PAPL shall be required to fully implement the Unanticipated Discoveries Plan recommended by FERC staff and attached hereto at Appendix [number]." *If alternative B is adopted, FERC staff should adopt and attach as an appendix to the FEIS the Unanticipated Discoveries Plan submitted by the Coushatta Tribe of Louisiana.*

IV. CONCLUSION

Given the proximity of PAPL's proposed project to significant known Tribal locations, project construction could potentially harm archaeological and/or culturally, historically and

NAT2-26 If something is found, PAPL would report it to the appropriate personnel in accordance with the *Unanticipated Discoveries Plan*; however, these status reports are not the appropriate venue because they are public documents.

NAT2-27 This condition has been revised to reflect the recommended update. PAPL has agreed to adopt the changes requested by the tribe in its *Unanticipated Discoveries Plan (For Project Facilities within the State of Louisiana)*, developed with the Coushatta Tribe of Louisiana on January 15, 2019 (FERC Accession No. 20190116-5005).

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religiously significant sites and artifacts. Such negative impacts would irreversibly devastate Tribal mores and cultural heritage by potentially annihilating artifacts from and evidence of the Tribe's past. The United States' trust responsibility to the Coushatta Tribe requires the government generally, and the Federal Energy Regulatory Commission specifically, to protect the Coushatta Tribe of Louisiana's cultural, historic and religious interests in the lands underlying the PAPL project corridor. And federal law similarly requires protection of these interests and of the cultural, historical and religious sites and artifacts to which they are tied. *See* American Indian Religious Freedom Act of 1978; Archaeological Resources Protection Act of 1979; National Environmental Policy Act of 1969; National Historic Preservation Act of 1966; and Native American Graves Protection and Repatriation Act of 1990. Adopting the changes proposed above would enable the FERC to fulfil its trust obligations toward the Coushatta Tribe of Louisiana. Accordingly, the Tribe respectfully requests that the FERC implement the changes noted above.

The Coushatta Tribe of Louisiana appreciates the opportunity to provide comment on the DEIS.

If you have any questions or require further clarification, feel free to contact me.

Sincerely,

Linda Langley

Linda Langley, Ph.D.
Tribal Historic Preservation Officer
Coushatta Tribe of Louisiana

KOWASSAATON NAATHIIHILKAS—LET US SPEAK KOASATI
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APPLICANTS COMMENTS

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November 19, 2018

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

RE: Port Arthur LNG, LLC, Docket No. CP17-20-000
Port Arthur Pipeline, LLC, Docket No. CP17-21-000
Port Arthur Pipeline, LLC, Docket No. CP18-7-000

Dear Ms. Bose:

On November 29, 2016, Port Arthur LNG, LLC and PALNG Common Facilities Company, LLC (collectively known as PALNG) along with Port Arthur Pipeline, LLC (PAPL) submitted applications under Section 3(a) and Section 7(c) of the Natural Gas Act for the construction and operation of a new LNG liquefaction facility (PALNG Project) and for the construction and operation of a new feed gas pipeline (PAPL Texas Connector or PAPTC) near Port Arthur, Texas. On October 16, 2017, PAPL submitted an application under Section 7(c) for the construction and operation of an additional feed gas pipeline (PAPL Louisiana Connector or PAPLC). In today's submittal, PALNG and PAPL are providing additional information related to these projects, comments to the Draft Environmental Impact Statement (EIS) and responses to Draft EIS conditions.

Attachment 1 – *Supplemental Information*

Attachment 2 – *Comments on Draft EIS*

Attachment 3 – *Responses to Draft EIS Conditions*

Please note that some of the material filed herein contains Privileged and Confidential Information ("PRIV"). Portions of Attachment 1 include documents that contain proprietary information and/or PRIV. Pursuant to Section 388.112 of the Commission's regulations, Port Arthur LNG requests that the Commission treat this information as privileged material. The information included in these attachments meets the Commission's definition of privileged material and treatment of this information as privileged is therefore warranted. Port Arthur LNG is submitting a public version of this filing, with the privileged material redacted. The privileged material has been labeled accordingly and is not to be released. Port Arthur LNG previously filed a proposed form of Protective Order and Non-Disclosure Certificate in this proceeding on November 29, 2016.

For questions concerning this submittal please contact Jim Thompson at 832-284-5685. Thank you for your attention to these matters.

Respectfully submitted,

/s/JD Morris
JD Morris
Director, Permitting & Compliance
On behalf of PALNG and PAPL

cc: Jim Thompson
Jerrod Harrison
Bill Lansinger

APPLICANTS COMMENTS

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CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Houston, TX, this 19th day of November 2018.

/s/ Heather K. Dading

Heather K. Dading
2925 Briarpark Drive, Suite 900
Houston, TX 77042
(832) 460.6589
HDading@SempraGlobal.com

APPLICANTS COMMENTS

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Port Arthur Liquefaction Project
Port Arthur Pipeline Texas Project
Port Arthur Pipeline Louisiana Project

Attachment 1
Supplemental Information

APP1-1 1. Updates to the previously submitted permitting summary tables, PAPTC - Table 1.4-1, PALNG - Table 1.7-1 and PAPLC - Table 1.6-1 are provided herein.

APP1-2 2. A Louisiana Division of Archaeology Report No. 5727-1 Concurrence Letter for the "*Phase I Cultural Resources Investigation of a Portion of the Proposed Port Arthur Pipeline Louisiana Connector within Coushatta Tribe of Louisiana Trust Land in Allen Parish, Louisiana,*" is provided herein. The subject report is being provided as Privileged and Confidential Information and has been removed from the public version. In addition, there are two emails from Dr. Linda Langley, Coushatta Tribal Historic Preservation Officer, indicating approval of the report.

APP1-1 Section 1.5 of the final EIS has been updated to reflect the current status of permits, approvals, and consultations.

APP1-2 Comments noted. The EIS text has been updated with this information.

APPLICANTS COMMENTS

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Port Arthur Pipeline

Port Arthur Pipeline Texas Connector Project

APP1-3

Table 1.4-1
Permits and Clearances Required for the Port Arthur Pipeline Project

Agency	Permit/Authorization	Anticipated Filing Date	Anticipated Receipt Date	Status
Federal				
Federal Energy Regulatory Commission (FERC)	Certificate of Public Convenience and Necessity (CPCN)	November 2016	February 2019	Submitted
U. S. Army Corps of Engineers (USACE)	Section 404/10 Permit*	January/November 2017	May 2019	Submitted Supplemental Application 11/16/2017
U.S. Fish and Wildlife Service (USFWS)	Section 7 Consultation	November 2016	June 2018	Complete
NOAA Fisheries	Section 7 Consultation	November 2016	August 2018	Ongoing
Environmental Protection Agency (EPA)	National Pollutant Discharge Elimination System (NPDES) Hydrostatic Test Water Discharge Permit**	December 2020	July 2021	Pending
State				
Texas Commission on Environmental Quality (TCEQ)	Standard Permit for Oil & Gas Facilities (Air Quality)	July 2019	December 2019	Pending
Railroad Commission of Texas (RRC)	Hydrostatic Test Water Discharge	December 2020	July 2021	Pending
	401 Certification*	January/November 2017	May 2019	Submitted Supplemental Application 11/16/2017

Page 1

APP1-3 See response to comment APP1-1.

APPLICANTS COMMENTS

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APP1-3 (cont'd)

Table 1.4-1
Permits and Clearances Required for the Port Arthur Pipeline Project

Agency	Permit/Authorization	Anticipated Filing Date	Anticipated Receipt Date	Status
Texas Historical Commission (THC)	Section 106 Consultation	August 2016	September 2016	Received
Texas General Land Office (GLO)	Statement of Consistency with the Coastal Management Program*	January/November 2017	May 2019	Submitted Supplemental Application 11/16/2017
Texas Department of Transportation (TXDOT)	Road Crossing/ Construction in Right-Of-Way (ROW) Permit	January 2020	March 2020	Pending
Texas Parks and Wildlife Department (TPWD)	Consultation with the TPWD	November 2016	November 2017	Complete
Louisiana Department of Environmental Quality (LDEQ)	National Pollutant Discharge Elimination System (NPDES) Permit**	December 2020	July 2021	Pending
	401 Certification*	January/November 2017	May 2019	Submitted Supplemental Application 11/16/2017
Louisiana Office of Cultural Development	Section 106 Consultation	August 2016	September 2016	Received
Louisiana Department of Natural Resources (LDNR), Office of Coastal Management	Coastal Use Permit*	January/November 2017	May 2019	Submitted Supplemental Application 11/16/2017
Local				
Local permits will be determined upon further facilities design.				

APPLICANTS COMMENTS

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APP1-3 (cont'd)

Table 1.4-1
Permits and Clearances Required for the Port Arthur Pipeline Project

Agency	Permit/Authorization	Anticipated Filing Date	Anticipated Receipt Date	Status

* Following discussion with USACE – Galveston District office, the USACE 404/10 Pre-Construction Notification of NWP12 will be submitted as a supplemental filing to the PALNG Common Facilities Company Individual Permit application submitted 11/29/2016.

** Hydrostatic test water discharge applications were not submitted along with FERC application because processing times are relatively short (6-9 months) and to allow the EPCC contractor opportunity to update current hydrostatic discharge plan discussed in RR1.

APPLICANTS COMMENTS

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APP1-3
(cont'd)

TABLE 1.7-1
Permits, Approvals, Consultations & Regulatory Requirements

Agency	Permit/Authorization	Filing Date	Anticipated / Receipt Date	Status
FEDERAL				
Federal Energy Regulatory Commission (FERC)	Certificate of Public Convenience and Necessity (CPCN)	November 2016	February 2019	Submitted
U. S. Army Corps of Engineers (USACE)	Clean Water Act (CWA) Section 10/404 Permit[2]	November 2016/2017	May 2019	Submitted supplemental application 11/13/2017
U.S. Fish and Wildlife Service (USFWS)	Endangered Species Act (ESA) Section 7 Consultation[2]	November 2016	June 2018	Received
United States Coast Guard (USCG)	Waterway Suitability Assessment	July 14, 2015	October 24, 2018	Received annual WSA update letter
NOAA National Marine Fisheries Service (NMFS)	ESA Section 7 and; Magnuson-Stevens Act Consultation; Essential Fish Habitat	November 2016	August 2018	Received
U. S. Environmental Protection Agency (EPA)	National Pollutant Discharge Elimination System (NPDES) Permits (Hydrostatic test water discharge/Operational Stormwater)[1,2]	January 2019 January 2019	August 2019 July 2019	Pending
U.S. Federal Aviation Administration	Aeronautical Study under 14 CFR 77 for all permanent structures, temporary construction equipment, and mobile objects that exceed the height requirements in 14 CFR 77.9	November 2018	May 2019	Pending

APPLICANTS COMMENTS

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APP1-3 (cont'd)

TABLE 1.7-1
Permits, Approvals, Consultations & Regulatory Requirements

Agency	Permit/Authorization	Filing Date	Anticipated / Receipt Date	Status
U.S. Department of Energy (DOE)	Authorization to Export (Free Trade Agreement Countries)	March 20, 2015	August 20, 2015	Received
	Amendment to request full 13.5 MTPA capacity of the Project	October 19, 2018	January 2019	Pending
U.S. Department of Energy (DOE)	Authorization to Export (Non-Free Trade Agreement Countries)	June 15, 2015	May 2019	Submitted
	Amendment to request full 13.5 MTPA capacity of the Project	October 19, 2018	May 2019	Pending
STATE				
Texas Commission on Environmental Quality (TCEQ)	Prevention of Significant Deterioration (PSD) Permit New Source Review (NSR) Permit Title V Operating Permit	April 9, 2015 June 6, 2017	February 17, 2016 July 7, 2017	Received Received extension request letter until February 17, 2019
Texas Commission on Environmental Quality (TCEQ)	General Construction Storm Water Permit 2 (**SH87, pipelines, and utilities relocation only**)	January 2019	March 2019	Pending
Railroad Commission of Texas (RRC)	401 Certification of USACE Section 404[2]	November 2016	December 2018	Submitted
	Hydrotest Discharge Permit[1,2]	January 2019	July 2019	Pending

APPLICANTS COMMENTS

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APP1-3
(cont'd)

TABLE 1.7-1
Permits, Approvals, Consultations & Regulatory Requirements

Agency	Permit/Authorization	Filing Date	Anticipated / Receipt Date	Status
Texas Historical Commission (THC)	National Historic Preservation Act Section 106 Consultation[2]	May 19, 2015	June 2, 2015	Received
Texas General Land Office (GLO)	Statement of Consistency with the Coastal Management Program[2] / Miscellaneous Easement	November 2016/2017	May 2019	Submitted supplemental application 11/13/2017
Texas Department of Transportation (TXDOT)	Road Crossing/ Construction in Right-Of-Way Permit	February 2019	May 2019	Pending
Texas Parks and Wildlife Department (TPWD)	Consultation with the TPWD for impacts to State protected species and impacts in State Wildlife Management Areas[2]	November 2016	November 2017	Received
LOCAL				
Jefferson County	Floodplain Development Permit[2]	December 2018	July 2019	Pending
	Development/ Building Permit	December 2018	July 2019	Pending
City of Port Arthur	Building Permit (if required)	December 2018	July 2019	Pending

[1] NPDES applications were not submitted along with FERC application because processing times are relatively short (6-9 months) and to allow EPCC contractor opportunity to update current hydrostatic discharge plan as well as the outfall locations for the Operational Stormwater Plan discussed in RR1.

[2] Permits/Authorization also required for Non-FERC Jurisdictional activities (i.e. S.H.87/Pipeline/Utilities Relocation).

APPLICANTS COMMENTS

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APP1-3
(cont'd)

TABLE 1.6-1
Permits, Approvals, Consultations, and Regulatory

Agency	Permit/Authorization	Anticipated Filing Date	Anticipated Receipt Date	Status
Federal				
Federal Energy Regulatory Commission (FERC)	Certificate of Public Convenience and Necessity (CPCN)	October 2017	February 2019	Submitted
U. S. Army Corps of Engineers (USACE)	Section 404/10 Permit	October 2017	May 2019	Submitted
U.S. Fish and Wildlife Service (USFWS)	Section 7 Consultation	September 2017	October 2018	Complete
NOAA Fisheries	Section 7 Consultation	August 2017	August 2018	Complete
Bureau of Indian Affairs	Right-of-Way Grant	June 2018	December 2020	Ongoing
State - Texas				
Railroad Commission of Texas (RRC)	National Pollutant Discharge Elimination System (NPDES) Permit – Hydrotest Discharge	June 2020	December 2020	Ongoing
	401 Certification	October 2017	May 2019	Ongoing
Texas Historical Commission (THC)	Section 106 Consultation	June 2017	May 2019	Ongoing
Texas General Land Office (GLO)	Statement of Consistency with the Coastal Management Program	October 2017	May 2019	Ongoing
Texas Parks and Wildlife Department (TPWD)	Consultation with the TPWD	August 2017	May 2017	Received

APPLICANTS COMMENTS

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APP1-3 (cont'd)

TABLE 1.6-1
Permits, Approvals, Consultations, and Regulatory

Agency	Permit/Authorization	Anticipated Filing Date	Anticipated Receipt Date	Status
State - Louisiana				
Louisiana Department of Environmental Quality (LDEQ)	Louisiana Pollutant Discharge Elimination System (LPDES) Permit	June 2020	December 2020	Ongoing
	Air Permit for Compressor Stations	September 2017	September 2018	Received
	401 Certification	October 2017	May 2019	Ongoing
	Hydrostatic Test Water Discharge General Permit	June 2020	December 2020	Ongoing
Louisiana Office of Cultural Development	Section 106 Consultation	September 2017	October 2017	Received
Louisiana Department of Natural Resources (LDNR)	Coastal Use Permit - Office of Coastal Management	October 2017	May 2019	Ongoing
	Letter of Comment for state listed Threatened and Endangered Species and Fish and Wildlife concerns	March 2017	June 2017	Received
	Wild and Scenic Rivers Permit	February 2019	May 2019	Ongoing
Local				
Local permits will be determined upon further facilities design.				

APPLICANTS COMMENTS

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BILLY NUNGESSER
LIEUTENANT GOVERNOR

State of Louisiana
OFFICE OF THE LIEUTENANT GOVERNOR
DEPARTMENT OF CULTURE, RECREATION & TOURISM
OFFICE OF CULTURAL DEVELOPMENT
DIVISION OF ARCHAEOLOGY

RICHARD H. HARTLEY
DEPUTY SECRETARY

KRISTIN P. SANDERS
ASSISTANT SECRETARY

September 14, 2018

Peter Cropley
R. Christopher Goodwin & Associates, Inc.
309 Jefferson Highway
New Orleans, LA 70121

APP1-4

Re: Draft Phase I Report
La Division of Archaeology Report No. 5727-1
Phase I Cultural Resources Investigation of a Portion of the Proposed Port Arthur Pipeline, Louisiana Connector within Coushatta Tribe of Louisiana Trust Land in Allen Parish, Louisiana

Dear Peter Cropley:

We acknowledge receipt of your letter dated August 17, 2018 and two copies of the above referenced report. We have completed our review of this report and have the following comments to offer:

Include the name and address of the Lead Federal Agency on the Title Page.

Based on the description of the Area of Potential Effect (APE), the proposed ground-disturbing activities, and the identification of historic properties within the APE, our office concurs with the assessment that no properties listed in or eligible for listing in the National Register of Historic Places will be affected by this project. Our office has no further concerns for this project.

Consultation with the State Historic Preservation Office does not constitute consultation with Tribal Historic Preservation Offices, other Native American tribes, local governments, or the public. If archaeological materials are encountered during construction, the procedures codified at 36 CFR 800.13(b) will apply. Archaeological materials consist of any items, fifty years old or older, which were made or used by man. These items include but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, worked wood, bone and stone, metal, and glass objects. The federal agency or the applicant receiving federal assistance should contact our office immediately. If human remains are encountered, the provisions of the Louisiana Unmarked Human Burial Sites Preservation Act (Revised Statute 8:671-681) should be followed.

Please note that the Divisions of Historic Preservation and Archaeology have published new standards for field investigations and reports effective for all projects initiated after 1 September 2018. The revised standards can be found at https://www.crt.state.la.us/cultural-development/archaeology/section-106/2018-standards/index.

P.O. BOX 44247 • BATON ROUGE, LOUISIANA 70804-4247
PHONE (225) 342-8170 • FAX (225) 342-4480 • WWW.CRT.LA.GOV

APP1-4 See response to comment APP1-2.

APPLICANTS COMMENTS

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APP1-4 (cont'd)

We look forward to receiving one bound copy (printed double sided) and one pdf of the final report. If you have any questions, please contact Emily Dale at the Division of Archaeology by email at edale@crt.la.gov or by phone at 225-219-4596.

Sincerely,

Kristen P. Sanders

Kristen Sanders,
State Historic Preservation Officer

APPLICANTS COMMENTS

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From: Linda Langley
To: Thompson, Jim
Cc: David Sickey; Zehava Zevit
Subject: [EXTERNAL] Follow-up
Date: Tuesday, November 6, 2018 8:39:44 AM

Jim,

APP1-4 (cont'd)

I wanted to follow up on last week's meeting to let you know that the Tribe has no comments on the Phase I environmental report relating to Coushatta Tribal trust lands. We did have some comments on the CR report relating to Tribal trust lands and we provided those to Goodwin & Associates.

As we discussed, we do have comments on the Phase I CR report relating to non-Tribal lands, and we will be filing those comments on the record within a few weeks.

Thank you,

Linda Langley, Ph.D.
Tribal Historic Preservation Officer
Coushatta Tribe of Louisiana
337-584-1585

APPLICANTS COMMENTS

20181119-5118 FERC PDF (Unofficial) 11/19/2018 12:53:04 PM

From: Linda Langley
To: Thompson, Jim
Cc: Zehava Zevit
Subject: [EXTERNAL] Re: Follow-up
Date: Thursday, November 15, 2018 8:21:44 AM

Jim,

APP1-4 (cont'd)

I'm not sure if I responded to this already, but we are OK with the updated report.
Thanks,
Linda

Linda Langley, Ph.D.
Tribal Historic Preservation Officer
Coushatta Tribe of Louisiana
337-584-1585

From: Thompson, Jim <jdthompson@Sempraglobal.com>
Sent: Friday, November 9, 2018 8:48 AM
To: Linda Langley
Subject: RE: Follow-up

Linda,

Good morning! I reread your email and noticed you mentioned the comments sent to RC Goodwin on the cultural survey done for the Tribal trust lands. I just want to make sure you are OK with the updated version of that report I sent to you last month. I'm getting ready to send updated information and comments on the DEIS to FERC and didn't want to include this report if you're not OK with it.

If I need to resend, please let me know.

Thanks,

Jim

From: Linda Langley <LLangley@coushatta.org>
Sent: Tuesday, November 6, 2018 8:39 AM
To: Thompson, Jim <jdthompson@Sempraglobal.com>
Cc: David Sickey <dsickey@coushatta.org>; Zehava Zevit <Zehava@franklawrence.com>
Subject: [EXTERNAL] Follow-up

APPLICANTS COMMENTS

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Jim,

APP1-4 (cont'd)

I wanted to follow up on last week's meeting to let you know that the Tribe has no comments on the Phase I environmental report relating to Coushatta Tribal trust lands. We did have some comments on the CR report relating to Tribal trust lands and we provided those to Goodwin & Associates.

As we discussed, we do have comments on the Phase I CR report relating to non-Tribal lands, and we will be filing those comments on the record within a few weeks.

Thank you,

Linda Langley, Ph.D.
Tribal Historic Preservation Officer
Coushatta Tribe of Louisiana
337-584-1585

APPLICANTS COMMENTS

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Port Arthur Liquefaction Project
Port Arthur Pipeline Texas Project
Port Arthur Pipeline Louisiana Project

Attachment 2
Comments on the Draft EIS

1. PALNG and PAPL is providing comments to the Draft EIS as described herein.

APP1-5

2. Response to comment submitted to FERC by Mr. Ken Teague regarding alternative site for the PALNG Liquefaction Project.

   PALNG reviewed the suggested location along the Calcasieu River identified by Mr. Ken Teague in his comments to the DEIS dated 11/01/2018. PALNG reviewed Mr. Teague's suggested alternative location in its *"Alternative Analysis for the Port Arthur Liquefaction Project,"* submitted to FERC on 09/15/2017 in response to Staff's 02/17/2017 Data Request No. 126. Furthermore, PALNG has reviewed the proposed location's availability of sale and determined the property is owned by the Lake Charles Harbor and Terminal District and the properties on the north bank are currently leased.

APP1-6

3. Response to comment submitted to FERC by Mr. Chester Wimberly regarding an alternative route for the PAPLC Project near MP 128.5 to MP 130.7

   PAPLC reviewed the proposed alternative route suggested by Mr. Chester Wimberly in his comments to the DEIS dated 10/22/2018 and provides the attached *Comparison of the Proposed Route to the Chester Wimberly Alternative Route Table* to describe the potential impacts from each. Please note this evaluation is based on a hand drawn route suggested by Mr. Wimberly and has not received constructability evaluations by PAPL. Should this alternative route be selected by FERC as the approved route, PAPL reserves the right to adjust the route and add additional workspace as needed and approved by FERC staff prior to construction.

APP1-5 Comments noted. See response to comment IND5-1.

APP1-6 Comments noted. Section 3.4 of the final EIS has been updated to include the relevant information for this alternative.

APPLICANTS COMMENTS

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Port Arthur LNG

Port Arthur Pipeline

	No.	Section	PALNG/PAPL DEIS Commitment	PALNG/PAPL Response
APP1-7	1.	2.1.1.2	PALNG would install a berm (i.e., 20-foot storm surge barrier) around the LNG storage tank area to prevent liquid in the storage tank area from flowing off-site in the event of an outer tank impoundment failed.	PALNG proposes to use full containment tanks which provides secondary containment for stored LNG. The facility will have storm surge berms that will act as tertiary containment in the unlikely event of an outer tank failure.
APP1-8	2.	2.4.1.1	Concrete berms with a height of 20 feet AMSL would be constructed around all areas containing critical process equipment, including the liquefaction trains and LNG storage tanks.	PALNG will construct earthen berms, and not concrete.
APP1-9	3.	2.4.1.2	The remaining 2.9 million yd3 of dredge material would be transported to the J.D. Murphree WMA using a temporary 30-inch-diameter aboveground pipeline floated in Round Lake Canal (see figure 2.1.1-3).	PALNG estimates the quantity to be placed on the J.D. Murphree WMA to be 2.4 million yd^3.
APP1-10	4.	4.2.1.6	Prior to construction of the Liquefaction Project, PALNG should provide the EPA, USACE, TCEQ, and Texas RRC the soil and sediment analysis conducted at the area within the ship canal at the marine berth, construction dock, MOF, and landward component of the MOF for review. PALNG should file the conclusions of the reviews with the Secretary along with documentation of its consultations with these agencies including any measures PALNG would need to adopt if the analysis discovers previously unknown contamination.	The commitment to sample and perform sediment analysis of the marine berth, construction dock, MOF and landward component of the MOF for agency review was made in PALNG's application in response to comments received during Pre-filing. Subsequently a Tier 1 Evaluation Report was conducted. This report was provided to Staff with PALNG's supplemental clarification filing dated January 8, 2018. This same report was submitted to the USACE on November 13, 2017. The Tier 1

1

APP1-7 Section 2.1.1.2 of the final EIS has been updated to clarify that the primary function of the 20-foot storm surge barrier is not secondary containment.

APP1-8 Section 2.4.1.2 of the final EIS has been updated to indicate the berms are earthen.

APP1-9 Section 2.4.1.2 of the final EIS has been updated to indicate 2.4 million yd^3 would be placed on the J.D. Murphree WMA.

APP1-10 FERC acknowledges that the Tier I Evaluation Report has been provided to the USACE; however, the report also needs to be submitted to the EPA, TCEQ, and Texas RRC. Further, the conclusions of all four agencies' reviews and any subsequent agency recommendations should be filed with the Secretary.

APPLICANTS COMMENTS

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Port Arthur LNG

Port Arthur Pipeline

APP1-10 (cont'd)

			Evaluation Report analyzes all sampling events performed by PALNG as well as sediment sampling completed by others. The report concludes no additional sampling or analysis is required. If the USACE requires additional sampling and analysis, PALNG will complete this as required.

APP1-11

5.	4.5.2.1	Vegetation would be removed at the ground surface using mechanical or manual methods, or a combination of the two (vegetation would not be burned).	PALNG has also identified burning as a means of vegetation disposal in its application (RR 1, Section 1.3.2) in accordance with TCEQ requirements.

APP1-11 Section 4.5.2.1 of the final EIS has been updated to include the option of vegetation burning.

APPLICANTS COMMENTS

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Port Arthur Pipeline

Port Arthur Pipeline Louisiana Connector Project

APP1-12

Comparison of the Proposed Route to the Chester Wimberly Route Alternative

Factor (Unit)	Proposed Route	Chester Wimberly Route Alternative
Pipeline Length (miles)	2.24	2.26
Landowners crossed (number)	25	16
Landownership (miles)	2.24	2.24
Federal	0	0
State	0	0
Private	2.24	2.26
Temporary Construction Workspace (acres) [a]	33.9	34.24
Pipeline Permanent Easement (acres) [b]	13.6	13.7
Existing Pipeline Crossings (number)	0	0
Adjacent or Collocated with Other Existing ROW (percent)	100	0
Upland Scrub/Shrub - Forested Impacts – Construction (acres) [a]	0.64	0.0
Upland Scrub/Shrub - Forested Impacts – Operation (acres) [b]	0.27	0.0
Scrub/Shrub - Forested Wetland Impacts – Construction (acres) [a]	8.59	1.74
Scrub/Shrub - Forested Wetland Impacts – Operation (acres) [b]	4.39	0.69
Non-forested Wetland Impacts – Construction (acres) [a]	12.32	25.29
Non-forested Wetland Impacts – Operation (acres) [b]	5.56	10.40
Waterbody Crossings (number)	3	3
Major Waterbody (≥ 100 feet) Crossings (number)	0	0
Scenic Rivers Crossed (number)	0	0
Road / Rail Crossed (number)	3	4
Residences within 50 feet of Pipeline Centerline (number)	0	0

1

APP1-12 See response to comment APP1-6.

APPLICANTS COMMENTS

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APP1-12 (cont'd)

Comparison of the Proposed Route to the Chester Wimberly Route Alternative

Factor (Unit)	Proposed Route	Chester Wimberly Route Alternative
Conservation Easement Land Impacts – Construction (acres)[a]	0	0
Conservation Easement Land Impacts – Operation (acres)[b]	0	0

[a] Temporary construction workspace based on a 125-foot-wide construction right-of-way, which includes the permanent easement and temporary workspaces.
[b] Permanent easement based on a 50-foot-wide operational right-of-way.

APPLICANTS COMMENTS

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Port Arthur Liquefaction Project
Port Arthur Pipeline Texas Project
Port Arthur Pipeline Louisiana Project

Attachment 3
Responses to Draft EIS Conditions

APP1-13

1. DEIS Condition 19.
   Prior to the close of the draft EIS comment period, PALNG and PAPL shall file with the Secretary updated wetland impact data for the Projects to ensure accuracy, as well as consistency with the wetland data provided to the USACE as part of PALNG's and PAPL's permit applications. The updated data shall be filed with the FERC using the same format and wetland classification system/definitions as submitted to the USACE.

   Response:

   PALNG and PAPL provides the attached updated Table 4.4.2-1 Wetlands Affected by the Projects, that provides impact data for the Projects to ensure accuracy, as well as consistency with the wetland data provided to the USACE as part of PALNG's and PAPL's permit applications. The updated data uses the same format and wetland classification system/definitions as submitted to the USACE.

APP1-14

2. DEIS Condition 30.
   Prior to the end of the draft EIS comment period, PALNG shall file with the Secretary documentation demonstrating it has filed for an Aeronautical Study under 14 CFR 77 for all permanent structures, temporary construction equipment, and mobile objects that exceed the height requirements in 14 CFR 77.9.

   Response:

   PALNG has e-filed applications demonstrating it has filed for an Aeronautical Study under 14 CFR 77 for all permanent structures, temporary construction equipment, and mobile objects that exceed the height requirements in 14 CFR 77.9. A summary page identifying these applications is being provided herein.

   PALNG submitted an application for the LNG vessels though they do not exceed the height requirements in 14 CFR 77.9.

APP1-13 Section 4.4.2.1 of the final EIS has been updated with the provided data.

APP1-14 FERC has received PALNG's Aeronautical Study, and this Environmental Recommendation has been removed from the final EIS.

APPLICANTS COMMENTS

APP1-15 See response to comment APP1-13.

APP1-15

Port Arthur LNG

Port Arthur Pipeline

TABLE 4.4.2-1
Wetlands Affected by the Projects

Project	Wetland Type												Impacts (acres)	
	PEM		PSS		PFO		EEM		ESS		PUB			
	Cons.[3]	Oper.[3]	Cons.	Oper.	Cons.	Oper.	Cons.	Oper.	Cons.	Oper.	Cons.	Oper.	Cons.	Oper.
LIQUEFACTION PROJECT	317.0	301.9	420.2	400.9	0.0	0.0	21.2	21.2	0.0	0.0	0.0	0.0	758.4	724.0
Dredge Disposal Areas														
J.D. Murphree WMA	0.0	0.0	0.0	0.0	0.0	0.0	903.0	0.0	0.0	0.0	0.0	0.0	903.0	0.0
Disposal Areas 8, 9A, 9B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dredge Disposal Pipelines														
J.D. Murphree WMA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Disposal Areas 8, 9A, 9B	0.4	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.5	0.0
Subtotal	**317.4**	**301.9**	**420.2**	**400.9**	**0.0**	**0.0**	**924.3**	**21.2**	**0.0**	**0.0**	**0.0**	**0.0**	**1661.9**	**724.0**
TEXAS CONNECTOR PROJECT														
Northern Pipeline	92.2	35.2	8.3	3.4	14.6	4.3	5.5	2.7	0.0	0.0	0.0	0.0	120.6	45.6
Southern Pipeline	9.7	4.0	0.0	0.0	0.0	0.0	22.5	9.4	0.0	0.0	0.0	0.0	32.2	13.4
FGT Lateral	0.2	0.1	0.0	0.0	2.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.9
GTS Lateral	0.1	0.0	0.0	0.0	3.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	3.1	1.5
KMLP Lateral	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.5	0.0	0.0	0.0	0.0	1.3	0.5
NGPL Lateral	0.0	0.0	0.0	0.0	0.0	0.0	3.9	1.5	0.0	0.0	0.0	0.0	3.9	1.5
HPL Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TETCO Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GTS/CIPCO Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aboveground Facilities[4]	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0
Access Roads	10.5	0.0	6.1	0.3	2.2	0.0	3.0	0.1	0.0	0.0	0.0	0.0	21.8	0.4
ATWS	28.7	0.0	6.0	0.0	7.5	0.0	7.3	0.0	0.0	0.0	0.0	0.0	49.5	0.0
Subtotal	**141.5**	**39.3**	**20.5**	**3.6**	**29.6**	**6.6**	**46.5**	**17.3**	**0.0**	**0.0**	**0.0**	**0.0**	**238.1**	**66.8**

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APPLICANTS COMMENTS

APP1-15
(cont'd)

LOUISIANA CONNECTOR PROJECT														
Mainline	237.6	100.4	33.4	14.7	146.3	68.1	123.5	49.2	0.0	0.0	0.0	0.0	540.8	232.4
TETCO Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CS Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TGP Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Egan Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pine Prairie	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Texas Gas Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANR Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CGT Lateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aboveground Facilities	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.2
Laydown Yard	2.9	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0
Access Roads	15.1	9.9	0.3	0.0	0.8	0.6	5.2	1.0	0.0	0.0	0.0	0.0	21.4	11.5
ATWS	28.1	0.0	2.2	0.0	25.9	0.0	15.1	0.0	0.0	0.0	0.0	0.0	71.3	0.0
Subtotal	**283.8**	**110.4**	**36.2**	**14.7**	**173.0**	**68.7**	**143.9**	**50.3**	**0.0**	**0.0**	**0.0**	**0.0**	**636.9**	**244.1**
Nonjurisdictional Facilities	90.5	28.4	50.3	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	140.8	45.1
Projects Total	**833.2**	**460.0**	**527.2**	**435.9**	**202.6**	**75.3**	**1114.7**	**88.8**	**0.0**	**0.0**	**0.0**	**0.0**	**2677.7**	**1060.0**

[a] Construction and operation impacts are based on the typical construction and permanent rights-of-way widths (125 feet, 110 feet, 50 feet, etc.) and workspace areas as discussed in section 2.2. The HDD method would be used to avoid direct impacts on wetlands at various locations, as listed in table 2.4.3-1. Most wetland types would be allowed to revert to pre-construction conditions, and limited vegetation maintenance would be allowed in wetlands during project operations.

[b] The South Compressor Station and Centana and PALNG laterals would be within the liquefaction site boundaries and, therefore, their impacts on wetlands are included as part of the impacts for the Liquefaction Project.

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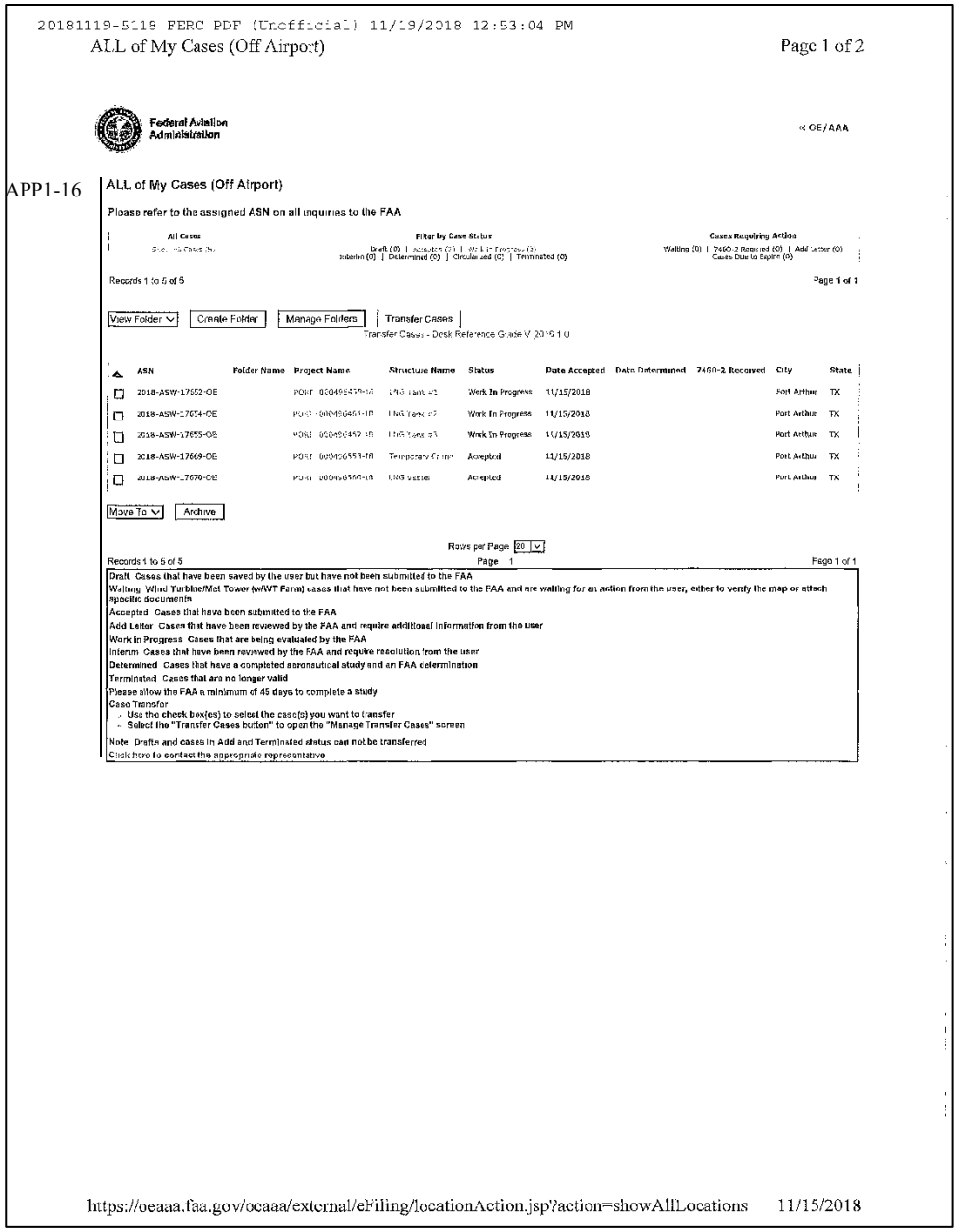
APPLICANTS COMMENTS



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	ASN	Folder Name	Project Name	Structure Name	Status	Date Accepted	Date Determined	7460-2 Received	City	State
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☐	2018-ASW-17654-OE		PORT [illegible]	LNG Tank #2	Work In Progress	11/15/2018			Port Arthur	TX
☐	2018-ASW-17655-OE		PORT [illegible]	LNG Tank #3	Work In Progress	11/15/2018			Port Arthur	TX
☐	2018-ASW-17669-OE		PORT [illegible]	Temporary Crane	Accepted	11/15/2018			Port Arthur	TX
☐	2018-ASW-17670-OE		PORT [illegible]	LNG Vessel	Accepted	11/15/2018			Port Arthur	TX

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APP1-16

APP1-16 See response to comment APP1-14.

APPLICANTS COMMENTS

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November 19, 2018

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

RE: Port Arthur LNG, LLC, Docket No. CP17-20-000
Port Arthur Pipeline, LLC, Docket No. CP17-21-000
Port Arthur Pipeline, LLC, Docket No. CP18-7-000

Dear Ms. Bose:

APP2-1

On November 29, 2016, Port Arthur LNG, LLC and PALNG Common Facilities Company, LLC (collectively known as PALNG) along with Port Arthur Pipeline, LLC (PAPL) submitted applications under Section 3(a) and Section 7(c) of the Natural Gas Act for the construction and operation of a new LNG liquefaction facility (PALNG Project) and for the construction and operation of a new feed gas pipeline (PAPL Texas Connector or PAPTC) near Port Arthur, Texas. On October 16, 2017, PAPL submitted an application under Section 7(c) for the construction and operation of an additional feed gas pipeline (PAPL Louisiana Connector or PAPLC). In today's submittal, PALNG and PAPL are providing additional information related to these projects, comments to the Draft Environmental Impact Statement (EIS) and responses to Draft EIS conditions.

Attachment 1 – *Supplemental Information*

Attachment 2 – *Comments on Draft EIS*

Attachment 3 – *Responses to Draft EIS Conditions*

Please note that some of the material filed herein contains Privileged and Confidential Information ("PRIV"). Portions of Attachment 1 include documents that contain proprietary information and/or PRIV. Pursuant to Section 388.112 of the Commission's regulations, Port Arthur LNG requests that the Commission treat this information as privileged material. The information included in these attachments meets the Commission's definition of privileged material and treatment of this information as privileged is therefore warranted. Port Arthur LNG is submitting a public version of this filing, with the privileged material redacted. The privileged material has been labeled accordingly and is not to be released. Port Arthur LNG previously filed a proposed form of Protective Order and Non-Disclosure Certificate in this proceeding on November 29, 2016.

For questions concerning this submittal please contact Jim Thompson at 832-284-5685. Thank you for your attention to these matters.

Respectfully submitted,

/s/JD Morris
JD Morris
Director, Permitting & Compliance
On behalf of PALNG and PAPL

cc: Jim Thompson
Jerrod Harrison
Bill Lansinger

APP2-1 See responses to comment letter APP1-1 as this comment is duplicative of that comment, and therefore, is not being included in its entirety.

APPENDIX U

SUBJECT INDEX

Appendix U

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167 FERC ¶ 61,052
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Neil Chatterjee, Chairman;
Cheryl A. LaFleur, Richard Glick,
and Bernard L. McNamee.

Port Arthur LNG, LLC PALNG Common Facilities Company, LLC	Docket No. CP17-20-000
Port Arthur Pipeline, LLC	Docket Nos. CP17-21-000 CP17-21-001 CP18-7-000

ORDER GRANTING AUTHORIZATIONS UNDER SECTIONS 3 AND 7 OF THE NATURAL GAS ACT

(Issued April 18, 2019)

1. On November 29, 2016, in Docket No. CP17-20-000, Port Arthur LNG, LLC and PALNG Common Facilities Company, LLC (collectively, Port Arthur LNG) filed an application for authorization under section 3 of the Natural Gas Act (NGA)[1] and Part 153 of the Commission's regulations[2] to site, construct, and operate new facilities for the export of liquefied natural gas (LNG) in the vicinity of Port Arthur, Texas (Liquefaction Project).

2. On the same day, Port Arthur Pipeline, LLC (Port Arthur Pipeline) filed an application in Docket No. CP17-21-000, under NGA section 7(c)[3] and Parts 157[4] and 284[5] of the Commission's regulations, for a certificate of public convenience and necessity to construct and operate a new natural gas pipeline system designed to transport

[1] 15 U.S.C. § 717b (2012).

[2] 18 C.F.R. pt. 153 (2018).

[3] 15 U.S.C. § 717f (2012).

[4] 18 C.F.R. pt. 157 (2018).

[5] 18 C.F.R. pt. 284 (2018).

(continued ...)

up to 2,000,000 million British thermal units (MMBtu) of natural gas per day from interconnections in Cameron Parish, Louisiana, and Orange and Jefferson Counties, Texas, to the Liquefaction Project (Texas Connector Project).

3. On October 16, 2017, Port Arthur Pipeline filed an application in Docket No. CP18-7-000, under NGA section 7(c)[6] and Parts 157[7] and 284[8] of the Commission's regulations, for a certificate of public convenience and necessity to construct and operate an additional new natural gas pipeline system designed to transport up to 2,000,000 MMBtu of natural gas per day originating in Eunice Parish, Louisiana, to serve as another source of feed gas for the Liquefaction Project (Louisiana Connector Project).

4. On November 7, 2017, Port Arthur Pipeline filed an amendment to the Texas Connector Project application in Docket No. CP17-21-001 which updated and revised Port Arthur Pipeline's *pro forma* tariff and initial rates as a result of the Louisiana Connector Project (Amendment Application).

5. Port Arthur Pipeline also requests blanket certificates under Part 284, Subpart G of the Commission's regulations to provide open-access transportation service, and under Part 157, Subpart F of the Commission's regulations to perform certain routine construction activities and operations, for the Louisiana Connector and Texas Connector projects.

6. For the reasons discussed in this order, we will authorize Port Arthur LNG's proposal under section 3 to site, construct, and operate the Liquefaction Project. We will also authorize Port Arthur Pipeline's requested authorizations under section 7(c) of the NGA, and Parts 157 and 284 of the Commission's regulations, to construct and operate the Louisiana Connector and Texas Connector projects. These authorizations are subject to the conditions discussed herein.

I. Background

7. Port Arthur LNG, LLC, PALNG Common Facilities Company, LLC, and Port Arthur Pipeline, LLC are limited liability companies organized under the laws of the state of Delaware, and are wholly-owned subsidiaries of Port Arthur LNG Holdings, LLC, which is wholly-owned subsidiary of Sempra Global, which is a wholly-owned subsidiary of Sempra Energy. Upon the commencement of operations proposed in its

[6] 15 U.S.C. § 717f.

[7] 18 C.F.R. pt. 157.

[8] 18 C.F.R. pt. 284.

(continued ...)

application, Port Arthur Pipeline will become a natural gas company within the meaning of section 2(6) of the NGA,[9] and will be subject to the Commission's jurisdiction. As its operations will not be in interstate commerce, Port Arthur LNG will not be a "natural gas company" as defined in the NGA, although it will be subject to the Commission's jurisdiction under NGA section 3.

II. Proposals

A. Liquefaction Project (Docket No. CP17-20-000)

8. The Liquefaction Project would be located at the same site as Port Arthur LNG, L.P.'s proposed import terminal.[10] As proposed, the Liquefaction Project would consist of two liquefaction trains with a total production capacity of approximately 13.5 million metric tons per annum (MTPA) of LNG (each train capable of producing up to 6.73 MTPA). Port Arthur LNG also proposes to construct and operate feed gas treatment facilities; three LNG storage tanks, each with a net working capacity of approximately 160,000 cubic meters; a marine facility consisting of two berths for LNG vessels with a capacity of up to 266,000 cubic meters of LNG and capable of loading one LNG vessel per day; onsite, gas-turbine generators with a generating capacity of 240 megawatts; and appurtenant facilities.

9. Port Arthur LNG received authorization from the U.S. Department of Energy, Office of Fossil Energy (DOE/FE) in August, 2015, to export annually up to 517 billion cubic feet (Bcf) of natural gas in the form of LNG to countries with which the United States has a Free Trade Agreement (FTA), for a term of 25 years.[11] In addition, Port Arthur LNG currently has pending before the DOE/FE an application to export LNG to

[9] 15 U.S.C. § 717a(6) (2012).

[10] In 2006, the Commission, under section 3 of the NGA, authorized Port Arthur LNG, L.P. to site, construct, and operate an LNG import terminal near the City of Port Arthur, in Jefferson County, Texas. *Port Arthur LNG, L.P.* 115 FERC ¶ 61,344 (2006). In the same order, the Commission issued Port Arthur Pipeline, L.P. a certificate of public convenience and necessity pursuant to section 7(c) of the NGA and Part 157 of the Commission's regulations to construct and operate natural gas pipelines from the outlet of the proposed LNG terminal. Since neither applicant had begun construction of the authorized facilities within the time frame required, the Commission vacated the authorizations in September, 2011. *Port Arthur LNG, L.P. and Port Arthur Pipeline, L.P.,* 136 FERC ¶ 61,196 (2011).

[11] *Port Arthur LNG, LLC*, FE Docket No. 15-53-LNG, Order No. 3698 (Filed August 20, 2015).

(continued ...)

other nations with which the United States permits such trade, but has not entered into an FTA providing for the national treatment of trade in natural gas.[12]

B. Louisiana Connector and Texas Connector Projects (Docket No. CP18-7-000, and Docket Nos. CP17-21-000 & CP17-21-001)

10. Port Arthur Pipeline proposes to construct a new interstate natural gas pipeline system to transport up to a total of 4,000,000 MMBtu per day of natural gas to serve as feed gas for the Liquefaction Project. The Port Arthur Pipeline system would comprise two non-integrated pipelines: the Louisiana Connector Project and the Texas Connector Project.

1. Facilities

Louisiana Connector Project (Docket No. CP18-7-000)

11. The 130.9-mile-long Louisiana Connector Project would transport up to 2,000,000 MMBtu per day of natural gas from interconnections in Louisiana and Texas to the Liquefaction Project, where it would be liquefied for export to foreign markets. Specifically, the Louisiana Connector Project would consist of:

1. 130.9 miles of 42-inch-diameter pipeline extending from the Liquefaction Project north to interconnections with the facilities of:
    - Centana Intrastate Pipeline, LP;
    - Texas Eastern Transmission, LP;
    - Tennessee Gas Pipeline Company, L.L.C.;
    - Market Hub Partners Holding, LLC;
    - Pine Prairie Energy Center, LLC;
    - Texas Gas Transmission, LLC;
    - ANR Pipeline Company; and
    - Columbia Gulf Transmission, LLC;

[12] *See* application pending before DOE/FE in Docket No. 15-96-LNG (Filed June 15, 2015).

2. a new 89,900 horsepower (hp) compressor station consisting of four gas-driven turbines rated at 22,475 hp each located at milepost (MP) 96.2 in Allen Parish, Louisiana; and

3. appurtenant facilities, including pig launcher/receiver facilities located at MP 0, 63.4, 96.2, and 130.9.

12. The estimated cost of the Louisiana Connector Project facilities is approximately $1.2 billion.[13]

Texas Connector Project (CP17-21-000 and CP17-21-001)

13. The 34.2-mile-long Texas Connector Project would transport up to 2,000,000 MMBtu/d of natural gas from interconnections in Louisiana and Texas to the Liquefaction Project, where it would be liquefied for export to foreign markets. Specifically, the Texas Connector Project would consist of:

1. two segments of 42-inch-diameter pipe:

   - The 7.6-mile-long southern segment, extending from the Liquefaction Project south to interconnections with the facilities of the Natural Gas Pipeline Company of America and Kinder Morgan Louisiana Pipeline Company in Cameron Parish, Louisiana; and

   - The 26.6-mile-long northern segment extending from the Liquefaction Project north to interconnections with the facilities of Houston Pipeline Company, Texas Eastern Transmission, and Florida Gas Transmission Company, as well as underground storage facilities in Jefferson County, Texas;

2. approximately 4.65 miles of lateral pipeline of various diameters;

3. two new compressor stations, one each for the northern and southern segments. The northern compressor station, 50,052 hp total, would consist of three natural gas-driven turbine compressors rated at 16,684 hp each; the southern compressor station, 15,000 hp total, would consist of three electric-driven centrifugal compressors rated at 5,000 hp each; and

4. appurtenant facilities.

[13] Louisiana Connector Project Application, Exhibit K.

(continued ...)

The estimated cost of the Texas Connector Project is approximately $825.7 million.[14]

2. Open Season and Proposed Services

14. Port Arthur Pipeline states that it held a binding open season from August 21 through September 1, 2017, for service on the Louisiana Connector and Texas Connector projects. In response to the open season, Port Arthur Pipeline states that Port Arthur LNG entered into a 20-year precedent agreement for 100 percent of both the Louisiana Connector and Texas Connector projects' capacity at negotiated rates. Based upon this level of commitment, Port Arthur Pipeline provided Port Arthur LNG "Foundation Shipper" status, which provides certain benefits including the option to elect unilateral extensions of the contract term and a contractual right of first refusal.[15]

15. Port Arthur Pipeline requests approval of its *pro forma* tariff, as revised in its amended application in Docket No. CP 17-21-001. Port Arthur Pipeline proposes to provide firm and interruptible transportation service on the Louisiana Connector and Texas Connector projects under new Rate Schedules FT and IT, respectively. Port Arthur Pipeline also proposes to provide Enhanced Hourly Firm transportation service[16] under Rate Schedule EHFT, firm and interruptible storage service under Rate Schedules FSS and ISS, respectively, Parking and Lending service under Rate Schedule P&L, and load management service under rate schedule LMS. Port Arthur Pipeline also proposes a fuel retainage percentage for service on the Louisiana Connector and Texas Connector projects.

3. Blanket Certificates

16. Port Arthur Pipeline requests a blanket certificate of public convenience and necessity pursuant to Part 284, Subpart G of the Commission's regulations authorizing Port Arthur Pipeline to provide transportation service to customers requesting and

[14] Amendment Application, Exhibit K.

[15] *See* Port Arthur Pipeline's November 7, 2017 Amendment to the Texas Connector Project Application, at 12-13 (Amendment Application), Louisiana Connector Project Application at 33. Port Arthur Pipeline states that it is not requesting advance approval of any potentially non-conforming provisions in this certificate proceeding.

[16] "Enhanced Hourly Firm Transportation Service" enables a shipper to receive 1/21 of their daily scheduled quantity of gas per hour. *See* Amendment Application at 10.

(continued ...)

qualifying for transportation service under its proposed FERC Gas Tariff, with pre-granted abandonment authorization.[17]

17. Port Arthur Pipeline requests a blanket certificate of public convenience and necessity pursuant to Part 157, Subpart F of the Commission's regulations authorizing certain future facility construction, operation, and abandonment.[18]

III. Notice, Interventions, and Comments

18. Notice of Port Arthur LNG's application for the Liquefaction Project in Docket No. CP17-20-000, and Port Arthur Pipeline's application for the Texas Connector Project in Docket No. CP17-21-000, was published in the *Federal Register* on December 20, 2016, with comments, interventions, and protests due on January 3, 2017.[19] Notice of Port Arthur Pipeline's application for the Louisiana Connector Project in Docket No. CP18-7-000 was published in the *Federal Register* on November 3, 2017, with comments, interventions, and protests due on November 20, 2017.[20] Notice of Port Arthur Pipeline's amendment to the Texas Connector Project application in Docket No. CP17-21-001 was published in the *Federal Register* on December 6, 2017, with comments, interventions, and protests due on December 21, 2017.[21]

19. Golden Pass Products, LLC and Golden Pass Pipeline, LLC (collectively, Golden Pass) filed a timely motion to intervene in the Liquefaction Project, Louisiana Connector Project, and Texas Connector Project proceedings. Golden Pass received authorization to construct, own and operate an LNG export terminal located approximately two miles from the proposed Liquefaction Project, as well as an interstate natural gas pipeline system located in Calcasieu Parish, Louisiana, and Jefferson and Orange Counties, Texas.[22]

20. Driftwood Pipeline LLC and Driftwood LNG LLC (collectively, Driftwood) filed a timely motion to intervene in the Louisiana Connector proceeding. Concurrently with this order, Driftwood received authorization to construct an LNG export facility in

[17] 18 C.F.R. § 284.221 (2018).

[18] *Id.* § 157.204 (2018).

[19] 81 Fed. Reg. 92,809.

[20] 82 Fed. Reg. 51,233.

[21] 82 Fed. Reg. 57,593.

[22] *Golden Pass Products, LLC*, 157 FERC ¶ 61,222 (2016).

(continued ...)

Calcasieu Parish, Louisiana, as well as a 96-mile-long interstate natural gas pipeline system that would transport natural gas to Driftwood's proposed LNG terminal, certain segments of which will be collocated with the Louisiana Connector Project. [23]

21. Sabine Pass LNG, L.P., and Sabine Pass Liquefaction, LLC (collectively, Sabine Pass), and Cheniere Creole Trail Pipeline, L.P. (Creole Trail), filed a timely motion to intervene in the Liquefaction Project, Louisiana Connector Project, and Texas Connector Project proceedings. Sabine Pass owns and operates the existing Sabine Pass Liquefaction Terminal[24] located in Cameron Parish, Louisiana, and have an application pending before the Commission to add an additional liquefaction berth to their liquefaction terminal.[25] Creole Trail owns and operates the Creole Trail Pipeline,[26] an interstate pipeline system located in Beauregard and Cameron Parishes, Louisiana, designed to transport gas to the Sabine Pass Liquefaction Project.

22. In addition, a local landowner, Douglas Pedigo, filed a timely motion to intervene and comments in the Texas Connector Project proceeding, and the Coushatta Tribe of Louisiana (Coushatta Tribe) filed a timely motion to intervene in the Louisiana Connector Project proceeding. Timely, unopposed motions to intervene are automatically granted pursuant to Rule 214 of the Commission's Rules of Practice and Procedure.[27]

23. Several comments in support of the Liquefaction Project, Texas Connector Project, and Louisiana Connector Project were filed. The Coushatta Tribe of Louisiana commented on the potential of the Louisiana Connector Project to impact tribal lands.

IV. Discussion

A. Liquefaction Project (Docket No. CP17-20-000)

24. Because the proposed LNG terminal facilities will be used to export natural gas to foreign countries, the construction and operation of the proposed facilities and site of

[23] *Driftwood LNG, LLC*, 167 FERC ¶ 61,054 (2019).

[24] *Sabine Pass Liquefaction, LLC*, 139 FERC ¶ 61,039 (2012).

[25] For more information on Sabine Pass' proposal, *see* Sabine Pass' application filed in Docket No. CP19-11-000.

[26] *Cheniere Creole Trail Pipeline, L.P.*, 142 FERC ¶ 61,137 (2013), *reh'g denied Cheniere Creole Trail Pipeline, L.P.*, 145 FERC ¶ 61,074 (2013).

[27] 18 C.F.R. § 385.214 (2018).

(continued ...)

their location require approval by the Commission under section 3 of the NGA.[28] While section 3 provides that an application for the exportation or importation of natural gas shall be approved unless the proposal "will not be consistent with the public interest," section 3 also provides that an application may be approved "in whole or in part, with such modification and upon such terms and conditions as the Commission may find necessary or appropriate."[29] NGA section 3(a) also provides that for good cause shown, the Commission may make supplemental orders as it may find "necessary or appropriate."[30]

25. DOE/FE, pursuant to its authority under NGA section 3, has issued Port Arthur LNG authorization to export up to 1.91 billion cubic feet per day (Bcf/d), or approximately 10 million metric tons per annum (MTPA), of domestically-produced natural gas by vessel to all FTA nations from the proposed Liquefaction Project in Port Arthur, Texas, for a term of 25 years.[31] DOE/FE's initial order approving Port Arthur LNG's export volumes states that "[i]n light of DOE's statutory obligation to grant this Application without modification or delay, there is no need for DOE/FE to review other arguments asserted by Port Arthur LNG in support of the Application." [32]

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[28] The regulatory functions of section 3 were transferred to the Secretary of Energy in 1977 pursuant to Section 301(b) of the Department of Energy Organization Act, Pub. L. No. 95-91, 42 U.S.C. § 7101 *et. seq.* In reference to regulating the imports or exports of natural gas, the Secretary subsequently delegated to the Commission the authority to approve or disapprove the construction and operation of natural gas import and export facilities and the site at which such facilities shall be located. The most recent delegation is in DOE Delegation Order No. 00-004.00A, effective May 16, 2006. Applications for authorization to import or export natural gas must be submitted to DOE. The Commission does not authorize importation or exportation of the commodity itself.

[29] For a discussion of the Commission's authority to condition its approvals of LNG facilities under section 3 of the NGA, *see, e.g., Distrigas Corporation v. FPC*, 495 F.2d 1057, 1063-64 (D.C. Cir. 1974), *cert. denied,* 419 U.S. 834 (1974), and *Dynegy LNG Production Terminal*, *L.P.*, 97 FERC ¶ 61,231 (2001).

[30] 15 U.S.C. § 717b(a) (2012).

[31] DOE/FE Order No. 3698-A at 4.

[32] DOE/FE Order No. 3698 at 5. Section 3(c) provides that the exportation and importation of natural gas to and from countries with which there is in effect a Free Trade Agreement "shall be deemed to be consistent with the public interest applications for

(continued ...)

26. We have reviewed Port Arthur LNG's application to determine if the siting, construction, and operation of its Liquefaction Project as proposed would not be consistent with the public interest.[33] The proposed Liquefaction Project is to be located entirely on lands owned by Port Arthur LNG. Further, the final Environmental Impact Statement (EIS) prepared for the proposed projects finds that most of the direct environmental impacts of the proposed facilities are expected to be minor.[34] All adverse impacts from construction and operation of the facilities will be reduced to less than significant levels if the projects are constructed and operated in accordance with applicable laws and regulation and the environmental mitigation measures recommended in the final EIS and adopted by this order.[35] The final EIS also concludes that reasonably foreseeable cumulative impacts from operation of the Liquefaction Project will not be significant.[36]

27. In accordance with the Memorandum of Understanding signed on August 31, 2018, by the Commission and PHMSA,[37] PHMSA undertook a review of the proposed facility's ability to comply with the federal safety standards contained in Part 193, Subpart B, of Title 49 of the Code of Federal Regulations. [38] On December 20, 2018, PHMSA issued a Letter of Determination (LOD) indicating Port Arthur LNG has demonstrated that the siting of its proposed LNG facilities comply with those federal safety standards. If the proposed Liquefaction Project is subsequently modified so that it

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such importation and exportation shall be granted without modification or delay." 15 U.S.C. § 717b(c) (2012).

[33] *See National Steel Corp.,* 45 FERC ¶ 61,100, at 61,332-33 (1988) (observing that DOE, "pursuant to its exclusive jurisdiction, has approved the importation with respect to every aspect of it except the point of importation" and that the "Commission's authority in this matter is limited to consideration of the place of importation, which necessarily includes the technical and environmental aspects of any related facilities.").

[34] *See* final EIS at 4-326.

[35] *Id.* at ES-10.

[36] *Id.* at ES-9.

[37] FERC, *Memorandum of Understanding Between the Department of Transportation and the Federal Energy Regulatory Commission Regarding Liquefied Natural Gas Transportation Facilities* (Aug. 31, 2018), https://www.ferc.gov/legal/mou/2018/FERC-PHMSA-MOU.pdf.

[38] 49 C.F.R. pt. 193, Subpart B (2018).

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differs from the details provided in the documentation submitted to PHMSA, further review would be conducted by PHMSA.

28. Port Arthur LNG is proposing to operate its Liquefaction Project under the terms and conditions mutually agreed to by its customers and will solely bear the responsibility for the recovery of any costs associated with construction and operation of the project. Accordingly, Port Arthur LNG's proposal does not trigger NGA section 3(e)(4).[39]

29. In view of the above, we find that Port Arthur LNG's proposal is not inconsistent with the public interest. Therefore, we will grant Port Arthur LNG's application for authorization under section 3 of the NGA to site, construct, and operate its proposed LNG terminal facilities.

B. Pipeline Projects

30. Because the Louisiana Connector and Texas Connector projects' proposed pipeline facilities will be used to transport natural gas in interstate commerce subject to the jurisdiction of the Commission, the construction and operation of the facilities are subject to the requirements of subsections (c) and (e) of section 7 of the NGA.[40]

1. Application of the Certificate Policy Statement

31. The Certificate Policy Statement provides guidance for evaluating proposals to certificate new construction.[41] In the Certificate Policy Statement, the Commission established criteria for determining whether there is a need for a proposed project and whether the proposed project will serve the public interest. The Certificate Policy Statement explains that, in deciding whether to authorize the construction of major new natural gas facilities, the Commission balances the public benefits against the potential adverse consequences. The Commission's goal is to give appropriate consideration to the enhancement of competitive transportation alternatives, the possibility of overbuilding, subsidization by existing customers, the applicant's responsibility for unsubscribed capacity, the avoidance of unnecessary disruptions of the environment, and the unneeded exercise of eminent domain in evaluating new pipeline construction.

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[39] 15 U.S.C. § 717b(e)(4) (2012) (governing orders for LNG terminals offering open access service).

[40] 15 U.S.C. §§ 717f(c) and 717f(e) (2012).

[41] *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227 (1999), *clarified*, 90 FERC ¶ 61,128, *further clarified*, 92 FERC ¶ 61,094 (2000) (Certificate Policy Statement).

32. Under this policy, the threshold requirement for pipelines proposing new projects is that the pipeline must be prepared to financially support the project without relying on subsidization from the existing customers. The next step is to determine whether the applicant has made efforts to eliminate or minimize any adverse effects the project might have on the applicant's existing customers, existing pipelines in the market and their captive customers, and landowners and communities affected by the route of a new pipeline. If residual adverse effects on these interest groups are identified after efforts have been made to minimize them, the Commission will evaluate the project by balancing the evidence of public benefits to be achieved against the residual adverse effects. This is essentially an economic test. Only when the benefits outweigh the adverse effects on economic interests will the Commission then proceed to consider the environmental analysis where other interests are addressed.

33. As noted above, the threshold requirement for pipelines proposing new interstate gas pipeline facilities is that the pipeline must be prepared to financially support the project without relying on subsidization from its existing customers. As Port Arthur Pipeline is a new company, it has no existing customers. As such, there is no potential for subsidization of the Louisiana Connector or Texas Connector projects' facilities by existing customers, or the degradation of service to existing customers as a result of the projects. Thus, we find that the Louisiana Connector and Texas Connector projects meet the threshold no-subsidy requirement of the Certificate Policy Statement.

34. The proposed Louisiana Connector and Texas Connector projects' facilities are designed to transport gas for liquefaction and export at Port Arthur LNG's Liquefaction Project. No other pipelines, or their captive customers have filed adverse comments regarding the Louisiana Connector or Texas Connector projects. Thus, we find that the Louisiana Connector and Texas Connector projects will not adversely affect other pipelines and their captive customers.

35. We also find that the Louisiana Connector and Texas Connector projects will have minimal adverse impacts on landowners and communities. Of the approximately 34.2 miles of pipeline that would be installed as part of the Texas Connector Project, nearly 53 percent, or 18.29 miles, is proposed to be co-located on existing pipeline right-of-way.[42] In addition, Port Arthur Pipeline states that approximately 95.6 miles, or 73 percent of the approximately 131 miles of pipeline that would be installed as part of Louisiana Connector projects, will be co-located along existing pipeline or electric transmission utility rights-of-way.[43]

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[42] *See* Texas Connector Project Application, Resource Report 1, Table 1.1-4.

[43] *See* Louisiana Connector Project Application at 6.

36. In view of the considerations above, we find that Port Arthur Pipeline has demonstrated a need for the Louisiana Connector and Texas Connector projects, and that the benefits each project would provide outweigh their adverse effects on existing customers, other pipelines and their captive customers, landowners, and surrounding communities. Therefore, we find, consistent with the criteria discussed in the Certificate Policy Statement and subject to the environmental discussion below, that the public convenience and necessity requires approval of Louisiana Connector and Texas Connector projects, as conditioned in this order.

2. Blanket Certificates

37. Port Arthur Pipeline requests a Part 284, Subpart G blanket certificate in order to provide open-access transportation services. Under a Part 284 blanket certificate, Port Arthur Pipeline will not require individual authorizations to provide transportation services to particular customers. Port Arthur Pipeline filed a *pro forma* Part 284 tariff to provide open-access transportation services. Since a Part 284 blanket certificate is required for Port Arthur Pipeline to participate in the Commission's open-access regulatory regime, we will grant Port Arthur Pipeline a Part 284 blanket certificate, subject to the conditions imposed herein.

38. Port Arthur Pipeline has also applied for a Part 157, Subpart F blanket certificate. The Part 157 blanket certificate gives an interstate pipeline NGA section 7 authority to automatically, or after prior notice, perform a restricted number of routine activities related to the construction, acquisition, abandonment, and replacement and operation of existing pipeline facilities provided the activities comply with constraints on costs and environmental impacts.[44] Because the Commission has previously determined through a rulemaking that these blanket-certificate eligible activities are in the public convenience and necessity,[45] it is the Commission's practice to grant new natural gas companies a Part 157 blanket certificate if requested.[46] Accordingly, we will issue Port Arthur Pipeline the requested blanket construction certificate under Part 157 of the Commission's regulations, subject to the conditions imposed herein.

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[44] 18 C.F.R. § 157.203 (2018).

[45] *Revisions to the Blanket Certificate Regulations and Clarification Regarding Rates,* Order No. 686, 117 FERC ¶ 61,074, at P 9 (2006).

[46] *C.f. Rover Pipeline LLC,* 161 FERC ¶ 61,244, at P 13 (2017) (denying a request for a blanket certificate where the company's actions had eroded the Commission's confidence it would comply with all the requirements of the blanket certificate program, including the environmental requirements.).

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3. Rates

a. Initial Recourse Rates

39. Port Arthur Pipeline proposes to establish separate zone rates for the Louisiana Connector and Texas Connector facilities because of the non-integrated nature of the two pipeline systems. Port Arthur Pipeline estimates that the total capital cost of construction for the Louisiana Connector and Texas Connector projects' facilities will be $825,683,539[47] and $1,207,584,005,[48] respectively. Port Arthur Pipeline initially proposed a $146,140,823 cost of service for the Texas Connector Project and a $206,800,419 cost of service for the Louisiana Connector Project, utilizing a capital structure of 60 percent debt and 40 percent equity, a cost of debt of 5.7 percent, a return on equity of 14.00 percent, a federal tax rate of 35 percent, and a depreciation rate of 2.00 percent.[49]

40. In a February 6, 2018 response to a staff data request, (February 6 Data Response) Port Arthur Pipeline provided adjusted costs of service and recalculated its initial incremental recourse rates to reflect changes in the federal tax code, as per the Tax Cuts and Jobs Act of 2017,[50] which became effective January 2018. Due to the changes to the federal tax code, the cost of service for the Texas Connector Project was reduced to $135,042,816, and the cost of service for the Louisiana Connector Project was reduced to $188,555,221, with correspondingly lower calculated initial charges for firm and interruptible services.[51] As Port Arthur Pipeline's calculations in its February 6 Data Response reflect the federal tax code that will be in effect when the project goes into service, the Commission will use the revised costs of service for the purpose of establishing the initial recourse rates, to the extent Port Arthur Pipeline demonstrates that it is entitled to an income tax allowance, as further discussed below.

41. For the Texas Connector Project, Port Arthur Pipeline proposes an initial maximum monthly recourse reservation charge of $5.7059 per Dth, and an initial usage

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[47] Amendment Application, Exhibit K.

[48] *See* Louisiana Connector Project Application, Exhibit K.

[49] Amendment Application, Exhibits O and P; Louisiana Connector Application, Exhibits O and P.

[50] Pub. L. No. 115-97, 131 Stat. 2054 (Dec. 22, 2017).

[51] *See* Exhibit P, Part I of Port Arthur Pipeline's Data Response.

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charge of $0.0033 per Dth, for firm transportation service under Rate Schedule FT.[52] Port Arthur Pipeline developed its proposed FT reservation charge using first-year fixed costs of $133,519,072, and annual reservation billing determinants of 23,400,000 Dth.[53] Port Arthur Pipeline states that its proposed usage charge reflects variable costs of $1,523,744 and billing determinants of 467,200,000 Dth, based on an 80 percent load factor of the Texas Connector Project's annual design throughput. Although Port Arthur Pipeline states that the billing determinants are based on an 80 percent load factor of the Texas Connector Project's annual design throughput (daily design capacity of 2,000,000 Dth, times 365, times 80 percent), Port Arthur Pipeline's proposed billing determinants do not equal a load factor of 80 percent, but instead approximately 64 percent.[54]

42. For the Louisiana Connector Project, Port Arthur Pipeline proposes an initial maximum monthly recourse reservation charge of $7.8244 per Dth, and an initial usage charge of $0.0013 per Dth for firm transportation service under Rate Schedule FT.[55] Port Arthur Pipeline developed its proposed FT reservation charge for the Louisiana Connector Project using first-year fixed costs of $187,710,599, and annual reservation billing determinants of 23,990,400 Dth.[56] The proposed usage charge reflects variable costs of $844,622 and billing determinants of 656,737,200 Dth, based on a 90 percent load factor of the Louisiana Connector Project's annual design throughput.[57]

43. Under Rate Schedule EHTF, Port Arthur Pipeline proposes an initial monthly reservation charge of $6.5210 per Dth for service on the Texas Connector Project facilities and a monthly reservation charge of $8.9422 per Dth for service on the Louisiana Connector Project facilities.[58] As noted above, Rate Schedule EHFT provides a shipper the right to take its daily scheduled quantity ratably over a 21-hour period rather

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[52] *Id.*

[53] *Id.* Port Arthur did not use the daily design capacity of the Texas Connector Project (2,000,000 Dth) in calculating the proposed reservation charge. Instead, its calculation is based on 23,400,000 Dth in annual billing determinants, which is approximately 97.5 percent of the project's 24,000,000 Dth annualized design capacity. *See* Amended Exhibit P, Part 1, Page 2.

[54] *Id.*

[55] *See* Exhibit P, Part I, Page 1 of Port Arthur Pipeline's Data Response.

[56] *Id.,* Page 2.

[57] *Id.*

[58] *Id.*

than a 24-hour period. Port Arthur Pipeline does not anticipate having any initial customers under Rate Schedule EHFT and does not allocate costs to the service. Instead, Port Arthur Pipeline applies the factor of 1.1429 (24 divided by 21) to each zone FT rate to calculate a rate that accounts for the costs related to the additional capacity needed to provide service under Rate Schedule EHFT.

44. Port Arthur Pipeline also proposes rates for Interruptible Transportation (IT) service, Parking and Lending (P&L) service, and Authorized Overrun Service (AOS), derived from a 100 percent load factor rate of the respective zone's FT reservation and usage charges.

45. While the Commission generally finds Port Arthur Pipeline's proposed cost of service and initial rates for the Louisiana Connector and Texas Connector projects acceptable, the Commission will require Port Arthur Pipeline to recalculate its rates based on revised billing determinants for its reservation charges. After reviewing Port Arthur Pipeline's workpapers, the Commission finds that Port Arthur Pipeline has not based its billing determinants on 100 percent of the design capacity of the pipelines. The Commission has a long-standing policy of basing initial rates on the design-capacity of the pipeline.[59] This approach ensures that a pipeline constructing facilities is placed at risk for underutilization of the facilities if it does not contract with customers for the full capacity of the pipeline.[60] Port Arthur Pipeline states that the design capacities for the Louisiana Connector and Texas Connector projects are each 2,000,000 MMBtu, and thus Port Arthur Pipeline is directed to design its reservation charges based on this capacity. In addition, Port Arthur Pipeline is directed to clarify the billing determinants used to establish the usage charges for the Louisiana Connector and Texas Connector projects. Subject to the discussion herein, the Commission finds Port Arthur Pipeline's proposed costs of service and initial rates for the Louisiana Connector and Texas Connector projects reasonable.

4. Federal Income Tax Allowance

46. Consistent with the D.C. Circuit's holding in *United Airlines*, *Inc. v FERC*,[61] the Commission has held that a double recovery of income tax costs results from granting a Master Limited Partnership (MLP) a separate income tax allowance and a pre-tax return

[59] *Ruby Pipeline, L.L.C.*, 128 FERC ¶ 61,224 (2009), *order on reh'g* 131 FERC ¶ 61,007 (2010).

[60] *See Cameron Interstate Pipeline, LLC,* 160 FERC ¶ 61,009, at P 11 (2017).

[61] 827 F.3d 122, 134, 136 (D.C. Cir. 2016) (*United Airlines*).

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on equity.[62] Accordingly, the Commission has established a policy that MLPs are generally not permitted to recover an income tax allowance in their cost of service. For those pass-through business forms that are not MLPs, the Commission continues to consider how to resolve the double recovery concern raised by *United Airlines*.[63] However, the Commission has clarified that a natural gas company organized as a pass-through entity, all of whose income or losses are consolidated on the federal income tax return of its corporate parent, is considered to be subject to the federal corporate income tax, and is thus eligible for a tax allowance.[64] For all other pass-through entities claiming an income tax allowance, parties should fully address the double-recovery concern raised by the court in *United Airlines*,[65] including the pass-through entities' ownership structure, where any income tax liability is incurred in that ownership structure, and whether those income tax liabilities are reflected in the return on equity.

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[62] *SFPP, L.P.*, Opinion No. 511-C, 162 FERC ¶ 61,228, at PP 21-30 (2018); *Enable Mississippi River Transmission, LLC*, 164 FERC ¶ 61,075, at PP 34-35 (2018) (*Enable*); *see also Inquiry Regarding the Commission's Policy for Recovery of Income Tax Costs*, 162 FERC ¶ 61,227 (Revised Policy Statement) (providing guidance that an MLP may not recover an income tax allowance), *order on reh'g*, 164 FERC ¶ 61,030 (2018)).

[63] Revised Policy Statement, 162 FERC ¶ 61,227 at PP 3, 45; *Trailblazer Pipeline Co., LLC*, 164 FERC ¶ 61,074, at PP 30-31 (2018) (*Trailblazer*).

[64] *See Enable*, 164 FERC ¶ 61,075 at PP 34-35; *BP West Coast Products, LLC v. FERC*, 374 F.3d 1263, at 1289 (D.C. Cir. 2004) (disallowing an income tax allowance for an MLP's corporate unitholders, while explaining that an income tax allowance is appropriate in the cost of service of a pass-through subsidiary of a corporation "when such a subsidiary does not itself incur a tax liability but generates one that might appear on a consolidated return of the corporate group."). *See also Interstate and Intrastate Natural Gas Pipelines; Rate Changes Relating to Federal Income Tax Rate*, Order No. 849, 164 FERC ¶ 61,031 at P 3 (2018) (clarifying that for purposes of the FERC Form No. 501-G and limited section 4 filings contemplated by the final rule "a natural gas company organized as a pass-through entity all of whose income or losses are consolidated on the federal income tax return of its corporate parent is considered to be subject to the federal corporate income tax, and is thus eligible for a tax allowance.").

[65] Revised Policy Statement, 162 FERC ¶ 61,227 at PP 3, 45; *Trailblazer*, 164 FERC ¶ 61,074 at P 31.

47. Here, Port Arthur Pipeline represents that it is a wholly-owned subsidiary of Sempra Energy, effective November 29, 2016.[66] To the extent that Port Arthur Pipeline can demonstrate in its compliance filing to place its initial rates in-service that all of its income or losses are consolidated on the federal income tax return of its corporate parent, then Port Arthur Pipeline is permitted an income tax allowance on a stand-alone basis.[67] Consistent with the discussion above, if Port Arthur Pipeline cannot make such a showing, then Port Arthur Pipeline must provide other evidence to address the double-recovery concern raised by the court in *United Airlines*.[68] To the extent Port Arthur Pipeline does not make such a demonstration, the tariff records it files setting forth the initial rates for service must reflect rates recalculated to reflect removal of the proposed tax allowance and accumulated deferred income tax from its cost of service. If Port Arthur Pipeline fails to remove the proposed income tax allowance and accumulated deferred income taxes from the initial rates, the filing will be rejected as not being in compliance with this order and Port Arthur Pipeline will have to refile those records with the appropriate rates and receive Commission approval prior to going into service.

5. Allowance for Funds Used During Construction

48. Port Arthur Pipeline, a new pipeline company, proposes to calculate its Allowance for Funds Used During Construction (AFUDC) based on its proposed debt and equity capital structure. This approach is consistent with the accounting guidance we have given other newly created companies.[69] Consistent with Commission precedent, Port Arthur Pipeline is required to capitalize the actual costs of borrowed and other funds used for construction purposes, not to exceed the amount of debt and equity AFUDC that would be capitalized based on the overall rate of return approved. This will ensure that the amounts included in AFUDC are properly capitalized in this project, consistent with the Commission's requirements for newly created companies approved in other cases.

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[66] Texas Connector Application, Exhibit D.

[67] *See City of Charlottesville, Virginia, v. FERC*, 774 F.2d 1205 (1985) (describing and affirming the Commission's policy with regard to the recognition of income taxes for a pipeline that is part of a consolidated corporate income tax filing).

[68] 827 F.3d at 134-136. *See also* Revised Policy Statement, 162 FERC ¶ 61,227 at P 45.

[69] *See, e.g., Tiger Pipeline, LLC*, 131 FERC ¶ 61,010, at P 80 (2010); *Cheniere Creole Trail Pipeline, L.P.*, 115 FERC ¶ 61,331, at PP 41-43 (2006), *Port Arthur Pipeline, L.P.*, 115 FERC ¶ 61,344 at P 57.

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6. Fuel Rates

49. Port Arthur Pipeline is proposing an in-kind system fuel retention percentage with an annual tracker mechanism. Port Arthur Pipeline states that it will make an annual filing to true up any differences between (i) the quantity of gas retained through the fuel retention charge, and (ii) actual fuel consumed and volumes of gas lost and unaccounted for (LAUF) on its system. Port Arthur Pipeline proposes an initial fuel percentage of 0.98 percent for the Texas Connector Project[70] and 1.2 percent for the Louisiana Connector Project.[71] These percentages are designed to recover actual quantities used in compression, as well as LAUF volumes for each project or rate zone. The Commission accepts Port Arthur Pipeline's proposed initial fuel retainage percentages. The proposed annual tracker mechanism is addressed below.

7. Service under Rate Schedules FSS, ISS, and LMS

50. Port Arthur Pipeline does not propose to construct storage capacity as part of its system, but states that it will interconnect with off-system underground natural gas storage facilities. Port Arthur Pipeline's certificate application includes service proposals that would require the use of off-system storage capacity for firm storage service under Rate Schedule FSS, interruptible storage service under Rate Schedule ISS, and a load management service under Rate Schedule LMS. Moreover, section 13.43 of Port Arthur Pipeline's *pro forma* General Terms and Conditions (GT&C) (Off System Capacity) would permit Port Arthur Pipeline to acquire, through transportation agreements, off-system capacity rights, for operational reasons or to render service for its shippers within a zone, under its approved tariff and rates. Section 13.43 of the GT&C states that when off-system capacity is not required for operational reasons or to meet firm service commitments, Port Arthur Pipeline will offer the off-system capacity to shippers on a primary firm basis within the zone. Finally, section 13.43 of the GT&C states that Port Arthur Pipeline is not precluded from seeking case specific authorization for the utilization of off-system capacity by Port Arthur Pipeline for other purposes, nor does it preclude Port Arthur Pipeline from releasing any capacity it holds on off-system pipeline companies.

51. Port Arthur Pipeline has not proposed rates for Rate Schedules FSS and ISS. Port Arthur Pipeline asserts that its proposed LMS maximum monthly "reservation" rate of

[70] Texas Connector Project Application at 21.

[71] Louisiana Connector Project Application at 22.

$1.50 per Dth is the maximum it believes it can charge in the market area, and is lower than its proposed Rate Schedule P&L monthly "reservation" rate of $0.2065 per Dth.[72]

52. Port Arthur Pipeline has not developed rates for FSS and ISS services, and its maximum monthly market-based "reservation" rate for LMS service is unsupported. Thus, we reject Port Arthur Pipeline's proposed Rate Schedules FSS, ISS, and LMS and direct Port Arthur Pipeline to delete these rate schedules and any references thereto from its tariff.

53. Moreover, we note that the Commission's regulations set forth requirements for cost pass-through mechanisms.[73] Port Arthur Pipeline has not proposed a tariff-based cost recovery mechanism that would meet the requirements of section 154.403 of the Commission's regulations for passing through off-system costs to its customers. This rejection is without prejudice to Port Arthur Pipeline filing a rate and tariff proposal for Rate Schedule FSS, ISS and LMS services that is consistent with Commission precedent and regulations. The filing should include a detailed narrative explanation of how Port Arthur Pipeline intends to recover cost-based rates associated with its use of off-system capacity, as well as workpapers in Excel format showing all formulas underlying its rate derivations. Moreover, if Port Arthur Pipeline seeks to pass through to its customers' market-based rates charged by off-system storage providers, it must provide a study showing that it is not able to exercise market power.

8. Pipeline Safety and Greenhouse Gas Costs

54. Port Arthur Pipeline proposes tracking mechanisms for cost increases due to any new pipeline safety or greenhouse gas regulations issued after Port Arthur Pipeline's initial rates are approved. Section 13.29.3 of the GT&C states that Port Arthur Pipeline shall file annually to revise a Transmission Pipeline Safety Costs and Greenhouse Gas Costs Surcharge for each zone on or before September 30 to become effective November 1.

55. Port Arthur Pipeline's proposed Transmission Pipeline Safety Costs and Greenhouse Gas Costs Surcharge closely resembles modernization trackers that the Commission addressed in its policy statement *Cost Recovery Mechanisms for Modernization of Natural Gas Facilities*.[74] In the Cost Recovery Policy Statement, the

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[72] *See* Texas Connector Project Application at 21; Louisiana Connector Project Application at 22.

[73] 18 C.F.R. § 154.403 (2018).

[74] 151 FERC ¶ 61,047, *clarification denied*, 152 FERC ¶ 61,046 (2015) (*Cost Recovery Policy Statement)*.

Commission adopted five guiding principles as the standards a pipeline would need to satisfy for the Commission to approve a surcharge such as the one proposed by Port Arthur:

1. the pipeline's existing rates must have been reviewed through an NGA general section 4 rate proceeding, a cost and revenue study, or through a collaborative effort between the pipeline and its customers;

2. the costs eligible for recovery through the surcharge must generally be limited to one-time capital costs incurred to modify the pipeline's existing system to comply with safety or environmental regulations or other federal or state government agencies, or costs shown to be necessary for safe, reliable, and/or efficient operation of the pipeline;

3. the pipeline must design any proposed surcharge in a manner that will protect the pipeline's captive customers from cost shifts due to the surcharge;

4. the pipeline must include some method to allow a periodic review of whether the surcharge and the pipeline's base rates remain just and reasonable; and

5. the pipeline must work collaboratively with shippers to seek shipper support for any surcharge proposal.[75]

56. Port Arthur Pipeline has not demonstrated that its proposal meets the standards laid out in the Cost Recovery Policy Statement. Port Arthur Pipeline's proposal does not offer support for the surcharge from shippers, nor does it offer a method to allow for a periodic review of whether the surcharge and the pipeline's base rates remain just and reasonable. Furthermore, the Commission finds it is speculative to anticipate what types of costs Port Arthur Pipeline may be subject to under federal, state or local legislation, whether such costs should be recoverable, and, if recoverable, the manner in which they should be recovered. This action is without prejudice to Port Arthur Pipeline filing a proposal in the future if it actually incurs such costs or in compliance with the Cost Recovery Policy Statement.[76] Consistent with this determination, Port Arthur Pipeline is directed to delete references to the Transmission Pipeline Safety Costs and Greenhouse Gas Costs Surcharge from its tariff.

[75] Cost Recovery Policy Statement, 151 FERC ¶ 61,047 at P 31.

[76] *Sierrita Gas Pipeline, LLC,* 147 FERC ¶ 61,192, at P 48 (2014).

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9. Three Year Filing Requirement

57. Consistent with Commission precedent, Port Arthur Pipeline is required to file a cost and revenue study no later than three months after its first three years of actual operation to justify its existing cost-based firm and interruptible recourse rates.[77] In this filing, the projected units of service should be no lower than those upon which Port Arthur Pipeline's approved initial rates are based. The filing must include a cost and revenue study in the form specified in section 154.313 of the Commission's regulations to update cost of service data.[78] Port Arthur Pipeline's cost and revenue study should be filed through the eTariff portal using a Type of Filing Code 580. In addition, Port Arthur Pipeline is advised to include as part of the eFiling description, a reference to Docket Nos. CP17-21-000, CP17-21-001, and CP18-7-000 and the cost and revenue study.[79] After reviewing the data, the Commission will determine whether to exercise its authority under NGA section 5 to investigate whether the rates remain just and reasonable. In the alternative, in lieu of this filing, Port Arthur Pipeline may make an NGA general section 4 rate filing to propose alternative rates to be effective no later than three years after the in-service date for its proposed facilities.

10. Negotiated Rate Requirements

58. Port Arthur Pipeline proposes to provide service on the Louisiana Connector and Texas Connector projects to the project shipper under negotiated rate agreements. Port Arthur Pipeline must file either its negotiated rate agreement or tariff records setting forth the essential terms of the agreements in accordance with the Commission's Alternative Rate Policy Statement[80] and negotiated rate policies.[81] Port Arthur Pipeline must file the

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[77] *See Bison Pipeline, LLC,* 131 FERC ¶ 61,013, at P 29 (2010) (*Bison*); *Ruby Pipeline, LLC,* 128 FERC ¶ 61,224 at P 57; *MarkWest Pioneer, L.L.C.,* 125 FERC ¶ 61,165, at P 34 (2008).

[78] 18 C.F.R. § 154.313 (2018).

[79] *Electronic Tariff Filings*, 130 FERC ¶ 61,047, at P 17 (2010).

[80] *Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines; Regulation of Negotiated Transportation Services of Natural Gas Pipelines*, 74 FERC ¶ 61,076 (1996); *clarification granted*, 74 FERC ¶ 61,194 (1996), *order on reh'g*, 75 FERC ¶ 61,024 (1996).

[81] *Natural Gas Pipelines Negotiated Rate Policies and Practices; Modification of Negotiated Rate Policy,* 104 FERC ¶ 61,134 (2003), *order on reh'g and clarification,*

(continued ...)

negotiated rate agreements or tariff records at least 30 days, but not more than 60 days, before the proposed effective date for such rates.[82]

11. Pro Forma Rate Updates

59. Port Arthur Pipeline requests waiver of any Commission regulations necessary to allow it to revise its proposed rates prior to the in-service date of the project to reflect actual cost information.[83] Port Arthur Pipeline's request for a waiver is denied.

60. However, Port Arthur Pipeline may propose to modify its initial rates to reflect updated cost and rate information by filing an amendment to this certificate proceeding, but any changes to initial rates can only take place prior to the project being placed into service. Thus, Port Arthur Pipeline should file any such amendment application, complete with all necessary supporting information, no later than 60 days prior to its anticipated in-service date to afford the Commission time to review and act upon its request. If Port Arthur Pipeline chooses to place its project into service before the Commission has acted on any amendment request, it will have to file an NGA section 4[84] rate case in order to change the rates approved in this order.

12. Pro Forma Tariff

a. Reservation of Capacity for Future Expansions

61. Section 13.4.1 of the GT&C (Open Season for Generally Available Capacity) provides in part:

> (a) Pipeline will allocate firm pipeline capacity in accordance with this Section 13.4. To the extent Pipeline has available unsubscribed capacity for which there are no pending requests, Pipeline reserves the right, but shall not be obligated, to reserve such capacity for open seasons to be held

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114 FERC ¶ 61,042, *reh'g dismissed and clarification denied,* 114 FERC ¶ 61,304 (2006).

[82] Pipelines are required to file any service agreement containing non-conforming provisions and to disclose and identify any transportation term or agreement in a precedent agreement that survives the execution of the service agreement. 18 C.F.R. § 154.112(b) (2018).

[83] Louisiana Connector Application at 36.

[84] 15 U.S.C. § 717c(d) (2012).

(continued ...)

> within the next six (6) Months for the purpose of limiting or avoiding a future expansion.

62. This paragraph is the only reference in Port Arthur Pipeline's tariff to reserving capacity for future expansions. While the Commission permits such reservations of capacity, Commission policy requires the tariff include several conditions to ensure that "reserved capacity is offered in a not unduly discriminatory manner." [85] As laid out in greater detail in *Iroquois Gas Transmission System,* these conditions require Port Arthur Pipeline to:

1. post all available capacity so that all shippers may bid on it;
2. delineate that all capacity may only be reserved for a one-year period from the date posted;
3. provide detailed information in the posting of the reserved capacity;
4. solicit turnback capacity as a part of the process, to assist parties in determining the correct size of any expansion project; and
5. include solicitation procedures to ensure that excess and turnback capacity is posted.

Port Arthur Pipeline is directed to revise its tariff to include such provisions, consistent with Commission precedent.[86]

b. <u>Right of First Refusal and Net Present Value Standard</u>

63. Section of the 13.4.3 of the GT&C (Net Present Value Standard) provides in part that Port Arthur Pipeline shall award capacity for bids received during an open season to shippers whose bids it has determined to have the highest net present value (NPV). Section of the 13.4.3 of the GT&C describes NPV as

> the discounted cash flow of incremental revenues per dekatherm to Pipeline produced, lost or affected by the requests for service and shall be based upon such factors as the term, quantity, date on which the requested service is requested to commence, *and other factors determined to be relevant by Pipeline*. (Emphasis added.)

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[85] *See, e.g., Iroquois Gas Transmission System*, 100 FERC ¶ 61,279 (2002).

[86] *Id.* PP 5-10.

64. With respect to bids for capacity subject to a right of first refusal, section 13.4.2(c) of the GT&C provides:

> If Pipeline is willing to accept a bid, Pipeline shall, no later than fifteen (15) Days after the close of the bidding period, notify Shipper of the bid having the highest Net Present Value ("NPV"). Shipper shall have ten (10) Days after receiving notice to notify Pipeline as to whether it will match the bid having the highest NPV *and longest term*. If the Shipper elects to exercise its Right of First Refusal to match the bid with the highest NPV it must execute a new Service Agreement containing the terms of that bid, which new Service Agreement shall succeed the prior agreement following its expiration; provided, however, that Shipper shall not be required to pay any rate higher than the maximum applicable rate. (Emphasis added.)

65. The emphasized language in section 13.4.2(c) of the GT&C is not consistent with the Commission's policy that, in the context of the right of first refusal (ROFR) bidding process, "shippers may bid whichever combination of rate and term best represents the value they place on the capacity."[87] The Commission further finds that the phrase "and other factors determined to be relevant by Pipeline" in section 13.4.3 of the GT&C is overbroad and lacks clarity regarding how the NPV should be calculated. Accordingly, Port Arthur Pipeline is directed to delete the phrases "and the longest term" from section 13.4.2(c) of the GT&C and "and other factors determined to be relevant by the pipeline" from section 13.4.3 of the GT&C.

c. ROFR Notification

66. The Commission has held that both a shipper and the pipeline have the right to initiate the ROFR process through issuance of a notification to one another.[88] However, section 13.4.2 of the GT&C expressly grants this right only to the pipeline, stating in part, "if Pipeline provides written notice to Shipper to terminate any Long Term Service Agreement for firm transportation at the maximum tariff rate, Shipper will have a right of first refusal to retain such firm capacity by complying with the bidding procedures in this Section 13.4." Port Arthur Pipeline is directed to revise section 13.4.2 of the GT&C to be consistent with the Commission's ROFR notification policy.

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[87] *Atlantic Coast Pipeline, LLC*, 161 FERC ¶ 61,042, at P 156 (2017) (citing *Transcontinental Gas Pipe Line Corp.,* 105 FERC ¶ 61,365, at P 20 (2003)).

[88] *Texas Eastern Transmission, LP*, 102 FERC ¶ 61,262, at PP 26-28 (2003).

(continued ...)

d. ROFR Bid Matching

67. Under the Commission's policy, a ROFR shipper is permitted to match the best third-party bid for all or only a volumetric portion of the open season capacity.[89] However, section 13.4.2(c) of the GT&C provides, in part:

> If the Shipper elects to exercise its Right of First Refusal to match the bid with the highest NPV it must execute a new Service Agreement *containing the terms of that bid*, which new Service Agreement shall succeed the prior agreement following its expiration ….(Emphasis added.)

68. The emphasized language could be interpreted as inconsistent with the shipper's right to match bids for only a portion of its expiring capacity, and that the ROFR shipper does not have a right of contract reduction. Therefore, Port Arthur Pipeline is directed to clarify section 13.4.2 of the GT&C to provide that a shipper may notify Port Arthur Pipeline of its intent to match the best offer(s) for all or a volumetric portion of its capacity.

e. Posting ROFR Capacity

69. Section 13.4.2(a) of the GT&C provides that Port Arthur Pipeline "shall post the capacity [subject to ROFR rights] for bidding on its Internet Web Site no later than one-hundred and eighty (180) Days prior to the expiration of the current Service Agreement." The phrase "no later than" implies that Port Arthur Pipeline and a shipper may negotiate a deadline by which the ROFR notice must be provided under section 13.4.2(a) of the GT&C. While the Commission has permitted the negotiation of the ROFR notice deadline, the Commission also requires a stated outer limit on how far in advance of the end of the contract the ROFR process may begin.[90] This outer limit permits the ROFR process to take place relatively close to the time the contract terminates so that existing shippers, as well as prospective shippers, are provided a timely opportunity to assess the value of capacity.[91] It is unclear whether the phrase "no later than" is intended to authorize negotiation of the ROFR notice deadline, which must be implemented on a not unduly discriminatory basis, and/or whether it is intended to function as a "not earlier

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[89] *Mountain Valley Pipeline, LLC,* 161 FERC ¶ 61,043, at P 113 (2017); *see also Dominion Trans., Inc.* 111 FERC ¶ 61,135, at PP 18-22 (2005).

[90] *Gulf South Pipeline Company, LP*, 115 FERC ¶ 61,301, at PP 11-13 (2006).

[91] *Id.*

than" outer limit on the ROFR prior notice.[92] Port Arthur Pipeline is required to clarify and support its proposed notice date consistent with this discussion and Commission precedent.[93]

f. Operational Balancing Agreements

70. Section 13.7.1 of the GT&C (Operational Balancing Agreements) provides in relevant part that "[p]ipeline may enter into [Operational Balancing Agreements (OBAs)] with interstate, intrastate pipelines, or LNG terminals that operate natural gas facilities that directly interconnect with Pipeline's system (hereinafter called "OBA Party")," and lists five conditions under which Port Arthur Pipeline would have no obligation to negotiate and execute OBAs with any OBA Party.

71. North American Energy Standards Board (NAESB) Wholesale Gas Quadrant (WGQ) Version 3.0 Flowing Gas Related Standard 2.3.29 provides that "[a]t a minimum, [pipeline] should enter into [OBAs] at all pipeline-to-pipeline (interstate and intrastate) interconnects." Further, the Commission's regulations provide that "[a] pipeline must enter into [OBAs] at all points of interconnection between its system and the system of another interstate or intrastate pipeline."[94] Accordingly, Port Arthur Pipeline is directed to revise its tariff to comply with NAESB WGQ Version 3.0 Flowing Gas Related Standard 2.3.29 and section 284.12(b)(2)(i) of the Commission's regulations, and delete the above-mentioned conditions under which Port Arthur Pipeline would not be obligated to negotiate and execute OBAs with any OBA Party.

72. Section 13.7.1(a) of the GT&C states in part:

> For the purpose of minimizing operational conflicts between various pipeline facilities with respect to the delivery of gas to and from Pipeline's facilities, *Pipeline may enter* into OBAs with interstate, intrastate pipelines, or LNG terminals that operate natural gas facilities that directly interconnect with Pipeline's system (herein called ""OBA Party""). (Emphasis added.)

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[92] *E.g.,* Panhandle Eastern Pipe Line Company, LP, FERC NGA Gas Tariff, Fourth Revised Vol. No. 1, GT&C Section 7, Contracting for Service Rights, 1.0.0 provides that, for contracts two years or longer, notice must be provided "[n]ot earlier than 18 Months and not later than 12 Months."

[93] *See, e.g., Rover Pipeline LLC*, 158 FERC ¶ 61,109, at P 135 (2017) (*Rover*).

[94] 18 C.F.R. § 284.12(b)(2)(i) (2018).

(continued ...)

73. Port Arthur Pipeline is directed to revise its tariff to conform with Commission policy and NAESB WGQ Standard 2.3.29 which requires "[a]t at minimum…" pipelines to "enter into Operational Balancing Agreements at all pipeline-to-pipeline (interstate and intrastate) interconnects."[95]

g. Multiple Penalties for the Same Infraction

74. Sections 13.7.9 (Scheduling Penalties) and 13.10.4(b) (Curtailment and Penalties) of the GT&C allow penalties to be assessed in addition to any other applicable charges and penalties. Commission policy prohibits multiple penalties from being assessed for the same infraction.[96] Therefore, these sections should be revised to be consistent with Commission Policy. We also direct Port Arthur Pipeline to revise paragraph 5.2.4 of Rate Schedule FT quoted below to ensure that a shipper is not assessed both an operational flow order (OFO) penalty and an Excess Hourly Take Penalty for the same action:

> Quantities taken on behalf of Shipper at the Delivery Point(s) in any hour in excess of 1/24 of the Shipper's daily scheduled quantities shall be subject to the Excess Hourly Take Penalty applicable to excess hourly takes when either no OFO is in effect at the Delivery Points(s) or such an OFO is in effect.

h. Interconnecting Operator OFOs

75. Section 13.9.1 of the GT&C states in part:

> Pipeline reserves and will have the right to issue Operational Flow Orders to preserve the integrity of Pipeline's system, to prevent or respond to a force majeure event, to ensure adequate operating pressures, to have adequate supplies in the system, to assure adequate fuel and Fuel Retainage, to maintain firm services and to stabilize the operation of the system.

76. The above-quoted language in section 13.9.1 of the GT&C is consistent with the Commission's policy that an OFO can be issued only in situations which "threaten or could threaten the safe operations or system integrity, of the transportation service provider's system or to maintain operations required to provide efficient and reliable firm

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[95] *Rover,* 158 FERC ¶ 61,109 at P 130.

[96] *Id.* P 129; *Columbia Gas Transmission Corp.*, 100 FERC ¶ 61,084, at P 201 (2002).

(continued ...)

service."[97] Section 13.9.4 of the GT&C states that Port Arthur Pipeline may issue an OFO if a directly interconnected operator issues an OFO. This language could allow Port Arthur Pipeline to bypass the need to assess whether conditions on its own system as set forth in section 13.9.1 of the GT&C of its tariff support issuance of an OFO. Port Arthur Pipeline is directed to delete section 13.9.4 of the GT&C from its tariff.

i. Curtailment and Force Majeure

77. Section 13.10.1 of the GT&C provides in part:

> Pipeline shall have the right to curtail transportation services, in whole or in part, on all or a portion of its system in an emergency situation, as determined by Pipeline in its sole judgment, or when an unexpected capacity loss occurs after Pipeline has scheduled service and Pipeline is therefore unable to perform the service that it has scheduled… . In addition, Pipeline shall have the right to interrupt or discontinue service at any time for reasons of Force Majeure *or when, in Pipeline's sole judgment, capacity or operating conditions so require or it is desirable or necessary to make modifications or operating changes to its system.* (Emphasis added.)

78. The Commission has found that pipelines may only "curtail" scheduled service in an emergency situation or when an unexpected capacity loss occurs after the pipeline has scheduled service, and the pipeline is therefore unable to perform the service which it has scheduled.[98] As quoted above, section 13.10.1 of the GT&C gives Port Arthur Pipeline the right to curtail services under two sets of circumstances. The first set of circumstances, in underlined font, describes events that are clearly emergency situations. However, the second set of circumstances, in italicized font, could be interpreted as including both emergency and non-emergency situations. The language in italics should be revised to clearly indicate that the described circumstances must be emergencies.

79. Port Arthur Pipeline is also directed to correct a reference in section 13.10.2(b) of the GT&C that incorrectly describes the order in which it will curtail services as set forth in "this Section 13.10.2(c)" rather than "13.10.2(b)" which is the appropriate section.

80. Section 13.10.7(a) of the GT&C provides in part:

> In the event Pipeline is unable to make deliveries of the quantities of gas to which Shipper has firm entitlements on any Gas Day and to which Shipper

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[97] NAESB, WGQ Definition 1.2.6, v. 3.0.; *Rover*, 158 FERC ¶ 61,109 at P 127.

[98] *Ryckman Creek Resources, LLC*, 136 FERC ¶ 61,061, at P 68 (2011); *MarkWest Pioneer, L.L.C.*, 125 FERC ¶ 61,165 at P 52.

> has nominated for delivery from a Primary Receipt Point to a Primary Delivery Point under a firm Rate Schedule, Pipeline shall provide a credit applicable to the quantities of gas that were nominated and confirmed by Shipper's supplier, but not delivered; provided, however, Pipeline shall not be relieved of the obligation to provide credits for failure to confirm a nomination for reasons within its control.

81. The Commission requires pipelines to provide reservation credits based on the amount of primary firm service the shipper nominated, which the pipeline was unable to schedule or deliver.[99] Therefore, Port Arthur Pipeline is directed to remove the requirement from section 13.10.7 of the GT&C that credits must be based only on nominated and confirmed quantities that were not delivered.

j. Operational Purchases and Sales

82. Section 13.12.11 of the GT&C states in part:

> Pipeline is not providing a gas supply service under any Rate Schedule of Pipeline's Tariff. Without limiting the foregoing, Pipeline may buy and sell gas to the extent necessary to maintain system pressure and balance, to implement the cashout provisions in this Section 13.12 and to perform other functions necessary in connection with providing gas transportation service.

83. The Commission requires pipelines to include in their tariffs specific provisions addressing operational sales and purchases of gas.[100] These provisions include: (a) the specific circumstances in which the pipeline will perform an operational purchase or sale; (b) a statement that operational purchases or sales have a lower transportation priority than firm transportation and there will be no transportation service associated with its operational purchases or sales of gas; (c) a statement that operational sales service is unbundled from transportation service; (d) posting and bidding procedures for the sale of gas for operational purposes; and (e) a commitment to filing an annual report of sales and purchases and revenues derived from the sale of gas.[101] The report must indicate the

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[99] *SG Resources Mississippi, L.L.C.,* 153 FERC ¶ 61,364, at P 13 (2015); *CenterPoint Energy Gas Transmission Co*., 144 FERC ¶ 61,195, at P 46 (2013).

[100] *Rover*, 158 FERC ¶ 61,109 at P 132; *ANR Pipeline Co.,* 110 FERC ¶ 61,069, at P 57 (2006) (*ANR*); *Colorado Interstate Gas Co.,* 107 FERC ¶ 61,312, at P 15 (2004), *order on reh'g,* 111 FERC ¶ 61,216 (2005); *Dominion Trans., Inc.,* 106 FERC ¶ 61,029, at P 17 (2004).

[101] *ANR*, 110 FERC ¶ 61,069 at P 57.

source of gas, date of the purchase or sale volumes, purchase or sale price, costs and revenues from purchase or sale, and the disposition of the costs and revenues. Section 13.12.11 of the GT&C conforms with the first required provision; however, Port Arthur Pipeline is required to file revised tariff language that incorporates the remaining provisions required for operational sales and purchases of gas.

k. Force Majeure Definition

84. Section 13.21.1 of the GT&C, in part, defines a force majeure as "any other cause, whether of the kind herein enumerated, or otherwise, not within the control of the party claiming suspension and which by the exercise of Good Utility Practice, reasonable care and due diligence such party is unable to prevent or overcome." The Commission has defined force majeure outages as events that are both "unexpected and uncontrollable."[102] Therefore, we direct Port Arthur Pipeline to revise this portion of section 13.21 of the GT&C accordingly.

l. Liability

85. In various sections of its tariff,[103] Port Arthur Pipeline proposes to limit its liability to damages resulting from "gross negligence or willful misconduct." The Commission has consistently held that a simple negligence standard is appropriate for the liability and indemnification provisions of open access tariffs, as this standard prohibits pipelines from limiting their liability in a way that would immunize them from direct damages resulting from simple negligence and "gives service providers a powerful incentive to operate their systems in a reasonable and prudent manner."[104] The Commission has, however, allowed pipelines to limit their liability for simple negligence to direct damages, so that they are

[102] *North Baja Pipeline, LLC v. FERC*, 483 F.3d 819, 823 (D.C. Cir. 2007), *aff'd*, *North Baja Pipeline, LLC*, 109 FERC ¶ 61,159 (2004), *order on reh'g*, 111 FERC ¶ 61,101 (2005). *See also*, *e.g.*, *Kinder Morgan Louisiana Pipeline LLC,* 154 FERC ¶ 61,145 at P 29 (2016); *Algonquin Gas Transmission, LLC*, 153 FERC ¶ 61,038 at P 103 (2015).

[103] *See, e.g.* sections 13.5.1, 13.10.6, 13.14.1, and 13.18 of the GT&C.

[104] *See, e.g.*, *Trailblazer Pipeline Co. LLC*, 142 FERC ¶ 61,007, at P 8 (2012); *CenterPoint Energy Gas Transmission Co., LLC*, 139 FERC ¶ 61,064, at P 19 (2012); *Orbit Gas Storage, Inc.*, 126 FERC ¶ 61,095, at P 58 (2009)).

only liable for indirect, consequential, incidental, or punitive damages where there is gross negligence, willful misconduct, or bad faith.[105]

86. Port Arthur Pipeline's proposed liability standard is inconsistent with Commission policy, as it immunizes the pipeline from direct damages resulting from simple negligence. Therefore, Port Arthur Pipeline is directed to revise the liability standard in its *pro forma* tariff so as to not exclude it from liability for direct damages arising from its own simple negligence.

87. Section 13.21.5 of the GT&C provides, in part:

> Shipper warrants that all upstream and downstream transportation and/or service arrangements are in place, or will be in place as of the requested effective date of service, and that it has advised the upstream and downstream operators of the Receipt Point(s) and Delivery Point(s) under Shipper's Service Agreement(s) and any quantity and quality limitations for each point as specified on Exhibits A and B attached to the effective Service Agreement(s) or elsewhere in this Tariff. Shipper agrees to indemnify and hold Pipeline harmless for refusal to transport gas hereunder in the event any upstream or downstream operator fails to receive or deliver gas as contemplated by this Tariff.

88. Section 13.21.5 of the GT&C, could be interpreted to provide that Port Arthur Pipeline would be held harmless if it refuses to transport gas in the event any upstream or downstream operator fails to receive or deliver gas, whether or not Port Arthur Pipeline is also negligent. This would be inconsistent with Commission's adoption of a comparative negligence standard that would hold the pipeline liable for its proportional share of responsibility.[106] The Commission has prohibited pipelines from limiting their liability in circumstances wherein the pipeline and another party have both acted negligently. Port Arthur Pipeline is directed to revise its tariff accordingly.

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[105] *See, e.g., Bison*, 131 FERC ¶ 61,013 at P 37; *El Paso Natural Gas Co.,* 130 FERC ¶ 61,096, at PP 4-5 (2010); *ANR Pipeline Co.,* 100 FERC ¶ 61,132, at 61,505 (2002).

[106] *Petal Gas Storage, L.L.C.*, 124 FERC ¶ 61,082, at P 28 (2008) (citing *Koch Gateway Pipeline Co.*, 65 FERC ¶ 61,338, at 62,619 (1993)).

m. Fuel Adjustment Mechanism

89. Section 13.22.4 of the GT&C provides in part:

> On or prior to April 1 of each Year, Pipeline will make a filing with the Commission to adjust the Fuel Retainage Percentage to reflect the annual calculations of the Base Fuel Retainage Percentage and the Fuel Retainage Percentage True-Up Adjustment, with such adjustment to the Fuel Retainage Percentage to become effective as of May 1 of the same Year.

90. We approve section 13.22.4 of the GT&C subject to Port Arthur Pipeline revising the section to clarify that the filing described therein refers to a limited section 4 filing under the NGA. This revision is necessary because section 13.35 of the GT&C (Reports with Respect to Tariff) describes the annual fuel adjustment filing in section 13.22 of the GT&C as a report. The language quoted above in section 13.22.4 of the GT&C could therefore be interpreted under section 13.35 of the GT&C as permitting Port Arthur Pipeline to change its fuel retention charge only through simply posting and filing such changes, rather than making a limited NGA section 4 filing that proposes and supports such changes with the opportunity for shippers to review and challenge the basis for the changes. Fuel retention charges are rates under the NGA. Posting of changed rates cannot be in lieu of any other rate change filing required by NGA section 4.[107] In addition, Port Arthur Pipeline is directed to delete from section 13.35 of the GT&C the reference to a "Fuel Retainage Percentage report in accordance with GT&C's Section 13.22."

n. Penalty Crediting

91. Section 13.25 of the GT&C provides that Port Arthur Pipeline will credit on an annual basis to non-offending customers penalty revenues net of costs assessed for "unauthorized overruns or under-deliveries, failures to abide by an OFO or curtailment order, takes in excess of scheduled quantities and other misconduct…" Section 13.25 further states that "[i]f such penalty revenue net of costs for a Year, plus any amounts carried over from prior Years, is less than $400,000, then Port Arthur Pipeline may carry such balance of revenue forward to the next Year."

92. Section 13.25 of the GT&C does not provide for payment of interest on net penalty revenues held by Port Arthur Pipeline. The Commission finds that Port Arthur Pipeline's proposal not to credit interest on accumulated penalty revenue is inconsistent with the Commission's goal in Order No. 637 to eliminate the pipelines' financial

[107] *See ANR Pipeline Co.*, 139 FERC ¶ 61,238, at P 157 (2012) (rejecting a proposed posting-only fuel rate proposal).

(continued ...)

incentive to retain penalty revenues.[108] Consistent with Commission policy,[109] Port Arthur Pipeline must revise its tariff to provide that it will credit the penalty revenues including the interest that it has accrued to shippers in a manner consistent with Commission regulations.[110]

o. Interruptible Transportation Revenue Sharing

93. Section 13.26 of the GT&C (Interruptible Transportation and Storage, Load Management and Authorized Overrun Service Revenue Sharing) provides that the pipeline will credit revenues under Rate Schedules IT, P&L, and AOS (among others):

> to each of Pipeline's firm transportation and storage service Shippers (including a firm Shipper that pays a Negotiated Rate to the extent negotiated by Pipeline and Shipper on a not unduly discriminatory basis) based on the Shipper's pro rata share of total MDTQs and MDWQs in all of the Pipeline's firm transportation and storage Service Agreements.

94. The Commission's long-standing policy regarding new interruptible services requires either a 100 percent credit of the interruptible revenues, net of variable costs, to maximum rate firm and interruptible customers or an allocation of costs and volumes to these services.[111] Port Arthur Pipeline has chosen the crediting option. However, Port Arthur Pipeline does not propose to provide credits to maximum rate interruptible customers, and although proposing to credit interruptible revenues on a yearly basis, does

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[108] *Regulation of Short-Term Natural Gas Transportation Services and Regulation of Interstate Natural Gas Transportation Services*, Order No. 637, FERC Stats. & Regs. ¶ 31,091 (cross-referenced at 90 FERC ¶ 61,109), *clarified*, Order No. 637-A, FERC Stats. & Regs. ¶ 31,099 (cross-referenced at 91 FERC ¶ 61,169), *reh'g denied*, Order No. 637-B, 92 FERC ¶ 61,062 (2000), *aff'd in part and remanded in part sub nom. Interstate Natural Gas Ass'n of America v. FERC*, 285 F.3d 18 (D.C. Cir. 2002), *order on remand*, 101 FERC ¶ 61,127 (2002), *order on reh'g*, 106 FERC ¶ 61,088 (2004), *aff'd sub nom. American Gas Ass'n v. FERC*, 428 F.3d 255 (D.C. Cir. 2005).

[109] *See, e.g. Elba Express Co., L.L.C.,* 119 FERC ¶ 61,015, at P 42 (2007); *Algonquin Gas Trans. Co.,* 98 FERC ¶ 61,211, at 61,788-89 (2002); *Natural Gas Pipeline Co. of America,* 101 FERC ¶ 61,200, at P 97 (2002).

[110] 18 C.F.R. § 154.501(d) (2018).

[111] *See, e.g., National Grid LNG LLC,* 165 FERC ¶ 61,031, at P 29 (2018); *Creole Trail LNG, L.P.,* 115 FERC ¶ 61,331, at P 27 (2006); *Entrega Gas Pipeline Inc.,* 112 FERC ¶ 61,177, at P 51 (2005).

(continued ...)

not propose to pay interest on these funds that it may retain for up to twelve (12) months. The Commission requires Port Arthur Pipeline to pay interest on the accumulated balances consistent with Commission regulations,[112] and to include maximum rate interruptible customers in its revenue crediting proposal.

95. Moreover, with regard to permitting negotiated rate shippers to receive such credits, the Commission has held that a pipeline may agree to provide shippers paying negotiated rates with credits after eligible recourse rate shippers have been credited with 100 percent of interruptible revenues net of variable costs.[113] Negotiated rate shippers may receive such credits as a component of an individually negotiated rate rather than by virtue of the Commission's policy on interruptible revenue crediting. Accordingly, as provisions of a negotiated rate, such credits are required to be reported in a negotiated rate tariff filing. Therefore, we direct Port Arthur Pipeline to remove from section 13.26 of the GT&C provisions referring to the eligibility of negotiated rate shippers to receive interruptible revenue credits.

p. NAESB Standards

96. Port Arthur Pipeline reflects tariff provisions in section 13.38 of the GT&C (NAESB) implementing the NAESB WGQ Version 3.0 business practice standards that the Commission incorporates by reference in its regulations.[114] In the time since Port Arthur Pipeline filed its proposed tariff in this proceeding, the Commission adopted the new NAESB WGQ Version 3.1 business practice standards.[115] Thus, we direct Port Arthur Pipeline to file revised tariff records, no less than 60 days prior to its in-service date, implementing the NAESB WGQ Version 3.1 business practice standards. Further, Port Arthur Pipeline is directed to revise its tariff accordingly to:

1. include standard 0.2.5 in a section titled "Definitions:" under the heading "Additional Standards: – General:" in section 13.8 of the GT&C;

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[112] 18 C.F.R. § 154.501(d) (2018).

[113] *Wyoming Interstate Co., Ltd.*, 121 FERC ¶ 61,135, at P 9 (2007).

[114] 18 C.F.R. § 284.12(a) (2018).

[115] *Standards for Business Practices of Interstate Natural Gas Pipelines,* Order No. 587-Y, 83 Fed. Reg. 62,242 (Dec. 3, 2018), 165 FERC ¶ 61,109 (2018). Under Order No. 587-Y, interstate natural gas pipelines are required to file compliance filings with the Commission by April 1, 2019, and are required to comply with the Version 3.1 standards incorporated by reference in this rule on and after August 1, 2019.

2. remove standard 0.2.5 from section titled "Gas/Electric Operational Communications:" in section 13.8 of the GT&C; and

3. remove standard 5.3.73 from section titled "Standards Incorporated by Reference:" in section 13.8 of the GT&C, as the text of the standard is already included in section 13.11.9 of the GT&C (Capacity Release - Requests to Purchase Capacity).

q. Off-system Capacity

97. Section 13.43 of the GT&C (Off-System Capacity) provides:

> Pipeline may enter into a transportation agreement(s) with other interstate and intrastate pipeline companies to acquire transportation or storage capacity or rights ("off-system capacity"). In the event that Pipeline acquires off-system capacity, Pipeline will use such capacity for operational reasons or to render service for its Shippers within a Zone. In the event that Pipeline uses off-system capacity to render service for its Shippers, it will only render service to the Shippers within the Zone on the acquired capacity pursuant to this Tariff and subject to Pipeline's approved rates, as such tariff and approved rates may change from time to time. For purposes of transactions entered into subject to this GT&C Section 13.43, the "Shipper-Must-Have-Title" requirement is waived. When off-system capacity is not required for operational reasons or to meet firm service commitments, Pipeline will offer the off-system capacity to Shippers on a primary firm basis within the Zone. This GT&C Section 13.43 does not preclude Pipeline from seeking case specific authorization for the utilization of off-system capacity by Pipeline for other purposes, nor does it preclude Pipeline from releasing any capacity it holds on off-system pipeline companies.

98. We find this language to be consistent with the Commission's *Texas Eastern* policy concerning the acquisition of upstream capacity by interstate pipelines.[116] Therefore, we will grant a generic waiver of the "shipper must hold title" policy for any such transportation that the pipeline subsequently provides.

[116] *Texas Eastern Transmission Corp.*, 93 FERC ¶ 61,273 (2000), *reh'g denied,* 94 FERC ¶ 61,139 (2001).

(continued ...)

V. Environmental Analysis

99. To satisfy the requirements of the National Environmental Policy Act of 1969 (NEPA),[117] Commission staff evaluated the potential environmental impacts of the proposed projects in an EIS. The U.S. Army Corps of Engineers (USACE), Galveston District, U.S. Coast Guard, U.S. Environmental Protection Agency (EPA), U.S. Department of Transportation (DOT), Pipeline and Hazardous Materials Safety Administration (PHMSA), and DOE participated as cooperating agencies in the preparation of the EIS. Cooperating agencies have jurisdiction by law or special expertise with respect to resources potentially affected by the proposals and participate in the NEPA analysis.

100. Commission staff issued the draft EIS on September 28, 2018, which addressed the issues raised during the scoping period and up to the point of publication. Notice of the draft EIS was published in the *Federal Register* on October 5, 2018,[118] establishing a 45-day public comment period ending on November 19, 2018. The *Notice of Availability of the Draft Environmental Impact Statement for the Proposed Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector Project* was mailed to the environmental mailing list for the projects. Commission staff held three public comment sessions between October 16 and 18, 2018, to receive comments on the draft EIS.[119] A total of 17 people commented at the sessions. In addition, 17 parties submitted a total of 22 letters in response to the draft EIS. In addition, on November 30, 2018, Port Arthur LNG and Port Arthur Pipeline filed responses to several comments on the draft EIS. The transcripts of the public comment sessions and all written comments on the draft EIS are part of the public record for the projects.

101. On January 31, 2019, Commission staff issued the final EIS for the projects, and a public notice of the availability of the final EIS was published in the *Federal Register* on February 6, 2019,[120] and mailed to the environmental mailing list for the projects.[121] The final EIS addresses geology; soils; water resources; wetlands; vegetation; wildlife and aquatic resources; threatened, endangered, and other special status species; land use,

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[117] 42 U.S.C. §§ 4321 *et seq.* (2012). *See also* the Commission's NEPA-implementing regulations at Title 18 of the C.F.R., Part 380.

[118] 83 Fed. Reg. 50,362.

[119] Commission staff held the public comment sessions in Kinder and Sulfur, Louisiana, and Port Arthur, Texas.

[120] 84 Fed. Reg. 2221.

[121] The distribution list is provided in Appendix A of the final EIS.

recreation, and visual resources; socioeconomics; cultural resources; air quality and noise; safety; cumulative impacts; alternatives; and all substantive comments received on the draft EIS. The final EIS concludes that construction and operation of the projects will result in some adverse environmental impacts, but impacts will be reduced to less-than-significant levels with the implementation of Port Arthur Pipeline and Port Arthur LNG's proposed, and Commission staff's recommended, mitigation measures which are included as conditions in the appendix to this order, as discussed below. No adverse comments concerning the final EIS have been filed. Resource areas addressed in the final EIS are addressed below.

1. Geology

102. The overall effect of the Liquefaction Project, the Texas Connector Project, and Louisiana Connector Project on topography and geology would be minor. Geologic impacts would be limited to construction activities and would include disturbance of slopes within the work areas.[122] However, some hazards such as severe flooding, storm surges, high winds, erosion along the shoreline and docking facilities, and potential site access interruptions could affect the Liquefaction Project during operation.[123] Port Arthur LNG has incorporated structural and mechanical elements into the design of the liquefaction facilities.[124] Further, Port Arthur LNG would construct a storm surge barrier of improved soil and structural clay to a top elevation of 20 feet.[125] Port Arthur LNG would also monitor foundations and other critical facilities to ensure they are maintained within acceptable limits.[126] Along the pipelines, Port Arthur Pipeline would implement buoyancy control measures such as concrete-coated piping, anchors, or aggregate-filled saddle bags to weigh the pipe in wet areas, and would periodically monitor the pipeline right-of-way during operation to aid in identification of subsidence-related conditions that may require maintenance.[127] Port Arthur LNG and Port Arthur Pipeline do not anticipate that any blasting will be required during construction of the projects.[128] Based on Port

[122] Final EIS at 5-1.

[123] Final EIS at 5-1.

[124] Final EIS at 5-1.

[125] Final EIS at 5-3.

[126] Final EIS at 4-6.

[127] Final EIS at 5-2.

[128] Final EIS at 5-2.

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Arthur LNG's and Port Arthur Pipeline's proposed mitigation and design criteria, and Commission staff's recommended mitigation measures, included in the appendix to this order, the final EIS concludes that the Liquefaction Project, the Texas Connector Project, and Louisiana Connector Project will not significantly impact or be impacted by geological conditions in the area.

2. Soils

103. Construction of the Liquefaction Project, the Texas Connector Project, and Louisiana Connector Project could affect soil resources by increasing the potential for erosion, compaction, mixing of topsoil, and rutting.[129] The Liquefaction Project site and dredge disposal areas contain clay and peat soils prone to compaction.[130] In order to increase the load bearing capacity of soils along the heavy haul road, an engineered grout would be added to the subsoil that would permanently alter the physical characteristics of 7.5 acres of soils at the liquefaction facilities.[131] Operation of the compressor stations and other aboveground facilities along the pipelines for the Louisiana Connector and Texas Connector projects would permanently affect 105.7 acres of prime farmland but would not result in a significant reduction of usable prime farmland soils in the area.[132] In addition to the earthen berm, about 4.4 million cubic yards of fill would be used on the remainder of the liquefaction facilities site. Port Arthur LNG would further armor the Port Arthur Canal adjacent to the site by means of riprap or other erosion prevention measures, and would develop a Shoreline Protection Report to address potential shoreline erosion that may occur during operations in the shoreline zone.[133]

104. In response to the EPA's June 30, 2016 comments on Port Arthur LNG's draft resource reports 1 and 10,, Port Arthur LNG committed to resampling sediments at the landward component of the marine offloading facility prior to dredging and disposal. Environmental Condition 17 in the appendix to this order requires Port Arthur LNG to provide the EPA, USACE, Texas Commission on Environmental Quality, and Texas Railroad Commission with this final soil and sediment analysis from the area within the ship canal at the marine berth, construction dock, material offloading facility, and landward component of the material offloading facility for review. This condition also

[129] Final EIS at 5-2.

[130] Final EIS at 5-2.

[131] Final EIS at 5-3.

[132] Final EIS at 5-2.

[133] Final EIS at 5-3.

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requires Port Arthur LNG to file its consultation with these agencies with the Commission.

3. Water

105. Potential impacts on groundwater resources are anticipated to be minor and temporary. Most construction activities associated with the liquefaction and pipeline facilities would involve shallow, temporary, and localized excavation, with the exception of concrete and steel piles for LNG vessel loading facilities and LNG tanks. Piles required for the LNG storage tanks and LNG ship loading and berthing areas would be driven to a depth no lower than 160 feet and are not expected to have direct impacts on the underlying aquifer. [134] During construction of the Louisiana Connector and Texas Connector projects, shallow groundwater could be encountered within the first 3 feet below grade within Jefferson and Orange Counties, Texas and in Cameron, Calcasieu, and Beauregard Parishes, Louisiana, and should Port Arthur Pipeline need to pump water from a pipeline trench, it would be pumped through filter bags prior to discharge.[135] No drinking water wells or identified springs are within 150 feet of the Liquefaction Project. There are no known groundwater withdrawal wells, drinking water wells, designated well head protection areas, or springs within 150 feet of the Texas Connector Project in Texas and Louisiana. There are 16 known groundwater withdrawal or drinking water wells within 150 feet of the Louisiana Connector Project in Louisiana, and none in Texas.[136]

106. Construction of the Liquefaction Project, the Texas Connector Project, and Louisiana Connector Project would impact bodies of water, including lakes, canals, rivers and streams. To minimize and mitigate impacts on surface waters and aquatic resources Port Arthur LNG proposed to utilize dry excavation methods, install a 30-inch-diameter pipeline to safely transport dredge material to the dredge disposal area, and install a shoreline protection system to prevent post-construction erosion.[137] Port Arthur Pipeline would implement its Environmental Plan (including the Commission's *Upland Erosion Control, Revegetation & Maintenance Plan* [Plan] and *Wetland and Waterbody Construction and Mitigation Procedures* [Procedures]) to minimize erosion and sedimentation resulting from the construction of the Louisiana Connector and Texas Connector projects. Port Arthur Pipeline proposes to utilize the horizontal directional drill (HDD) crossing method at 46 waterbody crossings for the Louisiana Connector

[134] Final EIS at 5-4.

[135] Final EIS at 5-4.

[136] Final EIS at 5-3 – 5-4.

[137] Final EIS at 5-4 – 5-5.

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Project, and at 24 crossings for the Texas Connector Project, in order to avoid impacts on surface water resources.[138] In compliance with the Commission's Procedures, and prior to construction, Port Arthur Pipeline would provide Commission staff with finalized detailed plans for each HDD crossing and prepare final contingency plans in the event an HDD crossing is unsuccessful.[139] Therefore, the final EIS concludes that impacts on water resources will be adequately minimized and are not significant.

4. Wetlands

107. Construction of the Liquefaction Project would affect a total of 1,661.9 acres of wetlands, of which 724.0 acres would be permanently filled. Port Arthur LNG would offset impacts on USACE jurisdictional wetlands through mitigation measures included in its project Compensatory Mitigation Plan. The mitigation measures include the beneficial reuse of over 7.8 million cubic yards of dredge material excavated from the ship berthing area and Pioneer Dock. The beneficial reuse of this material would create about 1,268.8 acres of coastal marsh wetland. Port Arthur LNG's wetland mitigation would include adhering to the measures in the Commission's Procedures, as well as Port Arthur LNG's Compensatory Mitigation Plan.

108. Construction and operation of the Texas Connector Project and Louisiana Connector Project would affect about 238.1 acres and 636.9 acres of wetlands, respectively, of which 66.8 acres and 244.1 acres, respectively, would be permanently disturbed during operation of the projects. Port Arthur Pipeline would implement the mitigation measures outlined in its project-specific Environmental Plan (including the Commission's Procedures), and will be required to comply with any mitigation measures identified in the USACE permit conditions for the pipeline projects.

109. With the implementation of Port Arthur LNG's and Port Arthur Pipeline's Project-specific plans, Port Arthur LNG's proposed beneficial use of dredge material to restore emergent wetlands, the proposed mitigation measures discussed in the final EIS, the final EIS concludes that impacts on wetland resources will be adequately minimized and are not significant.

5. Vegetation

110. Construction and operation of the Liquefaction Project, the Texas Connector Project, and Louisiana Connector Project would affect a total of 1,206.5 acres and 5,767.0 acres of forested and open land vegetation types, respectively. About 845.3 acres

[138] Final EIS at 5-6.

[139] Final EIS at 5-6.

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of vegetation would be cleared during construction of the Liquefaction Project, and 808.0 acres would be permanently converted to industrial use associated with operation of the Liquefaction Project. Additionally, 151.0 acres of open water would be created for operation of the Liquefaction Project.[140] Port Arthur LNG would deposit some of its dredged material at the J.D. Murphree wildlife management area (WMA) where it would be used to create coastal marshland, and revegetate other impacted areas of the WMA.[141] As a result of Port Arthur LNG's proposed mitigation measures, including development of its wetland Compensatory Mitigation Plan and the beneficial reuse of dredge materials at J.D. Murphree WMA, the final EIS concludes that impacts on vegetation from construction and operation of the Liquefaction Project will be permanent but minor.

111. Construction of the Louisiana Connector and Texas Connector projects would disturb a total of 482.8 acres and 2,044.1 acres of vegetated land, respectively, including open and forested upland and wetland areas. Impacts on vegetation associated with installation of the pipelines would primarily be caused by vegetation clearing within the construction right-of-way and associated additional temporary work space. About 184.4 acres of upland forest would be permanently affected along the pipeline routes. Except for the 410.0 acres within the permanent right-of-way that would be crossed by HDD, vegetation would be cleared from the entire working right-of-way.[142]

112. No vegetation communities of special concern would be impacted by the Liquefaction Project or the Texas Connector Project; however, portions of the Louisiana Connector Project's route crosses a Coastal Prairie community, and a stand of western acidic longleaf pine savannah/flatwoods.[143] Port Arthur Pipeline's Environmental Plan would facilitate the restoration of the Coastal Prairie community upon completion of construction.[144] In addition, impacts on the western acidic longleaf pine savannah/flatwoods would be minor, as the stand is already disturbed by existing silviculture management, and Port Arthur Pipeline proposes to use an existing logging road to access the area, further reducing impacts.[145] Port Arthur Pipeline would also use its Environmental Plan to minimize the spread of invasive aquatic species, and implement

[140] Final EIS at 5-8.

[141] Final EIS at 5-9.

[142] Final EIS at 5-9.

[143] Final EIS at 5-9.

[144] Final EIS at 4-77.

[145] Final EIS at 4-78.

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measures in the Commission's Plan and Procedures to evaluate the success of revegetation efforts.[146] Therefore, based on the minor nature of the impacts on vegetation, and Port Arthur LNG and Port Arthur Pipeline's proposed efforts to further mitigate these impacts, the final EIS concludes that the projects will not have a significant impact on vegetation.

6. Wildlife

113. In total, approximately 7,828.1 acres of wildlife habitat would be affected by construction of the Liquefaction Project, and the Louisiana Connector and Texas Connector projects. While 6,003.1 acres would be affected during operations of the projects, the majority of these impacts would occur at the dredge disposal areas. Overall, the greatest impacts would be on open wetland habitat, followed by open upland and forested upland habitats, which are discussed above. Due to existing industrial activity in the area, wildlife in the vicinity of the Liquefaction Project is anticipated to be acclimated to the impacts of construction and operations, particularly impacts associated with noise and artificial light.[147] However, Port Arthur LNG proposes several additional measures including directing lighting downward during construction, use of nesting inhibitors to discourage nesting of migratory birds near the Liquefaction Project, and utilizing ground flares instead of elevated flares during operation, to further minimize impacts on migratory birds.[148]

114. Construction of the Louisiana Connector and Texas Connector projects would affect 2,526.5 acres of vegetated wildlife habitat, with the greatest impact on open upland habitat, and operation would permanently convert 816.3 acres of wildlife habitat.[149] Most impacts on wildlife would be limited to the duration of construction for the Louisiana Connector and Texas Connector projects, and abundant habitat is available for wildlife in the vicinity. Port Arthur Pipeline proposes to conduct surveys for bald eagle nests prior to construction, and to modify the construction schedule in the event a nest is located. Port Arthur Pipeline would implement its project-specific Environmental Plan to further

[146] Final EIS at 5-10.

[147] Final EIS at 4-86.

[148] Final EIS at 5-10 – 5-11.

[149] Final EIS at 5-10.

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minimize impacts.[150] Therefore, the final EIS determined that impacts on wildlife from construction and operation of the projects will not be significant.

7. Aquatic Resources

115. Impacts on aquatic resources from construction and operation of the Liquefaction Project include increased turbidity and sediment suspension, increased in-water noise, increased vessel traffic, and alteration of light regimes.[151] Port Arthur LNG proposes to minimize turbidity and sediment suspension by commencing construction from the landward side, working its way into the Port Arthur Canal, and would use hydraulic dredging techniques to retain much of the entrained sediment.[152] Port Arthur LNG would also implement construction techniques that minimize noise effects on aquatic species, including pre-drilling pile holes, the use of a vibratory hammer, bubble curtains/ cofferdams, and gradually increasing the power and frequency of pile driving over a period of time, which would allow sensitive aquatic species to depart the area before harmful underwater sound pressures are created by the vibratory hammers. Impacts from increased ship traffic due to the Liquefaction Project would be mitigated by installation of rip-rap to reduce shoreline erosion, as well as implementation of existing U.S. Coast Guard ballast water requirements, among other mandatory federal requirements.[153]

116. Potential impacts on aquatic resources related to construction and operation of the Louisiana Connector and Texas Connector projects would be associated with increased erosion and sedimentation due to open-cut waterbody crossings, inadvertent release of drilling mud during HDD crossings, physical or chemical water alterations from hydrostatic testing, entrainment from water appropriation for hydrostatic testing, and any inadvertent spills of hazardous materials. Port Arthur Pipeline would implement the measures outlined in its Environmental Plan to minimize impacts on waterbodies and aquatic resources during pipeline construction, including reducing workspace areas near waterbodies, establishing buffers to prevent stormwater run-off from entering waterbodies, and installing erosion control devices, as well as minimizing response time and ensure appropriate cleanup actions are taken in the event of a spill.[154] Port Arthur Pipeline would also implement its HDD Contingency Plan to minimize impacts in the

[150] Final EIS at 5-11.

[151] Final EIS at 5-12.

[152] Final EIS at 5-11.

[153] Final EIS at 5-12.

[154] Final EIS at 5-12 – 5-13

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case of an inadvertent return of drilling mud. Once construction is complete, streambeds and banks would be restored to their preconstruction conditions and contours to the maximum extent practicable, which would aid in preventing erosion and minimize long-term impacts on aquatic resources.[155]

117. Construction and operation of the Liquefaction Project, the Texas Connector Project, and Louisiana Connector Project would also result in temporary and permanent impacts on essential fish habitat (EFH). Construction and operation of the Liquefaction Project would affect 3.2 acres of estuarine water column and estuarine mud/soft bottom EFH, which would result in temporary and permanent impacts. However, the Liquefaction Project would create 68.3 acres of additional open water habitat for aquatic species and EFH-managed species by dredging the berthing area and material offloading facility, resulting in a net increase of estuarine mud/soft bottom and estuarine water column EFH.[156]

118. Construction of the Texas Connector Project would temporarily impact 1.2 acres, 8.4 acres, and 0.8 acre of estuarine emergent marsh EFH, respectively.[157] Construction of the Louisiana Connector Project would temporarily affect 1,534.7 acres of EFH, including 131.7 acres of estuarine emergent marsh EFH and 1,403.0 acres of estuarine water column and mud/soft bottom EFH. Permanent access roads required for the operation would permanently affect 1.7 acres of EFH, 1.2 acres of estuarine emergent marsh, and 0.5 acre of estuarine water column and estuarine mud/soft bottom.[158] Port Arthur LNG and Port Arthur Pipeline coordinated with the National Marine Fisheries Service (NMFS) on potential impacts on EFH. In an email to Commission staff on October 5, 2018, NMFS ultimately determined that "with the use of avoidance and minimization construction techniques as well as the wetlands restoration activities, the project would result in temporary and minimal impacts to EFH. Therefore, the EFH consultation required by the Magnuson-Stevens Fishery Conservation and Management Act is concluded and no further coordination with the NMFS is required."[159]

119. Due to the proposed HDD crossings at over 50 locations to avoid impacts on waterbodies, Port Arthur Pipeline's proposal to limit construction workspace and

[155] Final EIS at 5-14.

[156] Final EIS at 5-14.

[157] Final EIS at 5-14.

[158] Final EIS at 5-14 – 5-15.

[159] Final EIS at 5-15.

(continued ...)

duration at the waterbody crossings, and implementation of the proposed mitigation measures, the final EIS concludes that the projects would have minor and localized impacts on aquatic resources, including EFH.

8. Threatened, Endangered, and Other Special Status Species

120. According to the U.S. Fish and Wildlife Service (FWS) and NMFS, 26 federally listed or proposed species may occur in the counties and parishes impacted by the projects.[160] Commission staff determined that the projects would have no effect or not be likely to adversely effect 25 of the 26 listed or proposed species.[161] The remaining species, the eastern black rail (type of bird), was proposed for listing by the FWS in the *Federal Register* on October 9, 2018.[162] As required by section 7 of the Endangered Species Act of 1978, Commission staff requested that FWS and NMFS accept the information in the draft EIS as the Biological Assessment for the projects. On August 29, 2018, NMFS provided concurrence for the species under its jurisdiction.[163] The final EIS reports that consultation with FWS is ongoing for the American chaffseed, and may be required for the eastern black rail. Environmental Condition 19 in the appendix to this order requires completion of Endangered Species Act consultation before construction may begin.

9. Land Use, Recreation, and Visual Resources

121. Construction of the projects would temporarily affect a total of 10,612.0 acres of land. Of this, approximately 2,660 acres would be allowed to revert to the existing land use type after the completion of construction, and approximately 7,953 acres would be permanently affected by the projects' operation. The projects' construction would temporarily affect a total of approximately 521 acres of agricultural land, and approximately 176 acres would be included in permanent right-of-way.[164] The EIS states that agricultural land located within the pipeline permanent rights-of-way would be

[160] Final EIS at 5-15.

[161] Final EIS at 5-15.

[162] *Federal Register*, 83 Fed. Reg. 50,610 (2018).

[163] Final EIS at 4-131.

[164] Final EIS at 5-17.

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restored to previous use approximately one growing season after the completion of construction.[165]

122. The Louisiana Connector and Texas Connector Project's construction workspaces would be located within 50 feet of 24 and 11 residential structures, respectively; the Liquefaction Project's construction workspace is not within 50 feet of any residential structures.[166] The draft EIS and final EIS included site-specific plans for residential structures within 25 feet of the construction workspaces. No comments were received from landowners regarding these site-specific plans.

123. Construction of the projects would occur near several recreation areas, including the J.D. Murphree WMA, Round Lake, Keith Lake, and private hunting grounds.[167] Generally speaking, however, impacts on recreation areas would be temporary and limited to the duration of construction – which would extend from several days to several weeks depending on the area of construction.[168]

124. The Liquefaction Project includes many aboveground structures that could result in a visual resource impact, including three LNG storage tanks that would be approximately 256 feet tall, liquefaction trains, and additional infrastructure, most of which would require lighting. The Liquefaction Project would be sited along the Port Arthur Canal, which would create a strong vertical visual contrast across a relatively flat existing landscape.[169] The ship berths, offloading facilities, and utility buildings would also alter the existing viewshed. The storage tanks and liquefaction facilities would not be screened and would result in permanent visual impacts on views from the eastern edge of the nearby J.D. Murphree WMA. Impacts on views for those traveling on State Highway 87 and State Highway 82, visiting Pleasure Island or the Port Arthur Canal, boaters in the waterway, and viewers from a variety of recreational locations would be relatively minor due to existing industrial facilities surrounding and northeast of the project area.[170] Port Arthur LNG would restrict any permanent lighting needed for the Liquefaction Project terminal facilities to the property boundaries and direct the

[165] Final EIS at 5-17.

[166] Final EIS at 5-16.

[167] Final EIS at 5-17.

[168] Final EIS at 5-17.

[169] Final EIS at ES-7.

[170] Final EIS at ES-7.

(continued ...)

permanent lighting downward towards these sites.[171] The EIS concluded that because of the existing commercial, industrial, and developed nature of the area, including the existing Golden Pass liquefaction terminal within 3 miles of the proposed Liquefaction Project, impacts from facility siting and its lighting will be consistent with the area. The final EIS therefore concludes that land use, recreation, and visual resource impacts associated with the projects would be minor.

10. Socioeconomics

125. As stated in the EIS, construction of the projects would result in minor positive socioeconomic impacts from employment, and not have a significant adverse impact on local populations, employment, provision of community services, or property values.[172] Additionally, there would not be any disproportionately high or adverse environmental and human health impacts on low-income and minority populations.[173] Construction of the projects would result in minor, temporary impacts on local transportation infrastructure and traffic. Environmental Condition 23 in the appendix to this order requires Port Arthur LNG to file a Transportation Plan to outline how it would manage access to and from the Liquefaction Project construction site by personnel, equipment, and deliveries on a daily basis.

11. Cultural Resources

126. Commission staff is currently in the process of complying with section 106 of the National Historic Preservation Act for all projects.[174] Therefore, Environmental Condition 25 requires section 106 consultation be completed for all Project elements before Port Arthur LNG and Port Arthur Pipeline may commence construction. In addition, Commission staff, as well as staff from Port Arthur Pipeline have met with the Coushatta Tribe of Louisiana to address their concerns over the Louisiana Connector Project's potential impacts on cultural resources.[175] On November 15, 2018, the Coushatta Tribe filed a letter concurring with a determination that no historic properties would be affected by the Louisiana Connector Project; and Commission staff, Port Arthur

[171] Final EIS at ES-7.

[172] Final EIS at 5-19 – 5-21.

[173] Final EIS at 5-21.

[174] Final EIS at 5-23.

[175] Final EIS at 5-23 – 5-24.

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Pipeline, and the Coushatta Tribe continue to work together to address the Tribe's cultural resource concerns.

12. Air Quality and Noise

127. Construction emissions for the Liquefaction Project are estimated for approximately 60 months. Construction emissions would not be a permanent source, and, therefore, not have a long-term effect on air quality in the area.[176] Most construction-related emissions from the Louisiana Connector and Texas Connector projects would be temporary and localized and would dissipate with time and distance from areas of active construction. Further, construction emissions along the pipelines would subside once construction is complete.[177]

128. Long-term impacts on air quality would result from operation of the Liquefaction Project facilities and the pipeline compressor stations. Port Arthur LNG and Port Arthur Pipeline would minimize potential impacts on air quality caused by operation of the liquefaction facilities and compressor stations by adhering to applicable federal and state regulations and installing best available control technology to minimize emissions.[178] Therefore, with the mitigation measures that Port Arthur LNG and Port Arthur Pipeline have proposed, the final EIS concludes that there would be no regionally significant impacts on air quality.[179]

129. Noise would be generated during construction of the projects. Noise levels would be highest in the immediate vicinity of construction activities and would diminish with distance from the work area.[180] These impacts would be localized and temporary. Construction would generally not affect nighttime noise levels as it would be limited to 7 a.m. to 10 p.m., except for pile driving, HDD activities, and specific construction activities such as tie-ins and hydrostatic testing.[181] For construction of the Liquefaction Project, the City of Port Arthur's noise standard for the noise sensitive areas (NSA) in residential areas would limit project-generated noise to no greater than 57 A-weighted decibels

[176] Final EIS at 5-22 – 5-23.

[177] Final EIS at 4-239.

[178] Final EIS at ES-7.

[179] Final EIS at ES-7.

[180] Final EIS at 4-248.

[181] Final EIS at 4-248.

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(dBA) during the day (7 a.m. to 10 p.m.) and 52 dBA at night (10 p.m. to 7 a.m.); however, construction-related noise is exempt from this standard provided that such activities do not take place during nighttime hours.[182]

130. During construction of the Louisiana Connector and Texas Connector projects, use of the HDD method would result in minor impacts on NSAs in the vicinity of the drilling equipment. Therefore, Environmental Condition 26 in the appendix to this order requires Port Arthur Pipeline, prior to the use of HDDs at locations where HDD-related noise could exceed Commission sound level criteria at NSAs, to file HDD noise mitigation plans.

131. Operation of the Liquefaction Project and the Texas Connector Project's South Compressor Station (located near the Liquefaction Project) would generate sound levels throughout the life of the projects, but the increase in noise levels would be below the "barely detectable" noise level increase of 3 dBA, and would be below the FERC limit standard of a day-night sound level (L_{dn}) of 55 dBA, resulting in only minor impacts on the nearest NSA.[183] Further, Environmental Condition 27 requires Port Arthur LNG to file a full-load noise survey no later than 60 days after each liquefaction train is put in service for the first and second liquefaction trains. Environmental Condition 27 also requires that if noise levels attributable to operation of the Liquefaction Project and South Compressor Station exceed the FERC limit of 55 dBA L_{dn}, Port Arthur LNG must reduce the facilities' noise contribution to result in a noise level that is no higher than the FERC standard. Environmental Condition 28 also requires Port Arthur LNG to file a full-load noise survey no later than 60 days after placing all the Liquefaction Project facilities and South Compressor Station in service.

132. Sound levels would increase during operation of the Texas Connector Project's North Compressor Station, the Louisiana Connector Project's compressor station, and the meter stations associated with the pipeline projects, which would occur for the life of the Louisiana Connector and Texas Connector projects. To reduce noise impacts, Port Arthur Pipeline would implement mitigation measures such as the use of acoustically treated compressor enclosures, silencers on the exhaust outlet and air intake, and acoustically treated wall and roof fan openings.[184] Based on Commission staff's noise analysis as reported in the final EIS, the predicted noise levels attributable to operation of the Texas Connector Project's North Compressor Station, the Louisiana Connector Project's compressor station, and the meter stations would be less than 55 dBA L_{dn} at all

[182] Final EIS at 4-248 – 4-249.

[183] Final EIS at 4-249 at 5-24.

[184] Final EIS at 5-24.

(continued ...)

nearby NSAs.[185] To ensure that noise levels would be below 55 dBA L_{dn}, Environmental Condition 29 requires Port Arthur Pipeline to file noise surveys during full-load operations and, if the noise levels exceed the FERC standard, that Port Arthur Pipeline install additional noise controls to meet the FERC standard within 1 year of the in-service date. The final EIS concludes that any increase in noise levels during construction and operation of the Liquefaction Project, Louisiana Connector Project, and Texas Connector Project would be minor and not result in significant impacts.

13. Reliability and Safety

133. Commission staff conducted a preliminary engineering and technical review of the Liquefaction Project, including potential external impacts based on the site location. Based on this review, the final EIS recommends a number of mitigation measures for implementation prior to initial site preparation, prior to construction of final design, prior to commissioning, prior to introduction of hazardous fluids, prior to commencement of service, and throughout life of the facility, to enhance the reliability and safety of the facility. These recommendations have been adopted as mandatory conditions in the appendix to this order. On September 11, 2015, the U.S. Coast Guard issued a Letter of Recommendation to the Commission indicating the Sabine Neches River Ship Channel would be considered suitable for accommodating the type and frequency of LNG marine traffic associated with the Liquefaction Project. If the LNG Facility is authorized and constructed, the facility would be subject to the USCG's inspection and enforcement program to ensure compliance with the requirements of 33 CFR 105 and 33 CFR 127. Based on Commission staff's external impact analysis and preliminary evaluation of the engineering design, and with the incorporation of these recommended mitigation measures and oversight, the final EIS concludes that the Liquefaction Project's design would include acceptable layers of protection or safeguards that would reduce the risk of a potentially hazardous scenario from developing into an event that could impact the offsite public.

134. Further, as noted above,[186] PHMSA determined that the siting of the proposed LNG facilities complies with the federal safety standards governing the location, design, construction, operation, and maintenance of LNG facilities. The PHMSA LOD summarizes PHMSA's evaluation of the hazard modeling results and endpoints used to establish exclusion zones, as well as its review of Port Arthur LNG's evaluation of potential incidents and safety measures that could have a bearing on the safety of plant personnel and the surrounding public.

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[185] *Id.* at 4-249.

[186] *See supra* at P 26.

(continued ...)

135. Port Arthur Pipeline must design, construct, operate, and maintain its proposed pipelines and aboveground facilities in accordance with the DOT Minimum Federal Safety Standards.[187] These regulations, which are intended to protect the public and to prevent natural gas facility accidents and failures, include specifications for material selection and qualification, minimum design requirements, and protection of pipelines from corrosion. Accordingly, the final EIS concludes that Port Arthur Pipeline's compliance with the DOT's safety standards will ensure that Port Arthur Pipeline's construction and operation of the facilities would not have a significant impact on public safety.[188]

14. Greenhouse Gas Emissions

136. With respect to impacts from GHGs, the final EIS discusses the direct GHG impacts from construction and operation of the projects, the climate change impacts in the region,[189] and the regulatory structure for GHGs under the Clean Air Act.[190]

137. The final EIS estimated that operation of the Liquefaction Project and the Louisiana Connector and Texas Connector project's compressor stations may result in emissions of up to 4,722,648 metric tons per year of carbon dioxide equivalent (CO_2e).[191] To provide context to the direct GHG estimate, according to the national net CO_2e emissions estimate in the EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks* (EPA 2018), 5.8 billion metric tons of CO_2e were emitted at the national level in 2016 (inclusive of CO_2e sources and sinks). The direct and indirect operational emissions of the LNG terminal could potentially increase CO_2e emissions based on the 2016 levels by

[187] 49 C.F.R. § 192 (2018).

[188] Final EIS at 4-312.

[189] Final EIS at 4-360 – 4-362.

[190] Final EIS at 4-228 and 4-231.

[191] Final EIS at Tables 4.11.1-7. CO_2e emissions in the final EIS are expressed in short tons, which have been converted to metric tons in this Order so the emissions may be viewed in context with the EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks.*

(continued ...)

approximately 0.08 percent at the national level.[192] Currently, there are no national targets to use as benchmarks for comparison.[193]

138. The Final EIS included a qualitative discussion that addressed various effects of climate change.[194] The Final EIS acknowledges that the quantified GHG emissions from the construction and operation of the project will contribute incrementally to climate change.[195] Further, the Commission has previously concluded it could not determine a project's incremental physical impacts on the environment caused by GHG emissions.[196] The Commission has also previously concluded it could not determine whether a project's contribution to climate change would be significant.[197]

15. Cumulative Impacts

139. The final EIS considered the cumulative impacts of the projects with other projects or actions within the geographic and temporal scope of the projects.[198] The types of other projects evaluated in the final EIS that could potentially contribute to cumulative impacts on a range of environmental resources include existing LNG terminals and future liquefaction projects, oil and gas facilities, other industrial facilities, utility and transportation projects, commercial and residential developments, and government facilities/activities.[199] The final EIS concludes that the project's contribution to cumulative impacts on resources affected by the projects would not be significant, and

[192] EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2016* (2018), https://www.epa.gov/sites/production/files/2018-1/documents/2018_complete_report.pdf.

[193] The national emissions reduction targets expressed in the EPA's Clean Power Plan and the Paris climate accord are pending repeal and withdrawal, respectively.

[194] Final EIS at 4-360 – 4-362.

[195] Final EIS at 4-361.

[196] *Dominion Transmission, Inc.*, 163 FERC ¶ 61,128, at PP 67-70 (2018) (LaFleur, Comm'r, *dissenting in part*; Glick, Comm'r, *dissenting in part*).

[197] *Id.*

[198] Final EIS at 4-324.

[199] Final EIS at 5-25.

(continued ...)

that the potential cumulative impacts of the projects and the other projects considered would be minor or insignificant.[200]

16. Alternatives

140. The EIS assessed the No-Action Alternative, 20 new LNG or LNG terminal expansion system alternatives, 3 site alternatives, and various facility configuration alternatives for the Liquefaction Project that could achieve the Liquefaction Project's objectives. In addition, three pipeline route alternatives were considered. Alternatives were evaluated and compared to the projects to determine whether the alternatives were technically and economically feasible and practical; and offer a significant environmental advantage over the proposed projects. The final EIS concludes that the alternatives proposed did not offer a significant environmental advantage and found that the proposed projects, as modified by Commission staff's recommended mitigation measures, which are attached as conditions to the appendix to this order, was the preferred alternative.[201]

17. Environmental Analysis Conclusion

141. We have reviewed the information and analysis contained in the final EIS regarding potential environmental effects of the projects, as well as other information in the record. We are adopting the environmental recommendations in the final EIS and include them as conditions in the appendix to this order. Compliance with the environmental conditions appended to our orders is integral to ensuring that the environmental impacts of approved projects are consistent with those anticipated by our environmental analyses. Thus, Commission staff carefully reviews all information submitted. Commission staff will only issue a construction notice to proceed with an activity when satisfied that the applicant has complied with all applicable conditions. We also note that the Commission has the authority to take whatever steps are necessary to ensure the protection of environmental resources during construction and operation of the projects, including authority to impose any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the order, as well as the avoidance or mitigation of unforeseen adverse environmental impacts resulting from project construction and operation.

142. We agree with the conclusions presented in the final EIS and find that the projects, if constructed and operated as described in the final EIS, is an environmentally acceptable action. Further, for the reasons discussed throughout the order, as stated above, we find that the Liquefaction Project is not inconsistent with the public convenience and

[200] Final EIS at ES-9.

[201] Final EIS at ES-9 – ES-10.

necessity, and that the Louisiana Connector and Texas Connector projects are in the public convenience and necessity.

143. Any state or local permits issued with respect to the jurisdictional facilities authorized herein must be consistent with the conditions of this authorization and Certificate. The Commission encourages cooperation between jurisdictional companies and local authorities. However, this does not mean that state and local agencies, through application of state or local laws, may prohibit or unreasonably delay the construction or operation of facilities approved by this Commission.[202]

VI. Conclusion

144. At a hearing held on April 18, 2019, the Commission on its own motion received and made a part of the record in this proceeding all evidence, including the application, and exhibits thereto, and all comments, and upon consideration of the record,

The Commission orders:

(A) In Docket No. CP17-20-000, Port Arthur LNG is authorized under section 3 of the NGA to site, construct, and operate the proposed project located in Port Arthur, Texas, as described and conditioned herein, and as fully described in Port Arthur LNG's application and subsequent filings, including any commitments made therein, and subject to the environmental conditions contained in the appendix of this order.

(B) Port Arthur LNG's proposed project shall be constructed and made available for service within five years of the date of this order.

(C) In Docket Nos. CP17-21-000, CP17-21-001, and CP18-7-000, a certificate of public convenience and necessity is issued to Port Arthur Pipeline authorizing it to construct and operate the Texas and Louisiana Connector projects, as described and conditioned herein, and as more fully described in the applications and subsequent filings by the application, including any commitments made therein.

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[202] *See* 15 U.S.C. § 717r(d) (state or federal agency's failure to act on a permit considered to be inconsistent with Federal law); *see also Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 310 (1988) (state regulation that interferes with FERC's regulatory authority over the transportation of natural gas is preempted) and *Dominion Transmission, Inc. v. Summers*, 723 F.3d 238, 245 (D.C. Cir. 2013) (noting that state and local regulation is preempted by the NGA to the extent it conflicts with federal regulation, or would delay the construction and operation of facilities approved by the Commission).

(D) The certificate authority issued in Ordering Paragraph (C) is conditioned on:

a. Port Arthur Pipeline's completing the authorized construction of the proposed facilities and making them available for service within five years of the date of this order pursuant to section 157.20(b) of the Commission's regulations;

b. Port Arthur Pipeline's compliance with all applicable Commission regulations, including, but not limited to, Parts 154, 157, and 284, and paragraphs (a), (c), (e), and (f) of section 157.20 of the Commission's regulations;

c. Port Arthur Pipeline's compliance with the environmental conditions in the appendix to this order, and

d. Port Arthur Pipeline filing a written statement affirming that it has executed firm contracts for the capacity levels and terms of service represented in signed precedent agreements, prior to commencing construction.

(E) A blanket construction certificate is issued to Port Arthur Pipeline under Subpart F of Part 157 of the Commission's regulations.

(F) A blanket transportation certificate is issued to Port Arthur Pipeline under Subpart G of Part 284 of the Commission's regulations.

(G) Port Arthur Pipeline's initial rates and tariff are approved, as conditioned and modified in this order.

(H) Port Arthur Pipeline shall file actual tariff records that comply with the requirements contained in the body of this order not less than 60 days prior to the commencement of interstate service consistent with Part 154 of the Commission's regulations.

(I) No later than three months after the end of its first three years of actual operation, as discussed herein, Port Arthur Pipeline must make a filing to justify its existing cost-based firm and interruptible recourse rates. Port Arthur Pipeline's cost and revenue study should be filed through the eTariff portal using a Type of Filing Code 580. In addition, Port Arthur Pipeline is advised to include as part of the eFiling description, a

reference to Docket Nos. CP17-21-000, CP17-21-001, and CP18-7-000, and to the cost and revenue study.[203]

(J) Port Arthur LNG and Port Arthur Pipeline shall notify the Commission's environmental staff by telephone, e-mail, and/or facsimile of any environmental noncompliance identified by other federal, state, or local agencies on the same day that such agency notifies Port Arthur LNG or Port Arthur Pipeline. Port Arthur LNG and Port Arthur Pipeline shall file written confirmation of such notification with the Secretary of the Commission within 24 hours.

By the Commission. Commissioner LaFleur is concurring with a separate statement attached.
Commissioner Glick is dissenting with a separate statement attached.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

[203] *Electronic Tariff Filings*, 130 FERC ¶ 61,047 at P 17.

Appendix A

Environmental Conditions

As recommended in the final environmental impact statement and otherwise amended herein, this authorization includes the following conditions:

1. Port Arthur LNG and Port Arthur Pipeline shall follow the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests) and as identified in the final environmental impact statement (EIS), unless modified by the Order. Port Arthur LNG and Port Arthur Pipeline must:

    a. request any modification to these procedures, measures, or conditions in a filing with the Secretary of the Commission (Secretary);

    b. justify each modification relative to site-specific conditions;

    c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and

    d. receive approval in writing from the Director of the Office of Energy Projects (OEP) **before using that modification**.

2. For the Liquefaction Project, the Director of OEP, or the Director's designee, has delegated authority to address any requests for approvals or authorizations necessary to carry out the conditions of the Order, and take whatever steps are necessary to ensure the protection of life, health, property, and the environment during construction and operation of the project. This authority shall allow:

    a. the modification of conditions of the Order;

    b. stop-work authority and authority to cease operation; and

    c. the imposition of any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the Order as well as the avoidance or mitigation of unforeseen adverse environmental impact resulting from project construction and operation.

3. For the pipeline facilities, the Director of OEP, or the Director's designee, has delegated authority to address any requests for approvals or authorizations necessary to carry out the conditions of the Order, and take whatever steps are

necessary to ensure the protection of environmental resources during construction and operation of the projects. This authority shall allow:

a. the modification of conditions of the Order;

b. stop-work authority and authority to cease operation; and

c. the imposition of any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the Order as well as the avoidance or mitigation of unforeseen adverse environmental impact resulting from project construction and operation.

4. **Prior to any construction**, Port Arthur LNG and Port Arthur Pipeline shall file affirmative statements with the Secretary, certified by a senior company official, that all company personnel, Environmental Inspectors (EI), and contractor personnel will be informed of the EIs' authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.

5. The authorized facility locations shall be as shown in the EIS, as supplemented by filed alignment sheets. **As soon as they are available and before the start of construction**, Port Arthur LNG and Port Arthur Pipeline shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by the Order. All requests for modifications of environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

   Port Arthur Pipeline's exercise of eminent domain authority granted under Natural Gas Act (NGA) section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized facilities and locations. Port Arthur Pipeline's right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of its natural gas pipelines or facilities to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

6. Port Arthur LNG and Port Arthur Pipeline shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations; staging areas; pipe storage yards; new access roads; and other areas that will be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, documentation of landowner approval, whether any cultural resources or federally-listed threatened or

endangered species will be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of OEP **before construction in or near that area**.

This requirement does not apply to extra workspace allowed by the Commission's *Upland Erosion Control, Revegetation & Maintenance Plan* and/or minor field realignments per landowner needs and requirements that do not affect other landowners or sensitive environmental areas such as wetlands.

Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

a. implementation of cultural resources mitigation measures;

b. implementation of endangered, threatened, or special concern species mitigation measures;

c. recommendations by state regulatory authorities; and

d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.

7. **Within 60 days of the acceptance of the authorization and before construction begins**, Port Arthur LNG and Port Arthur Pipeline shall each file Implementation Plans with the Secretary for review and written approval by the Director of OEP. Port Arthur LNG and Port Arthur Pipeline must file revisions to their plans as schedules change. The plans shall identify:

a. how Port Arthur LNG and Port Arthur Pipeline will implement the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests), identified in the EIS, and required by the Order;

b. how Port Arthur LNG and Port Arthur Pipeline will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to on-site construction and inspection personnel;

c. the number of EIs assigned per spread and how Port Arthur LNG and Port Arthur Pipeline will ensure that sufficient personnel are available to implement the environmental mitigation;

d. the number of company personnel, including EIs and contractors, who will receive copies of the appropriate material;

e. the location and dates of the environmental compliance training and instructions Port Arthur LNG and Port Arthur Pipeline will give to all personnel involved with construction and restoration (initial and refresher training as the projects progress and personnel change), with the opportunity for OEP staff to participate in the training session(s);

f. the company personnel (if known) and specific portion of the Port Arthur LNG's and Port Arthur Pipeline's organization having responsibility for compliance;

g. the procedures (including use of contract penalties) Port Arthur LNG and Port Arthur Pipeline will follow if noncompliance occurs; and

h. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram) and dates for:

i. the completion of all required surveys and reports;

ii. the environmental compliance training of on-site personnel;

iii. the start of construction; and

iv. the start and completion of restoration.

8. Port Arthur LNG and Port Arthur Pipeline shall employ a team of EIs, including at least one EI for the Liquefaction Project, and at least one EI per construction spread for the pipeline facilities. The EI(s) shall be:

a. responsible for monitoring and ensuring compliance with all mitigation measures required by the Order and other grants, permits, certificates, or other authorizing documents;

b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 7) and any other authorizing document;

c. empowered to order correction of acts that violate the environmental conditions of the Order, and any other authorizing document;

d. a full-time position, separate from all other activity inspectors;

e. responsible for documenting compliance with the environmental conditions of the Order, as well as any environmental conditions/permit requirements

imposed by other federal, state, or local agencies or the Coushatta Tribe of Louisiana for Tribal Trust Lands; and

f. responsible for maintaining status reports.

9. Beginning with the filing of their respective Implementation Plans, Port Arthur LNG and Port Arthur Pipeline shall each file updated status reports with the Secretary on a **monthly** basis for the Liquefaction Project and **weekly** basis for the Louisiana Connector and Texas Connector projects until all construction and restoration activities are complete. Problems of a significant magnitude shall be reported to the FERC **within 24 hours.** On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:

a. an update on Port Arthur LNG's and Port Arthur Pipeline's efforts to obtain the necessary federal authorizations;

b. the construction status of Liquefaction Facilities and each spread of the Louisiana Connector and Texas Connector projects, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally sensitive areas;

c. a listing of all problems encountered, contractor nonconformance/deficiency logs, and each instance of noncompliance observed by the EIs during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);

d. a description of the corrective and remedial actions implemented in response to all instances of noncompliance, nonconformance, or deficiency;

e. the effectiveness of all corrective and remedial actions implemented;

f. a description of any landowner/resident complaints that may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and

g. copies of any correspondence received by Port Arthur LNG and Port Arthur Pipeline from other federal, state, local, or tribal permitting agencies concerning instances of noncompliance, and the Port Arthur LNG's and Port Arthur Pipeline's responses.

10. Port Arthur LNG and Port Arthur Pipeline must receive written authorization from the Director of OEP **before commencing construction of any project facilities**. To obtain such authorization, Port Arthur LNG and Port Arthur Pipeline shall file

with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).

11. Port Arthur LNG must receive written authorization from the Director of OEP **prior to introducing hazardous fluids into the liquefaction facilities**. Instrumentation and controls, hazard detection, hazard control, and security components/systems necessary for the safe introduction of such fluids shall be installed and functional.

12. Port Arthur LNG must receive written authorization from the Director of OEP **before placing the Liquefaction Project facilities into service**. Such authorization will only be granted following a determination that the facilities have been constructed in accordance with the FERC approval, can be expected to operate safely as designed, and the rehabilitation and restoration of the area affected by the Liquefaction Project facilities are proceeding satisfactorily.

13. Port Arthur Pipeline must receive written authorization from the Director of OEP **before placing the Texas Connector and/or the Louisiana Connector projects into service**. Such authorization will only be granted following a determination that the rehabilitation and restoration of the right-of-way and other areas affected by the Louisiana Connector and Texas Connector projects are proceeding satisfactorily.

14. **Within 30 days of placing the authorized facilities in service**, Port Arthur LNG and Port Arthur Pipeline shall file an affirmative statement with the Secretary, certified by a senior company official:

    a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or

    b. identifying which of the conditions in the Order Port Arthur LNG and Port Arthur Pipeline have complied with or will comply with. This statement shall also identify any areas affected by the projects where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.

15. **Prior to construction of the projects**, Port Arthur LNG and Port Arthur Pipeline each shall file with the Secretary, for review and written approval by the Director of OEP, a project-specific plan for construction near known abandoned oil and gas wells. This plan shall identify actions to be taken if any unidentified oil or gas wells are discovered during construction and discuss how Port Arthur LNG or Port Arthur Pipeline will maintain the integrity of any plugged wells. (*section 4.1.2*)

16. **Prior to construction of the compressor stations associated with the Louisiana Connector and Texas Connector projects**, Port Arthur Pipeline shall file with the

Secretary the results of geotechnical studies for the compressor stations, including any recommended mitigation measures Port Arthur Pipeline will adopt as part of the final engineering design. (*section 4.1.3.1*)

17. **Prior to construction of the Liquefaction Project**, Port Arthur LNG shall provide the U.S. Environmental Protection Agency, U.S. Army Corps of Engineers (USACE), Texas Commission on Environmental Quality, and Texas Railroad Commission with the soil and sediment analysis conducted at the area within the ship canal at the marine berth, construction dock, material offloading facility, and landward component of the material offloading facility for review. Port Arthur LNG shall file the conclusions of the agency reviews with the Secretary along with documentation of its consultations with these agencies including any measures Port Arthur LNG will need to adopt if the analysis discovers previously unknown contamination. (*section 4.2.1.6*)

18. **Prior to construction of the Louisiana Connector and Texas Connector projects**, Port Arthur Pipeline shall file with the Secretary, for review and approval by the Director of OEP, the anticipated volume and source of water to be used for dust control. (*section 4.3.2.2*)

19. **Port Arthur LNG and Port Arthur Pipeline shall not begin construction of the projects until**:

    a. all outstanding biological surveys are completed;

    b. the FERC staff complete any necessary Endangered Species Act section 7 consultation, including conference for the eastern black rail, with the U.S. Fish and Wildlife Service;

    c. Port Arthur LNG and Port Arthur Pipeline have received written notification from the Director of OEP that construction and/or use of mitigation (including implementation of conservation measures) may begin. (*section 4.7.3*)

20. **Prior to construction of the Louisiana Connector Project**, Port Arthur Pipeline shall conduct surveys for the American chaffseed on the remaining no-access parcels with potential habitat. If the American chaffseed is found, Port Arthur Pipeline shall incorporate methods to avoid impacts on the American chaffseed. Port Arthur Pipeline shall file with the Secretary and the U.S. Fish and Wildlife Service (Louisiana office) both the survey results and Port Arthur Pipeline's proposed avoidance methods. (*section 4.7.3.5*)

21. **Prior to construction of the Liquefaction Project**, Port Arthur LNG shall file with the Secretary documentation of concurrence from the USACE and Texas General

Land Office that the Liquefaction Project is consistent with the Coastal Zone Management Act. (*section 4.8.9.1*)

22. **Prior to construction of the Louisiana Connector and Texas Connector projects**, Port Arthur Pipeline shall file with the Secretary documentation of concurrence from the USACE, Texas General Land Office, and Louisiana Office of Coastal Management that the Texas Connector Project and Louisiana Connector Project are consistent with the Coastal Zone Management Act. (*section 4.8.9.2*)

23. **Prior to construction of the Liquefaction Project,** Port Arthur LNG shall file with the Secretary its Transportation Plan for the Liquefaction Project, for review and written approval by the Director of OEP. The plan shall include personnel training; permitting requirements; consultations conducted with local and state agencies; and how access to/from the work site by personnel, equipment, and materials will be managed on a daily basis throughout construction. (*section 4.9.6.1*)

24. **Prior to construction of the Louisiana Connector Project in Louisiana**, Port Arthur Pipeline shall file with the Secretary, for review and written approval by the Director of OEP, a revised *Unanticipated Discoveries Plan* that clarifies that Tribal Historic Preservation Office construction recommencement authorization is only applicable to Coushatta Tribe of Louisiana tribal trust lands. (*section 4.10.2*)

25. Port Arthur LNG and Port Arthur Pipeline shall **not begin** construction of facilities and/or use of staging, storage, or temporary work areas and new or to-be-improved access roads **associated with the projects until**:

    a. Port Arthur LNG files with the Secretary, the outstanding information for Dredge Disposal Area 8, and the Texas State Historic Preservation Office's (SHPO) comments on the information;

    b. Port Arthur LNG files any required survey report for Dredge Disposal Area 8, and the Texas SHPO's comments on the report;

    c. Port Arthur Pipeline files with the Secretary all outstanding survey reports, evaluation reports, special studies, and any required avoidance/treatment plans, and the Texas and Louisiana SHPOs' and the Coushatta Tribe of Louisiana Tribal Historic Preservation Office's comments (as applicable) on these;

    d. the Advisory Council on Historic Preservation is afforded an opportunity to comment if historic properties will be adversely affected; and

    e. the FERC staff reviews and the Director of OEP approves the cultural resources reports, studies, and plans, and notifies Port Arthur LNG and Port Arthur Pipeline in writing that treatment plans/mitigation measures

(including archaeological data recovery) may be implemented and/or construction may proceed.

All materials filed with the Commission containing **location, character, and ownership information** about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering "**CUI//PRIV – DO NOT RELEASE**."(*sections 4.10.4.1. and 4.10.4.2*)

26. **Prior to construction of horizontal directional drills (HDD) at mileposts (MP) 19.6 and 20.3 along the Texas Connector Project's Northern Pipeline; MP 0.5 along the GTS Lateral; MP 0.8 along the FGT Lateral; and MPs 38.7, 40.5, 42.5, 47.9, 48.5, 56.8, 60.2, 79.4, 91.1, 96.9, 110.1, and 110.3 along the Louisiana Connector Project** where HDD-related noise could exceed the Commission's sound level criterion at the closest noise-sensitive area (NSA), Port Arthur Pipeline shall file with the Secretary, for review and written approval by the Director of OEP, an HDD noise mitigation plan to reduce the projected noise level attributable to the proposed drilling operations at nearby NSAs. During drilling operations, Port Arthur Pipeline shall implement the approved plan, monitor noise levels, and make all reasonable efforts to restrict the noise attributable to the drilling operations to no more than a day-night sound level (L_{dn}) of 55 decibels on the A-weighted scale (dBA) at the NSAs or 10 dBA above background where nighttime ambient noise is above 55 dBA L_{dn}. (*section 4.11.2.3*)

27. Port Arthur LNG shall file a full power load noise survey with the Secretary **no later than 60 days** after placing each Liquefaction Project train in service. If the noise attributable to the operation of the equipment at the liquefaction facilities exceeds 55 dBA L_{dn} at the nearest NSA, **within 60 days** Port Arthur LNG shall modify operation of the liquefaction facilities or install additional noise controls until a noise level below 55 dBA L_{dn} at the NSA is achieved. Port Arthur LNG shall confirm compliance with the above requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls. (*section 4.11.2.4*)

28. Port Arthur LNG and Port Arthur Pipeline shall file noise surveys with the Secretary **no later than 60 days** after placing the entire Liquefaction Project facility, including the South Compressor Station associated with the Texas Connector Project, into service. If a full load condition noise survey is not possible, Port Arthur LNG and Port Arthur Pipeline shall provide an interim survey at the maximum possible horsepower load **within 60 days** of placing the Liquefaction Project facility and South Compressor Station into service and provide the full load survey **within 6 months**. If the noise attributable to operation of the equipment at the Liquefaction Project facility and South Compressor Station exceeds 55 dBA L_{dn} at the nearest NSA under interim or full horsepower load conditions, Port Arthur LNG and Port Arthur Pipeline shall file a report on what changes are needed and shall install the

additional noise controls to meet the level **within 1 year** of the in-service date. Port Arthur LNG and Port Arthur Pipeline shall confirm compliance with the above requirement by filing an additional noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls. (*section 4.11.2.4*)

29. Port Arthur Pipeline shall file a noise survey with the Secretary **no later than 60 days** after placing the Texas Connector Project North Compressor Station and Louisiana Connector Project's compressor station in service. If a full load condition noise survey is not possible, Port Arthur Pipeline shall instead file an interim survey at the maximum possible horsepower load and file the full load survey **within 6 months**. If the noise attributable to the operation of all of the equipment at any station under interim or full horsepower load exceeds 55 dBA L_{dn} at any nearby NSA, Port Arthur Pipeline shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within 1 year** of the in-service date. Port Arthur Pipeline shall confirm compliance with the 55 dBA L_{dn} requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls. (*section 4.11.2.4*)

30. **Prior to construction of final design,** Port Arthur LNG shall file with the Secretary the following information, stamped and sealed by the professional engineer-of-record, registered in Texas:

    a. site preparation drawings and specifications;

    b. LNG terminal structures and foundation design drawings and calculations (including prefabricated and field constructed structures);

    c. seismic specifications for procured equipment; and

    d. quality control procedures to be used for civil/structural design and construction.

    In addition, Port Arthur LNG shall file, in its Implementation Plan, the schedule for producing this information. *(section 4.12.6)*

31. **Prior to commencement of service,** Port Arthur LNG shall file with the Secretary a monitoring and maintenance plan, stamped and sealed by the professional engineer-of-record registered in Texas, for the perimeter levee which ensures the crest elevation relative to mean sea level will be maintained for the life of the facility considering berm settlement, subsidence, and sea level rise. *(section 4.12.6)*

Conditions 32 through 126 shall apply to the Port Arthur Liquefaction Project. Information pertaining to these specific conditions below shall be filed with the Secretary for review and written approval by the Director of OEP, or the Director's designee, within the timeframe indicated by each condition. Specific engineering, vulnerability, or

detailed design information meeting the criteria specified in Order No. 833 (Docket No. RM16-15-000), including security information, shall be submitted as critical energy infrastructure information pursuant to 18 C.F.R. 388.113. See *Critical Electric Infrastructure Security and Amending Critical Energy Infrastructure Information*, Order No. 833, 81 Fed. Reg. 93,732 (December 21, 2016), FERC Stats. & Regs. 31,389 (2016). Information pertaining to items such as offsite emergency response, procedures for public notification and evacuation, and construction and operating reporting requirements will be subject to public disclosure. All information shall be filed **a minimum of 30 days** before approval to proceed is requested.

32. **Prior to initial site preparation,** Port Arthur LNG shall file an overall project schedule, which includes the proposed stages of the commissioning plan. *(section 4.12.6)*

33. **Prior to initial site preparation,** Port Arthur LNG shall file quality assurance and quality control procedures for construction activities. *(section 4.12.6)*

34. **Prior to initial site preparation,** Port Arthur LNG shall file procedures for controlling access during construction. *(section 4.12.6)*

35. **Prior to initial site preparation,** Port Arthur LNG shall develop an emergency response plan (ERP) (including evacuation) and coordinate procedures with the U.S. Coast Guard; state, county, and local emergency planning groups; fire departments; state and local law enforcement; and appropriate federal agencies. This plan shall include at a minimum:

    a. designated contacts with state and local emergency response agencies;

    b. scalable procedures for the prompt notification of appropriate local officials and emergency response agencies based on the level and severity of potential incidents;

    c. procedures for notifying residents and recreational users within areas of potential hazard;

    d. evacuation routes/methods for residents and public use areas that are within any transient hazard areas along the route of the LNG marine transit;

    e. locations of permanent sirens and other warning devices; and

    f. an “emergency coordinator” on each LNG carrier to activate sirens and other warning devices.

Port Arthur LNG shall notify the FERC staff of all planning meetings in advance and shall report progress on the development of its ERP at **3-month intervals**. *(section 4.12.6)*

36. **Prior to initial site preparation,** Port Arthur LNG shall file a Cost-Sharing Plan identifying the mechanisms for funding all Project-specific security/emergency management costs that will be imposed on state and local agencies. This comprehensive plan shall include funding mechanisms for the capital costs associated with any necessary security/emergency management equipment and personnel base. Port Arthur LNG shall notify FERC staff of all planning meetings in advance and shall report progress on the development of its Cost Sharing Plan at **3-month intervals**. *(section 4.12.6)*

37. **Prior to construction of final design,** Port Arthur LNG shall file change logs that list and explain any changes made from the front-end-engineering-design (FEED) provided in Port Arthur LNG's application and filings. A list of all changes with an explanation for the design alteration shall be filed and all changes shall be clearly indicated on all diagrams and drawings. *(section 4.12.6)*

38. **Prior to construction of final design,** Port Arthur LNG shall file information/revisions pertaining to Port Arthur LNG' response numbers 9, 11, 18, 19, 24, 28, 29, 30-33, 34, 36-41, 43-46, 54-55 of its January 29, 2018 filing and 52 and 57 of its February 7, 2018 filing, which indicated features to be included or considered in the final design. *(section 4.12.6)*

39. **Prior to construction of final design,** Port Arthur LNG shall file a plot plan of the final design showing all major equipment, structures, buildings, and impoundment systems. *(section 4.12.6)*

40. **Prior to construction of final design,** Port Arthur LNG shall file three-dimensional plant drawings to confirm plant layout for maintenance, access, egress, and congestion. *(section 4.12.6)*

41. **Prior to construction of final design,** Port Arthur LNG shall file drawings of the storage tank piping support structure and support of horizontal piping at grade including pump columns, relief valves, pipe penetrations, instrumentation, and appurtenances. *(section 4.12.6)*

42. **Prior to construction of final design,** Port Arthur LNG shall file a complete specification and drawings of the proposed LNG tank design and installation. *(section 4.12.6)*

43. **Prior to construction of final design,** Port Arthur LNG shall file an up-to-date equipment list, process and mechanical data sheets, and specifications. The specifications shall include:

    a. building specifications (control buildings, electrical buildings, compressor buildings, storage buildings, pressurized buildings, ventilated buildings, blast resistant buildings);

    b. mechanical specifications (piping, valve, insulation, rotating equipment, heat exchanger, storage tank and vessel, other specialized equipment);

    c. electrical and instrumentation specifications (power system specifications, control system specifications, Safety Instrumented Systems (SIS) specifications, cable specifications, other electrical and instrumentation specifications); and

    d. security and fire safety specifications (security, passive protection, hazard detection, hazard control, firewater). *(section 4.12.6)*

44. **Prior to construction of final design,** Port Arthur LNG shall file a list of all codes and standards and the final specification document number where they are referenced. *(section 4.12.6)*

45. **Prior to construction of final design,** Port Arthur LNG shall file up-to-date process flow diagrams (PFDs) and piping and instrument diagrams (P&IDs), including vendor P&IDs. The PFDs shall include heat and material balances. The P&IDs shall include the following information:

    a. equipment tag number, name, size, duty, capacity, and design conditions;

    b. equipment insulation type and thickness;

    c. storage tank pipe penetration size and nozzle schedule;

    d. valve high pressure side and internal and external vent locations;

    e. piping with line number, piping class specification, size, and insulation type and thickness;

    f. piping specification breaks and insulation limits;

    g. all control and manual valves numbered;

    h. relief valves with size and set points; and

    i. drawing revision number and date. *(section 4.12.6)*

46. **Prior to construction of final design,** Port Arthur LNG shall file P&IDs, specifications, and procedures that clearly show and specify the tie-in details required to safely connect subsequently constructed facilities with the operational facilities. *(section 4.12.6)*

47. **Prior to construction of final design,** Port Arthur LNG shall file a car seal philosophy and a list of all car-sealed and locked valves consistent with the P&IDs. *(section 4.12.6)*

48. **Prior to construction of final design,** the engineering, procurement, and construction contractor shall verify that the recommendations from the FEED Hazard Identification are complete and consistent with the requirements of the final design as determined by the engineering, procurement, and construction contractor. *(section 4.12.6)*

49. **Prior to construction of final design,** Port Arthur LNG shall file a hazard and operability review review prior to issuing the P&IDs for construction. A copy of the review, a list of the recommendations, and actions taken on the recommendations shall be filed. *(section 4.12.6)*

50. **Prior to construction of final design,** Port Arthur LNG shall file the safe operating limits (upper and lower), alarm and shutdown set points for all instrumentation (i.e., temperature, pressures, flows, and compositions). *(section 4.12.6)*

51. **Prior to construction of final design,** Port Arthur LNG shall file cause-and-effect matrices for the process instrumentation, fire and gas detection system, and emergency shutdown (ESD) system for review and approval. The cause-and-effect matrices shall include alarms and shutdown functions, details of the voting and shutdown logic, and set points. *(section 4.12.6)*

52. **Prior to construction of final design,** Port Arthur LNG shall file an evaluation of ESD valve closure times. The evaluation shall account for the time to detect an upset or hazardous condition, notify plant personnel, and close the ESD valve. *(section 4.12.6)*

53. **Prior to construction of final design,** Port Arthur LNG shall file an evaluation of dynamic pressure surge effects from valve opening and closure times and pump operations. *(section 4.12.6)*

54. **Prior to construction of final design,** Port Arthur LNG shall demonstrate that hazardous fluid piping and piping nipples 2 inches or less in diameter are designed to withstand external loads, including vibrational loads in the vicinity of rotating equipment and operator live loads in areas accessible by operators. *(section 4.12.6)*

55. **Prior to construction of final design,** Port Arthur LNG shall specify that all drains from high pressure hazardous fluid systems are equipped with double isolation and bleed valves. *(section 4.12.6)*

56. **Prior to construction of final design,** Port Arthur LNG shall file electrical area classification drawings. *(section 4.12.6)*

57. **Prior to construction of final design,** Port Arthur LNG shall file drawings and details of how process seals or isolations installed at the interface between a flammable fluid system and an electrical conduit or wiring system meet the requirements of National Fire Protection Association (NFPA) 59A (2001). *(section 4.12.6)*

58. **Prior to construction of final design,** Port Arthur LNG shall file details of an air gap or vent installed downstream of process seals or isolations installed at the interface between a flammable fluid system and an electrical conduit or wiring system. Each air gap shall vent to a safe location and be equipped with a leak detection device that shall continuously monitor for the presence of a flammable fluid, alarm the hazardous condition, and shut down the appropriate systems. *(section 4.12.6)*

59. **Prior to construction of final design,** Port Arthur LNG shall include layout and design specifications of the pig trap, inlet separation and liquid disposal, inlet/send-out meter station, and pressure control. *(section 4.12.6)*

60. **Prior to construction of final design,** Port Arthur LNG shall specify that piping and equipment that may be cooled with liquid nitrogen will be designed for liquid nitrogen temperatures, with regard to allowable movement and stresses. *(section 4.12.6)*

61. **Prior to construction of final design,** Port Arthur LNG shall include LNG tank fill flow measurement with high flow alarm. *(section 4.12.6)*

62. **Prior to construction of final design,** Port Arthur LNG shall include boil-off gas flow, tank density profile, and temperature profile measurement for each tank. *(section 4.12.6)*

63. **Prior to construction of final design,** Port Arthur LNG shall file the structural analysis of the LNG storage tank and outer concrete impoundment wall to demonstrate they are designed to withstand all loads and combinations. *(section 4.12.6)*

64. **Prior to construction of final design,** Port Arthur LNG shall file an analysis of the structural integrity of the outer containment of the full containment storage tanks when exposed to a roof tank top fire or adjacent tank top fire. *(section 4.12.6)*

65. **Prior to construction of final design,** Port Arthur LNG shall file the sizing basis and capacity for the final design of the flares and/or vent stacks as well as the pressure and vacuum relief valves for major process equipment, vessels, and storage tanks. *(section 4.12.6)*

66. **Prior to construction of final design,** Port Arthur LNG shall file detailed cooldown plans showing the piping flow, valve alignment, and instruments used to monitor the initial cooldown and filling of the LNG storage tanks. *(section 4.12.6)*

67. **Prior to construction of final design,** Port Arthur LNG shall file detailed procedures for import of LNG during the initial cooldown of the LNG storage tanks including detailed P&IDs with flow paths and valve alignment showing the position of valves and lockout/tagout devices. *(section 4.12.6)*

68. **Prior to construction of final design,** Port Arthur LNG shall file an evaluation on the need to install fixed toxic gas detection to detect hydrogen sulfide (H_2S) releases from loss of containment from the acid gas piping system and potential release points (i.e., vents, relief valves, vent stacks, and thermal oxidizer stack). *(section 4.12.6)*

69. **Prior to construction of final design,** Port Arthur LNG shall file process simulation results for the deethanizer, depropanizer depressurized conditions to ensure the associated deethanizer, depropanizer, reboiler, piping, and other associated equipment are adequately designed for settle out and upset conditions to prevent brittle facture of piping and associated equipment. *(section 4.12.6)*

70. **Prior to construction of final design,** Port Arthur LNG shall file an evaluation assessing the minimum design metal temperature and material of construction needed for the deethanizer, depropanizer, reboiler and piping during upset/settleout conditions. *(section 4.12.6)*

71. **Prior to construction of final design**, Port Arthur LNG shall include provisions to maintain stability and pressure of the regenerator in the event that the H_2S scavenger or thermal oxidizer are unavailable (e.g., change out, maintenance, startup, etc.). *(section 4.12.6)*

72. **Prior to construction of final design,** Port Arthur LNG shall include a thermal relief valve between the propane shutoff valves (XV-30687 and XV0-30686) to protect piping. *(section 4.12.6)*

73. **Prior to construction of final design,** Port Arthur LNG shall include a thermal relief valve between the ethane shutoff valves (XV0-30729 and XV0-30731) to protect piping. *(section 4.12.6)*

74. **Prior to construction of final design,** Port Arthur LNG shall include provisions to prevent cryogenic fluids accumulated in the dry flare knockout drum from reaching the wet flare knockout drum, which are connected by the dry flare knockout drum drain line to the blow case purge to the wet flare knockout drum. *(section 4.12.6)*

75. **Prior to construction of final design**, Port Arthur LNG shall include details of the flare knockout drum heater and detailed procedures for draining flare knockout drums to a safe location. *(section 4.12.6)*

76. **Prior to construction of final design,** Port Arthur LNG shall file detailed calculations for the flow rate of the jockey pumps accounting for flow rate losses due to leaks or when drain valves are opened to ensure that system losses do not exceed the specified design flow rate of the jockey firewater pumps. *(section 4.12.6)*

77. **Prior to construction of final design,** Port Arthur LNG shall file an evaluation of the need to install pressure relieving protection for flammable liquid piping segments (i.e., refrigerants, liquid hydrocarbons, condensate products) that can be isolated by valves. *(section 4.12.6)*

78. **Prior to construction of final design,** Port Arthur LNG shall specify that all ESD valves will be equipped with open and closed position switches connected to the Distributed Control System (DCS)/SIS. *(section 4.12.6)*

79. **Prior to construction of final design,** Port Arthur LNG shall file a drawing showing the location of the ESD buttons. Emergency shutdown buttons shall be easily accessible, conspicuously labeled, and located in an area which will be accessible during an emergency. *(section 4.12.6)*

80. **Prior to construction of final design,** Port Arthur LNG shall file drawings and specifications for vehicle barriers at each facility entrance for access control. *(section 4.12.6)*

81. **Prior to construction of final design,** Port Arthur LNG shall file an evaluation of the need to install turning lanes to minimize the risk of hazardous material truck and other vehicle incidents entering and exiting the facility from State Highway 87. *(section 4.12.6)*

82. **Prior to construction of final design,** Port Arthur LNG shall file an evaluation of the need for installing internal road vehicle protections (e.g., guard rails, barriers, and bollards) to protect transfer piping, pumps, and compressors, etc. and to ensure that they are located away from roadway or protected from inadvertent damage from vehicles. *(section 4.12.6)*

83. **Prior to construction of final design,** Port Arthur LNG shall file a projectile analysis for review and approval to demonstrate that the outer concrete

impoundment wall of a full-containment LNG tank could withstand windborne projectiles. The analysis shall detail the projectile speeds and characteristics and method used to determine penetration or perforation depths. *(section 4.12.6)*

84. **Prior to construction of final design,** Port Arthur LNG shall file security camera, intrusion detection, and lighting drawings. The security camera drawings shall show the location, areas covered, and features of the camera (fixed, tilt/pan/zoom, motion detection alerts, low light, mounting height, etc.) to verify camera coverage of the entire perimeter with redundancies for cameras interior to the facility to enable rapid monitoring of the LNG plant. The intrusion detection drawings shall show or note the location of the intrusion detection to verify it covers the entire perimeter of the LNG plant. The lighting drawings shall show the location, elevation, type of light fixture, and lux levels of the lighting system. *(section 4.12.6)*

85. **Prior to construction of final design,** Port Arthur LNG shall file the details of the ESD system, including whether a plant-wide ESD button with proper sequencing and reliability will be installed or whether another system will be installed that is demonstrated through a human reliability analysis to provide a means to quickly and reliably shutdown the entire plant. *(section 4.12.6)*

86. **Prior to construction of final design,** Port Arthur LNG shall file an updated fire protection evaluation of the proposed facilities. A copy of the evaluation, a list of recommendations and supporting justifications, and actions taken on the recommendations shall be filed. *(section 4.12.6)*

87. **Prior to construction of final design,** Port Arthur LNG shall file spill containment system drawings with dimensions and slopes of curbing, trenches, impoundments, and capacity calculations considering any foundations and equipment within impoundments, as well as the sizing and design of the down-comer that will transfer spills from the tank top to the ground-level impoundment system. The spill containment drawings shall show containment for all hazardous fluids from the largest flow from a single line for 10 minutes or from the largest vessel or otherwise demonstrate spill containment will not significantly reduce the flammable vapor dispersion or radiant heat consequences of a spill. *(section 4.12.6)*

88. **Prior to construction of final design**, Port Arthur LNG shall specify the material of construction for the curbed areas, trenches, and impoundments as insulated concrete or otherwise demonstrate insulated concrete will not significantly reduce the flammable vapor dispersion or radiant heat consequences of a spill. *(section 4.12.6)*

89. **Prior to construction of final design,** Port Arthur LNG shall file an analysis of the localized hazards to operators from a potential liquid nitrogen release and shall also

provide spill containment and low oxygen detectors to mitigate liquid nitrogen releases. *(section 4.12.6)*

90. **Prior to construction of final design,** Port Arthur LNG shall file complete drawings and a list of the hazard detection equipment. The drawings shall clearly show the location and elevation of all detection equipment and demonstrate potential releases resulting in an offsite impact could be detected by at least two detectors to allow for shutdown in less than 10 minutes. The list shall include the instrument tag number, type and location, alarm indication locations, and shutdown functions of the hazard detection equipment. *(section 4.12.6)*

91. **Prior to construction of final design,** Port Arthur LNG shall file a list of alarm and shutdown set points for all hazard detectors that account for the calibration gas of the hazard detectors when determining the lower flammable limit set points for methane, propane, butane, ethane, and condensate. *(section 4.12.6)*

92. **Prior to construction of final design,** Port Arthur LNG shall file a list of alarm and shutdown set points for all hazard detectors that account for the calibration gas of hazard detectors when determining the set points for toxic components such as aqueous ammonia, natural gas liquids and H_2S. *(section 4.12.6)*

93. **Prior to construction of final design,** Port Arthur LNG shall file a technical review of facility design that:

    a. identifies all combustion/ventilation air intake equipment and the distances to any possible flammable gas or toxic release; and

    b. demonstrates that these areas are adequately covered by hazard detection devices and indicates how these devices will isolate or shutdown any combustion or heating ventilation and air conditioning equipment whose continued operation could add to or sustain an emergency. *(section 4.12.6)*

94. **Prior to construction of the final design,** Port Arthur LNG shall file a building siting assessment to ensure plant buildings that are occupied or critical to the safety of the LNG plant are adequately protected from potential hazards involving fires and vapor cloud explosions. *(section 4.12.6)*

95. **Prior to construction of final design,** Port Arthur LNG shall file a drawing that includes smoke detection in occupied buildings. *(section 4.12.6)*

96. **Prior to construction of final design,** Port Arthur LNG shall file a drawing that includes hazard detection suitable to detect high temperatures and smoldering combustion products in electrical buildings and control room buildings. *(section 4.12.6)*

97. **Prior to construction of final design,** Port Arthur LNG shall file a drawing that includes clean agent systems in the electrical switchgear and instrumentation buildings. *(section 4.12.6)*

98. **Prior to construction of final design,** Port Arthur LNG shall file facility plan drawings and a list of the fixed and wheeled dry-chemical, hand-held fire extinguishers, and other hazard control equipment. Plan drawings shall clearly show the location by tag number and elevation of all fixed, wheeled, and hand-held extinguishers and demonstrate travel distances are along normal paths of access and egress and in compliance with NFPA 10, 15, and 17. The list shall include the equipment tag number, type, capacity, equipment covered, discharge rate, and automatic and manual remote signals initiating discharge of the units. *(section 4.12.6)*

99. **Prior to construction of final design,** Port Arthur LNG shall file facility plan drawings showing the proposed location of the firewater and any foam systems. Plan drawings shall clearly show the location of firewater and foam piping, post indicator valves, and the location and area covered by, each monitor, hydrant, hose, water curtain, deluge system, foam system, water-mist system, and sprinkler. The drawings shall demonstrate that each process area, fire zone, or other sections of piping with several users can be isolated with post indicator valves and that firewater coverage is provided by at least two monitors or hydrants with sufficient firewater flow to cool exposed surfaces subjected to a fire. Drawings shall also include piping and instrumentation diagrams of the firewater and foam systems. *(section 4.12.6)*

100. **Prior to construction of final design,** Port Arthur LNG shall file detailed calculations to confirm that the final fire water volumes will be accounted for when evaluating the capacity of the impoundment system during a spill and fire scenario. *(section 4.12.6)*

101. **Prior to construction of final design,** Port Arthur LNG shall specify that the firewater flow test meter is equipped with a transmitter and that a pressure transmitter is installed upstream of the flow transmitter. The flow transmitter and pressure transmitter shall be connected to the DCS and recorded. *(section 4.12.6)*

102. **Prior to construction of final design,** Port Arthur LNG shall specify that the firewater pump shelter is designed with a removable roof for maintenance access to the firewater pumps. *(section 4.12.6)*

103. **Prior to construction of final design,** Port Arthur LNG shall file calculations for the firewater spray systems sized to provide cooling for mitigation of boiling-liquid-expanding-vapor explosions. *(section 4.12.6)*

104. **Prior to construction of final design,** Port Arthur LNG shall file a design that accounts for the fire water required for foam generation in calculating the total fire water required for 2 hours of supply. *(section 4.12.6)*

105. **Prior to construction of final design,** Port Arthur LNG shall file drawings and specifications for the structural passive protection systems to protect equipment and supports from cryogenic releases. *(section 4.12.6)*

106. **Prior to construction of final design,** Port Arthur LNG shall file a detailed quantitative analysis to demonstrate that adequate thermal mitigation will be provided for each significant component within the 4,000 BTU/ft^2-hr zone from an impoundment, or provide an analysis that evaluates the consequences of pressure vessel bursts and boiling liquid expanding vapor explosions. Trucks at the truck transfer station shall be included in the analysis. Passive mitigation shall be supported by calculations for the thickness limiting temperature rise and active mitigation shall be justified with calculations demonstrating flow rates and durations of any cooling water to mitigate the heat absorbed by the vessel. *(section 4.12.6)*

107. **Prior to construction of final design,** Port Arthur LNG shall file an evaluation of the voting logic and voting degradation for hazard detectors. *(section 4.12.6)*

108. **Prior to commissioning,** Port Arthur LNG shall file a detailed schedule for commissioning through equipment startup. The schedule shall include milestones for all procedures and tests to be completed: prior to introduction of hazardous fluids and during commissioning and startup. Port Arthur LNG shall file documentation certifying that each of these milestones has been completed before authorization to commence the next phase of commissioning and startup will be issued. *(section 4.12.6)*

109. **Prior to commissioning,** Port Arthur LNG shall file detailed plans and procedures for: testing the integrity of onsite mechanical installation; functional tests; introduction of hazardous fluids; operational tests; and placing the equipment into service. *(section 4.12.6)*

110. **Prior to commissioning,** Port Arthur LNG shall file a plan for clean-out, dry-out, purging, and tightness testing. This plan shall address the requirements of the American Gas Association's Purging Principles and Practice, and shall provide justification if not using an inert or non-flammable gas for clean-out, dry-out, purging, and tightness testing. *(section 4.12.6)*

111. **Prior to commissioning,** Port Arthur LNG shall file the procedures for pressure/leak tests which address the requirements of American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code section VIII, and

ASME B31.3. The procedures shall include a line list of pneumatic and hydrostatic test pressures. *(section 4.12.6)*

112. **Prior to commissioning,** Port Arthur LNG shall file the operation and maintenance procedures and manuals, as well as safety procedures, hot work procedures and permits, abnormal operating conditions reporting procedures, simultaneous operations procedures, and management of change procedures and forms. *(section 4.12.6)*

113. **Prior to commissioning,** Port Arthur LNG shall tag all equipment, instrumentation, and valves in the field, including drain valves, vent valves, main valves, and car-sealed or locked valves. *(section 4.12.6)*

114. **Prior to commissioning,** Port Arthur LNG shall file a plan to maintain a detailed training log to demonstrate that operating staff has completed the required training. *(section 4.12.6)*

115. **Prior to commissioning,** Port Arthur LNG shall equip the LNG storage tank and adjacent piping and supports with permanent settlement monitors to allow personnel to observe and record the relative settlement between the LNG storage tank and adjacent piping. The settlement record shall be reported in the **semi-annual** operational reports. *(section 4.12.6)*

116. **Prior to introduction of hazardous fluids,** Port Arthur LNG shall develop and implement an alarm management program to reduce alarm complacency and maximize the effectiveness of operator response to alarms. *(section 4.12.6)*

117. **Prior to introduction of hazardous fluids**, Port Arthur LNG shall file results of the LNG storage tank hydrostatic test and foundation settlement results. At a minimum, foundation settlement results shall be provided thereafter **annually.** *(section 4.12.6)*

118. **Prior to introduction of hazardous fluids,** Port Arthur LNG shall complete and document all pertinent tests (Factory Acceptance Tests, Site Acceptance Tests, Site Integration Tests) associated with the DCS and SIS that demonstrates full functionality and operability of the system. *(section 4.12.6)*

119. **Prior to introduction of hazardous fluids,** Port Arthur LNG shall complete and document a firewater pump acceptance test and firewater monitor and hydrant coverage test. The actual coverage area from each monitor and hydrant shall be shown on facility plot plan(s). *(section 4.12.6)*

120. **Prior to introduction of hazardous fluids,** Port Arthur LNG shall complete and document a pre-startup safety review to ensure that installed equipment meets the design and operating intent of the facility. The pre-startup safety review shall

include any changes since the last hazard review, operating procedures, and operator training. A copy of the review with a list of recommendations, and actions taken on each recommendation, shall be filed. *(section 4.12.6)*

121. **Port Arthur LNG shall file a request for written authorization from the Director of OEP prior to unloading or loading the first LNG commissioning cargo**. **After production of first LNG**, Port Arthur LNG shall file **weekly** reports on the commissioning of the proposed systems that detail the progress toward demonstrating the facilities can safely and reliably operate at or near the design production rate. The reports shall include a summary of activities, problems encountered, and remedial actions taken. The weekly reports shall also include the latest commissioning schedule, including projected and actual LNG production by each liquefaction train, LNG storage inventories in each storage tank, and the number of anticipated and actual LNG commissioning cargoes, along with the associated volumes loaded or unloaded. Further, the weekly reports shall include a status and list of all planned and completed safety and reliability tests, work authorizations, and punch list items. Problems of significant magnitude shall be reported to the FERC **within 24 hours**. *(section 4.12.6)*

122. **Prior to commencement of service,** Port Arthur LNG shall label piping with fluid service and direction of flow in the field, in addition to the pipe labeling requirements of NFPA 59A (2001). *(section 4.12.6)*

123. **Prior to commencement of service,** Port Arthur LNG shall provide plans for any preventative and predictive maintenance program that performs periodic or continuous equipment condition monitoring. *(section 4.12.6)*

124. **Prior to commencement of service,** Port Arthur LNG shall develop procedures for offsite contractors' responsibilities, restrictions, and limitations and for supervision of these contractors by Port Arthur LNG staff. *(section 4.12.6)*

125. **Prior to commencement of service,** Port Arthur LNG shall notify the FERC staff of any proposed revisions to the security plan and physical security of the plant. *(section 4.12.6)*

126. **Prior to commencement of service,** Port Arthur LNG shall file a request for written authorization from the Director of OEP. Such authorization will only be granted following a determination by the U.S. Coast Guard, under its authorities under the Ports and Waterways Safety Act, the Magnuson Act, the Maritime Transportation Security Act of 2002, and the Security and Accountability For Every Port Act, that appropriate measures to ensure the safety and security of the facility and the waterway have been put into place by Port Arthur LNG or other appropriate parties. *(section 4.12.6)*

In addition, recommendations 127 through 130 shall apply **throughout the life of the Port Arthur Liquefaction facility**.

127. The facility shall be subject to regular FERC staff technical reviews and site inspections on at least an **annual basis** or more frequently as circumstances indicate. Prior to each FERC staff technical review and site inspection, Port Arthur LNG shall respond to a specific data request including information relating to possible design and operating conditions that may have been imposed by other agencies or organizations. Up-to-date detailed P&IDs reflecting facility modifications and provision of other pertinent information not included in the semi-annual reports described below, including facility events that have taken place since the previously submitted semi-annual report, shall be submitted. *(section 4.12.6)*

128. **Semi-annual** operational reports shall be filed with the Secretary to identify changes in facility design and operating conditions; abnormal operating experiences; activities (e.g., ship arrivals, quantity and composition of imported and exported LNG, liquefied and vaporized quantities, boil off/flash gas); and plant modifications, including future plans and progress thereof. Abnormalities shall include, but not be limited to, unloading/loading/shipping problems, potential hazardous conditions from offsite vessels, storage tank stratification or rollover, geysering, storage tank pressure excursions, cold spots on the storage tanks, storage tank vibrations and/or vibrations in associated cryogenic piping, storage tank settlement, significant equipment or instrumentation malfunctions or failures, non-scheduled maintenance or repair (and reasons therefore), relative movement of storage tank inner vessels, hazardous fluids releases, fires involving hazardous fluids and/or from other sources, negative pressure (vacuum) within a storage tank, and higher than predicted boil off rates. Adverse weather conditions and the effect on the facility also shall be reported. Reports shall be submitted **within 45 days after each period ending June 30 and December 31**. In addition to the above items, a section entitled "Significant Plant Modifications Proposed for the Next 12 Months (dates)" shall be included in the semi-annual operational reports. Such information will provide the FERC staff with early notice of anticipated future construction/maintenance at the LNG facilities. *(section 4.12.6)*

129. In the event the temperature of any region of any secondary containment, including imbedded pipe supports, becomes less than the minimum specified operating temperature for the material, the Commission shall be notified **within 24 hours** and procedures for corrective action shall be specified. *(section 4.12.6)*

130. Significant non-scheduled events, including safety-related incidents (e.g., LNG, condensate, refrigerant, or natural gas releases; fires; explosions; mechanical failures; unusual over pressurization; and major injuries) and security-related incidents (e.g., attempts to enter site, suspicious activities) shall be reported to the

FERC staff. In the event that an abnormality is of significant magnitude to threaten public or employee safety, cause significant property damage, or interrupt service, notification shall be made **immediately**, without unduly interfering with any necessary or appropriate emergency repair, alarm, or other emergency procedure. In all instances, notification shall be made to the FERC staff **within 24 hours**. This notification practice shall be incorporated into the liquefaction facility's emergency plan. Examples of reportable hazardous fluids-related incidents include:

a. fire;

b. explosion;

c. estimated property damage of $50,000 or more;

d. death or personal injury necessitating in-patient hospitalization;

e. release of hazardous fluids for 5 minutes or more;

f. unintended movement or abnormal loading by environmental causes, such as an earthquake, landslide, or flood, that impairs the serviceability, structural integrity, or reliability of an LNG facility that contains, controls, or processes hazardous fluids;

g. any crack or other material defect that impairs the structural integrity or reliability of an LNG facility that contains, controls, or processes hazardous fluids;

h. any malfunction or operating error that causes the pressure of a pipeline or LNG facility that contains or processes hazardous fluids to rise above its maximum allowable operating pressure (or working pressure for LNG facilities) plus the build-up allowed for operation of pressure-limiting or control devices;

i. a leak in an LNG facility that contains or processes hazardous fluids that constitutes an emergency;

j. inner tank leakage, ineffective insulation, or frost heave that impairs the structural integrity of an LNG storage tank;

k. any safety-related condition that could lead to an imminent hazard and cause (either directly or indirectly by remedial action of the operator), for purposes other than abandonment, a 20 percent reduction in operating pressure or shutdown of operation of a pipeline or an LNG facility that contains or processes hazardous fluids;

l. safety-related incidents from hazardous fluids transportation occurring at or en route to and from the LNG facility; or

m. an event that is significant in the judgment of the operator and/or management even though it did not meet the above criteria or the guidelines set forth in an LNG facility's incident management plan.

In the event of an incident, the Director of OEP has delegated authority to take whatever steps are necessary to ensure operational reliability and to protect human life, health, property, or the environment, including authority to direct the liquefaction facility to cease operations. Following the initial company notification, the FERC staff would determine the need for a separate follow-up report or follow up in the upcoming semi-annual operational report. All company follow-up reports shall include investigation results and recommendations to minimize a reoccurrence of the incident. *(section 4.12.6)*

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Port Arthur LNG, LLC PALNG Common Facilities Company, LLC	Docket No.	CP17-20-000
Port Arthur Pipeline, LLC	Docket Nos.	CP17-21-000 CP17-21-001 CP18-7-000

(Issued April 18, 2019)

GLICK, Commissioner, *dissenting*:

1. I dissent from today's order because it violates both the Natural Gas Act[1] (NGA) and the National Environmental Policy Act[2] (NEPA). In particular, the Commission is again refusing to consider the consequences its actions have for climate change. Neither the NGA nor NEPA permit the Commission to assume away the climate change implications of constructing and operating this liquefied natural gas (LNG) facility. Yet that is precisely what the Commission is doing today.

2. In the order authorizing Port Arthur LNG, LLC's LNG export terminal (LNG Terminal) pursuant to section 3 of the NGA and the associated natural gas pipelines (Pipeline Projects) pursuant to section 7 of the NGA (collectively, Project), the Commission treats GHG emissions differently than all other environmental impacts. By refusing to assess the significance of the impact of the Project's GHG emissions, even after quantifying them, the Commission not only neglects its obligation to assess the environmental impacts, but also its concomitant duty to explore possible mitigation measures to reduce any significant adverse effects. This systematic failure to consider the Project's impacts on climate change is what allows the Commission to misleadingly state that "[a]ll [environmental] impacts . . . will be reduced to less-than-significant

[1] 15 U.S.C. §§ 717b, 717f (2012).

[2] National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321 *et seq.*

(continued ...)

levels"[3] and, as a result, conclude that the Project satisfies the NGA's public interest standards.[4]

I. The Commission's Public Interest Determinations Are Not the Product of Reasoned Decisionmaking

3. The NGA's regulation of LNG import and export facilities "implicate[s] a tangled web of regulatory processes" split between the U.S. Department of Energy (DOE) and the Commission.[5] The NGA establishes a general presumption favoring the import and export of LNG unless there is an affirmative finding that the import or export "will not be consistent with the public interest."[6] Section 3 of the NGA, which governs LNG imports and exports, provides for two independent public interest determinations: one regarding the import or export of LNG itself and one regarding the facilities used for that import or export. DOE determines whether the import or export of LNG is consistent with the public interest, with transactions among free trade countries legislatively deemed to be "consistent with the public interest."[7] The Commission evaluates whether "an application for the siting, construction, expansion, or operation of an LNG terminal" is

[3] *Port Arthur LNG, LLC*, 167 FERC ¶ 61,052, at P 101 (2019) (Certificate Order); *see also* Final Environmental Impact Statement at ES-10 (Final EIS).

[4] Certificate Order, 167 FERC ¶ 61,052 at PP 29, 36.

[5] *Sierra Club v. FERC*, 827 F.3d 36, 40 (D.C. Cir. 2016) (*Freeport*).

[6] 15 U.S.C. §717b(a); *see EarthReports, Inc. v. FERC*, 828 F.3d 949, 953 (D.C. Cir. 2016) (citing *W. Va. Pub. Servs. Comm'n v. Dep't of Energy*, 681 F.2d 847, 856 (D.C. Cir. 1982) ("NGA [section] 3, unlike [section] 7, 'sets out a general presumption favoring such authorization.'")). Under section 7 of the NGA, the Commission approves a proposed pipeline if it is shown to be consistent with the public interest, while under section 3, the Commission approves a proposed LNG import or export facility unless it is shown to be inconsistent with the public interest. *Compare* 15 U.S.C. § 717b(a) *with* 15 U.S.C. §717f(a), (e).

[7] 15 U.S.C. § 717b(c). The courts have explained that, because the authority to authorize LNG exports rests with DOE, NEPA does not require the Commission to consider the upstream or downstream GHG emissions that may be indirect effects of the export itself when determining whether the related LNG export facility satisfies section 3 of the NGA. *See Freeport*, 827 F.3d at 46-47; *see also Sierra Club v. FERC*, 867 F.3d 1357, 1373 (D.C. Cir. 2017) (*Sabal Trail*) (discussing *Freeport*). NEPA still requires, however, that the Commission consider the direct GHG emissions associated with a proposed LNG export facility. *See Freeport*, 827 F.3d at 41, 46.

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consistent with the public interest.[8] Pursuant to that authority, the Commission must approve a proposed LNG facility unless the record shows that the facility would be inconsistent with the public interest.[9]

4. As part of that determination, the Commission must examine a proposed LNG facility's impact on the environment and public safety. A facility's impact on climate change must be part of a public interest determination under the NGA.[10] Nevertheless, the Commission maintains that it need not consider whether the Project's contribution to climate change is significant because it lacks a means to do so—or at least so it claims.[11] However, the shocking part of the Commission's rationale is what comes next. Based on this alleged inability to assess significance, the Commission concludes that the Project will have no significant environmental impact.[12] That is the equivalent of saying that an action that is known to be dangerous is actually safe because we do not know exactly how dangerous it is. That is ludicrous and it certainly does not give climate change the serious consideration it deserves and that the law demands.

5. The Commission's failure to consider the impact of the Project's GHG emissions is all-the-more glaring given the volume of emissions at issue in this proceeding. The Commission points out that the operation of the Project will directly emit 4.77 million

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[8] 15 U.S.C. § 717b(e). In 1977, Congress transferred the regulatory functions of NGA section 3 to DOE. DOE, however, subsequently delegated to the Commission authority to approve or deny an application for the siting, construction, expansion, or operation of an LNG terminal, while retaining the authority to determine whether the import or export of LNG to non-free trade countries is in the public interest. *See EarthReports, Inc.*, 828 F.3d at 952-53.

[9] *See Freeport*, 827 F.3d at 40-41.

[10] *See Sabal Trail*, 867 F.3d at 1373 (explaining that the Commission may "deny a pipeline certificate on the ground that the pipeline would be too harmful to the environment"); *see also Atl. Ref. Co. v. Pub. Serv. Comm'n of N.Y.*, 360 U.S. 378, 391 (1959) (holding that the NGA requires the Commission to consider "all factors bearing on the public interest").

[11] Certificate Order, 167 FERC ¶ 61,052 at P 138; *see also* Final EIS at 4-361–4-362 (explaining that "[t]here is no generally accepted methodology to estimate what extent a project's incremental contribution to [GHG] emissions would result in physical effects on the environment").

[12] Certificate Order, 167 FERC ¶ 61,052 at P 101; Final EIS at ES-10.

(continued ...)

metric tons of GHGs annually.[13] Given the Commission's acknowledgment of that GHG emissions contribute to climate change,[14] the decision to exclude GHG emissions from playing any role in the Commission's public interest analysis is indefensible.

6. The implications of the Commission's approach to evaluating the impacts of GHG emissions extend beyond any single proceeding under NGA section 3 or section 7. Taking the Commission's approach to its logical conclusion, the Commission would approve any project regardless of the amount of GHGs emitted without ever determining the significance of their environmental impact. If the Commission's assessment of that impact will not change no matter the volume of GHG emissions at issue, those emissions and their consequences cannot meaningfully factor into the public interest determination. Approving a project that may significantly contribute to the harms caused by climate change without meaningfully evaluating the significance of that impact or considering it as part of the public interest determination is contrary to law, arbitrary and capricious, and not the product of reasoned decisionmaking.[15]

II. The Commission Fails to Satisfy Its Obligations under NEPA

7. In order to evaluate the environmental consequences of the Project under NEPA, the Commission must consider the harm caused by the Project's GHG emissions and "evaluate the 'incremental impact' that these emissions will have on climate change or the environment more generally."[16] As noted, the Final EIS states that the Project will directly emit 4.77 million metric tons of GHGs annually.[17] Although that quantification

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[13] Certificate Order, 167 FERC ¶ 61,052 at P 137; Final EIS at Table 4.11.1-7 (Carbon dioxide emissions in the Final EIS are expressed in short tons.).

[14] Final EIS at 4-360.

[15] As noted, the NGA "requires the Commission to evaluate all factors bearing on the public interest," *Atl. Ref. Co.*, 360 U.S. at 391, which *Sabal Trail* held includes a facility's contribution to the harms caused by climate change, 867 F.3d at 1373.

[16] *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1216 (9th Cir. 2008); *WildEarth Guardians v. Zinke*, No. CV 16-1724 (RC), 2019 WL 1273181, at *1 (D.D.C. Mar. 19, 2019) (explaining that the agency was required to "provide the information necessary for the public and agency decisionmakers to understand the degree to which [its] decisions at issue would contribute" to the "impacts of climate change in the state, the region, and across the country").

[17] *Supra* note 13.

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of the Project's GHG emissions is a necessary step toward meeting the Commission's NEPA obligations, listing the volume of emissions alone is insufficient.[18]

8. As an initial matter, identifying the consequences that those emissions will have for climate change is essential if NEPA is to play the disclosure and good government roles for which it was designed. The Supreme Court has explained that NEPA's purpose is to "ensure[] that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts" and to "guarantee[] that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision."[19] It is hard to see how hiding the ball on a project's climate impacts is consistent with either of those purposes.

9. In addition, under NEPA, a finding of significance informs the Commission's inquiry into potential ways of mitigating environmental impacts.[20] The Supreme Court has held that an EIS must "contain a detailed discussion of possible mitigation measures" to address adverse environmental impacts.[21] The Court explained that, "[w]ithout such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects" of a project, making an examination of possible mitigation measures necessary to ensure that the agency has taken a "hard look" at the environmental consequences of the action at issue.[22] Consistent with this

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[18] *See Ctr. for Biological Diversity*, 538 F.3d at 1216 ("While the [environmental document] quantifies the expected amount of CO_2 emitted . . . , it does not evaluate the 'incremental impact' that these emissions will have on climate change or on the environment more generally . . . ."); *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 995 (9th Cir. 2004) ("A calculation of the total number of acres to be harvested in the watershed is a necessary component . . . , but it is not a sufficient description of the actual environmental effects that can be expected from logging those acres.").

[19] *Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 768 (2004) (citing *Robertson v. Methow Valley Citizens Coun.*, 490 U.S. 332, 349 (1989)).

[20] 40 C.F.R. § 1502.16 (2018) (NEPA requires an implementing agency to form a "scientific and analytic basis for the comparisons" of the environmental consequences of its action in its environmental review, which "shall include discussions of . . . [d]irect effects and their significance.").

[21] *Robertson*, 490 U.S. at 351.

[22] *Id.* at 352; *see also* 40 C.F.R. §§ 1508.20 (defining mitigation), 1508.25

(continued ...)

obligation, the Final EIS discusses mitigation measures to ensure that the Project's adverse environmental impacts, excluding GHG emissions, are reduced to less than significant levels.[23] For example, in order to find that the Project's impacts on wetlands are not anticipated to be significant,[24] the Commission relies on compensatory mitigation including the purchase of mitigation credits.[25] The Commission not only has the obligation to discuss mitigation of adverse environmental impacts under NEPA, but also the authority to condition certificates under section 3 and 7 of the NGA.[26] Once again, however, the Project's climate change impacts are treated differently. By refusing to assess significance, the Commission escapes its obligation to consider mitigation measures for the Project's GHG emissions.

10. In refusing to even assess the significance of the Project's GHG emissions during the environmental review process, the Commission relegates climate change to a negligible role, at best, in its NEPA analysis. Nothing in today's order justifies this result. The Commission argues that it cannot determine whether the Project's contribution to climate change is significant, relying on the premise that there is no "generally accepted methodology" to estimate a project's impact on climate change, either locally or nationally.[27] As a logical matter, the argument that there is no single standard methodology for evaluating the significance of GHG emissions does not excuse the Commission from assessing the Project's environmental impacts under NEPA. The

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(including in the scope of an environmental impact statement mitigation measures).

[23] Certificate Order, 167 FERC ¶ 61,052 at PP 102, 106, 109, 112, 114, 128 (The Commission states that adverse environmental impacts to geology, water, wetlands, vegetation, wildlife, and air quality will not be significant if the Applicant implements proposed mitigation measures.).

[24] Final EIS at ES-6.

[25] *Id.*; *see also* Final EIS at 4-58–4-59 (The U.S. Army Corp of Engineers has a goal of "no net loss" for wetlands and requires compensatory mitigation for all permanent wetland loss. The Final EIS relies on multiple mitigation measures including contributed dredging materials for emergent wetlands and wetland mitigation credit purchases.).

[26] 15 U.S.C. § 717b(e)(3)(A); 15 U.S.C. § 717f(e); Certificate Order, 167 FERC ¶ 61,052 at P 141 ("[T]he Commission has the authority to take whatever steps are necessary to ensure the protection of environmental resources . . . , including authority to impose any additional measures deemed necessary . . . .").

[27] Final EIS at 4-361–4-362; *see also* Certificate Order, 167 FERC ¶ 61,052 at P 138.

(continued ...)

claimed absence of a standard methodology is no justification for effectively ignoring those emissions.[28]

11. Moreover, the argument that there is no single standard methodology for evaluating the significance of GHG emissions is a red herring. The lack of any single methodology does not prevent the Commission from adopting *a* methodology, even if others are available. The Commission has several tools to assess the harm from the Project's contribution to climate change. By measuring the long-term damage done by a ton of carbon dioxide, the Social Cost of Carbon links GHG emissions to *actual* environmental effects from climate change, thereby facilitating the necessary "hard look" at the Project's environmental impacts that NEPA requires. Especially when it comes to a global problem like climate change, a measure for translating a single project's climate change impacts into concrete and comprehensible terms plays a useful role in the NEPA process by putting the harm in terms that are readily accessible for both agency decisionmakers and the public at large. Yet, the Commission continues to ignore the Social Cost of Carbon, relying instead on deeply flawed reasoning that I have previously critiqued at length.[29]

12. Regardless of tools or methodologies available, the Commission can use its judgement and discretion to consider all factors and determine, quantitatively or qualitatively, whether the Project's GHG emissions have a significant impact on climate change. After all, that is precisely what the Commission does in other aspects of its environmental review. For example, consider the Commission's evaluation of the Project's impact on the surrounding land. The Final EIS determines that a total of 992

[28] My colleague, Commissioner LaFleur, wrestled with these questions and reached a judgment on both the significance of the impact of the GHG emissions and the merits of the Project notwithstanding the lack of analysis in the Commission's order. Certificate Order, 167 FERC ¶ 61,052 (LaFleur, Comm'r, concurring at P 8). Providing additional context regarding the Project's GHG emissions and their cumulative impact is a useful first step that promotes public disclosure and informed decisionmaking. But neither that context nor a concurrence assessing the significance of the impact of the Project's GHG emissions can remedy the order's erroneous conclusion that the Commission cannot evaluate the significance of the Project's contribution to climate change or its assumption that such a contribution is insignificant. Nor can a concurrence remedy the absence of any discussion in the record of the significance of the Project's contribution to climate change.

[29] *See, e.g.*, *Fla. Se. Connection, LLC*, 164 FERC ¶ 61,099 (2018) (Glick, Comm'r, dissenting).

(continued ...)

acres of vegetation and upland forest will be permanently affected by the Project,[30] but then concludes that the Project "will not have a significant impact on vegetation."[31] The Final EIS provides no "standard methodology" available to the Commission to evaluate this impact.[32] Instead, the Commission uses its judgment to conduct a qualitative review to assess the Project's impact on vegetation and conclude that the impact would not be significant based on the "minor nature of the impacts."[33] The Commission's refusal to exercise similar qualitative discretion and judgment when it comes to evaluating the impacts of GHG emissions is arbitrary and capricious and willfully ignorant.

13. The Commission's refusal to seriously consider the significance of the impact of the Project's GHG emissions is even more mystifying because NEPA "does not dictate particular decisional outcomes."[34] NEPA "'merely prohibits uninformed—rather than unwise—agency action.'"[35] Taking the matter seriously—and rigorously examining a project's impacts on climate change—does not necessarily prevent any of my colleagues from ultimately concluding that a project meets the public interest standard. Indeed, a thorough investigation of a project's contribution to climate change would also help infrastructure developers by reducing their legal risk in the appeals that will inevitably follow. At the end of the day, no one benefits from the Commission's refusal to consider a project's impact on climate change.

For these reasons, I respectfully dissent.

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Richard Glick
Commissioner

[30] Certificate Order, 167 FERC ¶ 61,052 at PP 110-111.

[31] *Id*. P 112.

[32] As compared to the Commission's requirement for a "standard methodology" to determine the significance of the Project's GHG emissions, as discussed in Certificate Order, 167 FERC ¶ 61,052 at P 138 (citing to *Dominion Transmission, Inc.*, 163 FERC ¶ 61,128, at PP 67-70 (2018) (LaFleur, Comm'r, dissenting in part; Glick, Comm'r, dissenting in part)).

[33] *Id*. P 112.

[34] *Sierra Club v. U.S. Army Corps of Engineers*, 803 F.3d 31, 37 (D.C. Cir. 2015).

[35] *Id.* (quoting *Robertson*, 490 U.S. at 351).

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Port Arthur LNG, LLC PALNG Common Facilities Company, LLC	Docket Nos.	CP17-20-000
Port Arthur Pipeline, LLC		CP17-21-000 CP17-21-001 CP18-7-000

(Issued April 18, 2019)

LaFLEUR, Commissioner, *concurring*:

1. Today's order grants authorization to Port Arthur LNG, LLC and PALNG Common Facilities Company, LLC (collectively Port Arthur LNG) pursuant to section 3 of the Natural Gas Act (NGA),[1] to site, construct and operate a new liquefied natural gas (LNG) export terminal (Port Arthur LNG Project) in Port Arthur, Texas.[2] The Commission also authorizes Port Arthur Pipeline, LLC (Port Arthur Pipeline), pursuant to section 7 of the NGA,[3] to construct and operate both, the Texas Connector Project to provide up to 2,000,000 dekatherms per day (Dth/day) of natural gas transportation service to the proposed export terminal and the Louisiana Connector Project to provide 2,000,000 Dth/day to the proposed export terminal. For the reasons discussed below, I concur.

2. Under section 3 of the NGA, oversight for LNG export is divided between the Commission and the U.S. Department of Energy (DOE). Specifically, it is the DOE, not the Commission, which retains the exclusive authority over the export of the natural gas as a commodity, including the responsibility to consider whether the exportation of that

[1] 15 U.S.C. § 717b (2012).

[2] *Port Arthur LNG, LLC*, 167 FERC ¶ 61,052 (2019) (Certificate Order).

[3] 15 U.S.C. § 717f(c) (2012).

(continued ...)

gas is in the public interest.[4] If the export will be sent to a free trade country, the NGA automatically "deems" the export "to be consistent with the public interest."[5]

3. This framework leaves the Commission with the limited authority to approve or deny an application for the siting, construction, expansion, or operation of the LNG terminal facilities. In exercising its section 3 authority, the Commission's responsibility includes conducting a public interest analysis to consider the technical and environmental aspects of the LNG facilities themselves. Our environmental review is governed by the National Environmental Policy Act[6] (NEPA) which, as relevant here, requires the Commission to take a "hard look" at the potential environmental impacts that could result from the Port Arthur LNG Project, including the climate change impacts of the proposed project.

4. The U.S. Court of Appeals for the D.C. Circuit (D.C. Circuit) has made clear that the DOE, rather than the Commission, has the responsibility to assess upstream and downstream indirect GHG emission impacts of LNG exports as part of the DOE's determination of the public interest in exporting the natural gas.[7] However, the Commission still has the clear responsibility to disclose and consider the direct and cumulative GHG impacts of the proposed LNG export facility, and make significance determinations regarding such impacts, in order to satisfy our obligations under NEPA and section 3 of the NGA.

5. I appreciate that the Commission has disclosed in the Certificate Order the direct GHG emissions of the Port Arthur LNG Project and the Texas and Louisiana Connector pipeline projects, and has provided important context by comparing them to the national GHG emissions inventory.[8] We have included this comparison in the past to provide

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[4] 15 U.S.C. § 717b(a)-(c) (2012).

[5] 15 U.S.C. § 717b(c) (2012).

[6] National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321 *et seq.*

[7] *Sierra Club v. FERC*, 827 F.3d 36, 47 (D.C. Cir. 2016) (*Freeport*) ("[T]he Commission's NEPA analysis did not have to address the indirect effects of the anticipated *export* of natural gas. That is because the Department of Energy, not the Commission, has the sole authority to license the export of any natural gas going through the Freeport facilities."). *See also Sierra Club v. FERC*, 827 F.3d 59 (D.C. Cir. 2016) (*Sabine Pass*); *EarthReports, Inc. v. FERC*, 823 F.3d 949 (D.C. Cir. 2016).

[8] Certificate Order, 167 FERC ¶ 61,052 at P 137. Final Environmental Impact Statement (EIS) at Table 4.11.1-7. The Final EIS also discloses the direct GHG emissions from the construction of the LNG terminal and the pipelines: 197,714 metric *(continued ...)*

context to the indirect emissions of pipeline projects, and the D.C. Circuit has taken note of the Commission's efforts to use available national, regional, and state emissions inventories as part of our climate change analysis.[9]

6. I recognize that the disclosure of the data, and the context provided, is only the first step to assist the Commission in determining the significance of a given rate or volume of GHG emissions as part of our climate change analysis. As a second step, NEPA requires that we analyze that information to determine whether a specific impact is, in fact, significant. [10] Unfortunately, to date, the Commission has not established a framework for making a significance determination. However, the magnitude of the direct GHG emission from the Port Arthur LNG Project are substantial and certainly appear to be significant as contemplated by NEPA.

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tons during the multiple years of construction. Table 4.11.1-4, 4.11.1-5 and 4.11.1-6. *See Sierra Club v. FERC*, 867 F.3d 1357 at 1374 (D.C. Cir. 2017) (*Sabal Trail*) ("Quantification would permit the agency to compare the emissions from this project to emissions from other projects, to total emissions from the state or the region, or to regional or national emissions-control goals.")

[9] *E.g., Town of Weymouth, Mass. v. FERC*, No. 17-1135, 2018 WL 6921213 (D.C. Cir. Dec. 27, 2018)(per curiam) (speaking approvingly of the Commission's quantification of the project's expected GHG emissions, which included a comparison of the Atlantic Bridge Project against state and regional climate change goals.); *Appalachian Voices v. FERC*, No. 17-1721 (D.C. Cir. Feb. 19, 2019) (per curiam) (dismissing claims that FERC failed to adequately consider downstream climate impacts of the Mountain Valley Pipeline project by noting, among other things, that "FERC provided an estimate of the upper bound of emissions resulting from end-use combustion…"). By comparison, in *Sabal Trail*, the D.C. Circuit vacated and remanded the Commission's authorization of the Southeast Market Pipeline Project and directed the Commission to both quantify and consider the project's downstream GHG emissions or explain in more detail why it cannot do so. In response to the Court order, the Commission quantified the net, gross, and full-burn of downstream GHG emissions and compared them to the state and national GHG emissions inventories.

[10] Under NEPA, when evaluating the significance of a particular impact, the Commission must consider both context and intensity. 40 C.F.R. § 1508.27(a) (2017) (Context means "that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests and the locality."). 40 C.F.R. § 1508.27(b) (2017) (Intensity refers to "the severity of the impact").

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7. I remain frustrated by the Commission's continued refusal to even consider how we might develop a framework for assessing the potential significance of GHG emissions.[11] While it might be easier to assess significance if we had national emissions reduction targets, like EPA's Clean Power Plan or the Paris Climate Accord,[12] to use as part of our framework, the lack of such targets does not prevent the Commission from making a significance determination in this or in any other case. In fact, the Commission makes challenging determinations on quantitative and qualitative issues in many other areas of our work.[13]

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[11] In my concurrence on the Driftwood LNG Project, I explain that finding the GHG emissions to be significant does not mean the Commission cannot approve a proposed project. NEPA requires the Commission to disclose and consider all environmental impacts of a proposed action, but NEPA does not mandate particular results, it simply prescribes the necessary process for considering each impact. Once a significant impact has been identified then the next logical step is to think about ways to mitigate that impact. *Driftwood LNG LLC*, 167 FERC ¶ 61,054 (2019) (LaFleur, Comm'r, *concurring* at PP 9-10) (citing *KN Wattenberg Transmission LLC,* 90 FERC ¶ 61,322, at 62,083 (2000) (citing and quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989)).

[12] As noted in the Certificate Order, the EPA's Clean Power Plan and the Paris climate account are pending repeal and withdrawal, respectively. Certificate Order, 167 FERC ¶ 61,052 at P 137, nt. 194.

[13] Many of the core areas of the Commission's work have required the development of analytical frameworks, often a combination of quantitative measurements and qualitative assessments, to fulfill the Commission's responsibilities under its broad authorizing statutes. This work regularly requires that the Commission exercise judgment, based on its expertise, precedent, and the record before it. For example, to help determine just and reasonable returns on equity (ROEs) under the Federal Power Act, Natural Gas Act, and Interstate Commerce Act, the Commission identifies a proxy group of comparably risky companies, applies a method or methods to determine a range of potentially reasonable ROEs (i.e., the zone of reasonableness), and then considers various factors to determine the just and reasonable ROE within that range. *See also*, *e.g.*, *Promoting Transmission Investment through Pricing Reform*, Order No. 679, FERC Stats. & Regs. ¶ 31,222, *order on reh'g*, Order No. 679-A, FERC Stats. & Regs. ¶ 31,236 (2006), *order on reh'g*, 119 FERC ¶ 61,062 (2007) (establishing Commission regulations and policy for reviewing requests for transmission incentives); *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000, FERC Stats. & Regs. ¶ 31,323 (2011), *order on reh'g*, Order No. 1000-A, 139 FERC ¶ 61,132, *order on reh'g and clarification*, Order No. 1000-B, 141 FERC ¶ 61,044 *(continued ...)*

8. I do not believe it is beyond the capability of this Commission to determine whether a given rate or volume of GHG emissions should be considered significant. The Commission has grappled with every other identifiable and measurable environmental impact; for example, we quantify, consider, and mitigate impacts to land, water, and species, and we make determinations on whether the impacts to wetlands or mussels are significant.[14] For reasons that I do not find persuasive, the Commission treats climate impacts differently than all other environmental impacts in our environmental review, and refuses to make such determinations regarding climate change impacts. Instead, the Commission summarily finds that because it cannot decide how to conduct a meaningful analysis of climate change impacts, it is not required to conduct *any* analysis of significance. I disagree.

9. With regards to cumulative impacts analysis, I appreciate that the analysis in the final EIS addresses a range of resources impacted within the identified geographic scope of the Port Arthur LNG Project. However, as I highlighted in my concurrence in

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(2012), *aff'd sub nom. S.C. Pub. Serv. Auth.* v. *FERC*, 762 F.3d 41 (D.C. Cir. 2014) (requiring, among other things, the development of regional cost allocation methods subject to certain general cost allocation principles); *BP Pipelines (Alaska) Inc.*, Opinion No. 544, 153 FERC ¶ 61,233 (2015) (conducting a prudence review of a significant expansion of the Trans Alaska Pipeline System). I also note that the Commission is currently actively considering a broad topic – resilience – whose scope and complexity might similarly require the development of new analytical frameworks for conducting the Commission's work.

[14] In the Final EIS, the Commission made a significance determination on: geology, soils, water resources, wildlife, aquatic resources, wetlands, vegetation, wildlife resources, land use, recreation, and visual impacts, socioeconomics, air quality, noise, and reliability and safety. The Commission also determined that adverse environmental impacts to geology, water, wetlands, vegetation, wildlife, and air quality would not be significant with the proposed mitigation measures. Moreover, in making such determinations, the Commission has frequently relied solely on a qualitative assessment and Commission staff discretion, rather than quantitative analysis, as it did with the vegetation impacts in this case. Certificate Order, 167 FERC ¶ 61,052 at PP 110-112. I reject the view that the difficulty of quantifying GHG emissions impacts is an excuse for failing to evaluate the significance of those impacts.

(continued ...)

Calcasieu Pass LNG,[15] I disagree with the decision to exclude GHG emissions from the cumulative impacts analysis.[16]

10. As I have stated before, it takes minimal effort to disclose the GHG emissions for the other FERC projects identified in the final EIS's cumulative impacts air region, and include an estimate of the total annual potential GHG emissions associated with a proposed project and other nearby projects as part of our environmental review. I am disappointed that the final EIS does not do so. I recognize that using the 50 km air region is a rudimentary proxy for assessing the cumulative impacts of GHG emissions because those emissions are not typically measured on a local or regional basis.[17] But disclosing that minimal information would at least be a start, and I believe that failure to do so creates added legal risk.[18]

11. Since the Commission fails to disclose the cumulative GHG emissions numbers, I have included an estimate of them in Table 1 attached to my concurrence. I believe that,

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[15] *Venture Global Calcasieu Pass, LLC*, 166 FERC ¶ 61,144 (2019) (LaFleur, Comm'r, *concurring*).

[16] Final EIS at 4-330-4-337, Table 4.13.1-1.

[17] 50 kilometers is the distance used in the final EIS and by the EPA for cumulative modeling of large sources of air pollutants (nitrogen oxides [NO_x], sulfur oxides [SO_x], particulate matter [PM], etc.), volatile organic compounds, and hazardous air pollutants. GHGs are not included. Final EIS at 4-324- 4-325, Table 4.13-1.

[18] Recently, the U.S. District Court for D.C. criticized the Bureau of Land Management (BLM) for failing to disclose the cumulative impacts of GHG emissions in sufficient detail. The court found that NEPA requires "BLM quantify the emissions from each leasing decision—past, present or reasonably foreseeable—and compare those emissions to regional and national emissions, setting forth with reasonable specificity the cumulative effect of the leasing decision at issue." *WildEarth Guardians v. Zinke*, No. CV 16-1724 (RC), 2019 WL 1273181, at *46 (D.D.C. Mar. 19, 2019). By comparison, the U.S. District Court for Colorado, upheld BLM, finding they took an appropriately hard look at cumulative climate change impacts where, the agency: (1) looked at statewide emissions levels from emitting coal-fired power plants in Colorado and provided a comparative assessment; (2) provided a qualitative analysis of climate change and the role played by GHG emissions; (3) performed a regional cumulative impacts analysis for the future mineral development in the region for ten years; and (4) quantified the GHG emissions from both projects. *Citizens for a Healthy Cmty. v. Bureau of Land Mgmt.*, No. 1:17-CV-02519-LTB-GPG, 2019 WL 1382785, at *20-21 (D. Colo. Mar. 27, 2019).

(continued ...)

consistent with our NEPA obligations, at a minimum, the GHG emissions must be disclosed and considered, both cumulatively and with respect to individual facilities.

12. I will continue to consider and evaluate these issues as they arise in individual proceedings, however, I believe the Commission should proactively address these issues. If we do not, further guidance from the courts on our NEPA responsibility to consider climate change will likely require us to do so. Such guidance could create additional legal risk and add additional complexities to our reviews under both Section 3 and Section 7 of the NGA. Thus, I believe that proactive solutions to this challenging problem must be explored.

13. Given my review of the record including climate impacts, I find the Port Arthur LNG Project is not inconsistent with the public interest.[19] As for Port Arthur Pipeline's Texas Connector and Louisiana Connector Projects, which is solely serving the Port Arthur LNG Project, I find the pipeline is in the public convenience and necessity. The D.C. Circuit has recognized that, as with the appended LNG export facility, the downstream indirect GHG emissions for the pipeline are not part of the Commission's environmental review and consideration.[20] Therefore, my public interest determination is based on a review of the rest of the environmental review of the pipeline project. After carefully balancing the need for the project and its environmental impacts, I find the project is in the public interest.

For these reasons, I respectfully concur.

_____
Cheryl A. LaFleur
Commissioner

[19] I recognize that it is difficult to balance the GHG impacts with the potential public benefits of export, since the latter are part of DOE's responsibility, and the Commission is working under a presumption of public interest. I have considered the information provided by the 2014 National Energy Technology Lab (NETL*), Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States*, to provide some context to benefits. This analysis calculates the life cycle GHG emissions for regional coal and imported natural gas power in Europe and Asia. The approach includes GHG impacts of liquefaction and finds, on balance that export of US LNG has less climate impacts than some alternatives. As I have stated before, that analysis should be updated based on more recent information and proposed projects.

[20] *See Sabine Pass*, 827 F.3d at 68.

Table 1: Annual Direct CO_2e Emissions from FERC Projects within about 50km Port Arthur LNG						
	Port Arthur Liquefaction	Sabine Pass LNG	Golden Pass LNG Liquefaction	South Texas Expansion Project	**Total**	National Inventory for 2016
GHG in CO_2e (tpy)	5,190,000	10,220,000	5,330,000	5.2	**20,740,005**	6,395,700,000
Percent of National Inventory	0.08%	0.16%	0.08%	0.00%	**0.32%**	--
Notes:	Includes LNG terminal; North, South, and Louisiana Connector Compressor Stations	Includes trains 1-6	Includes terminal expansion, MP 1 Compressor Station, and MP 66 Compressor Station; does not include LNG import terminal	Piping modifications to the existing launcher/receiver at MP 412.73 on Line 16 within Texas Eastern's Vidor Compressor Station. This only shows the increase in emissions based on the modifications.	N/A	Table ES-2: Net GHG Emissions, inclusive of sources and sinks converted to english tons. https://www.epa.gov/sites/production/files/2018-01/documents/2018_complet e_report.pdf

PORT ARTHUR LIQUEFACTION PROJECT
PORT ARTHUR, TX

SEDIMENTATION REPORT

Prepared for:

Port Arthur LNG

Rev No	0	1	–	–	–
Issue Purpose	Final	Issued for ITB			
Date	20/03/2016	05/29/2018			
By	AV	JET			
Checked	OM/RD	JET			
Approved	JT	JET			



TBPE Firm Reg. No. F-3953

PRELIMINARY NOT FOR CONSTRUCTION

Prepared by:

moffatt & nichol

Port Arthur LNG

PORT ARTHUR LIQUEFACTION PROJECT
PORT ARTHUR, TX

SEDIMENTATION REPORT

moffatt & nichol

EXECUTIVE SUMMARY

Port Arthur LNG, LLC (Owner) plans to develop, construct and operate an LNG Export Terminal on a site located on the western shoreline of the Port Arthur Canal in Jefferson County, Texas. The LNG marine facilities for the project will consist of two LNG export berths, located within a proposed dredged slip adjacent to the Port Arthur Canal.

M&N has been engaged by the Owner to update and optimize the preliminary design of the marine facilities developed in 2015. Supplementing this optimization work, M&N has been retained to conduct a sedimentation study to determine sediment deposition rates in the proposed dredge slip, the turning circle fronting the facilities and at the proposed Materials Offloading Facility (MOF) located upstream from the LNG export berths in the Port Arthur Canal.

A Delft3D sediment transport model was developed to simulate sedimentation in Port Arthur Canal and to estimate sediment deposition rates in LNG Export Terminal and at the MOF. The model was calibrated to match sedimentation rates calculated in Port Arthur Canal using historical dredge records.

Expected annual sediment deposition volumes estimated in different portions of the project site are summarized in the table below.

Summary of sedimentation model results

Project area	Area (sq. yd)	Annual sediment deposition volume (cu. yd)	Annual sedimentation rate (ft)
LNG Export Berths & Dredged Slip	203,245	145,557	2.15
Turning Circle	272,650	128,222	1.41
MOF	33,350	12,914	1.16

It can be seen that the LNG Export Terminal exhibits a higher sedimentation rate (2.15 ft/yr) than other project areas which are in the Port Arthur Canal (1.16–1.41 ft/yr). It was seen from the local hydrodynamic model results (9177-01RP0001 Hydrodynamic Modeling Report) that there is significant eddy formation inside the LNG Export Terminal during flood and ebb tides. The eddies tend to bring more suspended sediments into the dredge basin due to longer retention times and lower current speeds inside the LNG Export Terminal, which promotes sediment settling and increased sedimentation.

The sediment characteristics such as suspended sediment concentration (SSC) and settling velocity often exhibit temporal and spatial variations. It was seen from available suspended sediment concentration (SSC) data in Port Arthur Canal that, the SSC varied between 6 and 111 mg/l, with a mean of 22 mg/l. An SSC of 46 mg/l and settling velocity

of 0.3 mm/s was used to establish expected sedimentation rates. In order to assess the effect of SSC and settling velocity variations on sedimentation rates at the project areas, a set of model sensitivity runs were conducted. The results are summarized in the table below.

Summary of model sensitivity runs

Settling velocity (mm/s)	Suspended sediment concentration (mg/l)	Annual sedimentation rate (ft/yr)		
		LNG Export Berths & Dredged Slip	Turning Circle	MOF
0.1	120	2.46	1.48	1.14
0.3	46	2.15	1.41	1.16
0.4	36	1.99	1.36	1.15

While the sedimentation rate estimates calculated using 0.3 mm/s settling velocity can be considered to represent average conditions, it is possible that in any given year, an increase in sedimentation of up to 15% can be expected.

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1.0 INTRODUCTION

Port Arthur LNG, LLC (Owner) plans to develop, construct and operate an LNG Export Terminal on a site located on the western shoreline of the Port Arthur Canal in Jefferson County, Texas. The LNG marine facilities for the project will consist of two LNG export berths, located within a proposed dredged slip adjacent to the Port Arthur Canal.

Moffatt & Nichol (M&N) was originally engaged to design the marine facilities at the FEED level in early 2015. M&N has since been engaged by the Owner to update and optimize a preliminary design of the marine facilities. Supplementing this optimization work, M&N has been retained to conduct a sedimentation study to determine sediment deposition rates in the proposed dredge slip, the turning circle fronting the facilities and at the proposed Materials Offloading Facility (MOF) located upstream from the LNG export berths in the Port Arthur Canal. Figure 1-1 shows the location of the proposed marine facilities.

This report describes a two-dimensional sediment transport model with hydrodynamic and sediment transport modules developed by M&N in order to estimate sedimentation in the proposed marine facilities.



Figure 1-1: Locations of proposed LNG Export Terminal and MOF

2.0 SEDIMENTS IN PORT ARTHUR CANAL

The site is located in the Port Arthur Canal (Figure 1-1), which is part of the Sabine-Neches Waterway (SNWW). The SNWW is a man-made navigation channel which extends from Gulf of Mexico through a jettied channel downstream of Port Arthur, to Beaumont via the Neches River Channel, and to Orange via the north part of Sabine Lake and continues via the Sabine River Channel.

Sedimentation in the SNWW is largely due to contributions from Sabine and Neches rivers, which empty into the Sabine-Neches estuary (Ravichandran et al., 1995). In order to evaluate sediment deposition rates in the Port Arthur Canal, an analysis of the historical dredging records was performed. The US Army Corps of Engineers (USACE) Navigation Data Center (NDC) maintains records of every awarded dredging contract from October 1, 1999 to September 30, 2013. Each record contains a summary of the dredging contract such as dates of bid advertisement, opening and contract award, estimated and actual start and end dates of dredging activity, estimated and actual dredged quantities. The NDC records listed eight awarded dredging contracts for the Port Arthur Canal. These records were used to obtain sedimentation rates. The extent of the area included in the sedimentation rate estimation is shown in Figure 2-1.

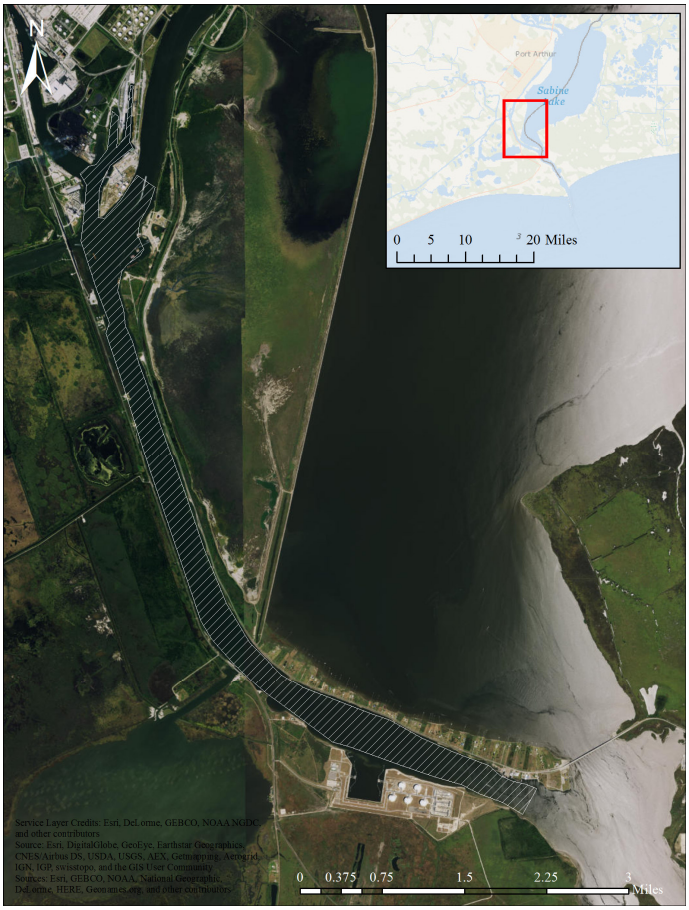

Figure 2-1: Channel area considered for sedimentation rate estimation

Table 2-1 consists of a summary of historical dredge activity in the Port Arthur Canal and Table 2-2 provides the sedimentation rate estimated using dredge volumes and time periods listed in Table 2-1.

Table 2-1: Dredging history for Port Arthur Canal

Dredge volume (cu. yd)	Start date	Completion date
1,614,502	July 15, 1993	December 12, 1993
1,450,504	April 28, 1994	October 20, 1994
4,218,452	February 3, 1999	December 21, 1999
4,171,189	November 9, 2001	March 19, 2003
3,549,223	December 22, 2005	May 13, 2007
2,213,314	May 2, 2007	December 15, 2007
2,624,789	December 19, 2010	April 15, 2011
2,583,368	November 25, 2012	July 4, 2013

Table 2-2: Sedimentation rate estimate for Port Arthur Canal

Area (sq. yd)	Sedimentation (cu. yd/yr)	Sedimentation (ft/yr)
4,426,033	1,163,471	0.72

3.0 SEDIMENTATION MODEL

3.1 Model Development

A two-dimensional sediment transport model was developed using Delf3D to estimate sedimentation rates in the LNG export berths, turning circle and MOF.

3.1.1 Model Grid and Bathymetry

The model domain includes a section of the Port Arthur Canal along with the dredged slip for LNG export berths and MOF. The model bathymetry was constructed from channel survey data provided by Chris Ransome & Associates, Inc. (CRA) and dredging configuration provided by the Owner. The grid cell size was varied throughout the domain. At the LNG export berths, the resolution was approximately 30 meters, and at MOF the resolution was approximately 10 meters.

All bathymetry data was referenced to Mean Sea Level (MSL). The local model grid is shown in Figure 3-1 and the bathymetry is shown in Figure 3-2.



Figure 3-1: Model grid

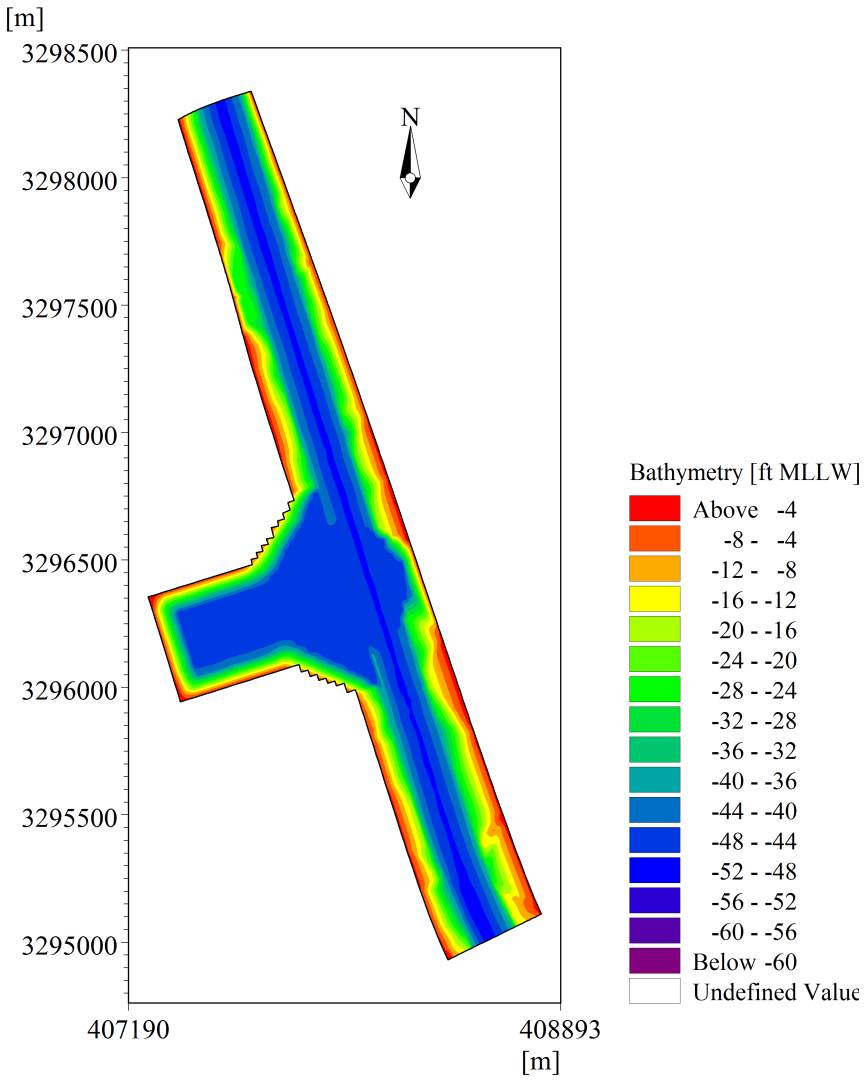

Figure 3-2: Model bathymetry

3.1.2 Boundary Conditions

The sedimentation model required boundary conditions for both hydrodynamic and sediment transport modules.

Hydrodynamic Boundary Conditions

Water levels and discharges extracted from the calibrated regional hydrodynamic model were used as hydrodynamic boundary conditions. Development of the regional hydrodynamic model is described in Hydrodynamic Modeling Report (9177-01RP0001 M&N, 2016).

Sediment Transport Boundary Conditions

The sediment transport model required specification of suspended sediment concentration at the boundaries. The Texas Commission on Environmental Quality (TCEQ) provides measured suspended sediment concentration (SSC) data for Sabine Lake. The data can be accessed from http://www80.tceq.texas.gov/SwqmisWeb/public/crpweb.faces. Data for Port Arthur Canal is available at different times between years 1971 and 2015, and from 11 different station locations. The available data had minimum and maximum SSC of 6 mg/l and 111 mg/l, respectively. 22 mg/l was the mean SSC in Port Arthur Canal.

3.2 Model Calibration

The model was calibrated using a simulation of a one month period, from October 9 to November 10, 2007. The aforementioned time period was selected because the same time period was used in the hydrodynamic model (M&N, 2016), whose results are being used here as hydrodynamic boundary conditions. Annual sedimentation rates in the model domain were calculated using the sediment transport module. In order to obtain annual sedimentation rate from one month's simulation, a morphological factor of 12 was used. This means that the bed thickness change over the one month of simulation would actually represent the bed thickness change during a 12-month period.

The mean sedimentation rate in the part of the mesh with Port Arthur Canal was computed and compared to the data available from historical dredge records. Figure 3-3 shows the channel region where resulting mean sedimentation rate was calculated from sedimentation model results.



Figure 3-3: Area used to calculate sedimentation rate in Port Arthur Canal

Distribution and variation of tidal currents and resulting bed shear stresses during a normal tidal cycle were analyzed to determine the critical shear stress parameters for erosion and deposition. The suspended sediment concentration specified at the boundary was used as the main calibration parameter. The sediment properties used in the model are presented in Table 3-1.

Table 3-1: Sediment properties

Sediment property	Value
Dry bed density (kg/m^3)	400
Settling velocity saline water (mm/s)	0.3†
Critical bed shear stress for erosion (N/m^2)	0.2
Critical bed shear stress for sedimentation (N/m^2)	0.1
Erosion parameter ($kg/m^2/s$)	7.0×10^{-6}

† Additional values were used in sensitivity tests

From the historical dredge records, the expected mean sedimentation rate was determined to be 0.72 ft/yr. Table 3-2 shows that the modeled mean sedimentation rate is in good agreement with the expected sedimentation rate obtained from historical dredge records.

The suspended sediment concentration value selected in Section 3.1.2 was modified to achieve the expected mean sedimentation rate in the channel.

Table 3-2: Comparison of annual sedimentation rate in Port Arthur Canal for calibration model runs

Case ID	Suspended sediment concentration (mg/l)	Expected mean sedimentation rate (ft/yr)	Achieved mean sedimentation rate (ft/yr)	Remarks
set01.c03	22	0.72	0.33	Initial calibration run
set01.c04	46	0.72	0.72	Final calibration run with updated suspended sediment concentration

3.3 Sedimentation at LNG Export Berths and MOF

The sedimentation rates at LNG export berths, turning circle and MOF were calculated using the results obtained from the calibrated sedimentation model. Figure 3-4 shows the polygons used for the three areas of interest. The sediment deposition volumes and rates were calculated for a given area considering only elements with positive net accumulation. The results are presented in Table 3-3.

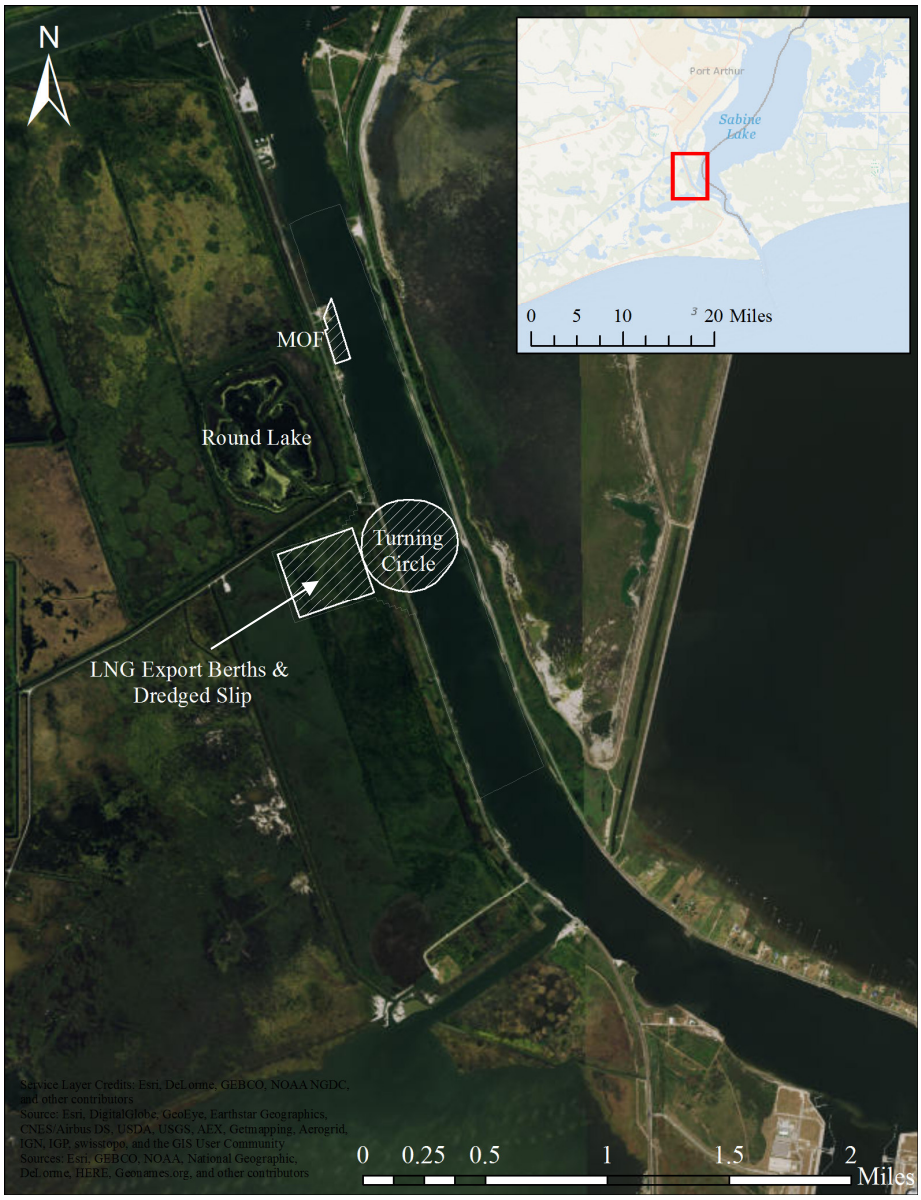

Figure 3-4: Areas used to calculate sedimentation rates at LNG Export Terminal and MOF

Table 3-3: Summary of sedimentation model results

Project area	Area (sq. yd)	Annual sediment deposition volume (cu. yd)	Annual sedimentation rate (ft)
LNG Export Berths & Dredged Slip	203,245	145,557	2.15
Turning Circle	272,650	128,222	1.41
MOF	33,350	12,914	1.16

Figure 3-5 shows the variation of annual sedimentation rates over different areas of interest.

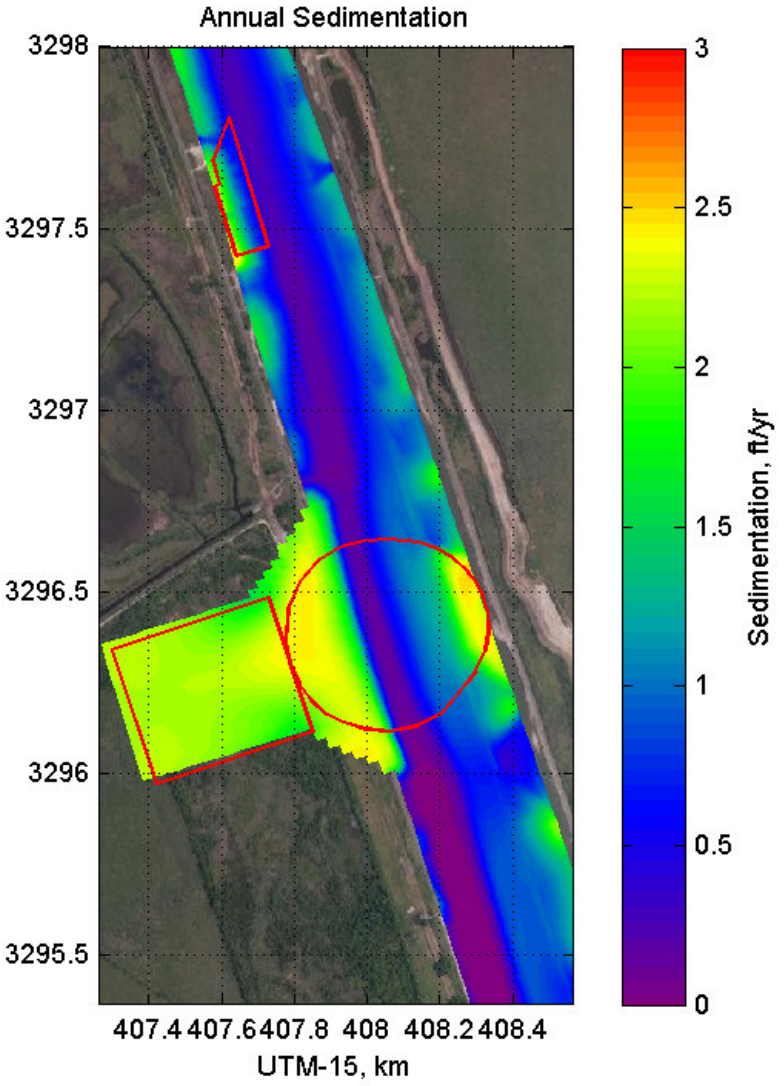

Figure 3-5: Spatial variation in annual sedimentation rates calculated from model results

From Table 3-3, it can be seen that the LNG Export Terminal exhibits a higher sedimentation rate, 2.3 ft/yr, than other areas which are in the Port Arthur Canal (1.3–1.5 ft/yr). It was seen from the results of local hydrodynamic model (M&N, 2016), that there is significant eddy formation inside the LNG Export Terminal during flood and ebb tides. Figure 3-6 shows the current speeds in the vicinity of the LNG Export Terminal during flood and ebb tides.

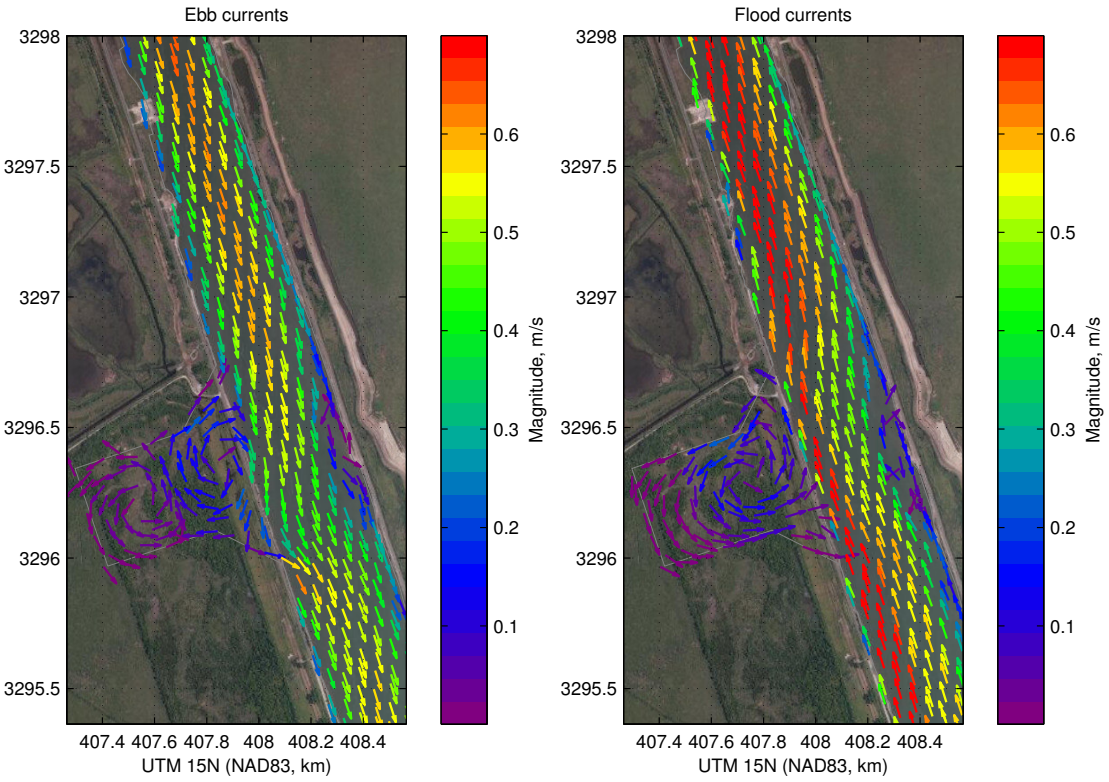

Figure 3-6: Current field in Port Arthur Canal during ebb and flood tide

This would normally result in increased sedimentation. The eddies tend to bring more suspended sediments in the dredge basin due to longer retention times and lower current speeds inside the LNG Export Terminal, which promotes sediment settling and increased sedimentation.

4.0 SENSITIVITY ANALYSIS ON MODEL PARAMETER: SETTLING VELOCITY

The settling velocity of sediment is one of the key sediment transport model parameters. It depends on various physical and environmental factors. It is difficult to accurately measure settling velocity, especially for cohesive sediments as it is likely to vary between different locations and in time.

In this study, a constant settling velocity of 0.3 mm/s was used. Zaloom et al (2003) and found that sediments in Sabine Lake have settling velocity between 0.1 mm/s and 0.35 mm/s, calculated from various samples. Other modeling studies conducted for coastal areas near Gulf of Mexico, assume settling velocity to be between 0.1 mm/s and 0.5 mm/s (ACRE, 2010; Su et al., 2007).

A sensitivity analysis was conducted to determine the effect of change in settling velocity on the annual sediment deposition rates.

The sedimentation model described in Section 3.0 was run with the settling velocity parameter set to 0.1 and 0.4 mm/s. The suspended sediment concentration value used as boundary condition was varied such that a mean sedimentation rate of 0.72 ft/yr was achieved in the Port Arthur Canal in both cases. Table 4-1 summarizes the model results obtained from the sensitivity runs.

Table 4-1: Summary of model sensitivity runs

Settling velocity (mm/s)	Suspended sediment concentration (mg/l)	Annual sedimentation rate (ft/yr)		
		LNG Export Berths & Dredged Slip	Turning Circle	MOF
0.1	120	2.46	1.48	1.14
0.3	46	2.15	1.41	1.16
0.4	36	1.99	1.36	1.15

Figure 4-1 shows the change in distribution of sediment deposition rates for the three cases examined in the model sensitivity runs. It can be seen from Figure 4-1 that a lower settling velocity leads to a higher sedimentation in the LNG berth slip.

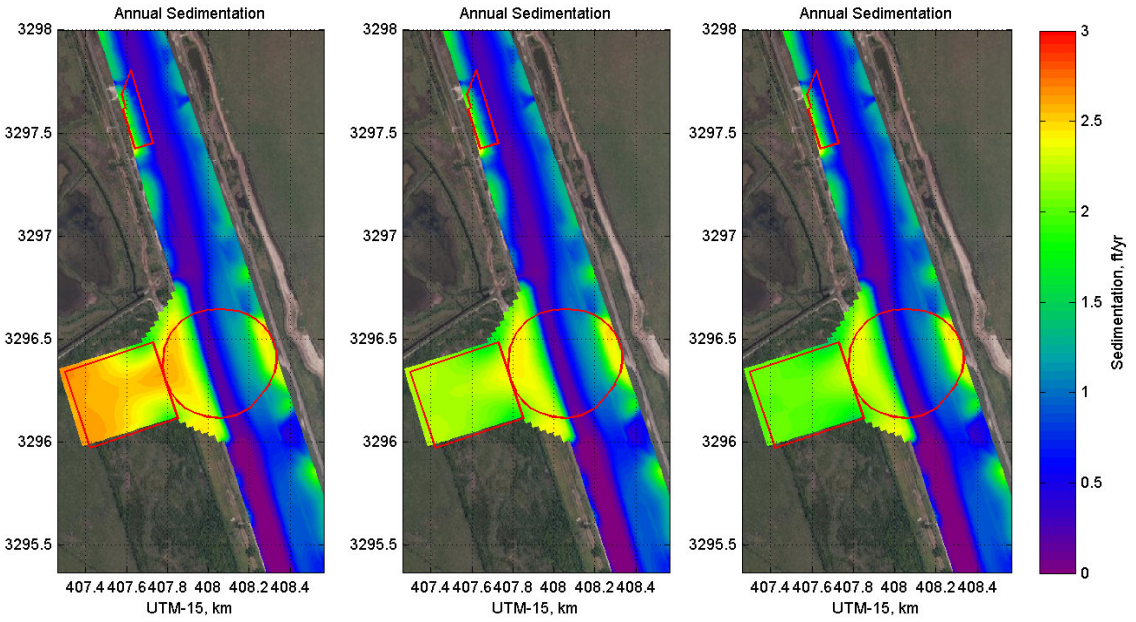

Figure 4-1: Spatial variation in annual sedimentation rates calculated for three different settling velocities (Left–0.1 mm/s, Middle–0.3 mm/s, Right–0.4 mm/s)

Table 4-1 shows that the sedimentation rates increase by a maximum of 15%, when settling velocity of 0.1 mm/s is assumed. It is to be noted that the suspended sediment concentration (SSC) used as boundary condition for settling velocity of 0.1 mm/s was 120 mg/l. It is at the upper range of values measured by TCEQ. Such a high SSC may not represent average conditions.

For settling velocity of 0.4 mm/s the resulting SSC is 36 mg/l, which is a closer value to the mean SSC calculated from TCEQ data. The pattern of sediment deposition seen in Figure 4-1 suggests that more sediments are accumulated at the entrance of the LNG berth slip.

Therefore, while the sedimentation rate estimates calculated using 0.3 mm/s settling velocity can be considered to represent average conditions, it is possible that in any given year, an increase in sedimentation of up to 15% can be expected. This is due to natural variations that can occur in suspended sediment concentration and in sediment characteristics in the navigation channel.

5.0 CONCLUSIONS

A Delft3D sediment transport model was developed to simulate sedimentation in the Port Arthur Canal and to estimate sediment deposition rates in the LNG Export Terminal and MOF. The model was calibrated to match sedimentation rates calculated in the Port Arthur Canal using historical dredge records.

The calibrated sediment transport model was run from October 9, 2007 to November 10, 2007 to evaluate net deposition at the project site. Change in sediment thickness was extracted from the model results and expected annual deposition was calculated. Expected annual sediment deposition volumes estimated in different portions of the project site are summarized in Table 5-1.

Table 5-1: Summary of sedimentation model results

Project area	Area (sq. yd)	Annual sediment deposition volume (cu. yd)	Annual sedimentation rate (ft)
LNG Export Berths & Dredged Slip	203,245	145,557	2.15
Turning Circle	272,650	128,222	1.41
MOF	33,350	12,914	1.16

It can be seen that the LNG Export Terminal exhibits a higher sedimentation rate, 2.15 ft/yr, than other project areas which are in the Port Arthur Canal (1.16–1.41 ft/yr). It was seen from the local hydrodynamic model results that there is significant eddy formation inside the LNG Export Terminal during flood and ebb tides. The eddies tend to carry more suspended sediments, and once the current speeds reduce inside the LNG Export Terminal, the sediments start to settle causing the increased sedimentation.

6.0 REFERENCES

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PORT ARTHUR LIQUEFACTION PROJECT

BASIC ENGINEERING DESIGN DATA

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REV	DATE	REASON FOR REVISION	BY	CK'D	APPR	PEM
00D	24 Dec 19	REISSUED FOR USE	DL	JJB	SNR	SK
00C	28-Jun-19	REISSUED FOR USE	DL	JJB	SNR	SK
00B	20-Mar-19	REISSUED FOR USE	JJB	SRP	SNR	WAL
00A	01-Oct-18	ISSUED FOR USE	SRP	SNR	SNR	WAL

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1 INTRODUCTION

The Basic Engineering Design Data (BEDD) document is intended to supply the information required to proceed with the engineering design work for the project. This document also refers to various resource documents for specific engineering details that may not be covered in the BEDD.

2 OVERVIEW

2.1 Project Overview

The Port Arthur LNG Facility is to be located on a tract of land owned by an affiliate of Port Arthur LNG, LLC on the Sabine-Neches Waterway as shown in Figure 1 below. The property has water front adjacent to the Gulf of Mexico and the Intracoastal Waterway.



Figure 1: Rendering of Port Arthur LNG Facility

3 METEOROLOGICAL AND GENERAL DESIGN DATA

3.1 Site Description / Location

The proposed site elevation (high point) for the LNG Facility will be +7.0 feet NAVD88 for the Process Area and the LNG tanks.

3.2 Coordinate System

Site Coordinates:

Horizontal dimensional control shall be based on U.S. State Plane Coordinate System, Lambert Projection, NAD83, Texas south central zone, U.S. survey foot.

All vertical dimensional control is based on North American Vertical Datum 1988 (NAVD88)

High Point of Finished Surface (HPFS) elevation = North American Vertical Datum 1988 (NAVD88) elevation +7'-0" ~~NAVD88 elevation = Mean Sea Level (MSL) +0.59 ft.~~

PALNG plant coordinate system originates from TPWD monument located at 29* 47' 52.61" N and 93* 57' 15.07" W. Plant coordinates N. 20,000'-0" and E. 10,000'-0" are equal to Texas state plane coordinates N. 13,872,197.79 ft and E. 3,568,342.28 ft.

Plant North is rotated 22º west of Grid North

3.3 Water Level

Description	Datum	Value, ft (Epoch: 1983 –2001)
Mean Higher High Water	MHHW	1.23
Mean High Water	MHW	1.13
Mean Sea Level	MSL	0.59
Mean Low Water	MLW	0.04
National Geodetic Vertical Datum of 1929	NGVD29	0.04
North American Vertical Datum 1988	NAVD88	0.00
Mean Lower Low Water	MLLW	-0.37
Mean Low Tide	MLT	-0.94
Mean Low Gulf	MLG	-1.49
Mean Tidal Range (MHW – MLW)	MN	1.09

3.4 Wind

The wind analysis was performed using twenty years (1996 to 2015) of historical data from the Jack Brooks Reginal Airport (formerly the Southeast Texas Regional Airport) weather station, which is located 12 miles northwest of the LNG Facility. The wind rose is presented in Figure below, this figure shall be applied to the project site by referencing North (True North)

in the figure to Grid north which is 2º-28' West of True North.

Wind Rose

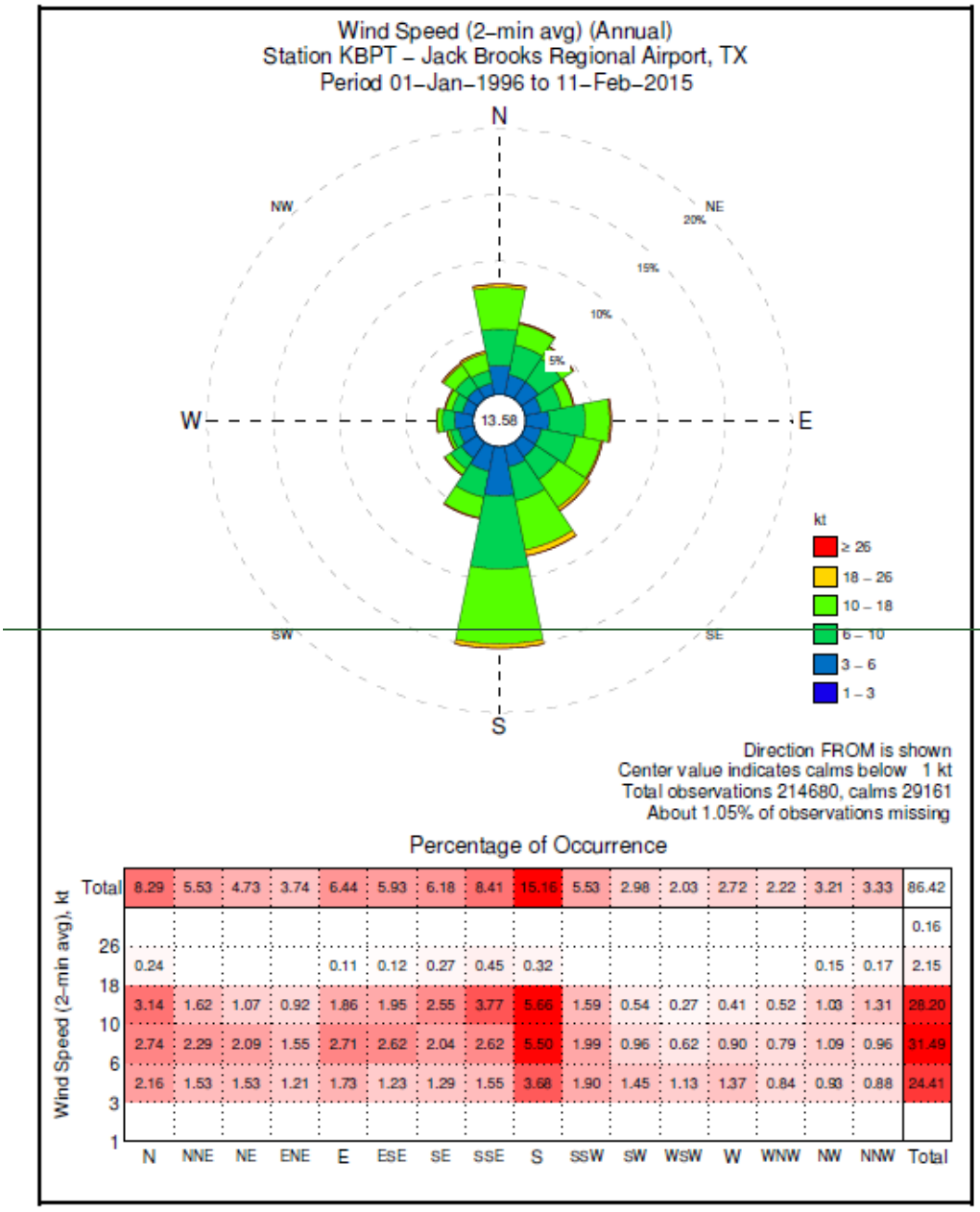

Figure 3-6: Annual wind rose for Station KBPT Jack Brooks Regional Airport

The design wind speed for the project, unless otherwise specified, shall be 190 mph for 3-second gust at 33 ft above grade using ASCE 7-10, which satisfies and exceeds the requirement of 150 mph sustained wind speed from 49 CFR PART 193 under section

193.2067 unless otherwise specified in the table below:

Structure	Risk Category (for Wind only) per ASCE 7-10	Basic Wind Speed (3-s gust speed) per ASCE 7-10
Security Fences (including access door and gates), Vapor Fences, Light Poles, CCTV Poles, Signs	I	135 mph

3.5 Snowfall

Snow loading design for structures shall be 0 psf.

3.6 Icing

Atmospheric ice loading shall be per ASCE 7-10.

3.7 Depth Averaged Currents

Depth-averaged currents near the site were calculated by Halcrow HPA from field measurements extending over an 11-month period in the Port Arthur Canal (Current Survey Study, 2007). Under normal conditions, the maximum depth-averaged ebb and flood currents were 3.2 knots and 2.6 knots, respectively.

3.8 Waves

The site is exposed to wind-generated waves and passing vessel-generated waves.

Wind-generated waves calculated with 100-year ASCE wind speed of 128.4 mph (3-sec gust at 33 ft above the ground) and a 100-year FEMA water level of +10.2 ft. (NAVD88) resulted in a maximum of 4.8 ft. significant wave height and 3.8 s peak wave period.

Wind-generated waves calculated with 500-year wind speed of 157 mph (sustained, using winds from NOAA Station SRST2 Sabine, TX) and a 500-year FEMA water level of 14.0 ft (NAVD88), resulted in maximum of 5.9 ft significant wave height and 4.0 s peak wave period.

Primary and secondary passing-vessel generated waves were examined for the design of shore protection. In the existing channel, a 40-ft draft vessel traveling at a speed of 12 knots can generate a primary or transverse stern wave height at the site in the range of 3.2 to 7.4 ft. Deep draft vessels are anticipated to navigate past the Project site at speeds of 6 to 7 knots (Sabine Pilots Association), thus lower transverse stern waves can be expected. Secondary waves, including those generated by tugs, can range from 1.2 to 1.6 ft.

3.8.1 Levee Elevation

The LNG Facility will be protected from storm surge inundation by a perimeter earthen levee designed to provide a 500-year return period standard of protection. This equates to a seawall levee height of +20.6 ft. (NAVD88) around the liquefaction site.

3.9 Site Ambient Temperatures

Site Ambient Temperature Data

Parameter	Temperature (ºF)
Annual Average	69.08
Annual Median	70.0
Extreme Low	14
Extreme High	104.0
2% Exceedance	39.0
98% Exceedance	92.0

Design Ambient Temperature

Case	Average	Hot	Cold
Designation	**AA**	**HA**	**CA**
Ambient Temperature (ºF, Note 1)	70.0	92.0	39.0
Gas Turbines Inlet Temperatures (ºF, Note 2)	73.6	95.6	42.6
Air Coolers Inlet Temperatures (ºF, Note 2)	73.6	95.6	42.6
Maximum Design Metal Temperature (insulated pipe) (ºF)	93		
Maximum Design Metal Temperature (un-insulated pipe) (ºF)	150		
Mechanical Design Maximum Temperature (ºF)	104		
Mechanical Design Minimum Temperature (ºF)	14		
Electrical Design Maximum Temperature (ºF)	104		
Electrical Design Minimum Temperature (ºF)	14		

Notes:

1. Does not include additional margins for global warming.
2. Includes a 3.6ºF hot air recirculation margin for gas turbines and 3.6ºF for air coolers, subject to studies to be conducted in the next phase of the project.

3.10 Barometric Pressure

Average barometric pressure at sea level of 14.696 psia
Minimum barometric pressure at sea level of 12.795 psia
Maximum barometric pressure at sea level of 15.722 psia
For design purposes, the standard atmospheric pressure of 14.696 psia shall be used
Barometric pressure rise and fall is 0.145~~580~~ psi/hr.

3.11 Relative Humidity

The relative humidity data to be used for design are as follows:

Air blower design shall use 100% relative humidity at 92 °F dry bulb temperature.

Gas Turbine Frame 7EA design is based on 80% relative humidity for all ambient temperature.

3.12 Rainfall Intensity

NOAA Atlas 14 (Texas 2018) rainfall frequency and depth shall be used in all drainage design.

3.12.1 Intensity

10-year ARI storm = 3.38 inches/hr.
25-year ARI storm = 4.05 inches/hr.
50-year ARI storm = 4.54 inches/hr.
100-year ARI storm = 5.07 inches/hr.
500-year ARI storm = 6.58 inches/hr.

3.12.2 Depth

25-year ARI storm, Maximum 24-hour rainfall = 12.4 inches
100-year ARI storm, Maximum 24-hour rainfall = 18.4 inches
Annual Mean Precipitation = 57.2 inches

3.12.3 Drainage Design

- Rational or any other approved equal method, or software may be used to calculate the peak run-off.
- See Section 7.0 for drainage design philosophy.

Note: The data above shall only be used for the plant permanent drainage system design. For drainage during the construction, the EPC contractor may use the above data, however, they shall be solely responsible for those events and use more severe events should it be required/justified.

3.13 Seismic Data

For the analysis and design of LNG tanks and their foundations classified as Seismic Category I (SC-I) as defined in FERC Draft Seismic Design Guidelines and Data Submittal Requirements for LNG Facilities, January 23, 2007 for LNG Facilities, Part I, Section 2 and 3, seismic loading shall be determined in accordance with NFPA 59A-2006 using two levels of earthquake motions – the Operating Basis Earthquake (OBE) and the Safe Shutdown Earthquake (SSE), and using the following site specific spectral response accelerations:

Safe Shutdown Earthquake (SSE): 5% damped, spectral response accelerations per Table 7.2-1 of Fugro report No. 04.10150037-2.

Operating Basis Earthquake (OBE): 5% damped, spectral response accelerations per Table 7.2-2 of Fugro report No. 04.10150037-2.

For seismic design of LNG Tank associated Pressure Safety Valves, Vacuum Relief Valves, platforms and other appurtenances physically attached to the LNG Tanks, the amplified spectral accelerations acting at the structure/component point of support elevation on the tank shall be used.

For the analysis and design of structures, components and systems other than LNG tanks and their foundations, seismic loading shall be determined in accordance with ASCE 7-10.

Seismic design parameters are as follows:

- Site Class E
- Risk Category (for seismic only) III
- Seismic Design Category B
- Design Spectral Response Accelerations:

SDS = 0.164 (per Fugro report No. 04.10150037-2)

SD1 = 0.118 (per Fugro report No. 04.10150037-2)

SMS = 0.247 (per Fugro report No. 04.10150037-2)

SM1 = 0.177 (per Fugro report No. 04.10150037-2)

- Seismic Importance Factors, I_e = 1.25 & I_p = 1.50

3.14 Facilities Design Life

The LNG Facility will be designed for a Design Life of 25 years. The LNG Facility will have a preventative/predictive maintenance plan including corrosion control, taking into account the coastal environment, to maintain this design life.

Item	
Design Life Major vessels and equipment and major structural internals	25 Years 25 Years
Vessel internals	25 Years
Fired heater tubes	25 Years
Shell and tube heat exchangers tubes	25 Years
Critical piping and piping > 4-inch diameter	25 Years
Other piping	25 Years
Marine Facilities- LNG Berths and Material Offloading Facility	25 Years

4 UTILITIES

4.1 Utility & Instrument Air

Parameter	Utility Air	Instrument Air
Maximum Dew Point °F (°C)	Not applicable	-40°F (-40°C)
Operating Pressure (psig)	80-125	80-125
Operating Temperature (°F)	Ambient	Ambient
Entrainment [1]	Oil free	Clean, dry & oil free

4.2 Nitrogen

Products	Pressure (psig)	Temperature (°F)
Nitrogen to Distribution Header	125 psig	Ambient 70°F

4.3 Potable Water Battery Limit Conditions

Parameter	Unit	City (Potable) Water
Operating Pressure	psig	60
Operating Temperature	°F	Ground temperature

5 ELECTRICAL

The distribution and utilization voltages will be as follows:

Primary Distribution – 34.5 kV, 13.8 kV, 4160 V 3-phase, 3-wire, low resistance grounded neutral.

Secondary Distribution - 480 V, 3-phase, 3-wire, solidly grounded neutral or high resistance grounded neutral.

5.1 VOLTAGE LEVELS

Voltage levels for general electrical loads

Load	Voltage
Street and flood lighting	208 V or 480 V, 1Ø
Welding outlets	480 V, 3Ø
Process unit and indoor lighting	120 V, 1Ø
Convenience outlets	120 V, 1Ø
Instrument devices	120 V, 1Ø

Voltage levels for motor loads

Horsepower Rating	Voltage
< 1/2~~3~~ HP	120 V, 1Ø
~~½~~ 3/4 HP to 200 HP	480 V, 3Ø *
201 HP to 3000 HP	4.0 KV, 3Ø **
3001 HP ~~and above~~to 5000HP	4.0 or 13.2 KV, 3Ø ***
5001 HP and above	13.2 KV, 3Ø ***

Consideration may be given to special cases where motors of certain ratings may be of a different voltage to that specified above (e.g. where a particular voltage is not locally available, or its capacity is limited). VFD driven motors higher than 200HP shall be three-phase single or two~~2~~ winding with the voltage as specified by the vendor.

6 EFFLUENT DISCHARGE

Wastewater will be collected into two wastewater tanks and taken out for off-site disposal using a licensed contractor. Sanitary wastewater will be routed to a lift station provided by the City of Port Arthur and then routed to a municipal treatment facility for disposal.

7 STORMWATER DRAINAGE PHILOSOPHY

The Storm water runoff shall be discharged by pumping over the flood protection berm without negatively impacting the performance of the equipment:

a) All non-critical equipment point of support (POS) shall be at or above the flood elevation from a 500-year ARI storm, with all pumps running.

b) All critical equipment POS shall be at or above the flood elevation during a 100-year ARI 7-day extended period storm, considering overtopping and pumps not running.

The overtopping of the berm shall be considered, during a 500-year storm event, for the berm section facing the Sabine waterway. The overtopping rate of 0.10 cfs per foot length of berm, for a maximum period of 2-hours, shall be used in the evaluation.

The storm water conveyance channel shall be designed to carry the peak flow from a 10-year ARI storm event with pumps running.

8 PROJECT UNITS

The system of measurements shall be U.S. Customary Units for the following:

- Pressure: psia, psig
- Temperature: deg F
- Weights: lbs
- Length: ft.
- Mass Flow Rate: lb./hr.
- Mole flow rate: lb.-mol/hr.
- Molecular weight: lb./lb mol
- Mass density: lb./ft3
- Volume: ft3
- Velocity: ft./sec
- Line Size: inches
- Thermal Energy: Btu/hr.
- Electrical Energy: MW, kW
- Mechanical Power: HP

9 GEOTECHNICAL DATA

A geotechnical investigation was carried out by Fugro USA Land, Inc. (Fugro) under subcontract to Port Arthur LNG, LLC. Refer to the Fugro Report No. 04.10150037 for more details of the site conditions and subsurface conditions. Supplemental geotechnical investigation has been conducted in 2019, and the factual data are provided in the Fugro Report No. 04.10180165-1 as EPC-level geotechnical data report for the entire LNG development~~Onshore LNG Liquefaction Facilities and the Fugro Report No. 04.1018065-2 for Nearshore Facilities~~.

Port Arthur LNG

BECHTEL

Firm No. F-9684

PORT ARTHUR LIQUEFACTION PROJECT

DESIGN CRITERIA FOR CIVIL SITEWORK

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DESIGN CRITERIA FOR CIVIL SITEWORK		**Bechtel Document No.**	**Rev.**
		26196-100-3DR-C04-00001	001
		PALNG Document No.	**Rev.**
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1.0 GENERAL

1.1 Scope

1.1.1 This document establishes minimum civil engineering requirements for site development including but not limited to, design of roads, railroads, paving, drainage, stormwater control, erosion and sediment controls and fencing and gates. This document shall be used for design and preparation of construction documents and is not intended for use as a construction specification.

1.2 Abbreviations

1.2.1 Abbreviations used in this document shall have the following definitions:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AI	Asphalt Institute
AISI	American Iron and Steel Institute
ASTM	ASTM International
CLFMI	Chain Link Fence Manufacturers Institute
FHWA	Federal Highway Administration
MUTCD	Manual on Uniform Traffic Control Devices
NAAMM	National Association of Architectural Metal Manufacturers
NFPA	National Fire Protection Association
PCA	Portland Cement Association

1.3 Definitions

1.3.1 The following words shall have these special meanings when used herein:

Access Roads	Plant area roads that provide occasional access to areas for maintenance, security and firefighting vehicles. Access roads may or may not be paved.
Average Recurrence Interval (ARI)	Probability of a rainfall event of defined characteristics occurring in any given year at a given location.
Base Course	A layer of well-graded granular material that supports the paving and distributes wheel loads over a greater area of the subgrade.
Building Zone	The area enclosed within a 5-foot offset from the exterior cladding.

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Clear Zone	A traversable and unobstructed area beyond the edge of the travelway.
Flood Hazard Area	The area within a flood plain subject to a 1-percent or greater chance of flooding in any year. The area designated as a flood hazard area on a community's flood hazard map, or otherwise legally designated.
Freeboard	The vertical distance between the calculated water surface elevation and the top, crest of a structure or the floor level of a building.
Geogrid	High tensile strength polymer gridded material that provide a mechanism for interlocking aggregate material placed on the geogrid to prevent lateral movement and improve load distribution to the subgrade.
Geotextile Fabric	A flexible, porous textile which is commonly placed between dissimilar materials so that the integrity and functioning of both materials can remain intact or improved.
Lane	Portion of the travelway intended for a single line of traffic in a given direction.
Owner	Provide Entity Name or Owner of the Plant.
Paved Surface	Reinforced concrete or bituminous surfacing.
Primary Road	Plant area road that provides access to product shipping and receiving points used by large trucks and cranes.
Roadway	Structural section inclusive of travelway and shoulders.
Secondary Roads	Plant area roads that provide access to equipment by maintenance equipment and personnel vehicles not including cranes.
shall	Indicates that the statement is mandatory
should	Indicates a recommendation
Shoulder	Portion of the roadway structure that lies outside of the travelway, subject to intermittent traffic. Shoulder can be paved or unpaved.
Structural Flooding	The water surface elevation from the storm event exceeds the top of slab elevation of the building resulting in water entering the structure.
Subbase	A compacted layer of well-graded fill that may be required under the base course. Typically provided over fine grained subgrade soils to improve drainage, resist frost heave, provide structural support by distributing loads, and to prevent pumping of finer grained soils into the base material at paving joints and edges.
Subgrade	Soil placed and/or compacted during the rough grading works. Typically consists of natural soils found on site, unless soil strength is inadequate and imported soils are required.
Surface Waters	Natural waters such as in a stream, river, lake, wetland, or ocean. Stormwater facilities are not considered surface waters.

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Travelway	Portion of the roadway structure that is normally subject to vehicle movements. This area is typically paved for primary and secondary roads.

1.4 Referenced Codes and Standards

1.4.1 The publications listed below form a part of this document to the extent referenced. Documents shall be the current edition or revision at the time of contract award, unless otherwise expressly stated.

1.4.2 American Association of State Highway and Transportation Officials (AASHTO)

A Policy on Geometric Design of Highways and Streets
Guide for Design of Pavement Structures
Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT≤ 400)
LRFD Bridge Design Specifications

1.4.3 American Concrete Institute (ACI)

ACI 224.3R-95	Joint in Concrete Construction
ACI 302-1R	Guide for Concrete Floor and Slab Construction
ACI 325.3R	Guide for Design of Foundations and Shoulders for Concrete Pavement
ACI 325.9	Guide for Construction Concrete Pavement
ACI 330R	Guide for the Design and Construction of Concrete Parking Lots
ACI 350	Code Requirements for Environmental Engineering Concrete Structures and Commentary

1.4.4 American Society of Civil Engineers (ASCE)

ASCE MOP 77	Design and Construction of Urban Stormwater Systems
ASCE/EWRI 45-05	Standard Guidelines for the Design of Urban Stormwater Systems
ASCE/EWRI 46-05	Standard Guidelines for the Installation of Urban Stormwater Systems

1.4.5 Asphalt Institute (AI)

MS-1	Thickness Design - Asphalt Pavements for Highways and Streets

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1.4.6 ASTM International (ASTM)

ASTM A760	Corrugated Steel Pipe, Metallic-Coated for Sewers and Drains
ASTM B633	Electrodeposited Coatings of Zinc on Iron and Steel
ASTM C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain and Sewer Pipe
ASTM C1433	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Strom Drains, and Sewers
ASTM C1577	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Strom Drains, and Sewers Designed According to AASHTO LRFD
ASTM D1785	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
ASTM D2729	Standard Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
ASTM D2855	Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings
ASTM F2648	Standard Specification for 2 to 60 in. (50 to 1500 mm) Annular Corrugated Profile Wall Polyethylene (PE) Pipe and Fittings for Land Drainage Applications
ASTM F2306/ F2306M	Standard Specification for 12 to 60 in. (300 to 1500 mm) Annular Corrugated Profile-Wall Polyethylene (PE) Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications

1.4.7 Chain Link Fence Manufacturers Institute (CLFMI)

CLF-SFR0111	Chain Link Fence Manufacturers Institute Security Fencing Recommendations
WLG 2445	Chain Link Fence Wind Load Guide for the Selection of Line Post and Line Post Spacing

1.4.8 Federal Highway Administration (FHWA)

HEC-14	Hydraulic Design of Energy Dissipators for Culverts and Channels
HEC-22	Urban Drainage Design Manual, Third Edition
MUTCD	Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD)

1.4.9 National Association of Architectural Metal Manufacturers (NAAMM)

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ANSI/NAAMM MBG531	Metal Bar Grating Manual
ANSI/NAAMM MBG532	Heavy Duty Metal Bar Grating Manual
NAAMM MBG534	Metal Bar Grating Engineering Design Manual

1.4.10 National Fire Protection Association (NFPA)

NFPA 30	Flammable and Combustible Liquids Code
NFPA 59A	Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG)

1.4.11 National Resource Conservation Service (NRCS)

TR-55	Urban Hydrology for Small Watersheds, TR-55

1.4.12 Portland Cement Association (PCA)

PCA,1988, No. IS 234.01P	Design of Heavy Industrial Concrete Pavements

1.4.13 NOAA

ATLAS 14	Precipitation-Frequency Atlas of the United States, Texas, 2018

1.4.14 Reference Documents

26196-100-3BD-U04-00001 (PAL-PJT-HSE-B0D-00-GEN-0001)	Spill Containment Design Basis
26196-100-3DR-S04-00001 (PAL-PJT-CIV-DEC-00-X-0002)	Design Criteria for Structures and Foundations
26196-100-3PS-DB01-00001 (PAL-PJT-CIV-STD-00-X-0010)	Project Specification for Furnishing and Delivering Ready Mix Concrete
26196-100-3PS-DB02-00001 (PAL-PJT-CIV-STD-00-X-0012)	Project Specification for Concrete Work
26196-100-3PS-CG00-00001 (PAL-PJT-CIV-STD-00-X-0001)	Project Specification for Site Preparation and Earthwork
26196-100-3PS-CG00-00002 ((PAL-PJT-CIV-STD-00-X-0008)	Project Specification for Geosynthetic Products

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26196-100-3PS-CS00-00001 (PAL-PJT-CIV-STD-00-X-0002)	Project Specification for Roads and Paving
26196-100-3PS-CY04-00001 (PAL-PJT-CIV-STD-00-X-0004)	Project Specification for Survey
26196-100-3PS-CY10-00001 (PAL-PJT-CIV-STD-00-X-0003)	Project Specification for Fencing and Gates
26196-100-3BD-M04F-00002 (PAL-PJT-PRO-BOD-00-GEN-0002)	Basic Engineering Design Data (BEDD)
26196-100-3DR-K04F-00001 (PAL-PJT-CSA-RPT-00-GEN-0001)	EDSA Geotechnical Design Basis Report
26196-100-3DR-K04F-00002 (PAL-PJT-CSA-RPT-00-GEN-0002)	EDSA Geotechnical Recommendation for Site Preparation and Ground Improvement
26196-100-3DR-H04F-00001 (PAL-PJT-HSE-BOD-00-GEN-0002)	Environmental Design Basis
26196-100-3DR-P34D-00002 (PAL-PJT-PIP-DEC-00-GEN-0001)	Piping Design and Layout Criteria
Fugro Report No. 04.10150037	Geotechnical Study Port Arthur LNG Project Port Arthur LNG, LLC, Port Arthur, Texas

1.4.15 Reference Drawings

26196-100-C0-000-00005 (PAL-PJT-CIV-DWG-00-X-0005)	Civil – Sitework Standard Drawing, General Notes
26196-100-C0-000-00006 (PAL-PJT-CIV-DWG-00-X-0006)	Civil – Sitework Standard Drawing, Legend & Abbreviations
26196-100-C0-000-00010 (PAL-PJT-CIV-DWG-00-X-1010)	Civil – Sitework Standard Drawing, Typical Road Sections – Flexible Pavement
26196-100-C0-000-00015 (PAL-PJT-CIV-DWG-00-X-1015)	Civil – Sitework Standard Drawing, Guardrail and Guard Post Details
26196-100-C0-000-00016 (PAL-PJT-CIV-DWG-00-X-1016)	Civil – Sitework Standard Drawing, Road Signage and Markings
26196-100-C0-000-00017 (PAL-PJT-CIV-DWG-00-X-3017)	Civil – Sitework Standard Drawing, Concrete Paving and Surfacing Details
26196-100-C0-000-00018 (PAL-PJT-CIV-DWG-00-X-3018)	Civil – Sitework Standard Drawing, Joints in Concrete Pavement
26196-100-C0-000-00021 (PAL-PJT-CIV-DWG-00-X-2021)	Civil – Typical Flexible Channel Sections and Details

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26196-100-C0-000-00025 (PAL-PJT-CIV-DWG-00-X-2025)	Civil – Sitework Standard Drawing, Concrete Trench Sections & Details (to be provided by EPC contractor)
26196-100-C0-000-00030 (PAL-PJT-CIV-DWG-00-X-8030)	Civil – Sitework Standard Drawing, Erosion & Sediment Control Details, Sheet 1
26196-100-C0-000-00031 (PAL-PJT-CVI-DWG-00-X-8031)	Civil – Sitework Standard Drawing, Erosion & Sediment Control Details, Sheet 2
26196-100-C0-000-00050 (PAL-PJT-CIV-DWG-00-X-2050)	Civil – Sitework Standard Drawing, Pipe Culvert Installation Details
26196-100-C0-000-00051 (PAL-PJT-CIV-DWG-00-X-2051)	Civil – Sitework Standard Drawing, Box Culvert Installation Details
26196-100-C0-000-00054 (PAL-PJT-CIV-DWG-00-X-2054)	Civil – Sitework Standard Drawing, Concrete Headwall W/Flared Wings
26196-100-C0-000-00060 (PAL-PJT-CIV-DWG-00-X-8060)	Civil – Sitework Standard Drawing, Chain-Link Fence Details, Sheet 1
26196-100-C0-000-00061 (PAL-PJT-CIV-DWG-00-X-8061)	Civil – Sitework Standard Drawing, Chain-Link Fence Details, Sheet 2
26196-100-C0-000-00062 (PAL-PJT-CIV-DWG-00-X-8062)	Civil – Sitework Standard Drawing, Chain Link Fence Connection Details
26196-100-C0-000-00063 (PAL-PJT-CIV-DWG-00-X-8063)	Civil – Sitework Standard Drawing, Chain Link Fence Gate Details

2.0 SITE DEVELOPMENT

2.1 Existing Site Conditions

2.1.1 Current site topographic survey conducted for the project or as approved by the project shall be used to define existing site conditions. This topography shall form the basis of all earthwork calculations.

2.1.2 For geotechnical recommendations and subsurface conditions, refer to 26196-100-3DR-K04F-00001, EDSA Geotechnical Design Basis Report and 26196-100-3DR-K04F-00002, EDSA Geotechnical Recommendation for Site Preparation and Ground Improvement.

2.1.3 For special requirements related to environmental conditions, refer to Environmental Design Basis.

2.2 Site Preparation and Grading

2.2.1 For material requirements, refer to 26196-100-3PS-CG00-00001, Project Specification for Site Preparation and Earthwork.

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2.2.2 Site shall be graded to provide positive drainage and prevent ponding. Specific attention shall be made to areas around at-grade or above-grade structures to ensure structures do not block flow paths and trap water.

2.2.3 Finished grades shall be in accordance with Table 1, Finished Grades.

Table 1: Finished Grades

Item / Area Description	Requirement
Process Areas – Flammable/Cryogenic Liquid[1]	Min. 1.0%
Process / Utility Areas	Min. 0.5%
Non-Process Areas	Min. 0.3%
Tank Areas - Flammable Liquid[1]	Min. 1.0%
Primary Road – Longitudinal[2]	Min. 0.5% Max. 5.0%
Primary Road – Transverse	Min. 2.0%
Secondary Road Longitudinal[2]	Min. 0.5% Max. 7.5%
Secondary Road – Transverse	Min. 2.0%
Access Roads	Max. 10%
Parking Areas	Min. 0.5% Max. 5.0%
Sidewalks – Longitudinal	Max. 5.0%
Sidewalks – Transverse	Max. 2.0%
Ditches – Longitudinal	Min. 0.10%

1. Required for minimum 50 ft. (15 m) from the edge of tank in accordance with NFPA 30.
2. Minimum slope required only where curbs or structures adjacent to roads obstruct drainage flows.

2.2.4 Finished grade elevation at buildings shall be a minimum of 8 in. below building finished floor elevation.

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2.2.5 Occupied buildings shall be protected from structural flooding from a 100 yr ARI storm.

2.2.6 Embankments shall be benched and protected as required to prevent erosion by wind and rain.

2.2.7 Where granular fills are required over soft subgrades, geotextiles shall be provided as required.

2.2.8 Subgrade improvement shall be identified on drawings as required by 26196-100-3DR-K04F-00001, EDSA Geotechnical Design Basis Report and 26196-100-3DR-K04F-00002, EDSA Geotechnical Recommendation for Site Preparation and Ground Improvement.

2.2.9 Site layout shall be coordinated with Plant Design & Piping and Electrical Engineering disciplines to provide required space for underground utilities, miscellaneous structures, and drainage features.

2.3 Erosion and Sediment Control

2.3.1 Erosion and sediment control measures shall be in accordance with local, state and federal regulations, and project specific permits.

2.3.2 The following temporary erosion and sediment controls shall be provided:

a) Perimeter sediment controls (silt fences) to protect areas that will receive stormwater from earthworks activities.

b) Stabilized exits (rock areas) to minimize sediment and mud track-out onto off-site facilities.

c) Inlet protection (sediment traps) for off-site drainage facilities.

d) Erosion and velocity dissipation devices (rock check dams) along the length of unfinished channels and at channel inlets and outlets.

2.3.3 Temporary sediment basins should be provided to control sediment from disturbed areas greater than 10 acres. Sediment basins shall be sized for the lesser of:

a) The runoff from a 2-year, 24-hour storm, or

b) 3,600 cu. ft. per acre of drained area.

2.3.4 Natural buffers or equivalent sediment control measures shall be provided when a surface water is located within 50 ft. of the disturbed area of the project.

2.4 Flood Hazard Areas

2.4.1 Project sites located in Flood Hazard Areas shall be designed in accordance with local, state and federal regulations, and project specific permits.

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2.5 Design of Roads

2.5.1 Geometric design of roads shall be in accordance with Table 2, Guide Documents for Road Design.

Table 2: Guide Documents for Road Design

Criteria	Guide Document
Plant area roads with ADT ≤ 400	AASHTO, Guidelines for Geometric Design of Very Low Volume Local Roads (ADT ≤ 400), for Urban Industrial/Commercial Classification and this section
Plant area roads with ADT > 400	AASHTO, A Policy on Geometric Design of Highways and Streets.
Public Roads	AASHTO, A Policy on Geometric Design of Highways and Streets.

2.5.2 Roadway design shall be in accordance with Table 3, Roadway Design Parameters.

Table 3: Roadway Design Parameters

Road Class	Max. Design Speed mph	Min. Width ft.	Min. Shoulder Width ft.	Min. Inside Radius ft.	Design Vehicle
Primary	30	20	5	45	WB-65 (WB-20)
Secondary	15	20	3	45	WB-65 (WB-20)
Service /Access	15	16	-	15[1]	SU (Single Unit)
Patrol	15	10	-	10	Pick-Up Truck / ATV
Heavy Haul	10	20	20	100	Module or Construction Vehicles

1. Design Engineer shall be responsible for coordinating with the Owner to make sure proper access is provided for required maintenance vehicles and safe operation.

2.5.3 Inside radius shall be measured from the edge of the travelway.

2.5.4 Road shoulders may be paved or unpaved. Road shoulders should be paved where frequent stopping of vehicles are expected along roads. Unpaved shoulders shall drain away from the road travelway.

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2.5.5 Where unpaved shoulders are provided, inside radius at intersections shall be increased or the intersection provided with paved offset and taper to accommodate off-tracking characteristics of the design vehicle.

2.5.6 See Table 1 for minimum and maximum grades for road and paved areas. Where the longitudinal algebraic difference in grade is greater than 3%, a vertical curve shall be provided.

2.5.7 The minimum length of vertical curve shall be 3 times the design speed in miles per hour.

2.5.8 Turning movements of vehicles larger than SU may be allowed to cross into the oncoming traffic lane.

2.5.9 Minimum horizontal and vertical clearances shall be as required in accordance with Table 3, 26196-100-3DR-P34D-00002, Piping Design and Layout Criteria.

2.5.10 Required vertical clearances shall be measured from the high point of the road cross section and maintained for 2 ft. beyond the roadway

2.5.11 A clear zone of at least 6 ft. should be provided along primary and secondary roadways where possible measured from the shoulder edge.

2.5.12 Fire apparatus access roads shall be provided within 150 ft. of all portions of the plant facility and all portions of the exterior walls of the first story of the buildings.

2.5.13 Dead-end fire apparatus access roads in excess of 150 ft. in length shall be provided with an approved area for turning around fire apparatus.

2.5.14 See Section 3.0 for road paving design requirements.

2.6 Earthen Dikes

Earthen dikes may be used for spill containment or flood protection.

2.6.1 Earthen dikes for spill containment shall meet the requirements of 26196-100-3BD-U04-00001, Spill Containment Design Basis established for the work.

2.6.2 Containment dike walls shall be designed to withstand a full hydrostatic head. Hydro-dynamic loads are not required to be considered.

2.6.3 Earthen dikes more than 3 ft. in height shall have a top width of not less than 2 ft.

2.6.4 Earthen dike slopes shall not be steeper than the angle of repose of the material of which the dike is constructed. Maximum side slope shall be 2(H):1(V), but grass-lined dikes shall not exceed 3(H):1(V) side slopes.

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2.6.5 Where dikes are provided for containment, the containment volume shall be 100% of the largest tank capacity, plus 18 in. freeboard (maximum recorded rainfall in 24 hrs of 17.8").

2.6.6 Spill containment area dike walls and floors will require a minimum impermeability (1×10^{-5} cm/sec) to prevent egress of contaminants from the containment area in the event of a leak, up to and including impermeable liners/membranes.

2.6.7 Erosion control shall be provided on both sides of the dike to prevent deterioration resulting from heavy rainfall or leakage of any contained tank.

2.6.8 At least one stairway shall be provided over the spill containment dikes.

2.6.9 Flood protection Levee (dike):

- Facility shall be protected by a perimeter earthen levee designed to withstand a 500-year return period storm surge event.
- Top of levee shall be at or above El. 20.6 feet.
- Overtopping flow of 0.10 cfs per ft. is expected during a 500 year storm surge.
- Earthen levee shall be designed to withstand a full hydrostatic head plus hydro-dynamic loads.
- Side slopes of the levee shall be 3(H):1(V). Inner side slopes of 2.5(H):1(V) may be used if permitted by the Geotech consultant.
- Side slopes of the levee shall be protected from erosion due to wind, rain and wave action.

2.7 Parking Areas

2.7.1 Typically 90° parking shall be used. Alternative parking geometries may be used only where space restrictions dictate their use.

2.7.2 Parking space and aisle dimensions shall be in accordance with typical parking area layout in 26196-100-C0-000-00016, Civil – Sitework Standard Drawing, Road Signage and Markings.

2.7.3 Minimum 6 ft. long wheel stops anchored to the pavement shall be provided at parking spaces adjacent to sidewalks, buildings, stormwater facilities, areas of extreme slope and other areas where a vehicle would cause property damage.

2.8 Signage and Markings

2.8.1 Signs and associated pavement markings to facilitate safe traffic movement shall be provided in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

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2.8.2 Non-reflectorized pavement markings shall be provided for paved parking areas.

2.8.3 Reflectorized pavement markings shall be provided for paved roads and streets, and fire access markings.

2.9 Fencing

2.9.1 Fencing shall be chain link or welded wire mesh and meet the requirements of 26196-100-3PS-CY10-00001, Project Specification for Fencing and Gates, 26196-100-C0-000-00060, Civil - Sitework Standard Drawing, Chain-Link Fence Details, Sheet 1, 26196-100-C0-000-00061, Civil - Sitework Standard Drawing, Chain-Link Fence Details, Sheet 2, 26196-100-C0-000-00062, Civil - Sitework Standard Drawing, Chain-Link Fence Connection Details and 26196-100-C0-000-00063, Civil - Sitework Standard Drawing, Chain-Link Fence Gate Details.

2.9.2 Fencing shall have a maximum mesh size of 2 in. for chain link fencing and 4 sq. in. for welded mesh fencing.

2.9.3 Fencing shall be provided with continuous bottom rail and top tension wire.

2.9.4 Fencing post and spacing shall be determined in accordance with WLG 2445. A minimum of 135 miles per hour wind speed shall be considered in the fence and its foundation design.

2.9.5 Security barriers shall be provided at all locations where security fences must cross culverts, drainage ditches, swales or other openings larger than 100 sq. in.

2.9.6 Security fencing will consist of an 9 ft. high (8’ fence fabric height) perimeter fence equipped with triple barbed wire on 45-degree angled top and razor wire.

2.9.7 Intermediate posts shall be evenly spaced 10 ft. or less apart.

2.9.8 The thermal radiation zone (1500 Btu) for the flare should be provided with warning signage at regular intervals to prevent normal access to the area.

2.9.9 A clear distance of at least 10 ft. shall be maintained on the unsecure side of security fencing from any structures, ground or vegetation that rises above the fence grade.

2.9.10 Fencing for utility areas, laydown areas, etc. shall not be less than 6 ft. in height.

2.10 Guardrails and Bollards

2.10.1 Guardrails shall be provided along primary and secondary roads for the following situations:

a) Embankment:

- Heights is greater than 5 ft, and

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- Slope is greater that 3H to 1V, and
- Within the roadway clear zone

b) An errant vehicle leaving the roadway can result in serious injury or damage to the facility.

2.10.2 Guardrails along Access Roads shall be evaluated on a case by case basis.

2.10.3 Embankment slopes of 4H to 1V are considered recoverable and no protection is required.

2.10.4 Guardrails should be provided wherever structures are within the clear zone of the roadway or could be subject to damage from incidental vehicular contact.

2.10.5 Bollards should be considered in low traffic areas where structures could be subject to damage from incidental vehicular contact.

3.0 PAVEMENT AND SURFACING

3.1 General

3.1.1 Pavement and surfacing shall be as required by Plant Design and Piping.

3.1.2 Minimum flexural strength of concrete for pavements shall be 600 psi at 28 days.

3.1.3 Minimum compressive strength of concrete for pavements, walkways, curbs and gutters shall be 4000 psi at 28 days.

3.1.4 Paving shall not be tied to building or equipment foundations.

3.1.5 Consideration for material management and economics shall be given to specification of gravel surfacing materials including crushed stone, rip rap and Armor Rock. Where technically acceptable these materials shall be paired down to minimize material types.

3.2 Road Pavement

3.2.1 Pavements shall be designed for a minimum service life of 20 years.

3.2.2 Primary and Secondary roads shall be designed for AASTHO HS-20 wheel load.

3.2.3 Design of flexible pavements shall be in accordance with AASHTO Guide for Design of Pavement Structures, or AI MS-1.

3.2.4 Design of rigid pavements shall be in accordance with AASHTO Guide for Design of Pavement Structures.

3.2.5 Average daily traffic shall be determined from available operational and maintenance information. Where information is not made available the design traffic shall be as follows:

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a) ESAL = 800,000 total applications for Primary Roads

b) ESAL = 500,000 total applications for Secondary Roads

c) ESAL = 200,000 total applications for Access Roads.

3.2.6 Material properties for structural design, California Bearing Ratio (CBR), Resilient Modulus (MR) and Modulus of Subgrade Reaction (k-value) shall be as defined in 26196-100-3DR-K04F-00001, EDSA Geotechnical Design Basis Report.

3.2.7 Pavement design parameters shall be as follows:

a) Initial Serviceability = 4.5(rigid); 4.2 (flexible)

b) Terminal Serviceability = 2.0

c) Standard Deviation = 0.35(rigid); 0.45 (flexible)

d) Reliability (Min.) = 75%

3.2.8 Flexible pavement design shall include:

a) A minimum 8 in. thick granular base.

b) Geogrid, to reduce the required section of granular base where economical.

c) A subsurface drainage system shall be provided in accordance with Section 5.0, if required.

3.3 Concrete Area Paving

3.3.1 Area paving shall be designed in accordance with PCA, 1988, No. IS 234.01P, ACI-330R, ACI-302-1R or ACI-325.3R.

3.3.2 Area paving shall be designed for the anticipated operational and maintenance traffic loads and have minimum thicknesses in accordance with Table 4, Minimum Thickness for Area Paving.

Table 4: Minimum Thickness for Area Paving

Pavement Service	Minimum Thickness
Walkways	4 in.
Light Vehicles	6 in.
Heavy Vehicles / Cranes	8 in.

3.3.3 Pavement thickness shall be increased by 15% for free edge, excluding walkways.

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3.3.4 Distributed steel shall be provided to control shrinkage cracking in all concrete slabs and walkways.

3.3.5 Joints in concrete paving, including shrinkage dissipation joints (i.e. contraction joints, or control joints) shall be detailed and shown on design drawings. These joints shall not exceed 20 ft. spacing unless justified by specific design considerations.

3.3.6 Walkways shall have a minimum width of 4 ft. Maximum spacing for control joints shall be 10 ft.

3.3.7 Pavement joints shall be in accordance with ACI-224.3R-95, Joint in Concrete Construction.

3.3.8 For areas requiring curbs, curb height shall be min 10-in. or as required by the Spill Containment Design Basis.

3.3.9 Pavement construction shall be in accordance with ACI-325.9.

3.4 Bituminous Area Paving and Parking Areas

3.4.1 Paving shall meet the requirements for flexible pavements in Section 3.2

3.4.2 Determine average daily traffic from available operational and maintenance information. Where information is not made available, the design traffic shall be 250,000 ESAL's.

3.5 Compacted Crushed Rock with Surface Seal Areas

3.5.1 Compacted crush rock shall be base course material with a minimum thickness of 4 in.

3.5.2 Surface sealer (prime coat) shall be applied to surface of the compacted crush rock.

3.6 Gravel Surfaced Areas

3.6.1 Where required, gravel/crushed stone surfacing shall be provided to a minimum thickness of 3 in.

3.6.2 Geotextile fabric shall be installed to provide a separation layer between the gravel surfacing and subgrade, if required.

4.0 STORMWATER MANAGEMENT

4.1 General

4.1.1 Surface drainage, underground drainage systems, and stormwater management facilities shall be designed in accordance with local, state and federal regulations, and project specific permits.

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4.1.2 Systems may include features such as storm sewers, roadside ditches, trenches, open channels and detention ponds.

4.1.3 NOAA Atlas 14 (Texas 2018) rainfall frequency and depth shall be used in all drainage design

4.1.4 Facility shall be protected by a perimeter earthen dike/levee. As there is no gravity drainage outlet from the diked plant area, pumps will be required to remove stormwater.

4.1.5 The overtopping of levess shall be considered, during a 500-year storm event, for the levee section facing the Sabine waterway. The overtopping rate of 0.10 cfs per foot length of levee, for a maximum period of 2-hours, shall be used in the evaluation.

4.1.6 Permanent Plant stormwater drainage conveyance systems such as ditches, channels, trenches and culverts within the levee shall be designed for a minimum 10-year ARI storm, with pumps running.

4.1.7 Water surface for higher intensity storms shall be checked as follows:

a) All non-critical equipment point of support (POS) shall be at or above the high water elevation from a 500-year 24-hours ARI storm, with all pumps running.

b) All critical equipment POS shall be at or above the high water elevation during a 100-year ARI 7-day extended period storm, considering overtopping and pumps not running.

4.1.8 Overland flow and natural site features may be utilized where stormwater drainage will not impact site function. Drainage systems shall prevent erosion of existing soils, ponding, and convey flow to a suitable outfall location.

4.1.9 Design shall not increase or redirect existing sheet flow to adjacent private or public property.

4.1.10 Where possible the stormwater discharge from the developed site should be located coincident to the pre-developed discharge locations.

4.1.11 Stormwater discharge should be maintained as close as possible to the pre-developed discharge flows if discharging into county drainage facilities or public roadside ditches. Discharge flows cannot be increase without local authorities approval. Provide detention ponds, if required, to control stormwater discharge.

4.1.12 Surface water from non-operating areas shall generally be considered clean and allowed to be discharged without additional treatment.

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4.1.13 Surface water collected from curbed operating areas, including spent fire water runoff, shall be classified as potentially contaminated and subject to treatment.

4.1.14 Existing offsite runoff blocked by development shall be rerouted to return flow to original configuration or to approved discharge points.

4.1.15 Reinforced concrete headwalls and/or rip-rap aprons shall be provided at inlets and outlets of culverts.

4.1.16 Riprap aprons shall be designed in accordance with HEC-14 or local practice. Riprap shall be underlain with granular filter layer or filtration geotextile fabric.

4.2 Design Methods

4.2.1 The Rational Method shall be used for determination of stormwater peak flows for individual drainage areas up to 200 acres in size. Project areas greater than 200 acres shall be divided into smaller drainage areas, each being less than 200 acres in size, for analysis.

The Rational Method equation:

$$Q = \frac{CIA}{Z}$$

Q = Peak rate of runoff in (cfs)
C = Runoff coefficient representing the ratio of runoff to rainfall
I = Average intensity of rainfall (in/hr) from the IDF curves corresponding to the time of concentration, tc, and average recurrence interval
A = Drainage area (ac)
Z = Conversion factor, 1

4.2.2 Design rainfall intensity and depth shall be based on tables below:

Table 5: Rainfall Intensity (in/hr)

Rainfall Duration	10 YR ARI	25 YR ARI	100 YR ARI	500 YR ARI
5 min	10.50	12.60	15.70	19.70
10 min	8.32	10.00	12.50	15.40
15 min	7.01	8.36	10.40	12.90
30 min	4.98	5.92	7.30	9.25
60 min	3.38	4.05	5.07	6.58
2 hr	2.28	2.82	3.73	5.08
3 hr	1.78	2.26	3.08	4.33

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6 hr	1.12	1.46	2.07	3.00
12 hr	0.664	0.876	1.27	1.90
24 hr	0.389	0.518	0.765	1.15

Table 6: Rainfall Depth (in)

Rainfall Duration	10 YR ARI	25 YR ARI	100 YR ARI	500 YR ARI
5 min	0.87	1.05	1.31	1.64
10 min	1.39	1.67	2.09	2.57
15 min	1.75	2.09	2.59	3.24
30 min	2.49	2.96	3.65	4.62
60 min	3.38	4.05	5.07	6.58
2 hr	4.55	5.65	7.45	10.20
3 hr	5.34	6.78	9.26	13.00
6 hr	6.71	8.74	12.40	18.00
12 hr	8.00	10.60	15.30	22.90
24 hr	9.34	12.40	18.40	27.70
7 days	13.80	18.20	26.60	38.80

Source: NOAA Atlas 14 Point Precipitation Frequency Estimates: TX; Time series type - Annual Maximum
Location information: Port Arthur, Texas; Latitude: 29.7928, Longitude: -93.9551 (ref. BEDD)

4.2.3 Runoff coefficient C shall be based on the retention characteristics of the surface under consideration. Values provided in Table 7, Runoff Coefficient, shall be used and shall be weighted according to area in the case of multiple classifications.

Table 7: Runoff Coefficient

Surface Preparation	Runoff Coefficient, C
Pavement	
Hot Mix Asphalt	1.00
Concrete	1.00
Compacted gravel area	0.70
Unimproved area	0.40

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4.2.4 Consideration should be given to frequency between storms and existing ground conditions prior to event. Multiply coefficients by the frequency factors provided in Table 8, Frequency Factor. The resulting runoff coefficient shall not exceed 1.00.

Table 8: Frequency Factor

Annual Recurrence Interval (years)	Frequency Factor
10	1.00
25	1.10
50	1.20
100	1.25

Source: HEC 22, Third Edition, Urban Drainage Design Manual, 2009

4.2.5 Time of Concentration, T_c, shall be determined by summing the travel time of the various consecutive flow segments (overland flow, shallow concentrated flow, channel flow, etc.). The minimum T_c shall not be less than 6 min. (0.1 hr).

4.2.6 Determine overland/sheet flow time using the TR-55 modified kinematic wave equation for distances less than 300 ft:

$$T_O = \frac{0.42(nL)^{0.8}}{(P_2)^{0.5} S^{0.4}}$$

T_O = Overland Travel Time, min.
n = Manning's roughness coefficient
L = Flow Length, ft.
P_2 = 2-year, 24 hour rainfall, in.
S = land slope, ft/ft

4.2.7 Overland flow for distances greater than 300 ft. will begin to form small channels and should be considered shallow flow. Determine shallow concentrated flow velocity using the following formula (HEC 22):

$$V = K_u k S^{0.5}$$

V = shallow concentrated flow velocity, ft/s
K_u = 3.28
k = intercept coefficient (see Table 9, Intercept Coefficient)
S = slope, %

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Table 9: Intercept Coefficient

Land Cover/ Flow Regime	Intercept Coefficient, k
Forest w/ heavy ground litter; hay meadow	0.076
Trash fallow or minimum tillage cultivation; contour or strip cropped; woodland (overland flow)	0.152
Short grass pasture (overland flow)	0.213
Cultivated straight row (overland flow)	0.274
Nearly bare and untilled (overland flow); alluvial fans in western mountain regions	0.305
Grassed waterway (shallow concentrated flow)	0.457
Unpaved (shallow concentrated flow)	0.491
Paved area (shallow concentrated flow); small upland gullies	0.619

Source: HEC 22, Third Edition, Urban Drainage Design Manual, 2009

4.2.8 Channel flow times shall be determined in accordance with Section 4.3.

4.3 Open Channels

4.3.1 Design open channels, and culverts using the Manning's equation:

$$V = \frac{k}{n} R^{2/3} S^{1/2}$$

$$Q = AV$$

V = Average velocity, ft/s
Q = Discharge flow, ft^3/s
k = Conversion factor, 1.49
n = Manning's roughness coefficient
A = Flow cross sectional area, ft^2
R = Hydraulic radius, ft.
S = Slope, ft./ft.

4.3.2 Manning's roughness coefficient (n) shall be as shown in Table 10, Manning's Roughness Coefficient.

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Table 10: Manning's Roughness Coefficient

Channel Material	Manning's "n"
Asphalt	0.014
Rock, D50 ≤ 3 in.	0.030
Earth	0.025
Grass (Short)	0.030
Rip-rap	0.040
Grouted Rip-Rap	0.030
Gabions	0.030
Mattresses	0.025
Concrete	0.013
Gunite	0.016
Gravel Surface	0.025
HDPE Pipe	0.013
PVC Pipe	0.011

4.3.3 Channels shall typically be trapezoidal in cross section with a minimum 2 ft. bottom width. Maximum side slope shall be 2 horizontal to 1 vertical unless lined with concrete.

4.3.4 Freeboard should be provided to the top of bank for all channels. Minimum freeboard height to be 6 in. above the 10-year annual recurrence interval storm design water surface elevation.

4.3.5 Minimum pipe size for culverts shall be 18 in. Structural design of culverts shall be in accordance with the AASHTO LRFD Bridge Design Specification.

4.3.6 Where flexible linings are used, linings that are resistant to erosive forces of expected velocities during peak design flows shall be provided.

4.3.7 Shallow swales may be used to convey surface runoff where flow depth from the design rain event will be less than 8 in.

4.3.8 Provide concrete trenches where required due to space limitations or traffic requirements present a safety concern for the use of open ditches.

4.3.9 Concrete trenches required in paved process (spill containment) areas shall be designed as water-tight concrete structures in accordance with ACI 350.

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4.3.10 Where concrete trenches are used, provide grating as required by NAAMM MBG534.

4.3.11 Identify size and type of grating on design drawings in accordance with NAAMM MBG531, or NAAMM MBG532.

4.4 Underground Storm Drain System

4.4.1 Material selection shall consider specific site conditions and soil characteristics. Storm sewers and culverts shall be:

a) Reinforced Concrete Pipe per ASTM C76, Class IV

b) Reinforced Concrete Box sections per ASTM C1433 or ASTM C1577

c) Polyvinyl Chloride Pipe per ASTM D1785 and ASTM D2855

d) Corrugated Plastic Pipe per ASTM F2306

e) Corrugated Steel Pipe per ASTM A760 and ASTM B633

f) Perforated Polyvinyl Chloride pipe shall be in accordance with ASTM D2729.

g) Perforated High Density Polyethylene pipe shall be in accordance with ASTM F2648.

4.4.2 Storm drain design tailwater condition shall be the average of critical depth and the height of the storm drain conduit, (dc+D)/2, design tailwater, or mean high tide whichever is greater.

4.4.3 Storm sewer culvert headwater shall not exceed the top of road for the 25-year annual recurrence interval storm.

4.4.4 Storm drains should be designed for open channel flow unless the outfall is submerged.

4.4.5 A minimum full flow velocity of 3 ft/s shall be provided at peak flow conditions.

4.4.6 Maximum velocity for gravity storm drain systems shall not exceed 8 ft/s without energy dissipation at the outfall and in no case should exceed 15 ft/s.

4.4.7 Minimum pipes sizes for the storm drain system shall be:

a) Lateral and sub-lateral: 8 in.

b) Trunk lines: 12 in.

4.4.8 The pipe size shall not decrease in the downstream direction of flow.

4.4.9 Cover over pipe and culvert installations shall be designed to support HS20-44 live loads.

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4.4.10 A minimum cover for all culvert pipes shall be 18 in., unless justified by calculation.

4.4.11 For pipe under rigid pavement minimum cover may be reduced to 12 in. from the top of pipe to the finished grade and to 6 in. from the top of the pipe to the bottom of concrete pavement if reinforced concrete pipe (ASTM C76, Class V) is used.

4.4.12 Pipe drainage system including culverts shall not be utilized in potential LNG, LPG, Refrigeration storage and process spill areas.

4.5 Spill Conveyance Systems

4.5.1 A spill conveyance system for flammable and cryogenic liquids in accordance with the requirements of NFPA 30, NFPA 59A, and project requirements shall be provided.

4.5.2 Enclosed drainage channels shall not be used for cryogenic liquids.

4.5.3 Spill containment trenches in combination with area paving shall provide minimum grade and separation distances per NFPA 30 and NFPA 59A.

4.5.4 Cryogenic liquid spill containment trenches shall be concrete per ACI 350, unless otherwise noted.

4.5.5 Trenches shall be sized to convey the design spill rate or potentially contaminated rainwater whichever is greater. Minimum trench width shall be 2 ft.

4.5.6 Surface drainage in areas containing equipment which processes LNG and/or LPG shall be accomplished by "sheet drainage" of the area to a trench or series of trenches.

4.5.7 LNG containment pits/ impoundment basins shall be designed in accordance with 26196-100-3BD-U04-00001, Spill Containment Design Basis.

5.0 SUBSURFACE DRAINAGE SYSTEMS

5.1 General

5.1.1 Subsurface drainage systems for the removal of detrimental amounts of free groundwater shall be provided as required.

5.1.2 Sub-drainage systems shall be perforated PVC or polyethylene pipe placed at the bottom of a narrow trench and backfilled with filter gravel.

5.1.3 The system may consist of single subdrain pipe or multiple pipes placed in a grid pattern depending on area to be drained, and quantity of water to be collected.

5.2 Design Criteria

5.2.1 Minimum pipe size shall be 6 in.

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5.2.2 Perforations shall be in the bottom half of pipe below horizontal axis. Where sections of drain serve only to conduct water, perforations shall either be omitted or rotated to top and covered with PVC film.

5.2.3 Bottom of subdrain pipe shall be placed deep enough to accomplish desired draw down of free water within seepage zone.

5.2.4 Drainage trench width should be min 8 in. wider than pipe diameter. Normally, filter media shall be placed from bottom of pipe to the depth of water bearing strata.

5.2.5 Pipe and filter media shall be wrapped with separation/filtration geotextile fabric to control infiltration of fines and still allow sufficient passage of water.

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Port Arthur LNG

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PORT ARTHUR LIQUEFACTION PROJECT

EPC GEOTECHNICAL DESIGN BASIS REPORT FOR PERIMETER LEVEE

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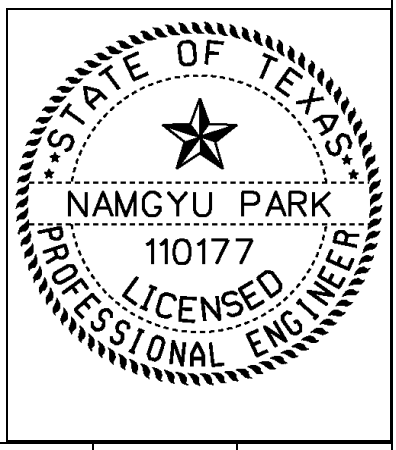

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		26196-100-3DR-K04F-00004	
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1.0 GENERAL

Port Arthur LNG, LLC (PALNG) is developing a Liquefied Natural Gas (LNG) production and export facility on a site located on the western shoreline of the Port Arthur Canal in Jefferson County, Texas. The project base scope will include two (2) identical LNG trains, two (2) LNG Storage Tanks, one (1) LNG Carrier Berth, and associated utilities/facilities. Overall site plan is shown in **Figure 1**.

As part of the PALNG project development, an earthen levee will be constructed around the perimeter of the plant as shown in **Figure 2** in order to protect the LNG plant against a 500-year return period storm surge event with associated wave conditions (Ref. 1).

The purpose of this report is to summarize geotechnical conditions, analyses, and recommendations for the design and construction of the perimeter levee. All elevation reported in the document is with respect to NAVD88.

2.0 GEOTECHNICAL INVESTIGATION DATA

The Owner conducted geotechnical investigations in several phases from 2004 through 2015; PSI conducted geotechnical investigations in 2004, and Fugro performed the additional investigations in 2006 and 2015. Due to insufficient data for Bechtel to develop an EPC Lump Sum Turn Key (LSTK) price, an EPC level geotechnical investigation was conducted by the Owner in 2019. The investigation scope was developed by Bechtel G&HES group and the final scope of work was agreed by the Owner. Bechtel received the following geotechnical investigation reports;

- Fugro EPC Level Geotechnical Data Report Port Arthur LNG Project (Report No. 04.10180165-1 Rev.2 dated December 6, 2019)
- Fugro Geotechnical Study Port Arthur LNG Project (Report No. 04.10150037 dated October 20, 2017)
- Thompson Report of Geotechnical Consulting Services – Phase 1 Pre-Feed Soil Stabilization Trials Port Arthur, Texas (Report No. 16-1101-0157 Rev.1 dated October 11, 2016)
- Fugro Geotechnical Investigation Port Arthur LNG Receiving Terminal – LNG Tanks (Report No. 0415-1422-1 dated May 31, 2006)
- Fugro Geotechnical Investigation Port Arthur LNG Receiving Terminal – SH 87 (Report No. 0415-1422-2 dated June 2, 2006)
- Fugro Geotechnical Investigation Port Arthur LNG Receiving Terminal – Process Area, Marine Area, and Levee (Report No. 0415-1422-3 dated July 30, 2006)
- PSI Geotechnical Exploration Report Proposed Sempra Energy LNG Import Terminal Port Arthur, Texas – Harbor/Marine Berthing Area, Process Area, Plant Roadways, Highways, Embankment, and Dikes (Report No. 286-45123-General dated October 29, 2004)
- PSI Geotechnical Exploration Report Proposed Sempra Energy LNG Import Terminal Port Arthur, Texas – LNG Tank Area (Report No. 286-45123-Ttank dated September 20, 2004)
- PSI Geotechnical Exploration Report Proposed Sempra Energy LNG Import Terminal Port Arthur, Texas – Phase II LNG Tanks (Report No. 286-45123-Tank-Addendum B dated October 29, 2004)

Geotechnical investigation locations from the investigations along the perimeter levee are shown in **Figure 3**. Our recommendations in this report will be based on the geotechnical data provided in the above reports.

3.0 SITE CONDITIONS

3.1 Site Surface Conditions

The project site is located on low-lying lands on the west bank of the Sabine-Neches Waterway with much of the area covered by wetlands. Forested wetlands with numerous tall trees, shrubs, and ponded water in several areas are scattered throughout the project site. The project site is undeveloped and mostly covered with vegetation consisting of heavy brush and trees. The Fugro's EPC Level Geotechnical Data Report (Ref. 1) indicates that the area had been previously used for disposal of dredged material removed during maintenance dredging operations in the Port Arthur Ship Channel. However, there has been no indication of dredge disposal activities at the project site in recent years. Due to the presence of standing water and soft soil conditions, site accessibility was very difficult for the previous geotechnical investigation by Fugro. A review of available topographic data indicates that existing site grade elevation varies from approximately EL +0.0 ft to EL +12.0 ft as presented in **Figure 4**. Site conditions encountered in pertinent areas are summarized in **Table 1**.

Table 1: Site Surface Conditions

Area	Existing Elevation (ft)	Site Conditions
Eastern and Southern Levee Alignment / Train / Utility	EL +1.0 to EL +12.0	Site grade varies significantly in this area, with the site grade decreasing from east to west. Thick vegetation consisting of clusters of small trees and shrubs were encountered in this area. Standing water was encountered to the eastern portion of this area.
Western Levee Alignment / Building	EL +2.0 to EL +4.0	This area is relatively level with shrub type vegetation. The average elevation in this area is about EL +2.5 ft.
Berth	EL +2.0 to EL +10.0	This area is covered with thick vegetation consisting of small trees and shrubs. Standing water was encountered in portions of this area. The average elevation in this area is about EL +7.0 ft.
LNG Tank	EL +2.0 to EL +9.0[1]	The site grade in this area generally decreased from east to west. Standing water was encountered in parts of this area. Vegetation varied from small shrubs to thick trees from west to east in this area.

NOTE: Existing grade elevations of perimeter levee alignment are considered as EL +1.0 ~ EL +7.0 ft.

During the EPC level geotechnical investigation conducted in early 2019, access to drilling and other field test locations was very difficult due to soft, marshy ground. The site conditions observed during the investigation are described in Section 3.2 of this report to provide guidelines on site access during construction.

3.2 Field Observations during Supplemental Geotechnical Investigations in 2019

Observations provided in this section are from the EPC level geotechnical investigation conducted in early 2019. These observations and implemented procedures for drill site access provide indication of the expected conditions during initial site access for construction.

The project site is mostly low and relatively flat with change in elevation ranged from approximately EL. +0 ft to EL. +12 ft. The higher areas are mostly man-made, such as dikes and old dredge fill areas, and support thick brush and modest tree growth. The lower areas are very wet, mostly under shallow water, and support marsh grasses, aquatic vegetation and stunted shrubs. This wetland area has been a challenge in which to perform the supplement geotechnical investigations and will certainly present challenges to early site works such as initial earthwork and construction of access roads, staging areas and laydown areas. **Figure 5** and **Figure 6** show the single, existing staging area used for the supplemental geotechnical investigations.

Vegetation clearing for both surveying and access roads was not particularly difficult because the subcontractors were experienced and used the correct equipment. **Figure 7** through **Figure 13** show the airboat, Marsh Master tracked vehicles, all-terrain vehicles (ATVs), and GyroTrac used at the site. The Marsh Masters were equipped with Brush Hog-style, rotary-bladed mowers and were sufficient in cutting most marsh vegetation including thick brush and thin saplings. Thicker trees were cut with a GyroTrac, which was sufficient for small trees. However, the GyroTrac was not particularly good in the soft ground despite the steel tracks. It worked well on the higher, drier ground but easily became mired in the mud. In the mud, their experience showed that heavy machinery on smaller tracks, like the GyroTrac, did not perform properly as well as the lighter, much wider tracked Marsh Master buggies and larger swamp buggies.

The drilling rigs and cone penetrometer test (CPT) rigs were mounted on a variety of tracked vehicles together known as swamp buggies or marsh buggies, presented in **Figure 14** through **Figure 18**. The Marsh Master buggies are smaller tracked vehicles than the swamp buggies.

The access roads were cleared of vegetation but otherwise unimproved. Vehicle traffic, regardless of the type and size of the vehicles, rapidly churned the roads to deep, sticky mud resembling rivers of slow-moving sludge, shown in **Figure 19** through **Figure 23**. The only vehicle other than the swamp or Marsh Master buggies that can navigate the access roads are the single-seat, motorcycle-style ATVs, shown in **Figure 24**. Four-wheel drive pickups, heavy trucks and the larger ATVs will not work, and foot traffic is nearly impossible.

3.3 Generalized Subsurface Conditions

All available borings and CPTs data are reviewed to develop generalized subsurface profiles for different areas of the project. Generalized descriptions of the subsurface conditions are discussed below. Soil profiles identifying the various strata at different areas are presented on Plates 4a through 4r of the Fugro's EPC Level Geotechnical Data Report (Ref. 1). The following strata have been identified in all areas; soil layering and properties specific to perimeter levee are further discussed in Section 0.

Stratum 1: Cohesive soils consisting of clay, and sandy/silty clay generally extends from the surface to a depth of about 150 to 175 feet below existing grade. In general, the upper approximately 15 feet of this stratum is very soft with undrained shear strengths as low as 0.1 ksf, (very soft), and the underlying soils appear to be firm (undrained shear strength (Su) of 0.5 ksf) to very stiff (up to Su of 3.5 ksf). Relatively thicker very soft clay layer was encountered in the MOF, Berth and Building areas. A 2-feet to 10-feet thick organic layer was encountered at bottom of the Stratum 1. The moisture contents and plasticity index values measured within this organic layer were much higher than the values obtained for Stratum 1.

Stratum 2: Natural granular soils consisting of sand, silty sand, and sandy silt extend below the cohesive soils (i.e. Stratum 1) to a depth of about 185 feet below existing grade. The sandy soils encountered in this stratum is considered medium dense to very dense based on recorded SPT N-values.

Stratum 3: Natural cohesive soils extend below the granular layer (i.e. Stratum 2) to a depth of about 270 feet below existing surface based on select borings in the Berth, LNG Tank, and Building areas. The soil layer similar to Stratum 3 is anticipated in other areas, but it was not confirmed due to limited soil boring information. Based on the field and laboratory measurements, undrained shear strengths in these soils generally range from 1.0 ksf (stiff) up to 4.0 ksf (hard).

Stratum 4: Natural granular soils consisting of sand and silty sand extend below the cohesive soils (i.e. Stratum 3) to a depth of about 300 feet below existing grade. The sandy soils encountered in this stratum is considered very dense with recorded N-values greater than 50 blows per foot. This stratum was encountered only at deep borings (greater than 275 feet) conducted in the Berth, LNG Tank, and Building areas.

3.4 Groundwater

Onshore soil borings were initially drilled using the dry-auger technique to estimate the depth-to-water. Once free-water was encountered, drilling was halted, and depth-to-water observations were made in the open boreholes. After a period of about 10 to 20 minutes, depth-to-water measurements were observed again. During the supplemental geotechnical investigations in 2019, 24-hr depth-to-water observations were performed at selected boring locations (i.e. B-123, B-127, B-134, and B-136). Based on the location and the ground surface elevations of the project site, it is estimated that water to be present at very shallow depths. Standing water was present in most of the areas within the project site at the time of geotechnical investigations. In addition, it is anticipated that perched water within the dredged material encountered at the site. Water levels will fluctuate with seasonal variations in rainfall and surface runoff, especially during extended periods of heavy rainfall. It may also be impacted by tidal fluctuation in the ship channel. It is possible that the groundwater level could rise to the ground surface during extended periods of heavy rainfall. Due to poor drainage at the site, water frequently ponds for an extended period of time after a rain event. Therefore, it is recommended that the groundwater level is considered at the existing grade for design and construction planning purposes.

4.0 LEVEE CONFIGURATION AND CONSTRUCTION INPUTS

4.1 General Levee Configuration

State Highway 87, pipelines and utility infrastructure will be relocated as mentioned in Section 1.0. An earthen levee is planned along the perimeter of the plant, as shown on **Figure 25**, to protect the plant facilities from storm surge and flooding.

In order to study the variation of subsurface condition and the geometry of the levee along the alignment, a number of cross sections are prepared and subsurface conditions at the cross sections are evaluated. The locations of the cross sections are shown in **Figure 25**. Based on the review of subsurface conditions and the geometry of the levee, the levee alignment is divided into three (3) segments; Segment-1 (North – Building/South Berth Area), Segment-2 (West, South and Northeast – Utility/Laydown/Other Area), and Segment-3 (Southeast – Ground Flare/Stormwater Pond Area). These segments with cross sections A-A’

through H-H' are shown in **Figure 25** and levee configuration with each cross section is presented in **Figure 26** through **Figure 30**. In addition, cross sections D-D', E-E' and F-F' provide approximate locations of the levee and existing State Highway 87 presented in **Figure 27** through **Figure 29**.

It is understood that the western levee of Segment 1 and Segment 2 has limited availability of the real estate and the toe of the levee coincides with the property line, thus the levee construction or any subgrade preparation prior to levee construction at the western boundary cannot extend beyond the property line. In addition, the existing State Highway 87 will be abandoned after completion of highway relocation which will be approximately 200 ft away from west and south of levee alignment. Texas Department of Transportation (TXDOT) proposed the State Highway 87 improvement plan per TXDOT contract drawings (Ref. 13), however Bechtel is not aware of the construction schedule for TXDOT's slope protection. Therefore, this improvement plan was not considered in the slope stability analyses for cross sections D-D', E-E' and F-F'. Section 7.2 provides more details of levee slope stability analysis

The top elevation of the levee will be at Elevation +20.6 feet and the top of the levee will be about 15 feet wide with a 3H:1V slope at both sides. The levee will be constructed at the existing grade generally ranging from Elevation +1 to +7 feet, with the final rough grade of the plant site around Elevation +7 feet.

4.2 Site Preparation prior to Levee Construction

The project site is a marsh area within a few miles of the Gulf of Mexico and mostly covered with vegetation consisting of heavy brushes and trees, thus the site shall be cleared and grubbed. Stripping should be to the minimum depth necessary to remove all vegetation and roots (entire root-ball systems). It is estimated that an average stripping depth of 2.5 feet across the entire site for the perimeter levee should be adequate at this stage. However, greater stripping depths may be required in localized areas due to existing root systems of trees, brushes, etc. and natural variation in subsurface conditions. The exact depth of stripping should be determined in the filed in consultation with the field geotechnical engineer. After clearing/grubbing/stripping, subgrade stabilization along the entire alignment shall be carried out prior to constructing the levee.

The exposed clayey subgrade after stripping shall be improved by in-place mixing with lime and/or cement to provide stable platform for levee construction. It is recommended that 10 feet shallow soil stabilization with a target unconfined compressive strength of 35 psi for Segment-1 and Segment-3, and 7 feet for Segment-2. Soil stabilization shall extend minimum 15 feet horizontal distance from toe of the levee at both sides. The subgrade improvement requirements have been determined based on the slope stability analyses described later in the report.

Laboratory bench scale testing program has been completed to select lime and cement quantities for subgrade improvement. Based on the laboratory bench scale testing results, it is recommended that subgrade soils be improved with 4% quicklime (pelletized) and 7% cement by wet soil weight of 100 lbs/ft^3 with the W/C ratio of 0.75. This includes some allowance for potential field variation of cement dosage established in the laboratory. These will be further refined after completing stabilization field trials.

Water in the low lying areas need to be drained prior to performing the soil stabilization to maintain "dry" conditions during site preparation.

Due to expected high settlement, wick drains should be installed under the levee to accelerate settlement and strength gain in the underlying soft clay layer. Wick drains will accelerate pore pressure dissipation and hence the underlying soil will gain strength while reducing the time required for primary consolidation

settlement. Wick drains will be installed after stabilized soils gain sufficient strength to support construction equipment.

The following construction sequence should be implemented after stripping operation along the levee alignment. Details of site preparation recommendations are illustrated in a story board format as shown in **Figure 31** through **Figure 34**, except as described in Section 4.3 for a portion of Segment 1 and Segment 2:

1) Stabilize the subgrade soils to a depth of 10 feet for Segment-1 and Segment-3, and to a depth of 7 feet for Segment-2 with a target unconfined compressive strength of 35 psi by mixing with cement and/or lime. Soil stabilization shall extend minimum 15 feet horizontal distance from toe of the levee at both sides.
2) Upon completion of the soil stabilization, low permeability fill shall be placed to provide a proper sloping surface to ensure the horizontal wick drains will maintain positive drainage flow from center to outside of the levee during consolidation of the levee, as illustrated in **Figure 31** through **Figure 34**.
3) Install vertical wick drains to a depth of 50 feet with a center-to-center spacing of 5 feet in a triangular pattern, and then install the horizontal wick drains. The wick drains should extend minimum 10 feet horizontal distance from toe of the levee at both sides.
4) Install 3 feet wide and 6 feet deep cut off wall with minimum 2 feet keyed into the soil stabilized layer, as illustrated in **Figure 31** through **Figure 34**.
5) Place and compact low permeability fill per the requirement in the Project Specification for Site Preparation and Earthworks [26196-100-3PS-CG00-00001 (PAL-PJT-CIV-STD-00-X-0001)]. Low permeability fill should be tested to confirm the conformance with the specification requirement by performing permeability, UC (Unconfined Compression) and direct shear tests in addition to “standard” compaction tests.
6) Re-work/replace any fill not meeting specified requirements as necessary and re-test until acceptable testing results are achieved.
7) Construct levee surface/slope protection.

During the construction phase, a field geotechnical engineer shall oversee the construction of perimeter levee including site preparation, soil stabilization, fill placement and compaction, and instrumentation monitoring. The field geotechnical engineer will review the in-situ and laboratory test results of the fill and stabilized soils and inspect the subgrade conditions before the fill placement. The field geotechnical engineer shall be notified with any anomaly occurring during the levee construction. It also should be noted that some steps recommended above could be carried out simultaneously in different levee segments.

4.3 Special Constructability Considerations

The real estate available at the western levee of Segment 1 and Segment 2 adjacent to the property line is very limited. The levee toe coincides with the property line, in which case horizontal extension of the subgrade stabilization to 15 feet beyond the western toe of the levee is not available which is required for levee stability. In addition, the horizontal wick drains that facilitate the horizontal water flow from vertical wick drains cannot be routed to outside of the property line.

With both considerations, it is recommended that sheet pile wall (AZ-14) be constructed at the toe of the levee that functions as a buttress to improve levee stability. The tip elevation should be at least Elevation -33.5 ft so that it provides stability to levee. Horizontal wick drain under the levee should be installed such that water flow occurs from outside edge of the levee to a trench located near inside toe of the levee.

5.0 DESIGN DATA

Following are the basic design data for the Perimeter Levee.

5.1 Flood Level

Based on the Overtopping and Levee Elevation Assessment Report (Ref. 21), the maximum water level elevation of +14.6 feet (NAVD88) outside the plant corresponding to 500-year Storm Still Water Elevation (SWEL) and Relative Sea Level Rise (RSLR) has been suggested for the geotechnical design of perimeter levee in this report.

However, we started analyses with the maximum water level of Elevation +16.6 feet (NAVD88) based on the previous Marine Site Characteristics Report (Ref. 20) prepared during a EDSA (FEED) phase. After completion of our analyses, it was recognized that the maximum still water level has been updated to Elevation +14.6 feet. We did not re-run the stability analyses since the analyses based on the maximum still water elevation of +16.6 ft is considered conservative.

5.2 Seismic Design Criteria

As noted in Fugro's Site-Specific Seismic Hazard Assessment Report (Ref. 4), the site is located in a zone of relatively low seismicity, with peak ground acceleration (PGA) shown in **Table 2** below:

Table 2: Horizontal Peak Ground Accelerations

Events	Horizontal PGA
475-year Return Period (OBE)	0.042g
2475-year Return Period (SSE)	0.116g

NOTE: OBE = Operating Basis Earthquake, SSE = Safe Shutdown Earthquake

5.3 Loading

A standard surcharge of 250 psf on top of the perimeter levee has been considered. This typically covers standard construction equipment of up to 15-20 ton.

5.4 Materials and Test Requirements

The requirements for materials, types of tests and testing frequency for levee construction are provided in the Sections 2.10, 3.7, 3.15 and 4.2 of the Project Specification for Site Preparation and Earthworks [26196-100-3PS-CG00-00001 (PAL-PJT-CIV-STD-00-X-0001)].

In addition, the Project Specification for Soil Improvement [26196-100-3PS-CY05-00002 (PAL-PJT-CSA-STD-00-GEN-0002)] requires post-acceptance testing to be performed on the stabilized soils to meet the acceptance criteria to confirm uniform mix with unconfined compressive strength of 35 psi.

5.5 Instrumentation

It is recommended that the following instrumentations for monitoring levee performance should be installed in accordance with the Project Specification for Installation and Monitoring Geotechnical Instrumentation [26196-100-3PS-CY05-00004 (PAL-PJT-CSA-STD-00-GEN-0004)]:

- Fifteen (15) settlement monitoring plates
- Twenty (20) inclinometers
- Fifteen (15) vibrating wire piezometers

Settlement monitoring plates shall be installed at the existing grade along the perimeter levee after stripping and shallow soil stabilization prior to placement of low permeability fill. At five (5) selected locations, inclinometers shall be installed at the toe and 20 feet away from the toe on both sides of the levee. Vibrating wire piezometers (VWPs) shall be installed in a boring drilled at the levee centerline at five (5) selected locations. VWPs shall be installed at 20 feet depth increment to a depth of 60 feet in each boring (i.e. 3 VWPs per boring). These instruments will help monitor levee stability during construction and the long-term performance thereafter. Monitoring shall be conducted on a daily basis during low permeability fill placement, and on a weekly basis for 3 months upon completion of fill placement, and on a bi-weekly basis thereafter until directed by the field geotechnical engineer for termination of monitoring.

Extra caution shall be exercised to avoid any damage to the monitoring instrumentation during construction until termination of the monitoring program. A layout of the recommended site wide instrumentation plan is shown in **Figure 37**.

5.6 Slope Surface Erosion Protection

It is assumed that proper erosion control measures and maintenance program will be implemented to protect the surfaces of perimeter levee at both sides during repeated flood, runoff, and storm surge events. The design of surface protection and maintenance program are out of scope of this report and the contribution to slope stability from surface protection has not been considered in our slope stability analysis.

6.0 DESIGN CRITERIA

The design requirements with respect to global stability, settlement, seepage and blowout are discussed in the following sections.

Based on existing soil conditions and recommended soil stabilization, it is expected that no bearing failure under the weight of the perimeter levee with design levee configuration. With low permeability fill specified to construct the levee, the internal erosion and piping potential through the levee itself should not be a design concern.

6.1 Global Stability

The following design conditions were analyzed to confirm Factor of safety (FOS) requirements would be achieved:

1) Short-term condition (during construction and operation) - minimum required FOS of 1.3
2) Long-term condition - minimum required FOS of 1.5
3) Rapid drawdown condition - minimum required FOS of 1.1

4) Maximum still water condition - minimum required FOS of 1.1
5) Seismic conditions - minimum required FOS of 1.1 or demonstrate lateral deformation of the slope is acceptable.

6.2 Settlement

The top of levee elevation must always not be lower than the worst-case design elevation for hydrologic conditions. Levee top elevation must be set higher during construction to compensate for the estimated long-term settlement and/or the top of levee elevation shall be regularly checked and maintained during the plant operation.

6.3 Seepage and Blowout Potential

Based on the soil information obtained from the soil borings/CPTs performed close to the proposed perimeter levee alignment, sandy soils consisting of silty sand were encountered in 8 locations (i.e. B-108, B-CPT-125, CPT-122, CPT-179, CPT-181, CPT-182, CPT-183, SCPT-105) within about EL. -30 feet. The existing sandy soils are generally more permeable than the clay soils but are not as permeable as clean sands or gravels. Given the depth of these isolated and interspersed sandy soils and relatively short duration of the design flood, seepage and blowout under the perimeter levee are not anticipated. If shallow sand channels are found during construction, the sand channels should be removed from the perimeter levee footprint and backfilled with clay select fill or low permeability fill.

7.0 ANALYSIS METHODOLOGY

7.1 General

The general methodology for performing slope stability analyses of the levee was as follows:

1. Evaluate subsurface data, soil borings and cone penetration tests (CPTs), along the levee alignment and establish representative subsurface sections and the areal limits of these sections.
2. Generate subsurface sections using borings and CPTs for each of the three levee segments. The extent of each levee segment is shown on **Figure 25**.
3. Develop representative soil stratigraphy for each levee segment. Evaluate engineering properties including shear strength (undrained S_u, and drained c' and ϕ' values) and soil compressibility for each levee segment as shown on **Figure 38** through **Figure 43**. Soil compressibility is interpreted based on field and laboratory test results for the entire site area with engineering judgment.
4. Assign soil properties for each soil layer as determined from Step 3.
5. Generate levee profiles for analysis, by combining design levee cross section profiles (i.e. A-A' through H-H' shown on **Figure 26** through **Figure 30**) and the corresponding subsurface profiles defined in Step 3.The appropriate engineering properties assigned in Step 4 are also added.
6. Select critical cross section profiles of A-A', C-C' for Segment-1, G-G' for Segment-2, and F-F' for Segment-3, respectively.
7. Perform analyses for slope stability and settlement. Additional details of the methodology for each type of analysis are provided in Sections 7.2 and 7.3, respectively.

7.2 Slope Stability

Slope stability analyses were conducted using computer program Slope/W (2018 R2 Version 9.1.1.16749), by GEO-SLOPE International (Ref. 12), using Spencer method for the conditions listed in Section 6.1. Analyses were conducted using both circular slip and block failure mechanisms. In some cases, block failure mechanism yielded substantially lower FOS. These cases were carefully examined for its validity by conducting additional analyses with Bishop and Janbu methods. In all cases, except seismic loading condition, a surcharge of 250 psf, to account for construction traffic, was applied at the levee crest.

The critical section for each levee segment was selected based on the loading, levee geometry, and subsurface soil conditions. Slope protection details as part of the State Highway 87 improvement plan proposed in the TXDOT contract drawings (Ref. 13) were not incorporated since Bechtel is not aware of the construction schedule for TXDOT's slope protection. Therefore, cross section profile of F-F' for Segment-3 was conservatively based on the existing slope toward the ship channel provided by bathymetry survey data available from Fugro's EPC Level Geotechnical Data Report (Ref. 1). The results are presented in Section 9.1.

7.3 Levee Settlement

Levee settlements for all segments were estimated using computer program UniSettle by UniSoft Geotechnical Solutions Ltd. (Ref. 14. UniSettle program uses conventional compressibility parameters for soils such as elastic modulus (E), compression index (C_c), recompression index (C_r), initial void ratio (e_0), pre-consolidation margin ($\Delta p'$), and secondary compression index (c_α) to calculate the settlement under the applied load. Westergaard's stress distribution method (Ref. 15) was used in UniSettle calculations. The results are presented in Section 9.2. The settlement values shall be used to estimate the quantity of fill required for compensating settlement.

8.0 SOIL DESIGN PARAMETERS

8.1 Strength Parameters for Slope Stability

The perimeter levee was subdivided into three segments as indicated in **Figure 25** based on the subsurface soil conditions. These segments with soil strength parameters are summarized in **Table 3**. The subsurface cross section profiles to approximately Elevation -80 feet for each segment are considered in each slope stability analysis since the underlying stiff clay provided sufficient resistance against deeper slip surfaces.

Design undrained shear strength of native soils was estimated using field test data from all available CPT and SPT explorations (torvane tests) and laboratory test results (UU triaxial and mini vane tests). Selection of these undrained shear strength parameters is presented on **Figure 38** through **Figure 40**. Strength gain of the soft clays underneath the levee, based on the planned wick drain soil improvement program under levee alignment, was developed using the Stress History and Normalized Soil Engineering Parameters (SHANSEP) design procedure. Design undrained shear strength of the low permeability fill and improved soil was taken from the Project Specification for Site Preparation and Earthworks [26196-100-3PS-CG00-00001 (PAL-PJT-CIV-STD-00-X-0001)] and Project Specification for Soil Improvement [26196-100-3PS-CY05-00002 (PAL-PJT-CSA-STD-00-GEN-0002)].

Direct measurements of soil drained strength were not available for the site soils along the levee alignment. The soil drained parameters were estimated based on the consolidated-undrained triaxial compression test

results from other areas within the project site, empirical correlations and Bechtel's past experience on similar soils.

The interpreted soil undrained (S_u) and drained (friction angle ϕ' and cohesion c') strength parameters are summarized in **Table 3**.

Table 3: Summary of Soil Strength Parameters for Slope Stability Analyses

Levee Segment / Area	Elevation Top of Layer (ft)	Soil Type	Total Unit Weight (pcf)	Undrained		Drained	
				S_u (psf)	S_u (psf)[1]	c' (psf)	ϕ' (deg)
Segment-1 (North – Building/ South Berth Area)	20.6	Low Permeability Fill[2]	120	1500	N/A	300	26
	4.5	Improved Soil[2]	100	2500	N/A	500	26
	-5.5	Upper Soft Clay	100	250	400	50	21
	-18	Lower Soft Clay	100	450	500	90	22
	-30	Firm Clay	115	1100	N/A	200	25
	-40	Stiff Clay	115	1300	N/A	250	26
Segment-2 (West, South and Northeast – Utility/ Laydown/ Other Area)	20.6	Low Permeability Fill[2]	120	1500	N/A	300	26
	1.5	Improved Soil[2]	100	2500	N/A	500	26
	-5.5	Soft Clay	100	200	380	40	21
	-18	Firm Clay	115	900	N/A	180	24
	-35	Stiff Clay	115	1200	N/A	250	26
Segment-3 (Southeast – Ground Flare/ Stormwater Pond Area)	20.6	Low Permeability Fill[2]	120	1500	N/A	300	26
	4.5	Improved Soil[2]	100	2500	N/A	500	26
	-5.5	Upper Soft Clay	100	200	380	40	21
	-12	Lower Soft Clay	100	350	440	70	22
	-32	Stiff Clay	115	1200	N/A	250	26

NOTE: 1. SHANSEP equation based on the effective stress increase estimated S_u values after consolidation of clay under levee weight aided by the wick drain.
2. The soil parameters for low permeability fill were estimated based on the laboratory tests results on similar soils in Bechtel's past projects.

8.2 Compressibility Parameters for Settlement Estimates

The generalized compressibility parameters developed for the site were used to estimate the levee settlements. These parameters were obtained from all available consolidation test results as shown in **Figure 41** through **Figure 43**. The interpreted soil compressibility parameters (elastic modulus (E), compression index (C_c), recompression index (C_r), initial void ratio (e_0), pre-consolidation margin ($\Delta p'$), and secondary compression index (c_α)) are summarized in **Table 4**.

Table 4: Summary of Soil Compressibility Parameters for Settlement Estimate

Levee Segment / Area	Elevation Top of Layer (ft)	Soil Type	Total Unit Weight (pcf)	Compressibility Parameters					
				E (ksf)	C_c	C_r	e_0	$\Delta p'$ (ksf)[2]	C_α
Segment-1 (North – Building/ South Berth Area)	7[1]	Low Permeability Fill	120	500	-	-	0.5	-	-
	4.5	Improved Soil	100	2000	-	-	0.3	-	-
	-5.5	Soft Clay	100	-	0.65	0.125	1.5	0	0.015
	-30	Firm to Stiff Clay	115	-	0.22	0.04	1.0	5	-
	-145	Organic Clay	120	-	0.768	0.144	1.4	5	-
	-155	Dense Sand	125	1000	-	-	0.3	-	-
	-175	Stiff Clay	125	-	0.36	0.068	0.8	3	-
Segment-2 (West, South and Northeast – Utility/ Laydown/ Other Area)	4[1]	Low Permeability Fill	120	500	-	-	0.5	-	-
	1.5	Improved Soil	100	2000	-	-	0.3	-	-
	-5.5	Soft Clay	100	-	0.65	0.125	1.5	0	0.015
	-18	Firm to Stiff Clay	115	-	0.22	0.04	1.0	5	-
	-155	Organic Clay	115	-	0.768	0.144	1.4	5	-
	-165	Dense Sand	125	1000	-	-	0.3	-	-
	-180	Stiff Clay	125	-	0.36	0.068	0.8	3	-
Segment-3 (Southeast – Ground Flare/ Stormwater Pond Area)	7[1]	Low Permeability Fill	120	500	-	-	0.5	-	-
	4.5	Improved Soil	100	2000	-	-	0.3	-	-
	-5.5	Soft Clay	100	-	0.65	0.125	1.5	0	0.015
	-32	Stiff Clay	115	-	0.22	0.04	1.0	5	-
	-165	Dense Sand	125	1000	-	-	0.3	-	-
	-175	Stiff Clay	125	-	0.36	0.068	0.8	3	-

NOTE: 1. Existing grade at EL. +7 ft, +5 ft, +3 ft and +1 ft with 2.5 ft of stripping were considered for settlement analyses.

2. Pre-consolidation margin $\Delta p'$ = difference between preconsolidation pressure and overburden pressure

9.0 RESULTS OF SLOPE STABILITY AND SETTLEMENT ANALYSES

9.1 Slope Stability

Prior to the stability analysis, subsurface conditions along each segment of the levee were screened to select the most critical cross section location for subsequent analysis, capturing variations in levee geometry with final grade, local soil profiles, and loading conditions. Analyses were then performed on the selected cross sections for each levee segment. Maximum still water level from storm surge, surcharge loading, and seismic loading were considered in the analysis.

The applied loading, groundwater conditions, soil drained or undrained parameters for each case are summarized as follows:

1. Short-term condition – Undrained Strength Parameters

   Short-term condition with undrained strength parameters is checked for operational condition, as this case will be similar to conditions during construction.
   - Surcharge load of 250 psf on the top of the levee to account for construction or maintenance
   - Groundwater is at approximate existing ground level

2. Long-term condition – Drained Strength Parameters

   The slope stability with drained strength parameters is checked for the long-term conditions.
   - Surcharge load of 250 psf on the top of the levee to account for construction or maintenance
   - Groundwater level at approximate existing ground level

3. Rapid drawdown – Undrained Strength Parameters

   Drawdown of flood water against a slope consisting of low permeability soils can result in residual pore pressures remaining in the soil and potentially causing instability of the slope.
   For the perimeter levee constructed of low permeable soils, fully adjusting from a pre-surge condition to a steady-state condition under an increased hydraulic loading of a storm surge would take months or even years, while the storm surge itself will last a matter of hours or days. The study of consolidation test data also supported that there is not enough time for the pressures imposed by a storm or flood to develop into a steady-state flow regime. Therefore, stability evaluations for the perimeter levee under storm surge and eventual drawdown involves essentially no change in effective stress; rapid drawdown condition during storm surge becomes undrained analysis as discussed in Case 3 herein.
   - Maximum water level of Elevation +16.6 feet (NAVD88) within the levee cross section during rapid drawdown
   - Surcharge load of 250 psf on the top of the levee to account for construction or maintenance
   - Groundwater at approximate existing ground level outside the levee cross section

4. Maximum Still Water – Undrained Strength Parameters

Maximum still water level corresponding to 500-year storm against the outboard/exterior levee slope consisting of low permeability soils can result in residual pore pressures remaining in the soil and potentially causing instability of the slope.

However, it is also understood that the use of maximum still water level corresponding to flood elevation in this case is a very conservative assumption, as steady-state maximum still water level will not be achieved in relatively short time of storm surge or flood events. Even under the steady state, the water level within the levee at inboard side should be lower than the outboard. The response to these loads is undrained and involves essentially no change in effective stress.

- Maximum water level of Elevation +16.6 feet (NAVD88) against the outboard/exterior levee slope
- Water level within the levee is gradually decreased close to the ground elevation at the toe inside the levee
- Surcharge load of 250 psf on the top of the levee to account for construction or maintenance
- Groundwater at approximate finished grade level inside the plant area

5. Seismic condition – Undrained Strength Parameters

- Seismic horizontal coefficient of 0.077g corresponding to 2/3 of PGA under the maximum considered earthquake (MCE) condition is used in the pseudo-static analyses. In the pseudo static analyses, an acceleration multiplier is used to calculate the seismic coefficient, and it varies from 0.17 to 0.75 which are typically recommended in the literature. The acceleration multiplier of 2/3 (=0.67) had been used in the past Bechtel projects.
- Soil undrained shear strength parameters are reduced to 80% of the original values considering seismic effect. It's a recommended practice to reduce the undrained shear strength of non-liquefiable soils in the literature.

The analysis results for all the considered cases are summarized in **Table 5** and the Slope/W outputs are presented in **Figure 44** through **Figure 76**.

Table 5: Summary of Slope Stability Analysis Results

Levee Segment / Cross Section	Exterior Slopes - Resultant Factor of Safety (FOS)					Figure Nos.
	Short-Term (Undrained)	Long-Term (Drained)	Rapid Drawdown (Undrained)	Max Still Water (Undrained)	Seismic (Undrained)	
	Exterior I->O	Exterior I->O	Exterior I->O	Exterior I->O	Exterior I->O	
1 (A-A')	1.58 (B)	2.10 (S)	1.57 (B)	-	0.90 (B)	**Figure 44** thru **Figure 47**
1 (C-C')	1.88 (B)	2.03 (S)	1.87 (B)	-	1.16 (B)	**Figure 54** thru **Figure 57**
2 (G-G')	1.88 (B)	2.17 (S)	1.81 (B)	-	1.11 (B)	**Figure 58** thru **Figure 61**
3 (F-F')	1.31 (B)	1.55 (S)	1.29 (B)	-	0.79 (B)	**Figure 67** thru **Figure 70**
Req'd FOS	1.3	1.5	1.1	1.1	1.1	
Levee Segment	**Interior Slopes - Resultant Factor of Safety (FOS)**					**Figure Nos.**
	Short-Term (Undrained)	**Long-Term (Drained)**	**Rapid Drawdown (Undrained)**	**Max Still Water (Undrained)**	**Seismic (Undrained)**	
	Interior O->I	**Interior O->I**	**Interior O->I**	**Interior O->I**	**Interior O->I**	
1 (A-A')	1.64 (B)	1.90 (S)	1.59 (B)	1.58 (B)	1.10 (B)	**Figure 49** thru **Figure 53**
2 (G-G')	1.61 (B)	1.53 (B)	1.57 (B)	1.56 (B)	1.12 (B)	**Figure 62** thru **Figure 66**
3 (F-F')	1.47 (B)	1.96 (S)	1.45 (B)	1.45 (B)	0.97 (B)	**Figure 72** thru **Figure 76**
Req'd FOS	1.3	1.5	1.1	1.1	1.1	

Notes:
B = Block failure surface
S = Circular slip surface
I->O = Slip surface from Inboard to Outboard; and O->I: Slip surface from Outboard to Inboard

It is noted that the resultant FOS values under all design conditions, except for two cross sections A-A' (Segment-1) and F-F' (Segment-3) under seismic loading condition, are higher than the required values when the subgrade preparation/improvement as discussed in Section 4.2 is implemented.

The Newmark sliding block analyses per Martin and Qiu (Ref. 17) were performed for the two cases with the FOS less than 1.0 under seismic loading condition; (a) slope at cross section A-A' (slip surface from inboard to outboard) in Segment-1, and (b) slope at cross section F-F' (slip surface from inboard to outboard) in Segment-3. In this procedure, yield acceleration defined as PGA for which FOS = 1.0 for the slope is calculated. Martin and Qiu (Ref. 17) proposed the following simplified equation for deformation analysis:

$$d = 6.82\,(k_y / k_{max})^{-0.55}\,(1 - k_y / k_{max})^{5.08}\,A^{-0.86}\,V^{1.66}$$

where

d = permanent displacement (inch),

k_y = yield acceleration in units of g,

k_{max} = maximum seismic acceleration in the sliding block in units of g (provided in **Table 2**),

A = peak ground acceleration (in/sec^2), and

V = peak ground velocity (in/sec), where $ln(V) = 3.97 + 0.94ln(S_1) + 0.013(ln(S_1) + 2.93)^2 + 0.063M$, V is in units of cm/sec,

S_1 = spectral acceleration at 1 sec in units of g,

M = magnitude of design earthquake.

The yield acceleration for the cross sections A-A' and F-F' are estimated to be about 0.052g and 0.015g as shown in **Figure 48** and **Figure 71**, respectively. Based on the equation above, the lateral deformation along the cross section F-F' was estimated to be about 4 inches, and the lateral deformation along the cross section A-A' was about 1 inch under the seismic condition. It is considered that this magnitude of deformation under the seismic condition is acceptable. The analysis results for all the considered cases are summarized in **Table 6**.

Table 6: Summary of Deformation Analysis Results

Levee Segment / Cross Section	Martin and Qiu (Ref. 17)						Lateral Deformation (in) - Seismic	Figure Nos.
	k_y (g)	k_{max} (g)	A (in/sec^2)	V (in/sec)	S_1 (g)	M		
1 (A-A')	0.052	0.116	44.82	3.88	0.11	6.4	1.0	**Figure 48**
3 (F-F')	0.015	0.116	44.82	3.88	0.11	6.4	4.0	**Figure 71**

Notes:
Lateral deformation under seismic condition was estimated using the Newmark sliding block analyses (Ref. 17).

9.2 Levee Settlement

Based on the compressibility properties of the underlying soil layers, the settlements underneath the levee are estimated and the results are summarized in **Table 7** by considering various fill thicknesses. The thickness of the fill placed for the levee construction generally ranges from 16 feet to 23 feet.

In addition to the settlement due to compression of the subsurface soils, compression of levee under self-weight and secondary compression of upper soft clays will contribute to total settlement of the levee. It is estimated that the magnitude of settlement due to self-weight is about 1 percent of the levee height, per NAVFAC DM 7.02 (Ref. 18). Secondary compression of top soft clays is estimated and summarized in **Table 4** using the secondary compression index interpreted from the time-settlement curves of the incremental consolidation test data documented in Fugro's EPC Level Geotechnical Data Report (Ref. 1).

Table 7: Summary of Settlement Analysis Results

Levee Segment	Existing Grade EL. (ft)	Fill Thickness (ft)	(1)	(2)	(3)	(1)+(2)+(3)
			Total Primary Consolidation and Immediate Settlement in Subsurface Soils (in)	Secondary Compression in Subsurface Soils 30 yrs after Start of Levee Construction (in)	Creep Settlement within Levee Fill due to Its Self-Weight (in)	Total Settlement (primary consolidation, immediate settlement, plus long-term)
1	+1	22.6	36.0	3.0	2.6	41.6
	+3	20.5	35.0	3.4	2.3	40.7
	+5	18.4	33.6	3.7	2.1	39.4
	+7	16.2	31.3	4.0	1.8	37.1
2	+1	21.6	23.9	1.4	2.5	27.8
	+3	19.7	25.2	1.7	2.3	29.2
	+5	17.7	25.8	2.0	2.0	29.8
	+7	15.7	25.5	2.3	1.8	29.6
3	+1	22.5	35.2	3.1	2.6	40.9
	+3	20.5	34.4	3.4	2.3	40.1
	+5	18.4	33.1	3.7	2.1	38.9
	+7	16.2	30.9	4.0	1.8	36.7

NOTE: The results in this table indicate the estimated settlement at the center of the levee. Settlement at the toe can be estimated as about 55% of the center settlement.

Based on the analysis results in **Table 7**, the levee shall be constructed to at least 42 inches higher than the design elevation for Segment-1 and Segment-3, and at least 30 inches higher than the design elevation for Segment-2, to compensate for the long-term settlement and to ensure the levee top elevation will not be lower than the minimum design elevation during the operational period. Due to subsurface variability, settlements along the levee alignment vary and differential settlements should be expected. It is recommended that installation of settlement monitoring plates at minimum fifteen (15) locations along the

levee, and inclinometers and vibrating wire piezometers at minimum five (5) locations as described in Section 5.5.

10.0 CONCLUDING REMARKS

Geotechnical recommendations for subgrade preparation along the levee alignment have been developed to ensure stability of the levee during the service life of the facility. Calculations have been performed to demonstrate stability of levee and estimated settlement. The following conclusions are made:

1. The analyses show that the perimeter levee will be stable under all static loading conditions, when subgrade improvement as discussed in Section 4.2 are implemented. The levee will also be stable under the seismic loading condition with minor deformation.
2. The settlement in subsurface soils due to the placement of levee fill and creep settlement within levee fill itself are estimated. Levee Segment-1 and Segment-3 will experience primary consolidation and immediate settlement of 36 inches and secondary compression and creep settlement of 6 inches. Levee Segment-2 will experience primary consolidation and immediate settlement of 26 inches and secondary compression and creep settlement of 4 inches. Even though majority of primary consolidation settlement is expected to occur during construction due to the presence of wick drains, time rate of settlement will be a function of construction sequence. It is recommended that the total settlement values need to be considered for compensation fill to maintain the levee top elevation higher than the minimum design elevation. Note that these settlement values are best-estimated theoretical values and some percentages of total consolidation settlement will take place during construction period. Therefore, settlement monitoring during construction period is critical to assess the remaining settlement after construction.
3. Seepage inflow and blowout beneath the levee during storm surge events are not anticipated.

11.0 REFERENCES

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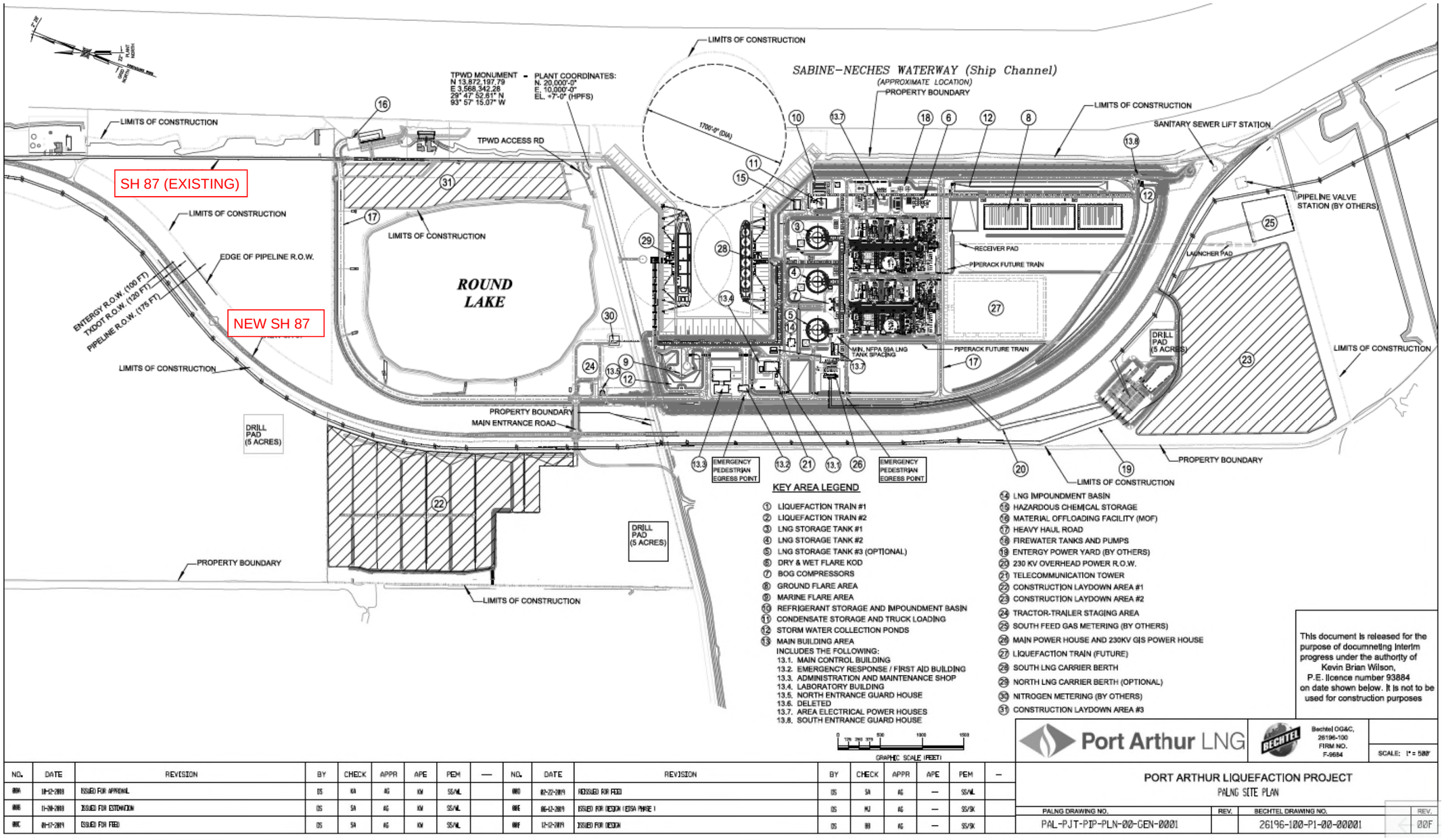
15. Westergaard, H.M., 1938. A problem of elasticity suggested by a problem in soil mechanics: A soft material reinforced by numerous strong horizontal sheets. In Contributions to the Mechanics of Solids, Stephen Timoshenko 60th Anniversary Volume, MacMillan, New York, pp 260-277 (as referenced by Holtz and Kovacs 1981).
16. Bechtel G&HES Engineering Design Guide for Analysis and Design of Slopes, Document No. 3DG-K04-00020 Rev.001
17. Martin, G.R. and Qiu, P., 1994. Effects of liquefaction on vulnerability assessment, NCEER Highway Project on Seismic Vulnerability of New and Existing Highway Construction, Year One Research Tasks, Technical Research Papers.
18. NAVFAC Design Manual 7.02, Foundations & Earth Structures, September 1, 1986.
19. Bechtel EDSA Geotechnical Recommendation for Site Preparation and Ground Improvement, Document No. 26196-100-3DR-K04F-00002 Rev. 001 (PAL-PJT-CSA-RPT-00-GEN-0002).
20. Moffatt & Nichol Marine Site Characteristics, PAL0-10-MAR-RPT-0002 Rev.000
21. Bechtel Overtopping and Levee Elevation Assessment Report, 26196-100-30R-R01-00002 Rev.000 (PAL-T0-MAR-RPT-00-GEN-0001)



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00A	08-12-2018	ISSUED FOR APPROVAL	DS	KA	AG	KM	SS/ML		00D	02-22-2019	REISSUED FOR FEED	DS	SA	AG	—	SS/ML	
00B	11-30-2018	ISSUED FOR ESTIMATION	DS	SA	AG	KM	SS/ML		00E	06-12-2019	ISSUED FOR DESIGN (ESA PHASE 1	DS	MJ	AG	—	SS/SK	
00C	01-17-2019	ISSUED FOR FEED	DS	SA	AG	KM	SS/ML		00F	12-12-2019	ISSUED FOR DESIGN	DS	BB	AG	—	SS/SK	

Figure 1: Overall Site Plan

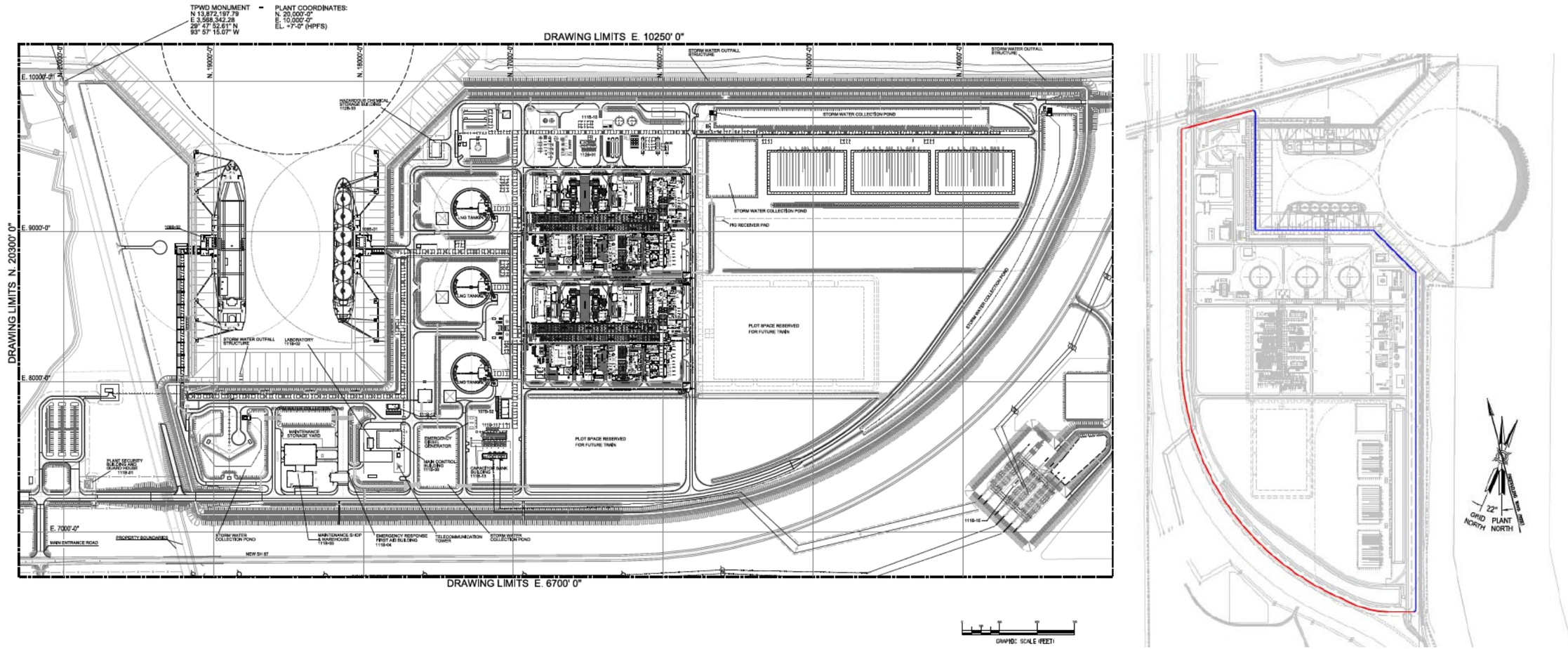

Figure 2: Facility Plot Plan with Shoreside (blue) and Landside (red) Reaches of the Perimeter Levee



Figure 3: Geotechnical Investigation Locations over the Overall Site Plan
(Note: detailed geotechnical investigations for ISBL are available in the EPC Geotechnical Design Basis Report for Liquefaction Area [26196-100-3DR-K04F-00003 (PAL-PJT-CSA-RPT-00-GEN-0003)].)

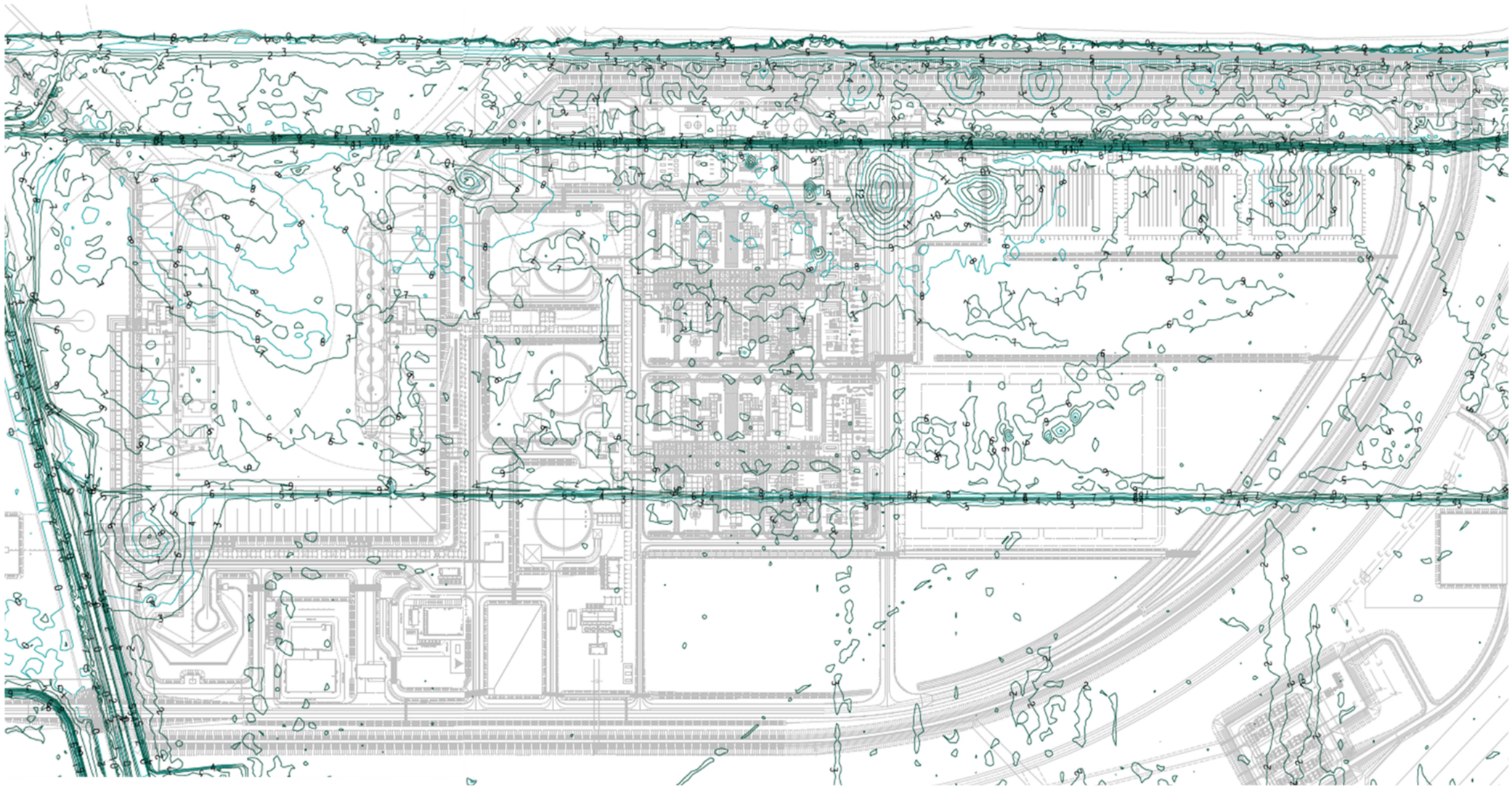

Figure 4: Topographic Contour Map for Areas along Perimeter Levee (Plot Plan Drawing No. 26196-100-P1-00-00001 Rev.00E)
(Note: Existing grade elevations of perimeter levee alignment are considered as EL +1.0 ~ EL +7.0 ft.)

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Figure 5: The single, existing staging area before supplemental geotechnical investigation started.



Figure 6: Staging area on early stage. Note that the staging area has deteriorated further as vehicles passed by daily basis.



Figure 7: Airboat used by Fugro surveyors.



Figure 8: A Marsh Master delivered on the staging area.



Figure 9: Marsh Master buggy with mower on back. This vehicle is the most agile on the marsh and the mower was sufficient for all grass and shrubs and small trees up to ~1-inch diameter.



Figure 10: An ATV after a second attempt to travel on the access road.



Figure 11: An early access road after vegetation clearing and one passage of an ATV.



Figure 12: The GyroTrac, used for heavy brush and small trees. Note small track for the size of the vehicle.



Figure 13: The cutting head on the GyroTrac used for all trees encountered on the site.



Figure 14: Drill Rig 1 mounted on a swamp buggy on a 200-foot deep borehole.



Figure 15: Drill Rig 3 on location with a Marsh Master buggy as a support vehicle.



Figure 16: CPT 2 rig on location.



Figure 17: A swamp buggy, one of two used for equipment and personnel transport.



Figure 18: A swamp buggy used as a drilling rig support vehicle, in this case a water carrier and personnel transport.



Figure 19: A typical access road after vegetation clearing only. Note that no other vehicles have entered.



Figure 20: A typical access road after three weeks of daily travel



Figure 21: Another access road after a few weeks of use.



Figure 22: Typical testing location after clearing vegetation and staking by survey team but before any equipment traffic.



Figure 23: A typical drilling location after a few days of travel.



Figure 24: A Polaris 570 Sportsman, typical of the single-seat 4X4 ATVs that work in the marsh.

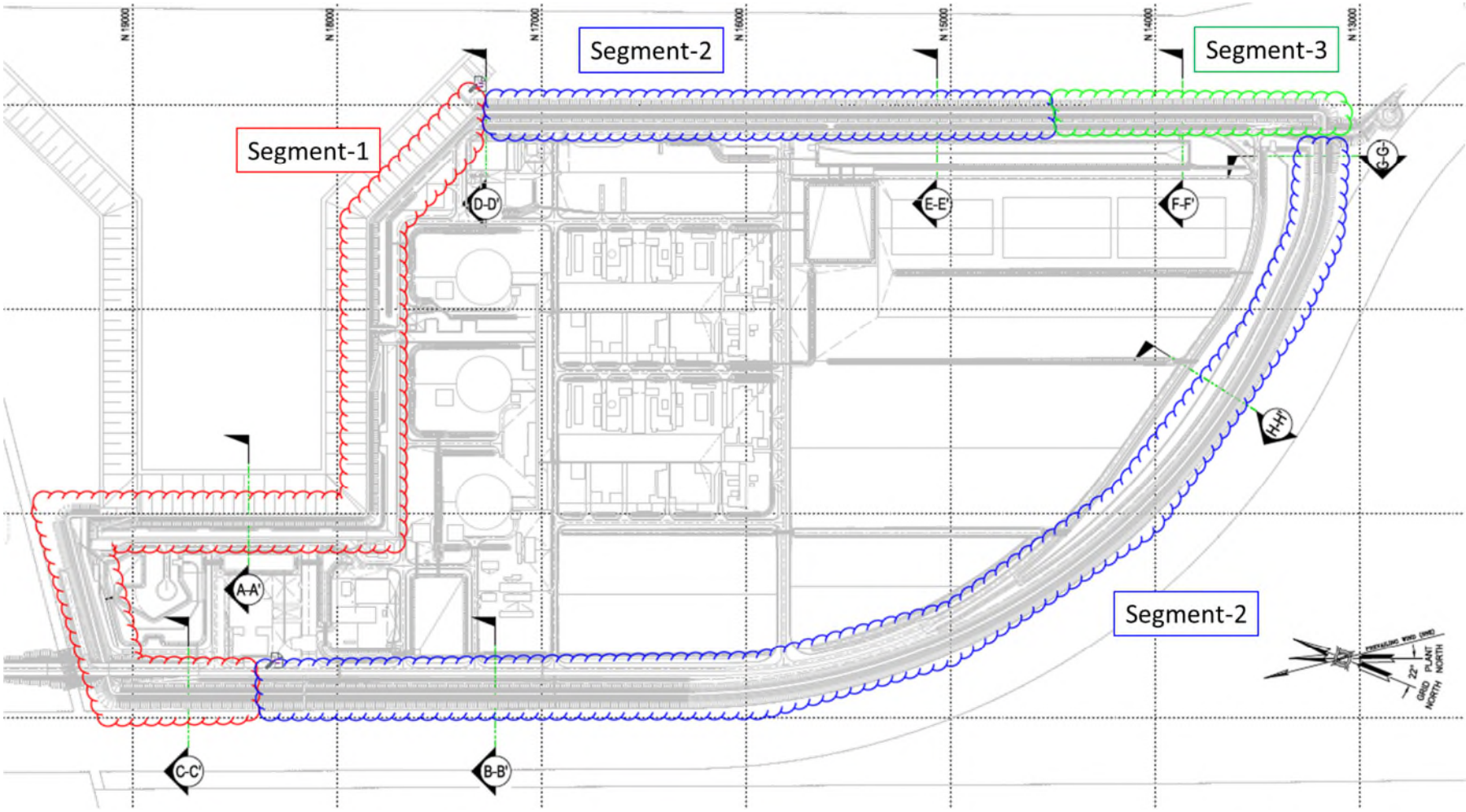

Figure 25: Levee Layout and Locations of Cross-Sections with Levee Segments (Site Plan Drawing No. 26196-100-P1-00-00001 (PAL-PJT-PIP-PLN-00-GEN-0001) Rev.00E)

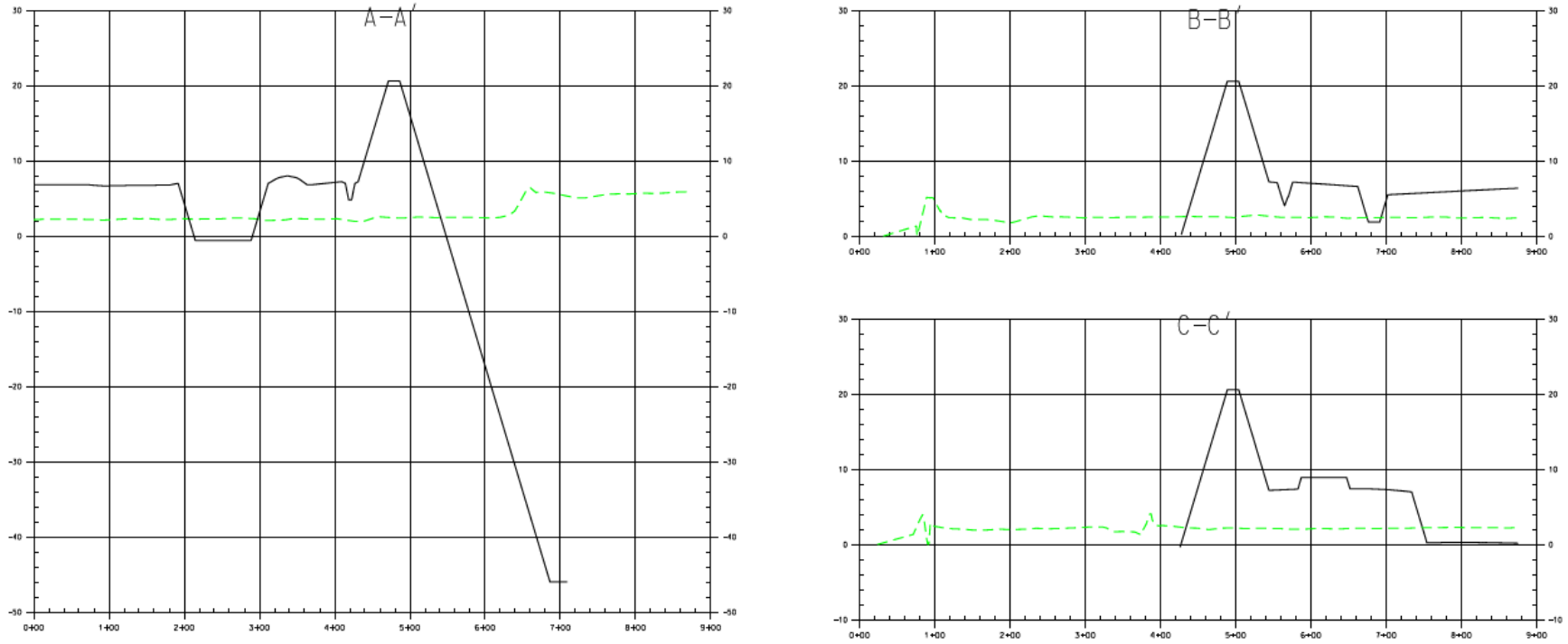

Figure 26: Levee Configuration with Cross-Sections of A-A', B-B' and C-C'

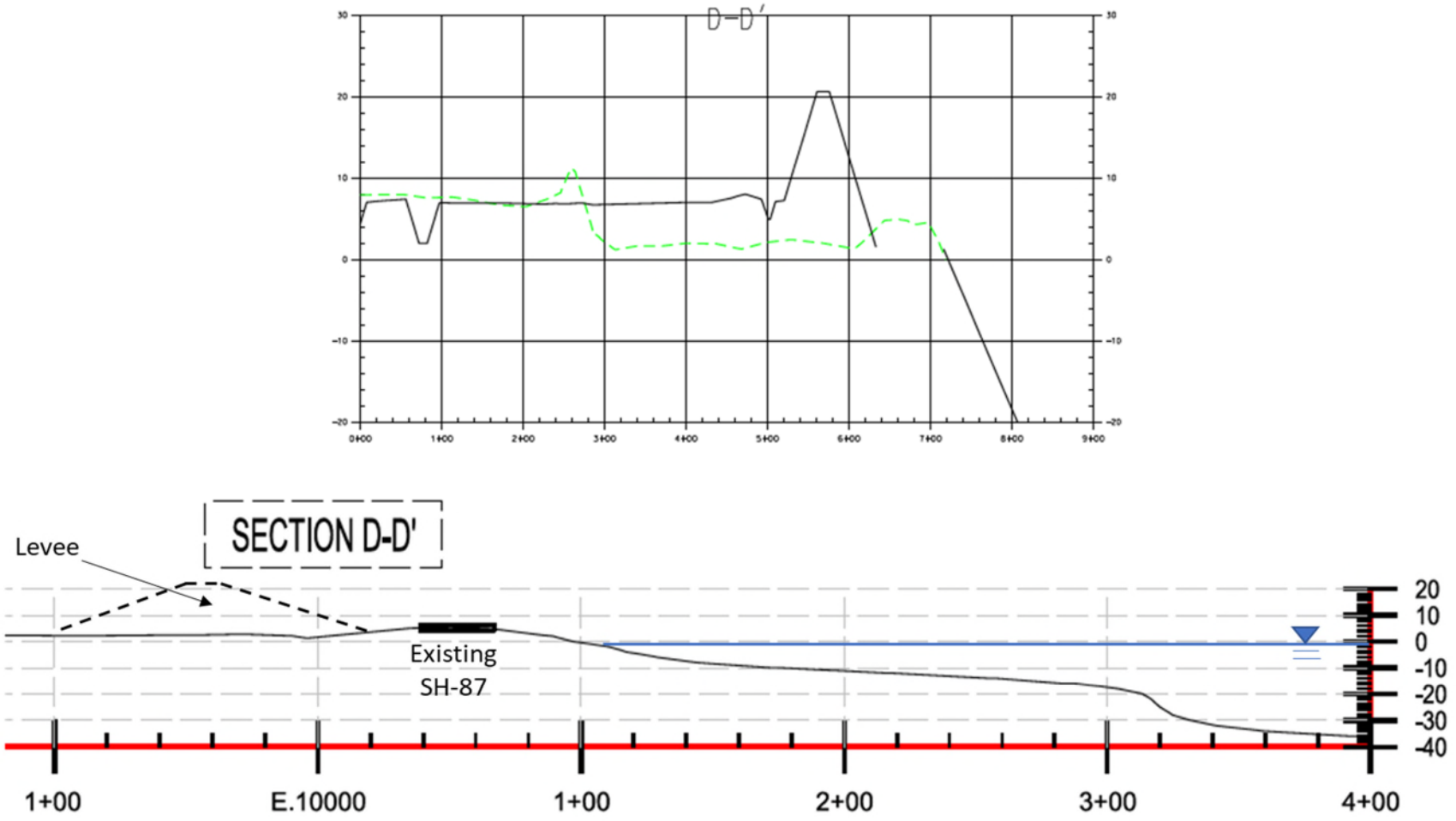

Figure 27: Levee Configuration with Cross-Section of D-D'

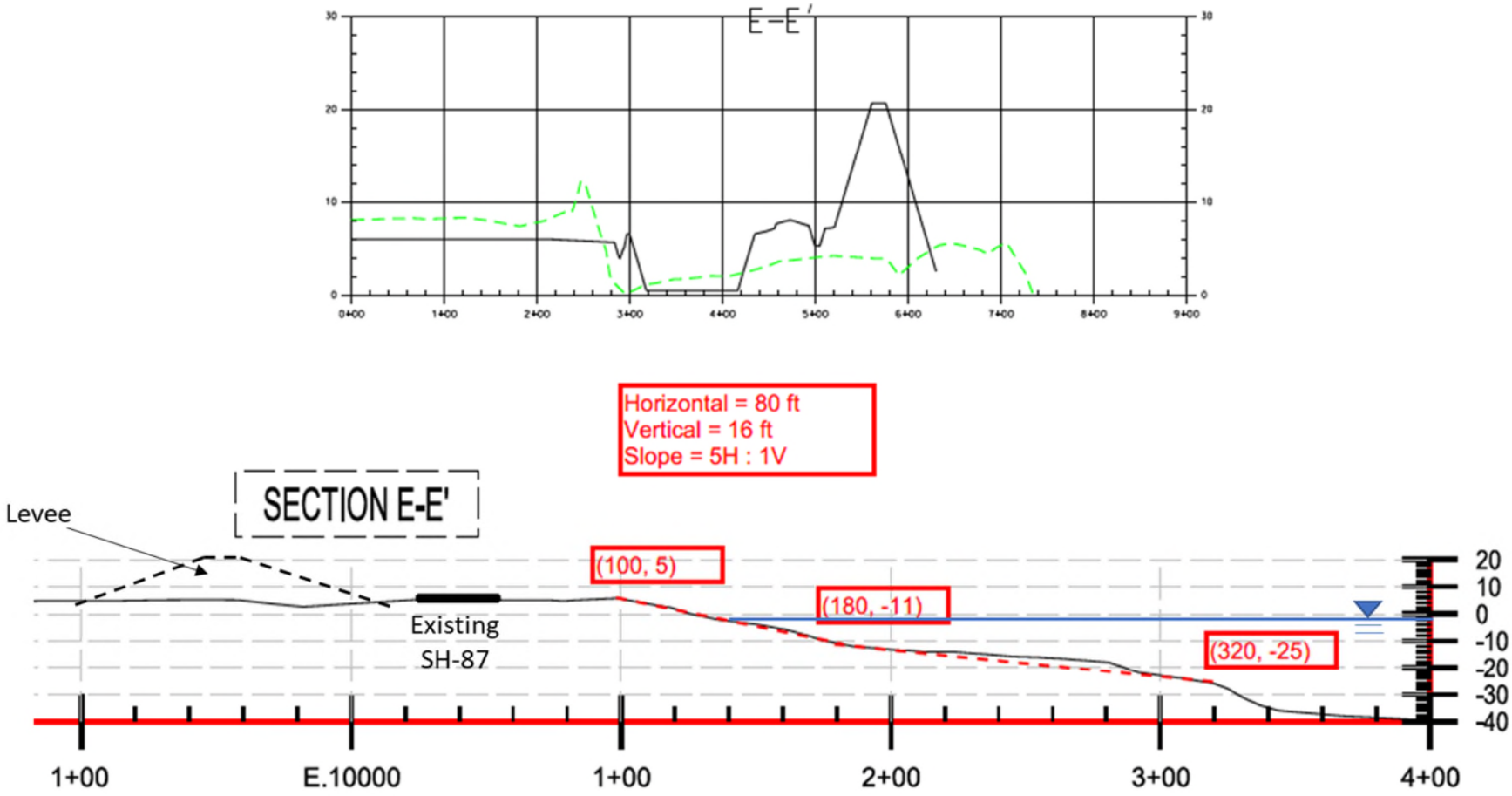

Figure 28: Levee Configuration with Cross-Section of E-E'

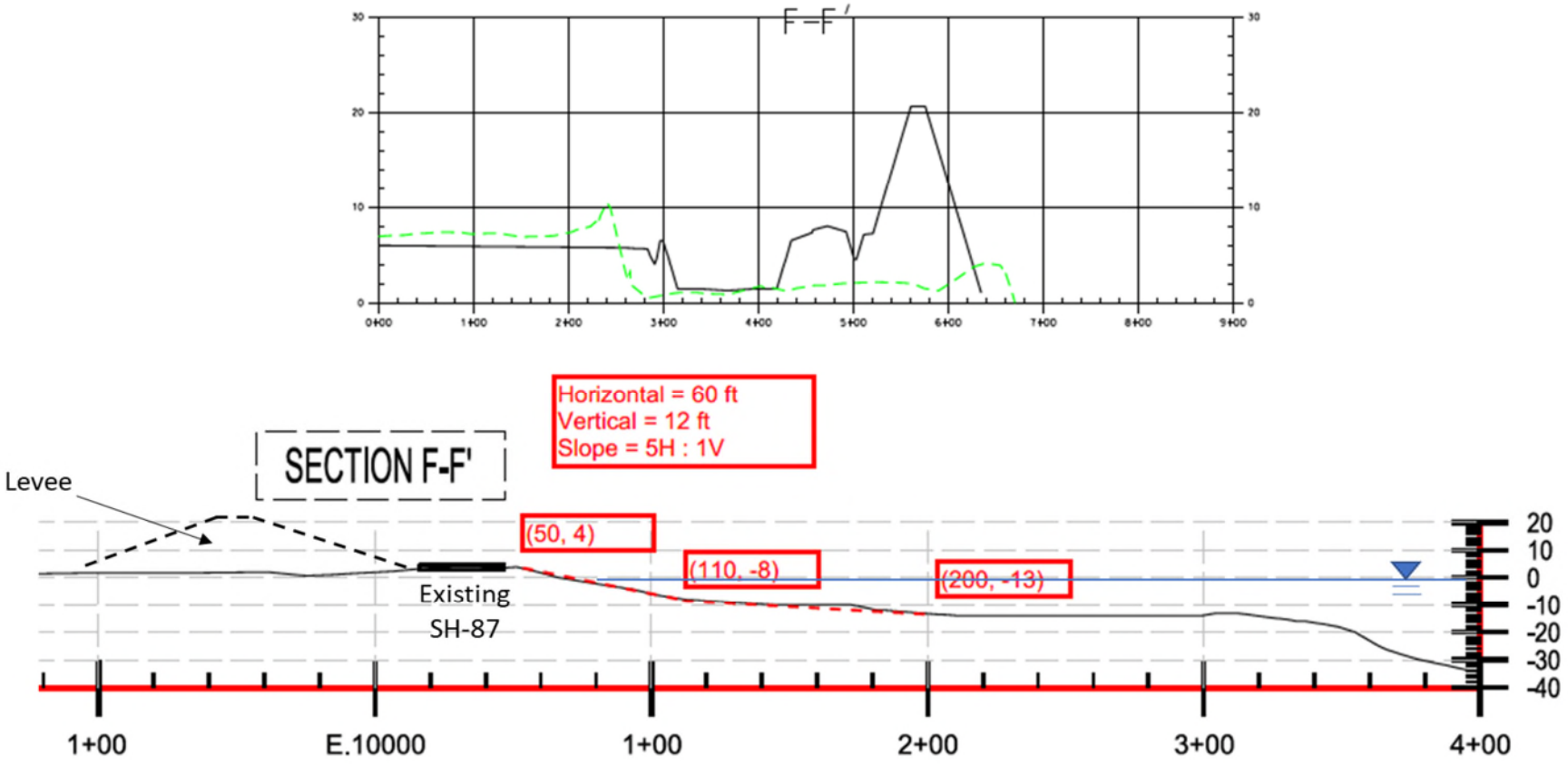

Figure 29: Levee Configuration with Cross-Section of F-F'

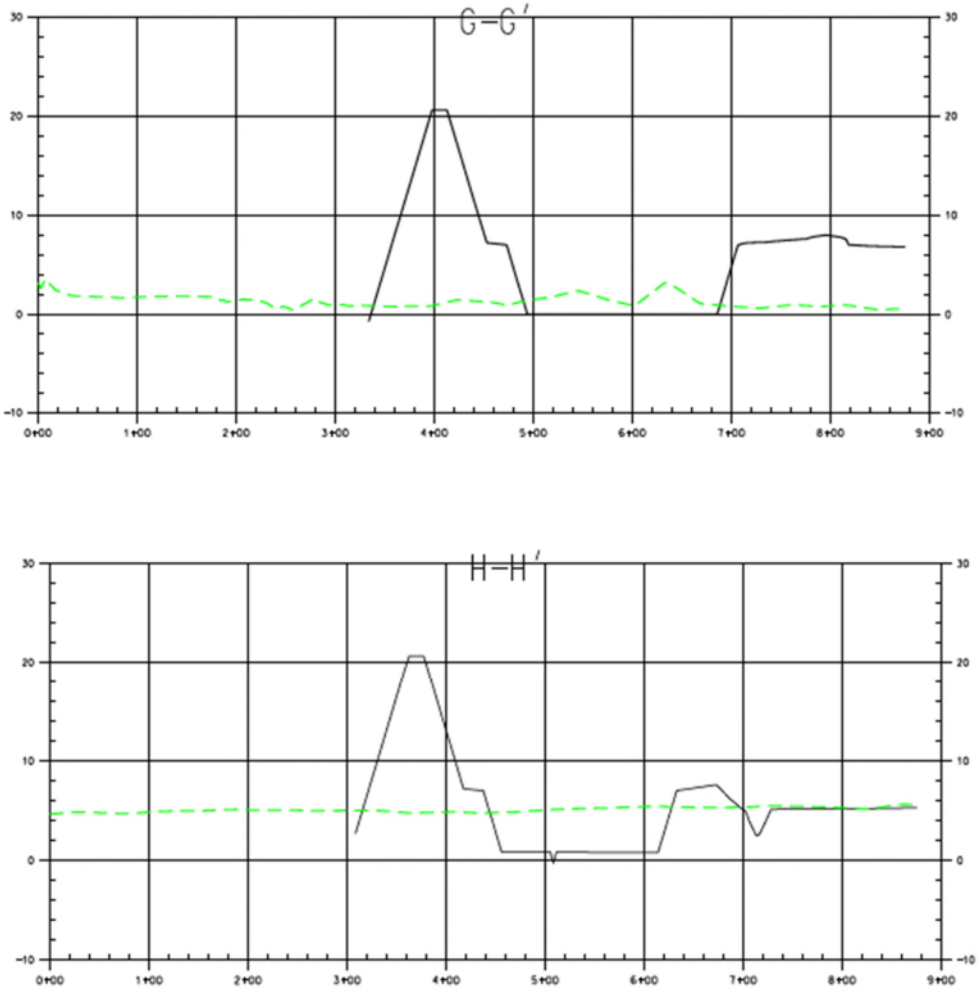

Figure 30: Levee Configuration with Cross-Sections of G-G' and H-H'

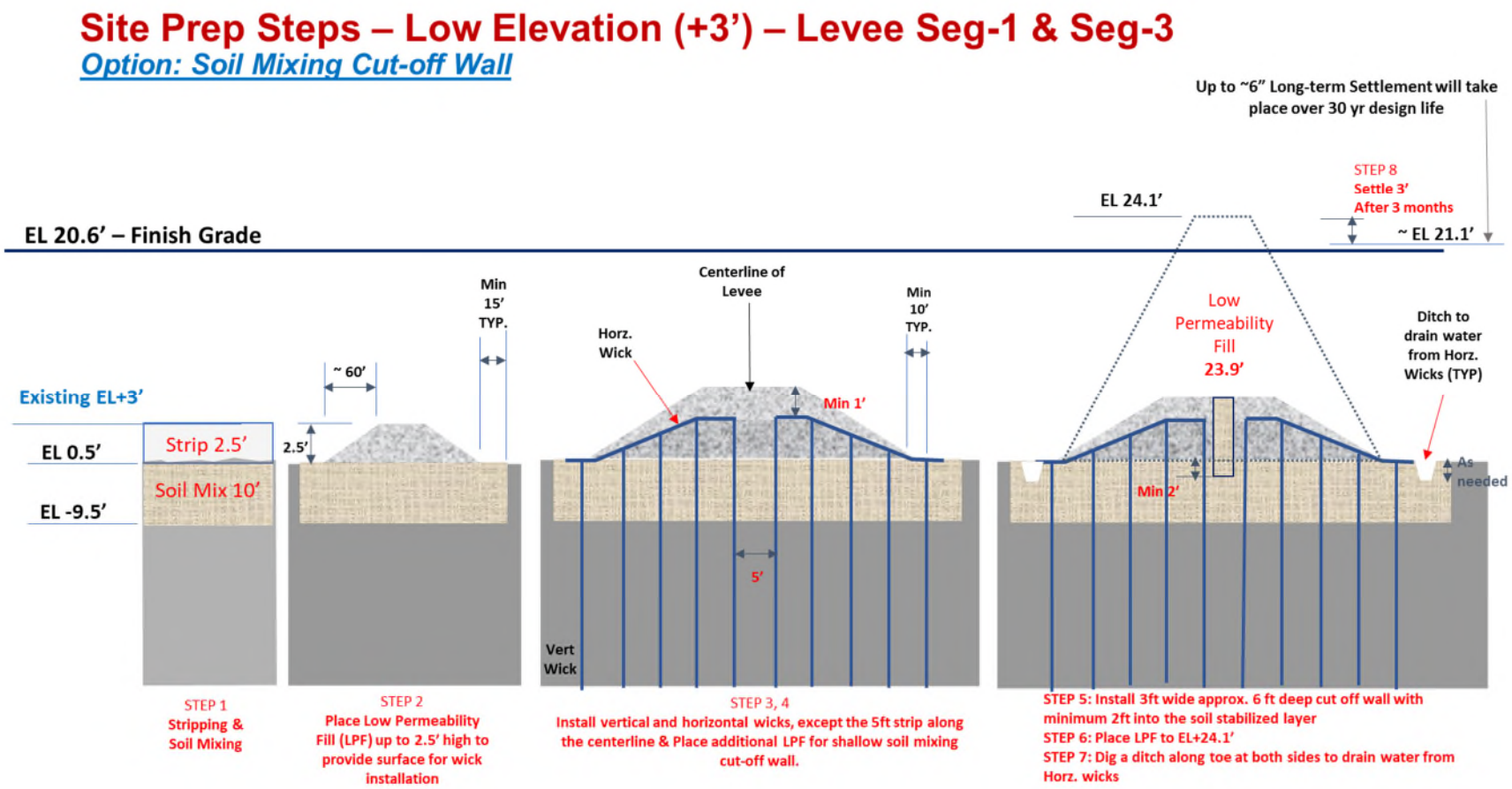

Figure 31: Site Preparation prior to Levee Construction – Levee Segment-1 and Segment 3 with Soil Mixing Cut-off Wall Option at Existing Grade of Elevation +3 ft

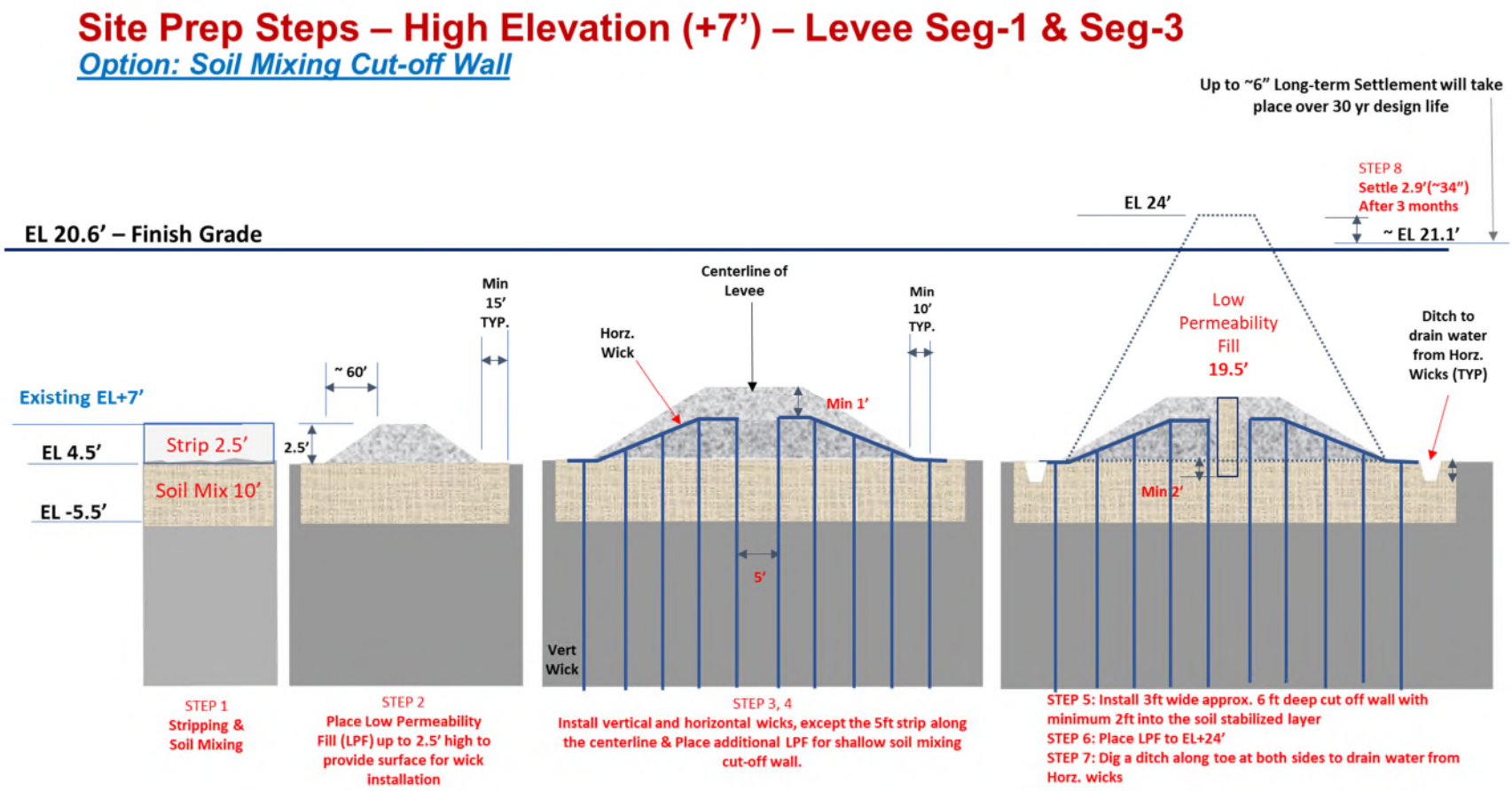

Figure 32: Site Preparation prior to Levee Construction – Levee Segment-1 and Segment 3 with Soil Mixing Cut-off Wall Option at Existing Grade of Elevation +7 ft

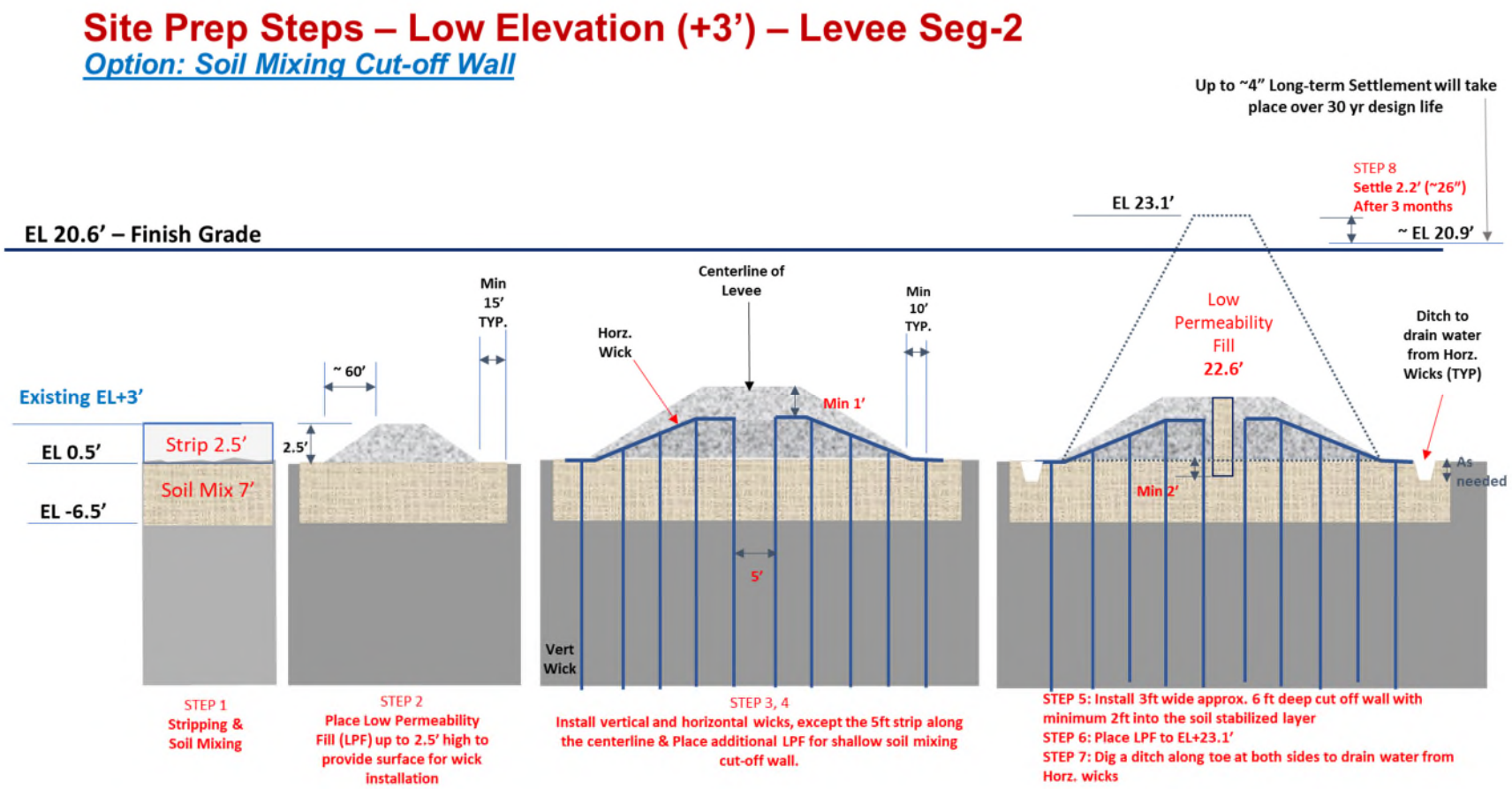

Figure 33: Site Preparation prior to Levee Construction – Levee Segment-2 with Soil Mixing Cut-off Wall Option at Existing Grade of Elevation +3 ft

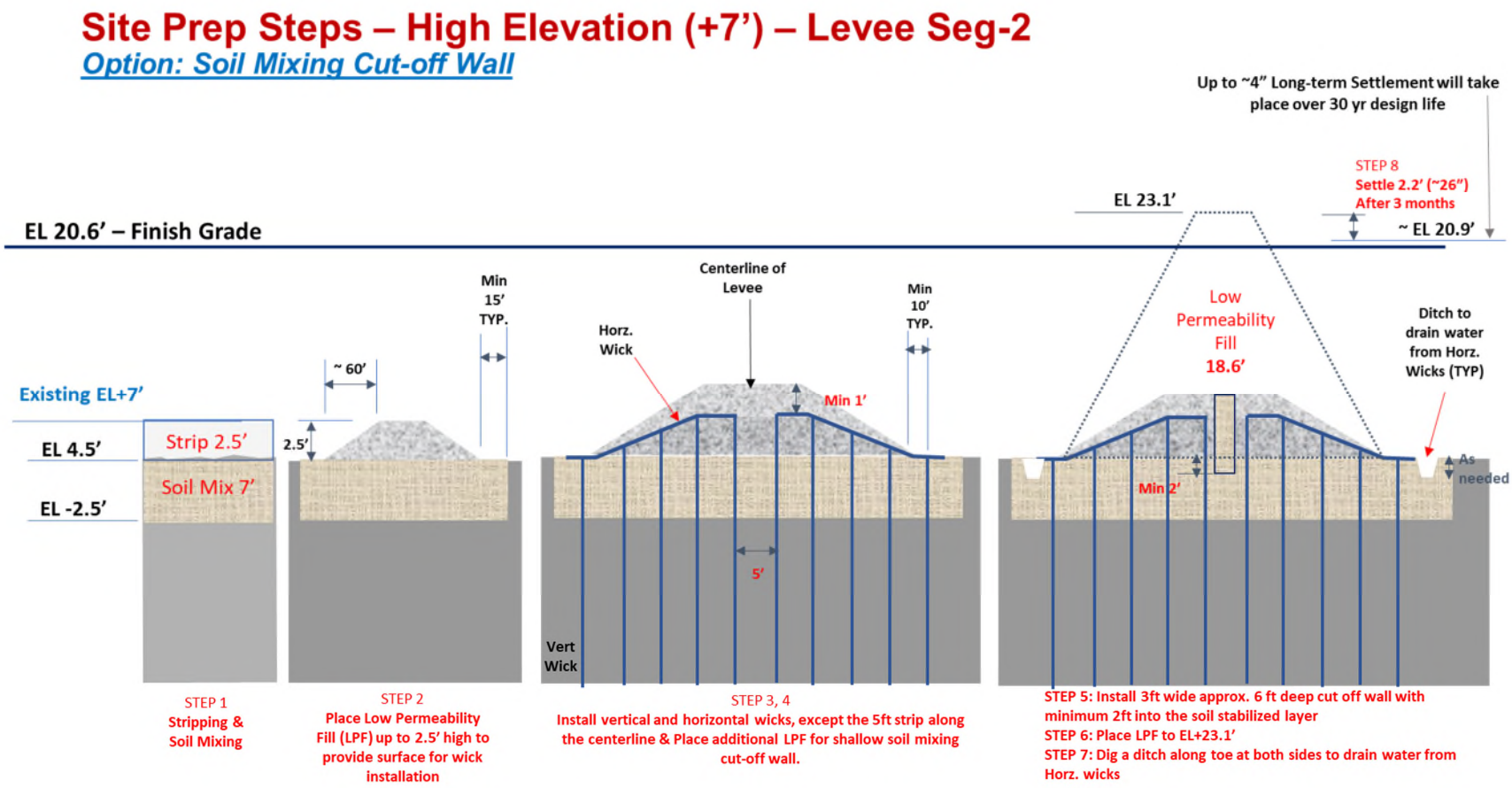

Figure 34: Site Preparation prior to Levee Construction – Levee Segment-2 with Soil Mixing Cut-off Wall Option at Existing Grade of Elevation +7 ft

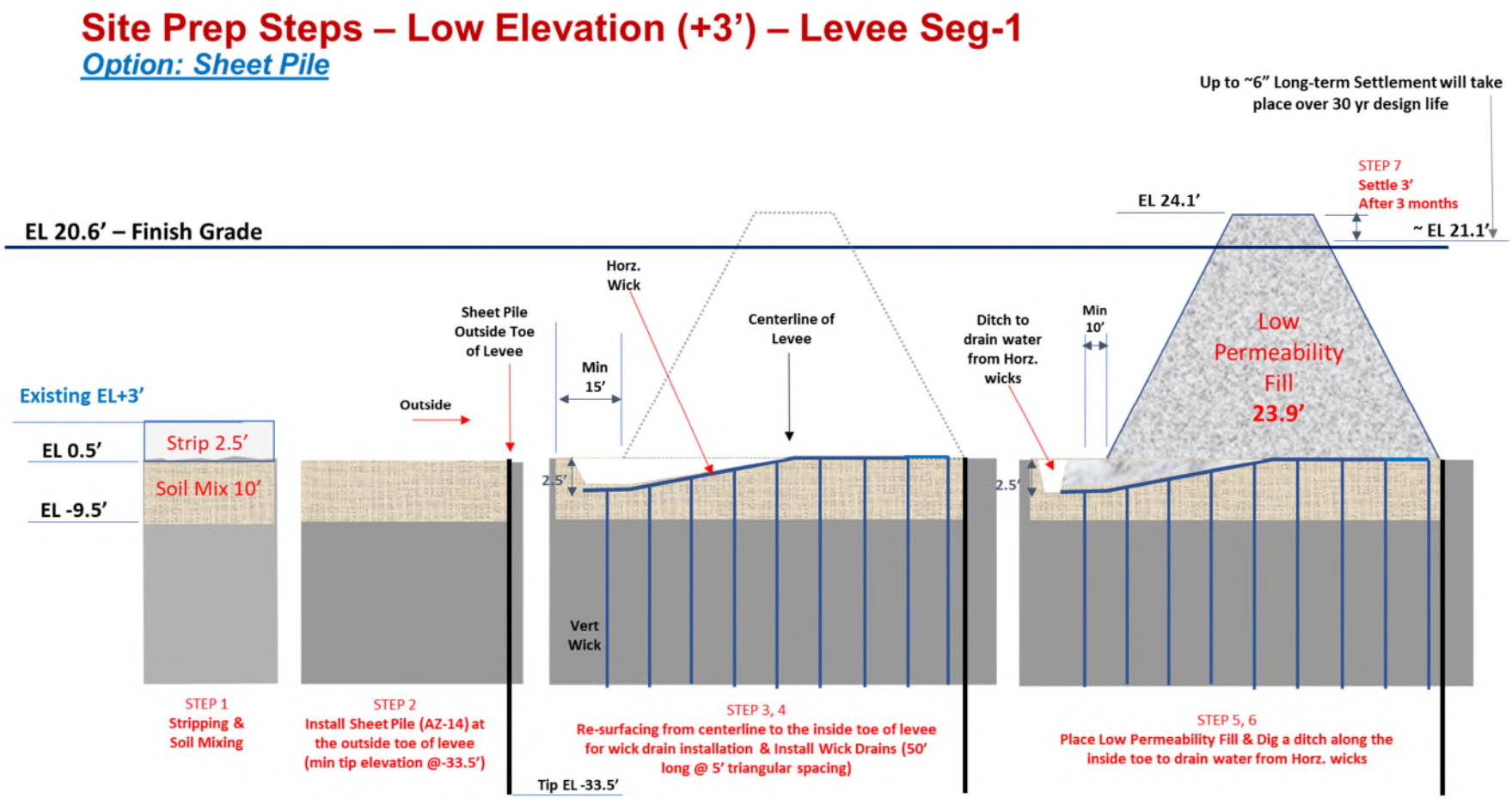

Figure 35: Site Preparation prior to Levee Construction – Levee Segment-1 with Sheet Pile Option at Existing Grade of Elevation +3 ft

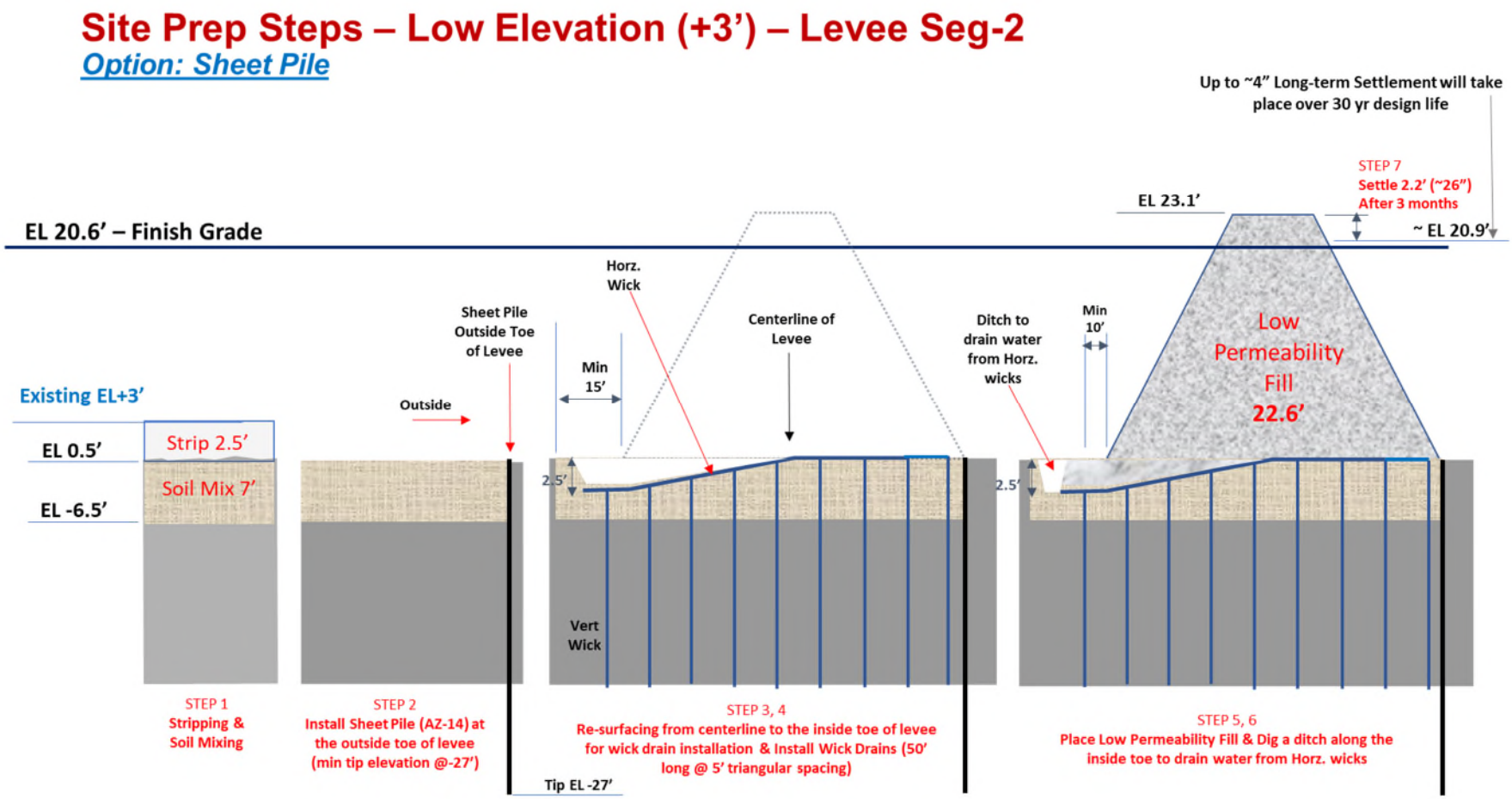

Figure 36: Site Preparation prior to Levee Construction – Levee Segment-2 with Sheet Pile Option at Existing Grade of Elevation +3 ft

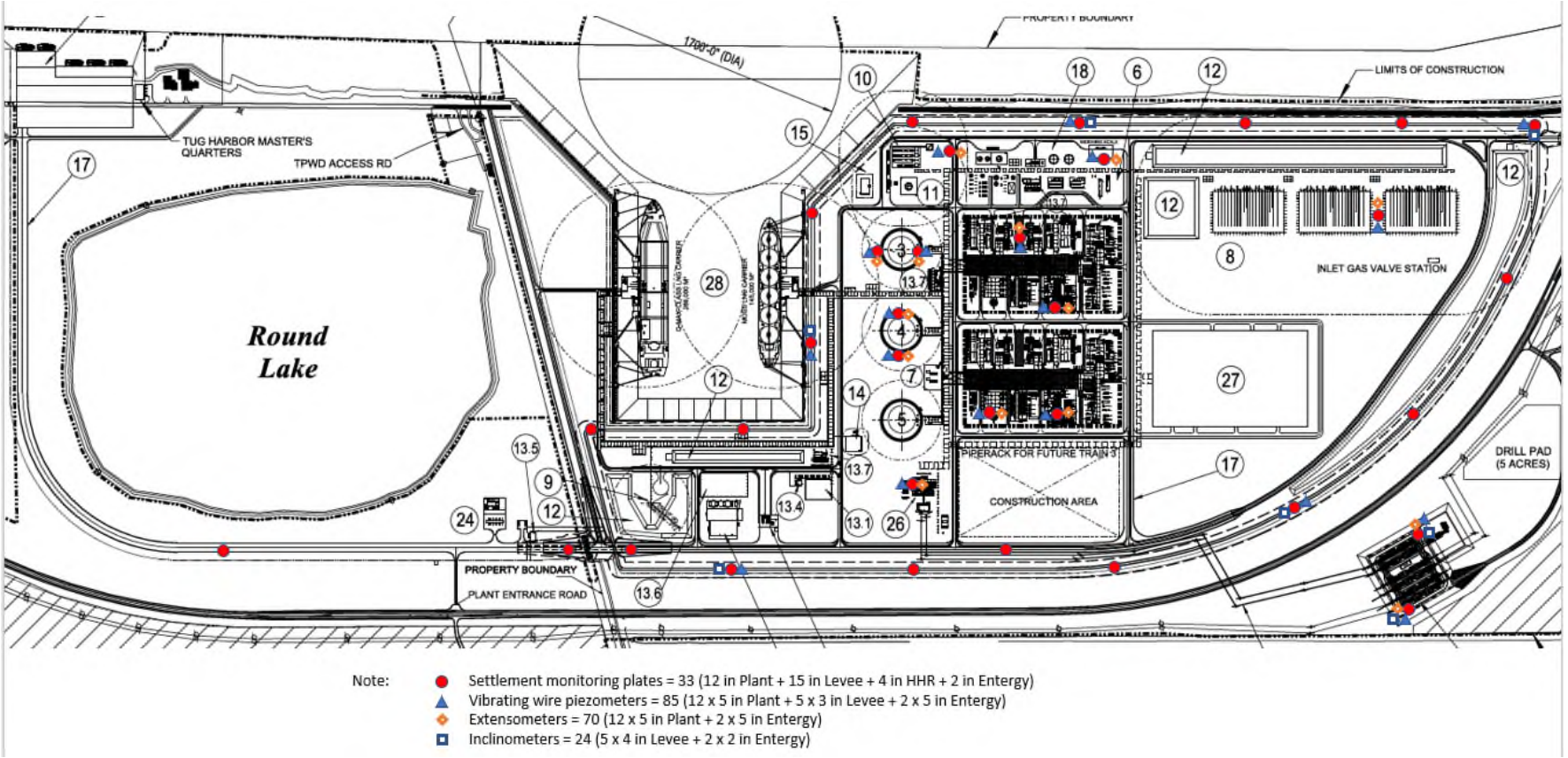

Figure 37: Layout of Recommended Site Wide Instrumentation for Monitoring

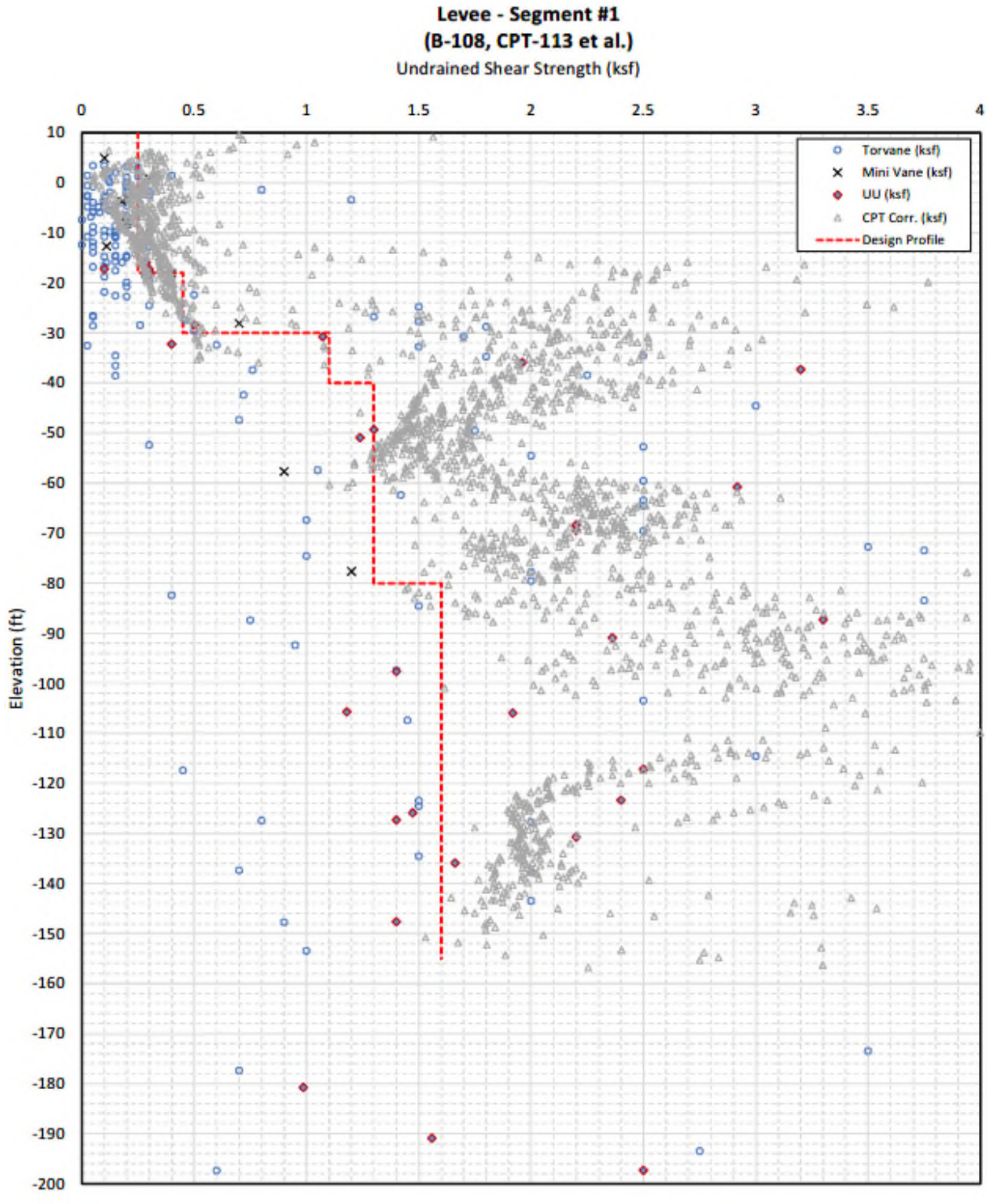

Figure 38: Soil Undrained Shear Strength Data – Levee Segment-1

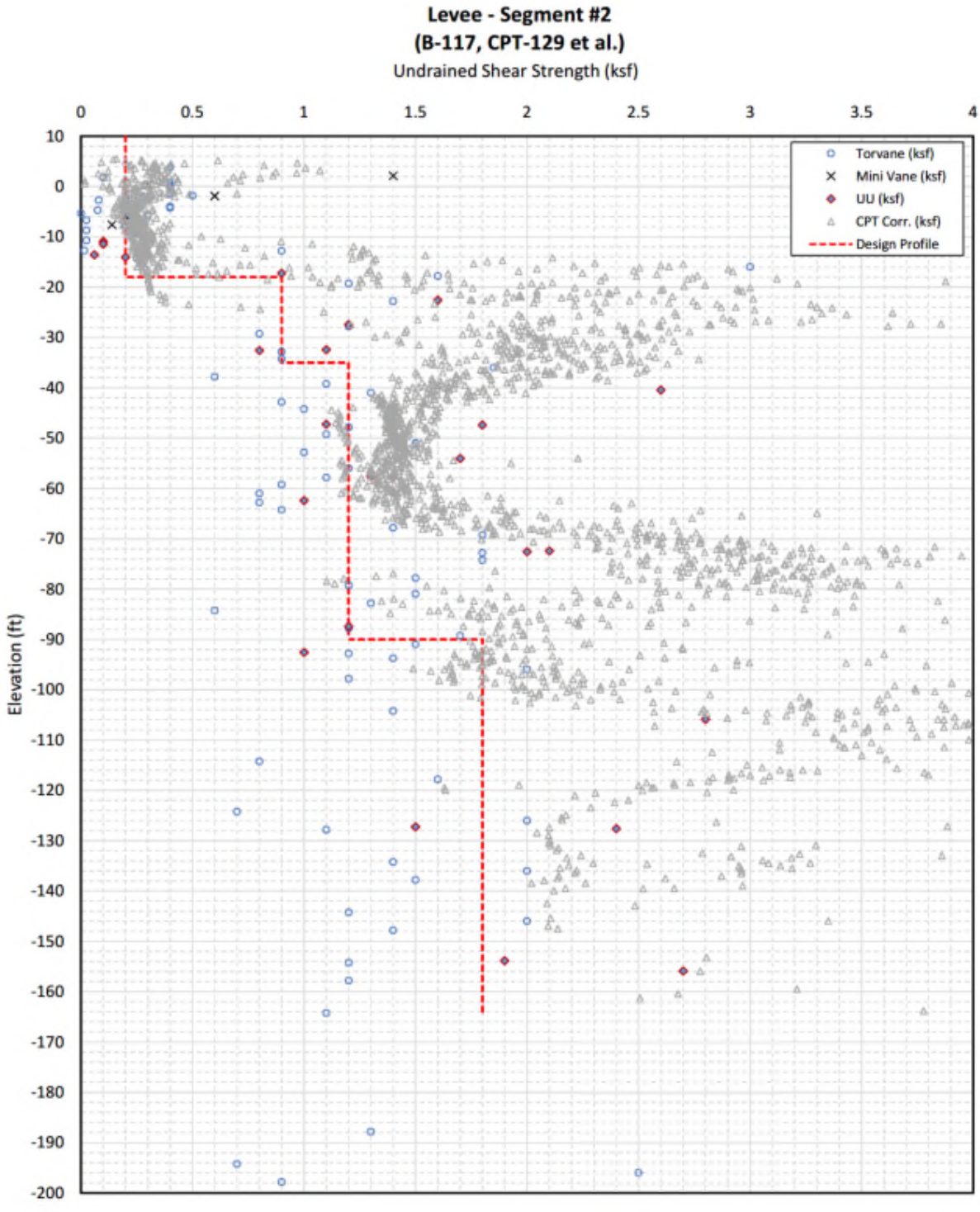

Figure 39: Soil Undrained Shear Strength Data – Levee Segment-2

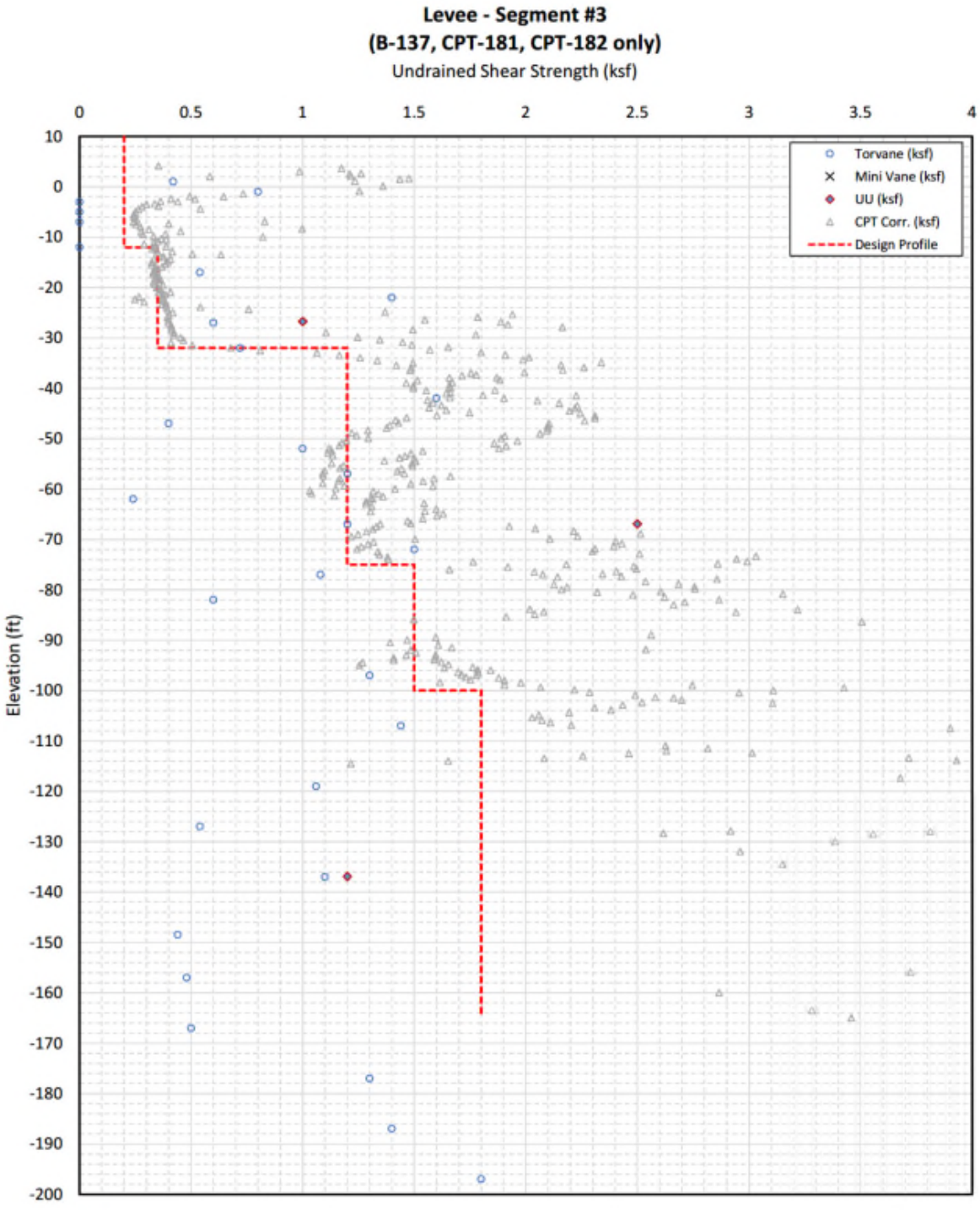

Figure 40: Soil Undrained Shear Strength Data – Levee Segment-3

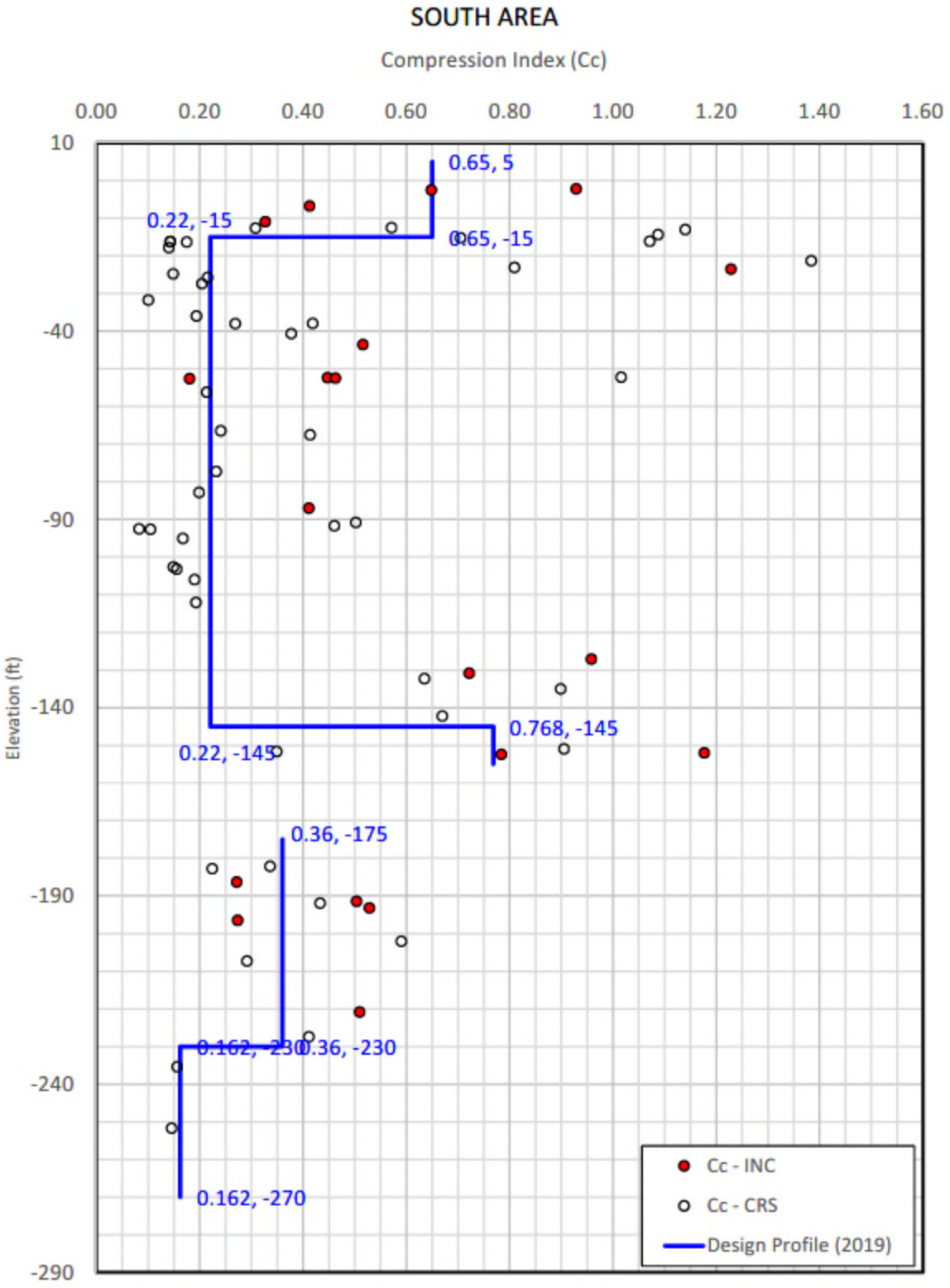

Figure 41: Compression Index (Cc) Data – All Levee Segments

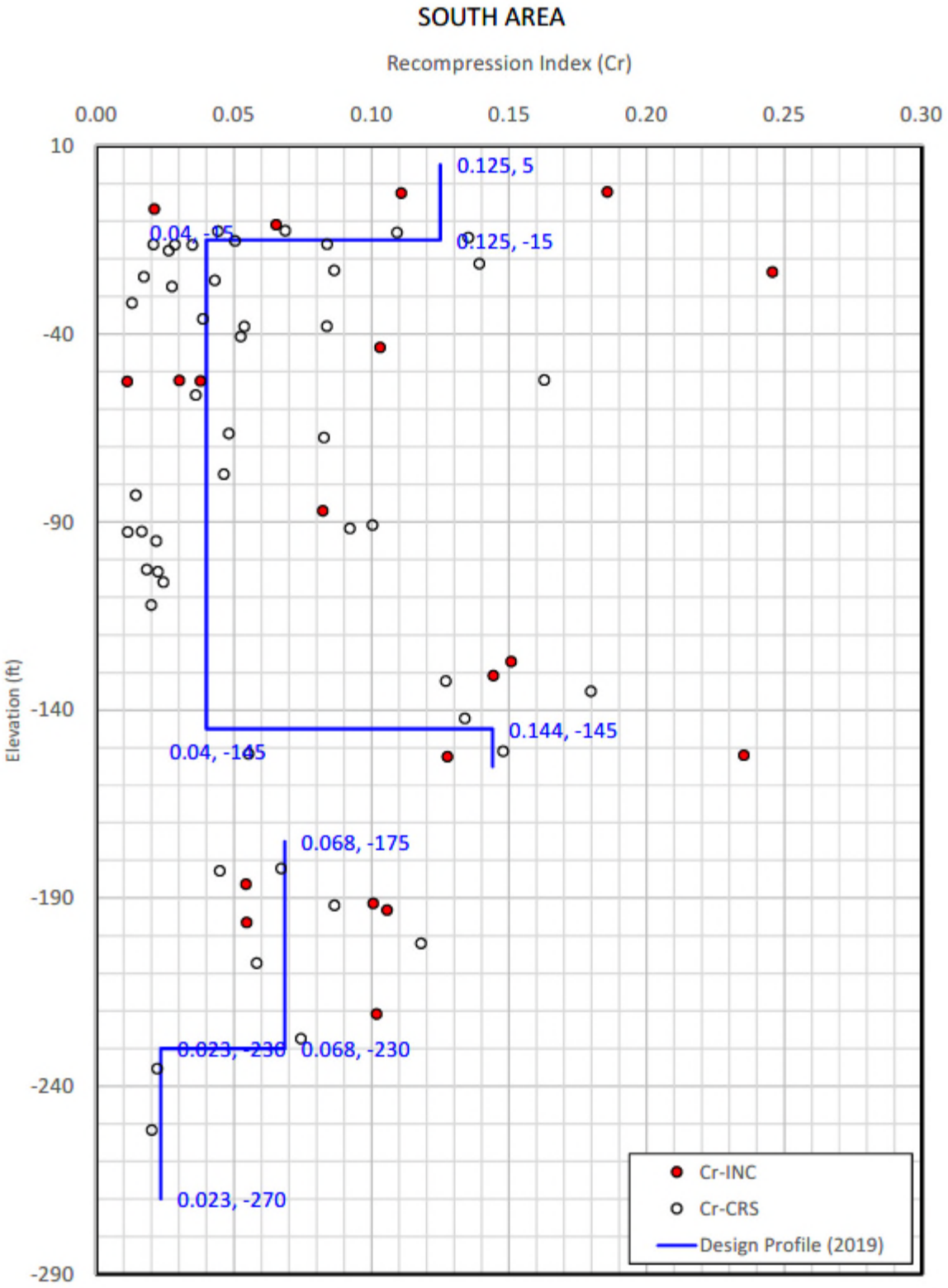

Figure 42: Recompression Index (Cr) Data – All Levee Segments

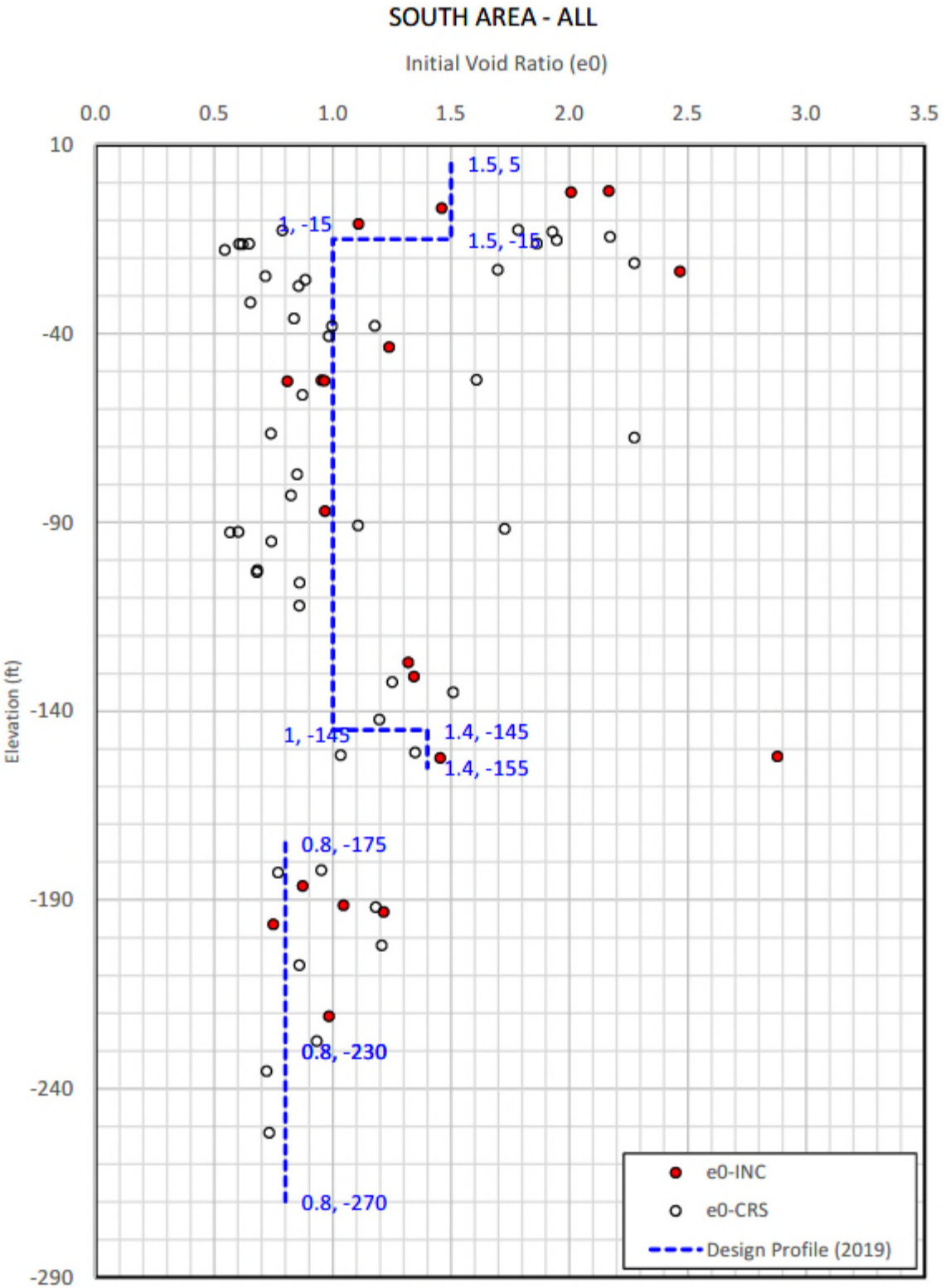

Figure 43: Initial Void Ratio (e_0) Data – All Levee Segments

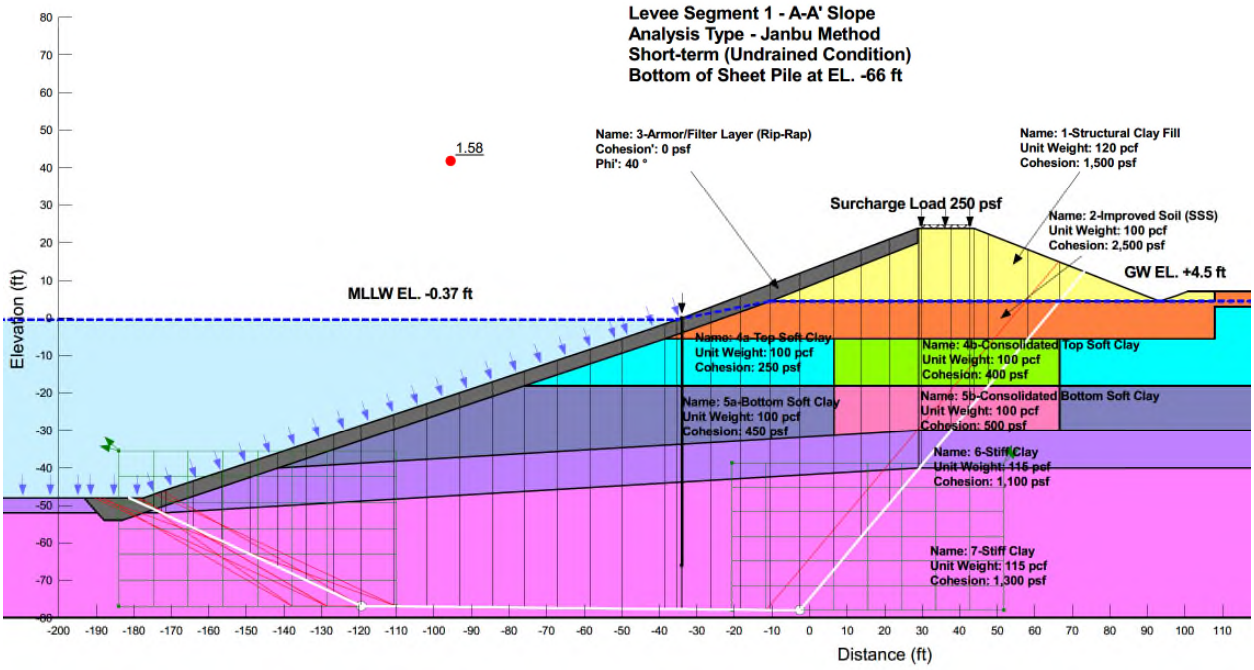

Figure 44: Slope/W Output for Segment-1 Cross Section A-A' – Short-Term (Inboard to Outboard)

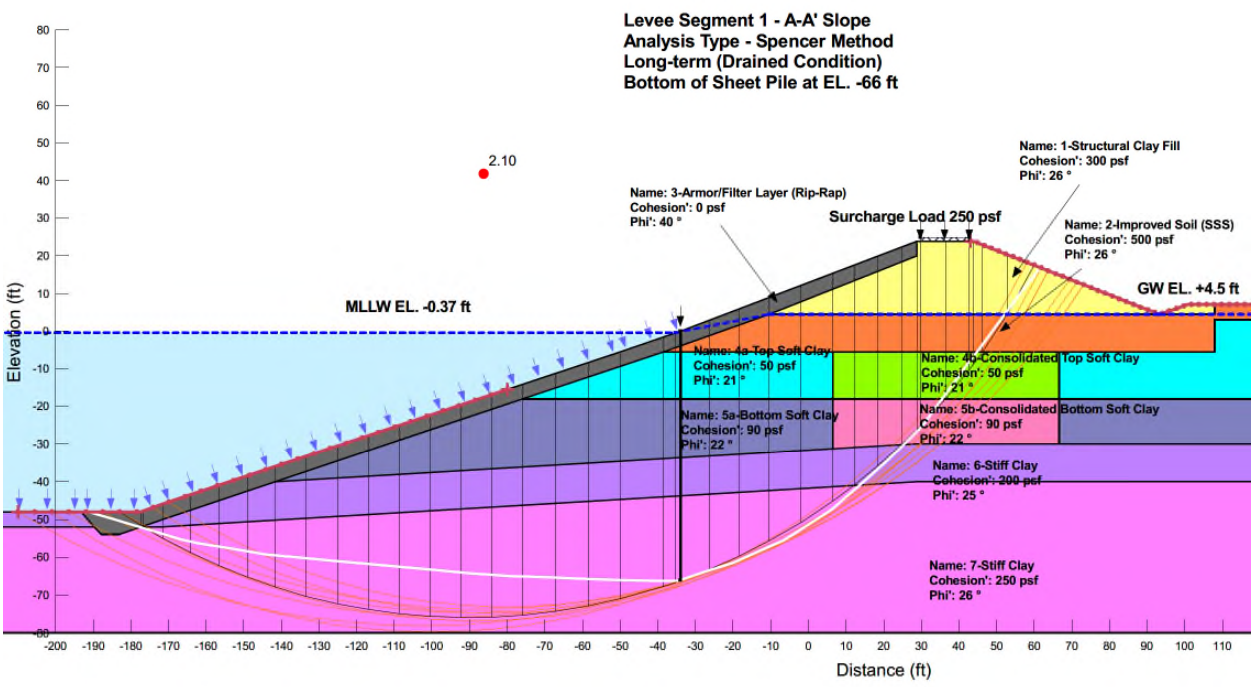

Figure 45: Slope/W Output for Segment-1 Cross Section A-A' – Long-Term (Inboard to Outboard)

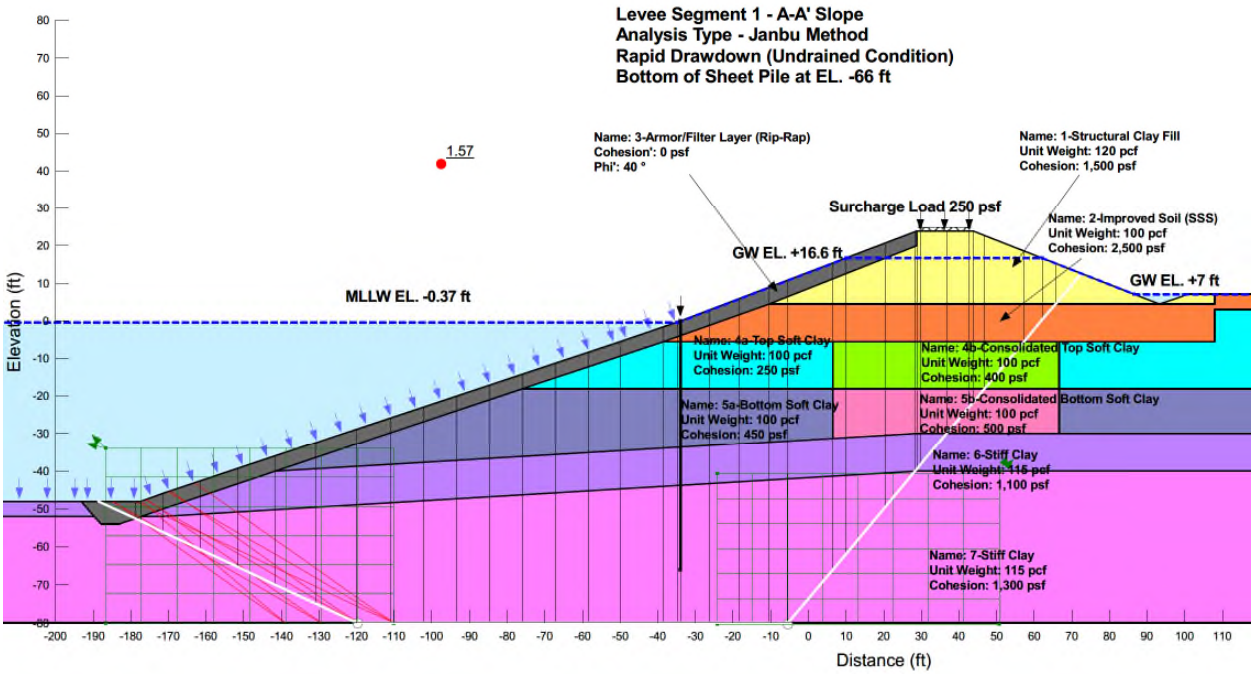

Figure 46: Slope/W Output for Segment-1 Cross Section A-A' – Rapid Drawdown (Inboard to Outboard)

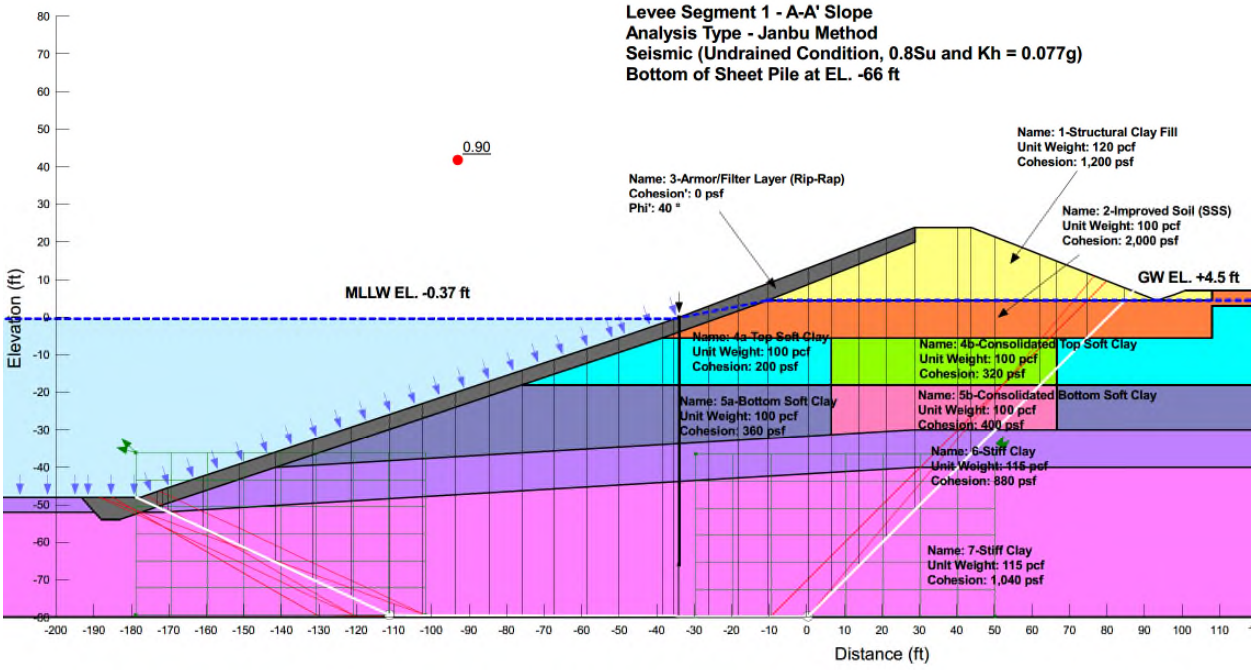

Figure 47: Slope/W Output for Segment-1 Cross Section A-A' – Seismic (Inboard to Outboard)

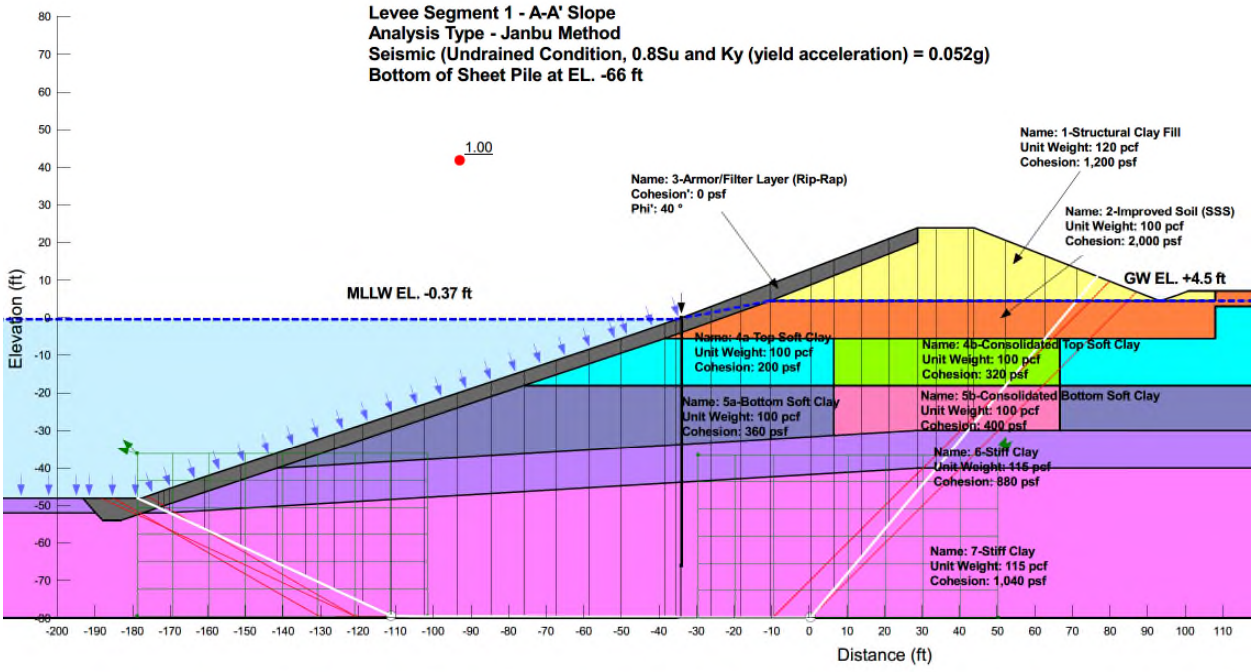

Figure 48: Slope/W Output for Segment-3 Cross Section A-A' – Seismic with yield acceleration (Inboard to Outboard)

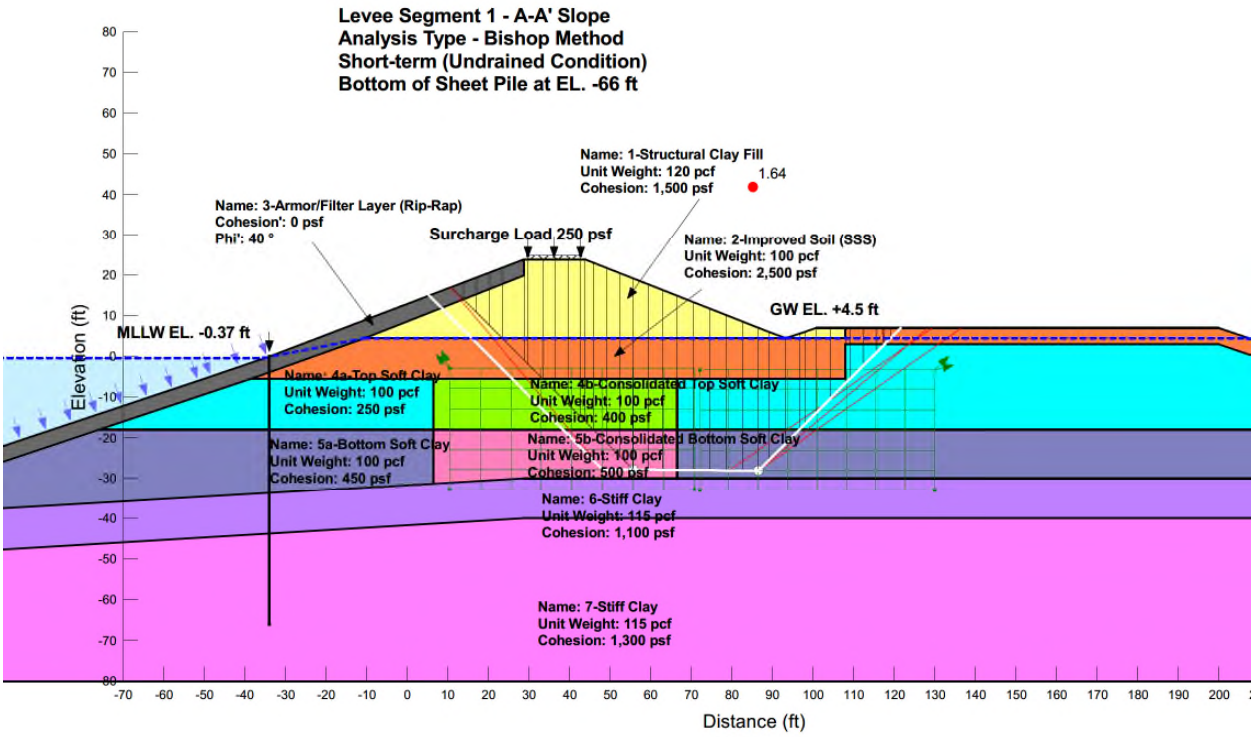

Figure 49: Slope/W Output for Segment-1 Cross Section A-A' – Short-Term (Outboard to Inboard)

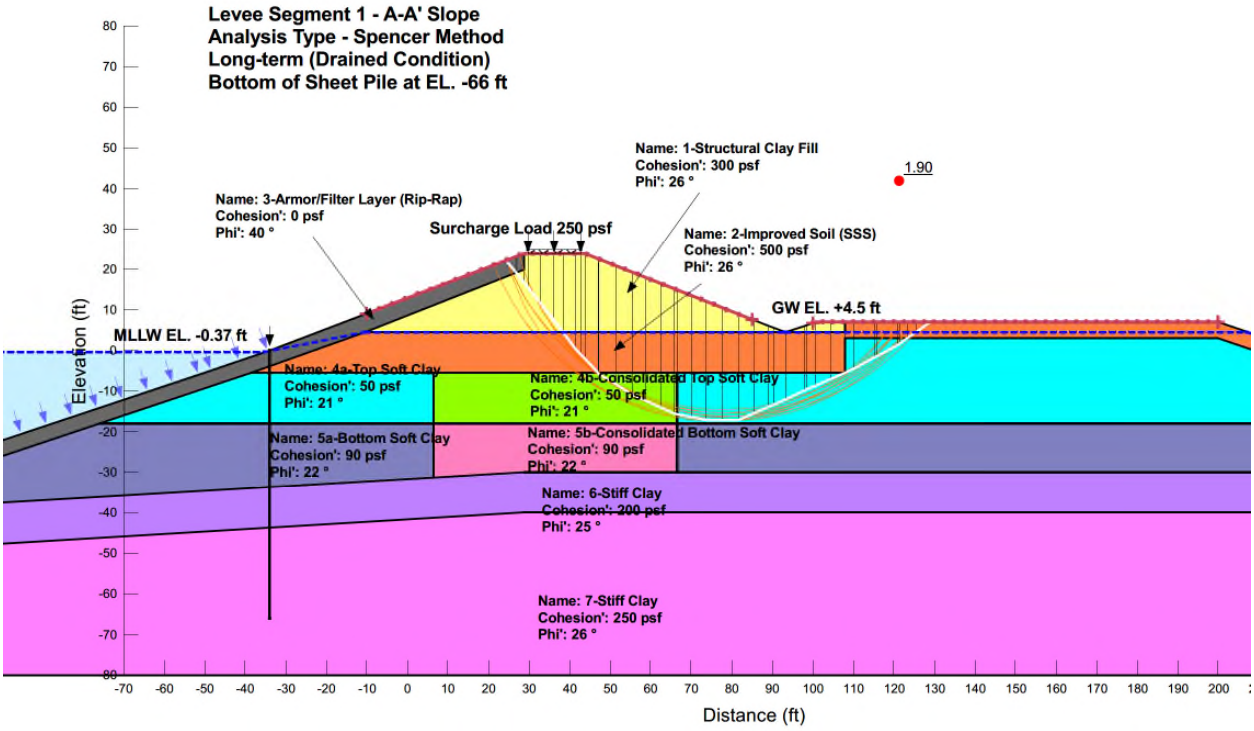

Figure 50: Slope/W Output for Segment-1 Cross Section A-A' – Long-Term (Outboard to Inboard)

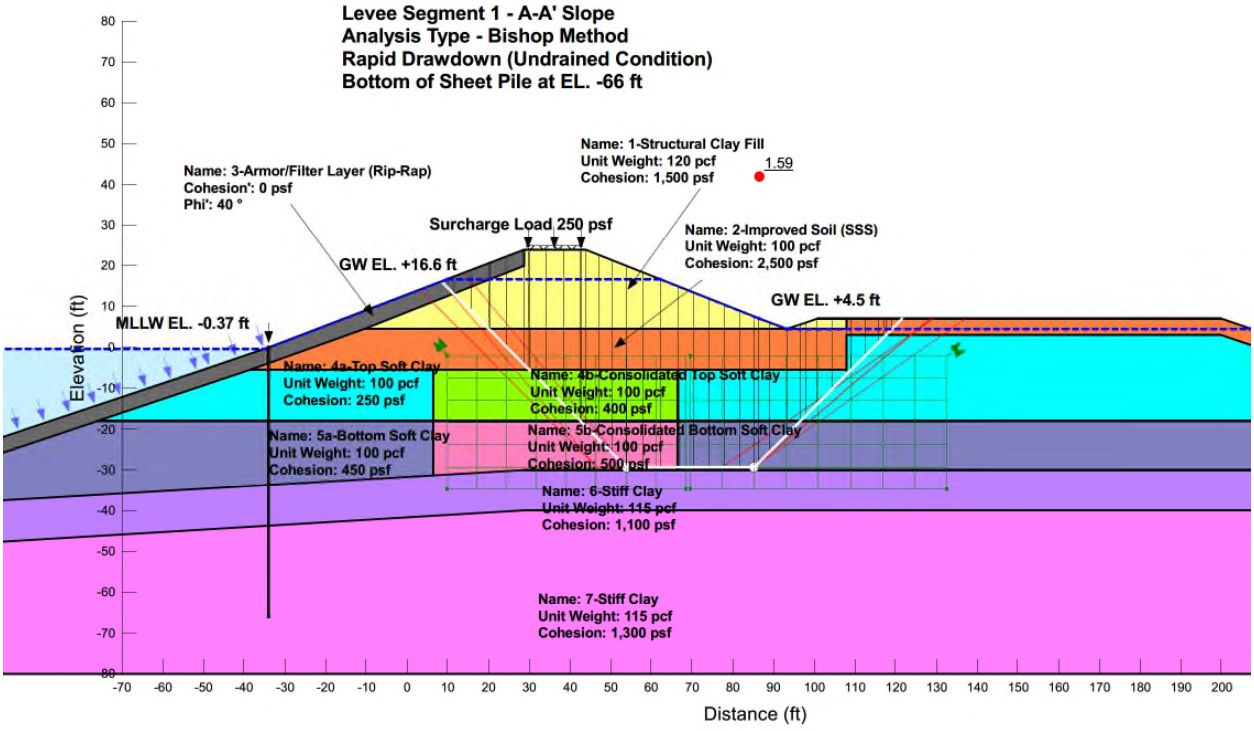

Figure 51: Slope/W Output for Segment-1 Cross Section A-A' – Rapid Drawdown (Outboard to Inboard)

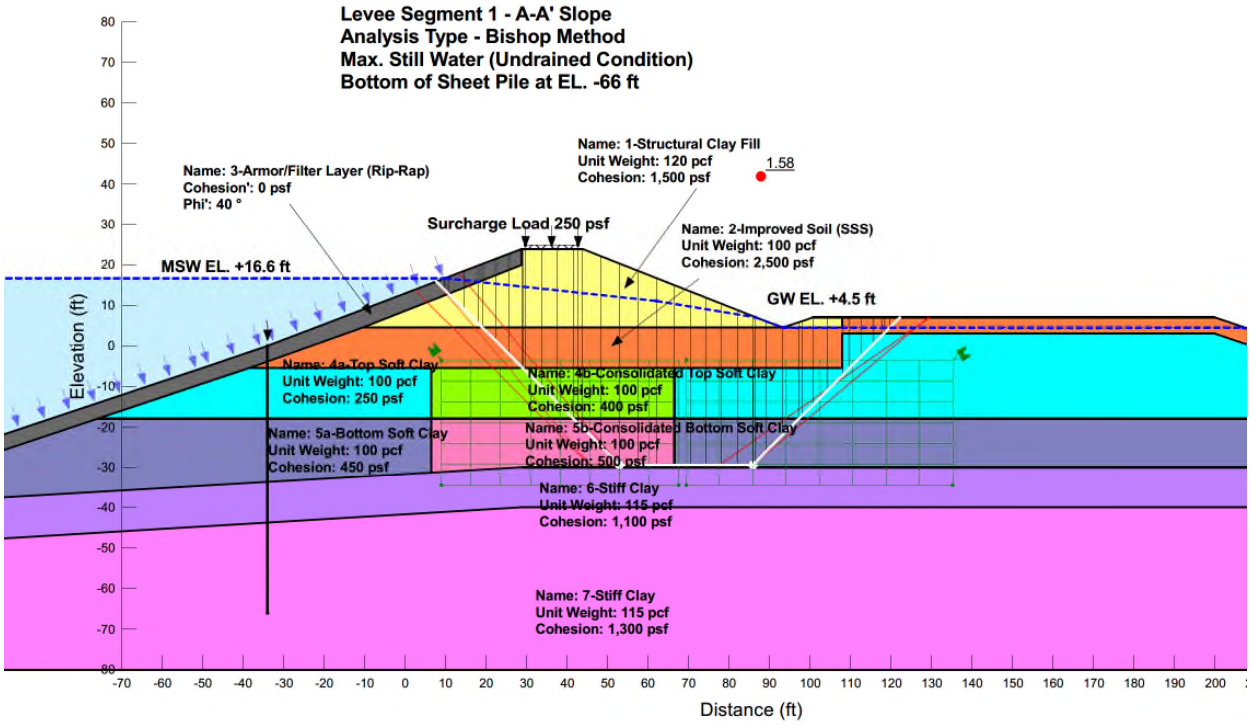

Figure 52: Slope/W Output for Segment-1 Cross Section A-A' – Maximum Still Water (Outboard to Inboard)

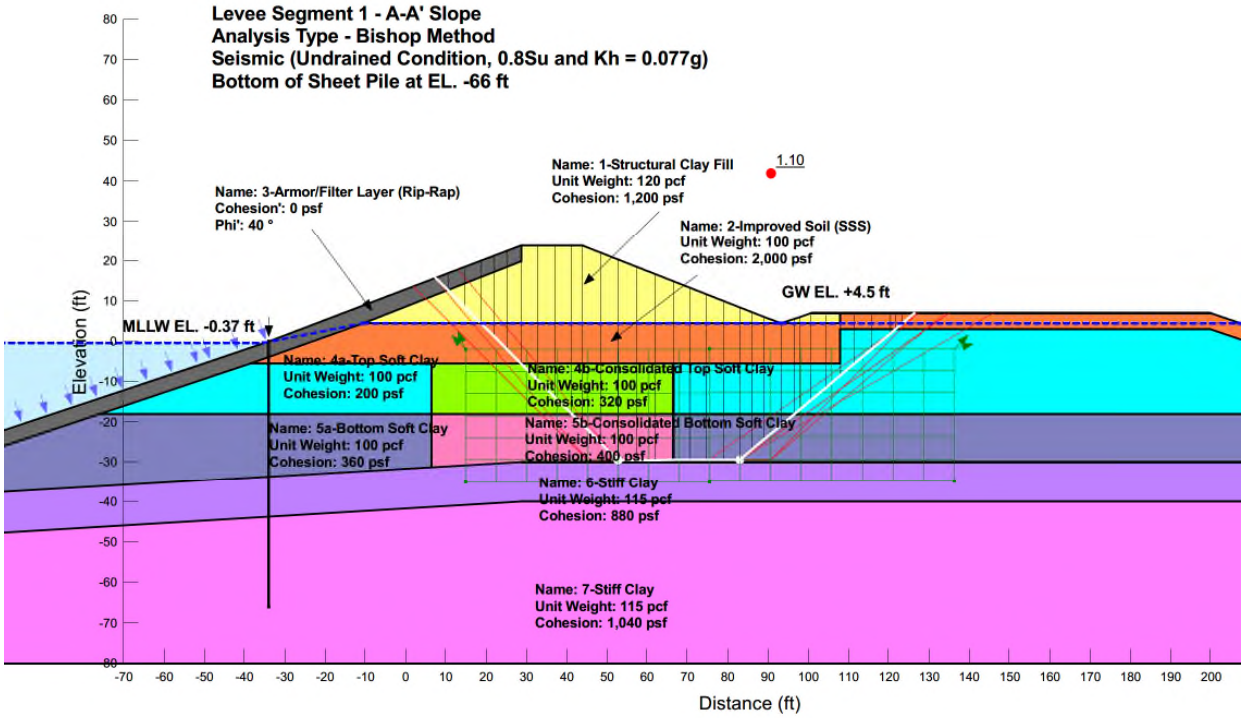

Figure 53: Slope/W Output for Segment-1 Cross Section A-A' – Seismic (Outboard to Inboard)

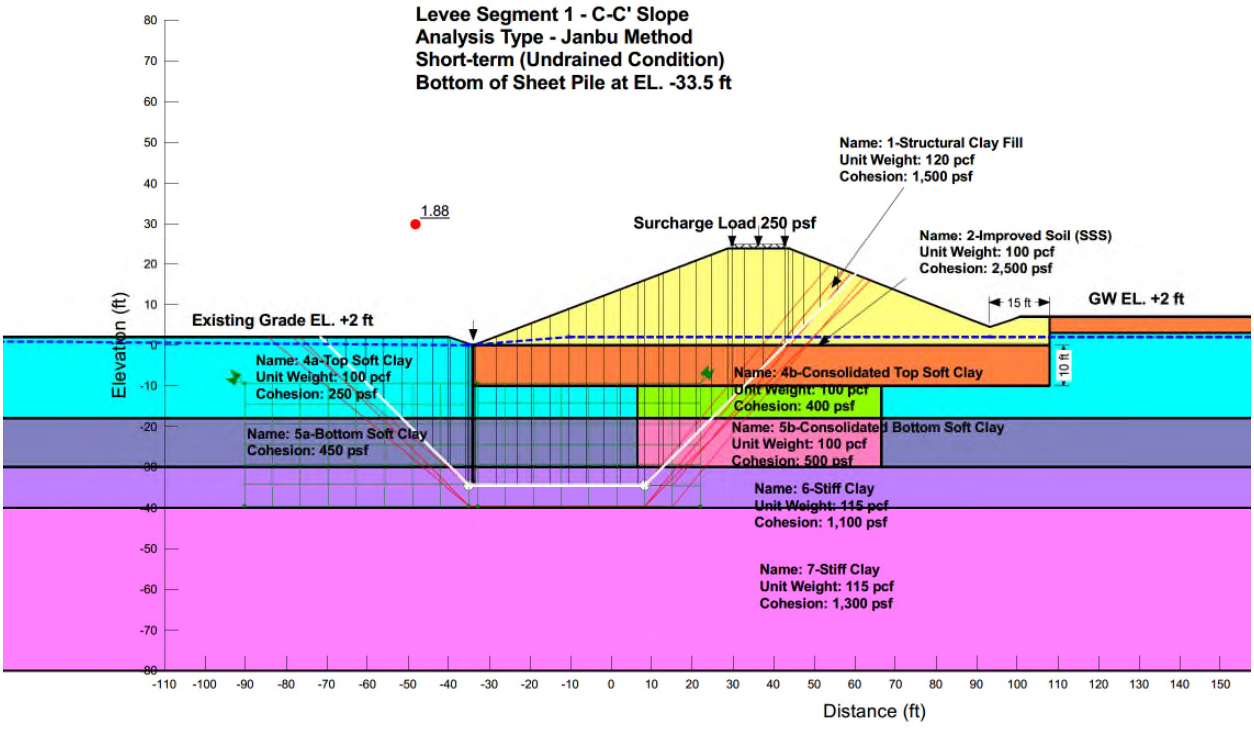

Figure 54: Slope/W Output for Segment-1 Cross Section C-C' – Short-Term (Inboard to Outboard)

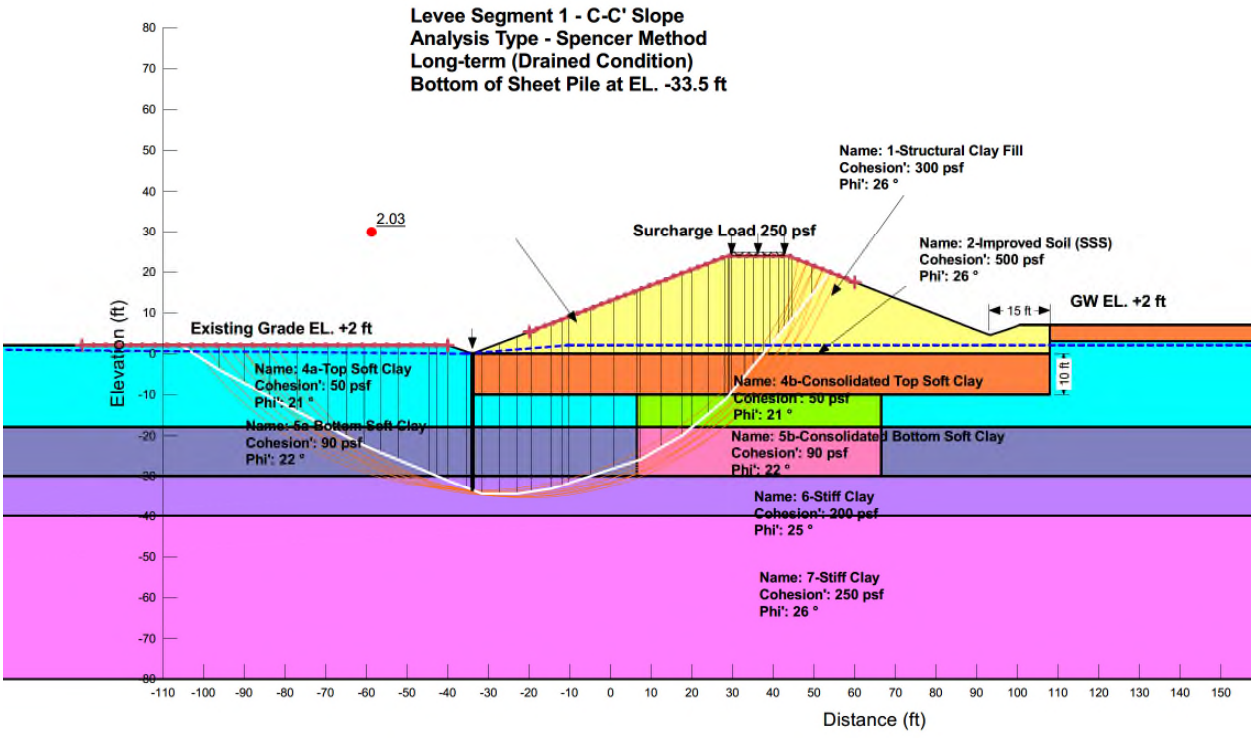

Figure 55: Slope/W Output for Segment-1 Cross Section C-C' – Long-Term (Inboard to Outboard)

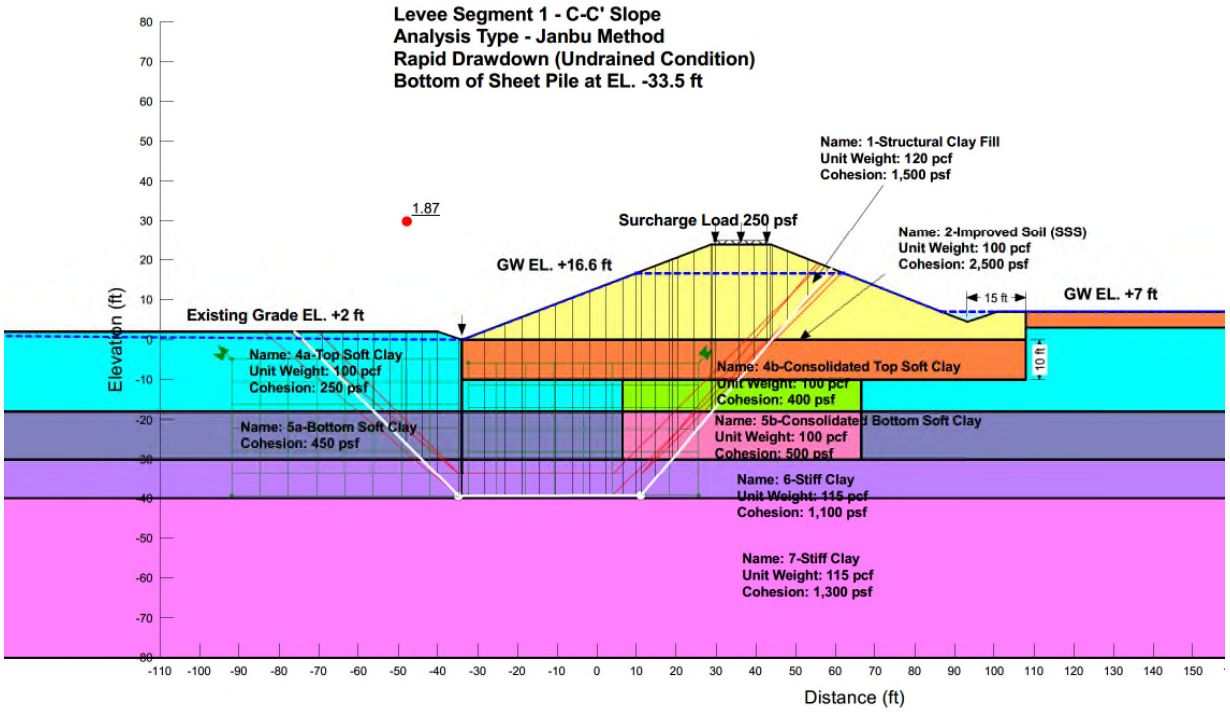

Figure 56: Slope/W Output for Segment-1 Cross Section C-C' – Rapid Drawdown (Inboard to Outboard)

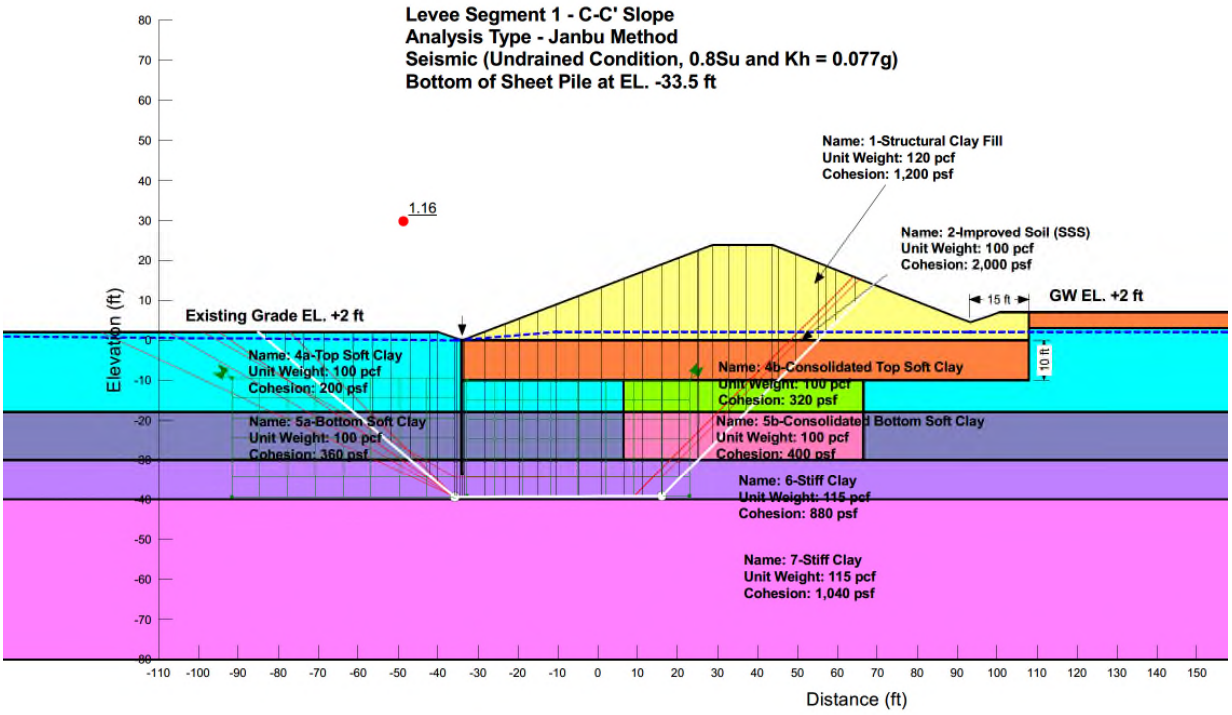

Figure 57: Slope/W Output for Segment-1 Cross Section C-C' – Seismic (Inboard to Outboard)

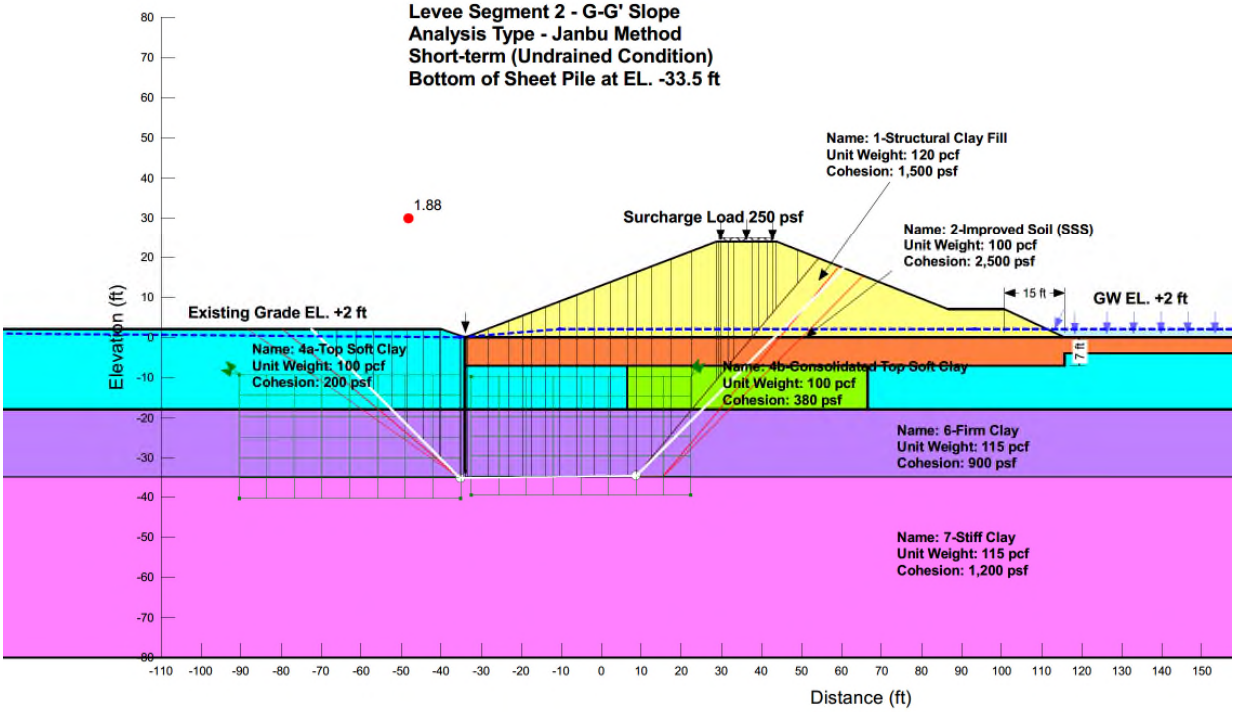

Figure 58: Slope/W Output for Segment-2 Cross Section G-G' – Short-Term (Inboard to Outboard)

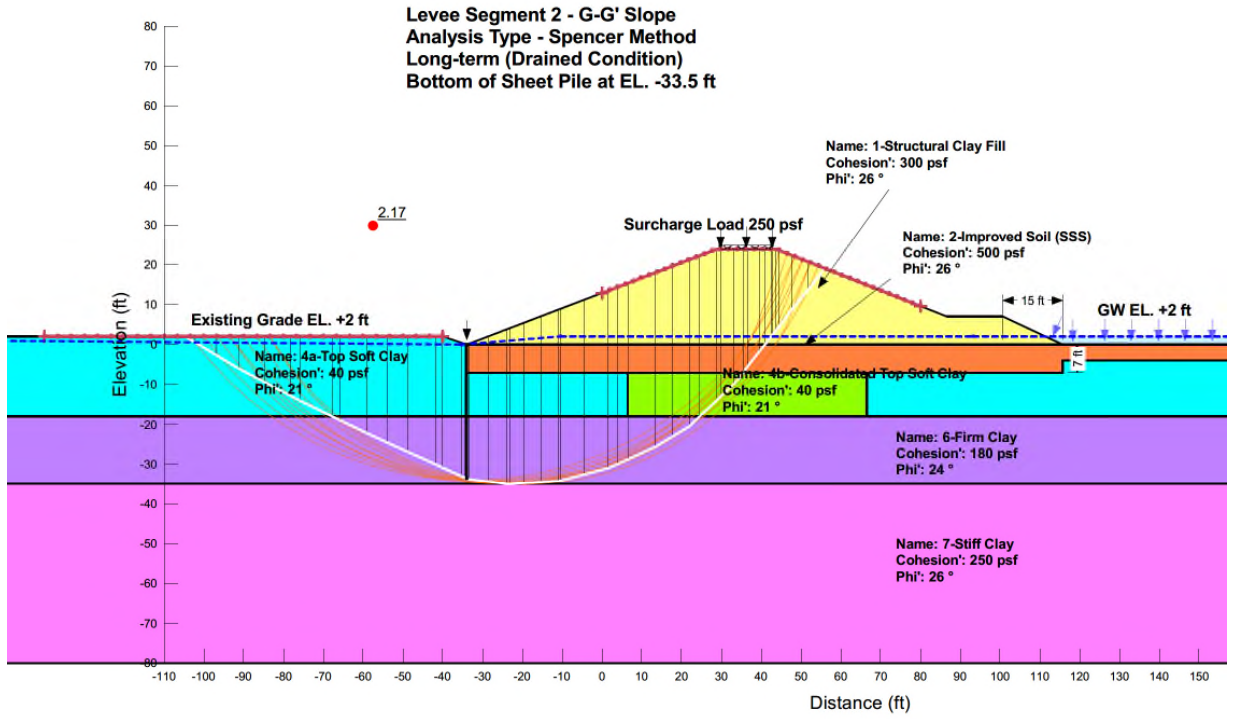

Figure 59: Slope/W Output for Segment-2 Cross Section G-G' – Long-Term (Inboard to Outboard)

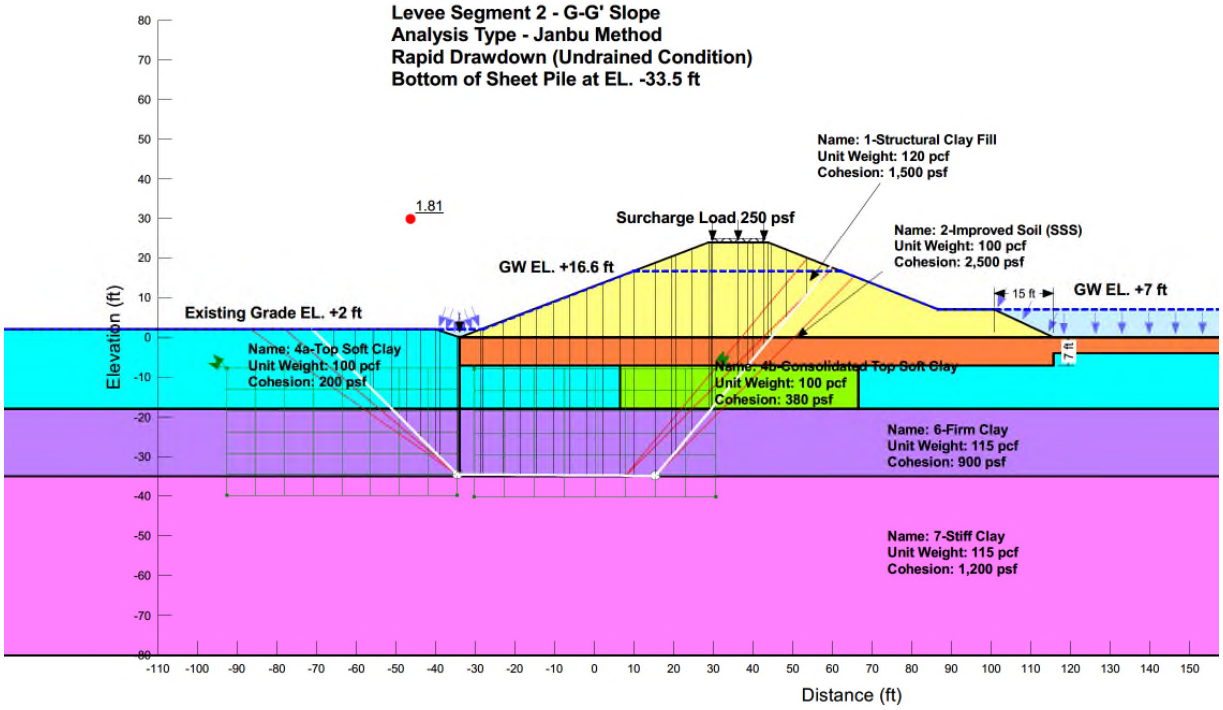

Figure 60: Slope/W Output for Segment-2 Cross Section G-G' – Rapid Drawdown (Inboard to Outboard)

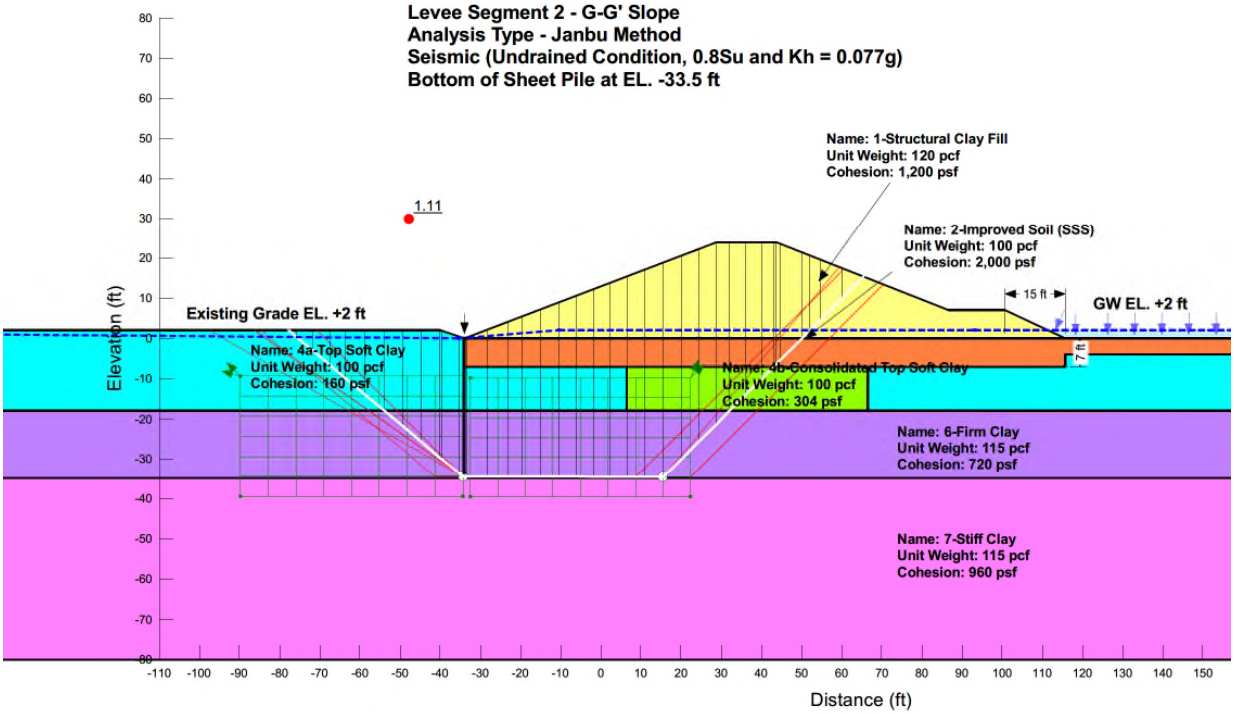

Figure 61: Slope/W Output for Segment-2 Cross Section G-G' – Seismic (Inboard to Outboard)

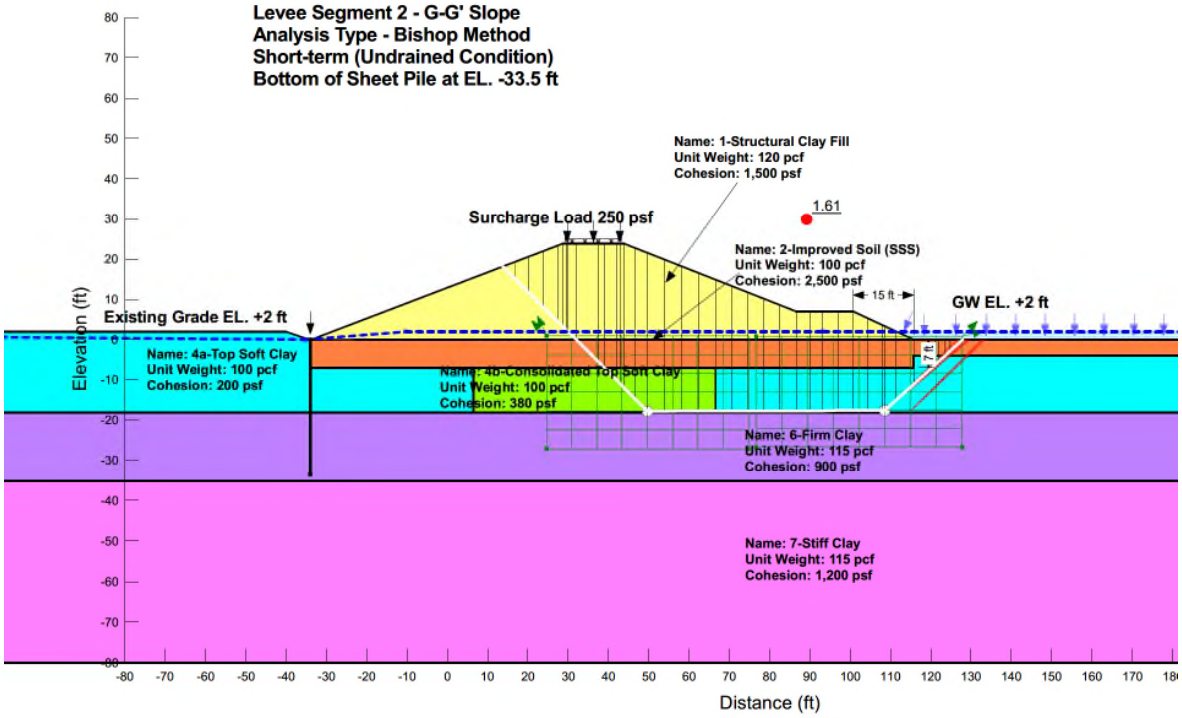

Figure 62: Slope/W Output for Segment-2 Cross Section G-G' – Short-Term (Outboard to Inboard)

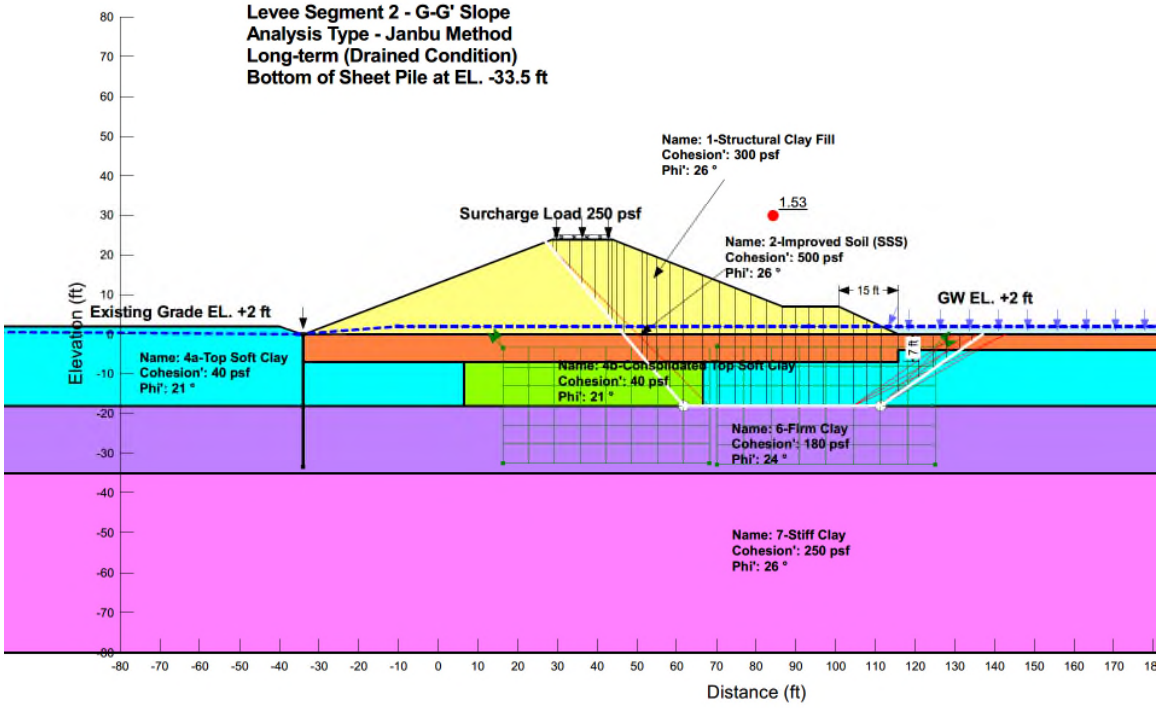

Figure 63: Slope/W Output for Segment-2 Cross Section G-G' – Long-Term (Outboard to Inboard)

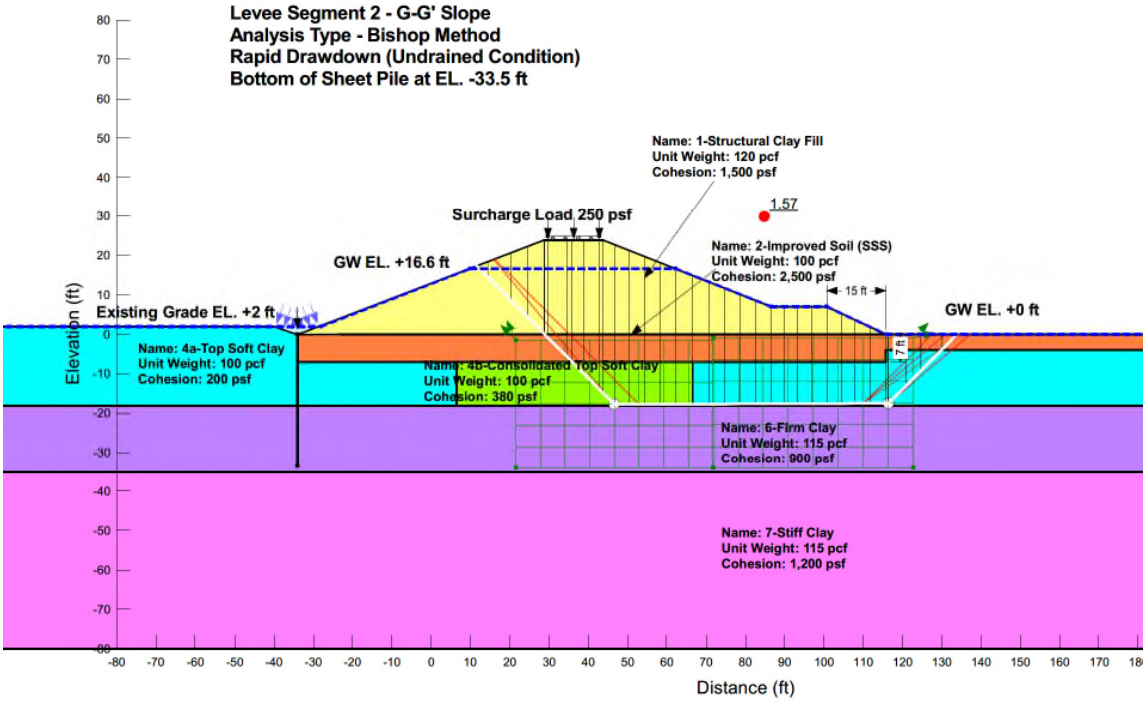

Figure 64: Slope/W Output for Segment-2 Cross Section G-G' – Rapid Drawdown (Outboard to Inboard)

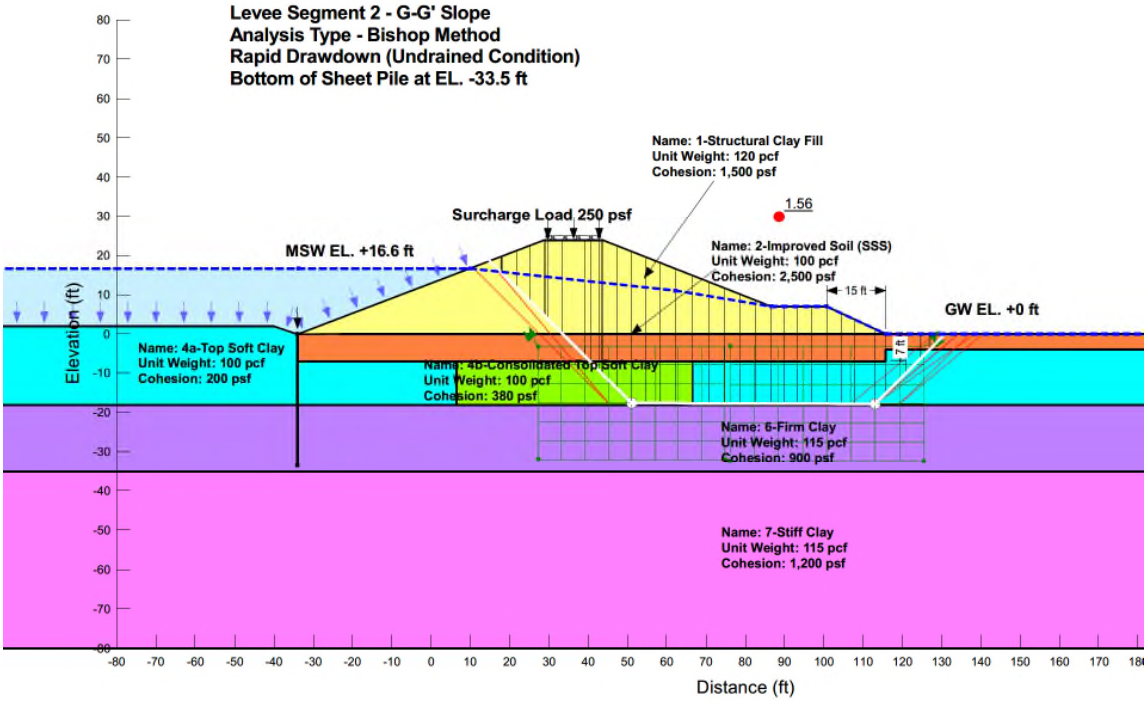

Figure 65: Slope/W Output for Segment-2 Cross Section G-G' – Maximum Still Water (Outboard to Inboard)

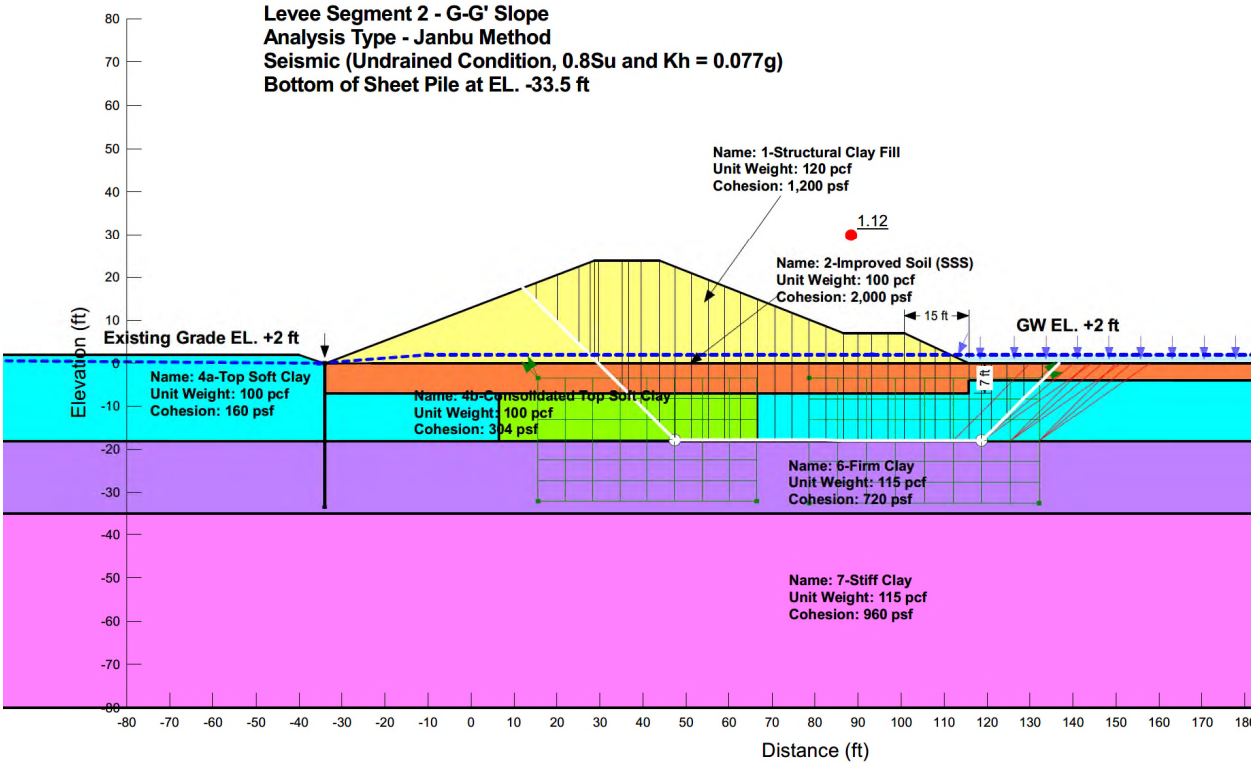

Figure 66: Slope/W Output for Segment-2 Cross Section G-G' – Seismic (Outboard to Inboard)

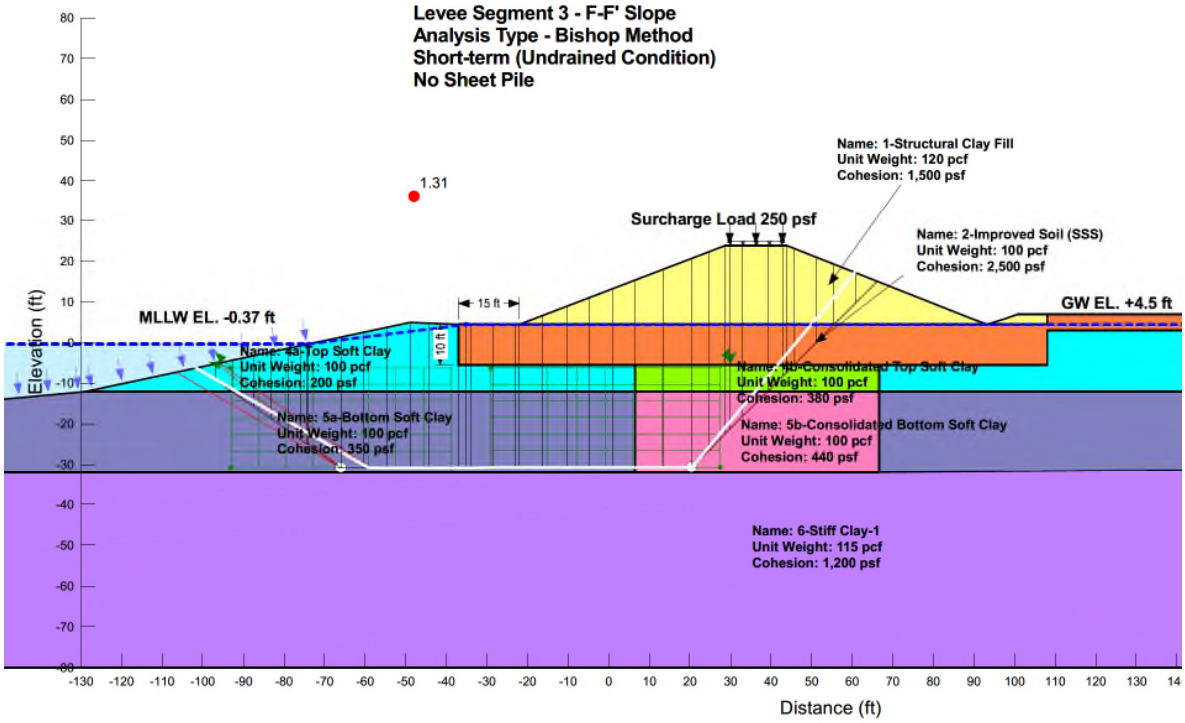

Figure 67: Slope/W Output for Segment-3 Cross Section F-F' – Short-Term (Inboard to Outboard)

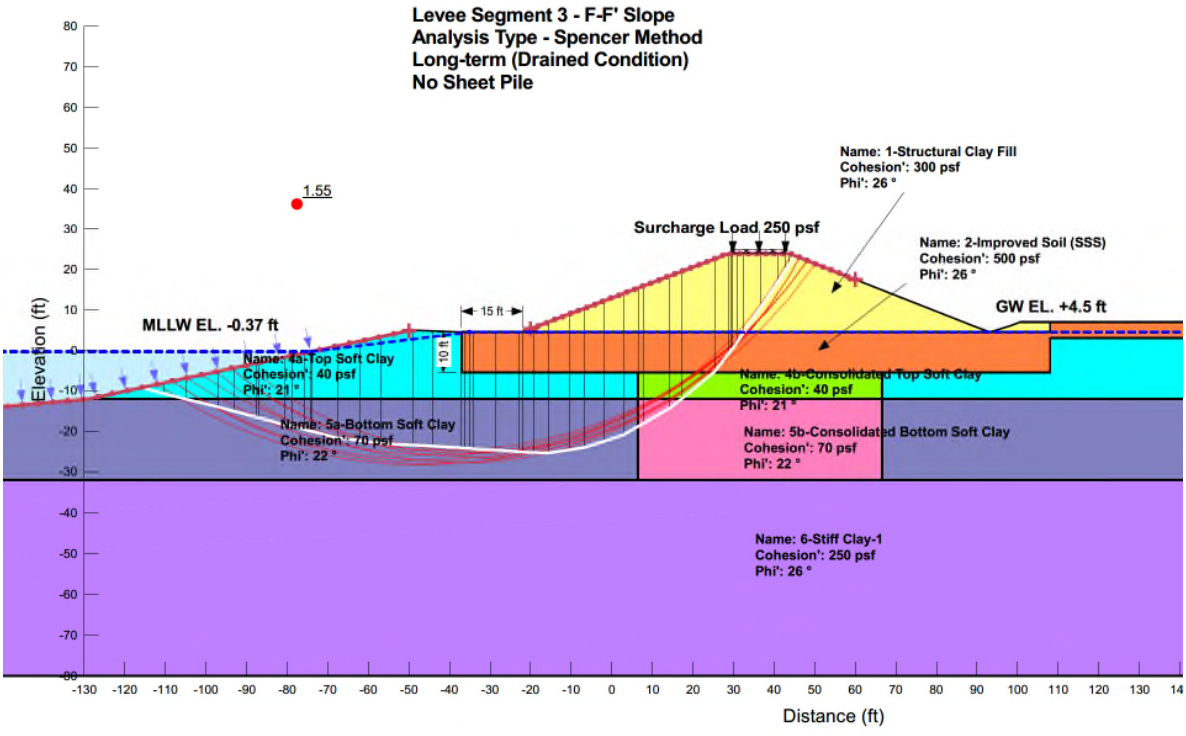

Figure 68: Slope/W Output for Segment-3 Cross Section F-F' – Long-Term (Inboard to Outboard)

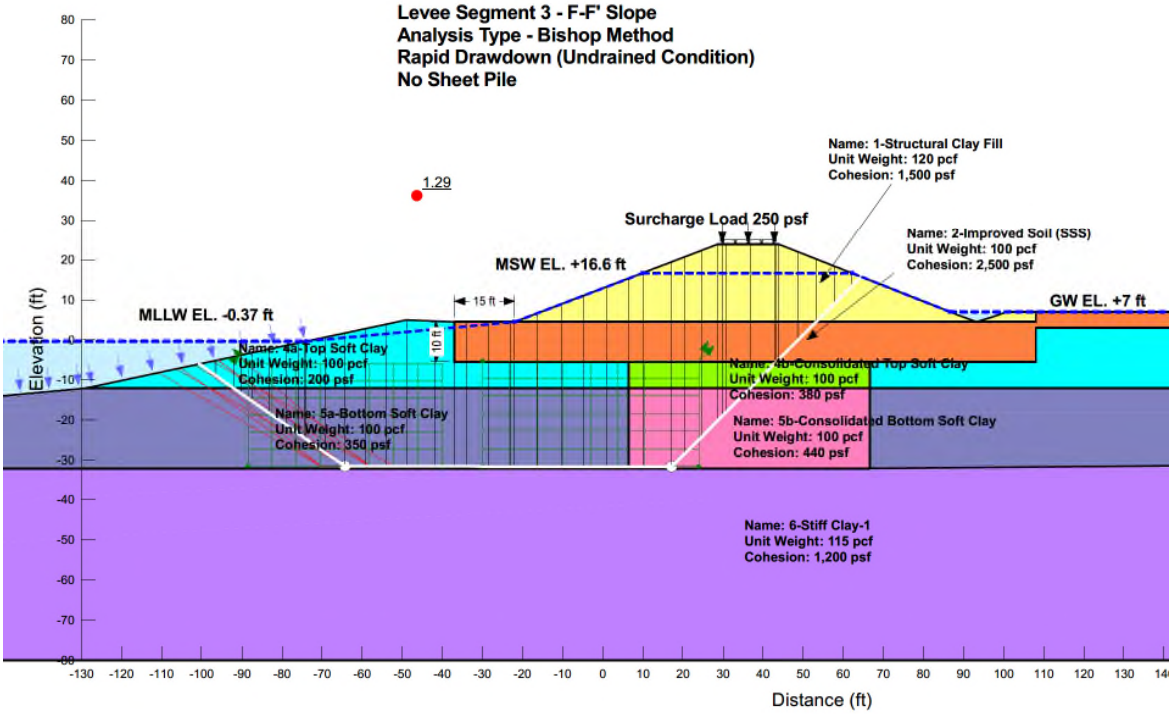

Figure 69: Slope/W Output for Segment-3 Cross Section F-F' – Rapid Drawdown (Inboard to Outboard)

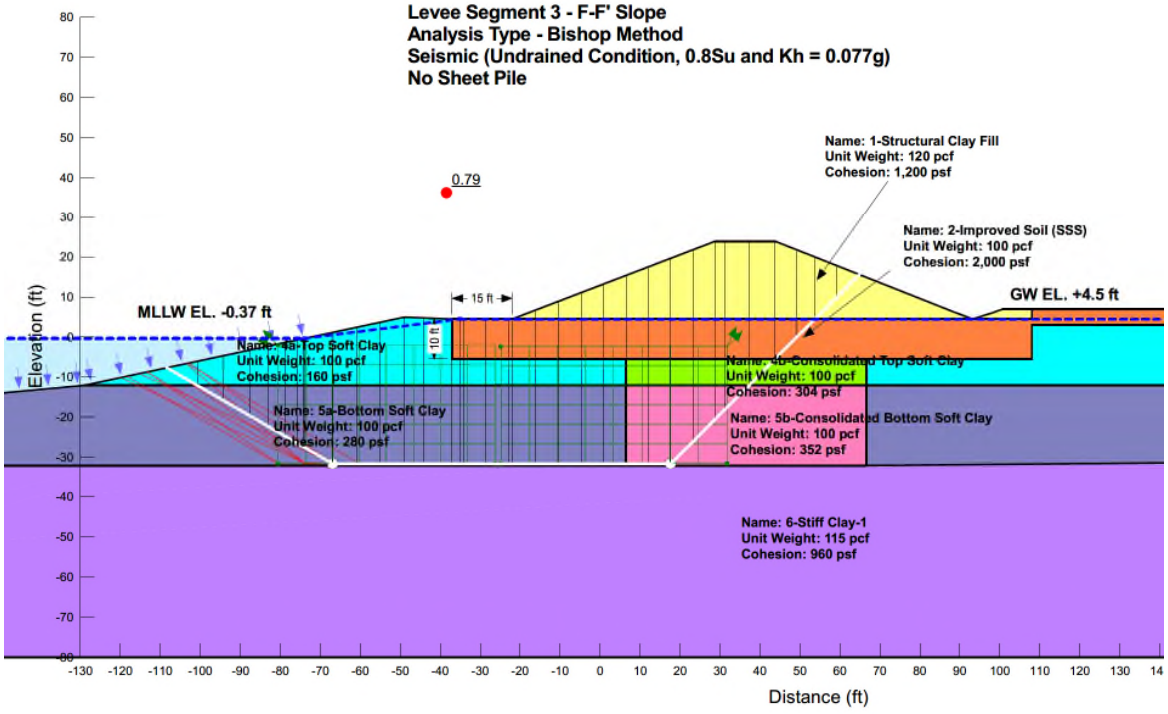

Figure 70: Slope/W Output for Segment-3 Cross Section F-F' – Seismic (Inboard to Outboard)

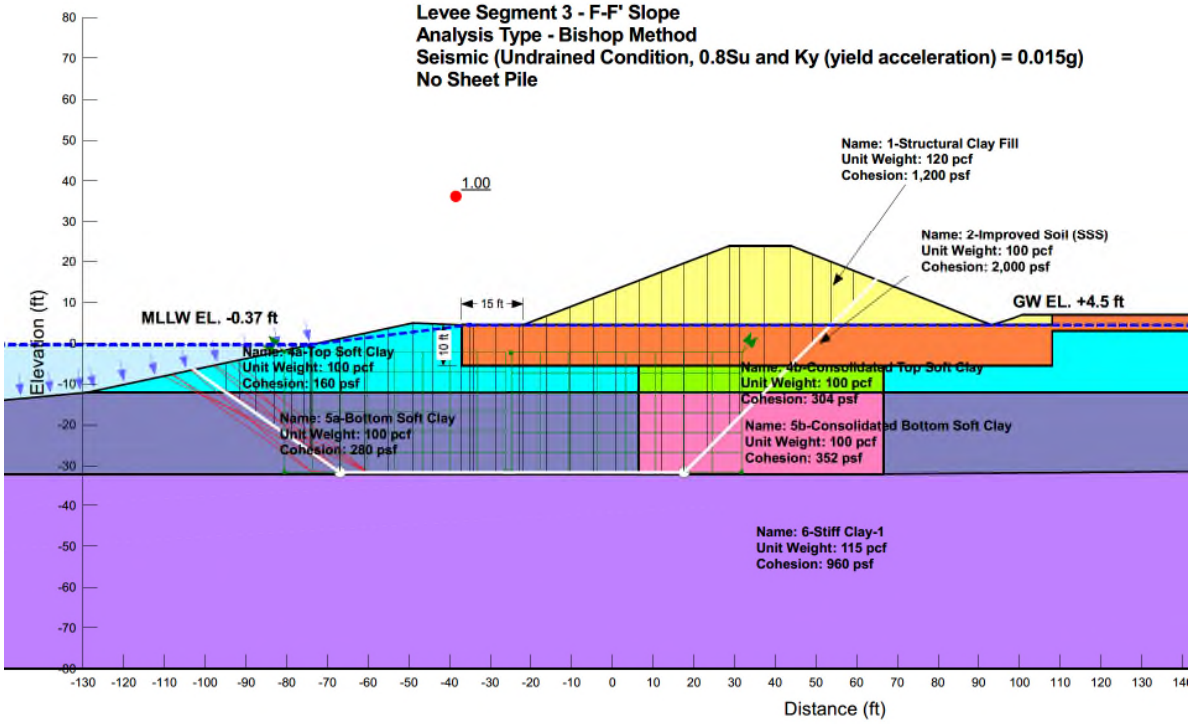

Figure 71: Slope/W Output for Segment-3 Cross Section F-F' – Seismic with yield acceleration (Inboard to Outboard)

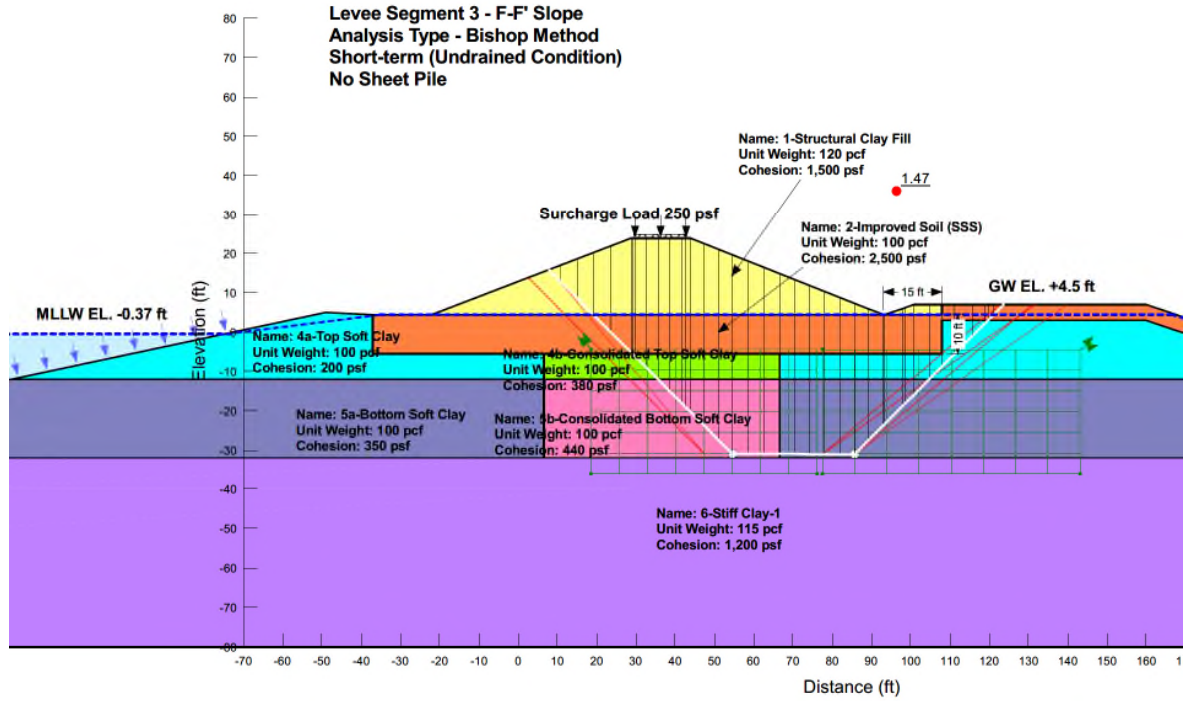

Figure 72: Slope/W Output for Segment-3 Cross Section F-F' – Short-Term (Outboard to Inboard)

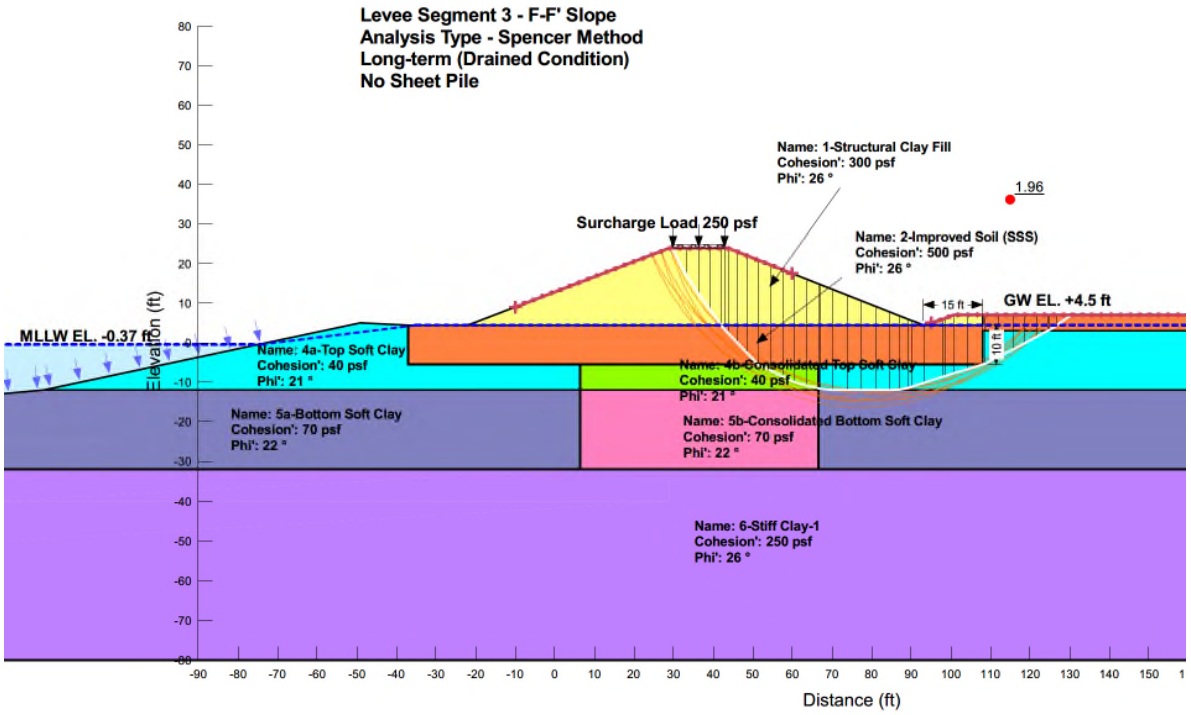

Figure 73: Slope/W Output for Segment-3 Cross Section F-F' – Long-Term (Outboard to Inboard)

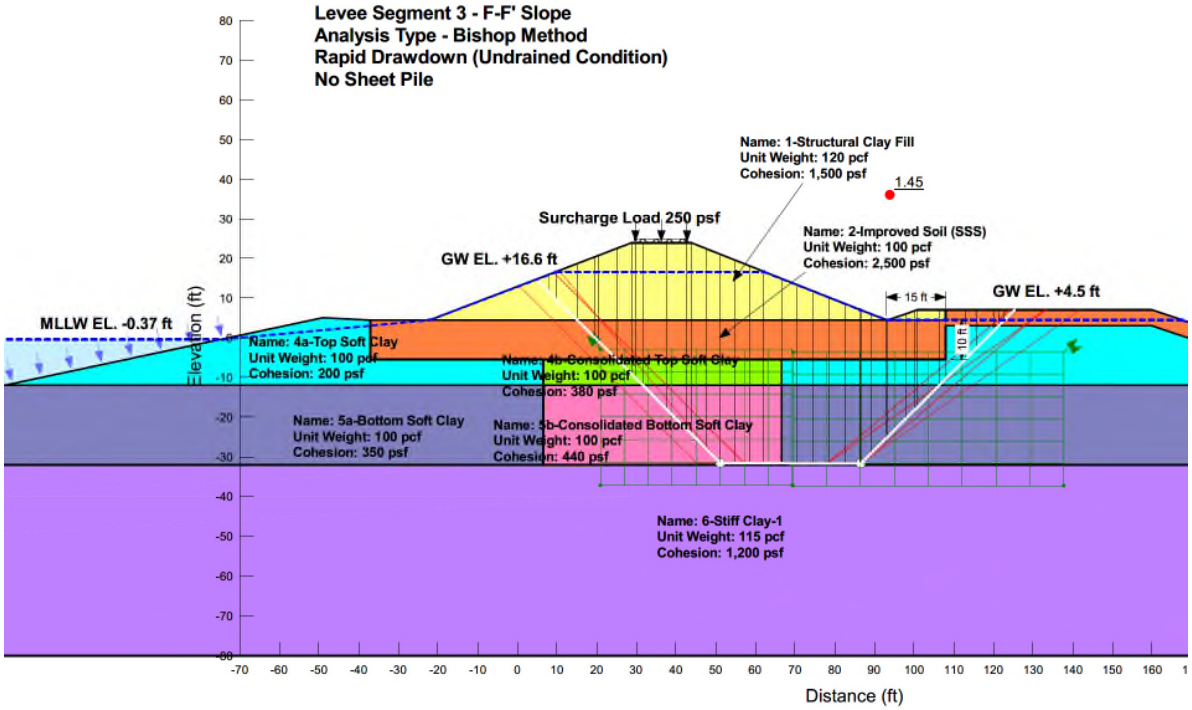

Figure 74: Slope/W Output for Segment-3 Cross Section F-F' – Rapid Drawdown (Outboard to Inboard)

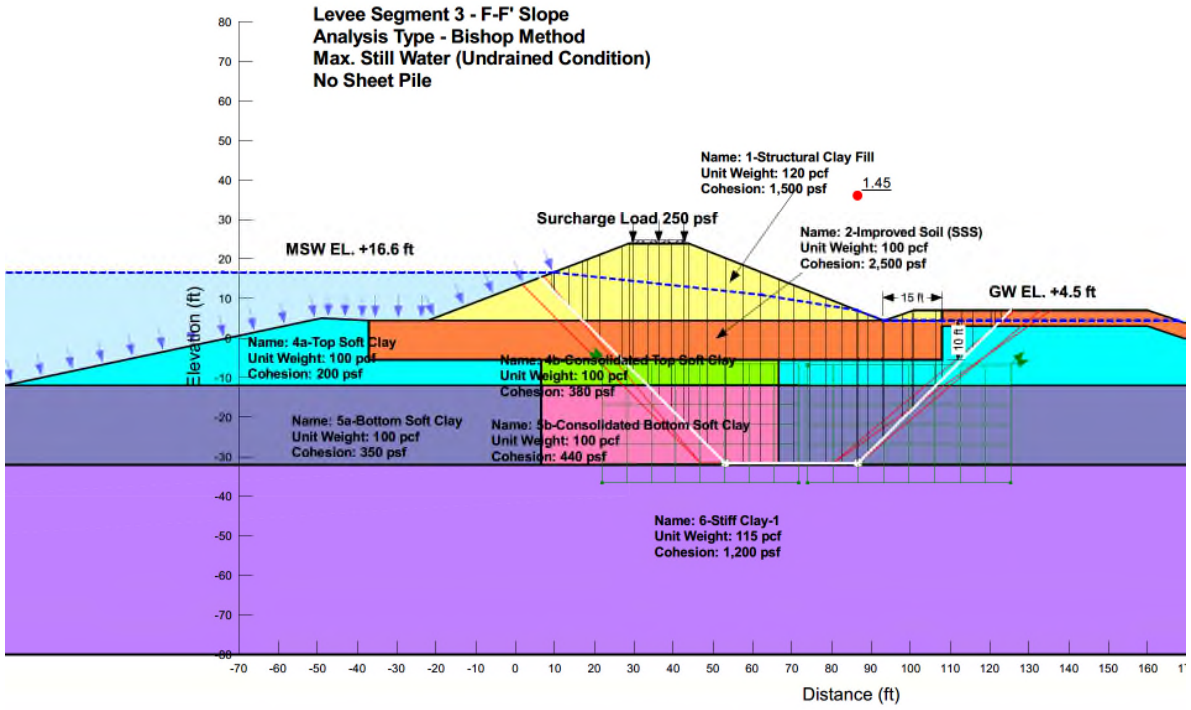

Figure 75: Slope/W Output for Segment-3 Cross Section F-F' – Maximum Still Water (Outboard to Inboard)

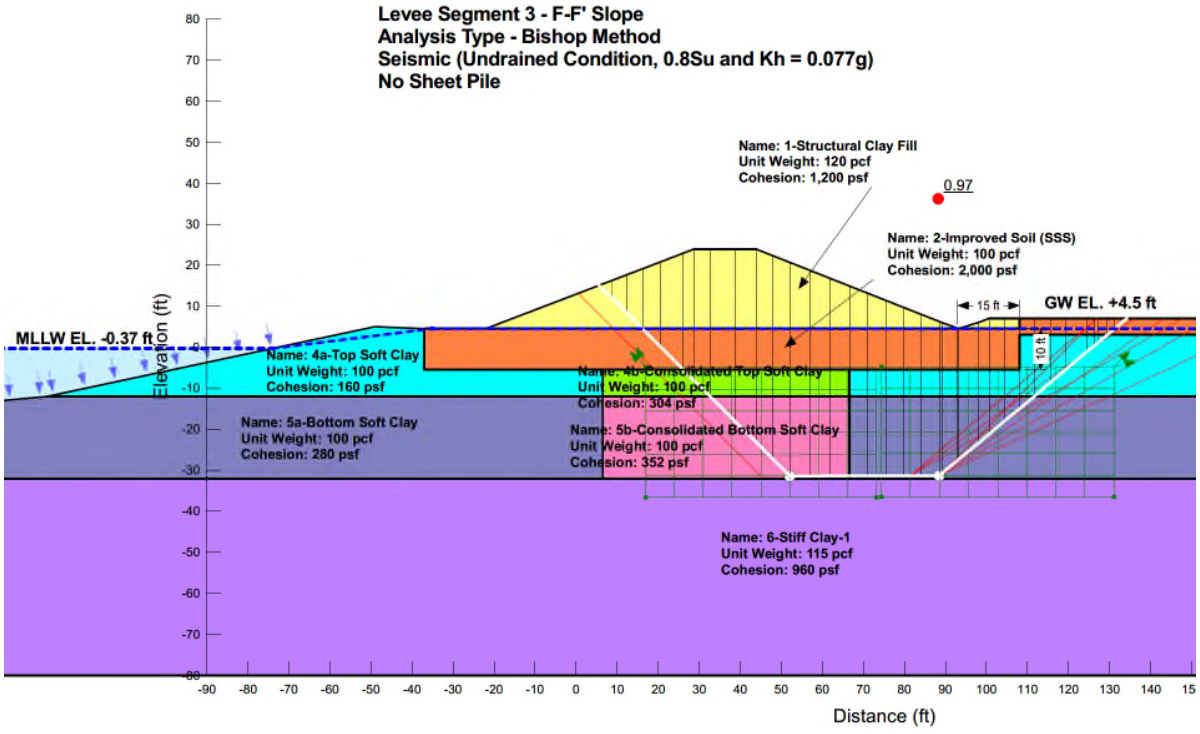

Figure 76: Slope/W Output for Segment-3 Cross Section F-F' – Seismic (Outboard to Inboard)

Segment-1

Top EL of Levee =		20.6		1st Iteration			2nd Iteration					3rd Iteration					4th Iteration							
Existing EL (ft)	Fill Thick (ft)	W of Dike Bottom	Edge of Berm	center Settlement (in)	edge Settlement (in)	Extra Fill for Compensation (ft)	Extra Uniform Load (psf)	Fill Thick (ft)	center Settlement (in)	edge Settlement (in)	Extra Fill for Compensation (ft)	Extra Uniform Load (psf)	Fill Thick (ft)	center Settlement (in)	edge Settlement (in)	Extra Fill for Compensation (ft)	Extra Uniform Load (psf)	Fill Thick (ft)	center Settlement (in)	edge Settlement (in)	Extra Fill for Compensation (ft)	2ndary Compression	1% Creep due to self-weight	∑longterm (inch)
1	19.6	132.6	66.3	32.5	10.7	1.8	107.0	21.4	35.7	12.8	1.9	128.0	21.5	36.0	13.1	1.9	131.0	21.5	36.0	13.1	1.9	3.0	2.6	5.6
3	17.6	120.6	60.3	31.4	10.8	1.7	108.0	19.3	34.6	13.0	1.8	130.0	19.4	35.0	13.3	1.8	133.0	19.4	35.0	13.3	1.8	3.4	2.3	5.7
5	15.6	108.6	54.3	30.0	10.7	1.6	107.0	17.2	33.1	13.0	1.7	130.0	17.3	33.6	13.4	1.7	134.0	17.3	33.6	13.4	1.7	3.7	2.1	5.8
7	13.6	96.6	48.3	27.4	10.4	1.4	104.0	15.0	30.8	12.8	1.5	128.0	15.1	31.3	13.1	1.5	131.0	15.1	31.3	13.2	1.5	4.0	1.8	5.8

Segment-2

Top EL of Levee =		20.6		1st Iteration			2nd Iteration					3rd Iteration					4th Iteration							
Existing EL (ft)	Fill Thick (ft)	W of Dike Bottom	Edge of Berm	center Settlement (in)	edge Settlement (in)	Extra Fill for Compensation (ft)	Extra Uniform Load (psf)	Fill Thick (ft)	center Settlement (in)	edge Settlement (in)	Extra Fill for Compensation (ft)	Extra Uniform Load (psf)	Fill Thick (ft)	center Settlement (in)	edge Settlement (in)	Extra Fill for Compensation (ft)	Extra Uniform Load (psf)	Fill Thick (ft)	center Settlement (in)	edge Settlement (in)	Extra Fill for Compensation (ft)	2ndary Compression	1% Creep due to self-weight	∑longterm (inch)
1	19.6	132.6	66.3	22.5	6.8	1.3	67.7	20.9	23.8	7.8	1.3	77.6	20.9	23.9	7.8	1.3	78.4	20.9	23.9	7.8	1.3	1.4	2.5	3.9
3	17.6	120.6	60.3	23.5	7.3	1.3	72.8	18.9	25.1	8.5	1.4	84.5	19.0	25.2	8.6	1.4	86.0	19.0	25.2	8.6	1.4	1.7	2.3	4.0
5	15.6	108.6	54.3	23.7	7.6	1.3	76.3	16.9	25.6	9.0	1.4	90.0	17.0	25.8	9.2	1.4	91.9	17.0	25.8	9.2	1.4	2.0	2.0	4.1
7	13.6	96.6	48.3	23.1	7.8	1.3	78.2	14.9	25.3	9.4	1.3	93.8	14.9	25.5	9.6	1.3	95.6	14.9	25.5	9.6	1.3	2.3	1.8	4.1

Segment-3

Top EL of Levee =		20.6		1st Iteration			2nd Iteration					3rd Iteration					4th Iteration							
Existing EL (ft)	Fill Thick (ft)	W of Dike Bottom	Edge of Berm	center Settlement (in)	edge Settlement (in)	Extra Fill for Compensation (ft)	Extra Uniform Load (psf)	Fill Thick (ft)	center Settlement (in)	edge Settlement (in)	Extra Fill for Compensation (ft)	Extra Uniform Load (psf)	Fill Thick (ft)	center Settlement (in)	edge Settlement (in)	Extra Fill for Compensation (ft)	Extra Uniform Load (psf)	Fill Thick (ft)	center Settlement (in)	edge Settlement (in)	Extra Fill for Compensation (ft)	2ndary Compression	1% Creep due to self-weight	∑longterm (inch)
1	19.6	132.6	66.3	32.0	10.4	1.8	103.9	21.4	34.9	12.4	1.9	124.1	21.5	35.2	12.7	1.9	126.8	21.5	35.2	12.7	1.9	3.1	2.6	5.6
3	17.6	120.6	60.3	30.9	10.5	1.7	105.1	19.3	34.0	12.7	1.8	126.7	19.4	34.4	13.0	1.8	129.8	19.4	34.4	13.0	1.8	3.4	2.3	5.7
5	15.6	108.6	54.3	29.3	10.5	1.6	104.7	17.2	32.6	12.7	1.7	127.4	17.3	33.0	13.1	1.7	130.8	17.3	33.1	13.1	1.7	3.7	2.1	5.7
7	13.6	96.6	48.3	27.0	10.2	1.4	102.3	15.0	30.4	12.5	1.5	125.3	15.1	30.9	12.9	1.5	129.0	15.1	30.9	12.9	1.5	4.0	1.8	5.8

Figure 77: Results of Iterative Settlement Analyses for Fill-Induced Settlement

Port Arthur LNG

BECHTEL

Firm No. F-9684

PORT ARTHUR LIQUEFACTION PROJECT

OVERTOPPING AND LEVEE ELEVATION ASSESSMENT

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001	10-20-2023	ISSUED FOR USE	CT	BC	KR	JT
000	07-18-2019	ISSUED FOR DESIGN (EDSA PHASE)	CT	YY	DH	SK

OVERTOPPING AND LEVEE ELEVATION ASSESSMENT	Bechtel Document No.	
	26196-100-30R-R01-00002	
	PALNG Document No.	Rev.
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1.0 GENERAL

Port Arthur LNG, LLC (PALNG) is developing a Liquefied Natural Gas (LNG) production and export facility on a site located on the western shoreline of the Port Arthur Canal in Jefferson County, Texas.

To protect the LNG plant against storm surge events an earthen levee will be constructed around the perimeter of the plant (Figure 1). As per the Design Criteria for Civil Sitework (26196-100-3DR-C04-00001/ PAL-PJT-CIV-DEC-00-X-0001), it has been determined that the levee will be designed to withstand a 500-year return period storm surge event with associated wave conditions.

This document describes the Overtopping and Levee Elevation Assessment that has been carried out. The analysis for this assessment is based upon the 500-year storm surge conditions and wave parameters presented in the Moffatt & Nichol Shoreline Protection Report (PAL0-MAR-RPT-0012).

The report will also calculate the surface water depth above ground on the inside of the levee when limited overtopping of the levee is allowed, and consider the protection required on the front and rear side of the levee.



Figure 1 Rendering of the PALNG Project

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2.0 DESIGN CONDITIONS

The following section of this report presents the design conditions used for the overtopping and levee elevation assessment report. This section contains the met-ocean design conditions and the design assumptions made for the levee.

2.1 Met-ocean

Met-ocean design conditions specific to the PALNG project site were developed and presented in report the following reports:

- Marine Site Characteristics (Moffatt and Nichol; PAL0-10-MAR-RPT-0002)
- Shoreline Protection Report (Moffatt and Nichol; PAL0-MAR-RPT-0012)

The design water level and wave conditions used for the analysis in this report are presented in Table 1.

The 500-year wave condition used is taken directly from PAL0-MAR-RPT-0012, which describes that it has been derived using the USACE Automated Coastal Engineering System model.

The 500-year Still Water Elevation (SWEL) was defined in both PAL0-10-MAR-RPT-0002 and PAL0-MAR-RPT-0012.

As per the recommendations of PAL0-MAR-RPT-0012, this single wave height and wave period has been considered as the worst-case significant wave height that could affect the site in a 500-year event, and therefore has been used for the overtopping and levee elevation analysis.

It should be noted that, as per PAL0-10-MAR-RPT-0002, that the probability of the 500-year SWEL occurring at the same time as the wind conditions required to create the derived 500-year wave is smaller than the probability of any of these events taking place individually. Therefore, it can be concluded that the results used for this levee elevation analysis are conservative.

2.2 Relative Sea Level Rise

For the assessment of the levee elevation a Relative Sea Level Rise (RSLR) value of 0.6’ was used, based upon the information defined in both PAL0-10-MAR-RPT-0002 and PAL0-MAR-RPT-0012. This value was based upon analysis of the recorded mean sea level trend at NOAA CO-OPS Station 8770570 Sabine Pass North for the period 1958 to 2013, which reflects RSLR. The analysis showed a mean sea level trend of 0.25 in/year,

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and therefore a loss in elevation relative to mean sea level of 0.6’ over a 30-year design life of the facility can be expected.

In addition to this, the design elevation of the levee was also checked against a Federal Energy Regulatory Commission (FERC) provided value for RSLR. This value was taken from the USACE Sea Level Change Curve Calculator which uses the same NOAA CO-OPS data to develop RSLR predictions using IPCC scenarios for increased future rates of sea level rise. For the intermediate scenario a RSLR of 1.21’ for a 30-year design life was provided by FERC.

2.3 Design Conditions

Design water levels considering both RSLR values have been studied in this updated report. These water levels, together with the associated 500-yr wave conditions, are provided in Table 1.

Table 1 Storm Surge, RSLR and Wave conditions for Levee Elevation analysis

	Storm Surge (ft. NAVD88)		**500-yr Wave Heights, H_s (ft)**	**500-yr Wave Periods, T_p (s)**
	SWEL (500-yr)	*SWEL+ RSLR*		
Baseline	+14.00	+14.60	5.9	4.0
FERC RSLR	+14.00	+15.21	5.9	4.0

2.4 Levee Design

Shoreside and landside elevations for the PALNG levee will be considered using the 500-year event wave height and period specified in PAL0-MAR-RPT-0012. The assumption in PAL0-MAR-RPT-0012 that the relocated Highway 87 would act as a wave breaking barrier and reduce the incident wave height at the shoreside levee is now no longer valid.

The latest State of Texas plans for proposed Highway 87 developments (State of Texas, 2018) show that the roadway elevation in front of the shoreline levee will be approximately +7.5’ NAVD88. Given this elevation and considering the same theory for wave breaking applied in the Moffat and Nichol Shoreline Protection Report (PAL0-MAR-RPT-0012), the worst-case wave height that may affect the land side of the levee will be in the order of 5.7’. This assumes a maximum wave height of 80% of the water depth over the highway (including predicted relative sea level rise). A similar wave period as presented in Table 1 would be expected. Based upon the analysis from the PALNG Substation elevation analysis (308005-00087 - 00-CS-REP-0001), this can be taken as a conservative wave

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height for the landside levee at this stage. The substation report suggests a 500-year wave height of 5.2' with a wave period of 3.2 seconds.

The angle of wave approach to the levees is described in the Moffatt and Nichol report PAL0-MAR-RPT-0012, and it is concluded that there is no case where the worst design wave condition will impact the levee in a head-on direction. Upon review, this assumption seems logical based upon the derivation of wave heights relying upon a fully developed wave occurring in either direction of the existing navigation channel. Therefore, a wave attack angle reduction factor (γ_β) of 0.85 will be used as per PAL0-MAR-RPT-0012.

For derivation of run-up and overtopping, it is assumed that the levee will be protected by a grass layer with a grass length greater than 0.1'. Therefore, as per the USACE Coastal Engineering Manual (USACE, 2003), the surface roughness reduction factor (γ_r) should be between 0.9 and 1.0. A value of 0.9 was used in these overtopping calculations as this provides some allowance for the effects of the with High Performance Turf Reinforcement Matting (HPTRM) that will be used for additional erosion protection.

For calculation of wave run-up and overtopping, it is assumed that the levee will be constructed with a 3 (Horizontal): 1 (Vertical) front side slope, and no berm in front of the slope has been considered. As a minimum, both the front and rear side of the levee will be protected with HPTRM around its full length.

3.0 METHODOLOGY

3.1 Levee Elevation

For the 500-year design case to determine levee elevations, a no-overtopping and overtopping allowed case were considered. For an allowable overtopping case, discharge should be limited to around 0.1 cfs/ft (10 l/s/m). This is as per USACE Coastal Engineering Manual guidelines for mean overtopping discharge over a clay levee with grass coverage to maintain structural stability, but does not account for additional erosion protection such as HPTRM.

For a no overtopping case, this elevation was considered as 1' above the run-up elevation of the largest 2% of the waves that may occur during the 500-year event. The methodology for determining these is explained in more detail in this section.

It is noted that a more recent EurOtop manual was released in December 2018 (EurOtop, 2018) than that used for the Moffatt & Nichol analysis (EurOtop, 2007). For this type of run-up and overtopping analysis the differences in calculated results between the use of the 2007 formula and the 2018 formula is minimal (see section 8.2 of 2018 EurOtop

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manual). To keep with the most recent overtopping guidance, analysis within this report will consider the EurOtop 2018 manual.

3.1.1 Considering Allowable Overtopping

To assess the required crest elevation to protect against run-up from a 500-year storm event a run-up and overtopping analysis was performed. This analysis followed the best practice of the EurOtop manual (2018) and the USACE Coastal Engineering Manual (2003).

Levee elevations were set at an elevation that limited the base case RSLR case (0.6') overtopping to below 0.1 cfs/ft, as per the Design Criteria for Civil Siteworks (26196-100-3DR-C04-00001). This value is defined in the USACE Coastal Engineering Manual as 'the start of damage' for a grass covered clay levee, which is generally acceptable when designing for such a low probability design event. The 500-year design event has a 0.2% chance of occurring in any year of the design life of the LNG plant. Note that an overtopping value of 0.1 cfs/ft does not consider any reinforcement to the grass coverage, such as High-Performance Turf Reinforcement Matting (HPTRM), which would provide further protection from erosion and therefore allow additional overtopping.

This value of 0.1 cfs/ft has been widely studied by the USACE, and was the value used for probabilistic design of earthen levees in the New Orleans area after Hurricane Katrina for 100-year design events.

The method for calculating overtopping is described in Formula (1). RSLR was included in the calculation to ensure the levee defends against predicted sea level rise and global subsidence over the lifetime of the project, as per PAL0-10-MAR-RPT-0002. As the design of the PALNG levee is using a deterministic approach, the deterministic overtopping design formula from the EurOtop manual has been used, rather than the probabilistic formula, which adds a partial safety factor of one standard deviation.

$$\frac{q}{\sqrt{gH_{m0}{}^3}} = \frac{0.026}{\sqrt{\tan\alpha}}\gamma_b\varepsilon_{om}exp\left[-\left(2.5\frac{R_C}{\varepsilon_{om}\gamma_b\gamma_r\gamma_\beta\gamma_v}\right)^{1.3}\right] \quad (1)$$

Where;

q	= Mean overtopping volume;	γ_r	= Surface roughness reduction factor
γ_b	= Levee reduction factor;	γ_β	= Wave attack angle reduction factor
γ_v	= Wave wall reduction factor;	R_c	= Freeboard above SWEL
ξ_{om}	= Iribarren Number;	H_{m0}	= Significant wave height (structure)

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In addition to the baseline calculation, the calculated levee elevation was then checked against the alternate RSLR value provided by FERC. This check was done to make sure that average overtopping remained close to the 0.1 cfs/ft range, and also that overtopping flow velocities were below the erosion threshold offered by the HPTRM protection (see Section 3.2 for more details on flow velocities).

3.1.2 No Overtopping

Based upon FEMA (2007) guidelines for levee elevations and 44 CFR 65.10, for a 100-year storm event a no overtopping scenario is defined as the maximum 2% wave run-up elevation with an additional 1' of freeboard. Therefore, to consider no overtopping in a 500-year event for the PALNG a similar approach was used. Using formula for a 2% run-up elevation from the EurOtop manual (2018), the levee elevation for a 500-year event for no overtopping was determined as per formula (2) and formula (3). For the design approach, the effects of RSLR were also included in setting the levee elevation for no overtopping.

$$R_{2\%} = H_{m0} * 1.75\gamma_b\gamma_\beta\gamma_f\varepsilon_{m0} \quad (2)$$

$$No\ Overtopping\ Levee\ Elevation = 500yr\ SWEL + RSLR + R_{2\%} + 1' \quad (3)$$

In addition to the method outlined in Formula 3, the 2018 EurOtop manual also provides some guidance as to what value of overtopping, using calculations from Formula 1, actually can be defined as a 'zero overtopping' scenario. Following these guidelines, 'zero overtopping' can be described as the following:

When H_{m0} = 1m (3.28'), q = 0.03 l/s per m (0.0003 cfs/ft) *(4)*

When H_{m0} = 3m (9.84'), q = 0.16 l/s per m (0.0017 cfs/ft) *(5)*

Therefore, considering a 500 yr wave height of 5.9' (1.8m), by following EurOtop guidance 'zero overtopping' for the PALNG levee will be achieved when Formula 1 shows overtopping of less than or equal to 0.0003 cfs/ft.

3.2 Overtopping Velocity

In addition to calculation of average overtopping volumes, a calculation was also performed to determine the velocity of the overtopping flow on the protected, inside slope of the levee. This was done to confirm that overtopping velocities were below the specified capacity of the HPTRM, and therefore below the erosion threshold for the levee. As shown in Appendix A, there critical velocity threshold for vegetated HPTRM is 25 ft/sec.

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Overtopping flow velocity was calculated by following the methodology presented in the USACE Technical Note on Estimate of Overtopping Flow Velocities on Earthen Levees (USACE, 2008).

3.3 Calculation of surface water depth above ground with overtopping

As per the Design Criteria for Civil Sitework (26196-100-3DR-C04-00001), for the 500-year event where overtopping was allowed for an average of around 0.1 cfs/ft, average surface water depth above ground was calculated based upon the duration of a two-hour, 500-year storm event. Two hours was selected as it was identified as the typical duration for peak winds speeds, as opposed to peak storm surge duration, to occur during a hurricane (Giammanco et al., 2005).

When calculating total discharge over the levee and potential water accumulation within the LNG plant area, overtopping of all the levee at the same time was not considered a realistic scenario. Therefore, potential surface water depth within the levee was considered by calculating total overtopping over either the shoreside or landside levee section, which are defined in Figure 2.

The average surface water depth was calculated by dividing the total overtopping discharge over the full storm event by the total area footprint within the levees, with no consideration of drainage or pump out of overtopped water. Total overtopping discharge was calculated using the method described in Chapter 5.5.2 of the EurOtop Manual (2018), which has been adopted as a reliable and realistic method for calculation. This method uses a method whereby the distribution of individual overtopping waves volumes can be represented by the two parameter Weibull probability distribution, given by the percent exceedance distribution show in Equation 6.

$$P_{V\%} = P(V_i \geq V) = exp\left[-\left(\frac{V}{a}\right)^b\right] \blacksquare (100\%) \quad and \quad P_{V\%} = P_V \blacksquare (100\%) \tag{6}$$

P_V is the probability (between 0 and 1) that an individual wave volume (V_i) will be less than a specified volume (V), and $P_{V\%}$ is the percentage of wave volumes that will exceed the specified volume (V). The two parameters of the Weibull distribution are the non-dimensional shape factor, b, that helps define the extreme tail of the distribution and the dimensional scale factor, a, that normalizes the distribution.

In previous revisions of this report, a more conservative approach of multiplying the full average discharge over a complete 2 hours storm duration were used, however since this report was first issued this method is now obsolete.

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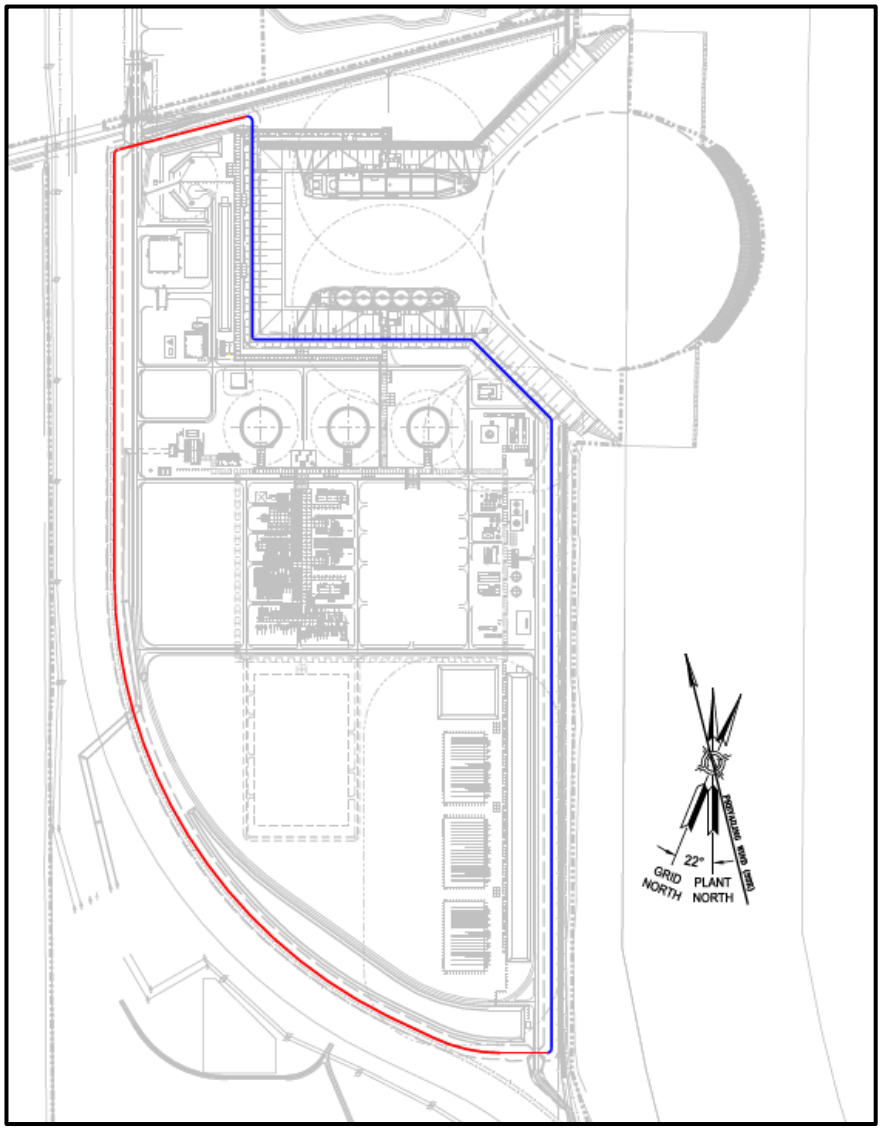

Figure 2 The shoreside (BLUE) and landside (RED) reaches of the PALNG levee

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4.0 RESULTS

4.1 Baseline Levee Elevation

The results from the levee run-up and overtopping analysis are presented in Table 2. This table shows the required levee elevation for the following two scenarios:

- Scenario 1: Allowable average overtopping limit of 0.1 cfs/ft (500-year storm event) using baseline RSLR of 0.6' over 30-year Project life;
- Scenario 2: No overtopping allowed (500-year storm event), as per Formula 3;
- Scenario 3: No overtopping allowed (500-year storm event), as per Formula 4.

The levee elevation refers to both the shoreside and landside PALNG levee as there is no difference in design conditions between the two levee sections. Both Scenario 1 and Scenario 2 results consider the long-term effects of RSLR.

Table 2 Levee Elevations for Scenario 1 and Scenario 2

	Surge Elev. + RSLR (ft. NAVD88)	H_{m0} (ft.)	T_p (s)	Final Levee Elevation (ft. NAVD88)
Scenario 1	+14.6	5.9	4.0	+20.6
Scenario 2	+14.6	5.9	4.0	+25.1
Scenario 3	+14.6	5.9	4.0	+26.8

4.2 RSLR Elevation Check

As noted in Section 3.1.1, an additional check was made to ensure that, when using the FERC provided RSLR value, the average overtopping velocities remained in the range of the target 0.1 cfs/ft. Table 3 compares the overtopping values for this check against the overtopping values calculated in the baseline Scenario 1.

Table 3 Average Overtopping Volume (cfs/ft) for Baseline and FERC RSLR Scenarios

	500-yr SWL (ft. NAVD88)	RSLR (ft.)	H_{m0} (ft.)	T_p (s)	Levee Elevation (ft. NAVD88)	Average Overtopping Volume (cfs/ft)
Baseline	+14.0	0.60	5.9	4.0	+20.6	0.09
FERC	+14.0	1.21	5.9	4.0	+20.6	0.13

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4.3 Overtopping Velocities

Following the methodology provided in Section 3.2, overtopping velocities for the rear, protected side of the levee were calculated for both the baseline RSLR scenario and also the FERC RSLR scenario. Results for these calculations are provided in Table 4.

Table 4 Protected Levee Side Overtopping Flow Velocities for Baseline and FERC RSLR Scenarios

	500-yr SWL (ft. NAVD88)	RSLR (ft.)	Levee Elevation (ft. NAVD88)	Overtopping Flow Velocity (ft/sec)
Baseline	+14.0	0.60	+20.6	16.6
FERC	+14.0	1.21	+20.6	18.5

As can be seen from this table, both scenarios result in an overtopping flow velocity being less than the erosion threshold of 25 ft/sec for the HPTRM.

4.4 Surface Water Levels from Overtopping

Surface water levels from overtopping were calculated using the updated methodology described in Section 3.3, for both shoreside and landside levee sections (see Figure 2). Total overtopped volume was determined over a storm duration of two hours, and then divided by the total footprint within the levee (approx. 281 acres) to calculate the average depth of the overtopped water across the project site. These values are provided in Table 5 for both the Baseline and FERC RSLR scenarios.

Table 5 Estimate surface water depth within the PALNG levee after a 500-year storm (no drainage)

	Levee Section Length (ft)	Total Water Volume (gallons)	Total Surface Water Depth
Shoreside Baseline	7,854	552,960	< 0.1”
Landside Baseline	8,376	589,710	< 0.1”
Shoreside Baseline	7,854	595,750	< 0.1”
Landside Baseline	8,376	635,342	< 0.1”

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As can be seen from the results, the total surface water depth using the update calculation method is less than 0.1” for both of the RSLR scenarios. This compares to a calculated depth of around 5” using the previous method, which significantly overestimates total overtopping volume.

5.0 LEVEE PROTECTION REQUIREMENTS

The levee that surrounds the PALNG plant will provide defense against storm surge and hurricane events, and therefore needs to be adequately protected to prevent levels of erosion that may compromise its integrity.

As part of this overtopping and levee elevation assessment, the effects of wave-induced erosion that would be expected to occur on the front side of the levee during a 500-year storm was considered. Guidance on the requirements for front side levee protection was taken from the USACE (2010), where several design methods were compared for a grass covered earthen clay levee. Note that the analysis undertaken by the USACE did not consider the use of HPTRM on the front side of the levee, which will provide further resistance against erosion.

The final conclusions that are listed in Section 8 (page 102) of the USACE study can be applied to the PALNG levee design, as the following criteria will apply to the levee design:

- Earthen levees are constructed of good quality clay with low sand content;
- The average wave overtopping discharge is less than 2.8 cfs/ft (PALNG average wave overtopping is limited to 0.1 cfs/ft);
- Peak surge and wave duration is less than 10 hours (PALNG peak wind conditions estimated to be approximately two hours as per Giammanco et al., 2005).

Given these above parameters, the following conclusions made by the USACE can be applied to the PALNG project:

1. With a reasonable degree of certainty, flood side armoring is not required where significant wave heights (H_s) are not expected to exceed 4.9’ (1.5m);
2. With less degree of certainty, flood side armoring is not required where significant wave heights (H_s) are not expected to exceed 8.0’ (2.44m);
3. Levees will possibly be able to withstand significant wave heights (H_s) greater than 8.0’ (2.44m) without flood side armoring.
4. Armoring of the front side of the levee is only justified when armoring of the land side of the levee is required, from an overtopping perspective. That is, before damage to

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the front side would become critical the rear side of the levee will already have sustained severe damage.

Given the design significant wave height (H_s) for the PALNG levee is 5.9' during a 500-year event it can be concluded that, with a degree of certainty closer to that of conclusion 1 than conclusion 2, flood side armoring for the PALNG levee is not required. The additional use of the HPTRM on the flood side of the levee will also prevent any significant erosion that may occur during a 500-year event.

In addition to this the levee elevation will be, at a minimum, designed to limit overtopping to an average of 0.1 cfs/ft. This value was chosen as it has been shown in research that rear-side levee erosion caused by this level of overtopping will not threaten the overall stability of a grass covered earthen clay levee. The additional stability provided by the HPTRM of the rear side of the levee will also prevent any significant erosion as a result of overtopping during a 500-year storm event. Therefore, based upon the USACE conclusion 4, front-side levee armoring is not required as the rear-side levee stability will not be compromised in a design event. It has also been shown by the results in Section 4.3 that the velocity of the overtopping flow on the rear side of the levee will be well below the critical erosion threshold provided by the additional protection of the HPTRM.

Both the front and rear sides of the PALNG levee should be protected with High Performance Turf Reinforcement Matting, which is anchored into the levee. This material will provide additional resistance against potential erosion during large storm events, such as the 500-year design conditions. As per the velocities shown in Section 4.3 and the information provided in Appendix A of this report, the HPTRM will be able to resist the expected run-up and run-down velocities from the wave surge and overtopping.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations can be drawn from this report:

A. The analysis to set the elevation of the PALNG levee has considered one 500-yr design scenario (SWEL, RSLR, H_s and T_p) for the shoreside and landside levee sections. There is no design case for having different elevations.

B. Considering the Design Criteria for Civil Sitework (26196-100-3DR-C04-00001), the PALNG levee should have a minimum elevation of +20.6'. This result in an overtopping rate of approx. 0.1 cfs/ft which would over a duration of 2 hours during a 500-year storm event that considers a Baseline RSLR scenario (0.6').

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C. When considering overtopping during a 500-yr storm event, and assuming no drainage or pump out of the overtopped water, a maximum average surface water depth across the interior of the levee of less than 0.5” may be expected.

D. Analysis of the FERC provided RSLR value of 1.21’ was undertaken to check the suitability of the baseline design should such a scenario occur during the project design life. As a result of this check the following can be concluded:

   i. Average overtopping volumes would not significantly exceed 0.1 cfs/ft

   ii. Overtopping flow velocities on the rear side of do not exceed the HPTRM critical erosion threshold.

   iii. Total overtopping volume over the duration of a 2-hour storm would result in a overall flood depth inside the levee of less than 0.5”.

E. The levee elevation of +20.6’ NAVD88 is suitable for both the Baseline (0.6’) and FERC (1.21’) Relative Sea Level Rise scenarios.

F. Based upon guidance from the USACE (2010), no rock armoring of the front side or rear side of the levee is required.

G. The front and rear side of the levee should be protected with High Performance Turf Reinforcement Mats to reduce the risk of erosion in a storm or overtopping event. The use of such matting also provides an additional level of protection in the event of localized poor grass coverage, poor grass establishment and lapsed levee maintenance over the lifetime of the project.

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APPENDIX A – HIGH PERFORMANCE TURF REINFORCEMENT MATS (EXAMPLE)

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ARMORMAX®

Product Data

ARMORMAX® 75

For Surficial Slope Stability

PYRAMAT® 75 HPTRM PROPERTIES

PROPERTY	TEST METHOD	ENGLISH	METRIC
ORIGIN OF MATERIALS			
% U.S. Manufactured		100%	100%
PHYSICAL			
Thickness [2]	ASTM D-6525	0.40 in	10.2 mm
Light Penetration (% Passing) [3]	ASTM D-6567	10%	10%
Color	Visual	Green or Tan	
MECHANICAL			
Tensile Strength [2]	ASTM D-6818	4000 x 3000 lbs/ft	58.4 x 43.8 kN/m
Elongation [2]	ASTM D-6818	40 x 35 %	40 x 35 %
Resiliency [2]	ASTM D-6524	80%	80%
Flexibility [4]	ASTM D-6575	0.534 in-lb	616,154 mg-cm
ENDURANCE			
UV Resistance % Retained at 3,000 hrs [4]	ASTM D-4355	90%	90%
UV Resistance % Retained at 6,000 hrs [4]	ASTM D-4355	90%	90%
PERFORMANCE			
Velocity (Vegetated) [4, 5]	Large Scale	25 ft/sec	7.6 m/sec
Shear Stress (Vegetated) [4, 5]	Large Scale	16 lb/ft²	766 Pa
Manning's n (Unvegetated) [4, 6]	Calculated	0.028	0.028
Seedling Emergence [4]	ASTM D-7322	296%	296%
ROLL SIZES		8.5 ft x 120 ft 15.0 ft x 120 ft	2.6 m x 36.6 m 4.6 m x 36.6 m

TYPE B2 ANCHOR PROPERTIES

PHYSICAL		ENDURANCE / COMPONENT MATERIALS	
Anchor Head Length	5.0 in	Anchor Head	Zinc-aluminum alloy
Anchor Head Width	1.6 in	Cable Tendon	Zinc-aluminum carbon steel
Anchor Head Bearing Area	6.0 in²	Load Bearing Plate	Zinc Plated Steel Coated with Plastisol
Anchor Head Weight	0.4 lbs	Load-Lock Mechanism	Zinc-aluminum alloy w/ceramic roller
		Crimped Ferrule	Aluminum
PERFORMANCE		**MECHANICAL**	
Load Range (Cohesive through Non Cohesive Soils)	Up to 1,500 lbs	Ultimate Strength	2,600 lbs
Embedment Depth	6 to 12 ft	Working Load	1,500 lbs

NOTES:

1. The property values listed above are effective 03/09/2018 and are subject to change without notice. Values represent testing at time of manufacture.
2. Minimum average roll values (MARV) are calculated as the typical minus two standard deviations. Statistically, it yields a 97.7% degree of confidence that any samples taken from quality assurance testing will exceed the value reported.
3. Maximum Average Roll Value (MaxARV), calculated as the typical plus two standard deviations. Statistically, it yields a 97.7% degree of confidence that any sample taken during quality assurance testing will meet to the value reported.
4. Typical Value.
5. Maximum permissible velocity and shear stress has been obtained through vegetated testing programs featuring specific soil types, vegetation classes, flow conditions, and failure criteria. These conditions may not be relevant to every project nor are they replicated by other manufacturers. Please contact Propex for further information.
6. Calculated as typical values from large-scale flexible channel lining test programs with a flow depth of 6 to 12 inches.

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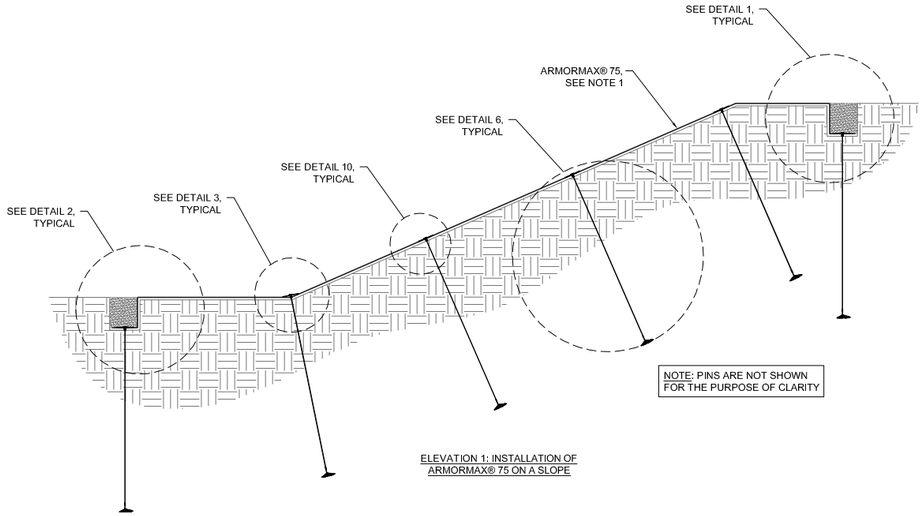
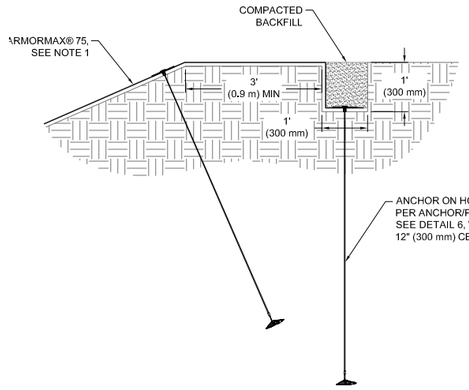
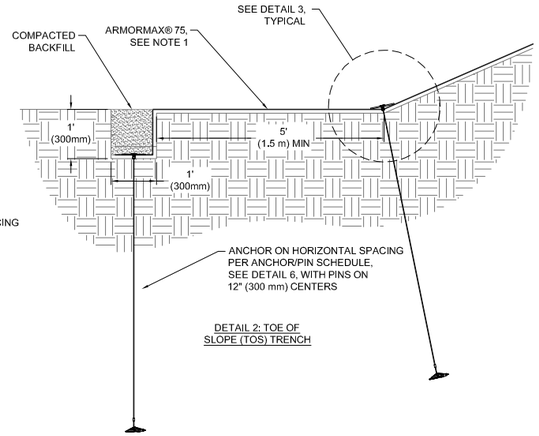


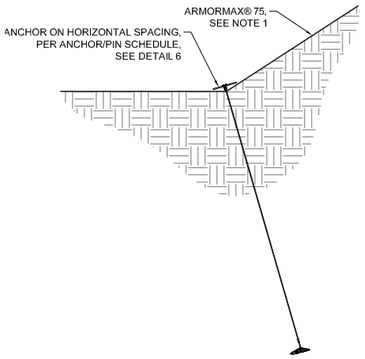
ELEVATION 1: INSTALLATION OF ARMORMAX® 75 ON A SLOPE



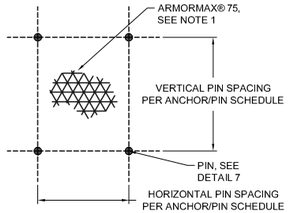
DETAIL 1: CREST OF SLOPE (COS) TRENCH



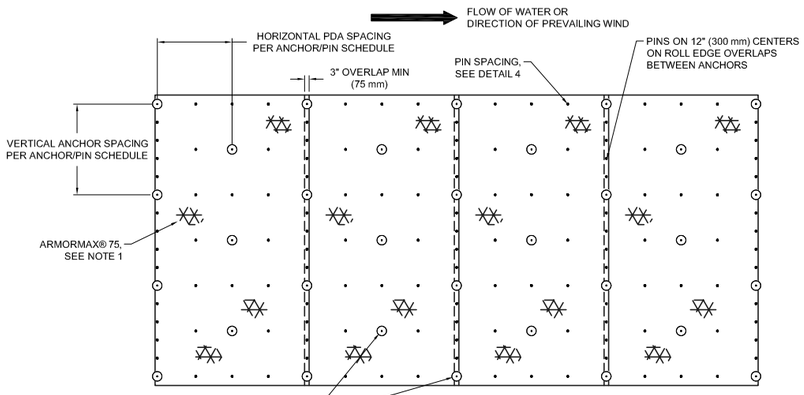
DETAIL 2: TOE OF SLOPE (TOS) TRENCH



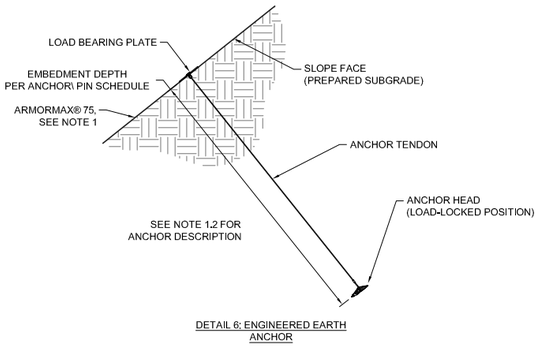
DETAIL 3: BREAK IN SLOPE INTERFACE



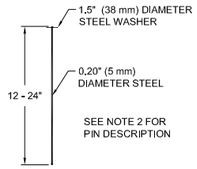
DETAIL 4: PIN PATTERN



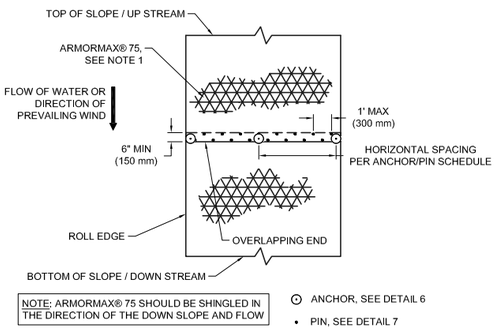
DETAIL 5: ANCHOR / PIN PATTERN



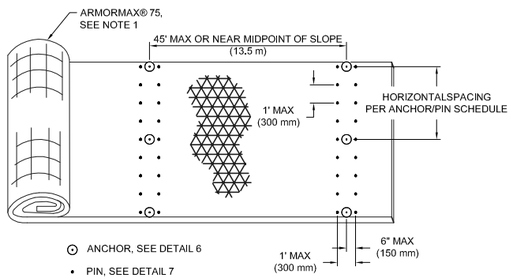
DETAIL 6: ENGINEERED EARTH ANCHOR



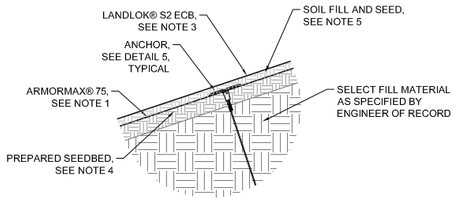
DETAIL 7: PIN



DETAIL 8: OVERLAP AT ROLL END DETAIL



DETAIL 9: SIMULATED CHECK SLOT DETAIL



DETAIL 10: VEGETATION ESTABLISHMENT

ANCHOR/PIN SCHEDULE		
SECURING DEVICE	ANCHOR	PIN
HORIZONTAL ANCHOR SPACING	PER MANUFACTURES DESIGN	PER MANUFACTURES DESIGN
VERTICAL ANCHOR SPACING	PER MANUFACTURES DESIGN	PER MANUFACTURES DESIGN
EMBEDMENT DEPTH	PER MANUFACTURES DESIGN	PER MANUFACTURES DESIGN

ARMORMAX® 75 ON A SLOPE FOR SLOPE STABILITY (STRUCTURAL APPLICATION) GENERAL INSTALLATION GUIDELINES

GENERAL NOTES

1. ARMORMAX® 75 is an engineered solution used for permanent erosion protection or surficial slope stability in vegetated and unvegetated applications. It is composed of two components: PYRAMAT® 75 High Performance Turf Reinforcement Mat (HPTRM) and Engineered Earth Anchors. ARMORMAX® 75 is available in green or tan to provide for an aesthetically pleasing solution with proven performance.
   1.1. PYRAMAT® 75 HPTRM is a three-dimensional, lofty, woven polypropylene geotextile that is available in green or tan which is specially designed for erosion control applications on steep slopes and vegetated waterways. The matrix is composed of polypropylene monofilament yarns featuring X3® technology woven into a uniform configuration of resilient pyramid-like projections. The material exhibits very high interlock and reinforcement capacity with both soil and root systems, demonstrates superior UV resistance, and enhances seedling emergence.
   1.3. The Type B2 anchor model is used for surficial slope stability applications and has a working load of up to 1,500 lbs. The Type B2 anchor consists of a die cast aluminum anchor head, zinc-aluminum coated carbon steel cable, a die cast zinc load-locking mechanism with a ceramic roller, and two aluminum ferrules. The bullet nose design of the anchor head allows the anchor to penetrate HPTRM resulting in minimal installation damage. The Type B2 anchor is also designed with a recessed cavity so the top of the cable can be cut below the surface being protected.
2. The 12", 18", and 24" Securing Pins are composed of a wire, mushroomed at the top. A washer is then placed on the wire and the wire is crimped or swedged about 3-1/2" below the top so the washer will not slide off. The end of the wire is cut at a 45 degree angle for easy penetration of the soil. These Pins with washers conform to industry standards for erosion control pins with washers.
3. LANDLOK® S2 Erosion Control Blankets consist of 100% wheat straw mechanically bound and covered on both sides by netting. The straw is homogeneously blended and evenly distributed throughout the blanket. The netting is photodegradable polypropylene with mesh openings of approximately 3/8 in. by 3/8 in. (11 mm by 11 mm). The blanket is sewn on approximately 2 in. (51 mm) centers with photodegradable polypropylene thread. This product is NTPEP approved for AASHTO standards.

VEGETATION ESTABLISHMENT

4. Prepare seedbed by loosening 50 to 75 mm (2 to 3 in) of soil above final grade. Apply seed in an amount equivalent to 60% of the total mixture required to be installed on the soil surface, to scarified surface prior to installation of the ARMORMAX® 75. Select and apply soil amendments and fertilizer, to scarified surface prior to installation of the ARMORMAX® 75. A site specific soil test should be performed to help determine what soil amendments, such as lime and fertilizer, need to be incorporated into the soil to promote healthy vegetation.
5. The installed ARMORMAX® 75 shall be soil filled and seeded with the remaining 40% of the seed mixture. Do not place excessive soil above material. Once soil fill and additional seed is in place, surficial protection should be accomplished by installing LANDLOK® S2 Erosion Control Blanket (ECB) atop the seed layer. LANDLOK® S2 ECB is to be secured using 6" U-shaped staples with a frequency of 2.0 staples per square meter (1.7 staples per square yard).
6. Irrigate as necessary to establish and maintain vegetation until 75% of vegetation has established and has reached a height of 2 inches. Frequent, light irrigation will need to be applied to seeded areas if natural rain events have not occurred within two weeks of seeding.

BEFORE INSTALLATION BEGINS

7. Coordinate with a Propex Representative: A pre-construction meeting is suggested with the construction team and a representative from Propex. This meeting should be scheduled by the contractor with at least a two week notice.
8. Gather the Tools Needed: Tools that you will need to install ARMORMAX® 75 include a pair of industrial shears to cut PYRAMAT® 75, tape measure, percussion hammer (sized appropriately for the anchors), ground rod driver compatible with the percussion hammer, drive steel compatible with the anchor, setting tool to set and load-lock the anchor, and wire cutters to cut the cable tendon of the anchor. If anchors will be load tested during construction, additional testing equipment may be necessary. Consult the "Anchor Load Test Manual" from Propex for further guidance. Available for purchase from Propex are drive steel, setting tools, and wire cutters.
9. Determine how to Establish Vegetation: The method of vegetation establishment should be determined prior to the start of installation. Different vegetation establishment methods require different orders of installation. Refer to Establish Vegetation for further guidance.
10. Please consult the Propex Website for the most up to date installation guidelines.

Propex GEOSOLUTIONS

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SLOPE STABILITY INSTALLATION DETAILS

Please note that the information presented herein is general information only. It is for conceptual use only and not intended to be used for construction. While every effort has been made to ensure its accuracy, this information should not be used for a specific application without independent professional examination and verification of its suitability, applicability, and accuracy. This engineering drawing is protected by the Copyright Act, 17 U.S.C. §101 et seq. and may be used ONLY with the express written permission of Propex in connection with Propex products. Any copying, distributing, and/or creation of a derivative work without permission of Propex is prohibited and is subject of actual damages, statutory damages and attorney's fees under the Copyright Act.

△	1 of 1	ARMORMAX®	ARMORMAX® 75 INSTALLATION DETAILS FOR SLOPES	
△				
△				
Rev		Date: 04/10/2017	Drawn By: J. HILL	Scale: NTS

*ALL DIMENSIONS ARE TO BE VERIFIED BY ENGINEER OF RECORD

Port Arthur LNG

BECHTEL

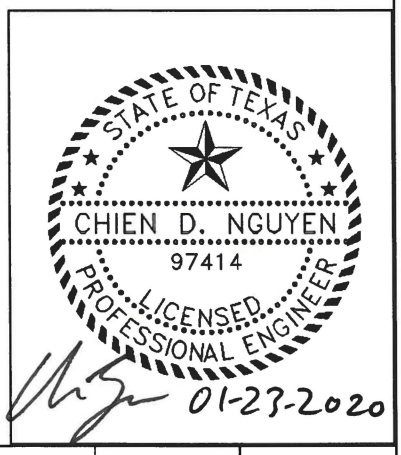
Firm No. F-9684

PORT ARTHUR LIQUEFACTION PROJECT

CALCULATIONS TO DETERMINE THE WATER ELEVATIONS FOR HIGHER INTENSITY STORM WITHIN THE BERM

Security Level 2 – Bechtel Confidential
Electronic documents, once printed, are non-controlled and may become outdated.
Refer to the Electronic Document Management System for current revision.

This document is subject to the terms and conditions of the Engineering and Design Services Agreement dated as of August 6, 2018, by and among Port Arthur LNG, LLC, PALNG Common Facilities Company, LLC and Bechtel Oil, Gas and Chemicals, Inc.



001	01-23-2020	RE-ISSUED FOR DESIGN	CDN	AP	JS	
000	04-15-2019	ISSUED FOR DESIGN	CDN	PKM	JS	
REV	**DATE**	**REASON FOR REVISION**	**BY**	**CK'D**	**APPR**	

CALCULATIONS TO DETERMINE THE WATER ELEVATIONS FOR HIGHER INTENSITY STORM WITHIN THE BERM	**Bechtel Document No.**	**Rev.**
	26196-100-CDC-000-00003	001
	PALNG Document No.	**Rev.**
Page 1 of 21 / Job No: 26196-100	PAL-PJT-CIV-CAL-00-X-2003	001

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1.0 DESIGN BASIS

1.1 Purpose and Scope

The purpose of this calculation is to determine the water surface for higher intensity storms within the berm for the current plot plan.

- The water surface elevations within the berm will be estimated for the 100-year 24 hr ARI storm, with all stormwater pump running.
- The water surface elevations within the berm will be estimated for the 500-year 24 hr ARI storm, with all stormwater pump running and will be compared to the non-critical equipment point of support elevations.
- The water surface elevations will be estimated for the 100-year 7-day ARI storm, considering overtopping and stormwater pumps not operating and will be used to determine the minimum Critical Equipment Point of Support elevations.
- The basis for this analysis is based on Plot Plan E.

2.0 REFERENCES

2.1 Project Specifications and Design Criteria

2.1.1	Basic Engineering Design Data (BEDD)	26196-100-3BD-M04F-00002
2.1.2	Design Criteria for Civil Sitework	26196-100-3DR-C04F-00001

2.2 Bechtel Design Guides

2.2.1	Civil/ Structural Engineering Design Guide for Storm Water Management	3DG-C12-00002

2.3 Bechtel Plot Plan

2.3.1	Overall Site Plan	26196-100-P1-00-00001 Rev E

3.0 DESIGN PHILOSOPHY & CALCULATIONS

3.1 Project Background

PALNG is located on a tract of land on the Sabine-Neches Waterway to the west of Port Arthur Ship channel. The project site is between Port Arthur and Sabine Pass.

3.2 Datum

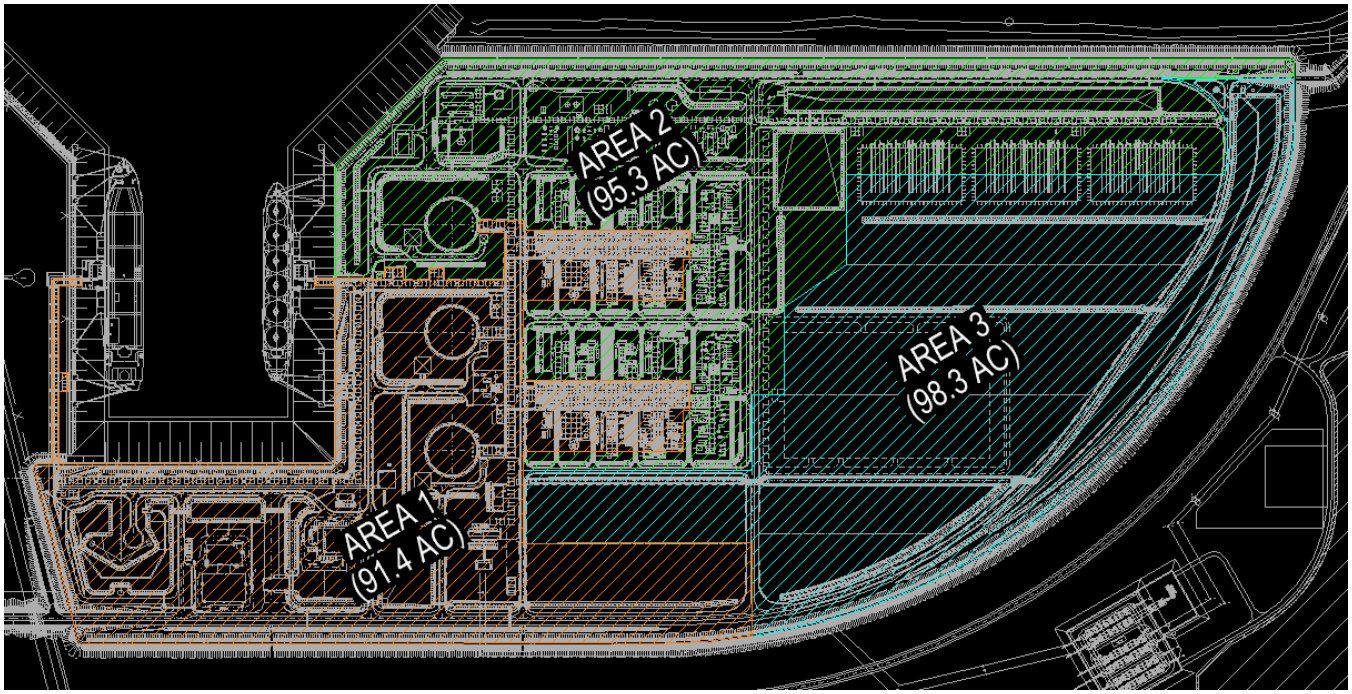
Site coordinates and elevations are based on plant datum (as mentioned in drawing 26196-100-C0-0000-00001).

3.3 Rainfall Data

The IDF curve utilized for this analysis is for the 100- and 500- year storm event, as per the Design Criteria for Civil Sitework (Reference 2.1.2).

3.4 Determine 100 and 500-Year 24 Hour Peak Flow

The area within the berm consists of 3 main drainage systems. Each drainage system has detention ponds and stormwater pumps to store and pump the stormwater over the berm during a rainfall event. See below for drainage area map.



The 100 and 500-year 24- hour hydrographs for each area were determine using WinTR-55. See below for WinTR-55 parameter and outputs.

WinTR-55 Current Data Description

--- Identification Data ---

User:	Chien	Date:	12/19/2019
Project:	Port Arthur	Units:	English
SubTitle:		Areal Units:	Acres
State:	Texas		
County:	Jefferson		
Filename:	<new file>		

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	Tc
Area 1		Outlet	91.4	93	.545
Area 2		Outlet	95.3	93	.852
Area 3		Outlet	98.3	93	1.268

Total area: 285 (ac)

--- Storm Data --

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	500-Yr (in)
4.95	7.3	9.34	12.4	15.1	18.4	27.7

Storm Data Source:	User-provided custom storm data
Rainfall Distribution Type:	Type III
Dimensionless Unit Hydrograph:	<standard>

Chien Port Arthur

Jefferson County, Texas

Storm Data

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	500-Yr (in)
4.95	7.3	9.34	12.4	15.1	18.4	27.7

Storm Data Source:	User-provided custom storm data
Rainfall Distribution Type:	Type III
Dimensionless Unit Hydrograph:	<standard>

Chien Port Arthur

Jefferson County, Texas

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period 100-Yr (cfs)	500-Yr (cfs)
SUBAREAS		
Area 1	922.82	1394.26
Area 2	777.52	1174.89
Area 3	639.75	969.24
REACHES		
OUTLET	2120.45	3205.23

Chien Port Arthur

Jefferson County, Texas

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period 100-Yr (cfs)	(hr)	500-Yr (cfs)	(hr)
SUBAREAS				
Area 1	922.82	12.35	1394.26	12.35
Area 2	777.52	12.55	1174.89	12.54
Area 3	639.75	12.83	969.24	12.80
REACHES				
OUTLET	2120.45		3205.23	

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Jefferson County, Texas

Sub-Area Summary Table

Sub-Area Identifier	Drainage Area (ac)	Time of Concentration (hr)	Curve Number	Receiving Reach	Sub-Area Description
Area 1	91.40	0.545	93	Outlet	
Area 2	95.30	0.852	93	Outlet	
Area 3	98.30	1.268	93	Outlet	

Total Area: 285 (ac)

Chien Port Arthur

Jefferson County, Texas

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Area 1							
SHEET	100	0.0100	0.011				0.021
SHALLOW	115	0.0100	0.025				0.016
CHANNEL	5485					3.000	0.508
					Time of Concentration		.545
Area 2							
SHEET	100	0.0050	0.011				0.028
SHALLOW	100	0.0050	0.050				0.024
CHANNEL	3600					1.250	0.800
					Time of Concentration		.852
Area 3							
SHEET	100	0.0050	0.011				0.028
SHALLOW	200	0.0050	0.050				0.049
CHANNEL	4930					1.150	1.191
					Time of Concentration		1.268

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Jefferson County, Texas

Sub-Area Land Use and Curve Number Details

Sub-Area	Hydrologic	Sub-Area	Curve

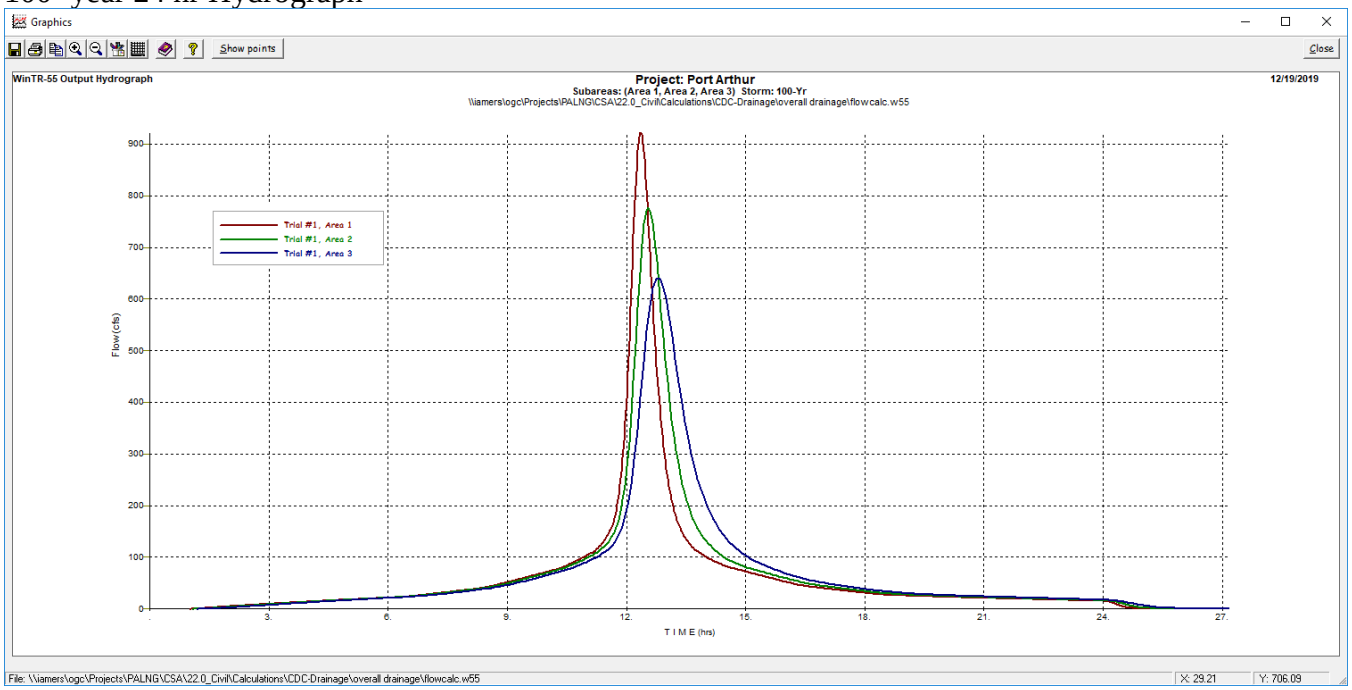
Identifier	Land Use	Soil Group	Area (ac)	Number
Area 1	Industrial	D	91.4	93
	Total Area / Weighted Curve Number		91.4	93
Area 2	Industrial	D	95.3	93
	Total Area / Weighted Curve Number		95.3	93
Area 3	Industrial	D	98.3	93
	Total Area / Weighted Curve Number		98.3	93

Verify 100-year rainfall volume obtained from WinTR-55 hydrographs with rainfall depth (NOAA Atlas 14) x area:

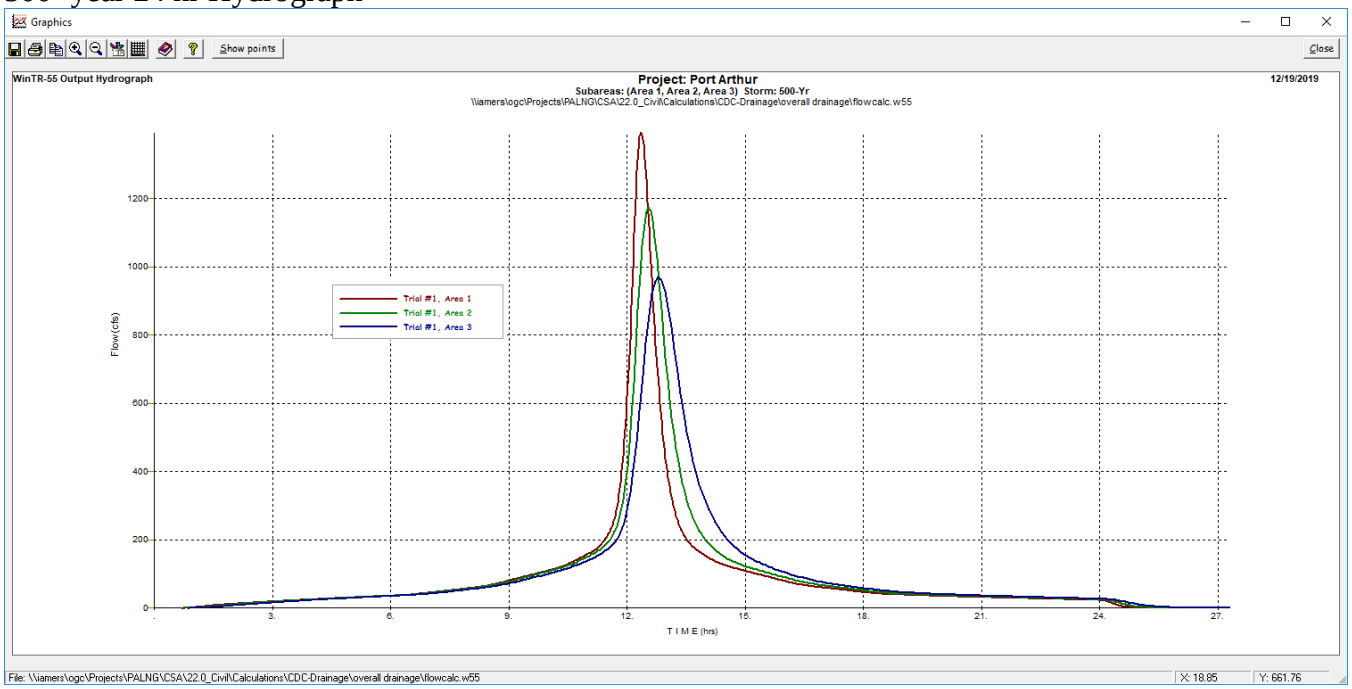
Drainage ID	C value	Area (acreage)	100yr Rainfall Depth (in)	100yr Rainfall Volume (cf)	100yr Rainfall Volume from WinTR-55 Hydrograph (cf)	% Difference
Area 1	0.9	91.4	18.4	5,494,310	5,815,417	2.8
Area 2	0.9	95.3	18.4	5,728,750	6,062,885	2.8
Area 3	0.9	98.3	18.4	5,909,088	6,254,167	2.8

Volume of from the WinTR-55 hydrographs computed (see page 11-15) are comparable to rainfall depth volumes and are adequate for this analysis.

100- year 24 hr Hydrograph



500- year 24 hr Hydrograph



3.5 Determine 100 and 500-Year 24 Hour Rainfall Volume and Depth

The 100-year ARI storm volume and water surface elevation for each area will be evaluated to determine if there are any impacts to the site.

The 500-year ARI storm water surface elevation will be compared to the minimum Non-Critical Equipment Point of Support elevation. From the design criteria, Non-Critical Equipment Point of Support shall be at or above 500-year ARI storm water surface elevations, with all pumps running. All Non-Critical Equipment Point of Support has been set to minimum elevation of 8.0'.

Based on the hydrograph shown above and with 133 cfs (60,000 gpm) pump out for each drainage area, the required storage was determined below.

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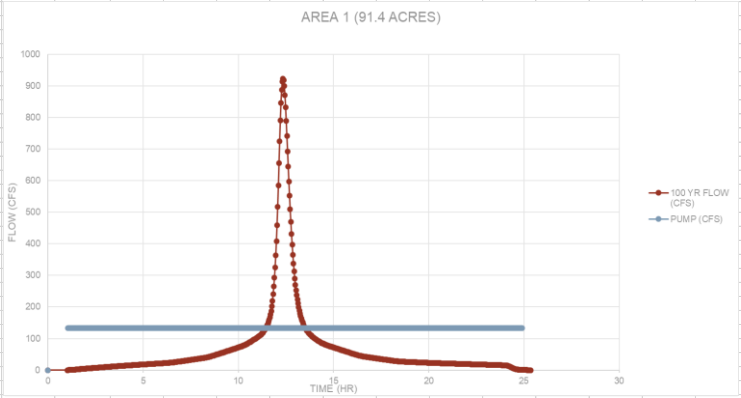
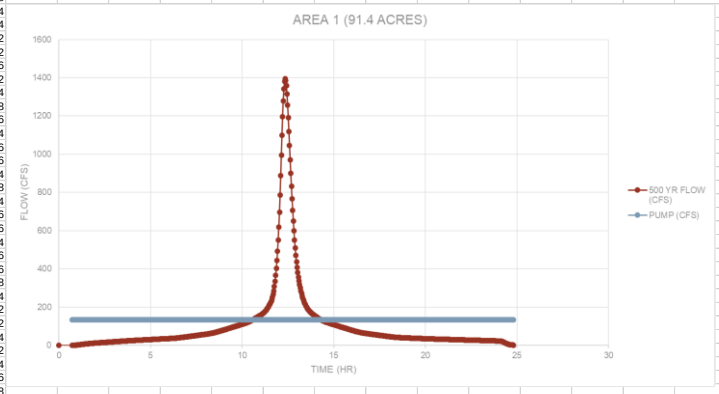
AREA 1

TIME (HR)	100 YR FLOW (CFS)	INCREMENTAL VOLUME (CF)	CUMULATIVE VOLUME (CF)	PUMP OUT (CFS)	100YR FLOW-PUMP OUT (CFS)	100YR FLOW - PUMP OUT VOLUME (CFS)	
0	0	0	0				
11.453	134.12	16187.4	1283484.996	133	1.12	137.088	
11.487	138.1	16659.864	1300144.86	133	5.1	624.24	
11.521	142.38	17165.376	1317310.236	133	9.38	1148.112	
11.555	147.12	17717.4	1335027.636	133	14.12	1728.288	
11.589	152.43	18332.46	1353360.096	133	19.43	2378.232	
11.626	158.63	20716.596	1374076.692	133	25.63	3413.916	
11.66	166.26	19883.268	1393959.96	133	33.26	4071.024	
11.694	175.72	20929.176	1414889.136	133	42.72	5228.928	
11.728	187.47	22227.228	1437116.364	133	54.47	6667.128	
11.762	202.04	23838.012	1460954.376	133	69.04	8450.496	
11.796	219.73	25812.324	1486766.7	133	86.73	10615.752	
11.83	240.67	28176.48	1514943.18	133	107.67	13178.808	
11.867	265.08	33682.95	1548626.13	133	132.08	17593.056	
11.901	292.83	34144.092	1582770.222	133	159.83	19563.192	
11.935	324.94	37807.524	1620577.746	133	191.94	23493.456	
11.969	363.02	42103.152	1662680.898	133	230.02	28154.448	
12.003	407.41	47150.316	1709831.214	133	274.41	33587.784	
12.037	458.55	52996.752	1762827.966	133	325.55	39847.32	
12.071	517.64	59742.828	1822570.794	133	384.64	47079.936	
12.108	584.66	73413.18	1895983.974	133	451.66	60161.112	
12.142	655.48	75896.568	1971880.542	133	522.48	63951.552	
12.176	725.49	84515.364	2056395.906	133	592.49	72520.776	
12.21	790.45	92775.528	2149171.434	133	657.45	80471.88	
12.244	845.62	100127.484	2249298.918	133	712.62	87224.688	
12.278	887.71	106079.796	2355378.714	133	754.71	92376.504	
12.312	913.26	110219.364	2465598.078	133	780.26	95503.824	
12.349	922.82	122282.928	2587881.006	133	789.82	105204.024	
12.383	918.05	112661.244	2700542.25	133	785.05	96090.12	
12.417	900.47	111293.424	2811835.674	133	767.47	93938.328	
12.451	871.28	108431.1	2920266.774	133	738.28	90365.472	
12.485	832.98	104300.712	3024567.486	133	699.98	85677.552	**PEAK FLOW= 923 CFS**
12.519	789.52	99297	3123864.486	133	656.52	80358.048	**TOTAL 100YR 24HR VOLUME= 5,818,417CF**
12.553	742.36	93751.056	3217615.542	133	609.36	74585.664	
12.59	693.09	95600.97	3313216.512	133	560.09	74603.988	**PUMP FLOW= 133 CFS**
12.624	644.24	81844.596	3395061.108	133	511.24	62575.776	**TOTAL 100YR 24HR VOLUME REQUIRED= 2,048,383 CF**
12.658	597.42	75989.592	3471050.7	133	464.42	56845.008	
12.692	552.45	70372.044	3541422.744	133	419.45	51340.68	
12.726	509.52	64992.564	3606415.308	133	376.52	46086.048	
12.76	469.21	59898.276	3666313.584	133	336.21	41152.104	
12.794	431.7	55135.692	3721449.276	133	298.7	36560.88	
12.831	397.2	55204.74	3776654.016	133	264.2	35191.44	
12.865	365.86	46699.272	3823353.288	133	232.86	28502.064	
12.899	337.75	43060.932	3866414.22	133	204.75	25061.4	
12.933	312.65	39804.48	3906218.7	133	179.65	21989.16	
12.967	290.37	36904.824	3943123.524	133	157.37	19262.088	
13.001	270.57	34329.528	3977453.052	133	137.57	16838.568	
13.035	252.97	32040.648	4009493.7	133	119.97	14684.328	
13.072	237.33	32653.98	4042147.68	133	104.33	13896.756	
13.106	223.32	28191.78	4070339.46	133	90.32	11055.168	
13.14	210.72	26563.248	4096902.708	133	77.72	9512.928	
13.174	199.35	25096.284	4121998.992	133	66.35	8121.24	
13.208	189.07	23771.304	4145770.296	133	56.07	6862.968	
13.242	179.83	22576.68	4168346.976	133	46.83	5731.992	
13.276	171.49	21500.784	4189847.76	133	38.49	4711.176	
13.313	163.98	22342.302	4212190.062	133	30.98	4126.536	
13.347	157.3	19662.336	4231852.398	133	24.3	2974.32	
13.381	151.32	18887.544	4250739.942	133	18.32	2242.368	
13.415	145.97	18194.148	4268934.09	133	12.97	1587.528	
13.449	141.18	17573.58	4286507.67	133	8.18	1001.232	total volume required
13.483	136.88	17017.272	4303524.942	133	3.88	474.912	2048383
25.36	0.06	8.658	5815417.32	133	-132.94		



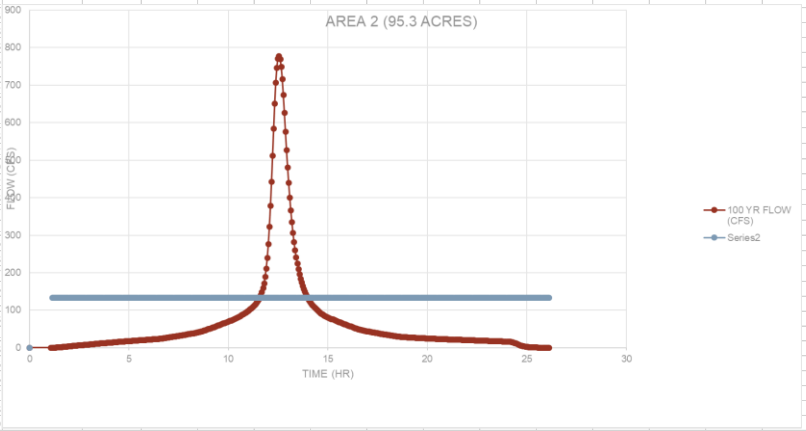
AREA 1

TIME (HR)	500 YR FLOW (CFS)	INCREMENTAL VOLUME (CF)	CUMULATIVE VOLUME (CF)	PUMP OUT (CFS)	500YR FLOW-PUMP OUT (CFS)	500YR FLOW - PUMP OUT VOLUME (CFS)	
0	0	0	0				
10.594	134.49	17788.19	1552208	133	1.49	198.468	
10.628	136.41	16579.08	1568787	133	3.41	417.384	
10.662	138.36	16815.92	1585603	133	5.36	656.064	
10.696	140.33	17055.83	1602659	133	7.33	897.192	
10.73	142.33	17298.79	1619957	133	9.33	1141.992	
10.764	144.34	17544.2	1637502	133	11.34	1388.016	
10.798	146.38	17792.06	1655294	133	13.38	1637.712	
10.835	148.42	19633.68	1674927	133	15.42	2053.944	
10.869	150.47	18292.07	1693220	133	17.47	2138.328	
10.903	152.54	18544.21	1711764	133	19.54	2391.696	
10.937	154.61	18797.58	1730561	133	21.61	2645.064	
10.971	156.69	19051.56	1749613	133	23.69	2899.656	
11.005	158.79	19307.38	1768920	133	25.79	3156.696	
11.039	160.91	19565.64	1788486	133	27.91	3416.184	
11.076	163.09	21578.4	1810064	133	30.09	4007.988	
11.11	165.35	20100.53	1830165	133	32.35	3959.64	
11.144	167.74	20385.11	1850550	133	34.74	4252.176	
11.178	170.34	20690.5	1871240	133	37.34	4570.416	
11.212	173.21	21025.26	1892266	133	40.21	4921.704	
11.246	176.4	21396.13	1913662	133	43.4	5312.16	
11.28	179.99	21811.07	1935473	133	46.99	5751.576	
11.317	183.99	24241.07	1959714	133	50.99	6791.868	
11.351	188.41	22790.88	1982505	133	55.41	6782.184	
11.385	193.28	23359.43	2005864	133	60.28	7378.272	
11.419	198.55	23980	2029844	133	65.55	8023.32	
11.453	204.21	24648.91	2054493	133	71.21	8716.104	
11.487	210.23	25363.73	2079857	133	77.23	9452.952	
11.521	216.71	26128.73	2105986	133	83.71	10246.104	
11.558	223.88	29343.29	2135329	133	90.88	12105.216	
11.592	231.92	27894.96	2163224	133	98.92	12107.808	
11.626	241.32	28962.29	2192186	133	108.32	13258.368	**PEAK FLOW= 1,394 CFS**
11.66	252.91	30246.88	2222433	133	119.91	14676.984	**TOTAL 500YR 24HR VOLUME= 8,897,953 CF**
11.694	267.28	31835.63	2254269	133	134.28	16435.872	
11.728	285.12	33806.88	2288076	133	152.12	18619.488	**PUMP FLOW= 133 CFS**
11.762	307.25	36253.04	2324329	133	174.25	21328.2	**TOTAL 500YR 24HR VOLUME REQUIRED= 3,771,967 CF**
11.799	334.11	42714.58	2367043	133	201.11	26787.852	
11.833	365.89	42840	2409883	133	232.89	28505.736	
11.867	402.91	47050.56	2456934	133	269.91	33036.984	
11.901	445.02	51893.32	2508827	133	312.02	38191.248	
11.935	493.75	57452.72	2566280	133	360.75	44155.8	
11.969	551.51	63969.91	2630250	133	418.51	51225.624	
12.003	618.79	71622.36	2701872	133	485.79	59460.696	
12.04	696.28	87583.66	2789456	133	563.28	75028.896	
12.074	785.78	90702.07	2880158	133	652.78	79900.272	
12.108	887.09	102379.6	2982537	133	754.09	92300.616	
12.142	993.93	115118.4	3097656	133	860.93	105377.832	
12.176	1099.4	128111.8	3225768	133	966.4	118287.36	
12.21	1197.06	140543.4	3366311	133	1064.06	130240.944	
12.244	1279.79	151583.2	3517894	133	1146.79	140367.096	
12.281	1342.64	174653.8	3692548	133	1209.64	161124.048	
12.315	1380.5	166656.2	3859204	133	1247.5	152694	
12.349	1394.26	169815.3	4029020	133	1261.26	154378.224	
12.383	1386.43	170178.2	4199198	133	1253.43	153419.832	
12.417	1359.32	168039.9	4367238	133	1226.32	150101.568	
12.451	1314.77	163654.3	4530892	133	1181.77	144648.648	
12.485	1256.61	157368.5	4688260	133	1123.61	137529.864	
12.522	1190.72	162992.2	4851253	133	1057.72	140888.304	
12.556	1119.33	141375.1	4992628	133	986.33	120726.792	
12.59	1044.85	132447.8	5125075	133	911.85	111610.44	
12.624	971.07	123374.3	5248450	133	838.07	102579.768	
12.658	900.39	114533.4	5362983	133	767.39	93928.536	
12.692	832.51	106053.5	5469037	133	699.51	85620.024	
12.726	767.73	97934.69	5566971	133	634.73	77690.952	
12.763	706.93	98212.36	5665184	133	573.93	76447.476	
12.797	650.36	83066.15	5748250	133	517.36	63324.864	
12.831	598.37	76422.28	5824672	133	465.37	56961.288	
12.865	551.14	70350.01	5895022	133	418.14	51180.336	
12.899	508.8	64868.33	5959890	133	375.8	45997.92	
12.933	470.99	59963.15	6019854	133	337.99	41369.976	
12.967	437.43	55595.3	6075449	133	304.43	37262.232	
13.004	407.6	56279	6131728	133	274.6	36576.72	
13.038	381.11	48269.05	6179997	133	248.11	30368.664	
13.072	357.55	45205.99	6225203	133	224.55	27484.92	
13.106	336.44	42472.19	6267675	133	203.44	24901.056	
13.14	317.47	40019.29	6307694	133	184.47	22579.128	
13.174	300.34	37809.97	6345504	133	167.34	20482.416	
13.208	284.86	35814.24	6381319	133	151.86	18587.664	
13.245	270.94	37016.28	6418335	133	137.94	18373.608	
13.279	258.38	32394.38	6450729	133	125.38	15346.512	
13.313	247.07	30933.54	6481663	133	114.07	13962.168	
13.347	237.01	29625.7	6511288	133	104.01	12730.824	
13.381	228	28458.61	6539747	133	95	11628	
13.415	219.95	27414.54	6567162	133	86.95	10642.68	
13.449	212.74	26480.63	6593642	133	79.74	9760.176	
13.486	206.26	27905.4	6621548	133	73.26	9758.232	
13.52	200.4	24887.59	6646435	133	67.4	8249.76	
13.554	195.05	24201.54	6670637	133	62.05	7594.92	
13.588	190.12	23572.4	6694209	133	57.12	6991.488	
13.622	185.55	22991	6717200	133	52.55	6432.12	
13.656	181.35	22454.28	6739654	133	48.35	5918.04	
13.69	177.49	21961.01	6761615	133	44.49	5445.576	
13.727	173.94	23405.24	6785021	133	40.94	5453.208	
13.761	170.64	21088.3	6806109	133	37.64	4607.136	
13.795	167.58	20699.06	6826808	133	34.58	4232.592	
13.829	164.72	20336.76	6847145	133	31.72	3882.528	
13.863	161.99	19994.65	6867140	133	28.99	3548.376	
13.897	159.36	19666.62	6886806	133	26.36	3226.464	
13.931	156.84	19351.44	6906158	133	23.84	2918.016	
13.968	154.38	20727.25	6926885	133	21.38	2847.816	
14.002	152	18750.46	6945635	133	19	2325.6	
14.036	149.68	18462.82	6964098	133	16.68	2041.632	
14.07	147.4	18181.3	6982279	133	14.4	1762.56	
14.104	145.18	17905.9	7000185	133	12.18	1490.832	
14.138	143.02	17637.84	7017823	133	10.02	1226.448	
14.172	140.91	17376.52	7035200	133	7.91	968.184	
14.209	138.87	18633.35	7053833	133	5.87	781.884	
14.243	136.91	16877.74	7070711	133	3.91	478.584	
14.277	135.01	16641.5	7087352	133	2.01	246.024	total volume required
14.311	133.21	16415.06	7103767	133	0.21	25.704	3771967
25.428	0.05	7.344	8897953	133	-132.95		

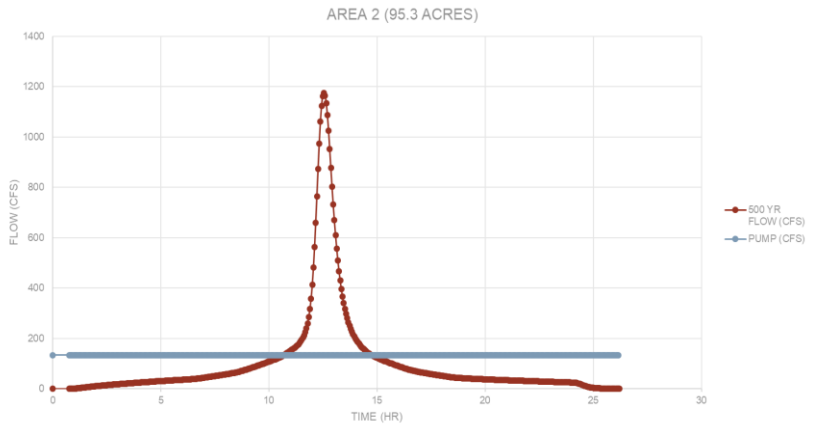


AREA 2

TIME (HR)	100 YR FLOW (CFS)	INCREMENTAL VOLUME (CF)	CUMULATIVE VOLUME (CF)	PUMP OUT (CFS)			
0	0	0	0				
11.581	133.78	25484.868	1292741.964	133	0.78	151.632	
11.634	140.22	26139.6	1318881.564	133	7.22	1377.576	
11.688	148.22	28036.368	1346917.932	133	15.22	2958.768	
11.742	158.42	29805.408	1376723.34	133	25.42	4941.648	
11.796	171.65	32082.804	1408806.144	133	38.65	7513.56	
11.85	188.76	35031.852	1443837.996	133	55.76	10839.74	
11.904	210.64	38821.68	1482659.676	133	77.64	15093.22	
11.958	239.15	43719.588	1526379.264	133	106.15	20635.56	
12.011	276.25	49169.16	1575548.424	133	143.25	27332.1	
12.065	322.53	58201.416	1633749.84	133	189.53	36844.63	
12.119	378.14	68105.124	1701854.964	133	245.14	47655.22	
12.173	442.02	79719.552	1781574.516	133	309.02	60073.49	
12.227	512.05	92735.604	1874310.12	133	379.05	73687.32	
12.281	583.62	106499.124	1980809.244	133	450.62	87600.53	
12.335	650.37	119943.828	2100753.072	133	517.37	100576.7	
12.387	706.27	126981.504	2227734.576	133	573.27	107316.1	
12.441	746.46	141205.356	2368939.932	133	613.46	119256.6	
12.495	770.45	147443.652	2516383.584	133	637.45	123920.3	
12.549	777.52	150462.684	2666846.268	133	644.52	125294.7	
12.603	769.52	150372.288	2817218.556	133	636.52	123739.5	
12.657	748.35	147536.964	2964755.52	133	615.35	119624	
12.711	715.53	142289.136	3107044.656	133	582.53	113243.8	
12.764	673.53	132516.324	3239560.98	133	540.53	103133.1	
12.818	625.54	126269.604	3365830.584	133	492.54	95749.78	
12.872	575.49	116740.116	3482570.7	133	442.49	86020.06	
12.926	526.58	107121.204	3589691.904	133	393.58	76511.95	
12.98	480.91	97928.028	3687619.932	133	347.91	67633.7	
13.034	439.04	89419.14	3777039.072	133	306.04	59494.18	
13.088	400.68	81620.784	3858659.856	133	267.68	52036.99	
13.141	365.9	73131.732	3931791.588	133	232.9	44437.32	
13.195	334.61	68089.572	3999881.16	133	201.61	39192.98	**PEAK FLOW= 778 CFS**
13.249	306.74	62339.22	4062220.38	133	173.74	33775.06	**TOTAL 100YR 24HR VOLUME= 6,062,885 CF**
13.303	282.04	57229.416	4119449.796	133	149.04	28973.38	
13.357	260.36	52721.28	4172171.076	133	127.36	24758.78	**PUMP FLOW= 133 CFS**
13.411	241.21	48752.604	4220923.68	133	108.21	21036.02	**TOTAL 100YR 24HR VOLUME REQUIRED= 2,141,291 CF**
13.465	224.28	45245.628	4266169.308	133	91.28	17744.83	
13.517	209.24	40577.472	4306746.78	133	76.24	14272.13	
13.571	195.97	39386.412	4346133.192	133	62.97	12241.37	
13.625	184.24	36956.412	4383089.604	133	51.24	9961.056	
13.679	173.89	34810.236	4417899.84	133	40.89	7949.016	
13.733	164.76	32916.78	4450816.62	133	31.76	6174.144	
13.787	156.68	31243.968	4482060.588	133	23.68	4603.392	
13.841	149.46	29756.808	4511817.396	133	16.46	3199.824	
13.894	143	27900.684	4539718.08	133	10	1908	**required storage**
13.948	137.15	27230.58	4566948.66	133	4.15	806.76	**2141290.656**
26.11	0.06	13.608	6062884.83	133	-132.94		

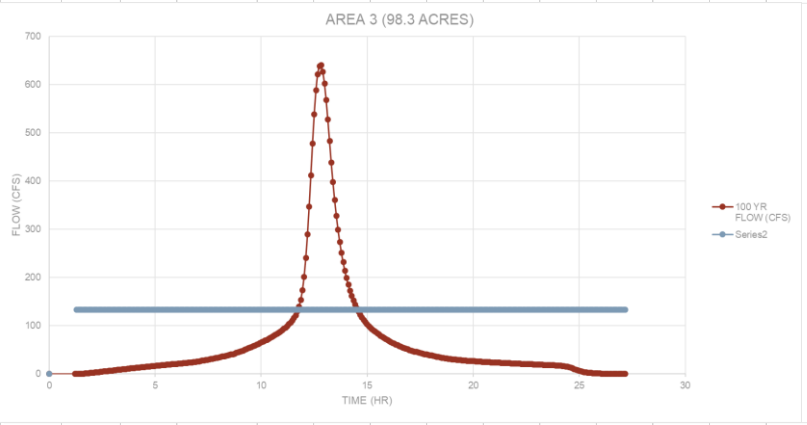


AREA 2							
TIME (HR)	500 YR FLOW (CFS)	INCREMENTAL VOLUME (CF)	CUMULATIVE VOLUME (CF)	PUMP OUT (CFS)	500YR FLOW-PUMP OUT (CFS)	500YR FLOW - PUMP OUT VOLUME (CFS)	
0	0	0	0				
10.714	135.05	25987.392	1564199.226	133	2.05	398.52	
10.768	137.89	26529.768	1590728.994	133	4.89	950.616	
10.822	140.83	27091.584	1617820.578	133	7.83	1522.152	
10.876	143.85	27670.896	1645491.474	133	10.85	2109.24	
10.929	146.94	27741.366	1673232.84	133	13.94	2659.752	
10.983	150.09	28871.316	1702104.156	133	17.09	3322.296	
11.037	153.29	29488.536	1731592.692	133	20.29	3944.376	
11.091	156.58	30119.364	1761712.056	133	23.58	4583.952	
11.145	159.98	30769.632	1792481.688	133	26.98	5244.912	
11.199	163.57	31449.06	1823930.748	133	30.57	5942.808	
11.253	167.44	32174.172	1856104.92	133	34.44	6695.136	
11.306	171.7	32353.956	1888458.876	133	38.7	7383.96	
11.36	176.47	33842.124	1922301	133	43.47	8450.568	
11.414	181.85	34828.704	1957129.704	133	48.85	9496.44	
11.468	187.91	35940.672	1993070.376	133	54.91	10674.504	
11.522	194.79	37198.44	2030268.816	133	61.79	12011.976	
11.576	202.76	38641.86	2068910.676	133	69.76	13561.344	
11.63	212.29	40342.86	2109253.536	133	79.29	15413.976	
11.682	224.09	40845.168	2150098.704	133	91.09	17052.048	
11.736	239.13	45024.984	2195123.688	133	106.13	20631.672	
11.79	258.63	48382.272	2243505.96	133	125.63	24422.472	
11.844	283.87	52731	2296236.96	133	150.87	29329.128	
11.898	316.08	58315.14	2354552.1	133	183.08	35590.752	
11.952	357.98	65518.632	2420070.732	133	224.98	43736.112	
12.006	412.67	74907.18	2494977.912	133	279.67	54367.848	
12.059	481.07	85262.796	2580240.708	133	348.07	66411.756	
12.113	563.66	101547.756	2681788.464	133	430.66	83720.304	
12.167	658.95	118837.692	2800626.156	133	525.95	102244.68	
12.221	764	138310.74	2938936.896	133	631	122666.4	
12.275	872.18	159036.696	3097973.592	133	739.18	143696.592	
12.329	974.13	179461.332	3277434.924	133	841.13	163515.672	**PEAK FLOW= 1,175 CFS**
12.383	1060.51	197767.008	3475201.932	133	927.51	180307.944	**TOTAL 500YR 24HR VOLUME= 9,276,972 CF**
12.436	1123.46	208350.738	3683552.67	133	990.46	188979.768	
12.49	1162.01	222147.684	3905700.354	133	1029.01	200039.544	**PUMP FLOW= 133 CFS**
12.544	1174.89	227146.68	4132847.034	133	1041.89	202543.416	**TOTAL 500YR 24HR VOLUME REQUIRED= 3,997,274 CF**
12.598	1164.71	227409.12	4360256.154	133	1031.71	200564.424	
12.652	1134.53	223486.128	4583742.282	133	1001.53	194697.432	
12.706	1086.37	215871.48	4799613.762	133	953.37	185335.128	
12.76	1024.03	205130.88	5004744.642	133	891.03	173216.232	
12.812	952.12	184967.64	5189712.282	133	819.12	153339.264	
12.866	876.58	177749.64	5367461.922	133	743.58	144551.952	
12.92	802.25	163182.276	5530644.198	133	669.25	130102.2	
12.974	732.76	149202.972	5679847.17	133	599.76	116593.344	
13.028	668.98	136249.128	5816096.298	133	535.98	104194.512	
13.082	610.52	124367.4	5940463.698	133	477.52	92829.888	
13.136	557.45	113526.684	6053990.382	133	424.45	82513.08	
13.189	509.68	101804.202	6155794.584	133	376.68	71870.544	
13.243	467.07	94940.1	6250734.684	133	334.07	64943.208	
13.297	429.27	87124.248	6337858.932	133	296.27	57594.888	
13.351	396.08	80224.02	6418082.952	133	263.08	51142.752	
13.405	366.78	74149.992	6492232.944	133	233.78	45446.832	
13.459	340.88	68784.552	6561017.496	133	207.88	40411.872	
13.513	317.88	64031.472	6625048.968	133	184.88	35940.672	
13.566	297.58	58714.884	6683763.852	133	164.58	31401.864	
13.62	279.66	56107.728	6739871.58	133	146.66	28510.704	
13.674	263.81	52825.284	6792696.864	133	130.81	25429.464	
13.728	249.86	49928.724	6842625.588	133	116.86	22717.584	
13.782	237.51	47372.364	6889997.952	133	104.51	20316.744	
13.836	226.49	45100.8	6935098.752	133	93.49	18174.456	
13.89	216.62	43070.292	6978169.044	133	83.62	16255.728	
13.942	207.7	39716.352	7017885.396	133	74.7	13983.84	
13.996	199.6	39589.56	7057474.956	133	66.6	12947.04	
14.05	192.21	38083.932	7095558.888	133	59.21	11510.424	
14.104	185.37	36700.776	7132259.664	133	52.37	10180.728	
14.158	179.1	35426.484	7167686.148	133	46.1	8961.84	
14.212	173.26	34249.392	7201935.54	133	40.26	7826.544	
14.266	167.83	33153.948	7235089.488	133	34.83	6770.952	
14.319	162.78	31540.194	7266629.682	133	29.78	5682.024	
14.373	158.02	31181.76	7297811.442	133	25.02	4863.888	
14.427	153.56	30285.576	7328097.018	133	20.56	3996.864	
14.481	149.37	29444.796	7357541.814	133	16.37	3182.328	
14.535	145.46	28657.476	7386199.29	133	12.46	2422.224	
14.589	141.8	27921.672	7414120.962	133	8.8	1710.72	
14.643	138.45	27240.3	7441361.262	133	5.45	1059.48	required storage
14.696	135.4	26125.29	7467486.552	133	2.4	457.92	3997274
26.212	0.06	13.608	9276971.526	133	-132.94		



AREA 3

TIME (HR)	100 YR FLOW (CFS)	INCREMENTAL VOLUME (CF)	CUMULATIVE VOLUME (CF)	PUMP OUT (CFS)			
0	0	0	0				
11.789	139.71	38772	1296525.042	133	6.71	1932.48	
11.87	153.55	42757.308	1339282.35	133	20.55	5992.38	
11.95	173.22	47054.88	1386337.23	133	40.22	11583.36	
12.03	201.58	53971.2	1440308.43	133	68.58	19751.04	
12.11	240.42	63648	1503956.43	133	107.42	30936.96	
12.19	289.3	76279.68	1580236.11	133	156.3	45014.4	
12.27	346.78	91595.52	1671831.63	133	213.78	61568.64	
12.35	411.16	109143.36	1780974.99	133	278.16	80110.08	
12.43	477.55	127974.24	1908949.23	133	344.55	99230.4	
12.51	538.6	146325.6	2055274.83	133	405.6	116812.8	
12.59	587.53	162162.72	2217437.55	133	454.53	130904.6	
12.67	620.98	174025.44	2391462.99	133	487.98	140538.2	
12.75	638.34	181342.08	2572805.07	133	505.34	145537.9	
12.83	639.75	184044.96	2756850.03	133	506.75	145944	
12.91	626.81	182384.64	2939234.67	133	493.81	142217.3	
12.991	601.67	179112.384	3118347.054	133	468.67	136664.2	
13.071	567.83	168408	3286755.054	133	434.83	125231	
13.151	527.2	157684.32	3444439.374	133	394.2	113529.6	
13.231	482.72	145428.48	3589867.854	133	349.72	100719.4	
13.311	438.51	132657.12	3722524.974	133	305.51	87986.88	
13.391	397.75	120421.44	3842946.414	133	264.75	76248	
13.471	361.06	109268.64	3952215.054	133	228.06	65681.28	
13.552	328.18	100491.192	4052706.246	133	195.18	56914.49	
13.632	299.21	90344.16	4143050.406	133	166.21	47868.48	
13.712	273.79	82512	4225562.406	133	140.79	40547.52	
13.792	251.34	75618.72	4301181.126	133	118.34	34081.92	
13.872	231.52	69531.84	4370712.966	133	98.52	28373.76	
13.952	214.12	64172.16	4434885.126	133	81.12	23362.56	
14.032	198.76	59454.72	4494339.846	133	65.76	18938.88	
14.112	185.1	55275.84	4549615.686	133	52.1	15004.8	
14.192	172.98	51563.52	4601179.206	133	39.98	11514.24	
14.272	162.18	48263.04	4649442.246	133	29.18	8403.84	
14.352	152.54	45319.68	4694761.926	133	19.54	5627.52	
14.432	143.89	42685.92	4737447.846	133	10.89	3136.32	
14.512	136.17	40328.64	4777776.486	133	3.17	912.96	
27.166	0.06	18.72	6254166.816	133	-132.94		



PEAK FLOW= 640 CFS

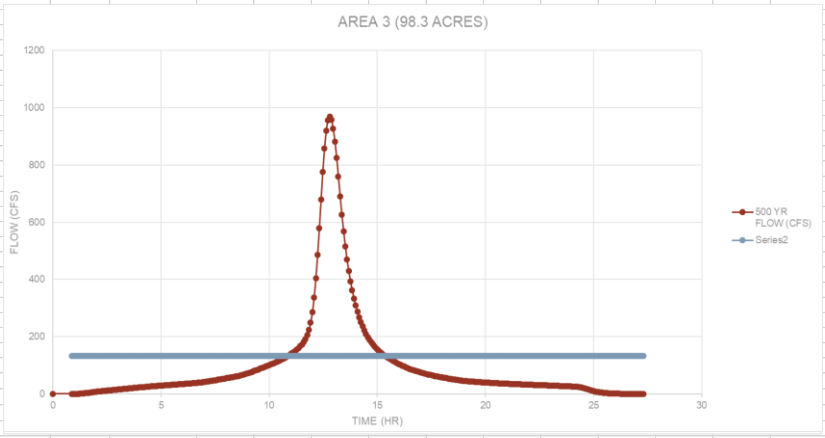
TOTAL 100YR 24HR VOLUME= 6,254,167 CF

PUMP FLOW= 133 CFS

required volume **2178822.2**

TOTAL 100YR 24HR VOLUME REQUIRED= 2,178,822 CF

AREA 3							
TIME (HR)	500 YR FLOW (CFS)	INCREMENTAL VOLUME (CF)	CUMULATIVE VOLUME (CF)	PUMP OUT (CFS)	500YR FLOW-PUMP OUT (CFS)	500YR FLOW - PUMP OUT VOLUME (CFS)	
0	0	0	0				
10.874	133.17	37811.52	1544254.398	133	0.17	48.96	
10.954	137.13	38923.2	1583177.598	133	4.13	1189.44	
11.034	141.28	40091.04	1623268.638	133	8.28	2384.64	
11.114	145.64	41316.48	1664585.118	133	12.64	3640.32	
11.194	150.26	42609.6	1707194.718	133	17.26	4970.88	
11.274	155.23	43990.56	1751185.278	133	22.23	6402.24	
11.354	160.65	45486.72	1796671.998	133	27.65	7963.2	
11.434	166.69	47136.96	1843808.958	133	33.69	9702.72	
11.515	173.55	49606.992	1893415.95	133	40.55	11824.38	
11.595	181.66	51150.24	1944566.19	133	48.66	14014.08	
11.675	191.9	53792.64	1998358.83	133	58.9	16963.2	
11.755	205.47	57221.28	2055580.11	133	72.47	20871.36	
11.835	223.8	61814.88	2117394.99	133	90.8	26150.4	
11.915	249.08	68094.72	2185489.71	133	116.08	33431.04	
11.995	285.64	76999.68	2262489.39	133	152.64	43960.32	
12.076	337.58	90865.476	2353354.866	133	204.58	59655.528	
12.156	405	106931.52	2460286.386	133	272	78336	
12.236	486.12	128321.28	2588607.666	133	353.12	101698.56	
12.316	579.05	153384.48	2741992.146	133	446.05	128462.4	
12.396	679.09	181172.16	2923164.306	133	546.09	157273.92	
12.476	776.02	209535.84	3132700.146	133	643.02	185189.76	
12.556	858.5	235370.88	3368071.026	133	725.5	208944	
12.636	919.63	256050.72	3624121.746	133	786.63	226549.44	
12.716	956.47	270158.4	3894280.146	133	823.47	237159.36	
12.796	969.24	277302.24	4171582.386	133	836.24	240837.12	
12.876	958.47	277590.24	4449172.626	133	825.47	237735.36	
12.956	927.56	271588.32	4720760.946	133	794.56	228833.28	
13.036	881.73	260537.76	4981298.706	133	748.73	215634.24	
13.116	824.46	245691.36	5226990.066	133	691.46	199140.48	
13.197	758.93	230858.262	5457848.328	133	625.93	182521.188	
13.277	691.07	208800	5666648.328	133	558.07	160724.16	**PEAK FLOW= 969 CFS**
13.357	627	189802.08	5856450.408	133	494	142272	**TOTAL 500YR 24HR VOLUME= 9,568,079 CF**
13.437	568.75	172188	6028638.408	133	435.75	125496	
13.517	516.3	156247.2	6184885.608	133	383.3	110390.4	**PUMP FLOW= 133 CFS**
13.597	469.92	142015.68	6326901.288	133	336.92	97032.96	**TOTAL 500YR 24HR VOLUME REQUIRED= 4,149,355 CF**
13.677	429.37	129497.76	6456399.048	133	296.37	85354.56	
13.757	393.6	118507.68	6574906.728	133	260.6	75052.8	
13.837	361.94	108797.76	6683704.488	133	228.94	65934.72	
13.917	334.14	100235.52	6783940.008	133	201.14	57928.32	
13.997	309.66	92707.2	6876647.208	133	176.66	50878.08	
14.077	287.94	86054.4	6962701.608	133	154.94	44622.72	
14.157	268.64	80147.52	7042849.128	133	135.64	39064.32	
14.237	251.52	74903.04	7117752.168	133	118.52	34133.76	
14.318	236.22	71112.492	7188864.66	133	103.22	30098.952	
14.398	222.52	66058.56	7254923.22	133	89.52	25781.76	
14.478	210.28	62323.2	7317246.42	133	77.28	22256.64	
14.558	199.29	58978.08	7376224.5	133	66.29	19091.52	
14.638	189.41	55972.8	7432197.3	133	56.41	16246.08	
14.718	180.54	53272.8	7485470.1	133	47.54	13691.52	
14.798	172.52	50840.64	7536310.74	133	39.52	11381.76	
14.879	165.24	49245.408	7585556.148	133	32.24	9401.184	
14.959	158.64	46638.72	7632194.868	133	25.64	7384.32	
15.039	152.63	44822.88	7677017.748	133	19.63	5653.44	
15.119	147.15	43168.32	7720186.068	133	14.15	4075.2	
15.199	142.09	41650.56	7761836.628	133	9.09	2617.92	
15.279	137.42	40249.44	7802086.068	133	4.42	1272.96	**required volume**
15.359	133.1	38954.88	7841040.948	133	0.1	28.8	4149355
27.292	0.06	20.16	9568079.01	133	-132.94		



Stage Storage Table for Areas within Levee

entire area	
stage (ft)	storage (cf)
5	5731890
5.5	6830721
6	8415444
6.5	10905217
7	14674764
8	24717496
9	35878968

area 1	
stage (ft)	storage (cf)
5	1811755
5.5	2152784
6	2595086
6.5	3227720
7	4160033
8	6952434
9	10244928

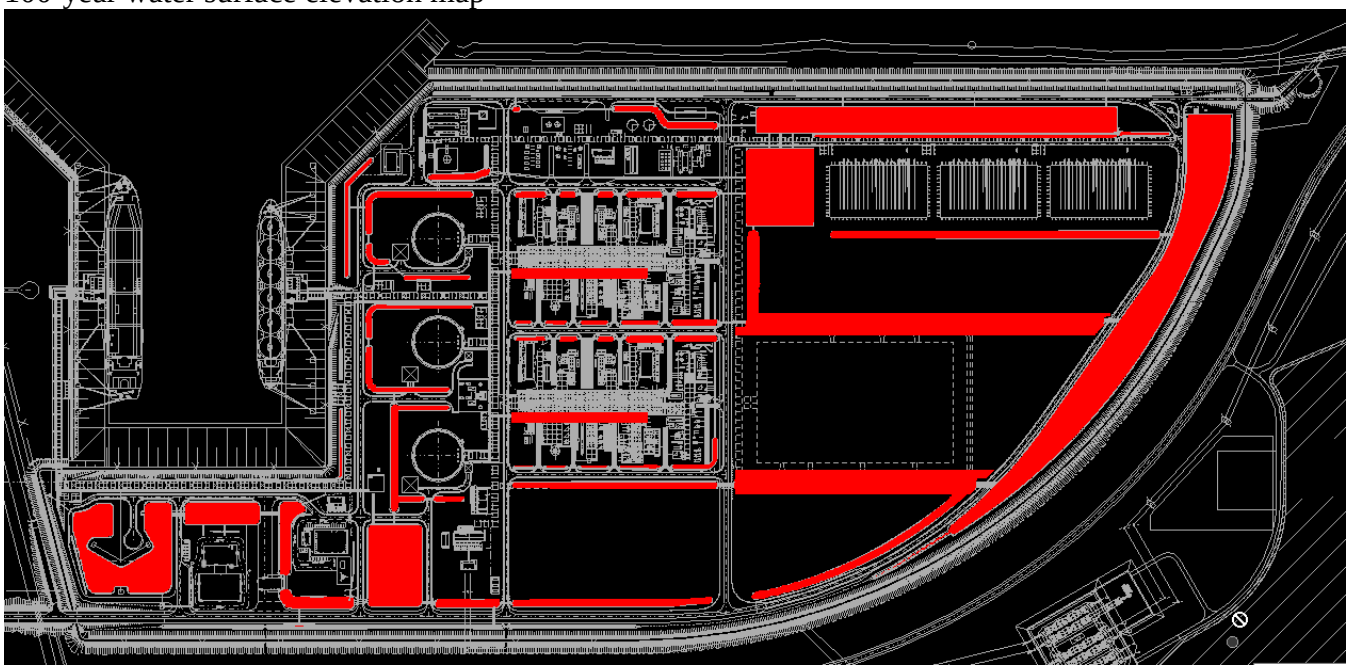
area 2	
stage (ft)	storage (cf)
5	1874130
5.5	2208900
6	2654465
6.5	3410802
7	4640586
8	7993951
9	11763345

area 3	
stage (ft)	storage (cf)
5	2046004
5.5	2469036
6	3165892
6.5	4266693
7	5874145
8	9771111
9	13870612

The storage volumes and water surface elevations for each area are summarized below.

Based on the Stage Storage table and the 100-year required volumes, the 100-year elevation in the berm for each area as follow:
Area 1 - 100-year required volume (with 133 cfs pump out) = 2,048,383 cf = elev 5.35'
Area 2 - 100-year required volume (with 133 cfs pump out) = 2,141,291 cf = elev 5.40'
Area 3 - 100-year required volume (with 133 cfs pump out) = 2,178,822 cf = elev 5.16'
See below for the 100-year inundation with in the berm.
The estimated average time it will take to drain the volume = 2,048,383 +2,141,291 +2,178,822 = 6,368,496 cf / (133 cfs x3)= 4.4 hrs

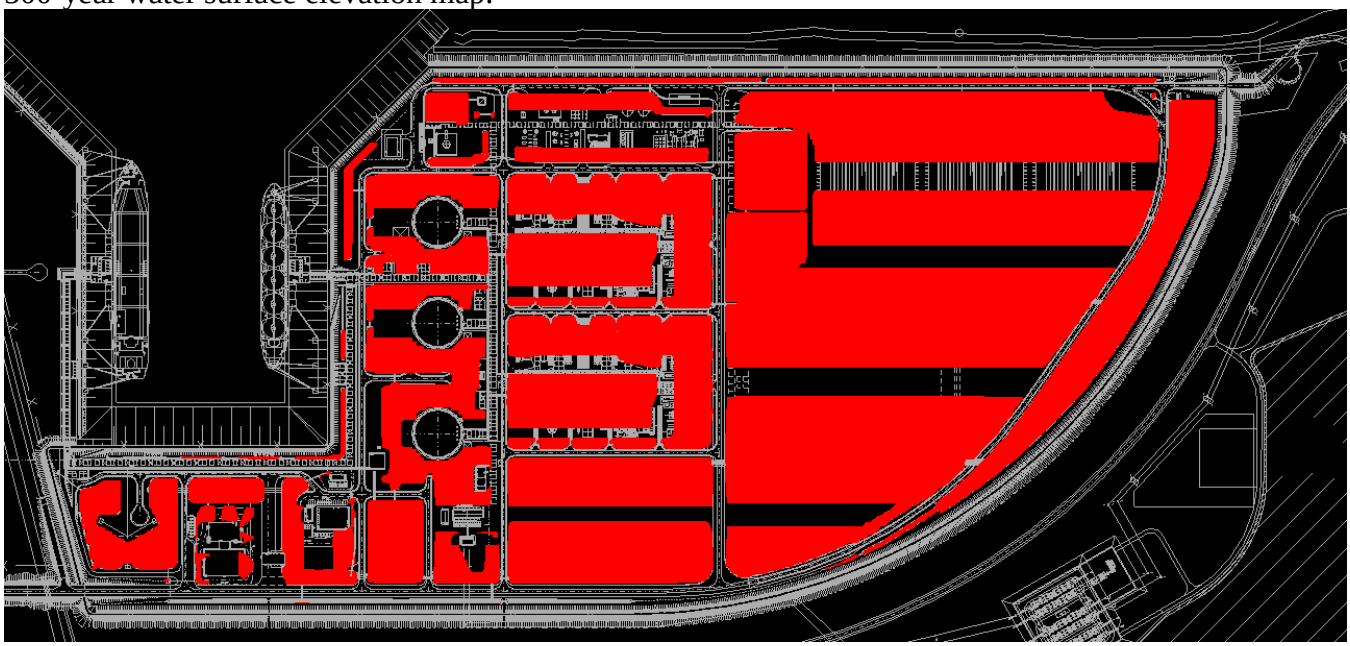
100-year water surface elevation map



Based on the 500-year required volumes, the 500-year elevation in the berm for each area as follow:
Area 1- 500 year required volume (with 133 cfs pump out) = 3,771,967 cf = elev 6.79'
Area 2- 500 year required volume (with 133 cfs pump out) = 3,997,274 cf = elev 6.74'
Area 3- 500 year required volume (with 133 cfs pump out) = 4,149,355 cf = elev 6.45'
All elevation is below the Non-Critical Equipment Point of Support minimum elevation of 8.0'.
See below for the 500-year inundation with in the berm.

The estimated average time it will take to drain the volume = 3,771,967+3,997,274+4,149,355 = 11,918,596 cf / (133 cfs x3)= 8.3 hrs

500-year water surface elevation map.



3.6 Determine 100-Year 7-day Rainfall Volume and Depth with Levee Overtopping and Stormwater Pumps Not Operating

The 100-year 7-day period storm with levee overtopping and stormwater pumps not operating will be used to determine the minimum Critical Equipment Point of Support elevation.

The rainfall depth for the 100-year 7-day period storm is 26.6 in.

Determine the rainfall volume for each area:
Area 1- 91.4 * 43560 * 0.98 * 26.6 / 12 = 9,017,938 cf
Area 2- 95.3 * 43560 * 0.98 * 26.6 / 12 = 8,648,893 cf
Area 3- 98.3 * 43560 * 0.98 * 26.6 / 12 = 9,301,818 cf
Total 100-year 7-day period volume= 26,968,649 cf

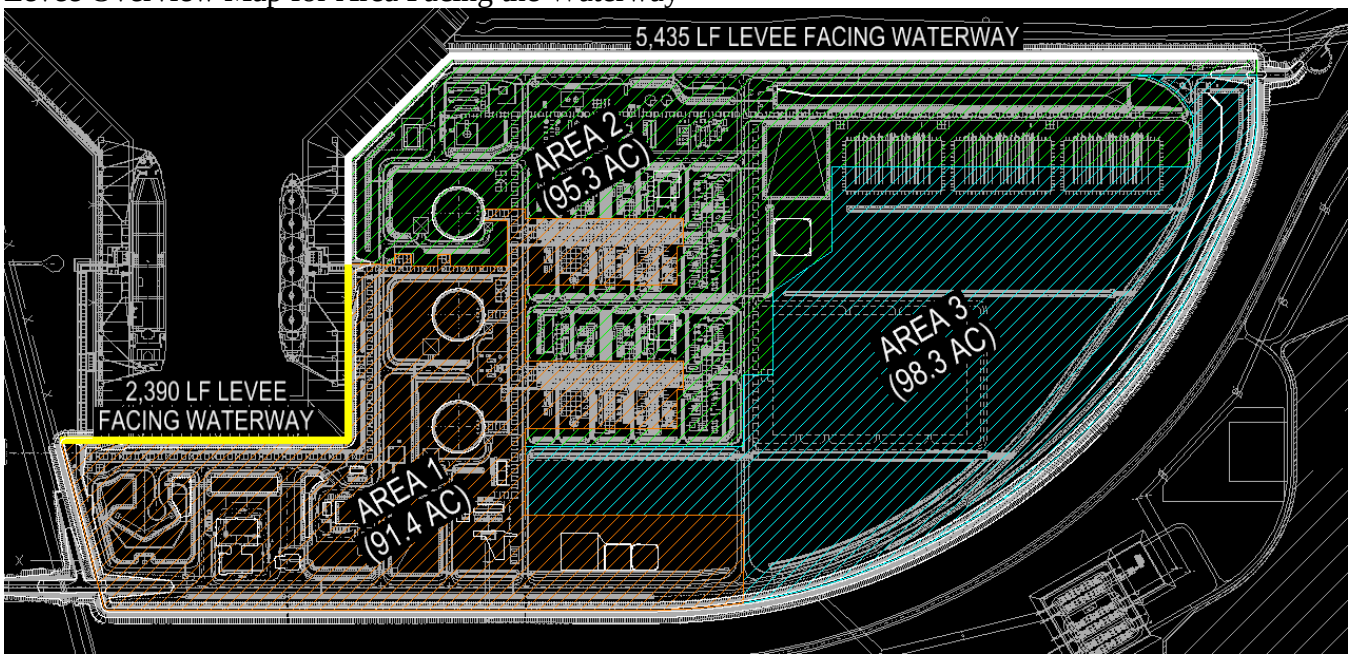
Determine the volume for overtopping for each area **facing the waterway** with a rate overtopping rate of 0.10 cfs per foot length of levee, for a maximum period of 2-hours:

Area 1- Berm Length facing waterway = 2,390 ft
Volume = 2,390 ft * 0.1 ft^3 / sec / ft * 2 hr * 3600 sec / hr = 1,720,800 cf

Area 2- Berm Length facing waterway = 5,435 ft
Volume = 5,435 ft * 0.1 ft^3 / sec / ft * 2 hr * 3600 sec / hr = 3,913,200 cf

Area 3- No volume from overtopping, not facing waterway

Levee Overview Map for Area Facing the Waterway



Determine the volume for overtopping for each area **on the landside** with a rate overtopping rate of 0.10 cfs per foot length of levee, for a maximum period of 2-hours:

Area 1- Berm Length facing waterway = 4,190 ft

Volume = 4,190 ft * 0.1 ft^3 / sec / ft * 2 hr * 3600 sec / hr = 3,016,800 cf.

Area 2- no volume from overtopping, not on the landside

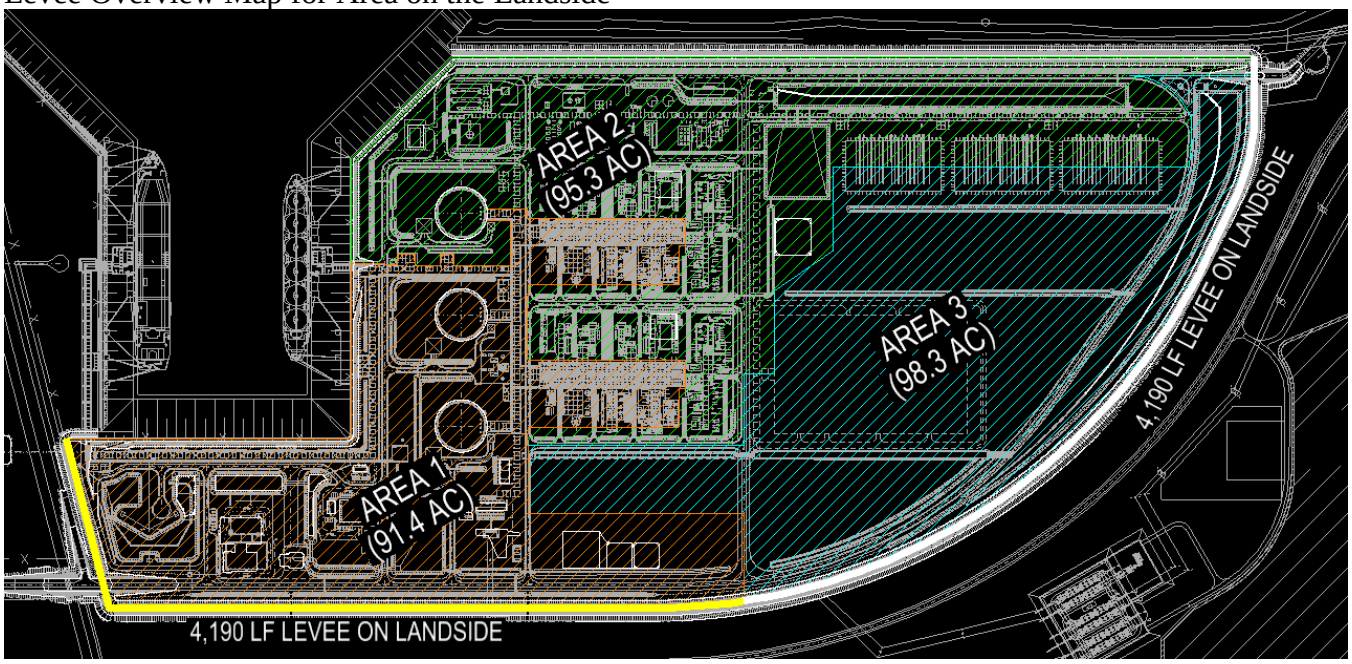
Area 3- Berm Length facing landside = 4,190 ft

Volume = 4,190 ft * 0.1 ft^3 / sec / ft * 2 hr * 3600 sec / hr = 3,016,800 cf.

Total Overtopping volume = 6,033,600 cf.

Use volume from the landside.

Levee Overview Map for Area on the Landside



Total volume (depth) = 26,968,649 + 6,033,600 =33,002,249 cf (elev 8.74')

The Critical Equipment Point of Support elevation should be set at 9.00' minimum.

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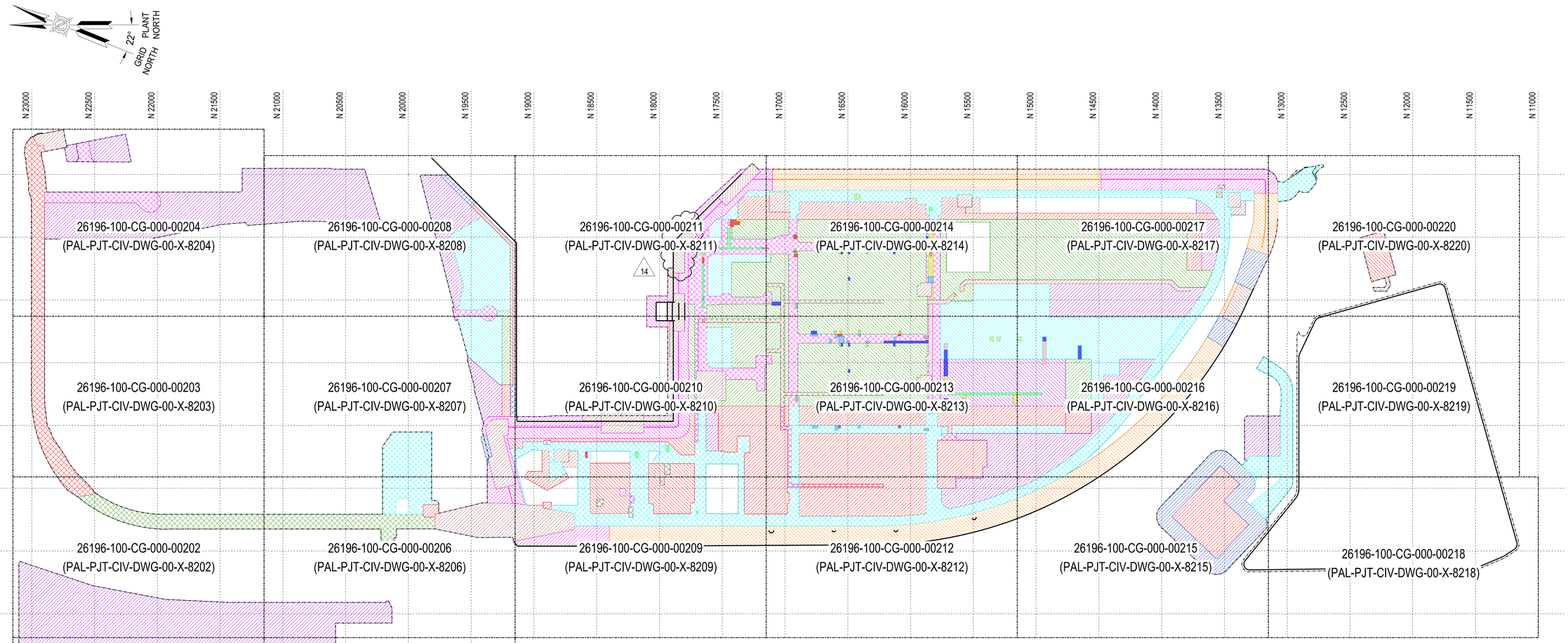

TYPE 1 - FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (5' THICK SOIL IMPROVEMENT)

TYPE-2 - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -5' SOIL IMPROVEMENT - WICK DRAINED)

TYPE-2A - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -7' SOIL IMPROVEMENT - WICK DRAINED)

TYPE 3 - LEVEE SEGMENT TYPE 1 AND TYPE 3 (10' THICK SOIL IMPROVEMENT - WICK DRAINED)

TYPE 4 - LEVEE SEGMENT TYPE 2 (7' THICK SOIL IMPROVEMENT -WICK DRAINED)

TYPE 5 - NON-FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)

TYPE 6 - NON-FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)

TYPE 7 - DMM SITE PREPARATION AREA

NO SITE PREPARATION AT POND AREAS

TYPE 8 - ROAD SEGMENT 1 (11' THICK SOIL IMPROVEMENT)

TYPE 9 - (LOW GROUND) ROAD SEGMENT 2 (10' THICK SOIL IMPROVEMENT - WICK DRAINED)

TYPE 10 - (LOW GROUND) ROAD SEGMENT 4 (5' THICK SOIL IMPROVEMENT - WICK DRAINED)

TYPE 11 - ROAD SEGMENT 5 (6.5' THICK SOIL IMPROVEMENT)

TYPE 12 - ROAD SEGMENT 6 (4' THICK SOIL IMPROVEMENT)

TYPE 13 - MEDIUM DEPTH STRUCTURES (DOWN TO EL -7.5' SOIL IMPROVEMENT)

TYPE 14 - MEDIUM DEPTH STRUCTURES (DOWN TO EL -7.5' SOIL IMPROVEMENT - WICK DRAINED)

TYPE 15 - MEDIUM DEPTH (7' THICK SOIL IMPROVEMENT)

TYPE 16 - (6' THICK SOIL IMPROVEMENT)

TYPE 17 - (8' THICK SOIL IMPROVEMENT)

TYPE 18 - (9' THICK SOIL IMPROVEMENT)

TYPE 19 - (10' THICK SOIL IMPROVEMENT)

TYPE 20 - (DOWN TO EL -10.0' SOIL IMPROVEMENT - WICK DRAINED)

TYPE 21 - (DOWN TO EL -12.0' SOIL IMPROVEMENT - WICK DRAINED)

NOTES:

1. FOR GENERAL NOTES AND REFERENCE SEE DRAWING 26196-100-C0-000-00005 (PAL-PJT-CIV-DWG-00-X-0005).
2. ALL DIMENSIONS AND COORDINATES ARE IN FEET UNLESS NOTED OTHERWISE.
3. SOIL IMPROVEMENT SHALL BE PERFORMED FROM STRIPPED SURFACE ON LOW GROUND AND FROM ROUGH GRADE DRAWING FEATURES ON HIGH GROUND.
4. FOR ROUGH GRADING DRAWINGS SEE 26196-100-CG-000-00100 (PAL-PJT-CIV-DWG-00-X-8100) AND 26196-100-CG-000-00250 (PAL-PJT-CIV-DWG-00-X-8250).
5. FOR CLEARING, GRUBBING AND STRIPPING DRAWING SEE 26196-100-CG-000-00011 (PAL-PJT-CIV-DWG-00-X-8011).
6. ALL MATERIALS, SITE PREPARATION AND EARTHWORKS SHALL ADHERE TO PROJECT SPECIFICATION FOR SITE PREPARATION AND EARTHWORKS, 26196-100-3PS-CG00-00001 (PAL-PJT-CIV-STD-00-X-0001).
7. WORK SHALL NOT DISTURB EXISTING UNDERGROUND PIPELINES AND UTILITIES. IF AN UNKNOWN PIPELINE OR UTILITY IS ENCOUNTERED, STOP WORK IMMEDIATELY AND NOTIFY THE RESIDENT ENGINEER FOR FURTHER DIRECTION.
8. ALL SOIL IMPROVEMENT WORK SHALL ADHERE TO PROJECT SPECIFICATION FOR SOIL IMPROVEMENT, 26196-100-3PS-CY05-00002 (PAL-PJT-CSA-STD-00-GEN-0002).
9. SHALLOW SOIL IMPROVEMENT CEMENT DOSAGE SHALL BE 6% OF THE WET WEIGHT OF 100 POUNDS PER CUBIC FOOT AT ALL AREAS WHERE FINISH GRADE ELEVATION WILL BE GREATER THAN 1 FOOT ABOVE EXISTING GRADE, AND 5.2% OF THE WET WEIGHT OF 100 POUNDS PER CUBIC FOOT AT ALL AREAS WHERE FINISH GRADE ELEVATION WILL BE EQUAL TO OR LESS THAN 1 FOOT ABOVE EXISTING GRADE. LIME DOSAGE SHALL BE 2% OF THE WET WEIGHT OF 100 POUNDS PER CUBIC FOOT. LIME USED SHALL BE QUICK LIME (PELLETIZED). WATER TO CEMENT RATIO SHALL BE 0.75.
10. FOR SHALLOW SOIL IMPROVEMENT DETAILS SEE DRAWINGS 26196-100-CG-000-00223 (PAL-PJT-CIV-DWG-00-X-8223), 26196-100-CG-000-00224 (PAL-PJT-CIV-DWG-00-X-8224) AND 26196-100-CG-000-00230 (PAL-PJT-CIV-DWG-00-X-8230).
11. DEEP MIXING METHOD (DMM) CEMENT DOSAGE SHALL BE 421 POUNDS PER CUBIC YARD. WATER TO CEMENT RATIO SHALL BE 0.80. CEMENT DOSAGE AND WATER TO CEMENT RATIO SHALL BE CONFIRMED BY PRE-PRODUCTION TEST.
12. FOR DEEP MIXING METHOD DETAILS SEE DRAWING 26196-100-CG-000-00221 (PAL-PJT-CIV-DWG-00-X-8221).
13. ALL DEEP MIXING WORK SHALL ADHERE TO PROJECT SPECIFICATION FOR DEEP MIXING METHOD 26196-100-3PS-CY05-00001 (PAL-PJT-CSA-STD-00-GEN-0001).
14. FOR SHALLOW SOIL IMPROVEMENT DETAILS AT THE LEVEE SEE DRAWINGS 26196-100-CG-000-00225 (PAL-PJT-CIV-DWG-00-X-8225 THROUGH 26196-100-CG-000-00228 (PAL-PJT-CIV-DWG-00-X-8228).
15. FOR WICK DRAIN SPACING DETAILS SEE DRAWING 26196-100-CG-000-00229 (PAL-PJT-CIV-DWG-00-X-8229). WICK DRAIN MATERIALS SHALL ADHERE TO PROJECT SPECIFICATION FOR WICK DRAINS, 26196-100-3PS-CY05-00003 (PAL-PJT-CSA-STD-00-GEN-0003).
16. FOR SHEET PILE DETAILS SEE STRUCTURAL DETAIL DRAWING 26196-100-CP-000-00008 (PAL-PJT-CIV-DWG-00-X-8008) (LATER).
17. NO FILL SHALL BE PLACED BEFORE SOIL IMPROVEMENT IS COMPLETED AND DESIRED SOIL STRENGTH HAS BEEN ACHIEVED. GEOTECHNICAL ENGINEER SHALL INDICATE WHEN THE PLACEMENT OF FILL MAY COMMENCE.
18. CONTROLLED LOW STRENGTH MATERIAL (CLSM) OR (FLOW FILL) MAY BE USED AS A REPLACEMENT FOR SHALLOW SOIL MIXING. IN CASES WHERE SHALLOW SOIL MIXING IS NOT POSSIBLE OR PRACTICAL, THE AREA MAY BE OVER-EXCAVATED BY A MINIMUM OF 3' 6", AND BACK FILLED WITH 3' OF FLOW FILL AND 6"OF BEDDING MATERIAL BEFORE PIPE PLACEMENT.

——— SHEET PILING

- - - - - - SURCHARGE TOE OF SLOPE (ELEVATION VARIES)

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

BECHTEL Bechtel Energy, Inc.
26196-100
FIRM NO.
F-9684

SCALE: 1"=400'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
013	09-04-2025	RE-ISSUED FOR CONSTRUCTION	MC	AP	SW	JR	AH	010	08-20-2024	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	KR	SK
014	09-18-2025	RE-ISSUED FOR CONSTRUCTION	ET	JW	AP/SW	JR	AH	011	01-26-2025	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	AH	SK
009	06-19-2024	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	KR	SK	012	05-02-2025	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	AH	SK

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT KEY PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8200	014	26196-100-CG-000-00200	014

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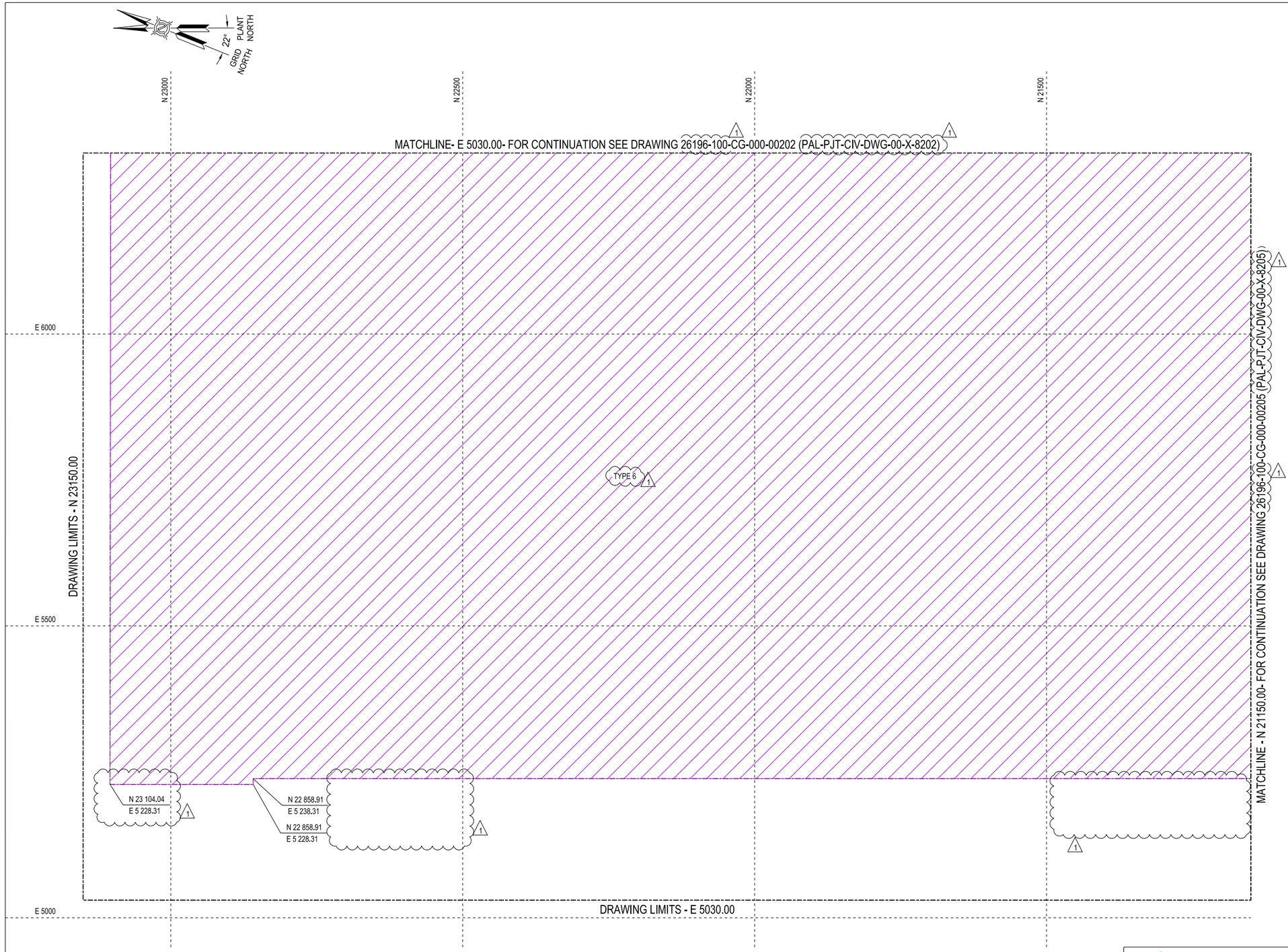

NOTES:

3520

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00200 (PAL-PJT-CIV-DWG-00-X-8200).

LEGEND:

- TYPE 1 - FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (5' THICK SOIL IMPROVEMENT)
- TYPE-2 - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -5' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 3 - LEVEE SEGMENT TYPE 1 AND TYPE 3 (10' THICK SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 4 - LEVEE SEGMENT TYPE 2 (7' THICK SOIL IMPROVEMENT -WICK DRAINED)
- TYPE 5 - NON-FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 6 - NON-FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 7 - DMM SITE PREPARATION AREA
- NO SITE PREPARATION AT POND AREAS
- TYPE 8 - ROAD SEGMENT 1 (11' THICK SOIL IMPROVEMENT)
- TYPE 9 - (LOW GROUND) ROAD SEGMENT 2 (10' THICK SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 10 - (LOW GROUND) ROAD SEGMENT 4 (5' THICK SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 11 - ROAD SEGMENT 5 (6.5' THICK SOIL IMPROVEMENT)
- TYPE 12 - ROAD SEGMENT 6 (4' THICK SOIL IMPROVEMENT)
- TYPE 13 - MEDIUM DEPTH STRUCTURES (DOWN TO EL -7.5' SOIL IMPROVEMENT)
- TYPE 14 - MEDIUM DEPTH STRUCTURES (DOWN TO EL -7.5' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 15 - MEDIUM DEPTH (7' THICK SOIL IMPROVEMENT)
- SHEET PILING
- SURCHARGE TOE OF SLOPE (ELEVATION VARIES)

THIS DRAWING SHALL BE PRINTED IN COLOR

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

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001	08-26-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/NP	NDJ/JS	CD	SK

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM

Port Arthur LNG

Bechtel OG&C.
26196-100
FIRM NO.
F-9684

SCALE: 1"=80'

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8201	001	26196-100-CG-000-00201	001

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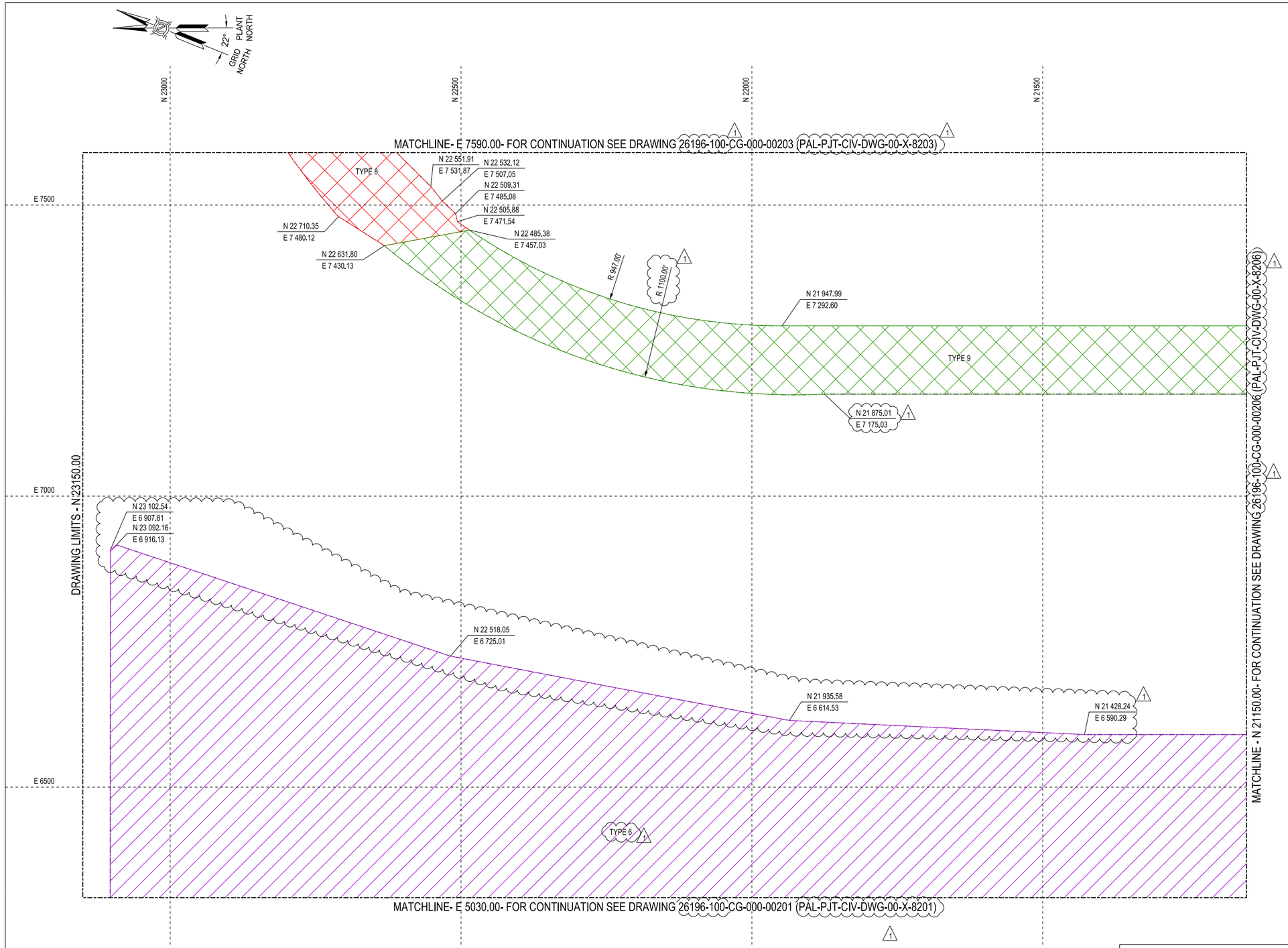

NOTES:

3521

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00200 (PAL-PJT-CIV-DWG-00-X-8200).

LEGEND:

- TYPE 1 - FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (5' THICK SOIL IMPROVEMENT)
- TYPE-2 - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -5' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 3 - LEVEE SEGMENT TYPE 1 AND TYPE 3 (10' THICK SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 4 - LEVEE SEGMENT TYPE 2 (7' THICK SOIL IMPROVEMENT -WICK DRAINED)
- TYPE 5 - NON-FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 6 - NON-FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 7 - DMM SITE PREPARATION AREA
- NO SITE PREPARATION AT POND AREAS
- TYPE 8 - ROAD SEGMENT 1 (11' THICK SOIL IMPROVEMENT)
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- TYPE 10 - (LOW GROUND) ROAD SEGMENT 4 (5' THICK SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 11 - ROAD SEGMENT 5 (6.5' THICK SOIL IMPROVEMENT)
- TYPE 12 - ROAD SEGMENT 6 (4' THICK SOIL IMPROVEMENT)
- TYPE 13 - MEDIUM DEPTH STRUCTURES (DOWN TO EL -7.5' SOIL IMPROVEMENT)
- TYPE 14 - MEDIUM DEPTH STRUCTURES (DOWN TO EL -7.5' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 15 - MEDIUM DEPTH (7' THICK SOIL IMPROVEMENT)
- SHEET PILING
- SURCHARGE TOE OF SLOPE (ELEVATION VARIES)

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ARTURO PALACIOS
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NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM

Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1"=80'

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8202	001	26196-100-CG-000-00202	001

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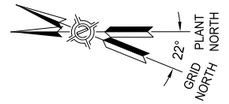

N 23000 N 22500 N 22000 N 21500

MATCHLINE- E 8870.00 - FOR CONTINUATION SEE DRAWING 26196-100-CG-000-00204 (PAL-PJT-CIV-DWG-00-X-8204)

E 8500

E 8000

DRAWING LIMITS - N 23150.00

TYPE 8

N 23 002.82
E 8 268.45

N 22 897.99
E 8 235.00

R 948.00'

N 22 889.86
E 8 111.10

N 22 876.48
E 7 995.30

N 22 856.39
E 7 969.03

N 22 834.00
E 7 905.04

R 1155.00'

N 22 724.43
E 7 742.41

N 22 701.86
E 7 697.47

N 22 643.15
E 7 622.54

MATCHLINE- N 21150.00- FOR CONTINUATION SEE DRAWING 26196-100-CG-000-00207 (PAL-PJT-CIV-DWG-00-X-8207)

MATCHLINE- E 7590.00- FOR CONTINUATION SEE DRAWING 26196-100-CG-000-00202 (PAL-PJT-CIV-DWG-00-X-8202)

NOTES:

3522

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00200 (PAL-PJT-CIV-DWG-00-X-8200).

LEGEND:

- TYPE 1 - FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (5' THICK SOIL IMPROVEMENT)
- TYPE-2 - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -5' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 3 - LEVEE SEGMENT TYPE 1 AND TYPE 3 (10' THICK SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 4 - LEVEE SEGMENT TYPE 2 (7' THICK SOIL IMPROVEMENT -WICK DRAINED)
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- NO SITE PREPARATION AT POND AREAS
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- TYPE 15 - MEDIUM DEPTH (7' THICK SOIL IMPROVEMENT)
- SHEET PILING
- SURCHARGE TOE OF SLOPE (ELEVATION VARIES)

THIS DRAWING SHALL BE PRINTED IN COLOR

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1"=80'

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PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8203	001	26196-100-CG-000-00203	001

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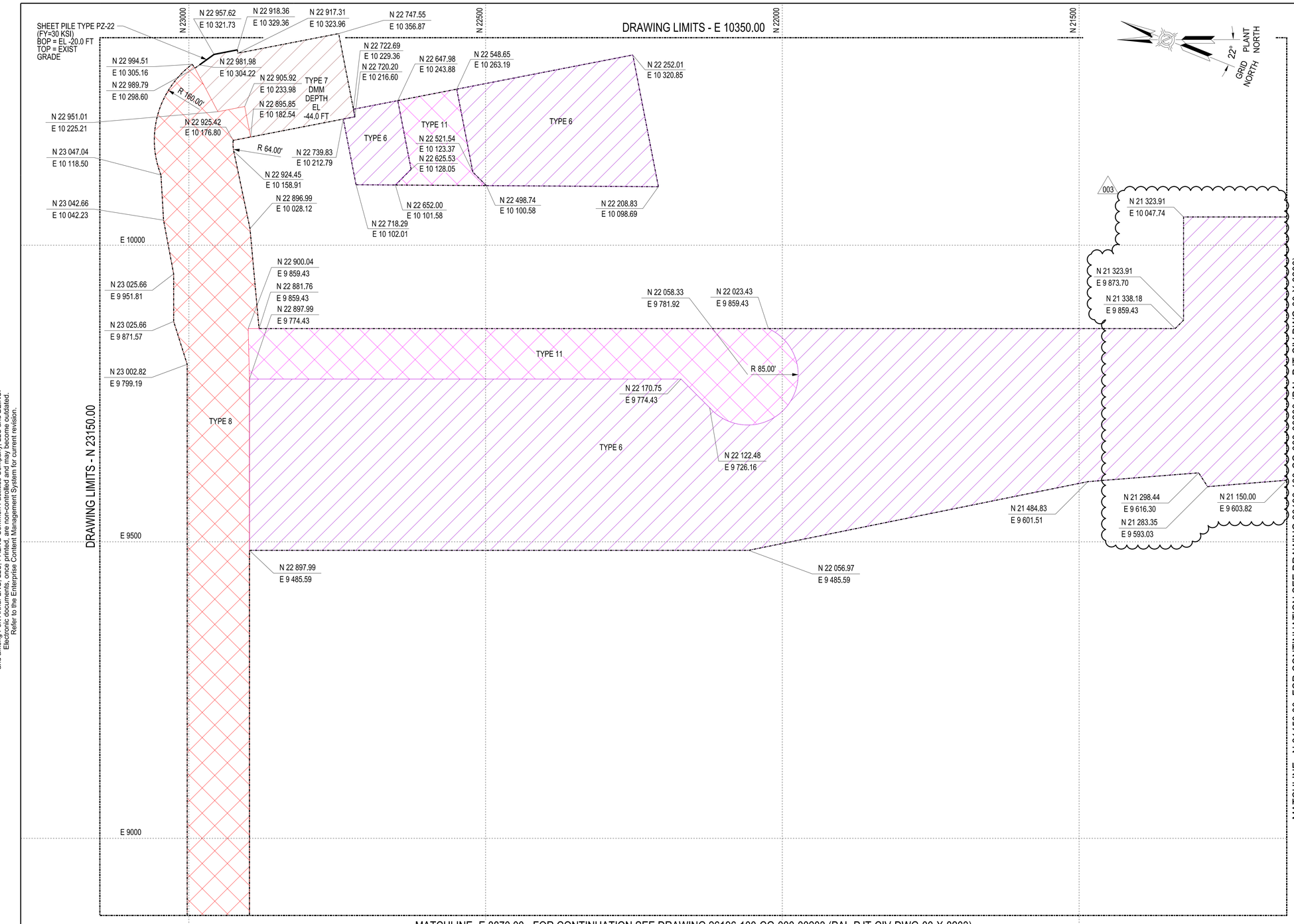

NOTES:

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002	01-09-2023	RE-ISSUED FOR CONSTRUCTION	ET	AP	SW	CD	JT
003	08-15-2023	RE-ISSUED FOR CONSTRUCTION	WY	MC	AP/SW	KR	JT

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8204	003	26196-100-CG-000-00204	003

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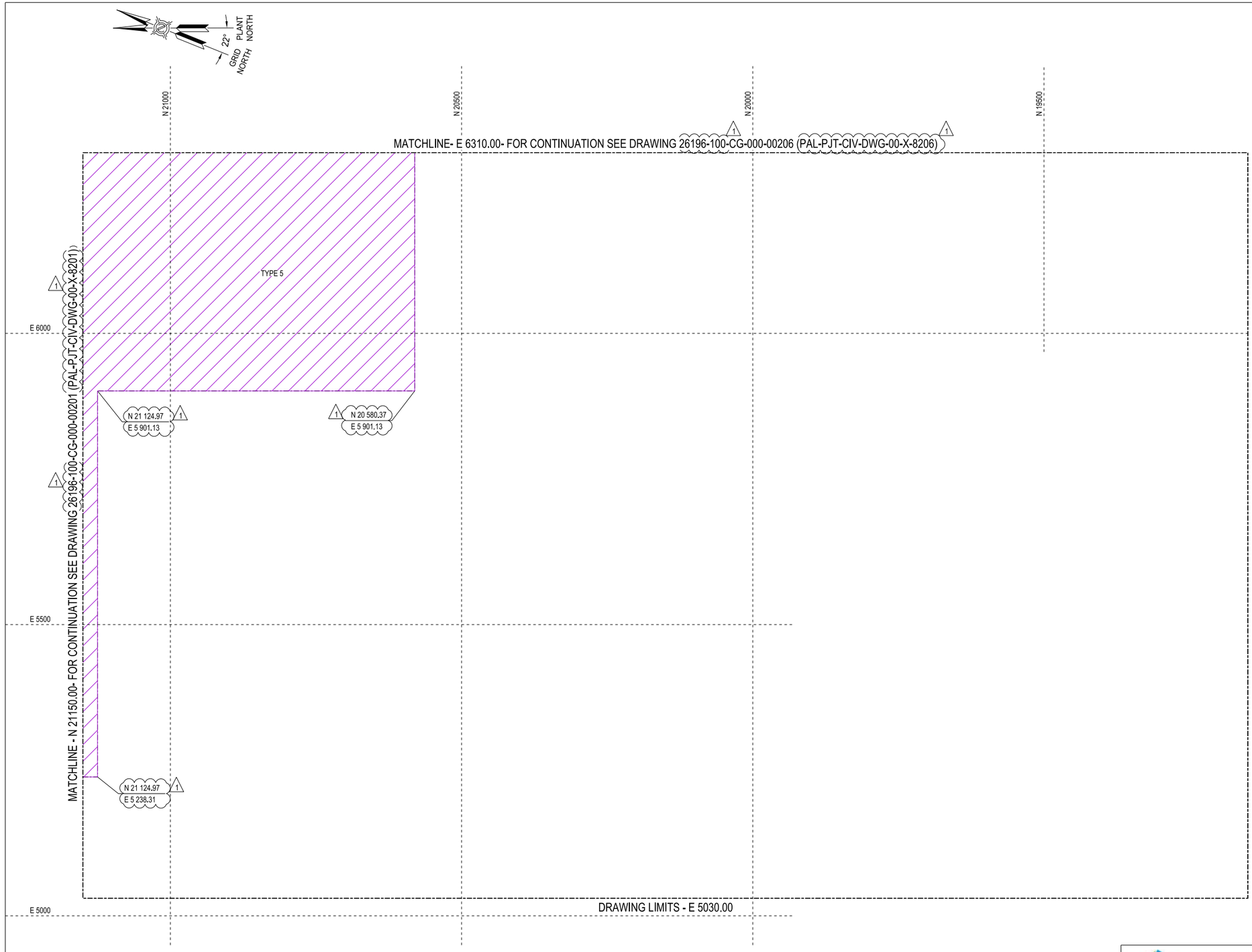

NOTES:

3524

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00200 (PAL-PJT-CIV-DWG-00-X-8200).

LEGEND:

- TYPE 1 - FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (5' THICK SOIL IMPROVEMENT)
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- TYPE 4 - LEVEE SEGMENT TYPE 2 (7' THICK SOIL IMPROVEMENT -WICK DRAINED)
- TYPE 5 - NON-FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 6 - NON-FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
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- TYPE 14 - MEDIUM DEPTH STRUCTURES (DOWN TO EL -7.5' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 15 - MEDIUM DEPTH (7' THICK SOIL IMPROVEMENT)
- SHEET PILING
- SURCHARGE TOE OF SLOPE (ELEVATION VARIES)

THIS DRAWING SHALL BE PRINTED IN COLOR

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

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Port Arthur LNG

Bechtel OG&C.
26196-100
FIRM NO.
F-9684

SCALE: 1"=80'

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8205	001	26196-100-CG-000-00205	001

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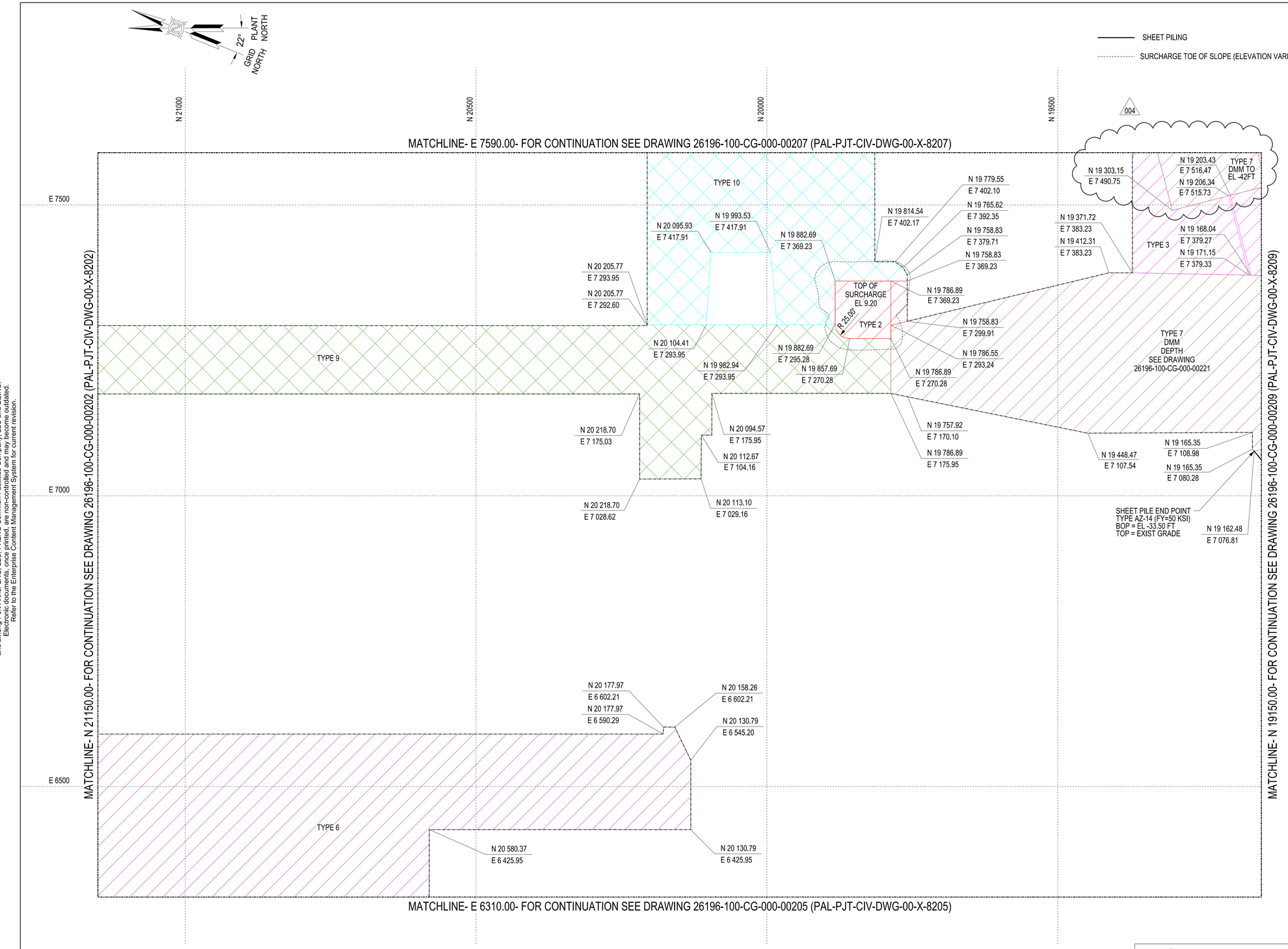

NOTES:

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00200 (PAL-PJT-CIV-DWG-00-X-8200).
2. SHALLOW SOIL MIXING ONLY FOR PHASE II. NO SURCHARGE, NO WICK DRAINS.

LEGEND:

- TYPE 1 - FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (5' THICK SOIL IMPROVEMENT)
- TYPE-2 - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -5' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE-2A - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -7' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 3 - LEVEE SEGMENT TYPE 1 AND TYPE 3 (10' THICK SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 4 - LEVEE SEGMENT TYPE 2 (7' THICK SOIL IMPROVEMENT -WICK DRAINED)
- TYPE 5 - NON-FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 6 - NON-FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 7 - DMM SITE PREPARATION AREA
- NO SITE PREPARATION AT POND AREAS
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- TYPE 14 - MEDIUM DEPTH STRUCTURES (DOWN TO EL -7.5' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 15 - MEDIUM DEPTH (7' THICK SOIL IMPROVEMENT)

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Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: 1"=80'

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002	04-27-2023	RE-ISSUED FOR CONSTRUCTION	ET	AP	SW	KR	JT
003	08-14-2023	RE-ISSUED FOR CONSTRUCTION	WY	MC	AP/SW	KR	JT
004	12-16-2024	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	KR	SK

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8206	004	26196-100-CG-000-00206	004

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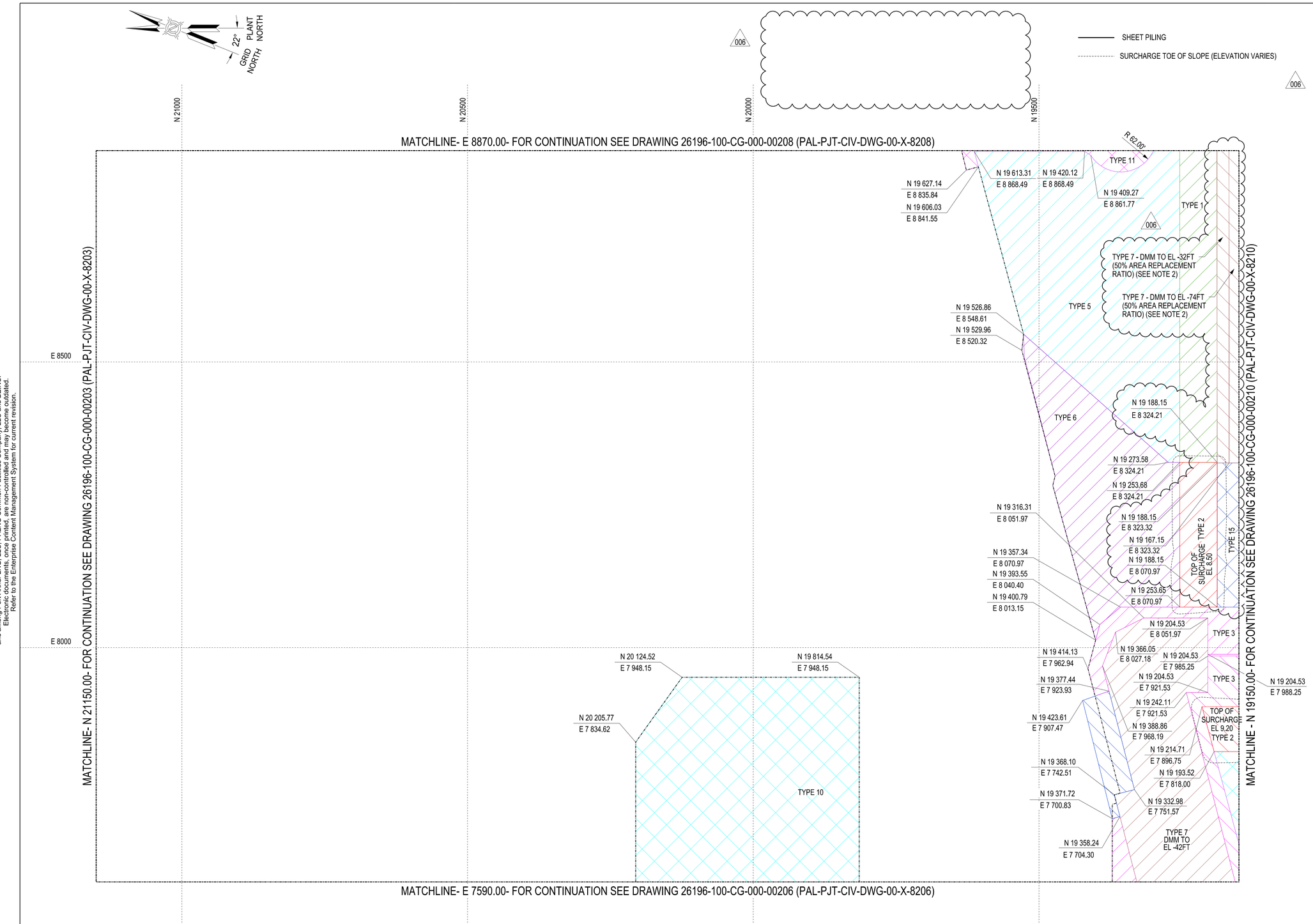

NOTES:

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00200 (PAL-PJT-CIV-DWG-00-X-8200).
2. FOR LEVEE AREA 10 FOUNDATION IMPROVEMENT BY DEEP MIXING METHOD (DMM), SEE CALCULATION 26196-100-K0C-000-00009 (PAL-T0-CIV-CAL-00-GEN-1009).

LEGEND:

- TYPE 1 - FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (5' THICK SOIL IMPROVEMENT)
- TYPE-2 - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -5' SOIL IMPROVEMENT - WICK DRAINED)
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- TYPE 7 - DMM SITE PREPARATION AREA
- NO SITE PREPARATION AT POND AREAS
- TYPE 8 - ROAD SEGMENT 1 (11' THICK SOIL IMPROVEMENT)
- TYPE 9 - (LOW GROUND) ROAD SEGMENT 2 (10' THICK SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 10 - (LOW GROUND) ROAD SEGMENT 4 (5' THICK SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 11 - ROAD SEGMENT 5 (6.5' THICK SOIL IMPROVEMENT)
- TYPE 12 - ROAD SEGMENT 6 (4' THICK SOIL IMPROVEMENT)
- TYPE 13 - MEDIUM DEPTH STRUCTURES (DOWN TO EL -7.5' SOIL IMPROVEMENT)
- TYPE 14 - MEDIUM DEPTH STRUCTURES (DOWN TO EL -7.5' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 15 - MEDIUM DEPTH (7' THICK SOIL IMPROVEMENT)

THIS DRAWING SHALL BE PRINTED IN COLOR

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: 1"=80'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
006	05-02-2025	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	AH	SK
001	08-26-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/NP	NDJ/JS	CD	SK
002	04-17-2023	RE-ISSUED FOR CONSTRUCTION	ET	AP	SW	KR	JT
003	08-14-2023	RE-ISSUED FOR CONSTRUCTION	WY	MC	AP/SW	KR	JT
004	12-16-2024	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	KR	SK
005	02-26-2025	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	AH	SK

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8207	006	26196-100-CG-000-00207	006

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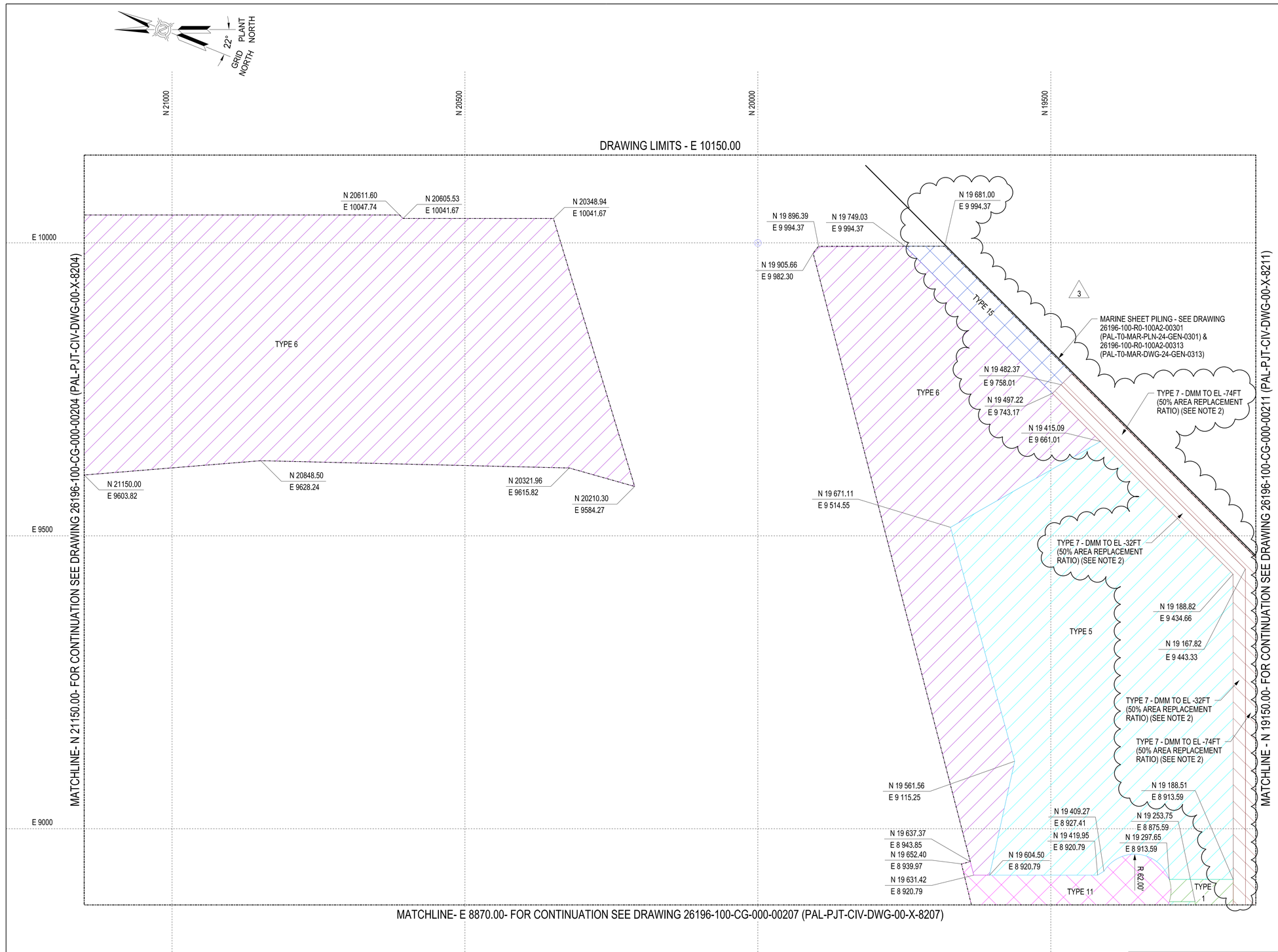

NOTES:

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00200 (PAL-PJT-CIV-DWG-00-X-8200).
2. FOR LEVEE AREA 10 FOUNDATION IMPROVEMENT BY DEEP MIXING METHOD (DMM), SEE CALCULATION 26196-100-K0C-000-00009 (PAL-T0-CIV-CAL-00-GEN-1009).

LEGEND:

- TYPE 1 - FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (5' THICK SOIL IMPROVEMENT)
- TYPE-2 - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -5' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE-2A - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -7' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 3 - LEVEE SEGMENT TYPE 1 AND TYPE 3 (10' THICK SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 4 - LEVEE SEGMENT TYPE 2 (7' THICK SOIL IMPROVEMENT -WICK DRAINED)
- TYPE 5 - NON-FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 6 - NON-FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 7 - DMM SITE PREPARATION AREA
- NO SITE PREPARATION AT POND AREAS
- TYPE 8 - ROAD SEGMENT 1 (11' THICK SOIL IMPROVEMENT)
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- TYPE 14 - MEDIUM DEPTH STRUCTURES (DOWN TO EL -7.5' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 15 - MEDIUM DEPTH (7' THICK SOIL IMPROVEMENT)
- TYPE 16 - MEDIUM DEPTH (15' THICK SOIL IMPROVEMENT)
- SHEET PILING
- SURCHARGE TOE OF SLOPE (ELEVATION VARIES)

THIS DRAWING SHALL BE PRINTED IN COLOR

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: 1"=80'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	01-23-2020	ISSUED FOR CONSTRUCTION	VJD	CN/NP	AP/JS	CD	SK
001	08-26-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/DL	NDJ/JS	CD	SK
002	08-15-2023	RE-ISSUED FOR CONSTRUCTION	WY	MC	AP/SW	KR	JT
003	05-02-2025	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	AH	SK

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8208	003	26196-100-CG-000-00208	003

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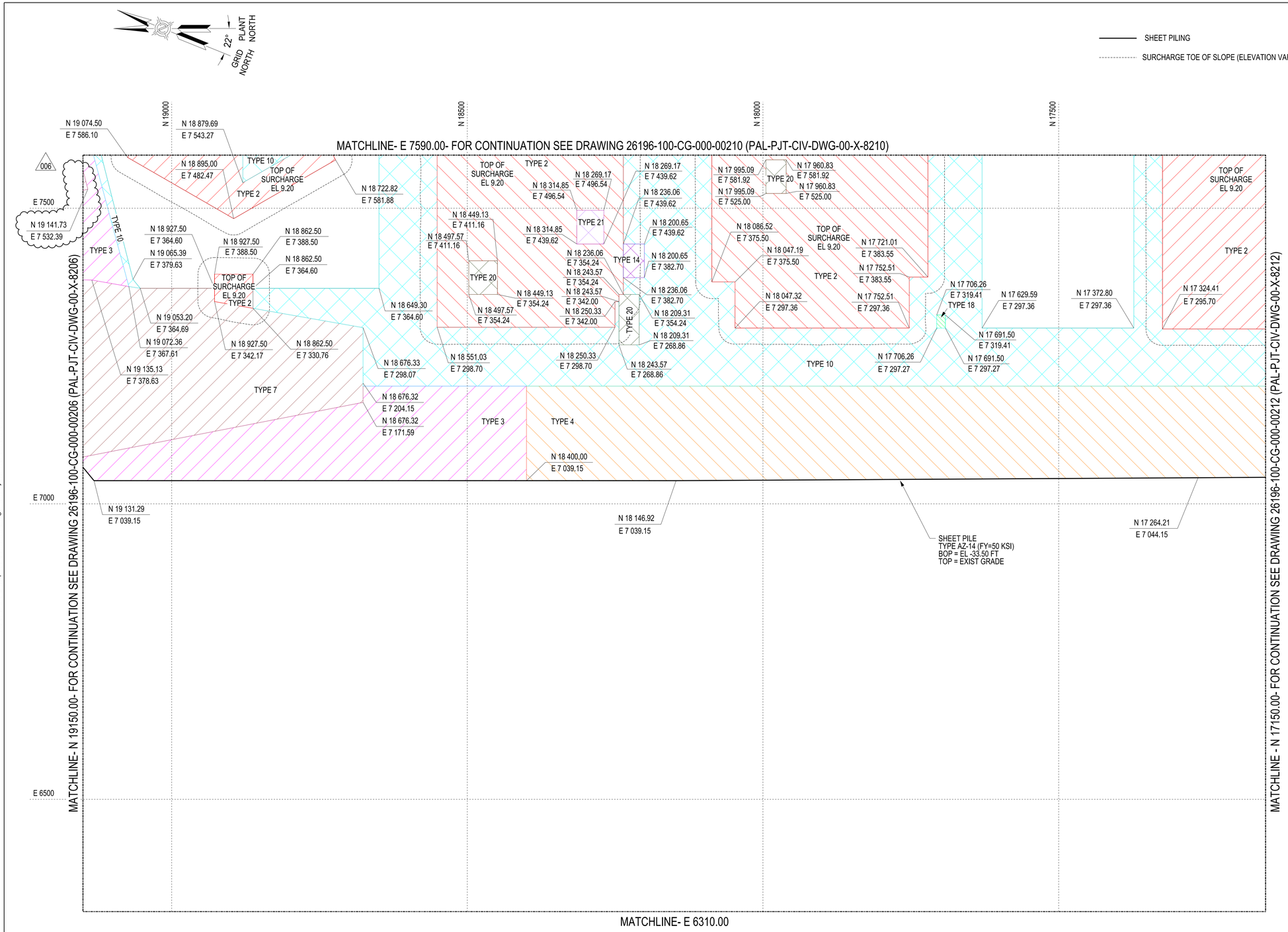

NOTES:

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00200 (PAL-PJT-CIV-DWG-00-X-8200).
2. SHALLOW SOIL MIXING ONLY FOR PHASE II. NO SURCHARGE, NO WICK DRAINS.

LEGEND:

- TYPE 1 - FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (5' THICK SOIL IMPROVEMENT)
- TYPE-2 - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -5' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE-2A - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -7' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 3 - LEVEE SEGMENT TYPE 1 AND TYPE 3 (10' THICK SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 4 - LEVEE SEGMENT TYPE 2 (7' THICK SOIL IMPROVEMENT -WICK DRAINED)
- TYPE 5 - NON-FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 6 - NON-FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 7 - DMM SITE PREPARATION AREA
- NO SITE PREPARATION AT POND AREAS
- TYPE 8 - ROAD SEGMENT 1 (11' THICK SOIL IMPROVEMENT)
- TYPE 9 - (LOW GROUND) ROAD SEGMENT 2 (10' THICK SOIL IMPROVEMENT - WICK DRAINED)
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- TYPE 18 - (9' THICK SOIL IMPROVEMENT)
- TYPE 19 - (10' THICK SOIL IMPROVEMENT)
- TYPE 20 - (DOWN TO EL -10.0' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 21 - (DOWN TO EL -12.0' SOIL IMPROVEMENT - WICK DRAINED)

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LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

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26196-100
FIRM NO.
F-9684

SCALE: 1"=80'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
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001	08-26-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/NP	NDJ/JS	CD	SK
002	04-27-2023	RE-ISSUED FOR CONSTRUCTION	ET	AP	SW	KR	JT
003	08-15-2023	RE-ISSUED FOR CONSTRUCTION	WY	MC	AP/SW	KR	JT
004	06-19-2024	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	KR	SK
005	08-20-2024	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	KR	SK

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8209	006	26196-100-CG-000-00209	006

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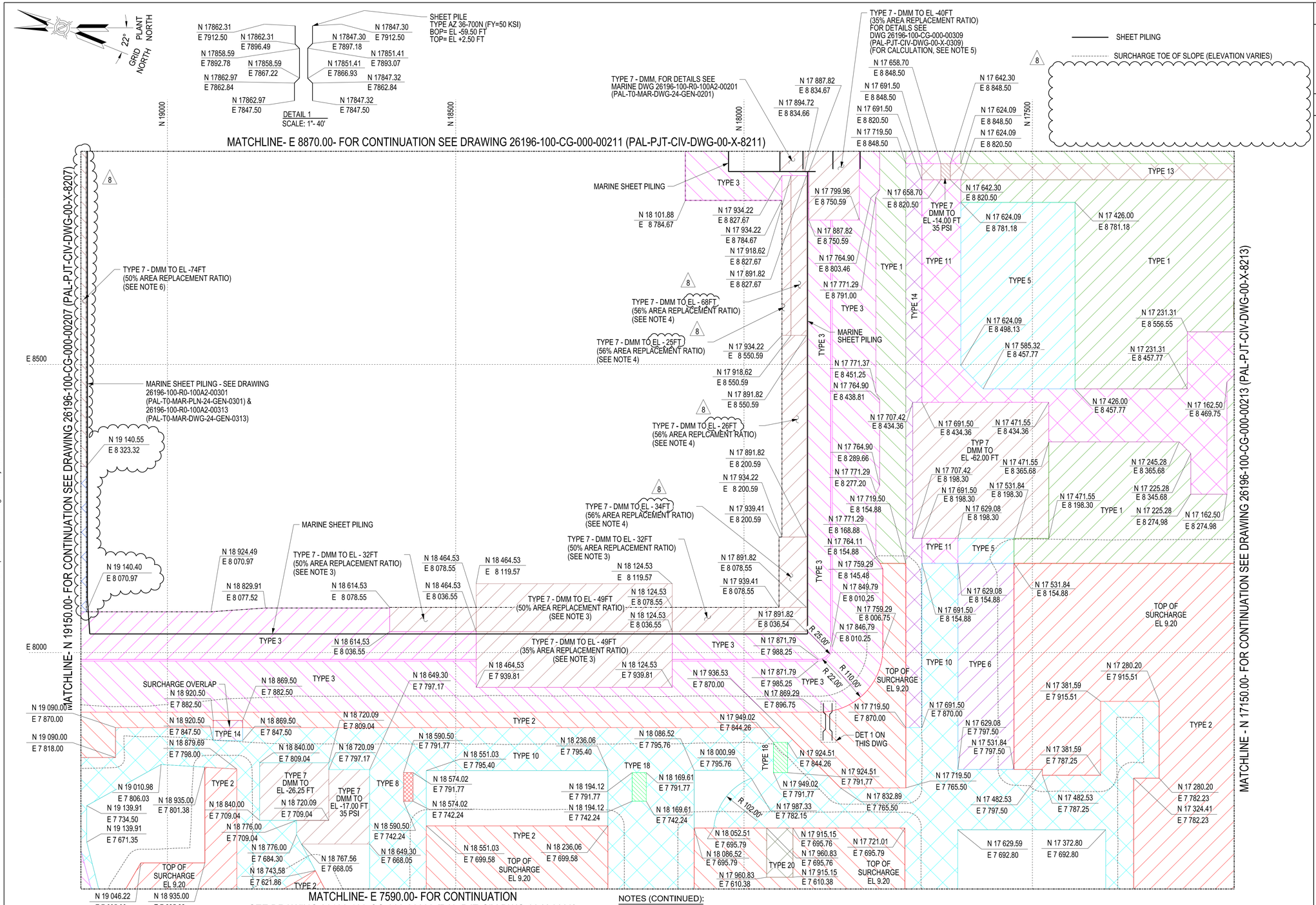

NOTES:

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00200 (PAL-PJT-CIV-DWG-00-X-8200).
2. SHALLOW SOIL MIXING ONLY FOR PHASE II. NO SURCHARGE, NO WICK DRAINS.

LEGEND:

- TYPE 1 - FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (5' THICK SOIL IMPROVEMENT)
- TYPE-2 - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -5' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE-2A - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -7' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 3 - LEVEE SEGMENT TYPE 1 AND TYPE 3 (10' THICK SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 4 - LEVEE SEGMENT TYPE 2 (7' THICK SOIL IMPROVEMENT -WICK DRAINED)
- TYPE 5 - NON-FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 6 - NON-FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 7 - DMM SITE PREPARATION AREA
- NO SITE PREPARATION AT POND AREAS
- TYPE 8 - ROAD SEGMENT 1 (11' THICK SOIL IMPROVEMENT)
- TYPE 9 - (LOW GROUND) ROAD SEGMENT 2 (10' THICK SOIL IMPROVEMENT - WICK DRAINED)
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- TYPE 18 - (9' THICK SOIL IMPROVEMENT)
- TYPE 19 - (10' THICK SOIL IMPROVEMENT)
- TYPE 20 - (DOWN TO EL -10.0' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 21 - (DOWN TO EL -12.0' SOIL IMPROVEMENT - WICK DRAINED)

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NOTES (CONTINUED):

3. FOR LEVEE AREA 3 FOUNDATION IMPROVEMENT BY DEEP MIXING METHOD (DMM), SEE CALCULATION 26196-100-K0C-000-00006 (PAL- T0-CIV-CAL-00-GEN-1006).
4. FOR LEVEE AREA 4 FOUNDATION IMPROVEMENT BY DEEP MIXING METHOD (DMM), SEE CALCULATION 26196-100-K0C-000-00007 (PAL- T0-CIV-CAL-00-GEN-1007).
5. FOR LEVEE AREA 9 FOUNDATION IMPROVEMENT BY DEEP MIXING METHOD (DMM), SEE CALCULATION 26196-100-K0C-000-00005 (PAL- T0-CIV-CAL-00-GEN-1005).
6. FOR LEVEE AREA 10 FOUNDATION IMPROVEMENT BY DEEP MIXING METHOD (DMM), SEE CALCULATION 26196-100-K0C-000-00009 (PAL- T0-CIV-CAL-00-GEN-1009).

STATE OF TEXAS
ARTURO PALACIOS
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Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: 1"-80'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
006	01-26-2025	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	AH	SK
007	03-24-2025	RE-ISSUED FOR CONSTRUCTION	FG	MC	AP/SW	AH	SK
008	05-02-2025	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	AH	SK

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
003	04-27-2023	RE-ISSUED FOR CONSTRUCTION	ET	AP	SW	KR	JT
004	06-19-2024	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	KR	SK
005	08-26-2024	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	KR	SK

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8210	008	26196-100-CG-000-00210	008

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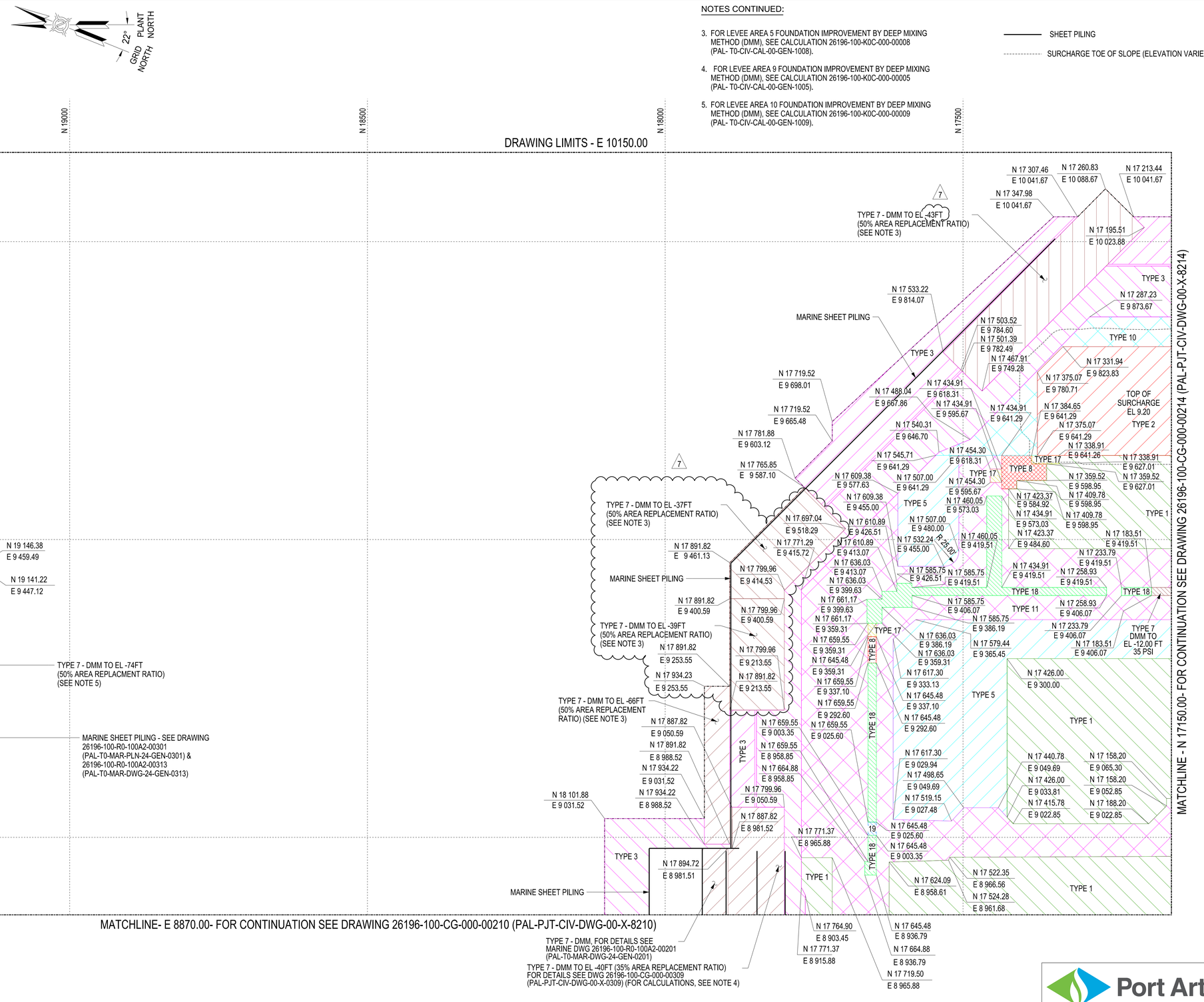

NOTES CONTINUED:

3. FOR LEVEE AREA 5 FOUNDATION IMPROVEMENT BY DEEP MIXING METHOD (DMM), SEE CALCULATION 26196-100-K0C-000-00008 (PAL- T0-CIV-CAL-00-GEN-1008).
4. FOR LEVEE AREA 9 FOUNDATION IMPROVEMENT BY DEEP MIXING METHOD (DMM), SEE CALCULATION 26196-100-K0C-000-00005 (PAL- T0-CIV-CAL-00-GEN-1005).
5. FOR LEVEE AREA 10 FOUNDATION IMPROVEMENT BY DEEP MIXING METHOD (DMM), SEE CALCULATION 26196-100-K0C-000-00009 (PAL- T0-CIV-CAL-00-GEN-1009).

SHEET PILING

SURCHARGE TOE OF SLOPE (ELEVATION VARIES)

NOTES:

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00200 (PAL-PJT-CIV-DWG-00-X-8200).
2. SHALLOW SOIL MIXING ONLY FOR PHASE II. NO SURCHARGE, NO WICK DRAINS.

LEGEND:

- TYPE 1 - FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (5' THICK SOIL IMPROVEMENT)
- TYPE-2 - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -5' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE-2A - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -7' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 3 - LEVEE SEGMENT TYPE 1 AND TYPE 3 (10' THICK SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 4 - LEVEE SEGMENT TYPE 2 (7' THICK SOIL IMPROVEMENT -WICK DRAINED)
- TYPE 5 - NON-FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 6 - NON-FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 7 - DMM SITE PREPARATION AREA
- NO SITE PREPARATION AT POND AREAS
- TYPE 8 - ROAD SEGMENT 1 (11' THICK SOIL IMPROVEMENT)
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- TYPE 21 - (DOWN TO EL -12.0' SOIL IMPROVEMENT - WICK DRAINED)

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007	09-18-2025	RE-ISSUED FOR CONSTRUCTION	ET	JW	AP/SW	JR	AH
002	04-17-2023	RE-ISSUED FOR CONSTRUCTION	ET	AP	SW	KR	JT
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004	06-19-2024	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	KR	SK
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PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8211	007	26196-100-CG-000-00211	007

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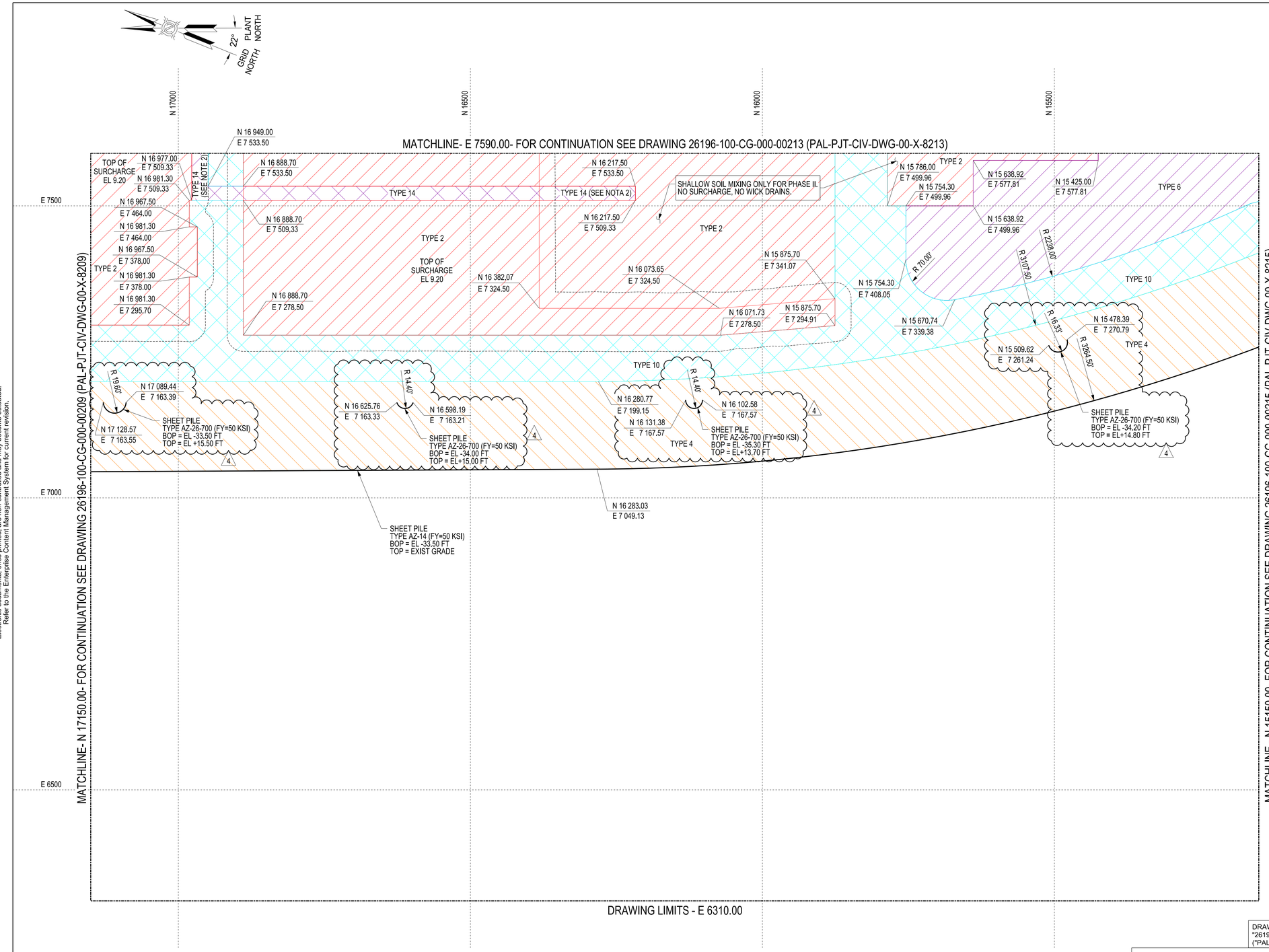

NOTES:

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LEGEND:

- TYPE 1 - FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (5' THICK SOIL IMPROVEMENT)
- TYPE-2 - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -5' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE-2A - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -7' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 3 - LEVEE SEGMENT TYPE 1 AND TYPE 3 (10' THICK SOIL IMPROVEMENT - WICK DRAINED)
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- TYPE 5 - NON-FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 6 - NON-FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
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- SHEET PILING
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ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O. "26196-100-" BECHTEL ("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

BECHTEL Bechtel Energy Inc. 26196-100 FIRM NO. F-9684

SCALE: 1"-80'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	01-23-2020	ISSUED FOR CONSTRUCTION	VJD	CN/NP	AP/JS	CD	SK
001	08-26-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/NP	NDJ/JS	CD	SK
002	04-27-2023	RE-ISSUED FOR CONSTRUCTION	ET	AP	SW	KR	JT
003	10-25-2023	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	KR	JT
004	02-10-2025	RE-ISSUED FOR CONSTRUCTION	NR	MC	AP/SW	KR	SK

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8212	004	26196-100-CG-000-00212	004

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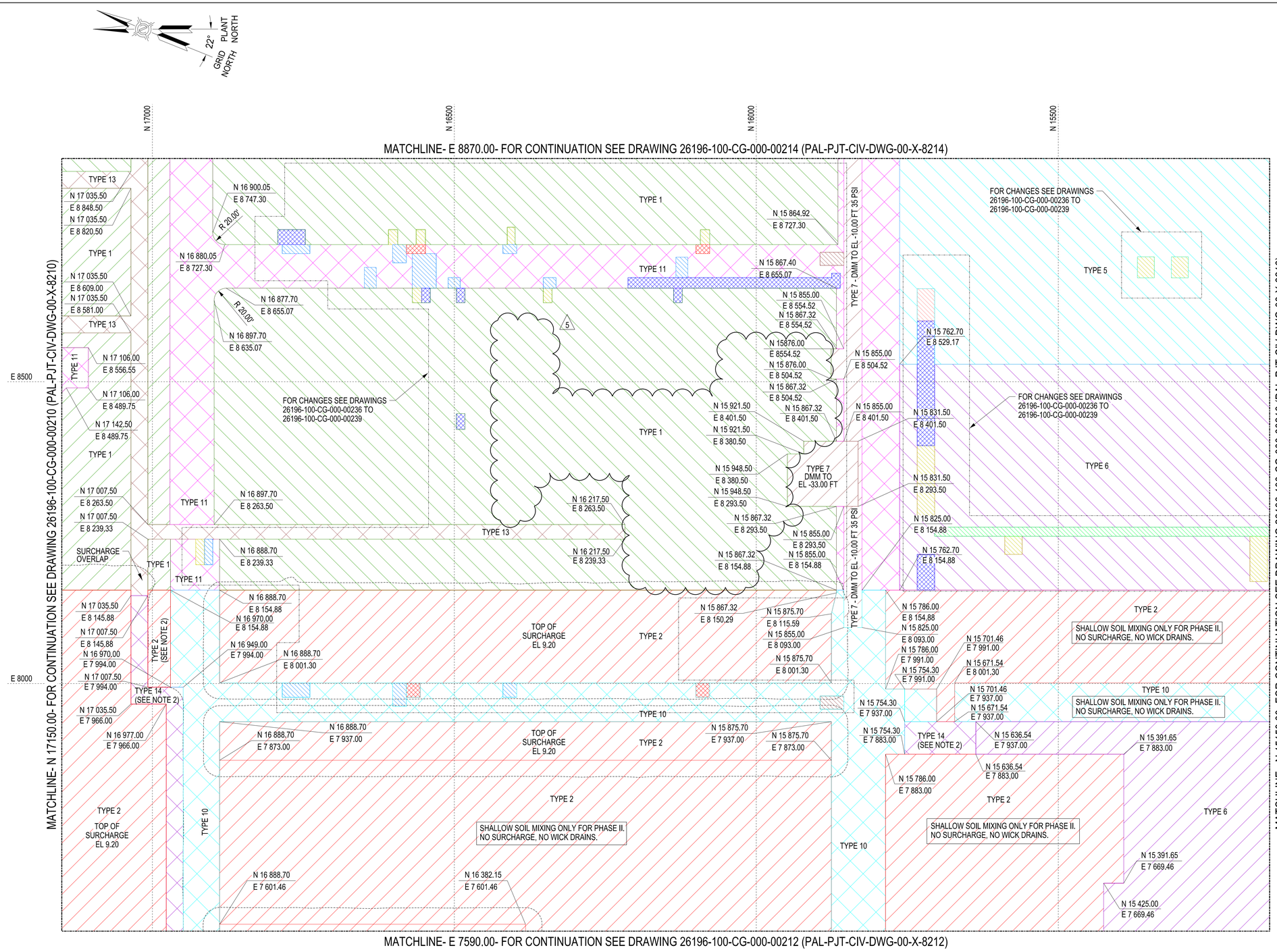

NOTES:

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LEGEND:

- TYPE 1 - FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (5' THICK SOIL IMPROVEMENT)
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- SHEET PILING
- SURCHARGE TOE OF SLOPE (ELEVATION VARIES)

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Port Arthur LNG

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PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8213	005	26196-100-CG-000-00213	005

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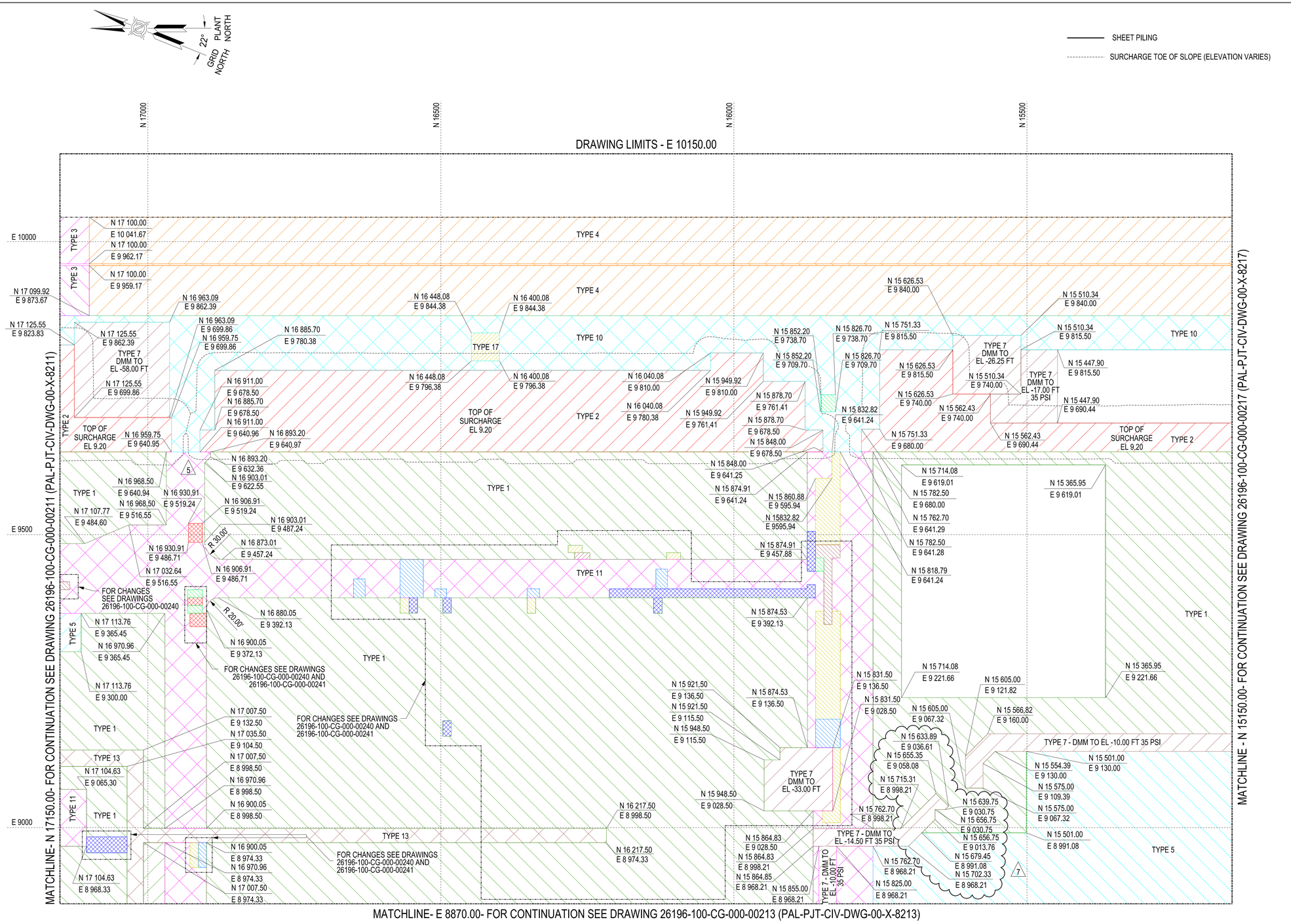

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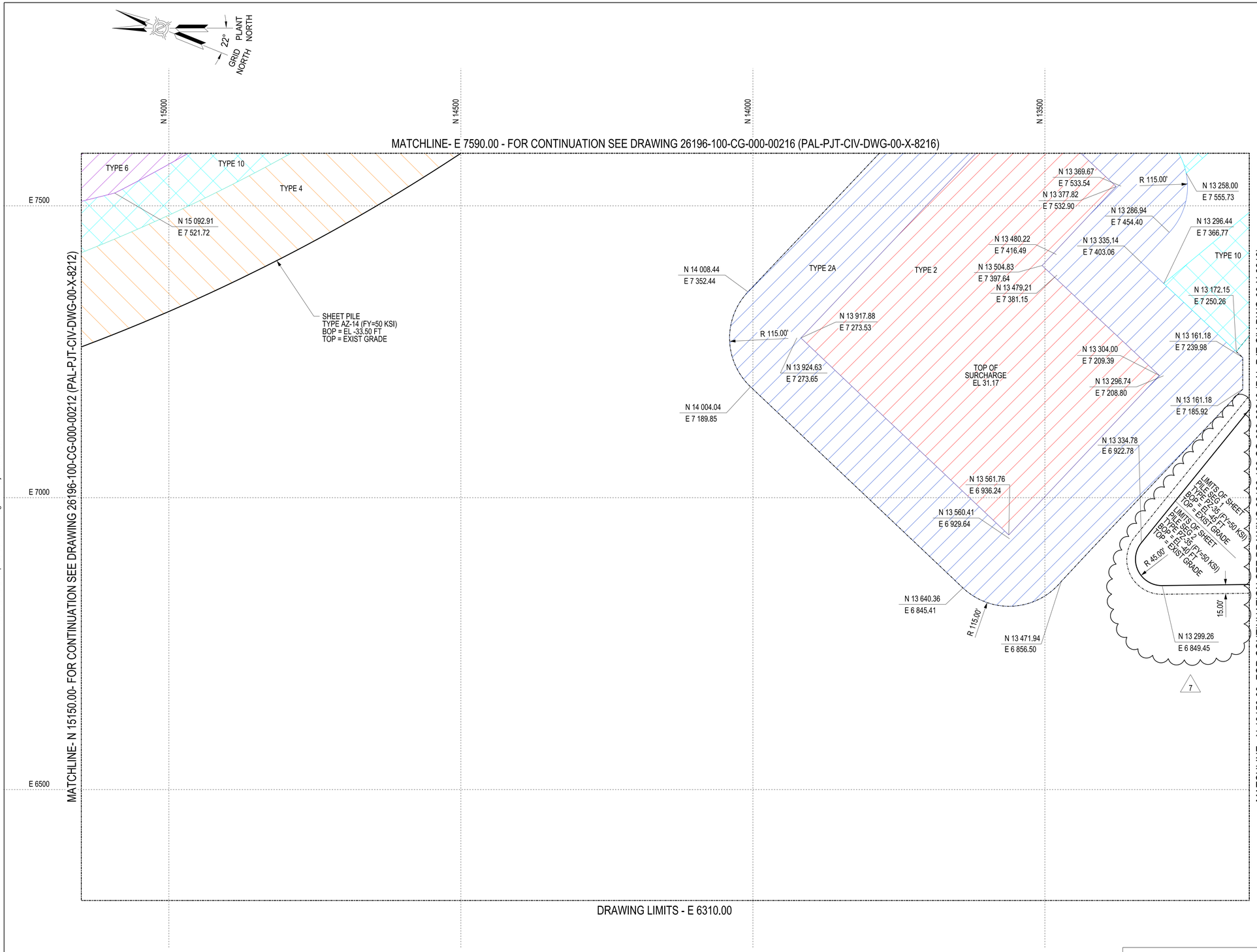

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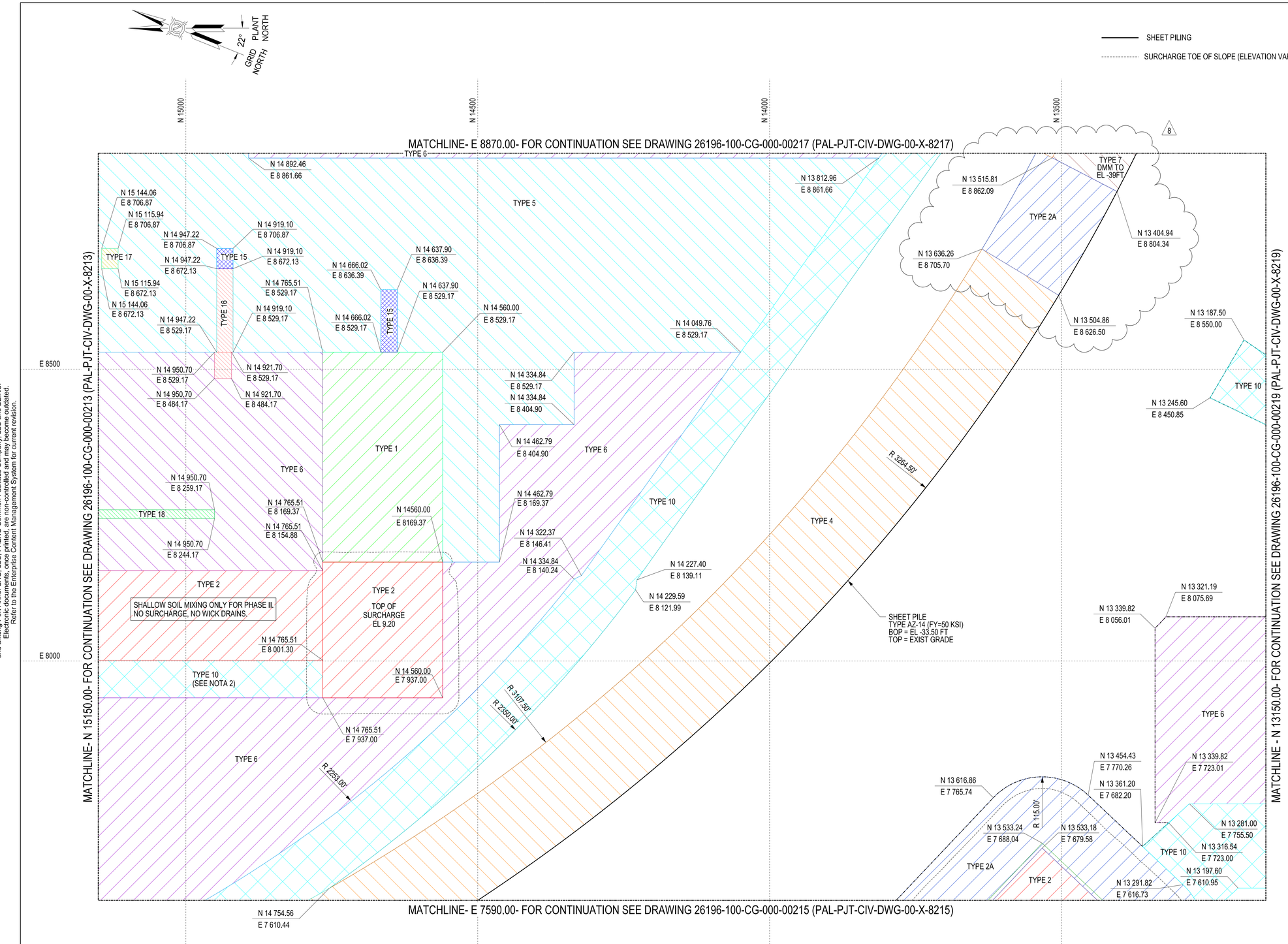

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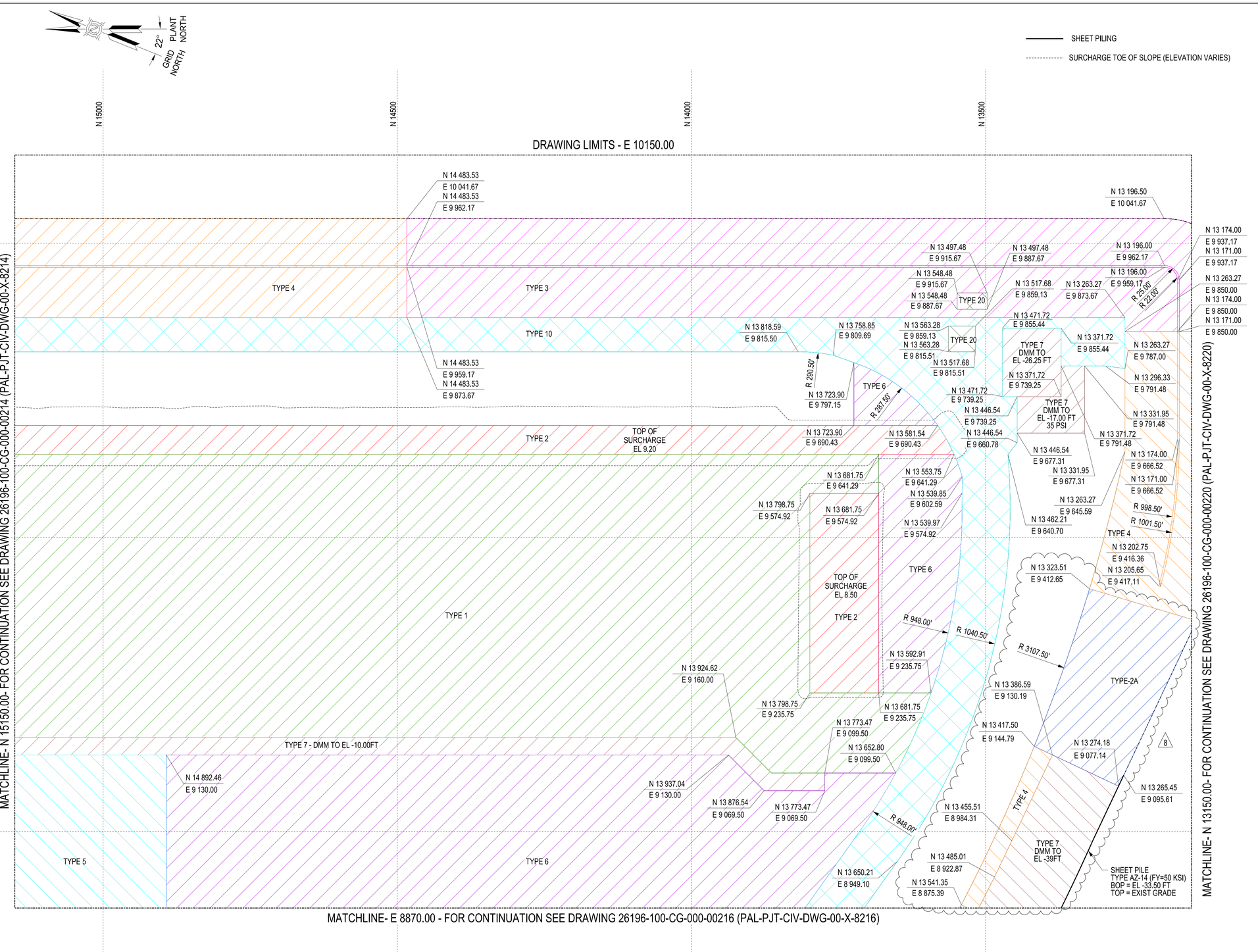

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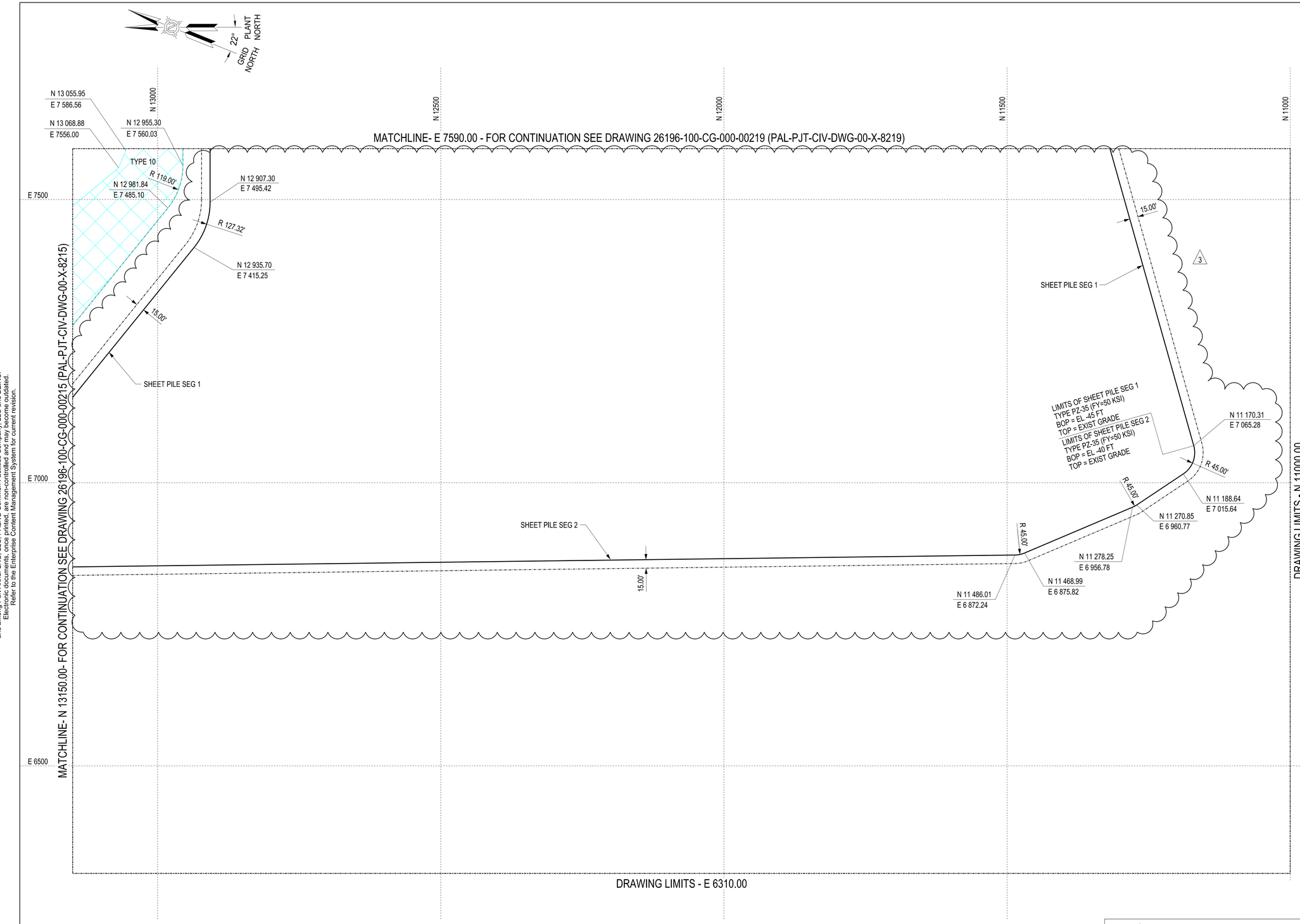

NOTES:

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2. SHALLOW SOIL MIXING ONLY FOR PHASE II. NO SURCHARGE, NO WICK DRAINS.

LEGEND:

- TYPE 1 - FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (5' THICK SOIL IMPROVEMENT)
- TYPE-2 - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -5' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE-2A - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -7' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 3 - LEVEE SEGMENT TYPE 1 AND TYPE 3 (10' THICK SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 4 - LEVEE SEGMENT TYPE 2 (7' THICK SOIL IMPROVEMENT -WICK DRAINED)
- TYPE 5 - NON-FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 6 - NON-FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
- TYPE 7 - DMM SITE PREPARATION AREA
- NO SITE PREPARATION AT POND AREAS
- TYPE 8 - ROAD SEGMENT 1 (11' THICK SOIL IMPROVEMENT)
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- TYPE 17 - (8' THICK SOIL IMPROVEMENT)
- TYPE 18 - (9' THICK SOIL IMPROVEMENT)
- TYPE 19 - (10' THICK SOIL IMPROVEMENT)
- SHEET PILING
- SURCHARGE TOE OF SLOPE (ELEVATION VARIES)

THIS DRAWING SHALL BE PRINTED IN COLOR

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: 1"=80'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	01-23-2020	ISSUED FOR CONSTRUCTION	VJD	CN/NP	AP/JS	CD	SK
001	08-26-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/NP	NDJ/JS	CD	SK
002	01-17-2023	RE-ISSUED FOR CONSTRUCTION	WY	AP	SW	CD	JT
003	06-19-2024	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	KR	SK

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8218	003	26196-100-CG-000-00218	003

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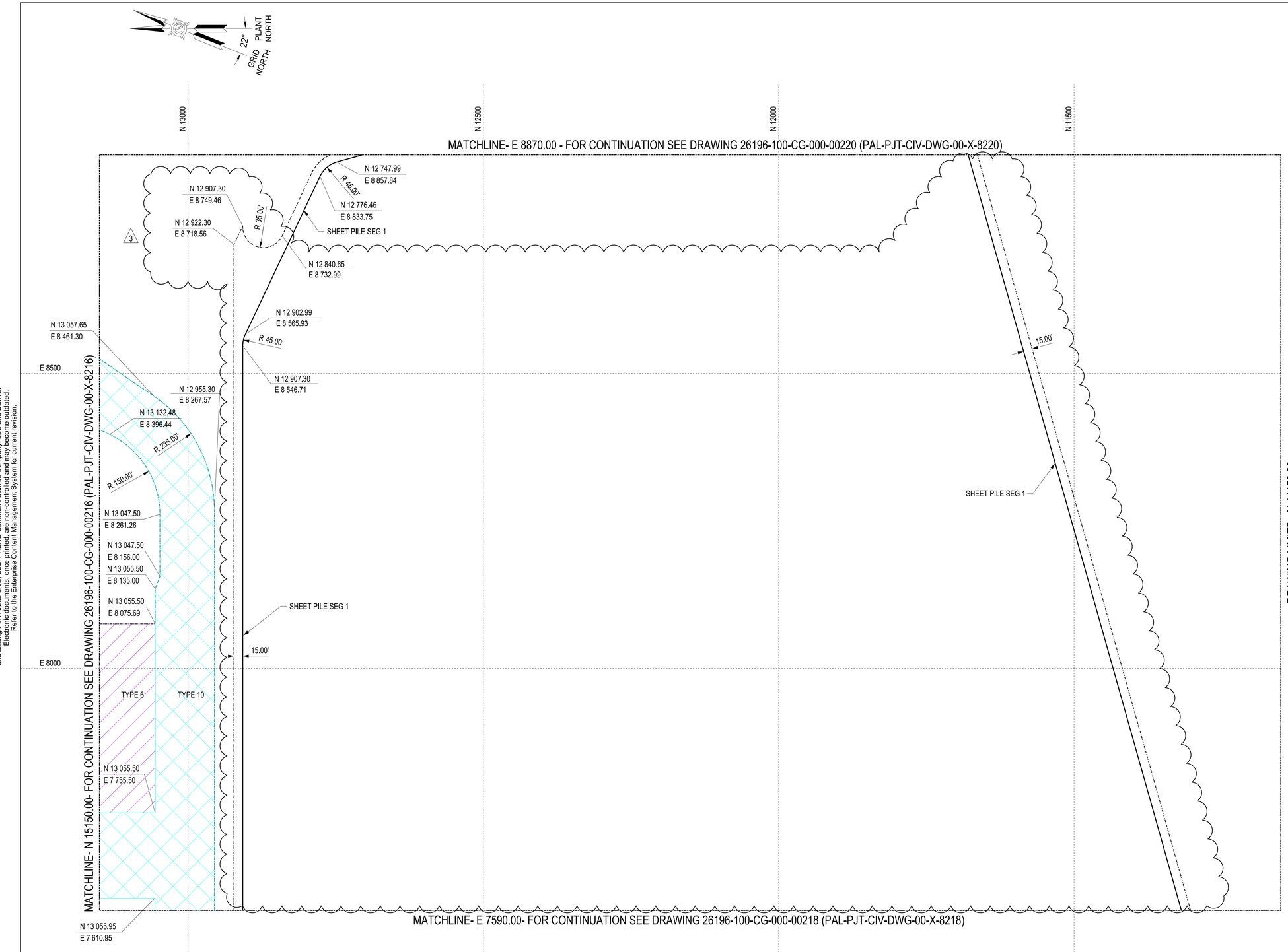

NOTES:

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LEGEND:

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- TYPE-2A - FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0" (DOWN TO EL -7' SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 3 - LEVEE SEGMENT TYPE 1 AND TYPE 3 (10' THICK SOIL IMPROVEMENT - WICK DRAINED)
- TYPE 4 - LEVEE SEGMENT TYPE 2 (7' THICK SOIL IMPROVEMENT -WICK DRAINED)
- TYPE 5 - NON-FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
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- SHEET PILING
- SURCHARGE TOE OF SLOPE (ELEVATION VARIES)

THIS DRAWING SHALL BE PRINTED IN COLOR

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: 1"=80'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	01-23-2020	ISSUED FOR CONSTRUCTION	VJD	CN/NP	AP/JS	CD	SK	003	06-19-2024	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	KR	SK
001	08-26-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/NP	NDJ/JS	CD	SK								
002	01-17-2023	RE-ISSUED FOR CONSTRUCTION	WY	AP	SW	CD	JT								

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8219	003	26196-100-CG-000-00219	003

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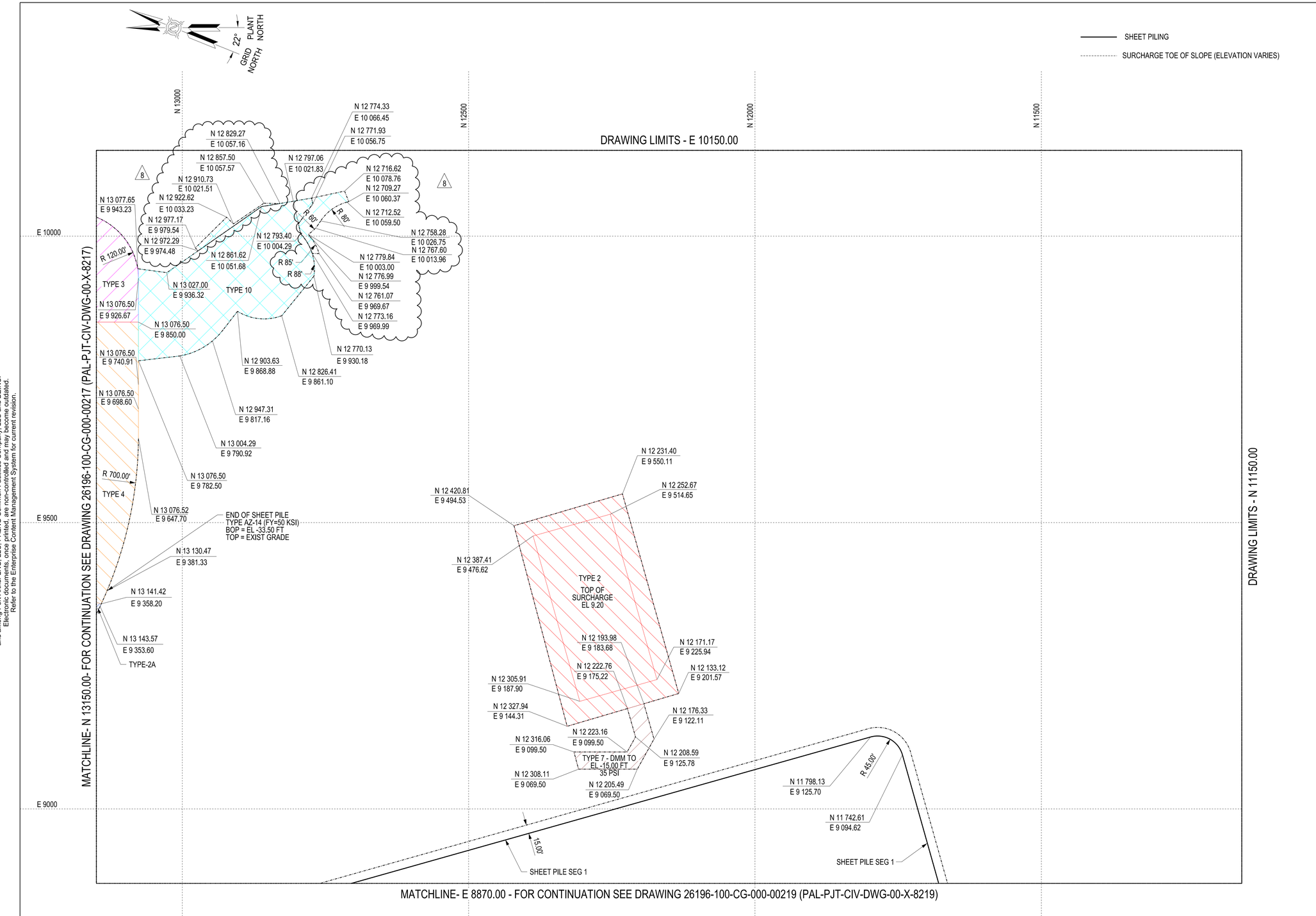

NOTES:

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LEGEND:

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- TYPE 19 - (10' THICK SOIL IMPROVEMENT)

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STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
006	06-19-2024	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	KR	SK
007	12-16-2024	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	KR	SK
008	05-02-2025	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	AH	SK

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
003	04-27-2023	RE-ISSUED FOR CONSTRUCTION	ET	AP	SW	KR	JT
004	10-25-2023	RE-ISSUED FOR CONSTRUCTION	ET	MC	AP/SW	KR	JT
005	04-05-2024	RE-ISSUED FOR CONSTRUCTION	ET	MC/AP	HM/SW	KR	SK

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: 1"-80'

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8220	008	26196-100-CG-000-00220	008

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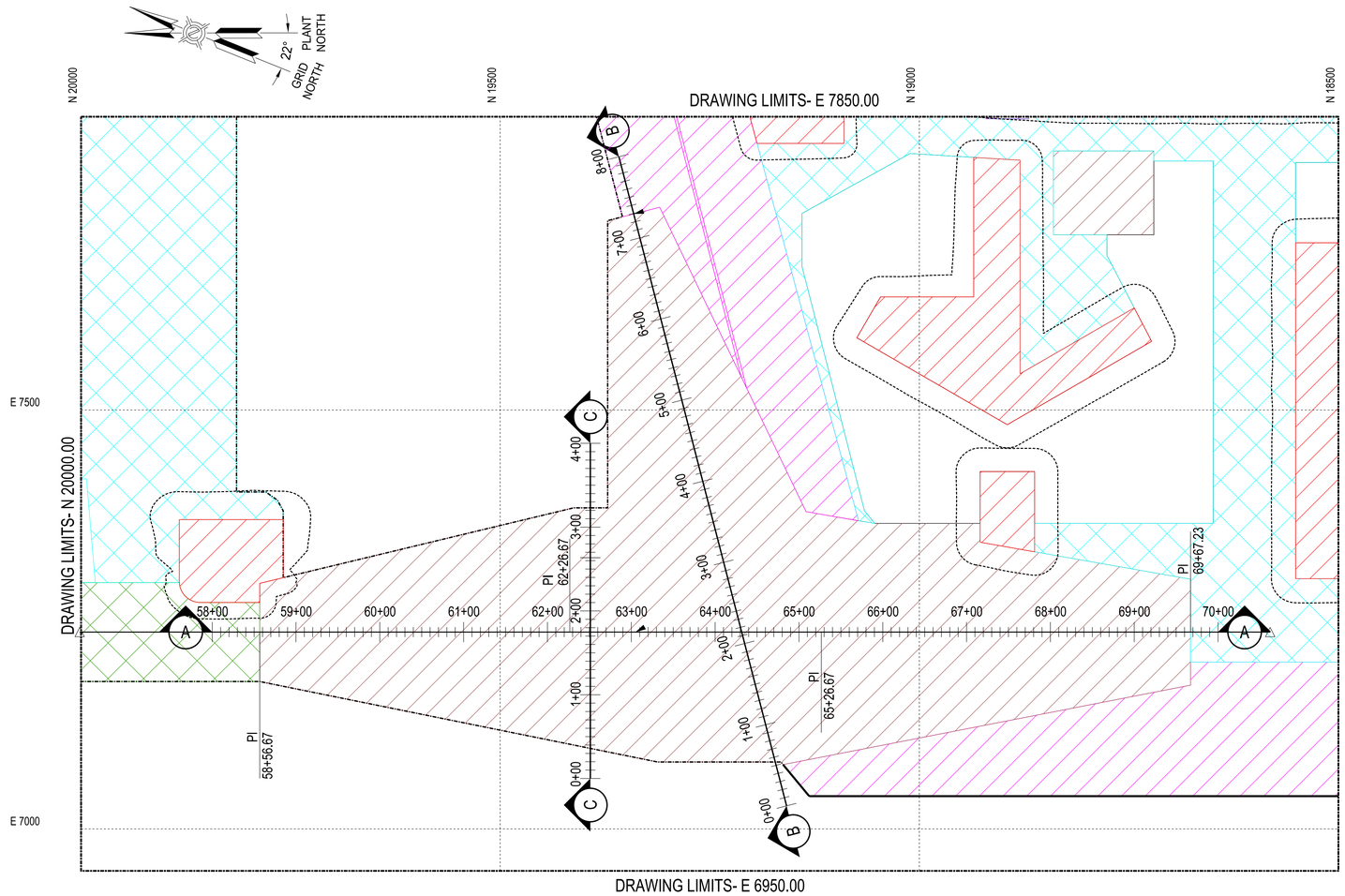
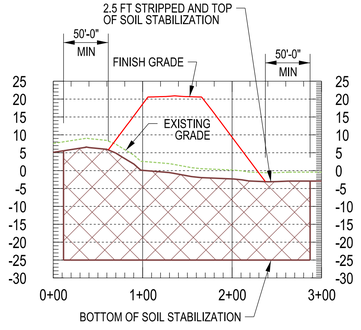
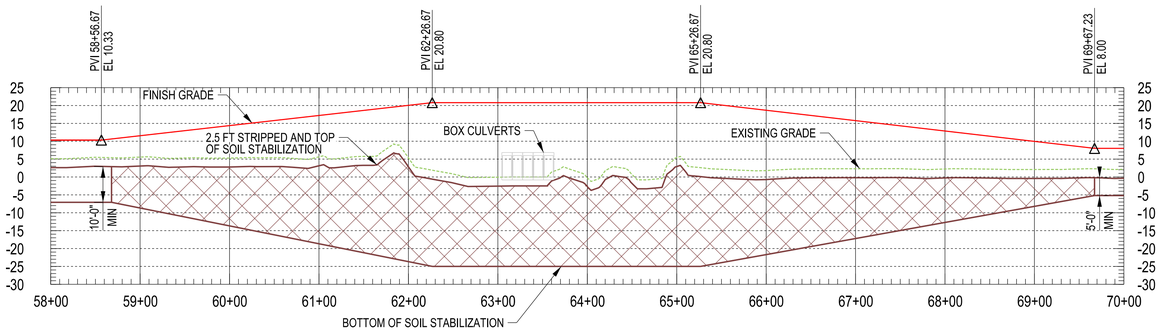
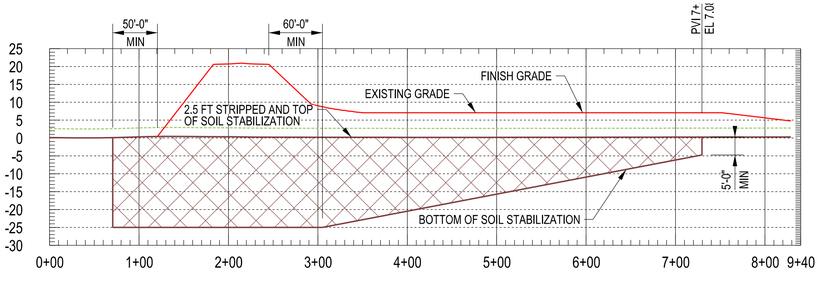




C SECTION
HORIZONTAL SCALE: 1" = 80'-0"
VERTICAL SCALE: 1" = 20'-0"



A SECTION
HORIZONTAL SCALE: 1" = 80'-0"
VERTICAL SCALE: 1" = 20'-0"



B SECTION
HORIZONTAL SCALE: 1" = 80'-0"
VERTICAL SCALE: 1" = 20'-0"

NOTES:

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00200 (PAL-PJT-CIV-DWG-00-X-8200).

LEGEND:

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- TYPE 4 - LEVEE SEGMENT TYPE 2 (7' THICK SOIL IMPROVEMENT -WICK DRAINED)
- TYPE 5 - NON-FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0" (4' THICK SOIL IMPROVEMENT)
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- SHEET PILING
- SURCHARGE TOE OF SLOPE (ELEVATION VARIES)

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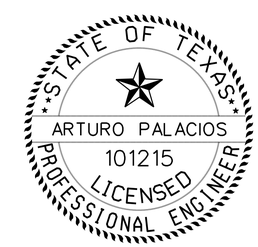

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

BECHTEL Bechtel Energy, Inc.
26196-100
FIRM NO.
F-9684

SCALE: 1"=80'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	01-23-2020	ISSUED FOR CONSTRUCTION	VJD	CN/NP	AP/JS	CD	SK								
001	08-26-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/NP	NDJ/JS	CD	SK								
002	04-17-2023	RE-ISSUED FOR CONSTRUCTION	ET	AP	SW	KR	JT								

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT DMM DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8221	001	26196-100-CG-000-00221	002

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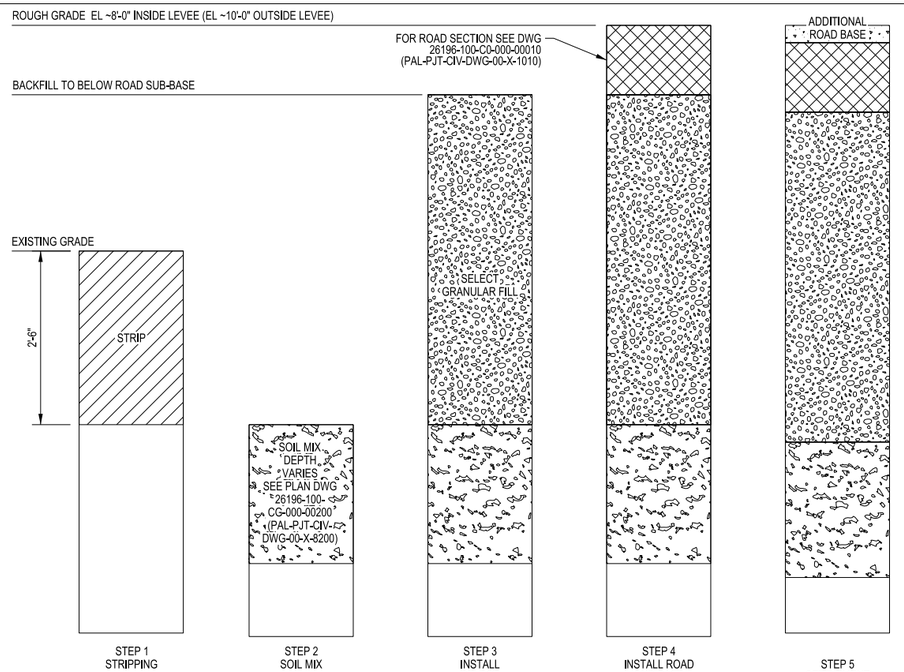
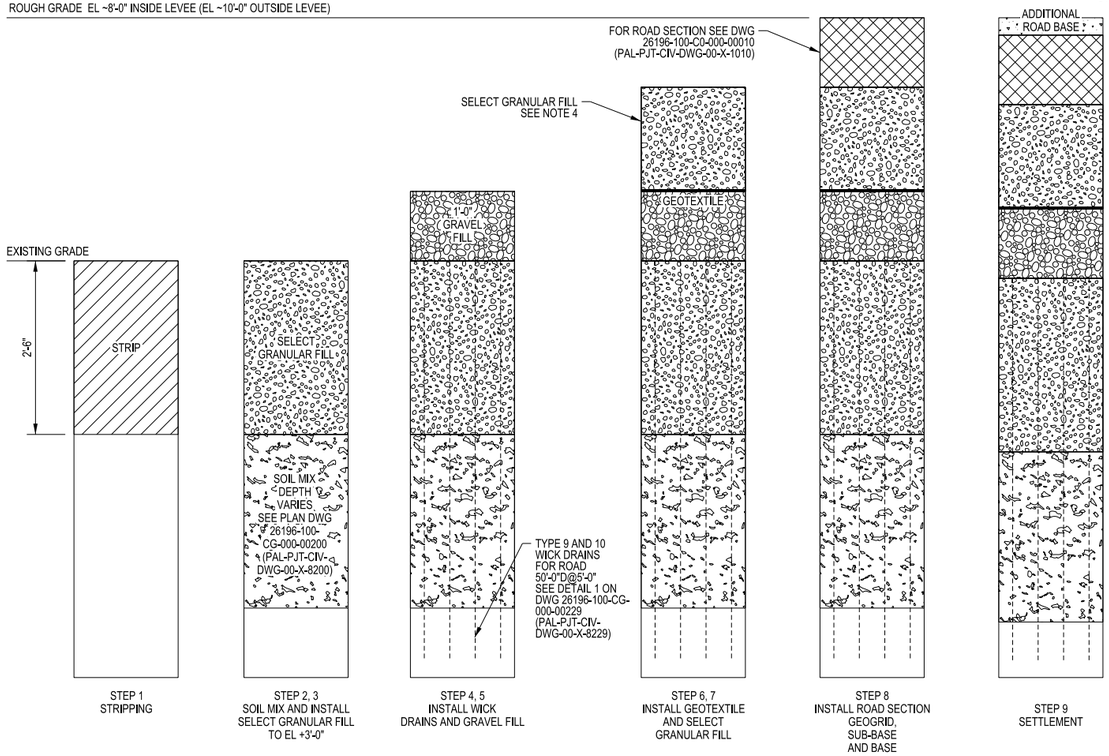


TYPES 8, 11, AND 12 - SITE PREPARATION AND CONSTRUCTION SEQUENCE FOR ROAD SEGMENTS 1, 5 AND 6



TYPES 9 AND 10 - SITE PREPARATION AND CONSTRUCTION SEQUENCE FOR ROAD SEGMENT 2 AND 4

NOTES:

3541

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00200 (PAL-PJT-CIV-DWG-00-X-8200).
2. SOIL IMPROVEMENT STORY BOARDS ARE A REPRESENTATION OF A SPECIFIC EXISTING ELEVATION EXAMPLE. EXISTING ELEVATIONS VARY.
3. GEOTEXTILE SHALL BE MIRAFI HP-570 OR APPROVED EQUIVALENT.

LEGEND:

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	08-26-2020	ISSUED FOR CONSTRUCTION	DF	AP/DL	NDJ/JS	CD	SK

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM

Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 1'-0"

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT - ROAD DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8222	000	26196-100-CG-000-00222	000

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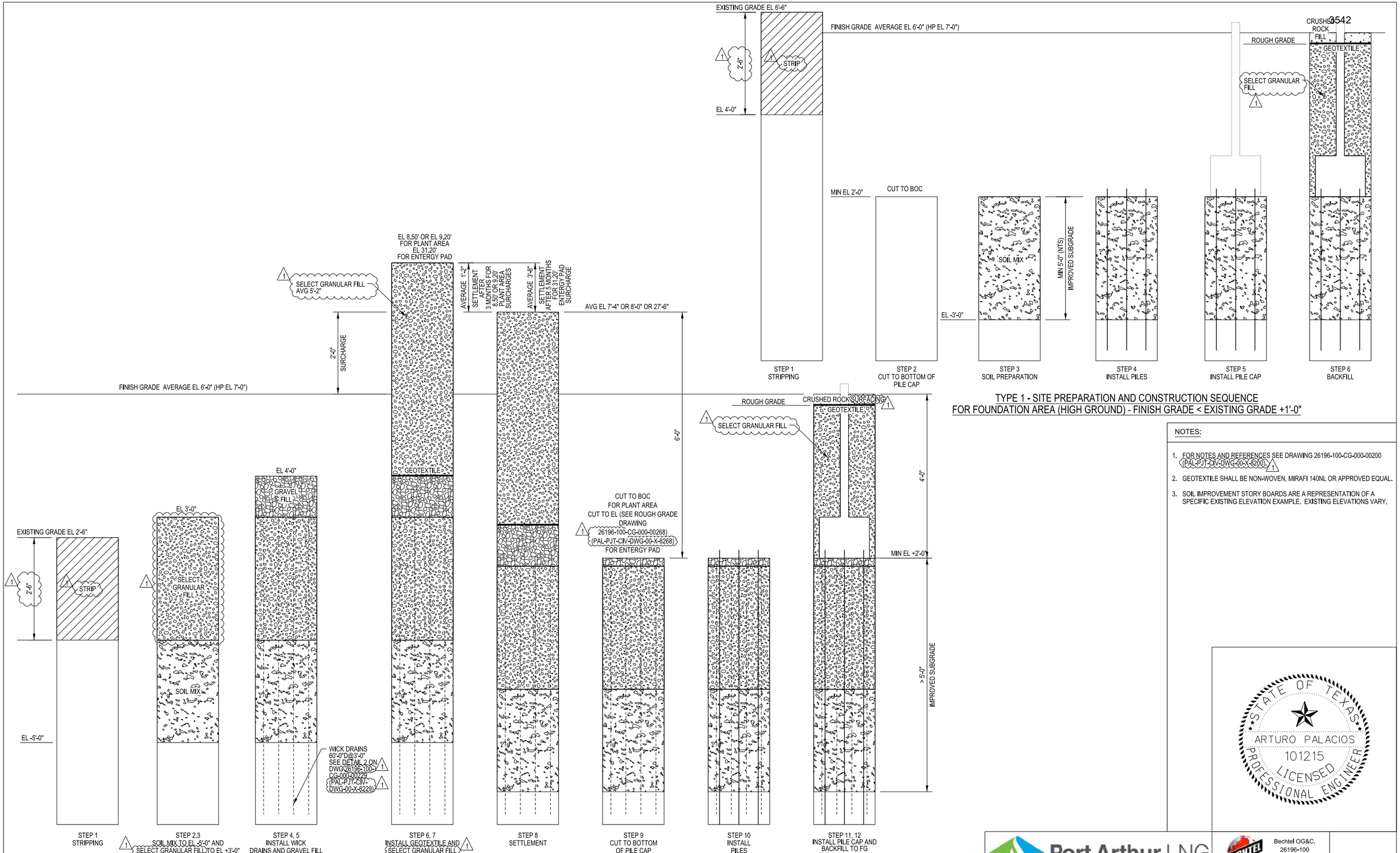

TYPE 1 - SITE PREPARATION AND CONSTRUCTION SEQUENCE FOR FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0"

TYPE 2 - SITE PREPARATION AND CONSTRUCTION SEQUENCE FOR FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0"

NOTES:

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2. GEOTEXTILE SHALL BE NON-WOVEN, MIRAFI 140NL OR APPROVED EQUAL.
3. SOIL IMPROVEMENT STORY BOARDS ARE A REPRESENTATION OF A SPECIFIC EXISTING ELEVATION EXAMPLE. EXISTING ELEVATIONS VARY.

STATE OF TEXAS
ARTURO PALACIOS
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NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM

Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 1'-0"

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT FOUNDATION AREA DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8223	001	26196-100-CG-000-00223	001

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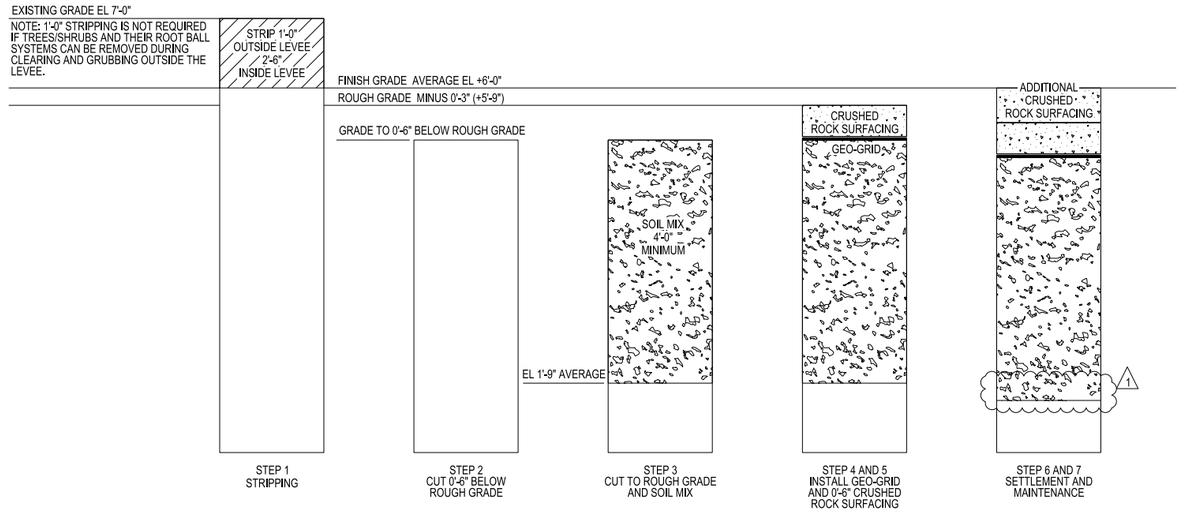
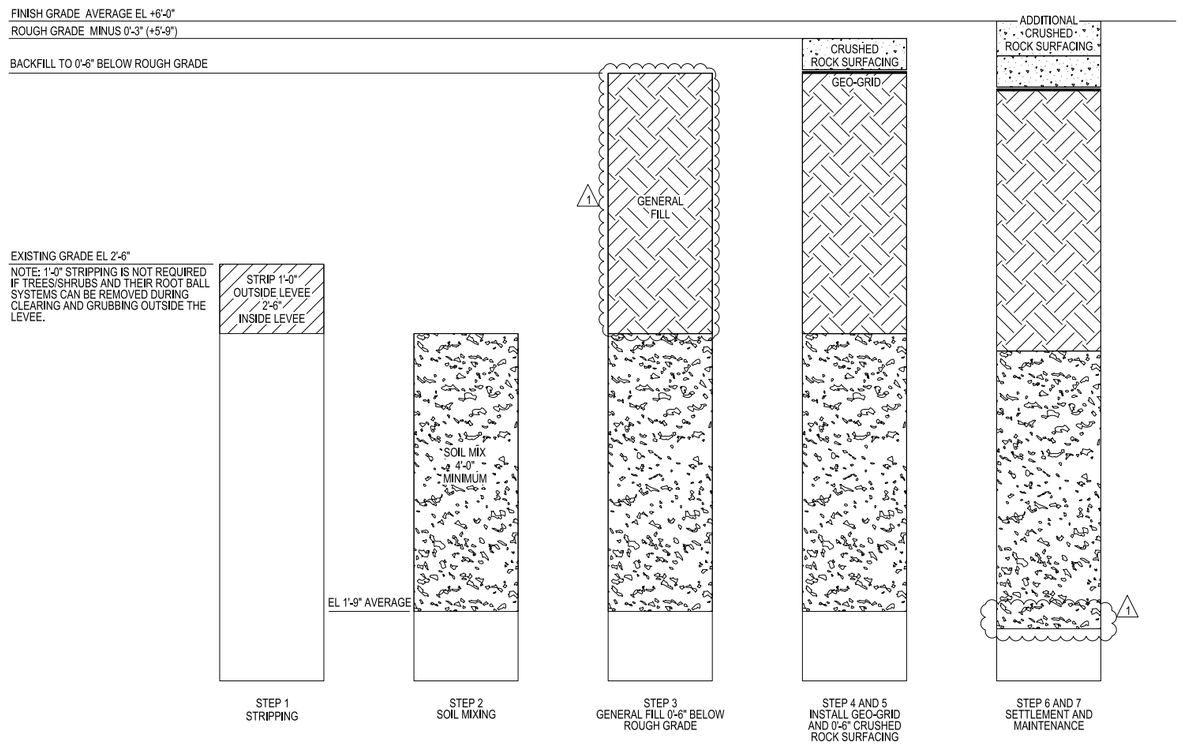


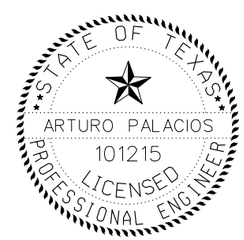
TYPE 5 - SITE PREPARATION AND CONSTRUCTION SEQUENCE FOR NON-FOUNDATION AREA (HIGH GROUND) - FINISH GRADE < EXISTING GRADE +1'-0"



TYPE 6 - SITE PREPARATION AND CONSTRUCTION SEQUENCE FOR NON-FOUNDATION AREA (LOW GROUND) - FINISH GRADE > EXISTING GRADE +1'-0"

NOTES:

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00200 (PAL-PJT-CIV-DWG-00-X-8200) 1
2. SOIL IMPROVEMENT STORY BOARDS ARE A REPRESENTATION OF A SPECIFIC EXISTING ELEVATION EXAMPLE. EXISTING ELEVATIONS VARY.
3. GEOGRID SHALL BE TENSAR TRI-AX TX160.



Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 1'-0"

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	01-23-2020	ISSUED FOR CONSTRUCTION	VJD	CN/NP	AP/JS	CD	SK								
001	08-26-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/DL	NDJ/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT NON-FOUNDATION AREA DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8224	001	26196-100-CG-000-00224	001

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NOTES:

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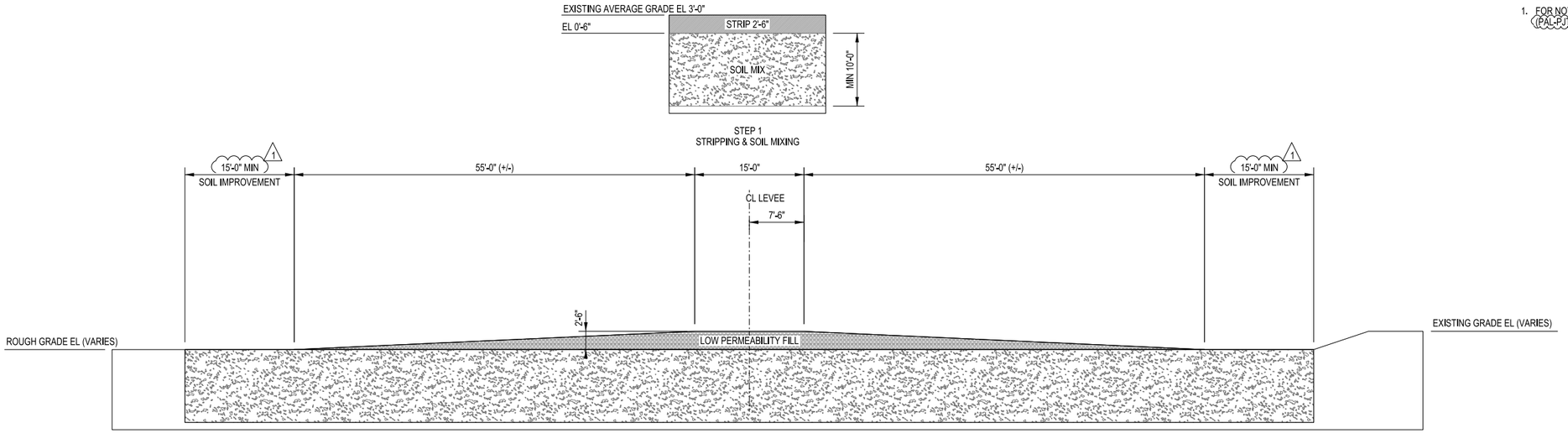

TYPE 3 - SITE PREPARATION AND CONSTRUCTION SEQUENCE FOR LEVEE SEGMENT (TYPE 1) AND (TYPE 3)

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1/8" = 1'-0"

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PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT LEVEE SEGMENT (TYPE 1) AND (TYPE 3) DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8225	001	26196-100-CG-000-00225	001

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NOTES:

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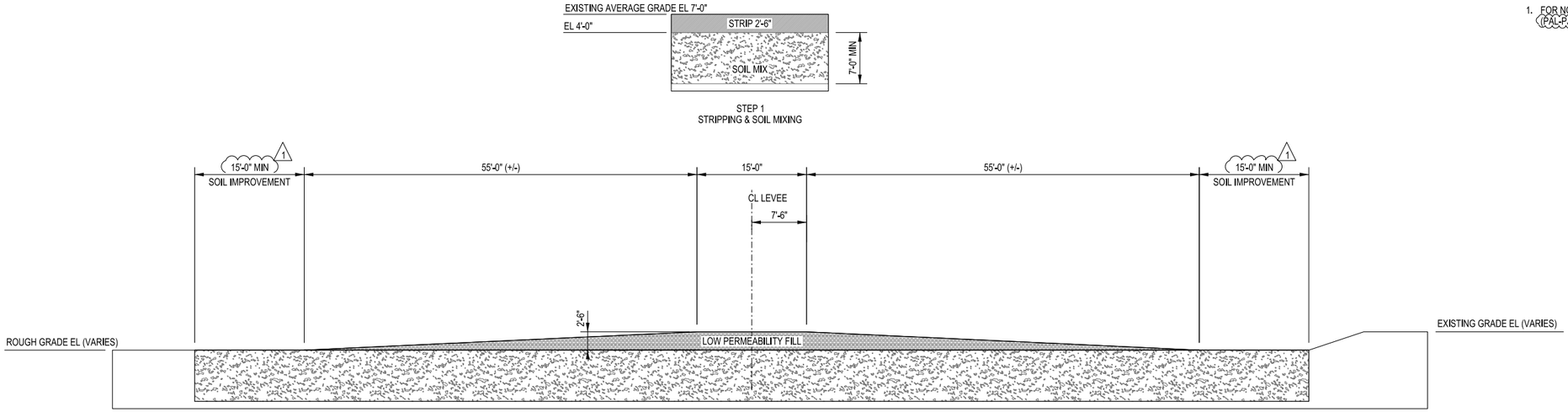
3545



TYPE 4 - SITE PREPARATION AND CONSTRUCTION SEQUENCE FOR LEVEE SEGMENT (TYPE 2) 1

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1/8" = 1'-0"

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	01-23-2020	ISSUED FOR CONSTRUCTION	VJD	CN/NP	AP/JS	CD	SK								
001	08-26-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/NP	NDJ/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT LEVEE SEGMENT (TYPE 2) 1 DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8226	001	26196-100-CG-000-00226	001

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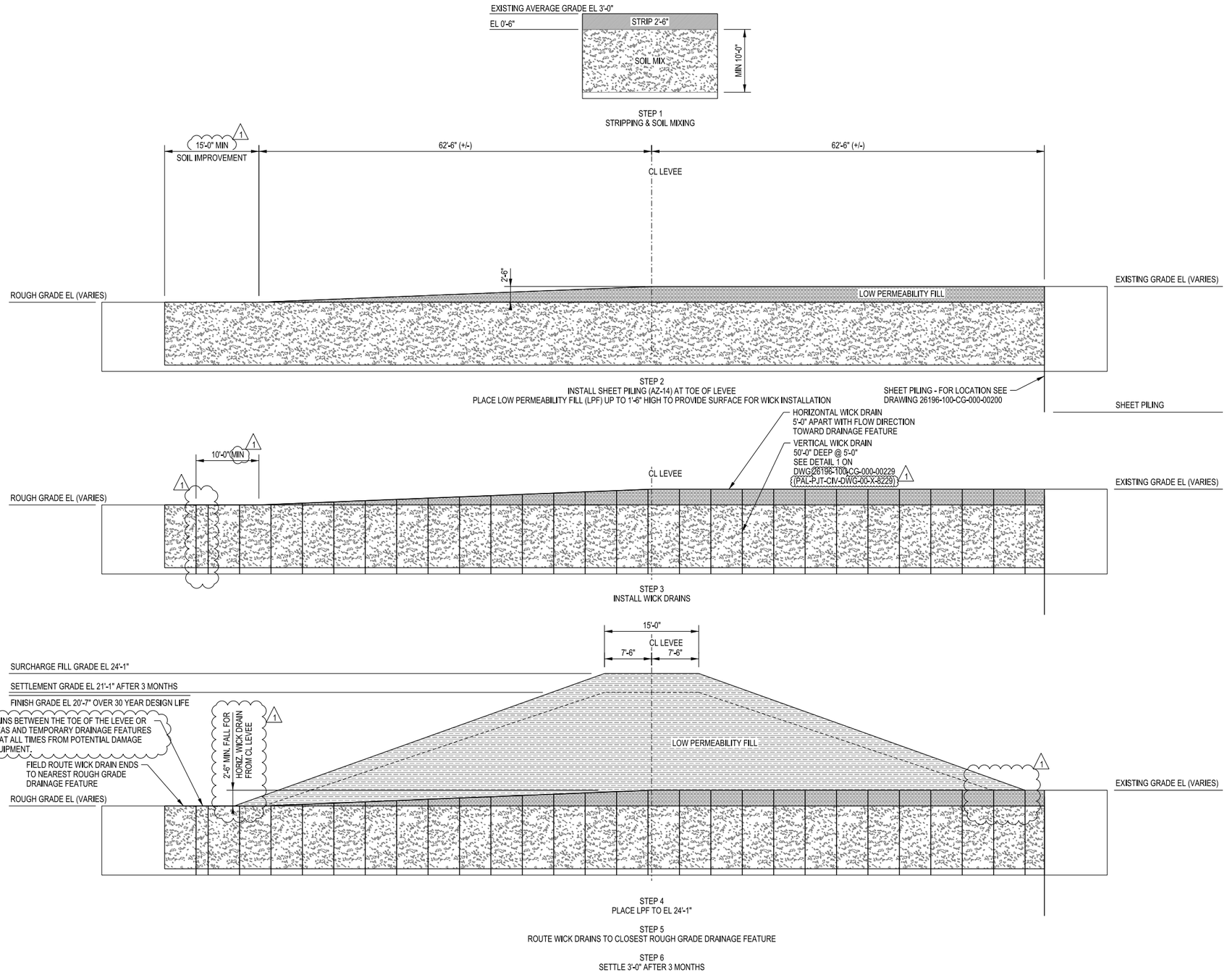
NOTES:

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00200 (PAL-PJT-CIV-DWG-00X-8200) 1

3546



TYPE 3 WITH SHEET PILING - SITE PREPARATION AND CONSTRUCTION SEQUENCE FOR LEVEE SEGMENT (TYPE 1) 1

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1/8" = 1'-0"

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	01-23-2020	ISSUED FOR CONSTRUCTION	VJD	CN/NP	AP/JS	CD	SK								
001	08-26-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/NP	NDJ/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK 1
SOIL IMPROVEMENT LEVEE SEGMENT (TYPE 1) WITH SHEET PILING DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8227	001	26196-100-CG-000-00227	001

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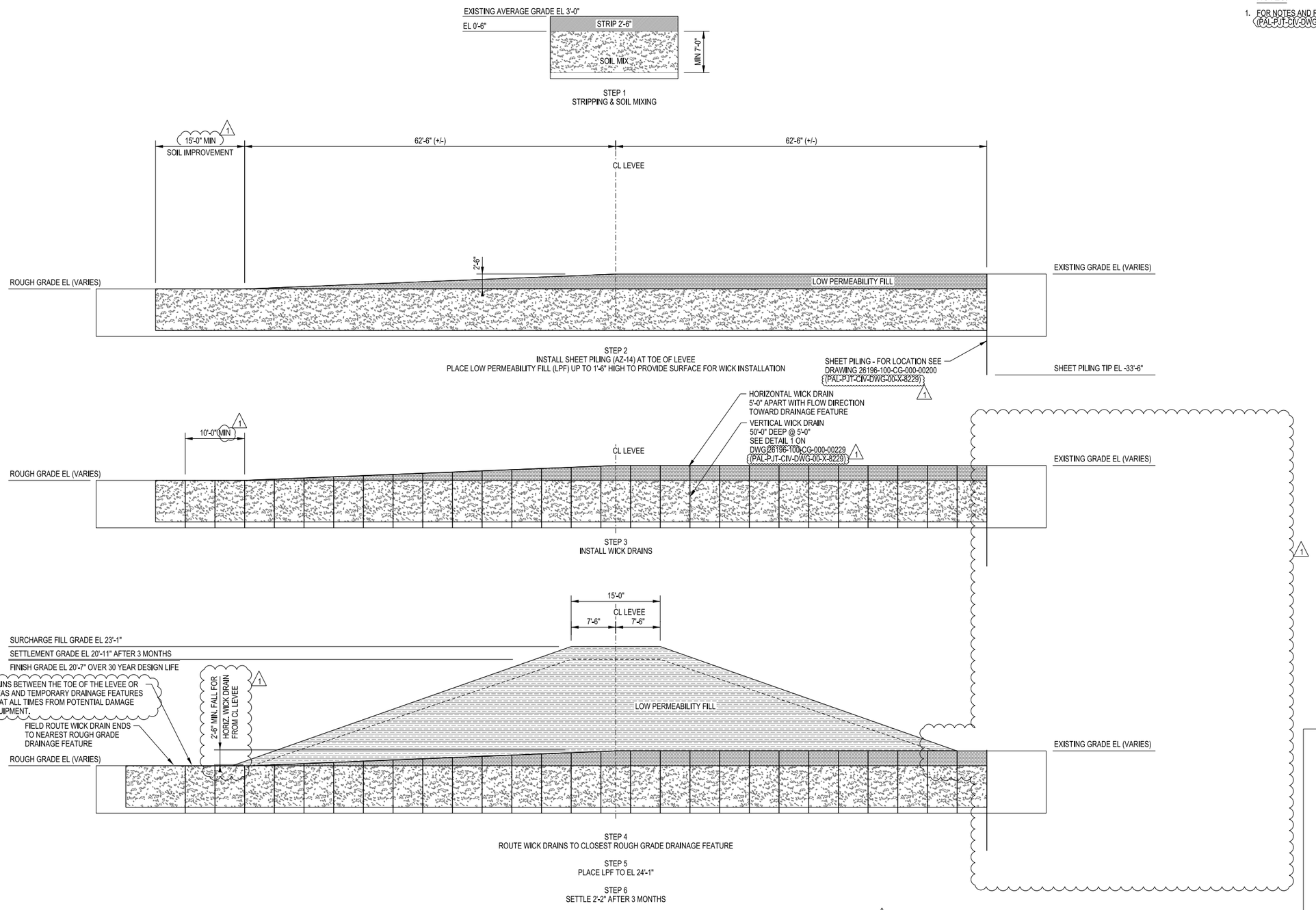
NOTES:

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00200 (PAL-PJT-CIV-DWG-00-X-8200) 1



TYPE 4 WITH SHEET PILING - SITE PREPARATION AND CONSTRUCTION SEQUENCE FOR LEVEE SEGMENT (TYPE 2) 1

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

BECHTEL

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1/8" = 1'-0"

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001	08-26-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/NP	NDJ/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK 1
SOIL IMPROVEMENT LEVEE SEGMENT (TYPE 2) WITH SHEET PILING DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8228	001	26196-100-CG-000-00228	001

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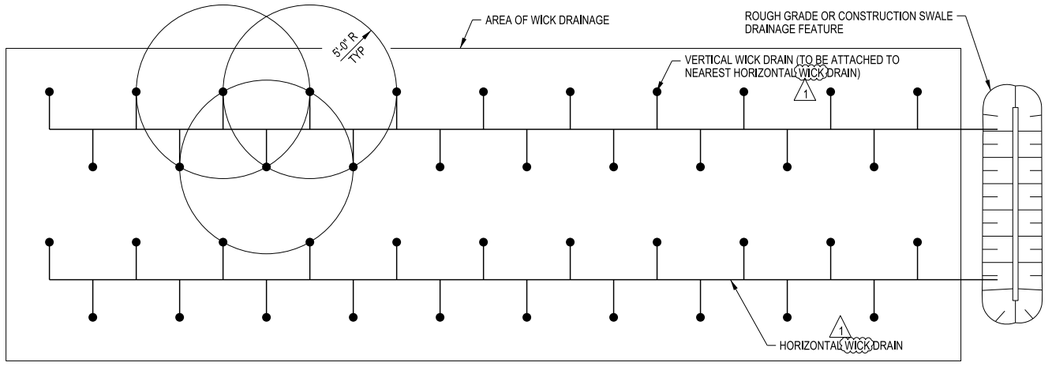
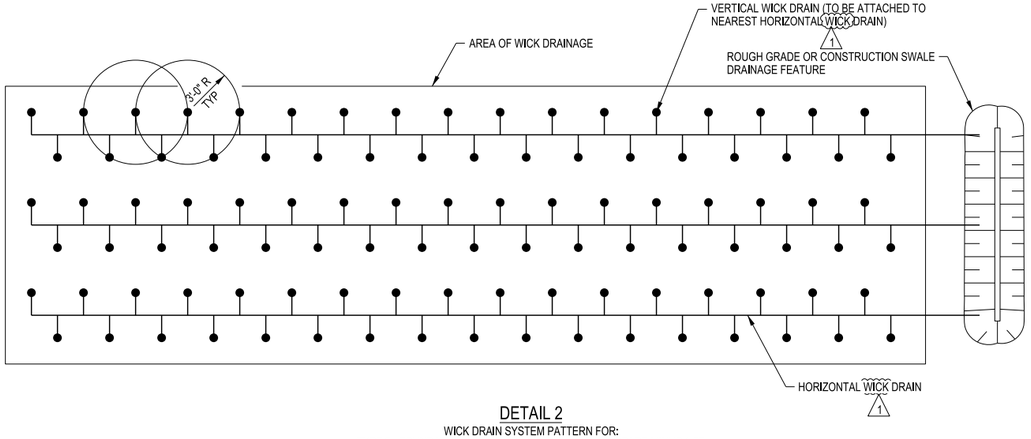


DETAIL 1

WICK DRAIN SYSTEM PATTERN FOR: 1
TYPE 3 - LEVEE SEGMENT 1 AND 3
TYPE 4 - LEVEE SEGMENT 2
TYPE 9 - ROAD SEGMENT 2
TYPE 10 - ROAD SEGMENT 4



DETAIL 2

WICK DRAIN SYSTEM PATTERN FOR:
TYPE 2 - FOUNDATION AREA EXISTING ELEV < FINISH GRADE MINUS 1 FT
AND ENTERGY PAD

NOTES:

3548

1. SWALE, BERMS AND DITCHES WILL BE USED TO TEMPORARILY TO DIRECT WATER AWAY FROM WORK AREAS.
2. HORIZONTAL WICK DRAINS TO BE INSTALLED PERPENDICULAR TO DRAINAGE FEATURES. 1
3. HORIZONTAL WICK DRAINS BETWEEN THE TOE OF THE LEVEE OR THE SURCHARGED AREAS AND TEMPORARY DRAINAGE FEATURES SHALL BE PROTECTED AT ALL TIMES FROM POTENTIAL DAMAGE BY CONSTRUCTION EQUIPMENT. 1

LEGEND:

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel OG&C.
26196-100
FIRM NO.
F-9684

SCALE: 1/4" = 1'-0"

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	01-23-2020	ISSUED FOR CONSTRUCTION	VJD	CN/NP	AP/JS	CD	SK								
001	08-26-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/NP	NDJ/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
SOIL IMPROVEMENT WICK DRAIN DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-8229	001	26196-100-CG-000-00229	001

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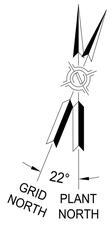
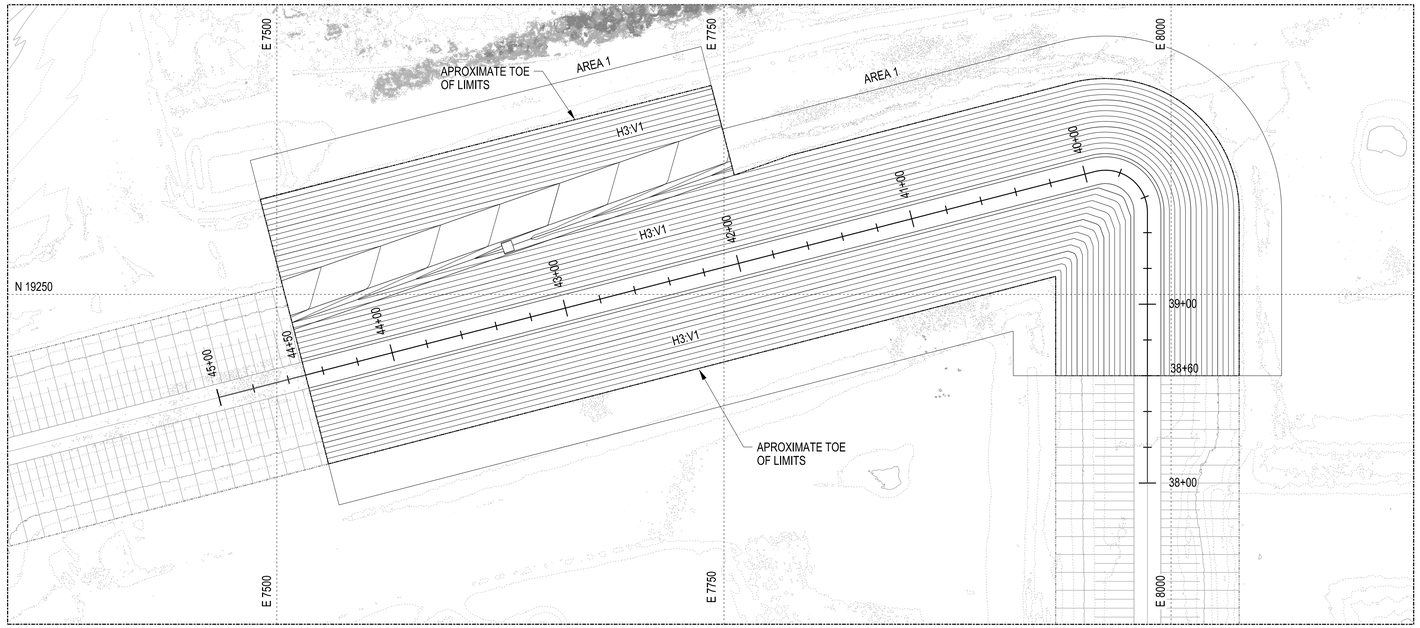
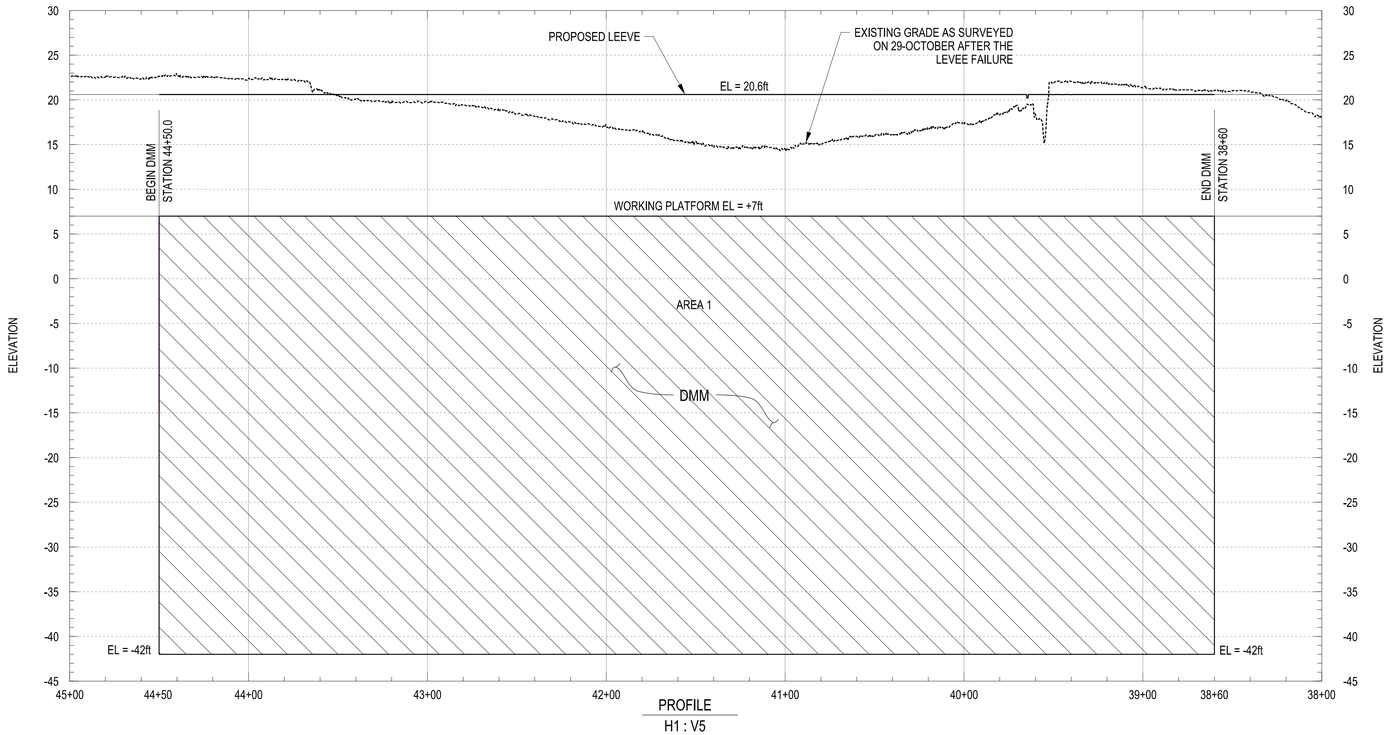




PLAN



PROFILE
H1 : V5

NOTES:

1. THE MINIMUM UNCONFINED COMPRESSIVE STRENGTH FOR THE DMM ELEMENTS SHALL BE 150 PSI AFTER 90 DAYS.
2. REFER TO THE LATEST VERSION OF PROJECT SPECIFICATION FOR DEEP MIXING METHOD (26196-100-3PS-CY05-00001) FOR FURTHER INFORMATION AND ACCEPTANCE TESTING REQUIREMENTS.
3. ALL CORE HOLES FROM PRODUCTION TESTING SHALL BE BACKFILLED WITH FLOWABLE FILL OR EQUIVALENT PRODUCT OF MIN COMPRESSIVE STRENGTH 150 PSI, USING THE TREMIE METHOD.
4. SUBCONTRACTOR SHALL SUBMIT TO CONTRACTOR DETAILS OF EQUIPMENT, MATERIALS, MEANS, METHODS AND PROCEDURES TO INSTALL THE DMM AS REQUIRED BY THE LATEST VERSION OF THE PROJECT SPECIFICATION FOR DEEP MIXING METHOD (26196-100-3PS-CY05-00001).
5. DMM TAKE OFF ESTIMATED AT 85,334 CY.
6. HORIZONTAL CONTROL IS IN PLANT COORDINATES AND ELEVATIONS IN NAVD 88.
7. EMBANKMENT FILL CONSTRUCTED ON DMM DOES NOT REQUIRE ANY COMPENSATION FILL.
8. LEVEE FILL RATE IS RESTRICTED TO 1 FT OF ELEVATION GAIN PER DAY.
9. TWO INCLINOMETERS SHALL BE INSTALLED AT THE EMBANKMENT NORTHERN TOE, ONE AT STA. 40+00 AT LEVEE TOE AND ANOTHER AT STA 43+00 AT RAMP TOE, TIPPED AT ELEVATION -100 FT. IN ADDITION, FOUR SETTLEMENT PLATES SHALL BE INSTALLED AT STATION NUMBERS 39+00, 40+00, 43+00 AND 44+00, AT THE TOP OF DMM AND AT THE MIDDLE OF THE LEVEE CREST. INSTRUMENTATION SHALL BE INSTALLED AS SOON AS DMM IN THE RESPECTIVE AREAS IS COMPLETE AND PRIOR TO ANY EMBANKMENT CONSTRUCTION COMMENCES. READINGS SHALL BE OBTAINED DAILY DURING FILL PLACEMENT AND FOR 2 WEEKS AFTER REACHING FINAL ELEVATION AND BIWEEKLY THEREAFTER UNTIL STABILIZATION OF SETTLEMENTS IS ACHIEVED AS DIRECTED BY THE FIELD GEOTECHNICAL ENGINEER.

LEGEND:

1

EXISTING GRADE CONTOUR LEVEL INTERVAL IS AT 2.5 FT.
(AS SURVEYED ON 29-OCTOBER AFTER THE LEVEE FAILURE)

- MAJOR CONTOUR
- MINOR CONTOUR

LEVEE PROPOSED CONTOUR LEVEL INTERVAL IS AT 1.0 FT.

- MAJOR CONTOUR
- MINOR CONTOUR

0 40' 80'
SCALE 1" = 40'

STATE OF TEXAS
DIMITRIOS LEKKAKIS
136532
LICENSED
PROFESSIONAL ENGINEER

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	11-18-2024	ISSUED FOR CONSTRUCTION	ET	AP	DL	KR	SK
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Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: 1"=40'

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
LEVEE DMM AREA 1 - PLAN & PROFILE

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-0300	001	26196-100-CG-000-00300	001

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3550

E. 7500

E. 7750

E. 8000

N. 19250

22°
GRID NORTH
PLANT NORTH

5.2
6
0.8

DETAIL - LAYOUT OF AUGER EQUIPMENT

APROXIMATE RAMP TOE AT ELEVATION +3

APROXIMATE LEVEE TOE AT ELEVATION +7

1

LEVEE DMM AREA 1
LAYOUT 2 OF 3

40+00

41+00

42+00

43+00

44+00

44+50

39+00

38+60

38+00

APROXIMATE LEVEE TOE AT ELEVATION +7

LEVEE DMM AREA 1
LAYOUT 3 OF 3

LEVEE DMM AREA 1
LAYOUT 1 OF 3

REFERENCE DRAWINGS:

26196-100-CG-000-00302- AREA 1 LAYOUT 1 OF 3
(PAL-PJT-CIV-DWG-00-X-0302)

26196-100-CG-000-00303- AREA 1 LAYOUT 2 OF 3
(PAL-PJT-CIV-DWG-00-X-0303)

26196-100-CG-000-00304- AREA 1 LAYOUT 3 OF 3
(PAL-PJT-CIV-DWG-00-X-0304)

26196-100-CG-000-00305- AREA 1 CONTROL POINTS
(PAL-PJT-CIV-DWG-00-X-0305)

0 10' 20' 40'
SCALE 1" = 20'

STATE OF TEXAS
DIMITRIOS LEKKAKIS
136532
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

BECHTEL
Bechtel Energy Inc.
26196-100
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001	12-12-2024	ISSUED FOR CONSTRUCTION	FG	AP	DL	KR	SK								

LEVEE DMM AREA 1
KEY MAP

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-0301	001	26196-100-CG-000-00301	001

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NOTES

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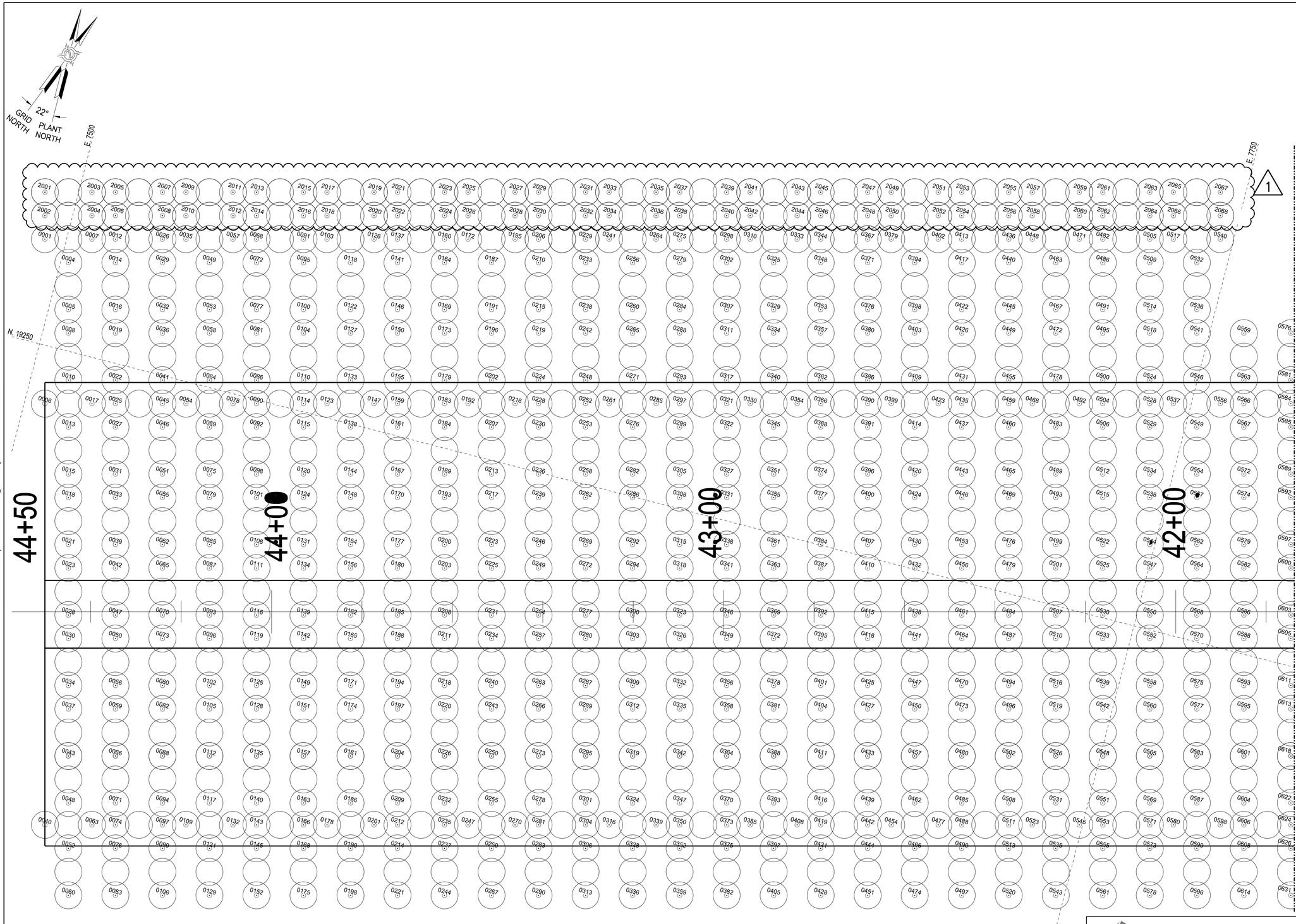

STATE OF TEXAS
DIMITRIOS LEKKAKIS
136532
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
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NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	11-18-2024	ISSUED FOR CONSTRUCTION	RJG	AP	DL	KR	SK								
001	12-12-2024	ISSUED FOR CONSTRUCTION	FG	AP	DL	KR	SK								

LEVEE DMM AREA 1
SECTION DETAILS 1 OF 3

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-0302	001	26196-100-CG-000-00302	001

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GRID NORTH 22° PLANT NORTH

E. 7750

NOTES

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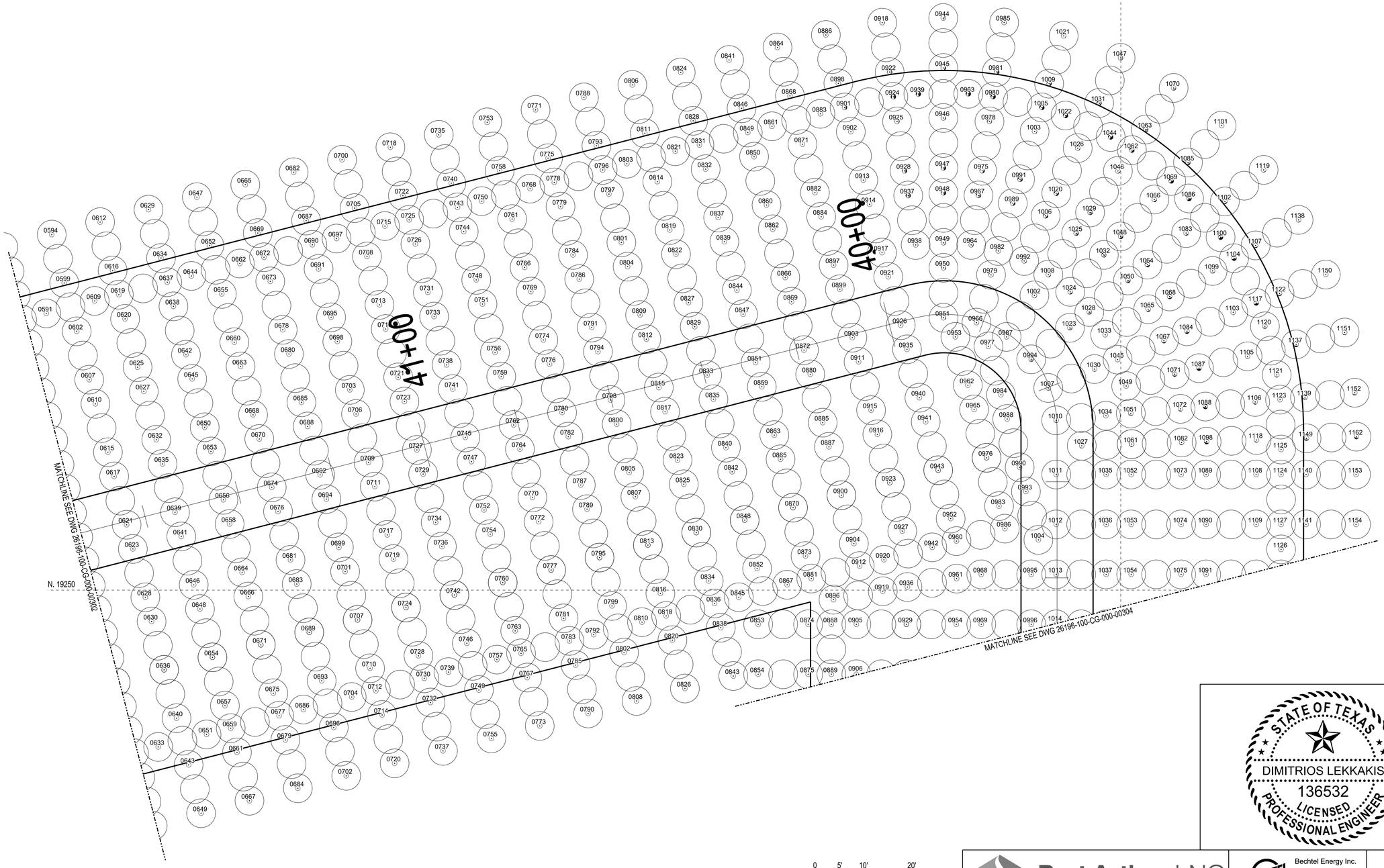

SCALE 1" = 10'

STATE OF TEXAS
DIMITRIOS LEKKAKIS
136532
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	11-18-2024	ISSUED FOR CONSTRUCTION	RJG	AP	DL	KR	SK								

LEVEE DMM AREA 1
SECTION DETAILS 2 OF 3

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-0303	000	26196-100-CG-000-00303	000

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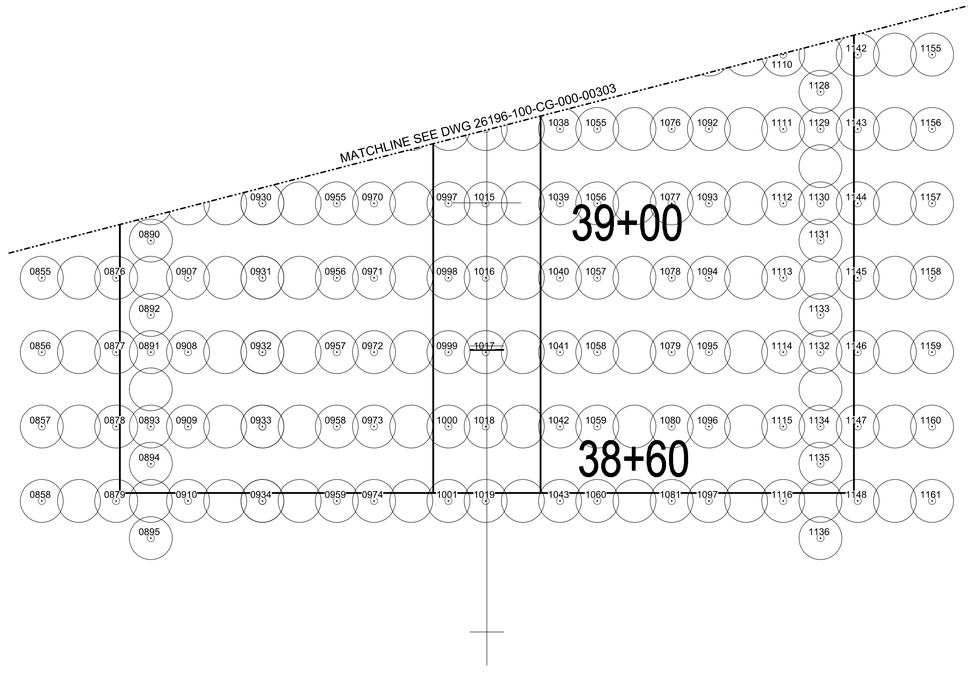
NOTES

1. FOR GENERAL NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00301 (PAL-PJT-CIV-DWG-00-X-0301).



0 5' 10' 20'
SCALE 1" = 10'

STATE OF TEXAS
DIMITRIOS LEKKAKIS
136532
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	11-18-2024	ISSUED FOR CONSTRUCTION	RJG	AP	DL	KR	SK								

LEVEE DMM AREA 1
SECTION DETAILS 3 OF 3

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-0304	000	26196-100-CG-000-00304	000

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Electronic documents, once printed, are non-controlled and may become outdated.
Refer to the Enterprise Content Management System for current revision.

CONTROL POINT	EASTING	NORTHING
0001	7495.36	19285.27
0002	-	-
0003	-	-
0004	7501.70	19281.53
0005	7504.30	19271.46
0006	7504.46	19250.02
0007	7505.43	19287.87
0008	7505.59	19266.43
0009	-	-
0010	7508.19	19256.36
0011	-	-
0012	7510.47	19289.17
0013	7510.79	19246.29
0014	7511.77	19284.13
0015	7513.39	19236.22
0016	7514.37	19274.06
0017	7514.53	19252.62
0018	7514.69	19231.19
0019	7515.66	19269.03
0020	-	-
0021	7517.28	19221.12
0022	7518.26	19258.96
0023	7518.58	19216.08
0024	-	-
0025	7519.56	19253.92
0026	7520.54	19291.77
0027	7520.86	19248.89
0028	7521.18	19206.01
0029	7521.84	19286.73
0030	7522.48	19200.98
0031	7523.46	19238.82
0032	7524.44	19276.66
0033	7524.76	19233.79
0034	7525.08	19190.91
0035	7525.57	19293.06
0036	7525.74	19271.63
0037	7526.38	19185.87
0038	-	-
0039	7527.35	19223.71
0040	7527.75	19159.75
0041	7528.33	19261.56
0042	7528.65	19218.68
0043	7528.97	19175.80
0044	-	-
0045	7529.63	19256.52
0046	7530.93	19251.49
0047	7531.25	19208.61
0048	7531.57	19165.73
0049	7531.91	19289.33
0050	7532.55	19203.57
0051	7533.53	19241.42
0052	7534.08	19156.00
0053	7534.51	19279.26
0054	7534.67	19257.82
0055	7534.83	19236.38
0056	7535.15	19193.50
0057	7535.64	19295.66
0058	7535.81	19274.23
0059	7536.45	19188.47
0060	7536.68	19145.93
0061	-	-
0062	7537.43	19226.31
0063	7537.82	19162.34
0064	7538.40	19264.16
0065	7539.72	19221.28
0066	7539.04	19178.40
0067	-	-
0068	7540.68	19296.96
0069	7541.00	19254.09
0070	7541.32	19211.21
0071	7541.64	19168.33
0072	7541.98	19291.93
0073	7542.62	19206.17
0074	7542.85	19163.64
0075	7543.60	19244.02
0076	7544.15	19158.60
0077	7544.58	19281.86
0078	7544.74	19260.42
0079	7544.90	19238.98
0080	7545.22	19196.10
0081	7545.88	19276.82
0082	7546.52	19191.07
0083	7546.75	19148.53
0084	-	-
0085	7547.50	19228.91
0086	7548.47	19266.75
0087	7548.79	19223.87
0088	7549.12	19181.00
0089	-	-
0090	7549.77	19261.71
0091	7550.75	19299.56
0092	7551.07	19256.68
0093	7551.39	19213.80
0094	7551.71	19170.93
0095	7552.05	19294.52
0096	7552.69	19208.77
0097	7552.92	19166.24
0098	7553.67	19246.61
0099	7554.22	19161.20
0100	7554.65	19284.45
0101	7554.97	19241.58
0102	7555.29	19198.70
0103	7555.78	19300.86
0104	7555.95	19279.42
0105	7556.59	19193.66
0106	7556.82	19151.13
0107	-	-
0108	7557.57	19231.51
0109	7557.96	19167.54
0110	7558.54	19269.35
0111	7558.86	19226.47
0112	7559.19	19183.59
0113	-	-
0114	7559.84	19264.31
0115	7561.14	19259.28
0116	7561.46	19216.40
0117	7561.78	19173.52
0118	7562.12	19297.12
0119	7562.76	19211.37
0120	7563.74	19249.21
0121	7564.29	19163.80
0122	7564.72	19287.05
0123	7564.88	19265.61
0124	7565.04	19244.18
0125	7565.36	19201.30
0126	7565.86	19303.46
0127	7566.02	19282.02
0128	7566.66	19196.26
0129	7566.89	19153.73
0130	-	-
0131	7567.64	19234.11
0132	7568.03	19170.14
0133	7568.61	19271.95
0134	7568.93	19229.07
0135	7569.26	19186.19
0136	-	-
0137	7570.89	19304.75
0138	7571.21	19261.88
0139	7571.53	19219.00
0140	7571.85	19176.12
0141	7572.19	19299.72
0142	7572.83	19213.96
0143	7573.06	19171.43
0144	7573.81	19251.81
0145	7574.36	19166.39
0146	7574.79	19289.65
0147	7574.95	19268.21
0148	7575.11	19246.77
0149	7575.43	19203.89
0150	7576.09	19284.62

CONTROL POINT	EASTING	NORTHING
0151	7576.73	19198.86
0152	7576.96	19156.32
0153	-	-
0154	7577.71	19236.70
0155	7578.68	19274.55
0156	7579.01	19231.67
0157	7579.33	19188.79
0158	-	-
0159	7579.98	19269.51
0160	7580.96	19307.35
0161	7581.28	19264.48
0162	7581.60	19221.60
0163	7581.92	19178.72
0164	7582.26	19302.32
0165	7582.90	19216.56
0166	7583.13	19174.03
0167	7583.88	19254.41
0168	7584.43	19168.99
0169	7584.86	19292.25
0170	7585.18	19249.37
0171	7585.50	19206.49
0172	7586.00	19308.65
0173	7586.16	19287.22
0174	7586.80	19201.46
0175	7587.03	19158.92
0176	-	-
0177	7587.78	19239.30
0178	7588.17	19175.33
0179	7588.75	19277.14
0180	7589.08	19234.27
0181	7589.40	19191.39
0182	-	-
0183	7590.05	19272.10
0184	7591.35	19267.07
0185	7591.67	19224.20
0186	7591.99	19181.32
0187	7592.33	19304.91
0188	7592.97	19219.16
0189	7593.95	19257.00
0190	7594.50	19171.59
0191	7594.93	19294.84
0192	7595.26	19273.40
0193	7595.25	19251.97
0194	7595.57	19209.09
0195	7596.07	19311.25
0196	7596.23	19289.81
0197	7596.87	19204.05
0198	7597.10	19161.52
0199	-	-
0200	7597.85	19241.90
0201	7598.24	19177.93
0202	7598.39	19279.74
0203	7599.15	19236.86
0204	7599.47	19193.98
0205	-	-
0206	7601.10	19312.55
0207	7601.42	19269.67
0208	7601.74	19226.79
0209	7602.06	19183.91
0210	7602.40	19307.51
0211	7603.04	19221.76
0212	7603.27	19179.23
0213	7604.02	19259.60
0214	7604.57	19174.19
0215	7609.00	19297.44
0216	7606.06	19178.40
0217	7605.32	19254.57
0218	7605.64	19211.69
0219	7606.30	19292.41
0220	7606.94	19206.65
0221	7607.17	19164.12
0222	-	-
0223	7607.92	19244.50
0224	7608.90	19282.34
0225	7609.22	19239.46
0226	7609.54	19196.58
0227	-	-
0228	7757.19	19277.30
0229	7611.17	19315.15
0230	7611.49	19272.27
0231	7611.81	19229.39
0232	7612.13	19186.51
0233	7612.47	19310.11
0234	7613.11	19224.36
0235	7613.34	19181.83
0236	7614.09	19262.20
0237	7614.64	19176.79
0238	7615.07	19300.04
0239	7615.39	19257.16
0240	7615.71	19214.29
0241	7616.21	19316.44
0242	7616.37	19295.01
0243	7617.01	19209.25
0244	7617.24	19166.71
0245	-	-
0246	7617.99	19247.09
0247	7618.38	19183.12
0248	7618.97	19284.94
0249	7619.29	19242.06
0250	7619.61	19199.18
0251	-	-
0252	7620.26	19279.90
0253	7621.56	19274.87
0254	7621.88	19231.99
0255	7622.20	19189.11
0256	7622.54	19312.71
0257	7623.18	19226.95
0258	7624.16	19264.80
0259	7624.71	19179.38
0260	7625.14	19302.64
0261	7625.30	19281.20
0262	7625.46	19259.76
0263	7625.78	19216.88
0264	7626.28	19319.04
0265	7626.44	19297.61
0266	7627.08	19211.85
0267	7627.31	19169.31
0268	-	-
0269	7628.06	19249.69
0270	7628.45	19185.72
0271	7629.04	19287.54
0272	7629.36	19244.66
0273	7629.68	19201.78
0274	-	-
0275	7631.31	19320.34
0276	7631.63	19277.46
0277	7631.95	19234.59
0278	7632.28	19191.71
0279	7632.61	19315.31
0280	7633.25	19229.55
0281	7633.48	19187.02
0282	7634.23	19267.39
0283	7634.79	19181.98
0284	7635.21	19305.24
0285	7635.37	19283.79
0286	7635.53	19262.36
0287	7635.85	19219.48
0288	7636.51	19300.20
0289	7637.15	19214.45
0290	7637.38	19171.91
0291	-	-
0292	7638.13	19252.29
0293	7639.11	19290.13
0294	7639.43	19247.25
0295	7639.75	19204.37
0296	-	-
0297	7640.40	19285.09
0298	7641.38	19322.94
0299	7641.70	19280.06
0300	7642.02	19237.18

CONTROL POINT	EASTING	NORTHING
0301	7642.35	19194.30
0302	7642.68	19317.90
0303	7643.32	19232.15
0304	7643.55	19189.62
0305	7644.30	19269.99
0306	7644.85	19184.58
0307	7645.28	19307.83
0308	7645.60	19264.96
0309	7645.92	19222.08
0310	7646.42	19324.24
0311	7646.58	19302.80
0312	7647.22	19217.04
0313	7647.45	19174.51
0314	-	-
0315	7648.20	19254.89
0316	7648.59	19190.92
0317	7649.18	19292.73
0318	7649.50	19249.85
0319	7649.82	19206.97
0320	-	-
0321	7650.47	19287.69
0322	7651.77	19282.66
0323	7652.10	19239.78
0324	7652.42	19196.90
0325	7652.75	19320.50
0326	7653.39	19234.75
0327	7654.37	19272.59
0328	7654.92	19187.18
0329	7655.35	19310.43
0330	7655.51	19288.99
0331	7655.67	19267.55
0332	7655.83	19224.68
0333	7656.49	19326.84
0334	7656.65	19305.40
0335	7657.29	19219.64
0336	7657.52	19177.11
0337	-	-
0338	7658.27	19257.48
0339	7658.66	19193.51
0340	7659.25	19295.33
0341	7659.57	19252.45
0342	7659.89	19209.57
0343	-	-
0344	7661.52	19328.13
0345	7661.84	19285.26
0346	7662.17	19242.38
0347	7662.49	19199.50
0348	7662.82	19323.10
0349	7663.46	19237.34
0350	7663.70	19194.81
0351	7664.44	19275.19
0352	7664.60	19189.77
0353	7665.42	19313.03
0354	7665.58	19291.59
0355	7665.74	19270.15
0356	7666.06	19227.27
0357	7666.72	19308.00
0358	7667.36	19222.24
0359	7667.59	19179.70
0360	-	-
0361	7668.34	19260.08
0362	7669.32	19297.93
0363	7669.64	19255.05
0364	7669.96	19212.17
0365	-	-
0366	7670.62	19292.89
0367	7671.59	19330.73
0368	7671.92	19287.86
0369	7672.24	19244.98
0370	7672.56	19202.10
0371	7672.89	19325.70
0372	7673.53	19239.94
0373	7673.77	19197.41
0374	7674.51	19277.79
0375	7675.06	19192.37
0376	7675.49	19315.63
0377	7675.81	19272.75
0378	7676.13	19229.87
0379	7676.63	19332.03
0380	7676.79	19310.59
0381	7677.43	19224.84
0382	7677.66	19182.30
0383	-	-
0384	7678.41	19262.68
0385	7678.80	19198.71
0386	7679.39	19300.52
0387	7679.71	19257.64
0388	7680.03	19214.77
0389	-	-
0390	7680.69	19295.48
0391	7681.99	19290.45
0392	7682.31	19247.57
0393	7682.63	19204.70
0394	7682.96	19328.29
0395	7683.61	19242.54
0396	7684.58	19280.38
0397	7685.13	19194.97
0398	7685.56	19318.22
0399	7685.72	19296.78
0400	7685.90	19275.35
0401	7686.20	19232.47
0402	7686.70	19334.63
0403	7686.86	19313.19
0404	7687.50	19227.43
0405	7687.73	19184.90
0406	-	-
0407	7688.48	19265.28
0408	7688.87	19201.31
0409	7689.46	19303.12
0410	7689.78	19260.24
0411	7690.10	19217.36
0412	-	-
0413	7691.73	19335.93
0414	7692.06	19293.05
0415	7692.38	19250.17
0416	7692.70	19207.29
0417	7693.03	19330.89
0418	7693.68	19245.14
0419	7693.91	19202.61
0420	7694.65	19282.98
0421	7695.20	19197.57
0422	7695.63	19320.82
0423	7695.79	19299.38
0424	7695.95	19277.95
0425	7696.27	19235.07
0426	7696.93	19315.79
0427	7697.57	19230.03
0428	7697.80	19187.50
0429	-	-
0430	7698.55	19267.87
0431	7699.53	19305.72
0432	7699.85	19262.84
0433	7700.17	19219.96
0434	-	-
0435	7700.83	19300.68
0436	7701.80	19338.53
0437	7702.13	19295.65
0438	7702.45	19252.77
0439	7702.77	19209.89
0440	7703.10	19333.49
0441	7703.75	19247.73
0442	7703.98	19205.20
0443	7704.72	19285.58
0444	7705.27	19200.16
0445	7705.70	19323.42
0446	7706.02	19280.54
0447	7706.34	19237.66
0448	7706.84	19339.82
0449	7707.00	19318.39
0450	7707.64	19232.63

CONTROL POINT	EASTING	NORTHING
0451	7707.87	19190.09
0452	-	-
0453	7708.62	19270.47
0454	7709.01	19206.50
0455	7709.60	19308.32
0456	7709.92	19265.44
0457	7710.24	19222.56
0458	-	-
0459	7710.90	19303.28
0460	7712.20	19298.25
0461	7712.52	19255.37
0462	7712.84	19212.49
0463	7713.17	19336.09
0464	7713.82	19250.33
0465	7714.79	19288.18
0466	7715.34	19202.76
0467	7715.77	19326.02
0468	7715.93	19304.58
0469	7716.09	19283.14
0470	7716.41	19240.26
0471	7716.91	19342.42
0472	7717.07	19320.98
0473	7717.71	19235.23
0474	7717.94	19192.69
0475	-	-
0476	7718.69	19273.07
0477	7719.08	19209.10
0478	7719.67	19310.91
0479	7719.99	19268.04
0480	7720.31	19225.16
0481	-	-
0482	7721.95	19343.72
0483	7722.27	19300.84
0484	7722.59	19257.96
0485	7722.91	19215.09
0486	7723.24	19338.69
0487	7723.89	19252.93
0488	7724.12	19210.40
0489	7724.86	19290.77
0490	7725.42	19205.36
0491	7725.84	19328.62
0492	7726.00	19307.17
0493	7726.16	19285.74
0494	7726.48	19242.86
0495	7727.14	19323.58
0496	7727.78	19237.82
0497	7728.01	19195.29
0498	-	-
0499	7728.76	19275.67
0500	7729.74	19313.51
0501	7730.06	19270.63
0502	7730.38	19227.75
0503	-	-
0504	7731.04	19308.47
0505	7732.02	19346.32
0506	7732.34	19303.44
0507	7732.66	19260.56
0508	7732.98	19217.68
0509	7733.31	19341.28
0510	7733.96	19255.53
0511	7734.19	19213.00
0512	7734.43	19293.37
0513	7735.49	19207.96
0514	7735.91	19331.21
0515	7736.23	19288.34
0516	7736.55	19245.46
0517	7737.05	19347.62
0518	7737.21	19326.18
0519	7737.85	19240.42
0520	7738.08	19197.89
0521	-	-
0522	7738.83	19278.27
0523	7739.22	19214.30
0524	7739.81	19316.11
0525	7740.13	19273.23
0526	7740.45	19230.35
0527	-	-
0528	7741.11	19311.07
0529	7742.41	19306.04
0530	7742.73	19263.16
0531	7743.05	19220.28
0532	7743.38	19344.88
0533	7743.03	19258.12
0534	7745.00	19295.97
0535	7745.56	19210.55
0536	7745.98	19333.81
0537	7746.14	19312.37
0538	7746.30	19290.93
0539	7746.62	19248.05
0540	7747.12	19350.22
0541	7747.28	19328.78
0542	7747.92	19243.02
0543	7748.15	19200.48
0544	7748.90	19280.86
0545	7749.29	19216.89
0546	7749.88	19318.71
0547	7750.20	19275.83
0548	7750.52	19232.95
0549	7752.48	19308.64
0550	7752.80	19265.76
0551	7753.12	19222.88
0552	7754.10	19260.72
0553	7754.33	19218.19
0554	7755.08	19298.57
0555	7755.63	19213.15
0556	7756.21	19314.97
0557	7756.37	19293.53
0558	7756.69	19250.65
0559	7757.35	19331.36
0560	7757.99	19245.62
0561	7758.22	19203.08
0562	7758.97	19283.46
0563	7759.95	19321.30
0564	7760.27	19278.43
0565	7760.59	19235.55
0566	7760.91	19192.68
0567	7762.55	19311.23
0568	7762.87	19268.36
0569	7763.19	19225.48
0570	7764.17	19263.32
0571	7764.40	19220.79
0572	7765.15	19301.16
0573	7765.70	19215.75
0574	7766.44	19296.13
0575	7766.77	19253.25
0576	7767.42	19333.87
0577	7768.06	19248.21
0578	7768.29	19205.68
0579	7769.04	19286.06
0580	7769.43	19222.09
0581	7770.02	19323.90
0582	7770.34	19281.02
0583	7770.66	19238.14
0584	7771.32	19318.86
0585	7772.62	19313.83
0586	7772.94	19270.95
0587	7773.26	19228.07
0588	7774.24	19265.92
0589	7775.22	19303.76
0590	7775.77	19218.35
0591	7776.35	19320.16
0592	7776.51	19298.73
0593	7776.84	19255.85
0594	7777.49	19336.57
0595	7778.13	19250.81
0596	7778.36	19208.28
0597	7779.11	19288.66
0598	7779.50	19224.69
0599	7780.09	19326.50
0600	7780.41	19283.62

CONTROL POINT	EASTING	NORTHING
0601	7780.73	19240.74
0602	7782.69	19316.43
0603	7783.01	19273.55
0604	7783.33	19230.67
0605	7784.31	19268.52
0606	7784.54	19225.99
0607	7785.29	19306.36
0608	7785.84	19220.95
0609	7786.42	19322.76
0610	7786.59	19301.32
0611	7786.91	19258.45
0612	7787.56	19339.17
0613	7788.20	19253.41
0614	7788.43	19210.88
0615	7789.18	19291.25
0616	7790.16	19329.10
0617	7790.48	19286.22
0618	7790.80	19243.34
0619	7791.46	19324.06
0620	7792.76	19319.03
0621	7793.08	19276.15
0622	7793.40	19233.27
0623	7794.38	19271.11
0624	7794.61	19228.58
0625	7795.36	19308.96
0626	7795.91	19223.54
0627	7796.66	19303.92
0628	7796.98	19261.04
0629	7797.63	19341.77
0630	7798.28	19256.01
0631	7798.51	19213.47
0632	7798.84	19293.85
0633	7799.64	19229.88
0634	7800.23	19331.70
0635	7800.55	19288.82
0636	7800.87	19245.94
0637	7801.53	19326.66
0638	7802.02	19321.63
0639	7803.15	19278.75
0640	7803.47	19235.87
0641	7804.45	19273.71
0642	7805.43	19311.55
0643	7805.98	19226.14
0644	7806.56	19327.95
0645	7806.73	19306.52
0646	7807.05	19263.64
0647	7807.70	19344.36
0648	7808.35	19258.61
0649	7808.58	19216.07
0650	7809.32	19296.45
0651	7809.71	19232.48
0652	7810.20	19334.29
0653	7810.62	19291.41
0654	7810.94	19248.54
0655	7812.90	19324.22
0656	7813.22	19281.34
0657	7813.54	19238.46
0658	7814.52	19276.31
0659	7814.75	19233.78
0660	7815.50	19314.15
0661	7816.05	19228.74
0662	7816.63	19330.55
0663	7816.80	19309.12
0664	7817.12	19266.24
0665	7817.77	19346.98
0666	7818.62	19261.20
0667	7818.65	19218.67
0668	7819.30	19299.05
0669	7820.37	19336.89
0670	7820.69	19294.01
0671	7821.01	19251.13
0672	7821.67	19331.85
0673	7822.97	19326.82
0674	7823.29	19283.94
0675	7823.61	19241.06
0676	7824.59	19278.91
0677	7824.82	19236.38
0678	7825.57	19316.75
0679	7826.12	19231.34
0680	7826.87	19311.71
0681	7827.19	19268.84
0682	7827.84	19349.56
0683	7828.49	19263.80
0684	7828.72	19221.27
0685	7829.46	19301.64
0686	7829.88	19237.67
0687	7830.44	19339.49
0688	7830.76	19296.61
0689	7831.08	19253.73
0690	7831.74	19334.45
0691	7833.04	19329.42
0692	7833.36	19286.54
0693	7833.68	19243.66
0694	7834.66	19281.50
0695	7835.64	19319.35
0696	7836.19	19233.93
0697	7836.78	19335.75
0698	7836.94	19314.31
0699	7837.26	19271.43
0700	7837.91	19352.16
0701	7838.56	19266.40
0702	7838.79	19223.86
0703	7839.53	19304.24
0704	7839.93	19240.27
0705	7840.51	19342.09
0706	7840.83	19299.21
0707	7841.15	19256.33
0708	7843.11	19332.02
0709	7843.43	19289.14
0710	7844.73	19246.26
0711	7844.73	19284.10
0712	7844.96	19241.57
0713	7845.71	19321.95
0714	7846.26	19236.53
0715	7846.85	19338.35
0716	7847.01	19316.91
0717	7847.33	19274.03
0718	7847.99	19354.75
0719	7848.63	19269.00
0720	7848.86	19226.46
0721	7849.60	19306.84
0722	7850.58	19344.68
0723	7850.90	19301.80
0724	7851.22	19258.93
0725	7851.88	19339.64
0726	7853.18	19334.61
0727	7853.50	19291.73
0728	7853.82	19248.86
0729	7854.80	19286.70
0730	7855.03	19244.17
0731	7855.78	19324.54
0732	7856.33	19239.13
0733	7857.08	19319.51
0734	7857.40	19276.63
0735	7858.06	19357.35
0736	7858.70	19271.59
0737	7858.93	19229.06
0738	7859.68	19309.44
0739	7860.07	19245.47
0740	7860.65	19347.28
0741	7860.97	19304.40
0742	7861.29	19261.52
0743	7861.95	19342.24
0744	7863.25	19337.21
0745	7863.57	19294.33
0746	7863.89	19251.45
0747	7864.87	19289.30
0748	7865.85	19327.14
0749	7866.40	19241.73
0750	7866.99	19343.54

CONTROL POINT	EASTING	NORTHING
0751	7867.15	19322.11
0752	7867.47	19279.23
0753	7868.13	19359.95
0754	7868.77	19274.19
0755	7869.00	19231.66
0756	7869.75	19312.04
0757	7870.14	19248.07
0758	7870.72	19349.88
0759	7871.04	19307.00
0760	7871.37	19264.12
0761	7873.32	19339.81
0762	7873.64	19296.93
0763	7873

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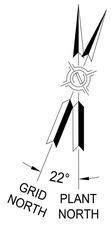

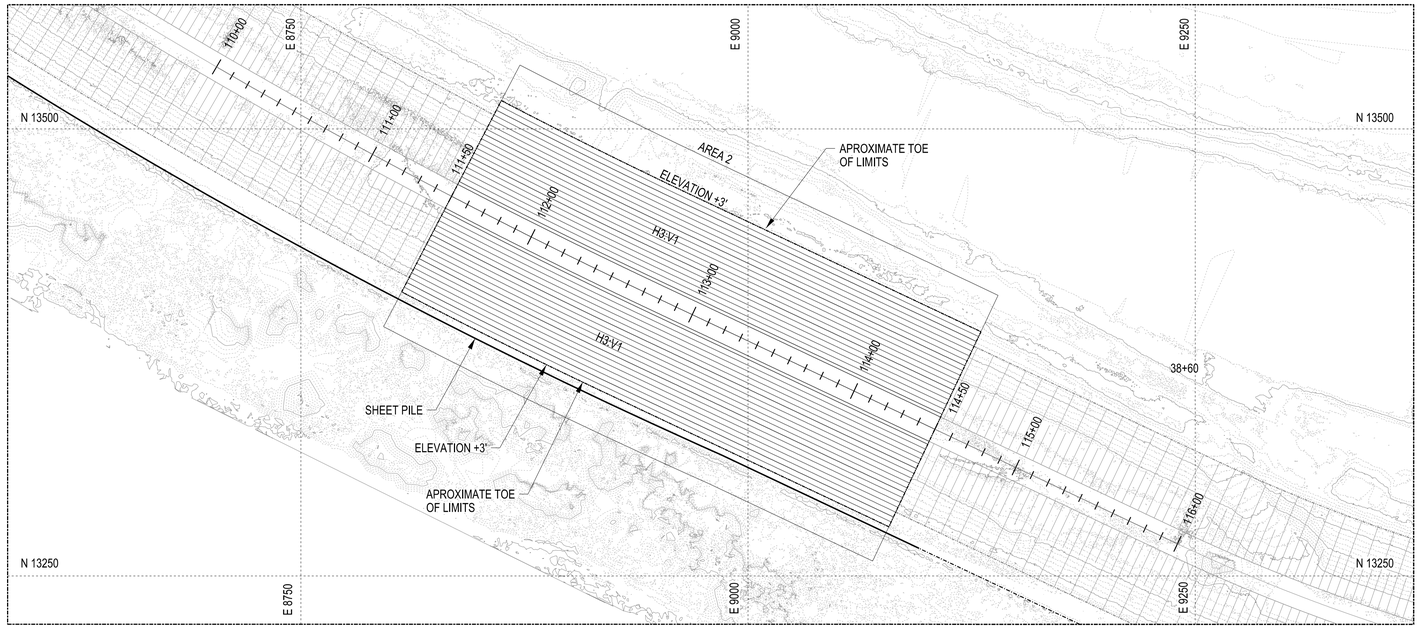

PLAN

PROFILE
H1 : V5

NOTES:

1. THE MINIMUM UNCONFINED COMPRESSIVE STRENGTH FOR THE DMM ELEMENTS SHALL BE 150 PSI AFTER 90 DAYS.
2. REFER TO THE LATEST VERSION OF PROJECT SPECIFICATION FOR DEEP MIXING METHOD (26196-100-3PS-CY05-00001) FOR FURTHER INFORMATION AND ACCEPTANCE TESTING REQUIREMENTS.
3. ALL CORE HOLES FROM PRODUCTION TESTING SHALL BE BACKFILLED WITH FLOWABLE FILL OR EQUIVALENT PRODUCT OF MIN COMPRESSIVE STRENGTH 150 PSI, USING THE TREMIE METHOD.
4. SUBCONTRACTOR SHALL SUBMIT TO CONTRACTOR DETAILS OF EQUIPMENT, MATERIALS, MEANS, METHODS AND PROCEDURES TO INSTALL THE DMM AS REQUIRED BY THE LATEST VERSION OF THE PROJECT SPECIFICATION FOR DEEP MIXING METHOD (26196-100-3PS-CY05-00001).
5. DMM TAKE OFF ESTIMATED AT 20,245 CY.
6. HORIZONTAL CONTROL IS IN PLANT COORDINATES AND ELEVATIONS IN NAVD 88.
7. EMBANKMENT FILL CONSTRUCTED ON DMM DOES NOT REQUIRE ANY COMPENSATION FILL.
8. LEVEE FILL RATE IS THE IS RESTRICTED TO 1 FT OF ELEVATION GAIN PER DAY IN THE DMM IMPROVEMENT AREA.
9. THREE INCLINOMETERS, SIX SETTLEMENT PLATES, AND TWO MULTI-LEVEL VIBRATING-WIRE PIEZOMETERS (VWP) SHALL BE INSTALLED AFTER GROUND IMPROVEMENT AND BEFORE LEVEE CONSTRUCTION AT STATION NUMBERS SHOWN IN TABLE. INCLINOMETERS SHALL BE INSTALLED AT THE EMBANKMENT INSIDE TOE AND TIPPED AT ELEVATION -100 FT. SETTLEMENT PLATES SHALL BE INSTALLED AT LEVEE CENTERLINE ON TOP OF GROUND IMPROVEMENT. MULTI-LEVEL VWP SHALL ALSO BE INSTALLED AT LEVEE CENTERLINE WITH SENSORS AT ELEVATIONS -20, -40, AND -80 FT. READINGS SHALL BE TAKEN DAILY DURING FILL PLACEMENT AND FOR 2 WEEKS AFTER REACHING FINAL ELEVATION AND BIWEEKLY THEREAFTER UNTIL STABILIZATION OF SETTLEMENTS AS DETERMINED BY THE FIELD GEOTECHNICAL ENGINEER.

STATION NUMBER	INSTRUMENT TYPE
110+00	SETTLEMENT PLATE AND VWP
110+50	INCLINOMETER
111+00	SETTLEMENT PLATE
112+50	SETTLEMENT PLATE
113+00	INCLINOMETER
113+50	SETTLEMENT PLATE
115+00	SETTLEMENT PLATE AND VWP
116+00	INCLINOMETER
117+00	SETTLEMENT PLATE

LEGEND:

EXISTING GRADE CONTOUR LEVEL INTERVAL IS AT 1.0 FT.
(AS SURVEYED ON 29-OCTOBER AFTER THE LEVEE FAILURE)

- MAJOR CONTOUR
- MINOR CONTOUR

LEVEE PROPOSED CONTOUR LEVEL INTERVAL IS AT 1.0 FT.

- MAJOR CONTOUR
- MINOR CONTOUR

0 40' 80'
SCALE 1" = 40'

STATE OF TEXAS
FRANCISCO JOSE ARIAS ESCUDERO
112293
LICENSED
PROFESSIONAL ENGINEER

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	12-11-2024	ISSUED FOR CONSTRUCTION	ET	AP	FA	KR	SK								

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: 1"-40'

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
LEVEE DMM AREA 2 - PLAN & PROFILE

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-0306	000	26196-100-CG-000-00306	000

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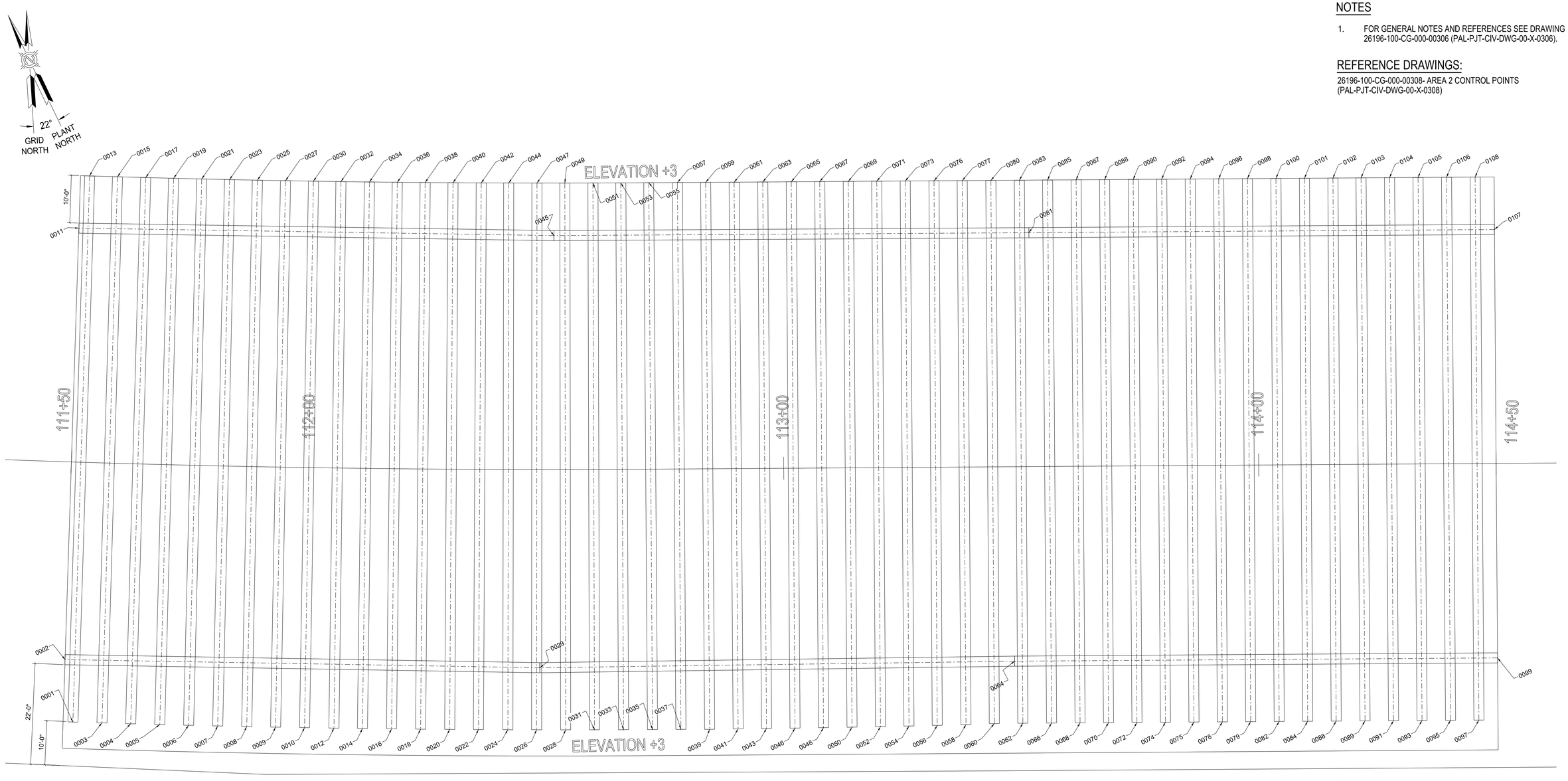
NOTES

1. FOR GENERAL NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00306 (PAL-PJT-CIV-DWG-00-X-0306).

REFERENCE DRAWINGS:

26196-100-CG-000-00308- AREA 2 CONTROL POINTS (PAL-PJT-CIV-DWG-00-X-0308)





0 5' 10' 20'
SCALE 1" = 10'

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	12-11-2024	ISSUED FOR CONSTRUCTION	FG	AP	FA	KR	SK

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
LEVEE DMM AREA 2 - SECTION DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-0307	000	26196-100-CG-000-00307	000

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CONTROL POINT	EASTING	NORTHING
0001	8810.80	13412.85
0002	8815.00	13425.40
0003	8816.23	13410.03
0004	8821.60	13407.25
0005	8827.05	13404.45
0006	8832.45	13401.68
0007	8837.91	13398.90
0008	8843.37	13396.13
0009	8848.79	13393.39
0010	8854.24	13390.65
0011	8856.98	13506.00
0012	8859.78	13387.88
0013	8863.79	13514.93
0014	8865.15	13385.20
0015	8869.00	13512.23
0016	8870.63	13382.48
0017	8874.28	13509.50
0018	8876.12	13379.77
0019	8879.50	13506.82
0020	8881.62	13377.07
0021	8884.77	13504.12
0022	8887.05	13374.42
0023	8890.00	13501.46
0024	8892.62	13371.71
0025	8895.23	13498.81
0026	8898.07	13369.08
0027	8900.51	13496.15
0028	8903.58	13366.41
0029	8904.34	13380.55
0030	8905.78	13493.51
0031	8909.06	13363.79
0032	8910.95	13490.92
0033	8914.59	13361.15
0034	8916.33	13488.25
0035	8920.09	13358.53
0036	8921.58	13485.65
0037	8925.50	13355.98
0038	8926.85	13483.06
0039	8930.96	13353.37
0040	8932.11	13480.48
0041	8936.40	13350.86
0042	8937.46	13477.87
0043	8941.82	13348.33
0044	8942.66	13475.34
0045	8946.44	13461.25
0046	8947.26	13345.81
0047	8948.01	13472.76
0048	8952.71	13343.29
0049	8953.30	13470.22
0050	8958.16	13340.79
0051	8958.64	13467.66
0052	8963.62	13338.29
0053	8963.93	13465.14
0054	8969.08	13335.81
0055	8969.26	13462.62
0056	8974.51	13333.36
0057	8974.71	13460.04
0058	8980.02	13330.87
0059	8980.09	13457.50
0060	8985.50	13328.49
0061	8985.51	13454.94
0062	8990.94	13325.95
0063	8990.95	13452.37
0064	8995.04	13338.47
0065	8996.38	13449.80
0066	8996.41	13323.37
0067	9001.81	13447.24
0068	9001.83	13320.80
0069	9007.23	13444.68
0070	9007.26	13318.24
0071	9012.66	13442.11
0072	9012.66	13315.69
0073	9018.08	13439.55
0074	9018.09	13313.12
0075	9023.51	13310.56
0076	9023.56	13436.96
0077	9028.93	13434.42
0078	9028.94	13308.00
0079	9034.32	13305.46
0080	9034.39	13431.85
0081	9036.84	13418.46
0082	9039.75	13302.89
0083	9039.81	13429.29
0084	9045.17	13300.33
0085	9045.19	13426.75
0086	9050.60	13297.77
0087	9050.61	13424.18
0088	9056.04	13421.62
0089	9056.09	13295.17
0090	9061.48	13419.05
0091	9061.51	13292.61
0092	9066.91	13416.48
0093	9066.94	13290.05
0094	9072.34	13413.92
0095	9072.36	13287.49
0096	9077.76	13411.36
0097	9077.76	13284.93
0098	9083.23	13408.77
0099	9086.98	13295.04
0100	9088.66	13406.21
0101	9094.08	13403.65
0102	9099.51	13401.08
0103	9104.86	13398.55
0104	9110.29	13395.99
0105	9115.71	13393.43
0106	9121.14	13390.87
0107	9125.47	13376.58
0108	9126.59	13388.29

NOTES

1. FOR GENERAL NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00306 (PAL-PJT-CIV-DWG-00-X-0306).
2. ALL DMM TOP ELEVATIONS SHALL BE AT +3.00 AND ALL DMM TIP ELEVATIONS SHALL BE AT -39.00.

STATE OF TEXAS
FRANCISCO JOSE ARIAS ESCUDERO
112293
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	12-11-2024	ISSUED FOR CONSTRUCTION	FG	AP	FA	KR	SK								

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
LEVEE DMM AREA 2 - CONTROL POINTS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-0308	000	26196-100-CG-000-00308	000

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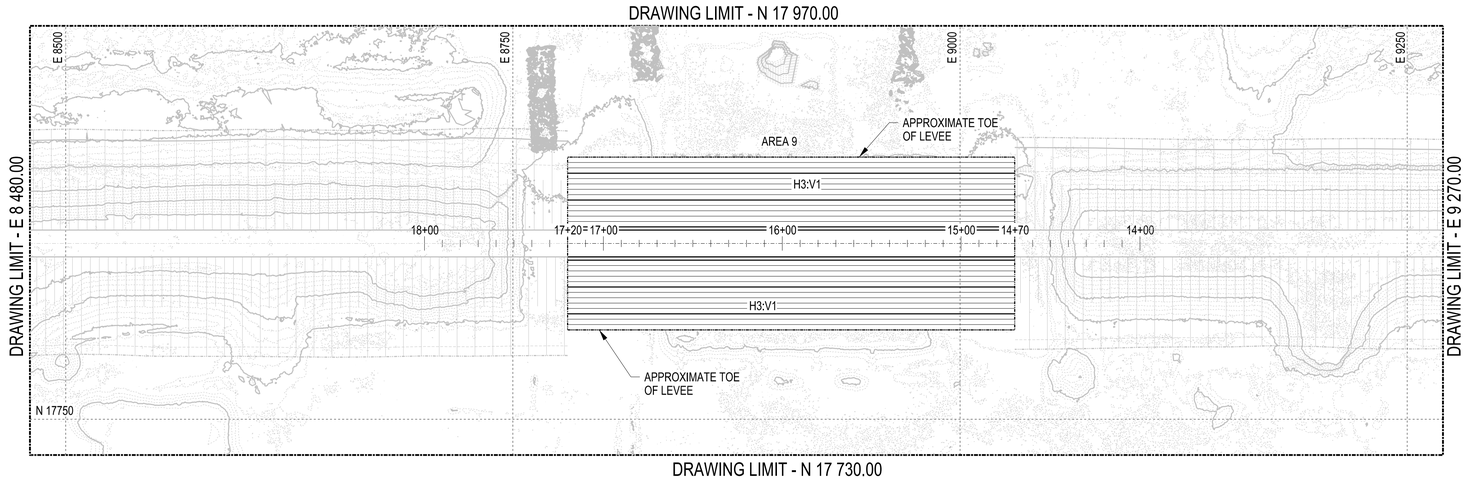
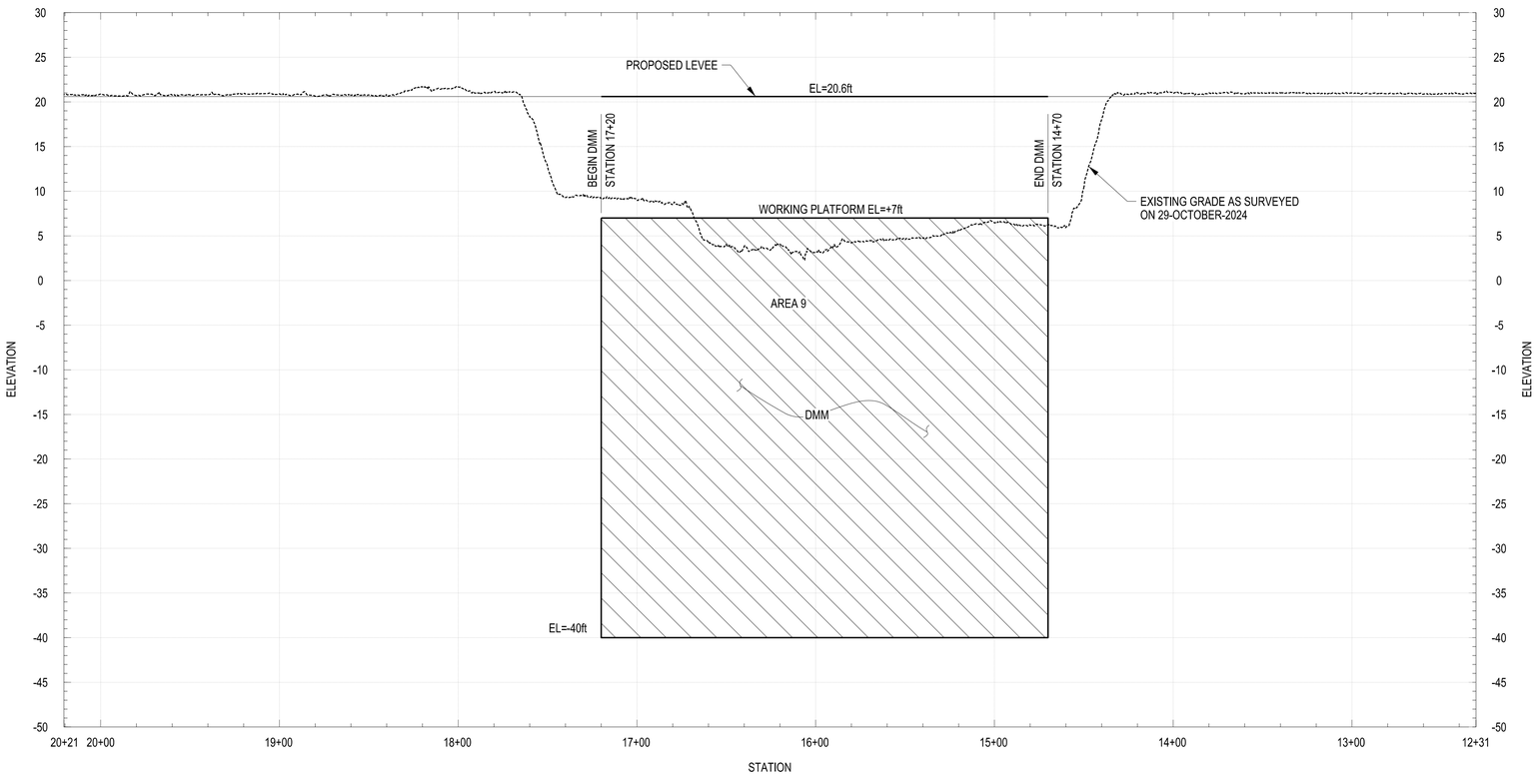


PLAN



PROFILE

H1 : V5

NOTES:

1. THE MINIMUM UNCONFINED COMPRESSIVE STRENGTH FOR THE DMM ELEMENTS SHALL BE 150 PSI AFTER 90 DAYS.
2. REFER TO THE LATEST VERSION OF PROJECT SPECIFICATION FOR DEEP MIXING METHOD (26196-100-3PS-CY05-00001) FOR FURTHER INFORMATION AND ACCEPTANCE TESTING REQUIREMENTS.
3. ALL CORE HOLES FROM PRODUCTION TESTING SHALL BE BACKFILLED WITH FLOWABLE FILL OR EQUIVALENT PRODUCT OF MIN COMPRESSIVE STRENGTH 150 PSI, USING THE TREMIE METHOD.
4. SUBCONTRACTOR SHALL SUBMIT TO CONTRACTOR DETAILS OF EQUIPMENT, MATERIALS, MEANS, METHODS AND PROCEDURES TO INSTALL THE DMM AS REQUIRED BY THE LATEST VERSION OF THE PROJECT SPECIFICATION FOR DEEP MIXING METHOD (26196-100-3PS-CY05-00001).
5. DMM TAKE OFF ESTIMATED AT 15,870 CY.
6. HORIZONTAL CONTROL IS IN PLANT COORDINATES AND ELEVATION IN NAVD 88.
7. EMBANKMENT FILL CONSTRUCTED ON DMM DOES NOT REQUIRE ANY COMPENSATION FILL.
8. LEVEE FILL RATE IS RESTRICTED TO 1FT OF ELEVATION GAIN PER DAY.
9. TWO INCLINOMETERS SHALL BE INSTALLED AT THE EMBANKMENT NORTHERN TOE, ONE AT STA 15+00 AND ANOTHER AT STA 17+00, TIPPED AT ELEVATION -100'-0". IN ADDITION, TWO SETTLEMENT PLATES SHALL BE INSTALLED AT THE SAME STATIONS, AT THE TOP OF DMM AND AT THE MIDDLE OF THE LEVEE CREST. INSTRUMENTATION SHALL BE INSTALLED AS SOON AS DMM IN THE RESPECTIVE AREAS IS COMPLETED AND PRIOR TO ANY EMBANKMENT CONSTRUCTION COMMENCES. READINGS SHALL BE OBTAINED DAILY DURING FILL PLACEMENT AND FOR 2 WEEKS AFTER REACHING FINAL ELEVATION AND BIWEEKLY THEREAFTER UNTIL STABILIZATION OF SETTLEMENTS IS ACHIEVED AS DIRECTED BY THE FILED GEOTECHNICAL ENGINEER.

LEGEND:

EXISTING GRADE CONTOUR LEVEL INTERVAL IS AT 1.0 FT.
(AS SURVEYED ON 29-OCTOBER-2024)

MAJOR CONTOUR

MINOR CONTOUR

LEVEE PROPOSED CONTOUR LEVEL INTERVAL IS AT 1.0 FT.

MAJOR CONTOUR

MINOR CONTOUR

0 40' 80'
SCALE 1" = 40'

STATE OF TEXAS
FRANCISCO JOSE ARIAS ESCUDERO
112293
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: 1"=40'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	12-16-2024	ISSUED FOR CONSTRUCTION	WY	AP	FA	KR	SK								

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
LEVEE DMM AREA 9 - PLAN & PROFILE

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	
PAL-PJT-CIV-DWG-00-X-0309	000	26196-100-CG-000-00309	000

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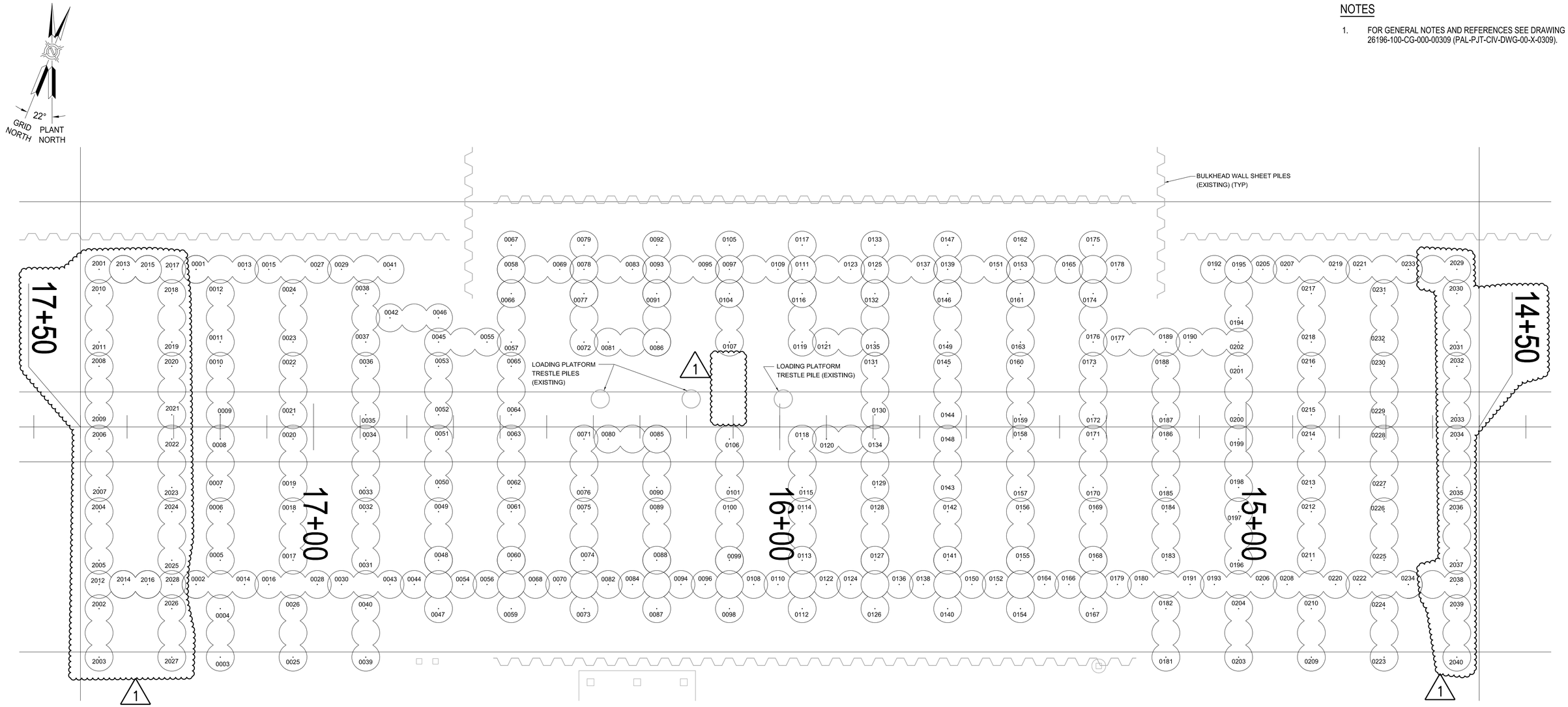
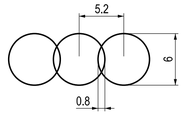
NOTES

1. FOR GENERAL NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00309 (PAL-PJT-CIV-DWG-00-X-0309).





DETAIL - LAYOUT OF AUGER EQUIPMENT

REFERENCE DRAWINGS:

26196-100-CG-000-00311- AREA 9 CONTROL POINTS
(PAL-PJT-CIV-DWG-00-X-0311)

0 5' 10' 20'
SCALE 1" = 10'

STATE OF TEXAS
FRANCISCO JOSE ARIAS ESCUDERO
112293
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
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NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	12-12-2024	ISSUED FOR CONSTRUCTION	FG	AP	FA	KR	SK								
001	02-25-2025	ISSUED FOR CONSTRUCTION	FG	AP	FA	AH	SK								

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
LEVEE DMM AREA 9 - SECTION DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-0310	001	26196-100-CG-000-00310	001

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CONTROL POINT	EASTING	NORTHING
0001	8775.39	17882.09
0002	8775.39	17814.49
0003	8780.59	17798.89
0004	8780.59	17809.29
0005	8780.59	17819.69
0006	8780.59	17830.09
0007	8780.59	17835.29
0008	8780.59	17845.69
0009	8780.59	17850.89
0010	8780.59	17861.29
0011	8780.59	17866.49
0012	8780.59	17876.89
0013	8785.79	17882.09
0014	8785.79	17814.49
0015	8790.99	17882.09
0016	8790.99	17814.49
0017	8796.19	17819.69
0018	8796.19	17830.09
0019	8796.19	17835.29
0020	8796.19	17845.69
0021	8796.19	17850.89
0022	8796.19	17861.29
0023	8796.19	17866.49
0024	8796.19	17876.89
0025	8796.19	17798.89
0026	8796.19	17809.29
0027	8801.39	17882.09
0028	8801.39	17814.49
0029	8806.59	17882.09
0030	8806.59	17814.49
0031	8811.79	17819.69
0032	8811.79	17830.09
0033	8811.79	17835.29
0034	8811.79	17845.69
0035	8811.79	17850.89
0036	8811.79	17861.29
0037	8811.79	17866.49
0038	8811.79	17876.89
0039	8811.79	17798.89
0040	8811.79	17809.29
0041	8816.99	17882.09
0042	8816.99	17871.69
0043	8816.99	17814.49
0044	8822.19	17814.49
0045	8827.39	17866.49
0046	8827.39	17871.69
0047	8827.39	17809.29
0048	8827.39	17819.69
0049	8827.39	17830.09
0050	8827.39	17835.29
0051	8827.39	17845.69
0052	8827.39	17850.89
0053	8827.39	17861.29
0054	8832.59	17814.49
0055	8837.79	17866.49
0056	8837.79	17814.49
0057	8842.99	17866.49
0058	8842.99	17882.09
0059	8842.99	17809.29
0060	8842.99	17819.69
0061	8842.99	17830.09
0062	8842.99	17835.29
0063	8842.99	17845.69
0064	8842.99	17850.89
0065	8842.99	17861.29
0066	8842.99	17876.89
0067	8842.99	17887.29
0068	8848.19	17814.49
0069	8853.39	17882.09
0070	8853.39	17814.49
0071	8858.59	17845.69
0072	8858.59	17866.49
0073	8858.59	17809.29
0074	8858.59	17819.69
0075	8858.59	17830.09
0076	8858.59	17835.29
0077	8858.59	17876.89
0078	8858.59	17882.09
0079	8858.59	17887.29
0080	8863.79	17845.69
0081	8863.79	17866.49
0082	8863.79	17814.49
0083	8868.99	17882.09
0084	8868.99	17814.49
0085	8874.19	17845.69
0086	8874.19	17866.49
0087	8874.19	17809.29
0088	8874.19	17819.69
0089	8874.19	17830.09
0090	8874.19	17835.29
0091	8874.19	17876.89
0092	8874.19	17887.29
0093	8874.19	17882.09
0094	8879.39	17814.49
0095	8884.59	17882.09
0096	8884.59	17814.49
0097	8889.79	17882.09
0098	8889.79	17809.29
0099	8889.79	17819.69
0100	8889.79	17830.09
0101	8889.79	17835.29
0102	-	-
0103	-	-
0104	8889.79	17876.89
0105	8889.79	17887.29
0106	8889.79	17845.69
0107	8889.79	17866.49
0108	8894.99	17814.49
0109	8900.19	17882.09
0110	8900.19	17814.49
0111	8905.39	17882.09
0112	8905.39	17809.29
0113	8905.39	17819.69
0114	8905.39	17830.09
0115	8905.39	17835.29
0116	8905.39	17876.89
0117	8905.39	17887.29
0118	8905.39	17845.69

CONTROL POINT	EASTING	NORTHING
0119	8905.39	17866.49
0120	8910.59	17845.69
0121	8910.59	17866.49
0122	8910.59	17814.49
0123	8915.79	17882.09
0124	8915.79	17814.49
0125	8920.99	17882.09
0126	8920.99	17809.29
0127	8920.99	17819.69
0128	8920.99	17830.09
0129	8920.99	17835.29
0130	8920.99	17850.89
0131	8920.99	17861.29
0132	8920.99	17876.89
0133	8920.99	17887.29
0134	8920.99	17845.69
0135	8920.99	17866.49
0136	8926.19	17814.49
0137	8931.39	17882.09
0138	8931.39	17814.49
0139	8936.59	17882.09
0140	8936.59	17809.29
0141	8936.59	17819.69
0142	8936.59	17830.09
0143	8936.59	17835.29
0144	8936.59	17850.89
0145	8936.59	17861.29
0146	8936.59	17876.89
0147	8936.59	17887.29
0148	8936.59	17845.69
0149	8936.59	17866.49
0150	8941.79	17814.49
0151	8946.99	17882.09
0152	8946.99	17814.49
0153	8952.19	17882.09
0154	8952.19	17809.29
0155	8952.19	17819.69
0156	8952.19	17830.09
0157	8952.19	17835.29
0158	8952.19	17845.69
0159	8952.19	17850.89
0160	8952.19	17861.29
0161	8952.19	17876.89
0162	8952.19	17887.29
0163	8952.19	17866.49
0164	8957.39	17814.49
0165	8962.59	17882.09
0166	8962.59	17814.49
0167	8967.79	17809.29
0168	8967.79	17819.69
0169	8967.79	17830.09
0170	8967.79	17835.29
0171	8967.79	17845.69
0172	8967.79	17850.89
0173	8967.79	17861.29
0174	8967.79	17876.89
0175	8967.79	17887.29
0176	8967.79	17866.49
0177	8972.99	17866.49
0178	8972.99	17882.09
0179	8972.99	17814.49
0180	8978.19	17814.49
0181	8983.39	17798.89
0182	8983.39	17809.29
0183	8983.39	17819.69
0184	8983.39	17830.09
0185	8983.39	17835.29
0186	8983.39	17845.69
0187	8983.39	17850.89
0188	8983.39	17861.29
0189	8983.39	17866.49
0190	8988.59	17866.49
0191	8988.59	17814.49
0192	8993.79	17882.09
0193	8993.79	17814.49
0194	8998.99	17871.69
0195	8998.99	17882.09
0196	8998.99	17819.69
0197	8998.99	17830.09
0198	8998.99	17835.29
0199	8998.99	17845.69
0200	8998.99	17850.89
0201	8998.99	17861.29
0202	8998.99	17866.49
0203	8998.99	17798.89
0204	8998.99	17809.29
0205	9004.19	17882.09
0206	9004.19	17814.49
0207	9009.39	17882.09
0208	9009.39	17814.49
0209	9014.59	17798.89
0210	9014.59	17809.29
0211	9014.59	17819.69
0212	9014.59	17830.09
0213	9014.59	17835.29
0214	9014.59	17845.69
0215	9014.59	17850.89
0216	9014.59	17861.29
0217	9014.59	17876.89
0218	9014.59	17866.49
0219	9019.79	17882.09
0220	9019.79	17814.49
0221	9024.99	17882.09
0222	9024.99	17814.49
0223	9030.19	17798.89
0224	9030.19	17809.29
0225	9030.19	17819.69
0226	9030.19	17830.09
0227	9030.19	17835.29
0228	9030.19	17845.69
0229	9030.19	17850.89
0230	9030.19	17861.29
0231	9030.19	17876.89
0232	9030.19	17866.49
0233	9035.39	17882.09
0234	9035.39	17814.49

CONTROL POINT	EASTING	NORTHING
2001	8754.59	17882.09
2002	8754.60	17809.29
2003	8754.60	17798.89
2004	8754.60	17830.09
2005	8754.60	17819.69
2006	8754.60	17845.69
2007	8754.60	17835.29
2008	8754.60	17861.29
2009	8754.60	17850.89
2010	8754.60	17876.89
2011	8754.60	17866.49
2012	8754.60	17814.49
2013	8759.79	17882.09
2014	8759.80	17814.49
2015	8764.99	17882.09
2016	8765.00	17814.49
2017	8770.19	17882.09
2018	8770.19	17876.89
2019	8770.19	17866.49
2020	8770.19	17861.29
2021	8770.19	17850.89
2022	8770.19	17845.69
2023	8770.19	17835.29
2024	8770.19	17830.09
2025	8770.19	17819.69
2026	8770.19	17809.29
2027	8770.19	17798.89
2028	8770.19	17814.49
2029	9045.79	17882.09
2030	9045.79	17876.89
2031	9045.79	17866.49
2032	9045.79	17861.29
2033	9045.79	17850.89
2034	9045.79	17845.69
2035	9045.79	17835.29
2036	9045.79	17830.09
2037	9045.79	17819.69
2038	9045.79	17814.49
2039	9045.79	17809.29
2040	9045.79	17798.89

1

NOTES

1. FOR GENERAL NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00309 (PAL-PJT-CIV-DWG-00-X-0309).
2. ALL DMM TOP ELEVATIONS SHALL BE AT +7.00 AND ALL DMM TIP ELEVATIONS SHALL BE AT -40.00.
3. CONTROL POINTS MARKED WITH A "-" FOR THE COORDINATES ARE NO LONGER REQUIRED.

1

STATE OF TEXAS
FRANCISCO JOSE ARIAS ESCUDERO
112293
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	01-06-2025	ISSUED FOR CONSTRUCTION	FG	AP	FA	KR	SK
001	02-25-2025	ISSUED FOR CONSTRUCTION	FG	AP	FA	AH	SK

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM

PORT ARTHUR LIQUEFACTION PROJECT
CIVIL SITEWORK
LEVEE DMM AREA 9 - CONTROL POINTS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-0311	001	26196-100-CG-000-00311	001

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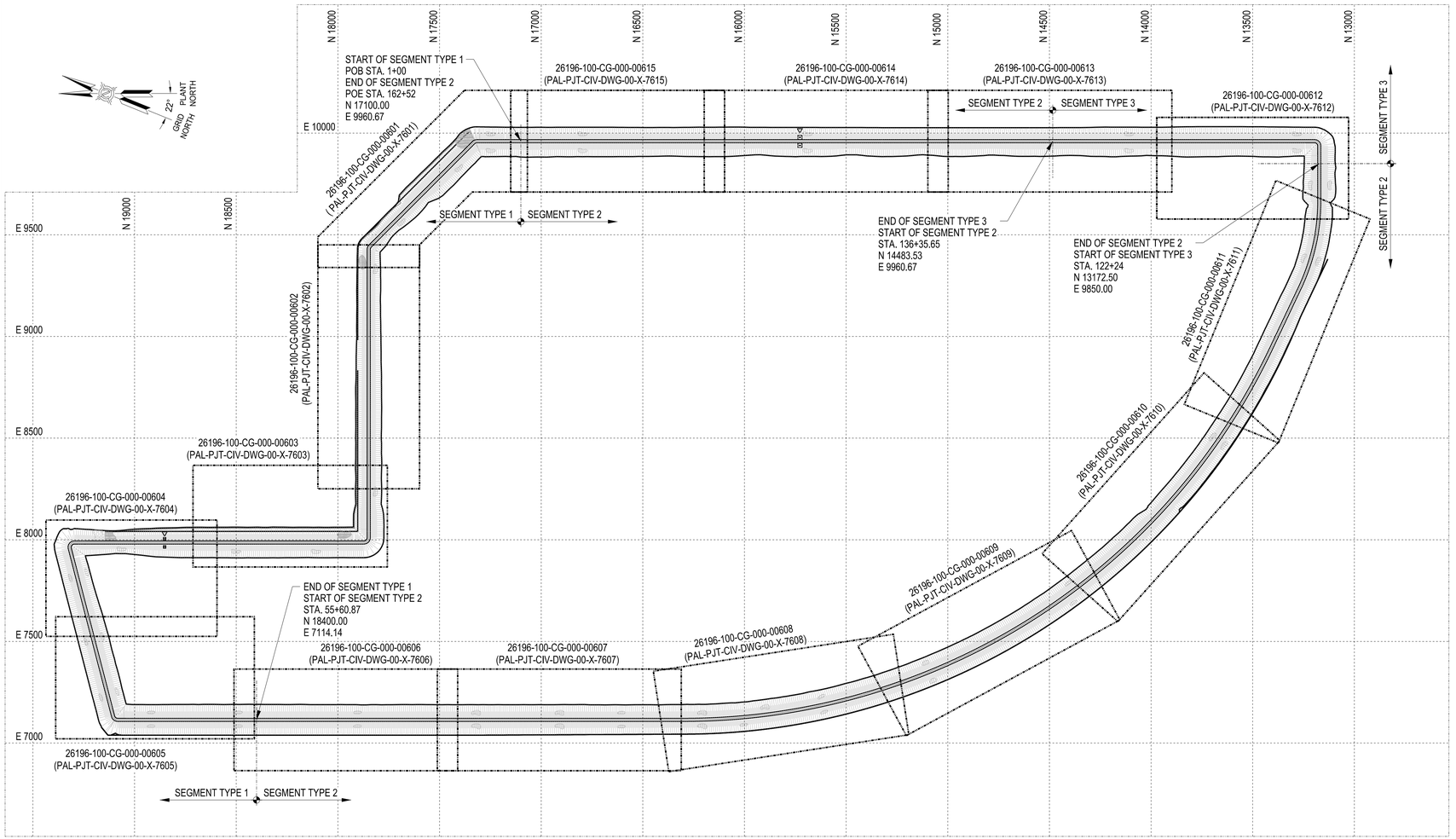

NOTES

1. FOR GENERAL NOTES AND REFERENCES, SEE DRAWING 26196-100-C0-000-00005 (PAL-PJT-CIV-DWG-00-X-0005).
2. ALL DIMENSIONS, ELEVATIONS AND COORDINATES ARE IN FEET, UNLESS NOTED OTHERWISE.
3. FOR LEVEE SOIL IMPROVEMENT AND LEVEE CONSTRUCTION SEQUENCE, SEE DRAWINGS 26196-100-CG-000-00200 (PAL-PJT-CIV-DWG-00-X-8200) THROUGH 26196-100-CG-000-00229 (PAL-PJT-CIV-DWG-00-X-8229).
4. FOR HEAVY HAUL ROAD PLANS AND PROFILES, SEE DRAWINGS 26196-100-CG-000-00550 (PAL-PJT-CIV-DWG-00-X-1550) THROUGH 26196-100-CG-000-00564 (PAL-PJT-CIV-DWG-00-X-1564).
5. ALL LEVEE MATERIALS AND LEVEE CONSTRUCTION SHALL ADHERE TO PROJECT SPECIFICATION FOR SITE PREPARATION AND EARTHWORKS, 26196-100-3PS-CG00-00001 (PAL-PJT-CIV-STD-00-X-0001).
6. WORK SHALL NOT DISTURB EXISTING UNDERGROUND PIPELINES AND UTILITIES. IF AN UNKNOWN PIPELINE OR UTILITY IS ENCOUNTERED, STOP WORK IMMEDIATELY AND NOTIFY THE RESIDENT ENGINEER FOR FURTHER DIRECTION.
7. FOR SHEET PILE LOCATION, SEE SOIL IMPROVEMENT DRAWINGS 26196-100-CG-000-00200 (PAL-PJT-CIV-DWG-00-X-8200) THROUGH 26196-100-CG-000-00229 (PAL-PJT-CIV-DWG-00-X-8229).
8. FOR MARINE SHEET PILE, SEE DRAWING 26196-100-R0-100A2-00301 (PAL-T0-MAR-PLN-24-GEN-0301).
9. FOR TURF REINFORCED MAT SLOPE PROTECTION DETAILS, SEE DRAWING 26196-100-C0-000-00031 (PAL-PJT-CIV-DWG-00-X-8031).
10. SECURITY FENCING AND PATROL ROAD ON TOP OF THE LEVEE SHALL BE COMPLETED AFTER ALL SHORT-TERM SETTLEMENT FOR THE LEVEE HAS TAKEN PLACE, AS DETERMINED BY THE PROJECT GEOTECHNICAL ENGINEER.
11. FOR LEVEE SEGMENT TYPE TYPICAL SECTIONS, SEE DRAWINGS 26196-100-CG-000-00650 (PAL-PJT-CIV-DWG-00-X-7650) AND 26196-100-CG-000-00651 (PAL-PJT-CIV-DWG-00-X-7651).
12. FOR ARMOUR ROCK SHORE PROTECTION, REFER TO MARINE DRAWINGS.
13. FOR RIPRAP APRON DETAIL AT OUTFALLS, SEE DRAWING 26196-100-C0-000-00030 (PAL-PJT-CIV-DWG-00-X-8030).
14. FOUNDATION LOCATIONS ON THE LEVEE PLANS ARE APPROXIMATE AND FOR REFERENCE ONLY, NOT FOR CONSTRUCTION.
15. FOR FLEXIBLE PAVEMENT ROAD TYPICAL SECTIONS, SEE DRAWING 26196-100-C0-000-00010 (PAL-PJT-CIV-DWG-00-X-1010).
16. FOR SECURITY FENCE POST CONCRETE FOOTING DETAILS, SEE DRAWING 26196-100-C0-000-00061 (PAL-PJT-CIV-DWG-00-X-8061).
17. NO PERMANENT FILL SHALL BE PLACED BEFORE SOIL IMPROVEMENT IS COMPLETED AND DESIRED SOIL STRENGTH HAS BEEN ACHIEVED. GEOTECHNICAL ENGINEER APPROVAL SHALL BE OBTAINED PRIOR TO LEVEE FILL PLACEMENT.
18. LOW PERMEABILITY FILL SHALL BE COMPACTED TO AT LEAST 92% MODIFIED MAXIMUM DRY DENSITY PER ASTM D 1557.

002

DRAWING LIST

PALNG DRAWING NO.	BECHTEL DRAWING NO.	TITLE
PAL-PJT-CIV-DWG-00-X-7601	26196-100-CG-000-00601	LEVEE SEGMENT TYPE 1 PLAN & PROFILE - POB STA. 1+00 TO STA. 11+00
PAL-PJT-CIV-DWG-00-X-7602	26196-100-CG-000-00602	LEVEE SEGMENT TYPE 1 PLAN & PROFILE - STA. 11+00 TO STA. 22+00
PAL-PJT-CIV-DWG-00-X-7603	26196-100-CG-000-00603	LEVEE SEGMENT TYPE 1 PLAN & PROFILE - STA. 22+00 TO STA. 33+00
PAL-PJT-CIV-DWG-00-X-7604	26196-100-CG-000-00604	LEVEE SEGMENT TYPE 1 PLAN & PROFILE - STA. 33+00 TO STA. 44+00
PAL-PJT-CIV-DWG-00-X-7605	26196-100-CG-000-00605	LEVEE SEGMENT TYPE 1 PLAN & PROFILE - STA. 44+00 TO STA. 55+00
PAL-PJT-CIV-DWG-00-X-7606	26196-100-CG-000-00606	LEVEE SEGMENT TYPE 1 & 2 PLAN & PROFILE - STA. 55+00 TO STA. 65+00
PAL-PJT-CIV-DWG-00-X-7607	26196-100-CG-000-00607	LEVEE SEGMENT TYPE 2 PLAN & PROFILE - STA. 65+00 TO STA. 76+00
PAL-PJT-CIV-DWG-00-X-7608	26196-100-CG-000-00608	LEVEE SEGMENT TYPE 2 PLAN & PROFILE - STA. 76+00 TO STA. 87+00
PAL-PJT-CIV-DWG-00-X-7609	26196-100-CG-000-00609	LEVEE SEGMENT TYPE 2 PLAN & PROFILE - STA. 87+00 TO STA. 98+00
PAL-PJT-CIV-DWG-00-X-7610	26196-100-CG-000-00610	LEVEE SEGMENT TYPE 2 PLAN & PROFILE - STA. 98+00 TO STA. 109+00
PAL-PJT-CIV-DWG-00-X-7611	26196-100-CG-000-00611	LEVEE SEGMENT TYPE 2 PLAN & PROFILE - STA. 109+00 TO STA. 120+00
PAL-PJT-CIV-DWG-00-X-7612	26196-100-CG-000-00612	LEVEE SEGMENT TYPE 2 & 3 PLAN & PROFILE - STA. 120+00 TO STA. 131+00
PAL-PJT-CIV-DWG-00-X-7613	26196-100-CG-000-00613	LEVEE SEGMENT TYPE 3 & 2 PLAN & PROFILE - STA. 131+00 TO STA. 142+00
PAL-PJT-CIV-DWG-00-X-7614	26196-100-CG-000-00614	LEVEE SEGMENT TYPE 2 PLAN & PROFILE - STA. 142+00 TO STA. 153+00
PAL-PJT-CIV-DWG-00-X-7615	26196-100-CG-000-00615	LEVEE SEGMENT TYPE 2 PLAN & PROFILE - STA. 153+00 TO POE STA. 162+52
PAL-PJT-CIV-DWG-00-X-7616	26196-100-CG-000-00616	LEVEE SEGMENT TYPE 1 CROSS SECTION STA. 1+00 TO STA. 6+00
PAL-PJT-CIV-DWG-00-X-7617	26196-100-CG-000-00617	LEVEE SEGMENT TYPE 1 CROSS SECTION STA. 7+00 TO STA. 12+00
PAL-PJT-CIV-DWG-00-X-7618	26196-100-CG-000-00618	LEVEE SEGMENT TYPE 1 CROSS SECTION STA. 13+00 TO STA. 18+00
PAL-PJT-CIV-DWG-00-X-7619	26196-100-CG-000-00619	LEVEE SEGMENT TYPE 1 CROSS SECTION STA. 19+00 TO STA. 24+00
PAL-PJT-CIV-DWG-00-X-7620	26196-100-CG-000-00620	LEVEE SEGMENT TYPE 1 CROSS SECTION STA. 25+00 TO STA. 30+00
PAL-PJT-CIV-DWG-00-X-7621	26196-100-CG-000-00621	LEVEE SEGMENT TYPE 1 CROSS SECTION STA. 31+00 TO STA. 36+00
PAL-PJT-CIV-DWG-00-X-7622	26196-100-CG-000-00622	LEVEE SEGMENT TYPE 1 CROSS SECTION STA. 37+00 TO STA. 42+00
PAL-PJT-CIV-DWG-00-X-7623	26196-100-CG-000-00623	LEVEE SEGMENT TYPE 1 CROSS SECTION STA. 43+00 TO STA. 48+00
PAL-PJT-CIV-DWG-00-X-7624	26196-100-CG-000-00624	LEVEE SEGMENT TYPE 1 CROSS SECTION STA. 49+00 TO STA. 54+00
PAL-PJT-CIV-DWG-00-X-7625	26196-100-CG-000-00625	LEVEE SEGMENT TYPE 1 & 2 CROSS SECTION STA. 55+00 TO STA. 60+00
PAL-PJT-CIV-DWG-00-X-7626	26196-100-CG-000-00626	LEVEE SEGMENT TYPE 2 CROSS SECTION STA. 61+00 TO STA. 66+00
PAL-PJT-CIV-DWG-00-X-7627	26196-100-CG-000-00627	LEVEE SEGMENT TYPE 2 CROSS SECTION STA. 67+00 TO STA. 72+00
PAL-PJT-CIV-DWG-00-X-7628	26196-100-CG-000-00628	LEVEE SEGMENT TYPE 2 CROSS SECTION STA. 73+00 TO STA. 78+00
PAL-PJT-CIV-DWG-00-X-7629	26196-100-CG-000-00629	LEVEE SEGMENT TYPE 2 CROSS SECTION STA. 79+00 TO STA. 84+00
PAL-PJT-CIV-DWG-00-X-7630	26196-100-CG-000-00630	LEVEE SEGMENT TYPE 2 CROSS SECTION STA. 85+00 TO STA. 90+00
PAL-PJT-CIV-DWG-00-X-7631	26196-100-CG-000-00631	LEVEE SEGMENT TYPE 2 CROSS SECTION STA. 91+00 TO STA. 96+00
PAL-PJT-CIV-DWG-00-X-7632	26196-100-CG-000-00632	LEVEE SEGMENT TYPE 2 CROSS SECTION STA. 97+00 TO STA. 102+00
PAL-PJT-CIV-DWG-00-X-7633	26196-100-CG-000-00633	LEVEE SEGMENT TYPE 2 CROSS SECTION STA. 103+00 TO STA. 108+00
PAL-PJT-CIV-DWG-00-X-7634	26196-100-CG-000-00634	LEVEE SEGMENT TYPE 2 CROSS SECTION STA. 109+00 TO STA. 114+00
PAL-PJT-CIV-DWG-00-X-7635	26196-100-CG-000-00635	LEVEE SEGMENT TYPE 2 CROSS SECTION STA. 115+00 TO STA. 120+00
PAL-PJT-CIV-DWG-00-X-7636	26196-100-CG-000-00636	LEVEE SEGMENT TYPE 2 & 3 CROSS SECTION STA. 121+00 TO STA. 126+00
PAL-PJT-CIV-DWG-00-X-7637	26196-100-CG-000-00637	LEVEE SEGMENT TYPE 3 CROSS SECTION STA. 127+00 TO STA. 132+00
PAL-PJT-CIV-DWG-00-X-7638	26196-100-CG-000-00638	LEVEE SEGMENT TYPE 3 & 2 CROSS SECTION STA. 133+00 TO STA. 138+00
PAL-PJT-CIV-DWG-00-X-7639	26196-100-CG-000-00639	LEVEE SEGMENT TYPE 2 CROSS SECTION STA. 139+00 TO STA. 144+00
PAL-PJT-CIV-DWG-00-X-7640	26196-100-CG-000-00640	LEVEE SEGMENT TYPE 2 CROSS SECTION STA. 145+00 TO STA. 150+00
PAL-PJT-CIV-DWG-00-X-7641	26196-100-CG-000-00641	LEVEE SEGMENT TYPE 2 CROSS SECTION STA. 151+00 TO STA. 156+00
PAL-PJT-CIV-DWG-00-X-7642	26196-100-CG-000-00642	LEVEE SEGMENT TYPE 2 CROSS SECTION STA. 157+00 TO STA. 162+52
PAL-PJT-CIV-DWG-00-X-7650	26196-100-CG-000-00650	LEVEE TYPICAL SECTIONS AND DETAILS - SHEET 1 OF 2
PAL-PJT-CIV-DWG-00-X-7651	26196-100-CG-000-00651	LEVEE TYPICAL SECTIONS AND DETAILS - SHEET 2 OF 2

300' 0 300' 600'
1" = 300'

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel Energy, Inc.
26196-100
FIRM NO.
F-9684

SCALE: 1" = 300'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK
001	09-29-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/DL	NJ/JS	CD	SK
002	10-16-2023	RE-ISSUED FOR CONSTRUCTION - NOTE 18 ADDED	WY	MC	AP/SW	KR	JT

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 1, 2 & 3 KEY PLAN, NOTES AND DRAWING LIST

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	
PAL-PJT-CIV-DWG-00-X-7600	002	26196-100-CG-000-00600	002

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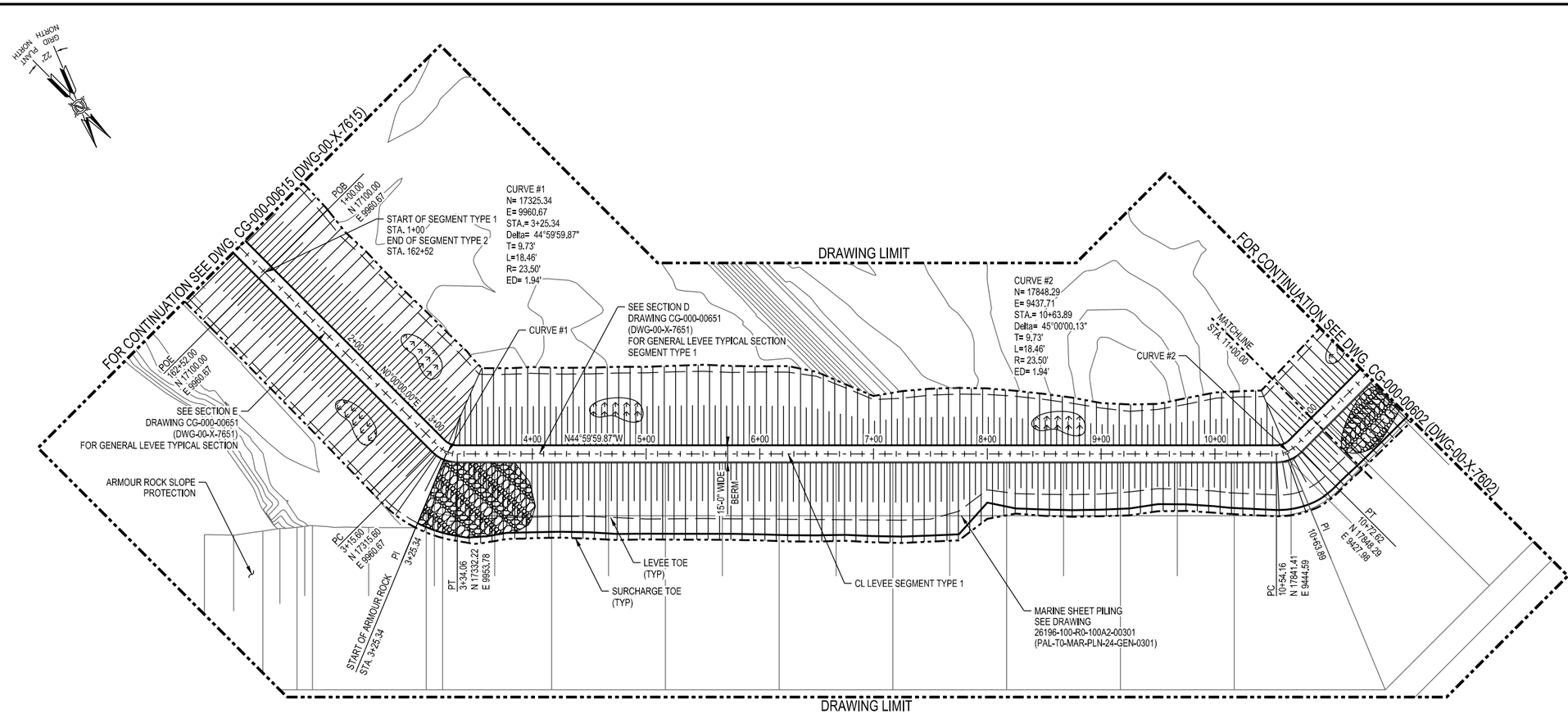
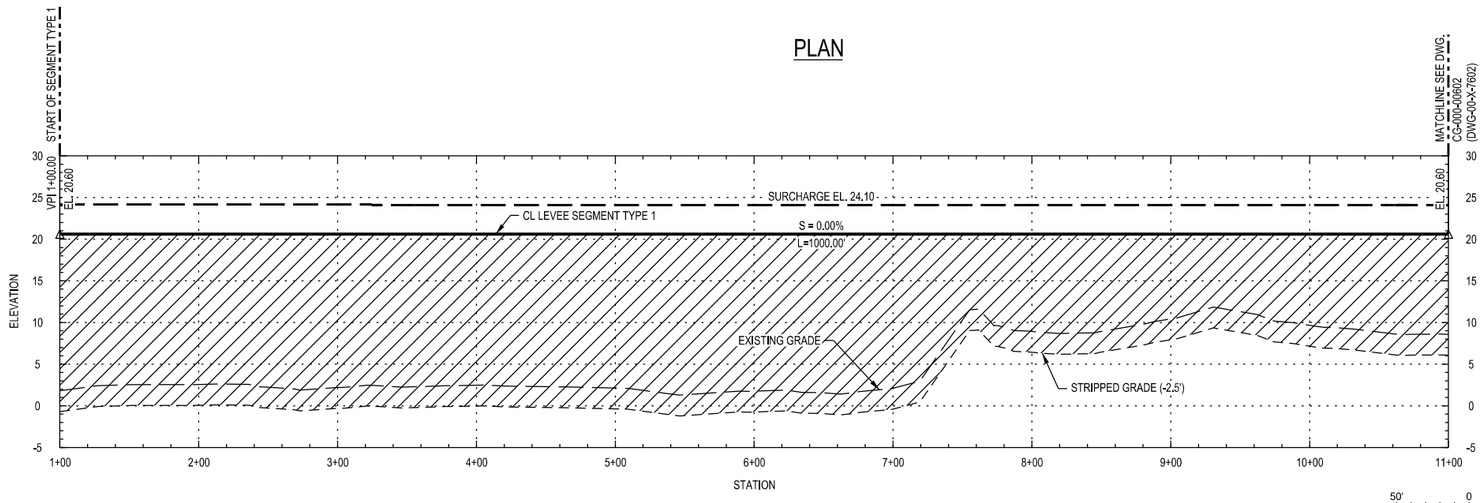
by and among Port Arthur LNG, LLC, PALNG Common Facilities Company, LLC and Bechtel Oil, Gas and Chemicals, Inc.



PLAN



PROFILE

SCALE 1H : 6V

50' 0 50' 100'

1" = 50'

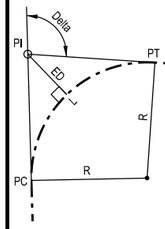
NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR CROSS-SECTIONS SEE DRAWINGS 26196-100-CG-000-00616 (PAL-PJT-CIV-DWG-00-X-7616) & 26196-100-CG-000-00617 (PAL-PJT-CIV-DWG-00-X-7617).

LEGEND

- SLOPE
- GRASS LINED
- EXISTING GRADE
- IMPERVIOUS BACKFILL/LOW PERMEABILITY FILL (PROFILE)
- ARMOUR ROCK
- SURCHARGE FILL EL.

CURVE PROPERTIES & ABBREVIATIONS



STA.	- STATION
T	- LENGTH OF TANGENT
L	- LENGTH
S	- SLOPE
R	- RADIUS OF CURVE
K	- RATE OF VERTICAL CURVATURE
ED	- EXTERNAL DISTANCE
PC	- POINT OF CURVATURE
PI	- POINT OF INTERSECT
PT	- POINT OF TANGENCY
PCC	- POINT OF COMPOUND CURVATURE
POB	- POINT OF BEGINNING
POE	- POINT OF ENDING
VPC	- VERTICAL POINT OF CURVATURE
VPI	- VERTICAL POINT OF INTERSECTION
VPT	- VERTICAL POINT OF TANGENCY
EVT	- EVENT POINT
HI	- HIGH VERTICAL POINT

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O. "26196-100-" BECHTEL ("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

BECHTEL

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 50'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/YY	AP/JS	CD	SK

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 1 PLAN & PROFILE
POB STA. 1+00 TO STA. 11+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7601	000	26196-100-CG-000-00601	000

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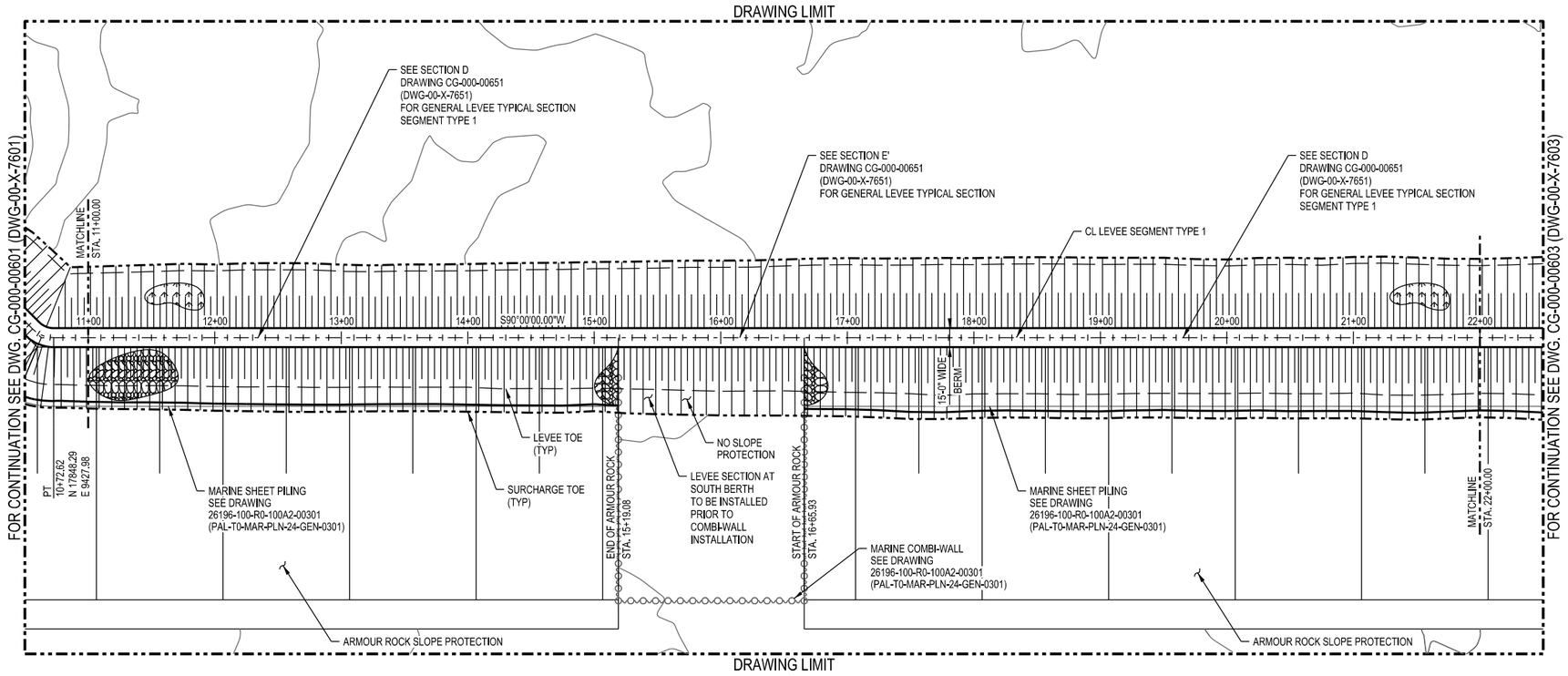
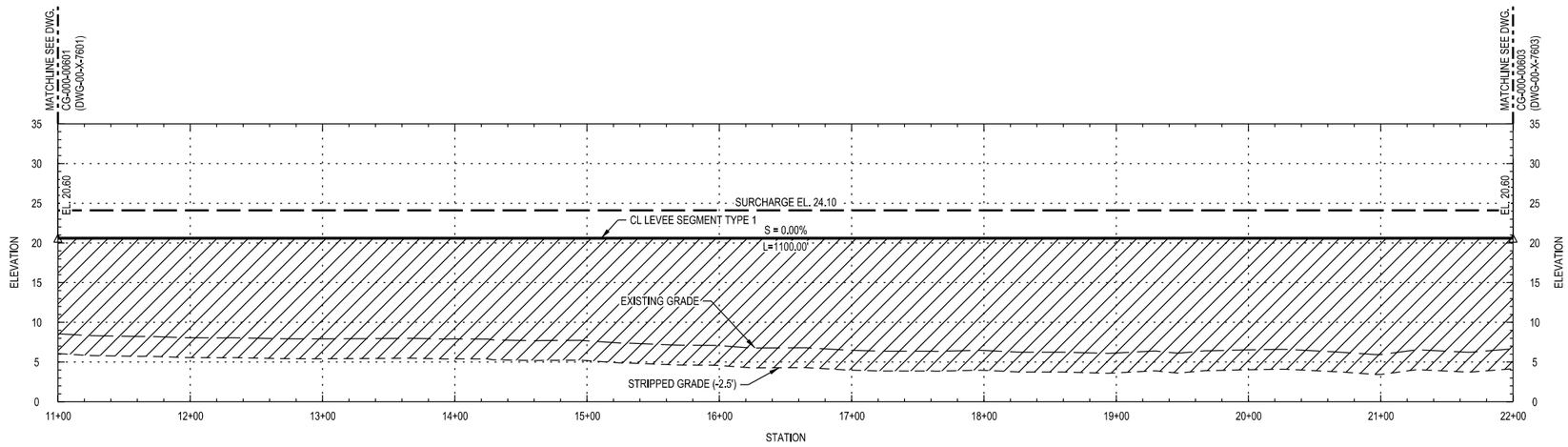


PLAN



PROFILE

SCALE 1H : 6V

NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR CROSS-SECTIONS SEE DRAWINGS 26196-100-CG-000-00617 (PAL-PJT-CIV-DWG-00-X-7617) THROUGH 26196-100-CG-000-00619 (PAL-PJT-CIV-DWG-00-X-7619).

LEGEND

- SLOPE
- GRASS LINED
- EXISTING GRADE
- IMPERVIOUS BACKFILL/LOW PERMEABILITY FILL (PROFILE)
- ARMOUR ROCK
- SURCHARGE FILL EL.

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

50' 0 50' 100'
1" = 50'

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel OG&C.
26196-100
FIRM NO.
F-9684

SCALE: 1" = 50'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-07-2020	ISSUED FOR CONSTRUCTION	WY	VJD/YY	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 1 PLAN & PROFILE
STA. 11+00 TO STA. 22+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7602	000	26196-100-CG-000-00602	000

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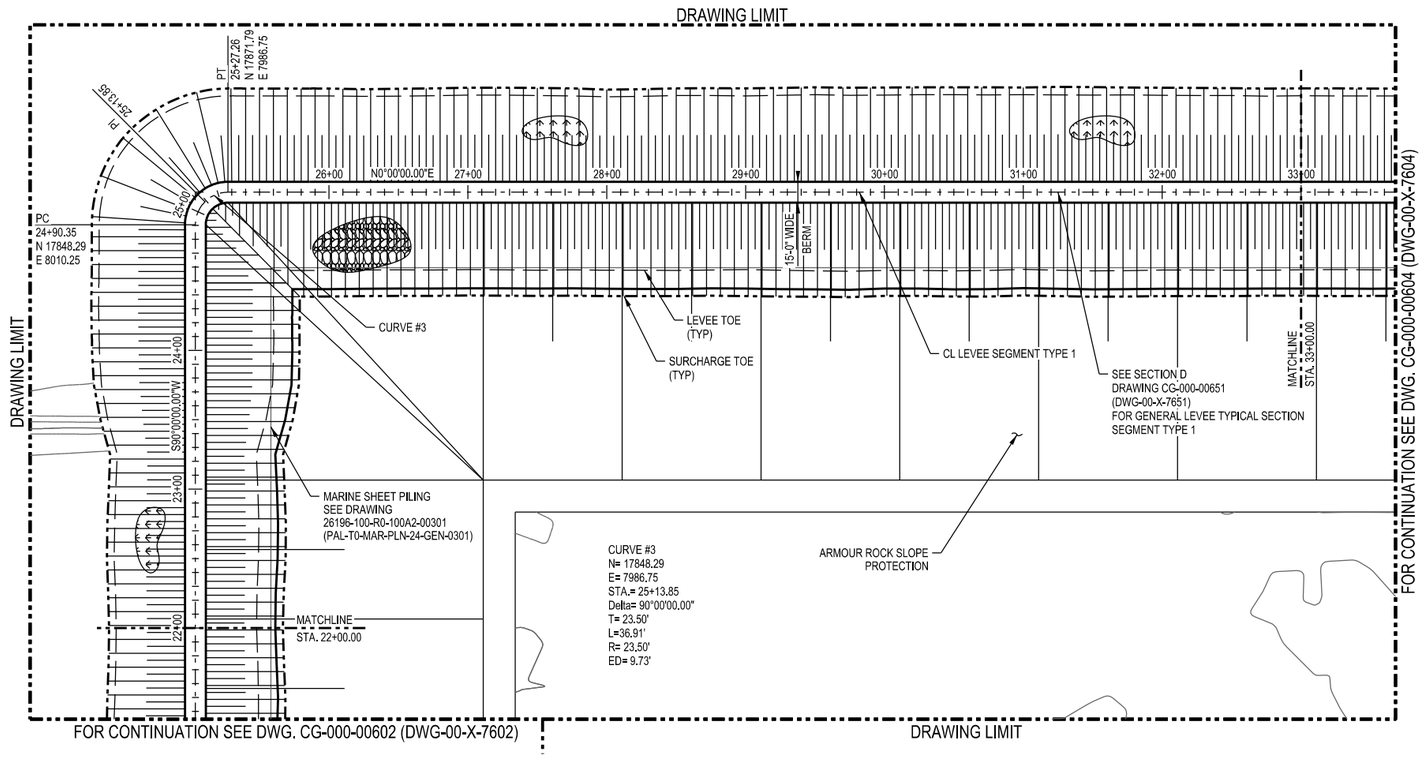
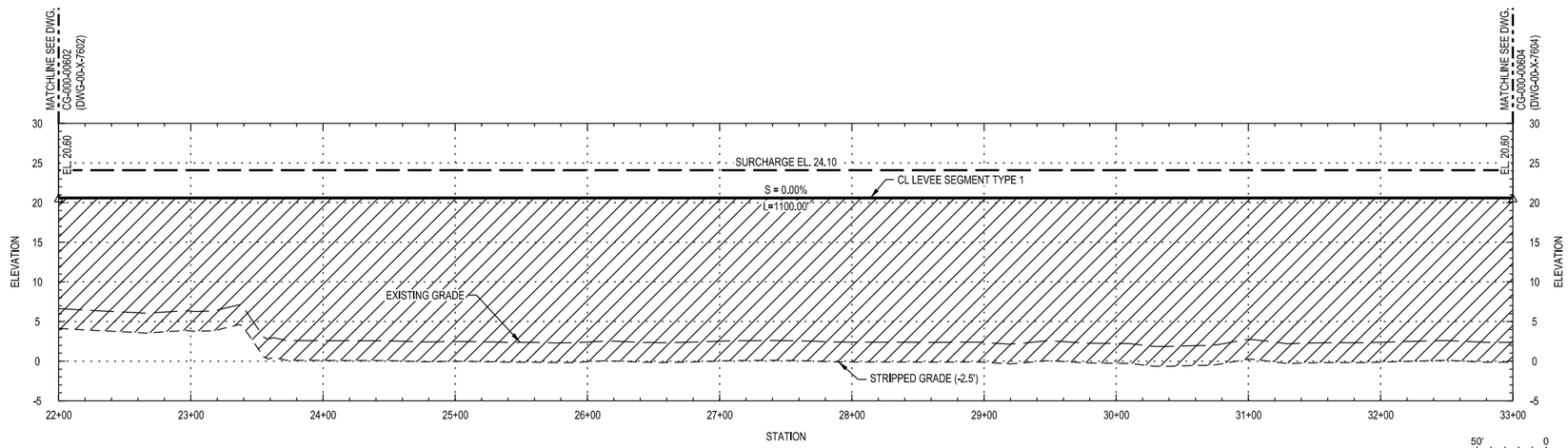


PLAN



PROFILE
SCALE 1H : 6V

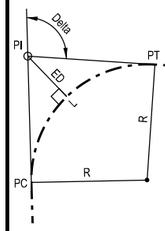
NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR CROSS-SECTIONS SEE DRAWINGS 26196-100-CG-000-00619 (PAL-PJT-CIV-DWG-00-X-7619) THROUGH 26196-100-CG-000-00621 (PAL-PJT-CIV-DWG-00-X-7621).

LEGEND

- SLOPE
- GRASS LINED
- EXISTING GRADE
- IMPERVIOUS BACKFILL/LOW PERMEABILITY FILL (PROFILE)
- ARMOUR ROCK
- SURCHARGE FILL EL.

CURVE PROPERTIES & ABBREVIATIONS



STA.	- STATION
T	- LENGTH OF TANGENT
L	- LENGTH
S	- SLOPE
R	- RADIUS OF CURVE
K	- RATE OF VERTICAL CURVATURE
ED	- EXTERNAL DISTANCE
PC	- POINT OF CURVATURE
PI	- POINT OF INTERSECT
PT	- POINT OF TANGENCY
PCC	- POINT OF COMPOUND CURVATURE
POB	- POINT OF BEGINNING
POE	- POINT OF ENDING
VPC	- VERTICAL POINT OF CURVATURE
VPI	- VERTICAL POINT OF INTERSECTION
VPT	- VERTICAL POINT OF TANGENCY
EVT	- EVENT POINT
HI	- HIGH VERTICAL POINT

50' 0 50' 100'
1" = 50'

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O. "26196-100-" BECHTEL ("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 50'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/YY	AP/JS	CD	SK

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 1 PLAN & PROFILE
STA. 22+00 TO STA. 33+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7603	000	26196-100-CG-000-00603	000

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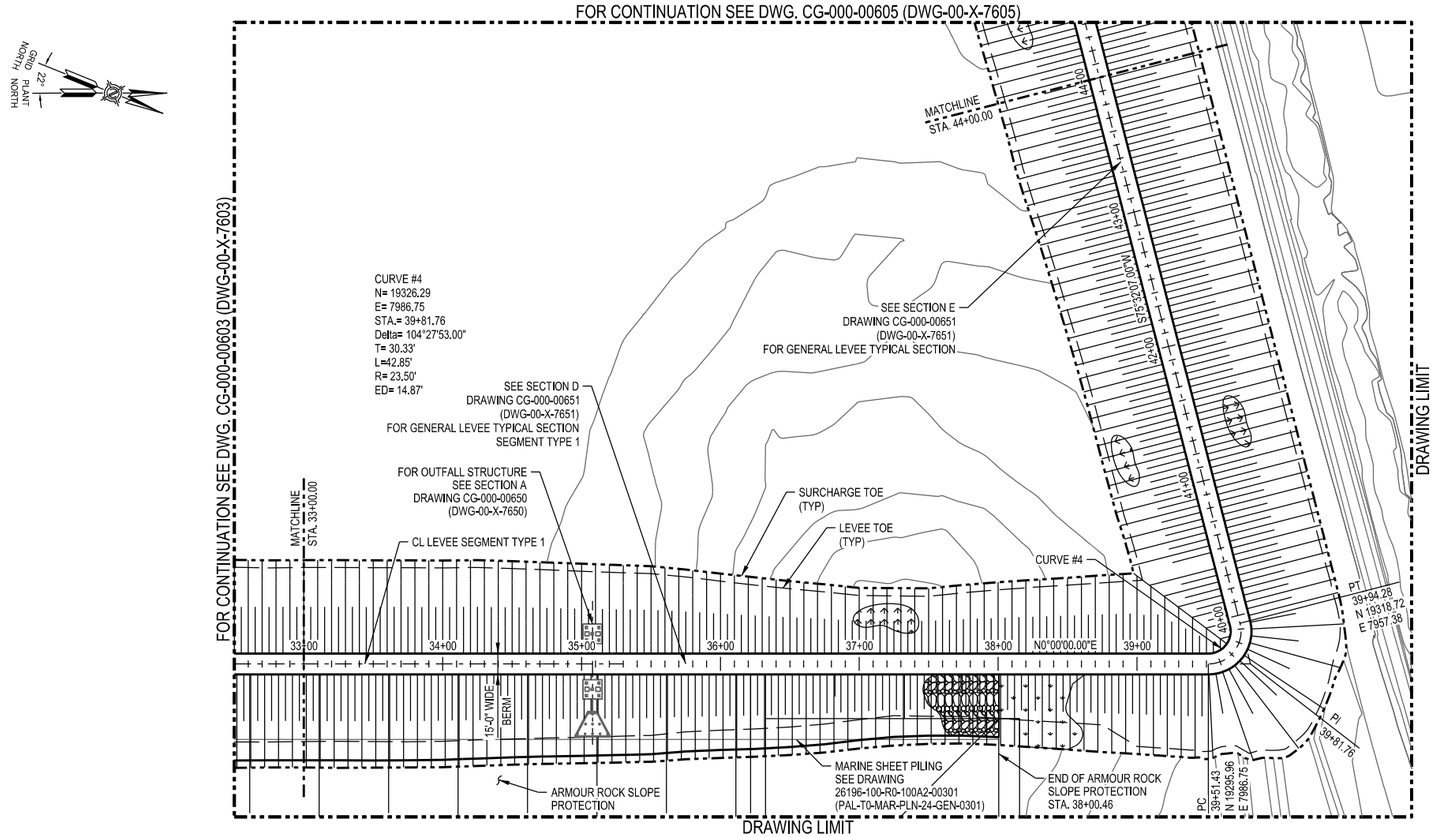
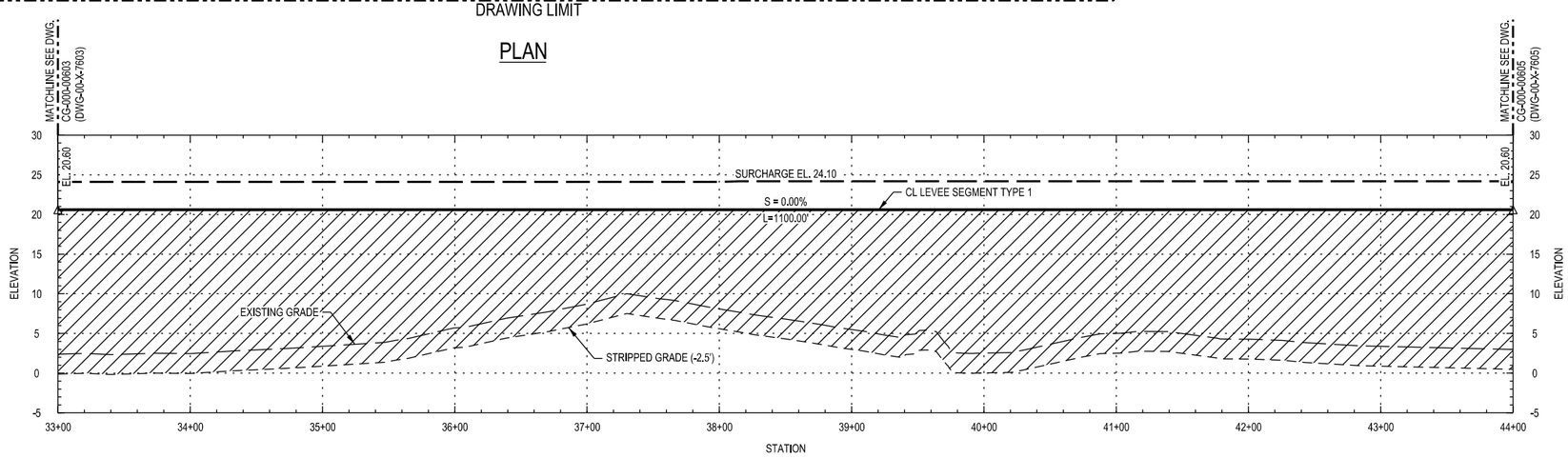


PLAN



PROFILE

SCALE 1H : 6V

50' 0 50' 100'

1" = 50'

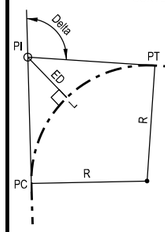
NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR CROSS-SECTIONS SEE DRAWINGS 26196-100-CG-000-00621 (PAL-PJT-CIV-DWG-00-X-7621) THROUGH 26196-100-CG-000-00623 (PAL-PJT-CIV-DWG-00-X-7623).

LEGEND

- SLOPE
- GRASS LINED
- EXISTING GRADE
- IMPERVIOUS BACKFILL/LOW PERMEABILITY FILL (PROFILE)
- ARMOUR ROCK
- SURCHARGE FILL EL.

CURVE PROPERTIES & ABBREVIATIONS



STA.	- STATION
T	- LENGTH OF TANGENT
L	- LENGTH
S	- SLOPE
R	- RADIUS OF CURVE
K	- RATE OF VERTICAL CURVATURE
ED	- EXTERNAL DISTANCE
PC	- POINT OF CURVATURE
PI	- POINT OF INTERSECT
PT	- POINT OF TANGENCY
PCC	- POINT OF COMPOUND CURVATURE
POB	- POINT OF BEGINNING
POE	- POINT OF ENDING
VPC	- VERTICAL POINT OF CURVATURE
VPI	- VERTICAL POINT OF INTERSECTION
VPT	- VERTICAL POINT OF TANGENCY
EVT	- EVENT POINT
HI	- HIGH VERTICAL POINT

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

BECHTEL

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1" = 50'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/YY	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 1 PLAN & PROFILE
STA. 33+00 TO STA. 44+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7604	000	26196-100-CG-000-00604	000

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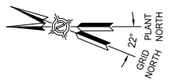
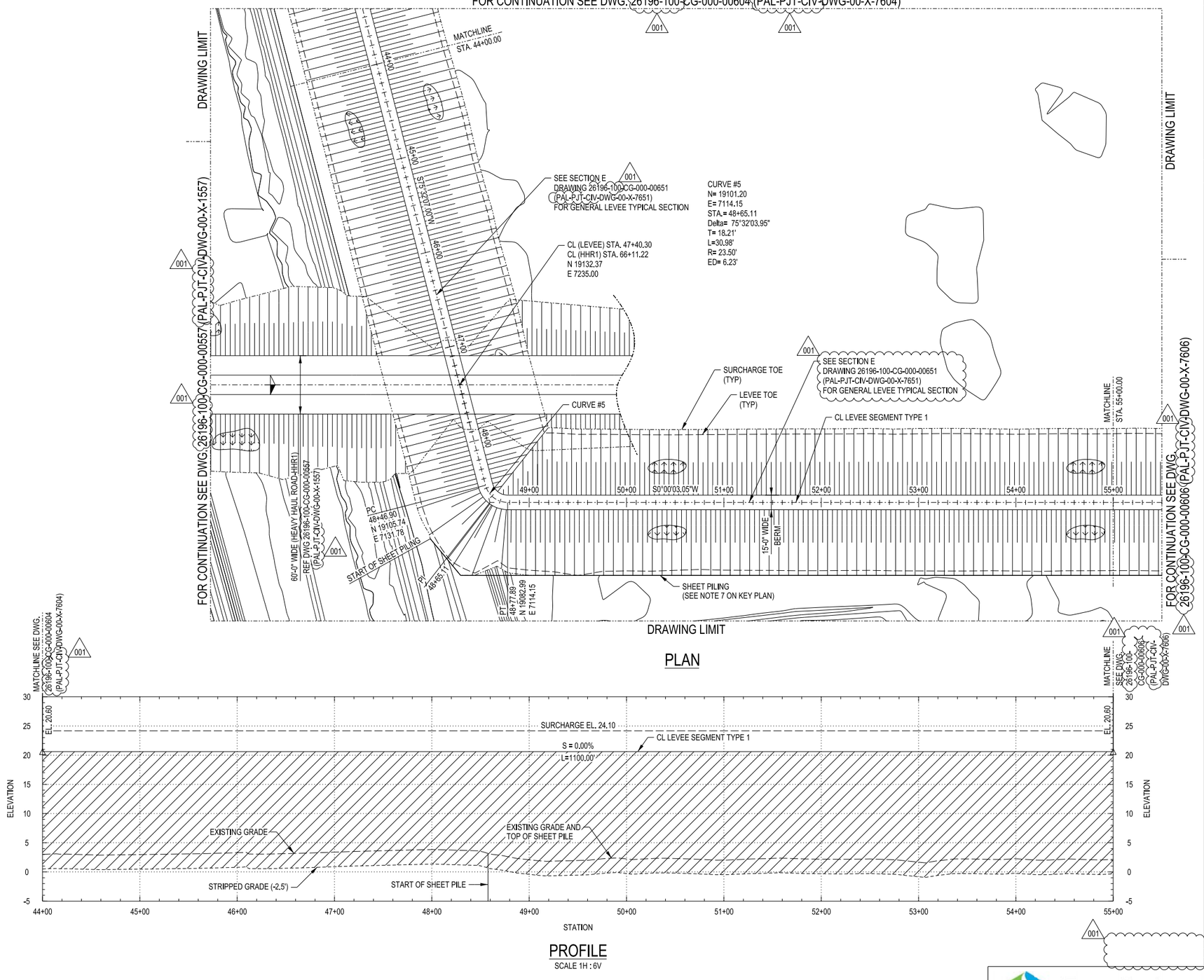




PLAN

PROFILE
SCALE 1H : 6V

50' 0 50' 100'
1" = 50'

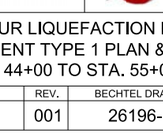
NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR CROSS-SECTIONS SEE DRAWINGS 26196-100-CG-000-00623 (PAL-PJT-CIV-DWG-00-X-7623) THROUGH 26196-100-CG-000-00625 (PAL-PJT-CIV-DWG-00-X-7625).

LEGEND

- SLOPE
- GRASS LINED
- EXISTING GRADE
- IMPERVIOUS BACKFILL/LOW PERMEABILITY FILL (PROFILE)
- SURCHARGE FILL EL.

CURVE PROPERTIES & ABBREVIATIONS



STA.	- STATION
T	- LENGTH OF TANGENT
L	- LENGTH
S	- SLOPE
R	- RADIUS OF CURVE
K	- RATE OF VERTICAL CURVATURE
ED	- EXTERNAL DISTANCE
PC	- POINT OF CURVATURE
PI	- POINT OF INTERSECT
PT	- POINT OF TANGENCY
PCC	- POINT OF COMPOUND CURVATURE
POB	- POINT OF BEGINNING
POE	- POINT OF ENDING
VPC	- VERTICAL POINT OF CURVATURE
VPI	- VERTICAL POINT OF INTERSECTION
VPT	- VERTICAL POINT OF TANGENCY
EVT	- EVENT POINT
HI	- HIGH VERTICAL POINT

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1" = 50'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK
001	09-29-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/DL	NJ/JS	CD	SK

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 1 PLAN & PROFILE
STA. 44+00 TO STA. 55+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7605	001	26196-100-CG-000-00605	001

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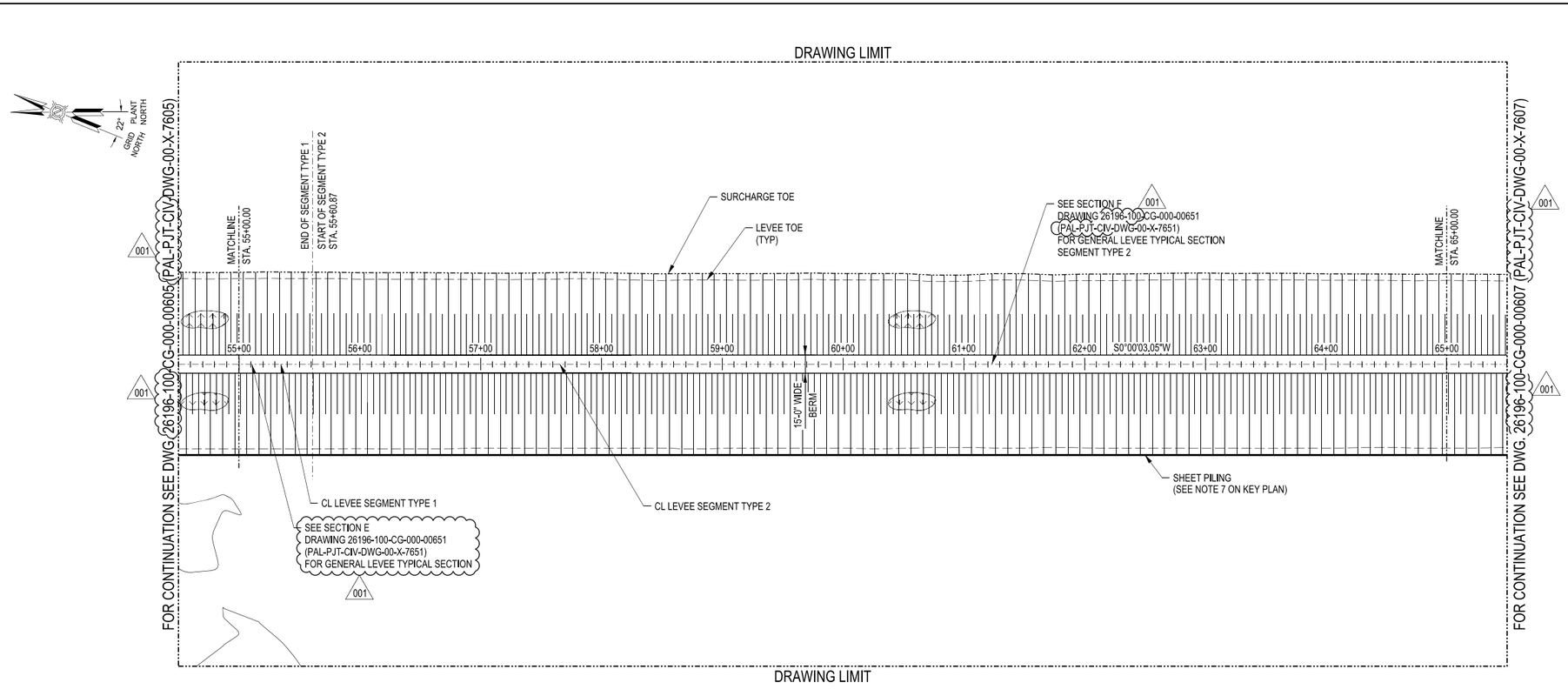
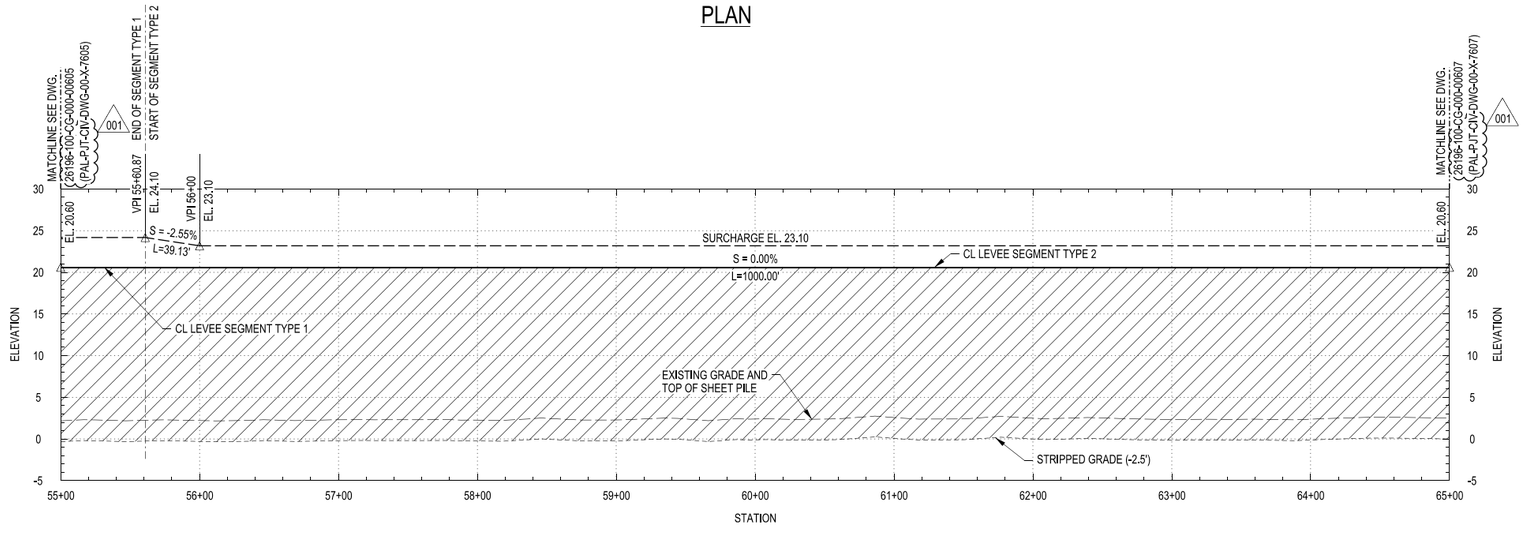


PLAN



PROFILE

SCALE 1H : 6V

50' 0 50' 100'
1" = 50'

NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR CROSS-SECTIONS SEE DRAWINGS 26196-100-CG-000-00625 (PAL-PJT-CIV-DWG-00-X-7625) & 26196-100-CG-000-00626 (PAL-PJT-CIV-DWG-00-X-7626).

LEGEND

- SLOPE
- GRASS LINED
- EXISTING GRADE
- IMPERVIOUS BACKFILL/LOW PERMEABILITY FILL (PROFILE)
- SURCHARGE FILL EL.

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel OG&C.
26196-100
FIRM NO.
F-9684

SCALE: 1" = 50'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								
001	09-29-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/DL	NJ/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 1 & 2 PLAN & PROFILE
STA. 55+00 TO STA. 65+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7606	001	26196-100-CG-000-00606	001

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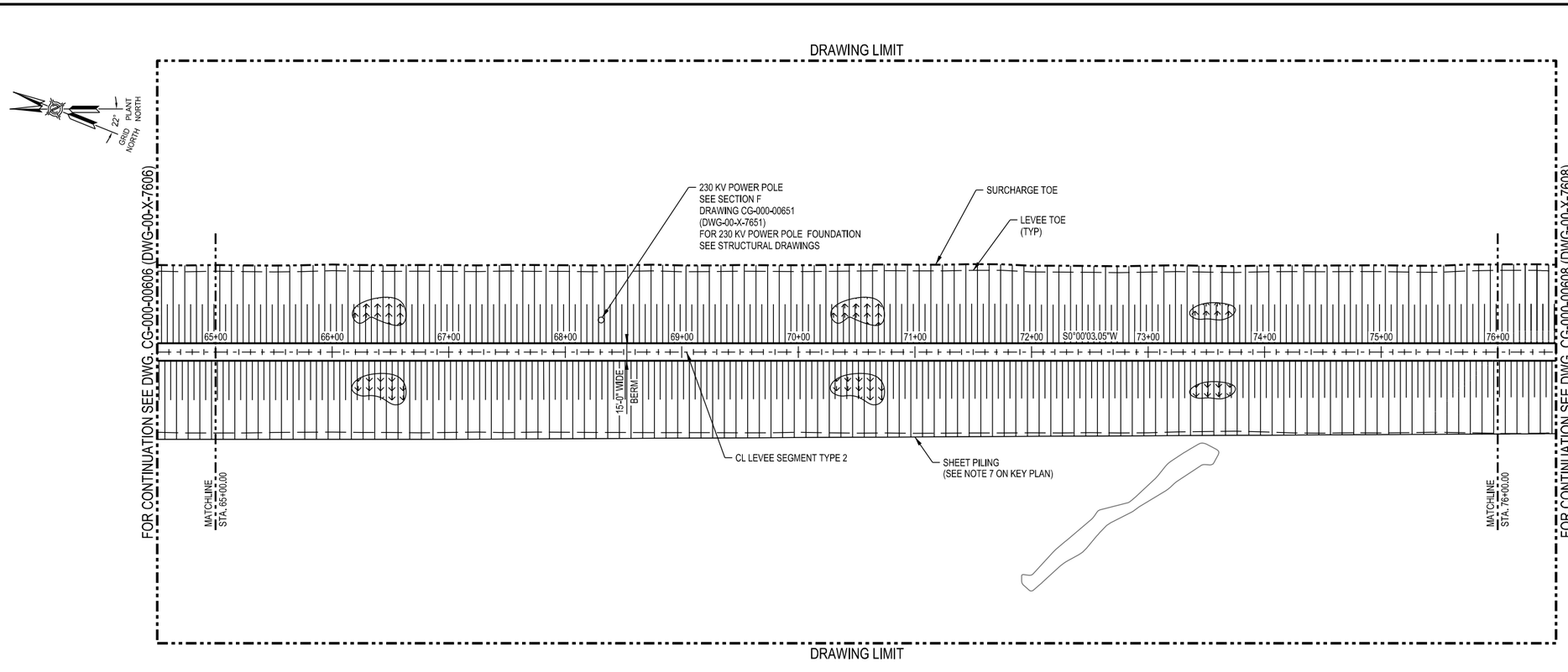
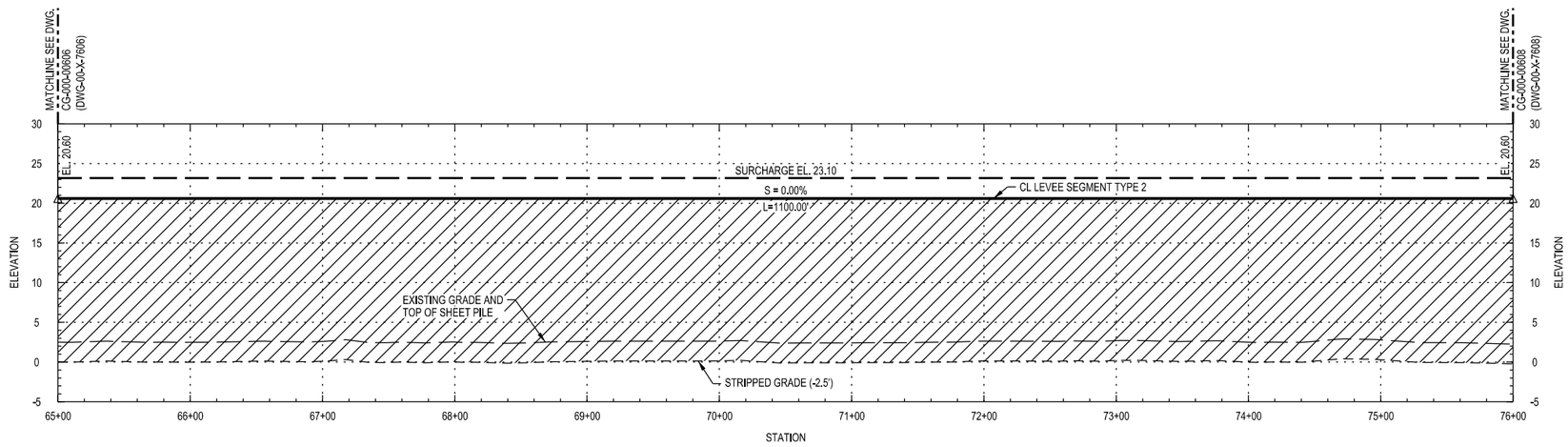
by and among Port Arthur LNG, LLC, PALNG Common Facilities Company, LLC and Bechtel Oil, Gas and Chemicals, Inc.



PLAN



PROFILE

SCALE 1H : 6V

50' 0 50' 100'

1" = 50'

NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR CROSS-SECTIONS SEE DRAWINGS 26196-100-CG-000-00626 (PAL-PJT-CIV-DWG-00-X-7626) THROUGH 26196-100-CG-000-00628 (PAL-PJT-CIV-DWG-00-X-7628).

LEGEND

- SLOPE
- GRASS LINED
- EXISTING GRADE
- IMPERVIOUS BACKFILL/LOW PERMEABILITY FILL (PROFILE)
- SURCHARGE FILL EL.

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

Bechtel OG&C.
26196-100
FIRM NO.
F-9684

SCALE: 1" = 50'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 PLAN & PROFILE
STA. 65+00 TO STA. 76+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7607	000	26196-100-CG-000-00607	000

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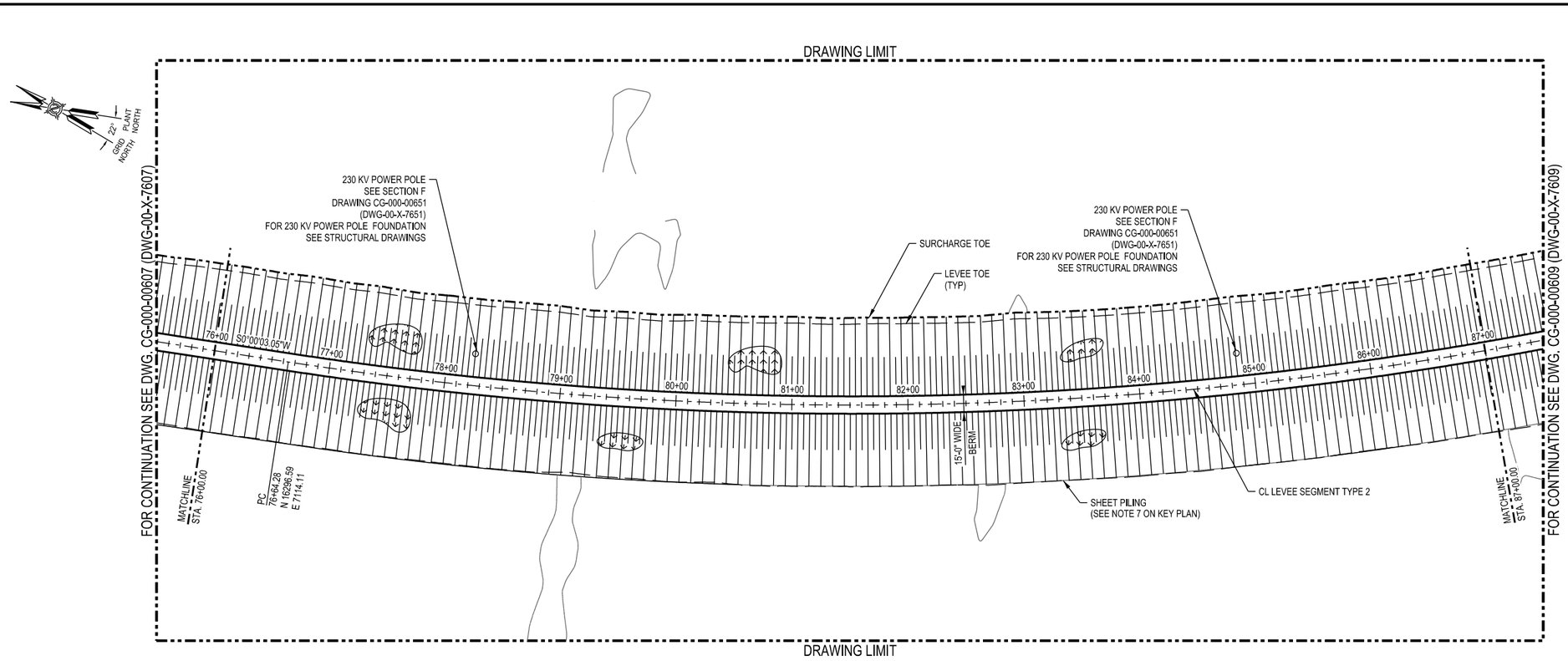
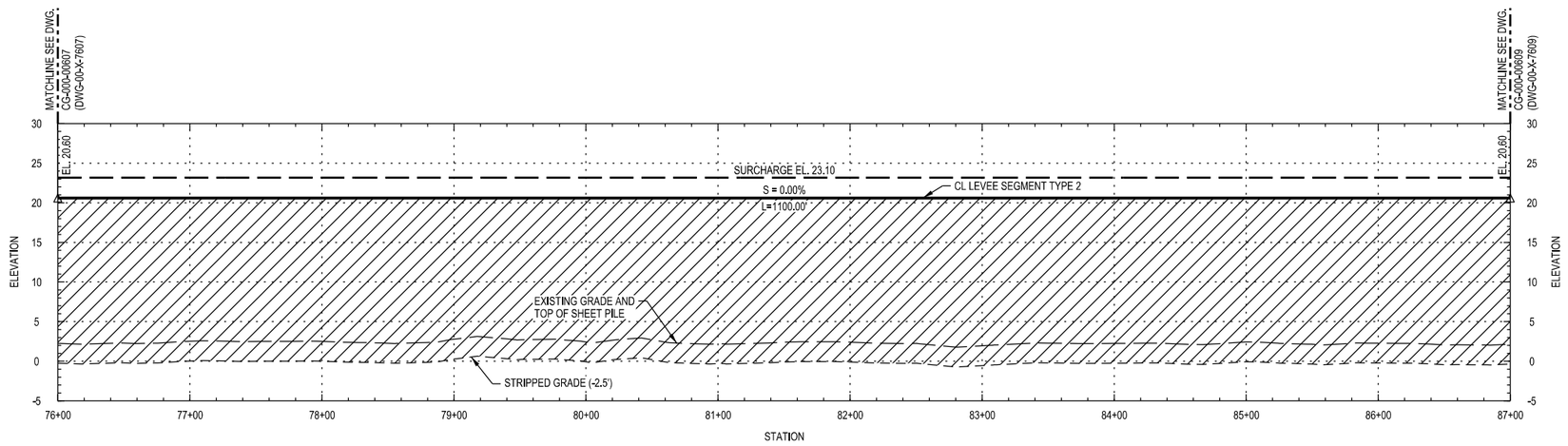


PLAN



PROFILE

SCALE 1H : 6V

50' 0 50' 100'

1" = 50'

NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR CROSS-SECTIONS SEE DRAWINGS 26196-100-CG-000-00628 (PAL-PJT-CIV-DWG-00-X-7628) THROUGH 26196-100-CG-000-00630 (PAL-PJT-CIV-DWG-00-X-7630).

LEGEND

- SLOPE
- GRASS LINED
- EXISTING GRADE
- IMPERVIOUS BACKFILL/LOW PERMEABILITY FILL (PROFILE)
- SURCHARGE FILL EL.

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

Bechtel OG&C.
26196-100
FIRM NO.
F-9684

SCALE: 1" = 50'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 PLAN & PROFILE
STA. 76+00 TO STA. 87+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7608	000	26196-100-CG-000-00608	000

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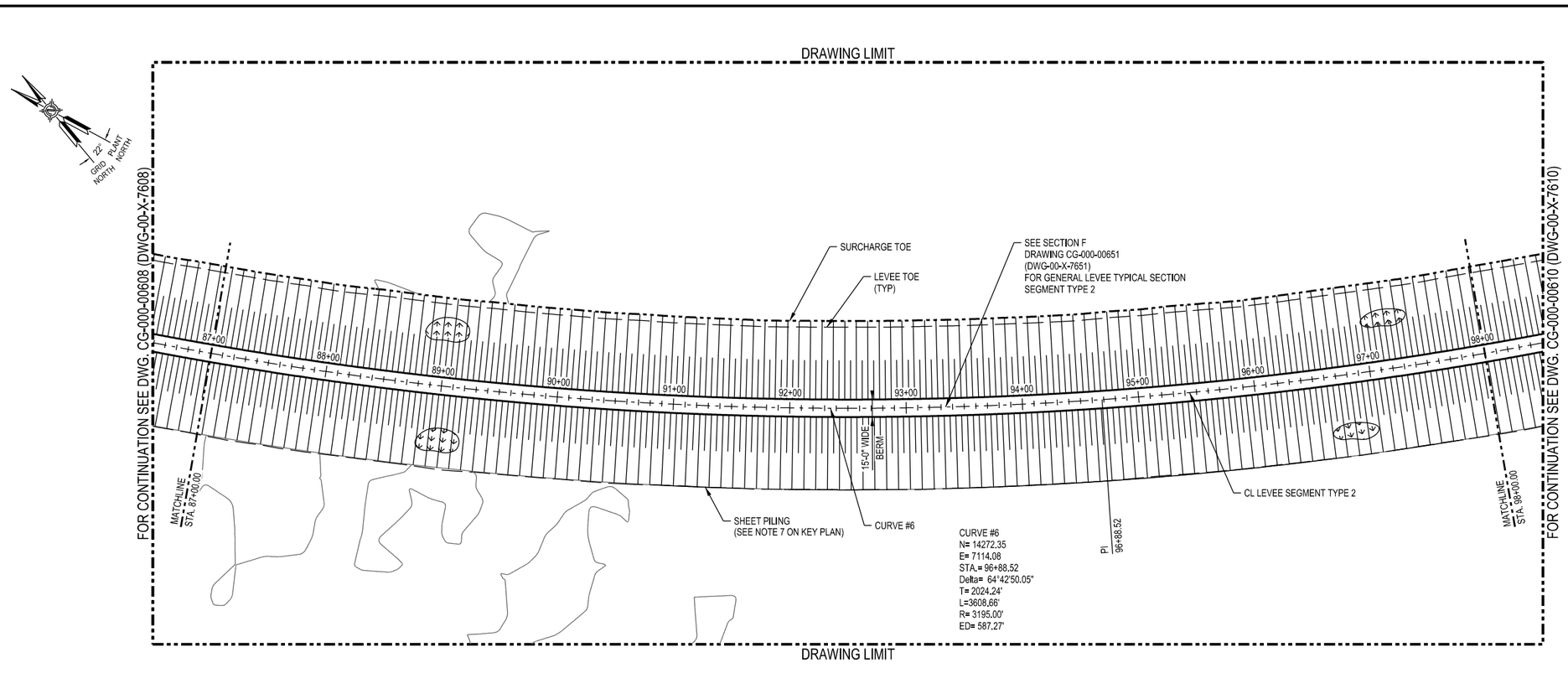
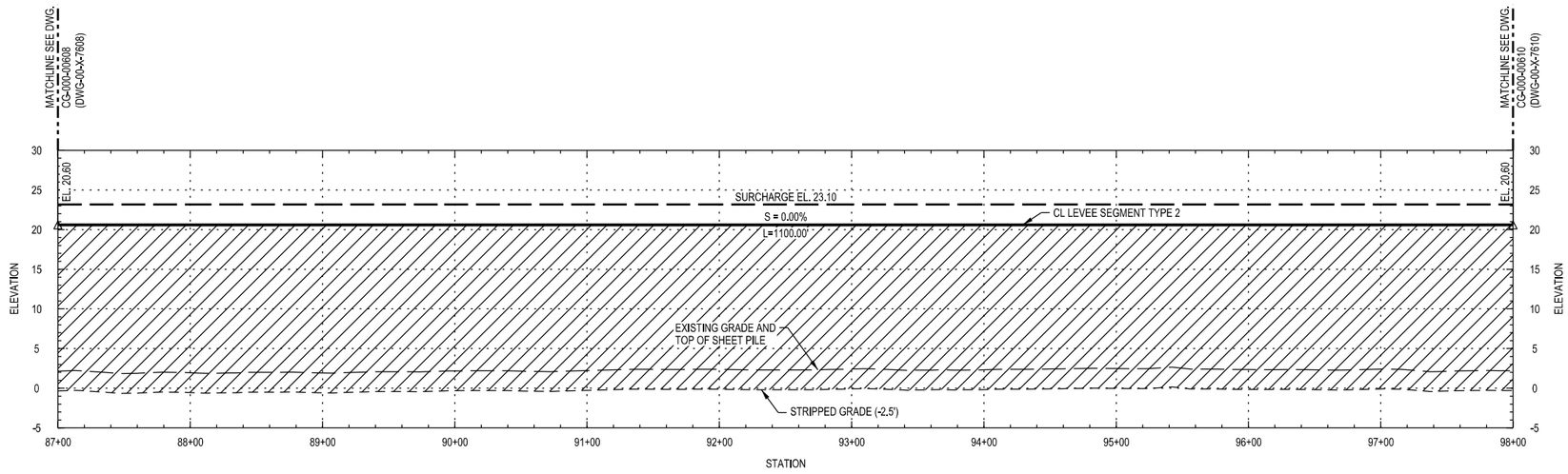


PLAN



PROFILE

SCALE 1H : 6V

50' 0 50' 100'

1" = 50'

NOTES

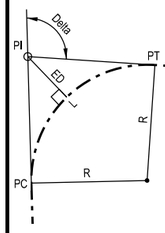
3570

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR CROSS-SECTIONS SEE DRAWINGS 26196-100-CG-000-00630 (PAL-PJT-CIV-DWG-00-X-7630) THROUGH 26196-100-CG-000-00632 (PAL-PJT-CIV-DWG-00-X-7632).

LEGEND

- SLOPE
- GRASS LINED
- EXISTING GRADE
- IMPERVIOUS BACKFILL/LOW PERMEABILITY FILL (PROFILE)
- SURCHARGE FILL EL.

CURVE PROPERTIES & ABBREVIATIONS



STA.	- STATION
T	- LENGTH OF TANGENT
L	- LENGTH
S	- SLOPE
R	- RADIUS OF CURVE
K	- RATE OF VERTICAL CURVATURE
ED	- EXTERNAL DISTANCE
PC	- POINT OF CURVATURE
PI	- POINT OF INTERSECT
PT	- POINT OF TANGENCY
PCC	- POINT OF COMPOUND CURVATURE
POB	- POINT OF BEGINNING
POE	- POINT OF ENDING
VPC	- VERTICAL POINT OF CURVATURE
VPI	- VERTICAL POINT OF INTERSECTION
VPT	- VERTICAL POINT OF TANGENCY
EVT	- EVENT POINT
HI	- HIGH VERTICAL POINT

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

Bechtel OG&C.
26196-100
FIRM NO.
F-9684

SCALE: 1" = 50'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 PLAN & PROFILE
STA. 87+00 TO STA. 98+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7609	000	26196-100-CG-000-00609	000

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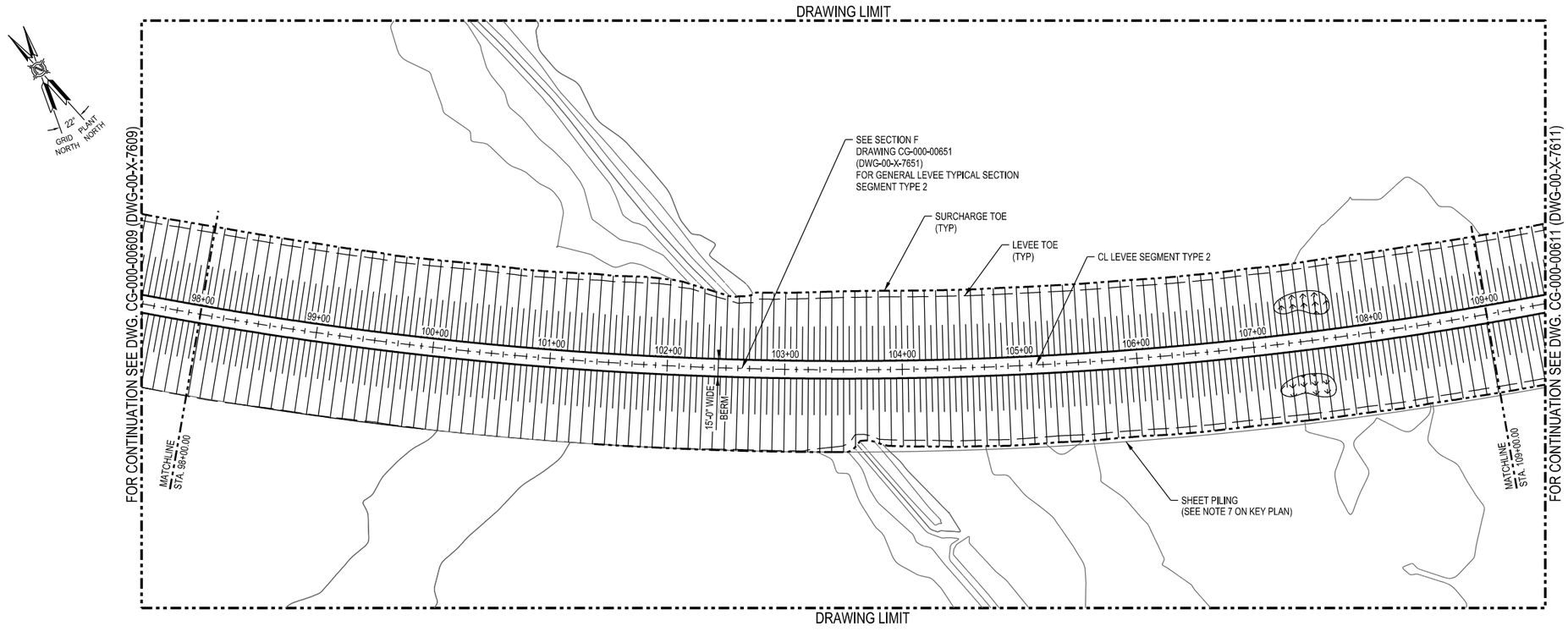
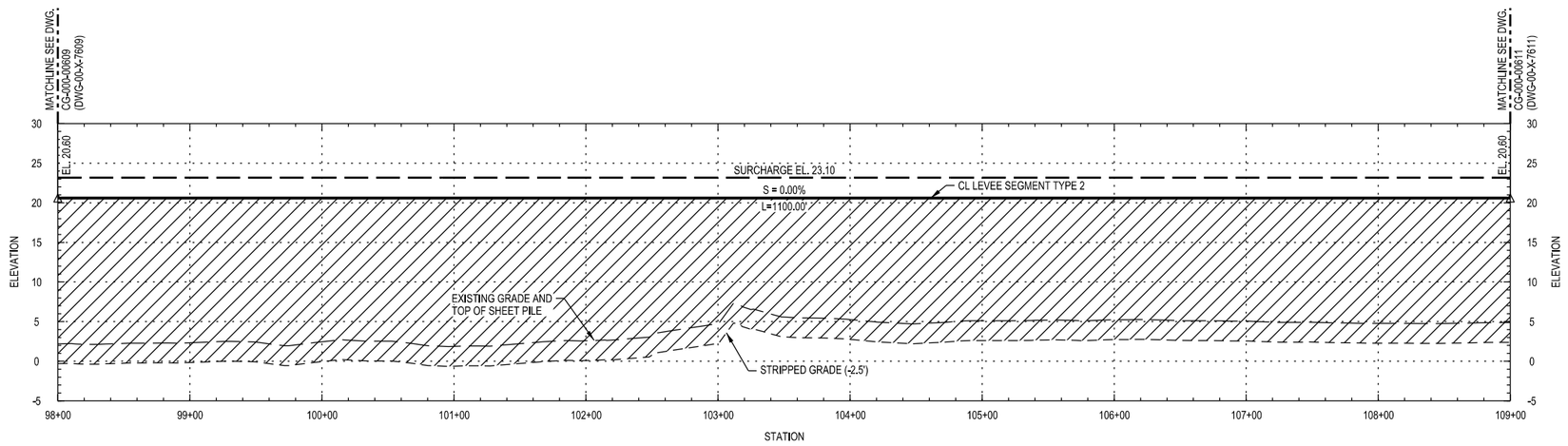


PLAN



PROFILE
SCALE 1H : 6V

50' 0 50' 100'
1" = 50'

NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR CROSS-SECTIONS SEE DRAWINGS 26196-100-CG-000-00632 (PAL-PJT-CIV-DWG-00-X-7632) THROUGH 26196-100-CG-000-00634 (PAL-PJT-CIV-DWG-00-X-7634).

LEGEND

- SLOPE
- GRASS LINED
- EXISTING GRADE
- IMPERVIOUS BACKFILL/LOW PERMEABILITY FILL (PROFILE)
- SURCHARGE FILL EL.

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

Bechtel OG&C.
26196-100
FIRM NO.
F-9684

SCALE: 1" = 50'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 PLAN & PROFILE
STA. 98+00 TO STA. 109+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7610	000	26196-100-CG-000-00610	000

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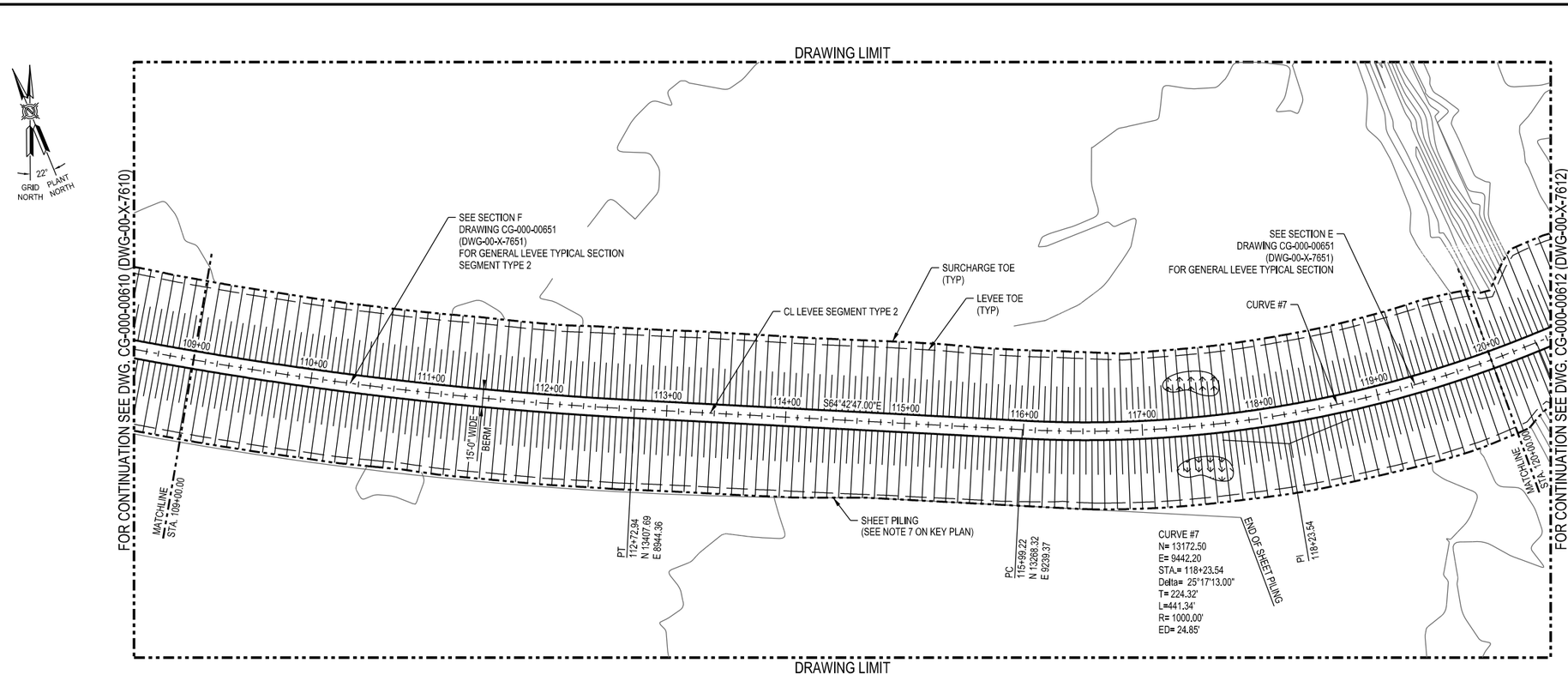
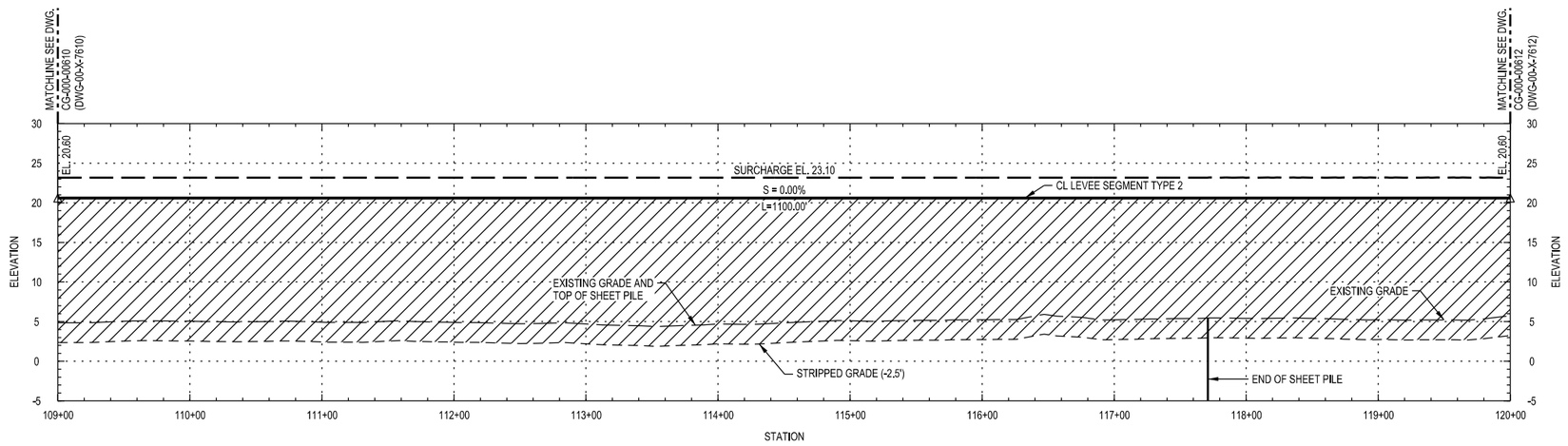


PLAN



PROFILE

SCALE 1H : 6V

NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR CROSS-SECTIONS SEE DRAWINGS 26196-100-CG-000-00634 (PAL-PJT-CIV-DWG-00-X-7634) & 26196-100-CG-000-00635 (PAL-PJT-CIV-DWG-00-X-7635).

LEGEND

- SLOPE
- GRASS LINED
- EXISTING GRADE
- IMPERVIOUS BACKFILL/LOW PERMEABILITY FILL (PROFILE)
- SURCHARGE FILL EL.

CURVE PROPERTIES & ABBREVIATIONS

STA.	- STATION
T	- LENGTH OF TANGENT
L	- LENGTH
S	- SLOPE
R	- RADIUS OF CURVE
K	- RATE OF VERTICAL CURVATURE
ED	- EXTERNAL DISTANCE
PC	- POINT OF CURVATURE
PI	- POINT OF INTERSECT
PT	- POINT OF TANGENCY
PCC	- POINT OF COMPOUND CURVATURE
POB	- POINT OF BEGINNING
POE	- POINT OF ENDING
VPC	- VERTICAL POINT OF CURVATURE
VPI	- VERTICAL POINT OF INTERSECTION
VPT	- VERTICAL POINT OF TANGENCY
EVT	- EVENT POINT
HI	- HIGH VERTICAL POINT

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

50' 0 50' 100'
1" = 50'

Port Arthur LNG

Bechtel OG&C.
26196-100
FIRM NO.
F-9684

SCALE: 1" = 50'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 PLAN & PROFILE
STA. 109+00 TO STA. 120+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7611	000	26196-100-CG-000-00611	000

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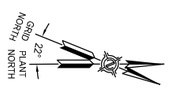
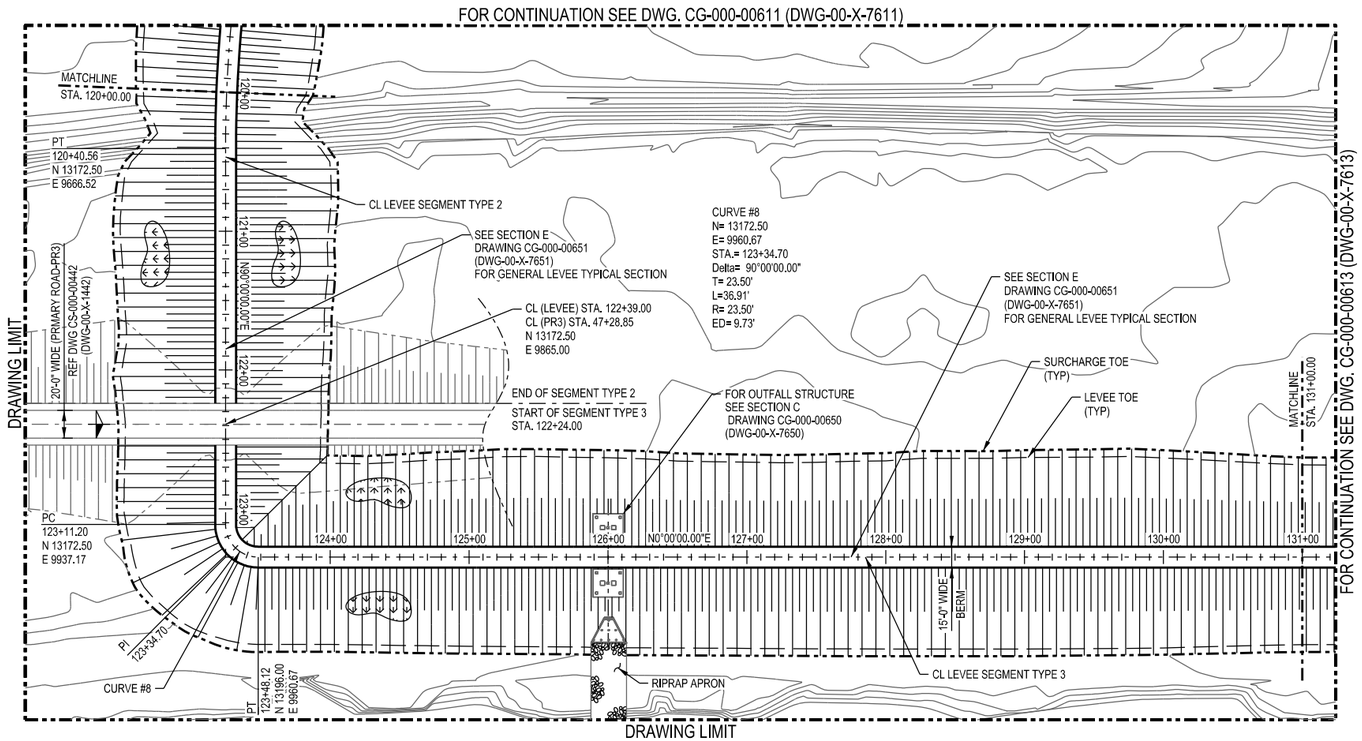
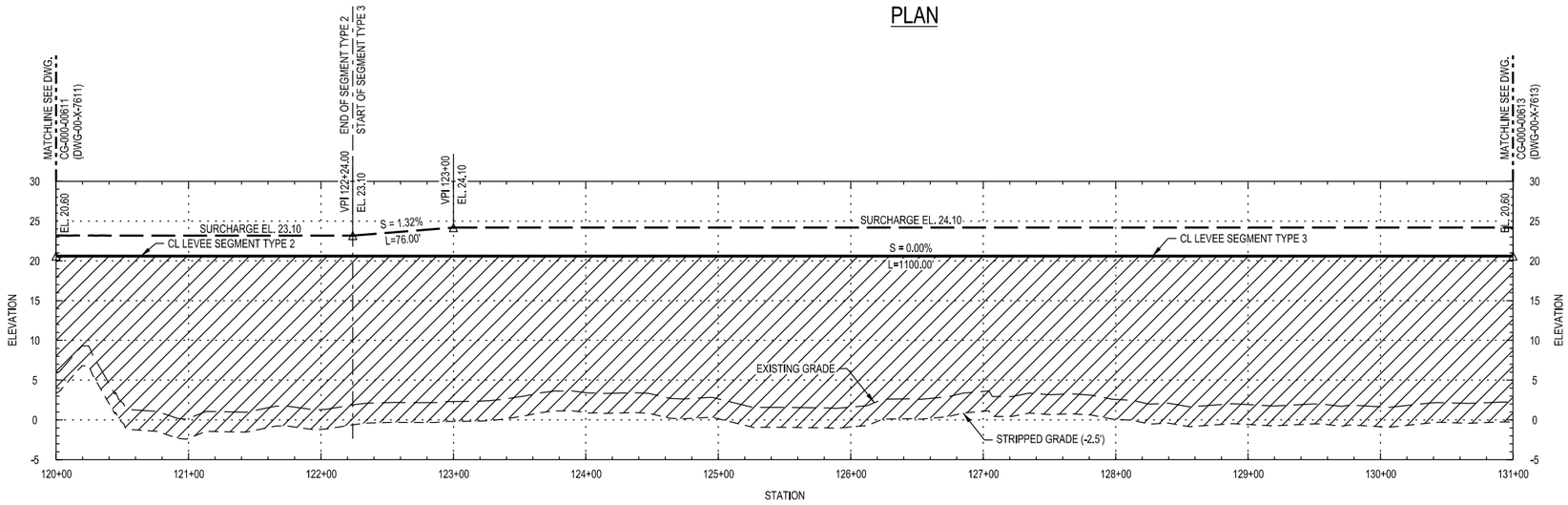




PLAN



PROFILE
SCALE 1H : 6V

50' 0 50' 100'
1" = 50'

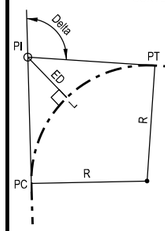
NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR CROSS-SECTIONS SEE DRAWINGS 26196-100-CG-000-00635 (PAL-PJT-CIV-DWG-00-X-7635) THROUGH 26196-100-CG-000-00637 (PAL-PJT-CIV-DWG-00-X-7637).

LEGEND

- SLOPE
- GRASS LINED
- EXISTING GRADE
- IMPERVIOUS BACKFILL/LOW PERMEABILITY FILL (PROFILE)
- RIPRAP APRON
- SURCHARGE FILL EL.

CURVE PROPERTIES & ABBREVIATIONS



STA.	- STATION
T	- LENGTH OF TANGENT
L	- LENGTH
S	- SLOPE
R	- RADIUS OF CURVE
K	- RATE OF VERTICAL CURVATURE
ED	- EXTERNAL DISTANCE
PC	- POINT OF CURVATURE
PI	- POINT OF INTERSECT
PT	- POINT OF TANGENCY
PCC	- POINT OF COMPOUND CURVATURE
POB	- POINT OF BEGINNING
POE	- POINT OF ENDING
VPC	- VERTICAL POINT OF CURVATURE
VPI	- VERTICAL POINT OF INTERSECTION
VPT	- VERTICAL POINT OF TANGENCY
EVT	- EVENT POINT
HI	- HIGH VERTICAL POINT

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O. "26196-100-" BECHTEL ("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 50'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 & 3 PLAN & PROFILE
STA. 120+00 TO STA. 131+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7612	000	26196-100-CG-000-00612	000

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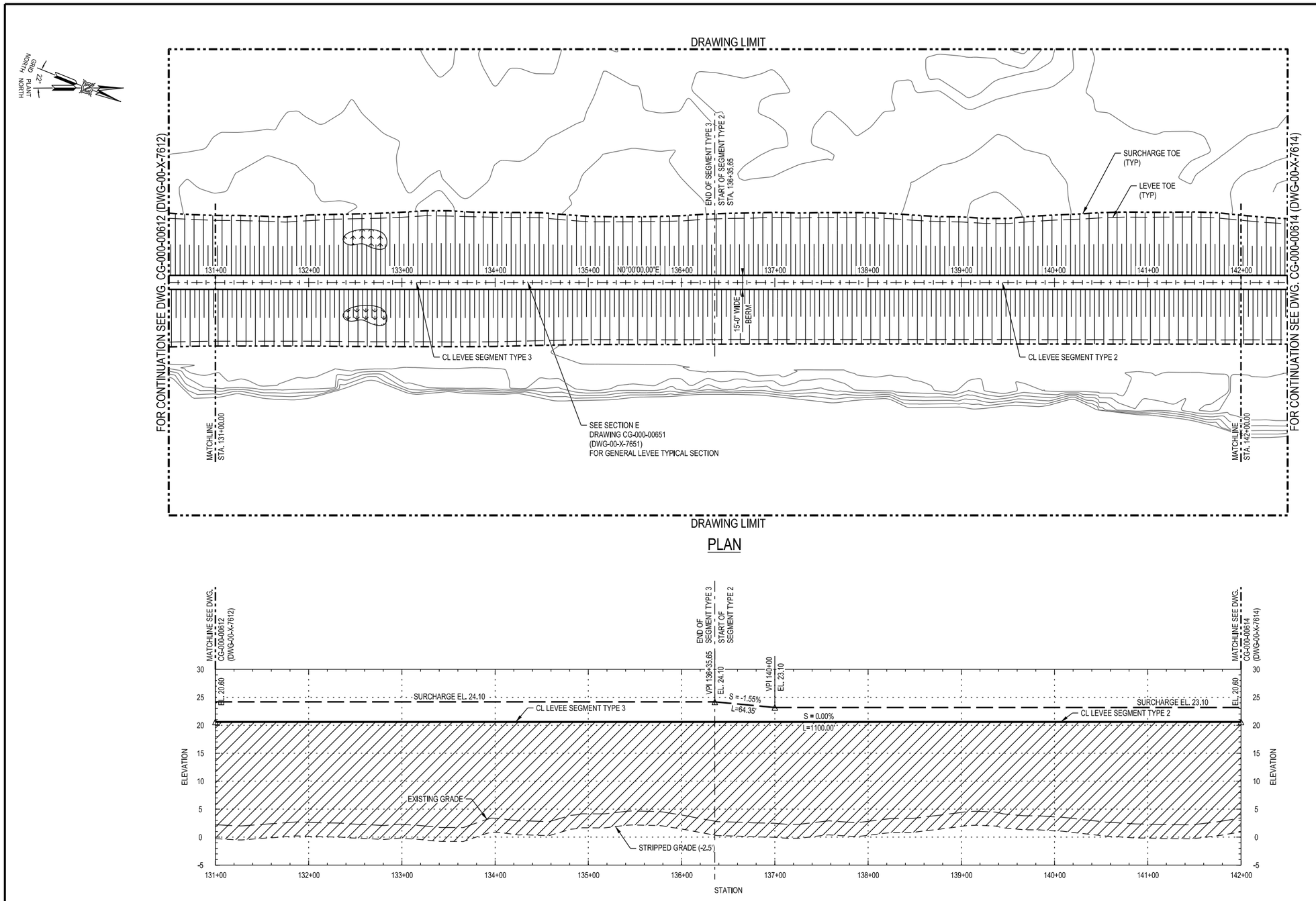

NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR CROSS-SECTIONS SEE DRAWINGS 26196-100-CG-000-00637 (PAL-PJT-CIV-DWG-00-X-7637) THROUGH 26196-100-CG-000-00639 (PAL-PJT-CIV-DWG-00-X-7639).

LEGEND

- SLOPE
- GRASS LINED
- EXISTING GRADE
- IMPERVIOUS BACKFILL/LOW PERMEABILITY FILL (PROFILE)
- SURCHARGE FILL EL.

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O. "26196-100-" BECHTEL ("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

BECHTEL Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 50'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 3 & 2 PLAN & PROFILE
STA. 131+00 TO STA. 142+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7613	000	26196-100-CG-000-00613	000

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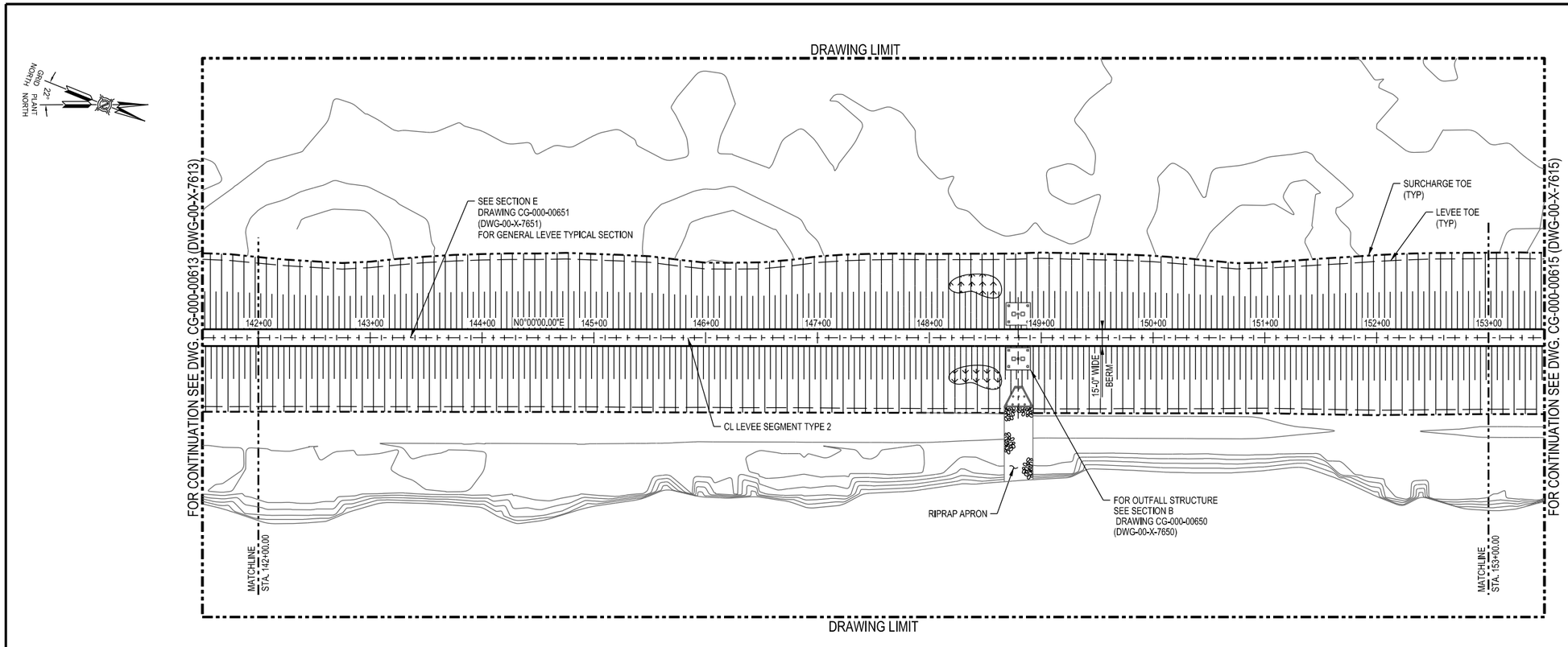
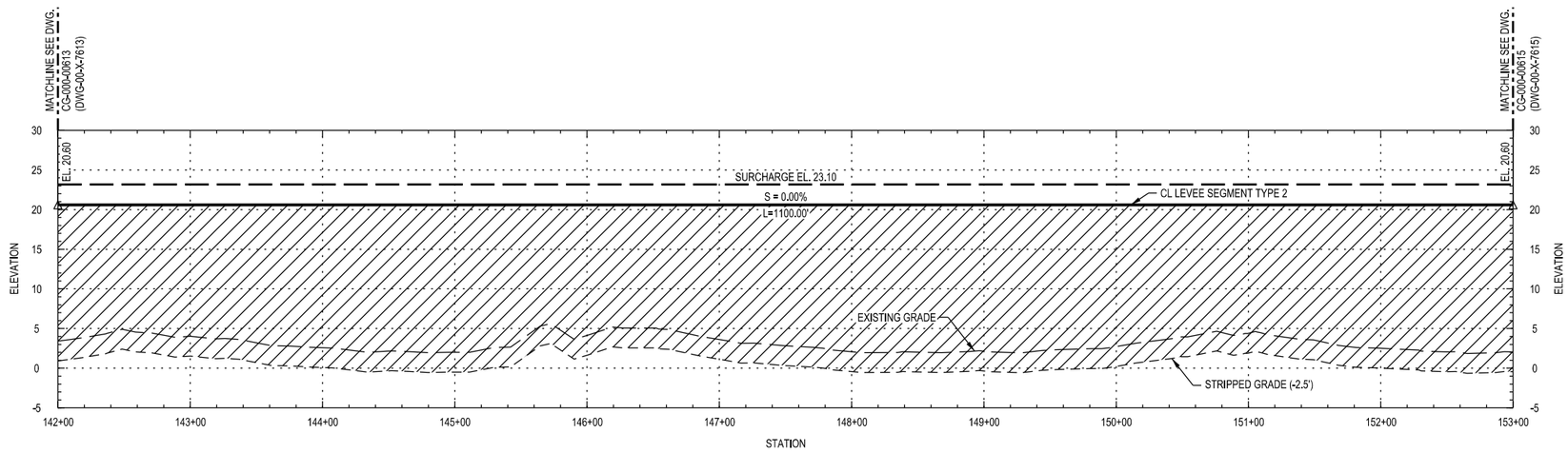


PLAN



PROFILE
SCALE 1H : 6V

50' 0 50' 100'
1" = 50'

NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR CROSS-SECTIONS SEE DRAWINGS 26196-100-CG-000-00639 (PAL-PJT-CIV-DWG-00-X-7639) THROUGH 26196-100-CG-000-00641 (PAL-PJT-CIV-DWG-00-X-7641).

LEGEND

- SLOPE
- GRASS LINED
- EXISTING GRADE
- IMPERVIOUS BACKFILL/LOW PERMEABILITY FILL (PROFILE)
- RIPRAP APRON
- SURCHARGE FILL EL.

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

Bechtel OG&C.
26196-100
FIRM NO.
F-9684

SCALE: 1" = 50'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 PLAN & PROFILE
STA. 142+00 TO STA. 153+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7614	000	26196-100-CG-000-00614	000

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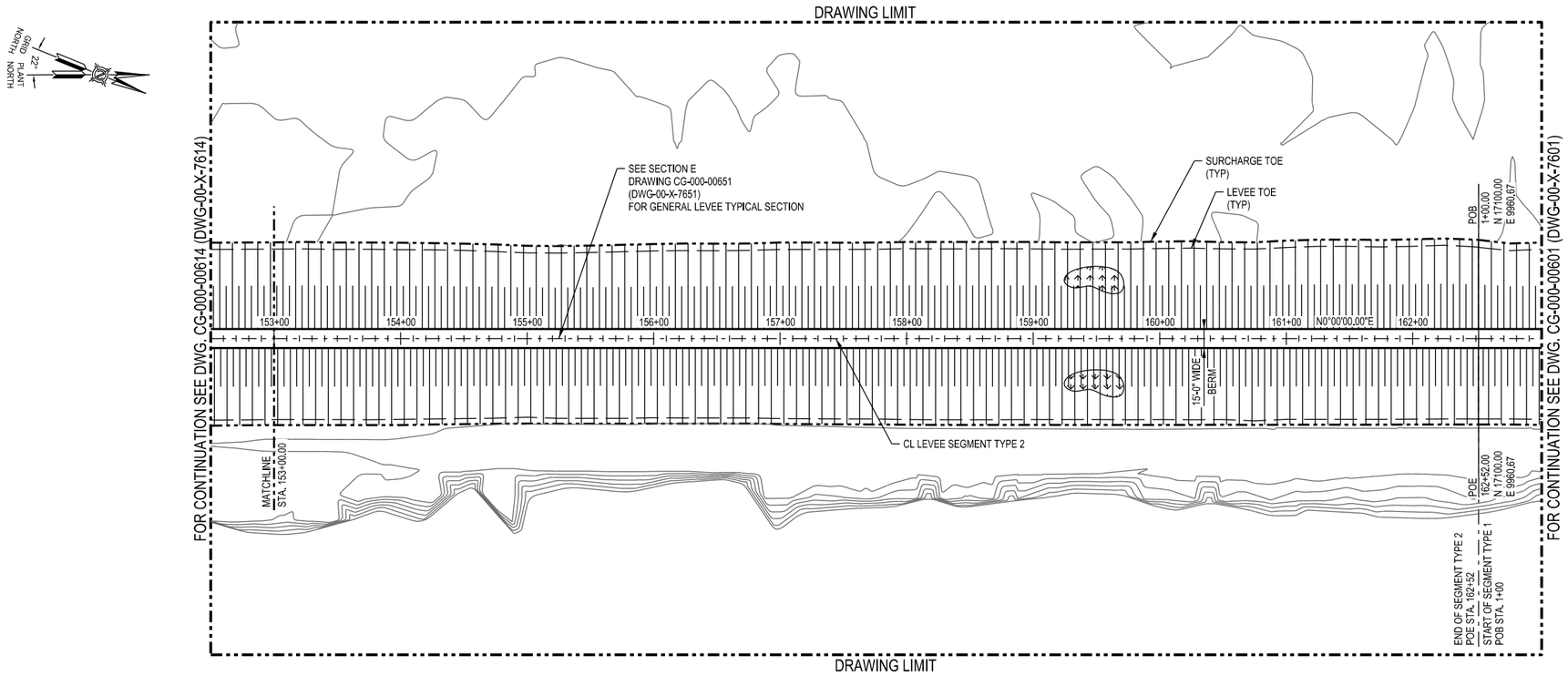
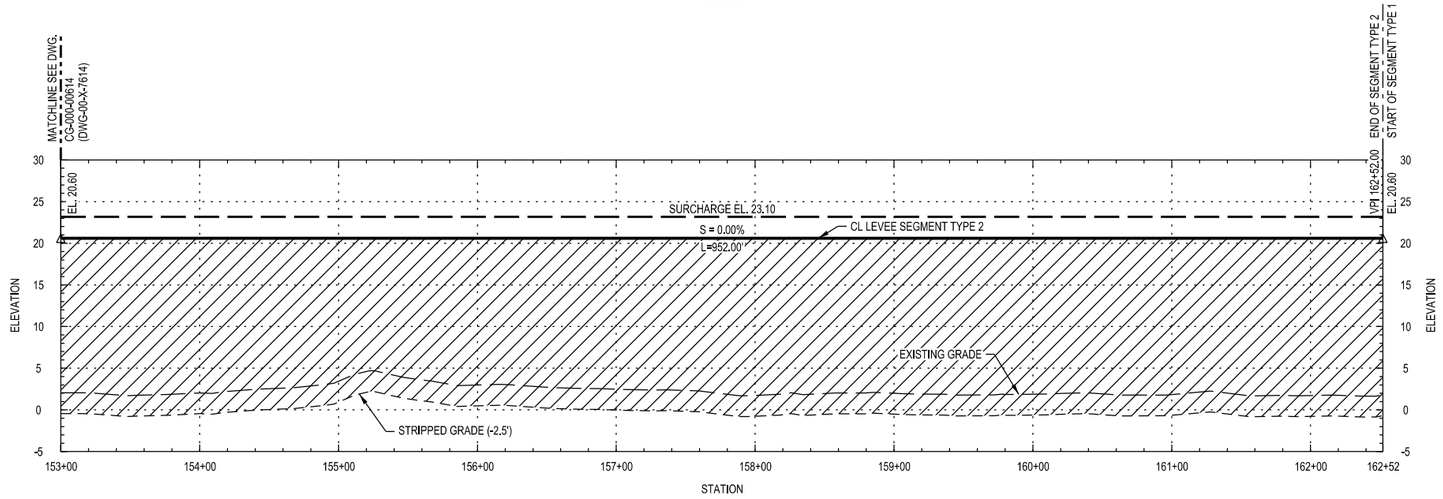
by and among Port Arthur LNG, LLC, PALNG Common Facilities Company, LLC and Bechtel Oil, Gas and Chemicals, Inc.



PLAN



PROFILE
SCALE 1H : 6V

50' 0 50' 100'
1" = 50'

NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR CROSS-SECTIONS SEE DRAWINGS 26196-100-CG-000-00641 (PAL-PJT-CIV-DWG-00-X-7641) & 26196-100-CG-000-00642 (PAL-PJT-CIV-DWG-00-X-7642).

LEGEND

- SLOPE
- GRASS LINED
- EXISTING GRADE
- IMPERVIOUS BACKFILL/LOW PERMEABILITY FILL (PROFILE)
- SURCHARGE FILL EL.

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1" = 50'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 PLAN & PROFILE
STA. 153+00 TO POE STA. 162+52

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7615	000	26196-100-CG-000-00615	000

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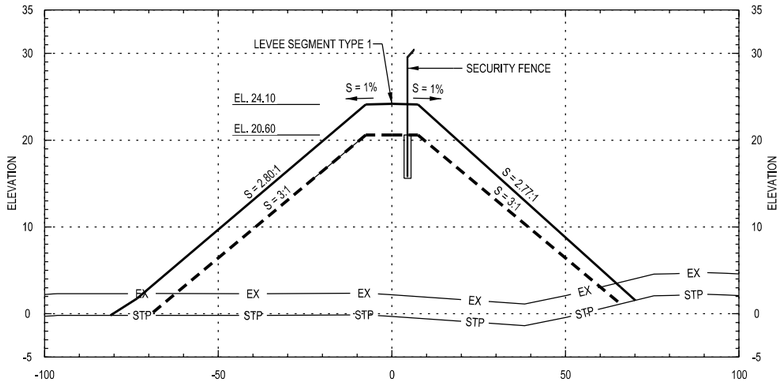
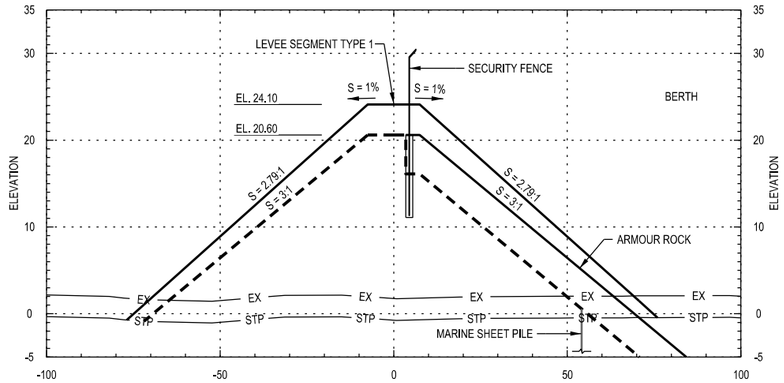
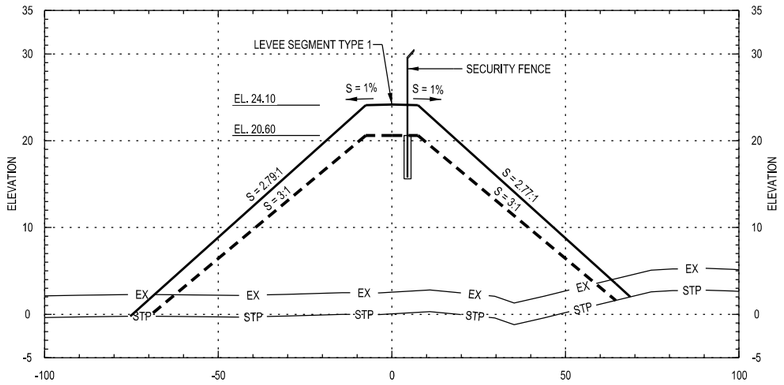
SEGMENT TYPE 1 - STA.1+00 TO STA.6+00



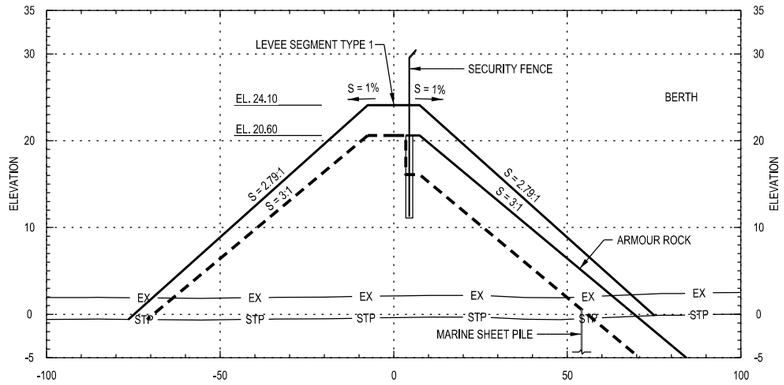
STA. 3+00



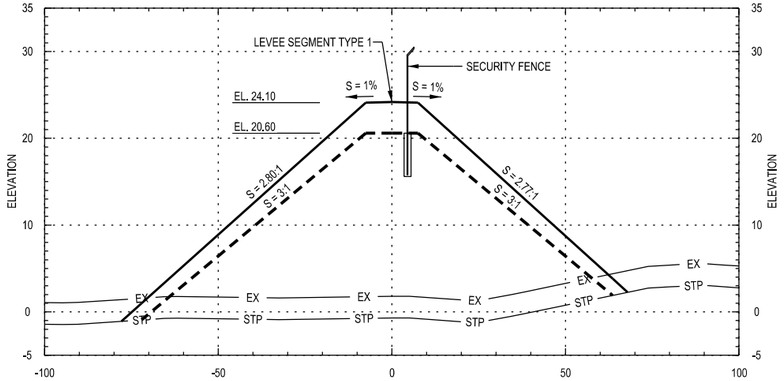
STA. 6+00



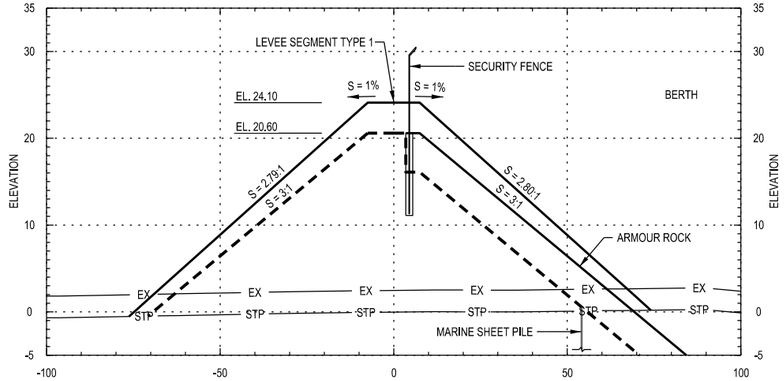
STA. 2+00



STA. 5+00



STA. 1+00



STA. 4+00

20' 0 20' 40'
1" = 20'

NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWING 26196-100-CG-000-00601 (PAL-PJT-CIV-DWG-00-X-7601).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

BECHTEL

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/YY	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 1 CROSS SECTION
STA. 1+00 TO STA. 6+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7616	000	26196-100-CG-000-00616	000

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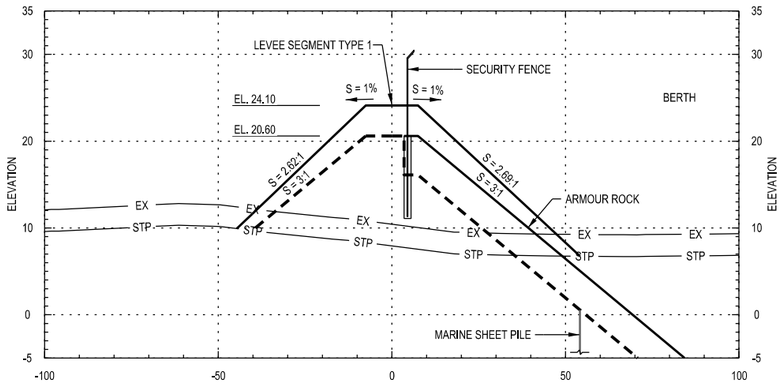
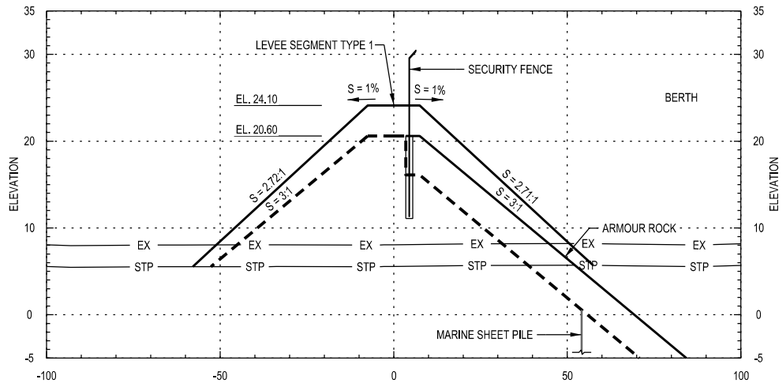
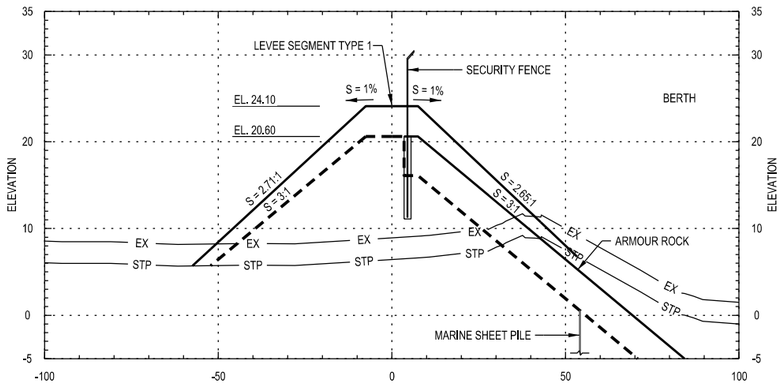
SEGMENT TYPE 1 - STA.7+00 TO STA.12+00



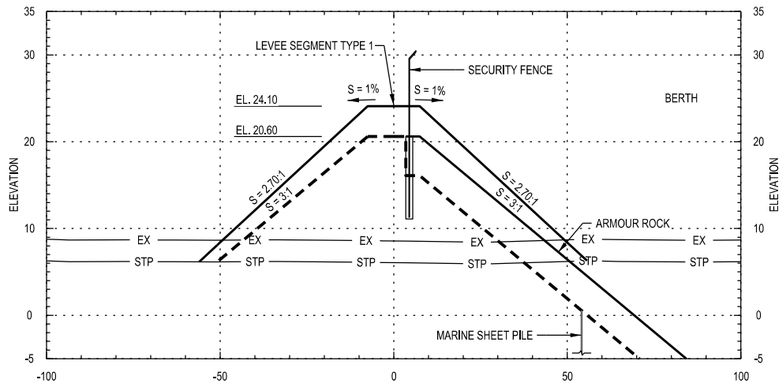
STA. 9+00



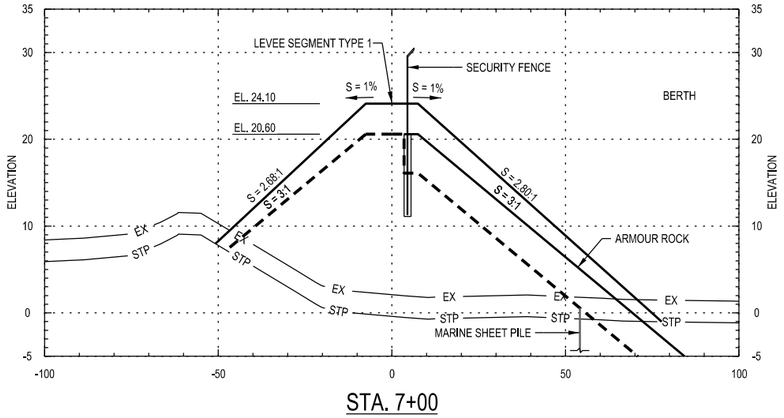
STA. 12+00



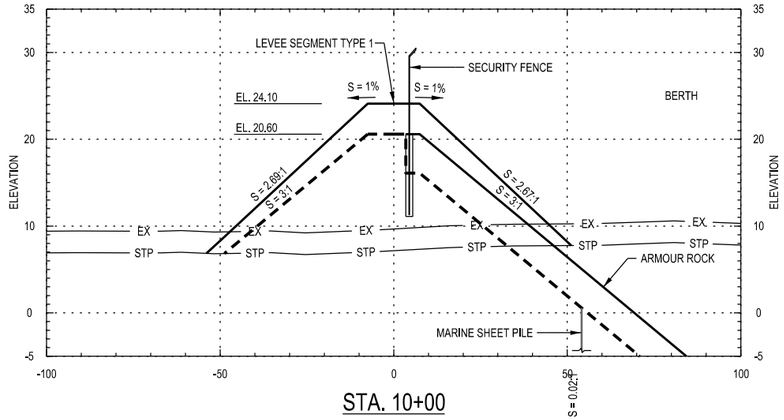
STA. 8+00



STA. 11+00



STA. 7+00



STA. 10+00

NOTES

3578

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWINGS 26196-100-CG-000-00601 (PAL-PJT-CIV-DWG-00-X-7601) & 26196-100-CG-000-00602 (PAL-PJT-CIV-DWG-00-X-7602).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

20' 0 20' 40'
1" = 20'

DRAWING PREFIX U.N.O. "26196-100-" BECHTEL ("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/YY	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 1 CROSS SECTION
STA. 7+00 TO STA. 12+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7617	000	26196-100-CG-000-00617	000

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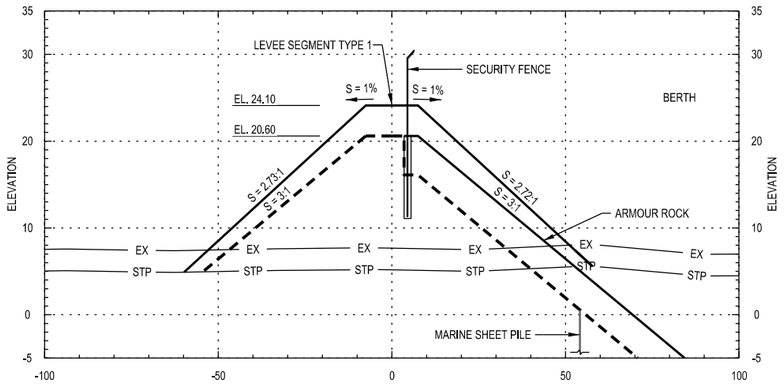
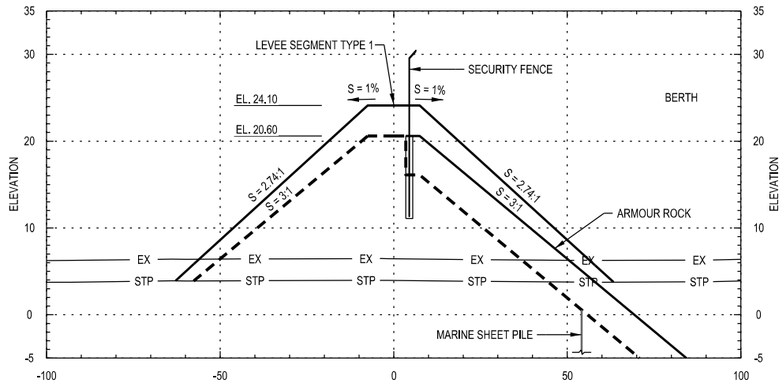
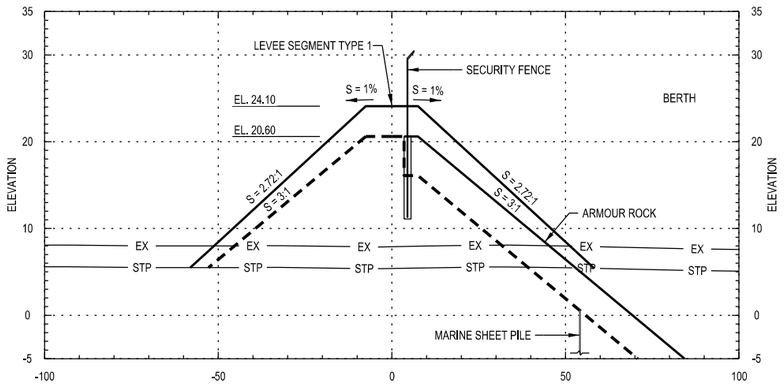
SEGMENT TYPE 1 - STA.13+00 TO STA.18+00



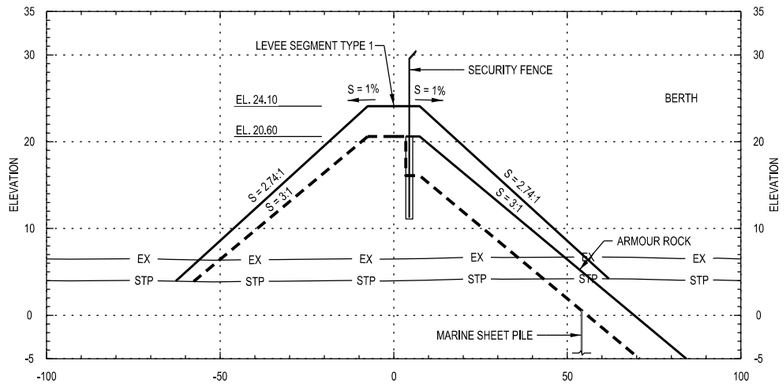
STA. 15+00



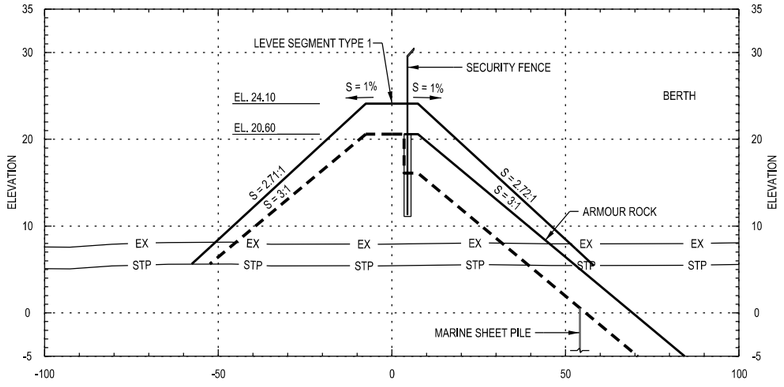
STA. 18+00



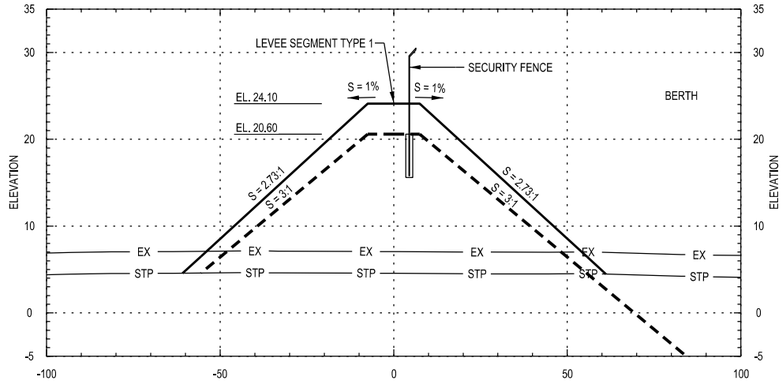
STA. 14+00



STA. 17+00



STA. 13+00



STA. 16+00

NOTES

3579

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWING 26196-100-CG-000-00602 (PAL-PJT-CIV-DWG-00-X-7602).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL

DRAWING PREFIX U.N.O. "26196-100-" BECHTEL ("PAL-PJT-CIV-" PALNG)

20' 0 20' 40'
1" = 20'

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/YY	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 1 CROSS SECTION
STA. 13+00 TO STA. 18+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7618	000	26196-100-CG-000-00618	000

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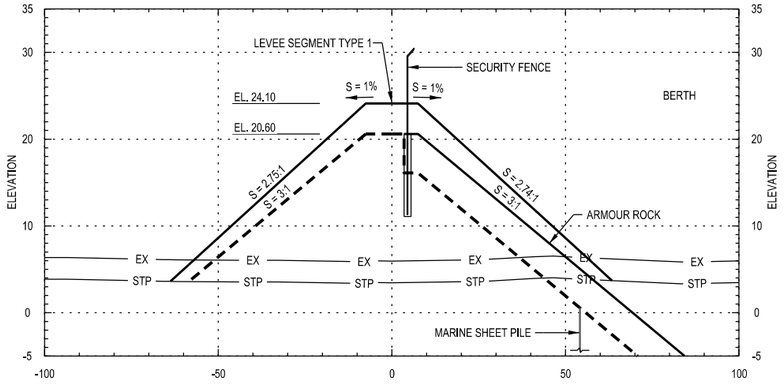
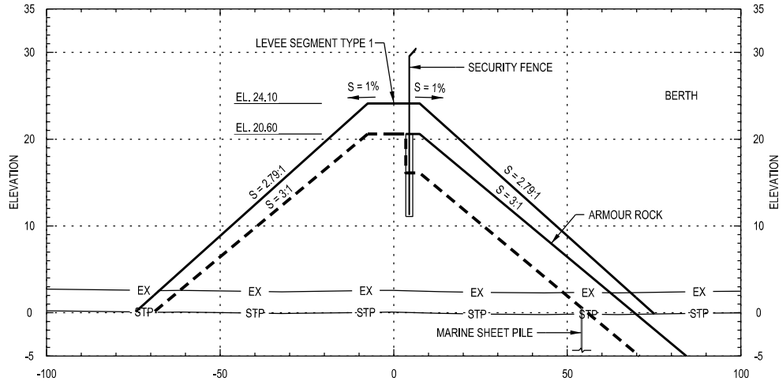
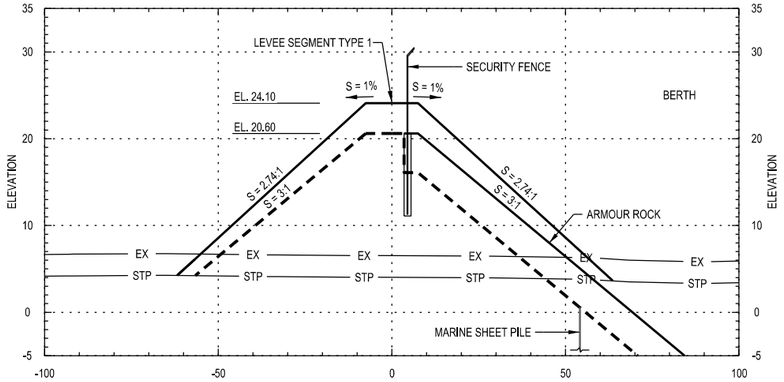
SEGMENT TYPE 1 - STA.19+00 TO STA.24+00



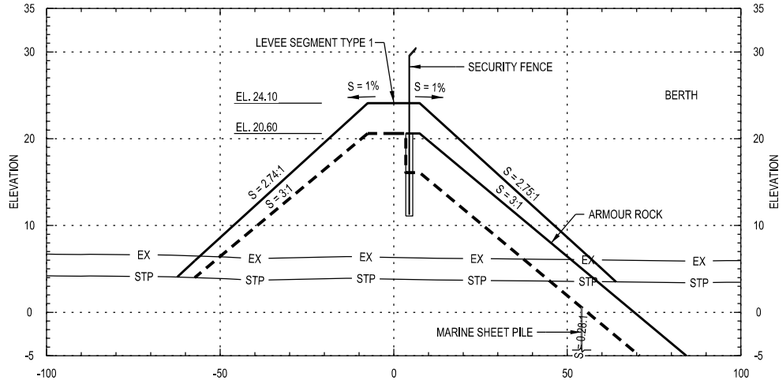
STA. 21+00



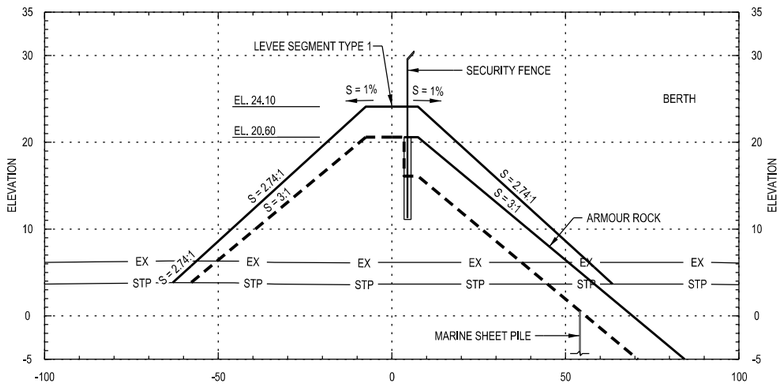
STA. 24+00



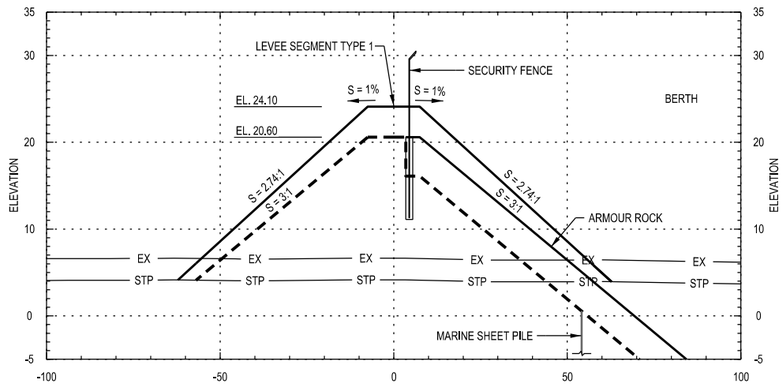
STA. 20+00



STA. 23+00



STA. 19+00



STA. 22+00

NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWINGS 26196-100-CG-000-00602 (PAL-PJT-CIV-DWG-00-X-7602) & 26196-100-CG-000-00603 (PAL-PJT-CIV-DWG-00-X-7603).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL

20' 0 20' 40'
1" = 20'

DRAWING PREFIX U.N.O. "26196-100-" BECHTEL ("PAL-PJT-CIV-" PALNG)

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 20'

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000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/YY	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 1 CROSS SECTION
STA. 19+00 TO STA. 24+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7619	000	26196-100-CG-000-00619	000

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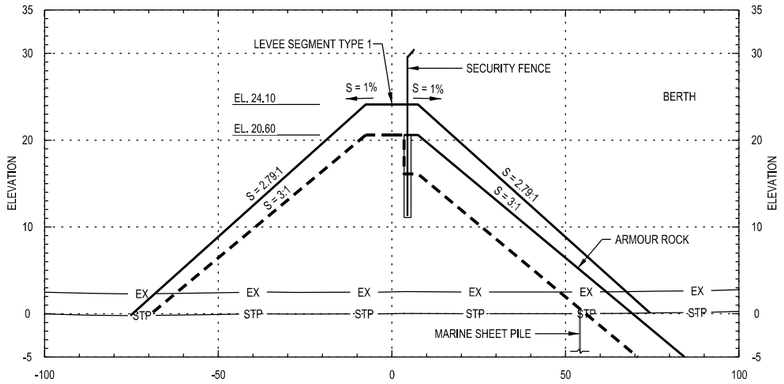
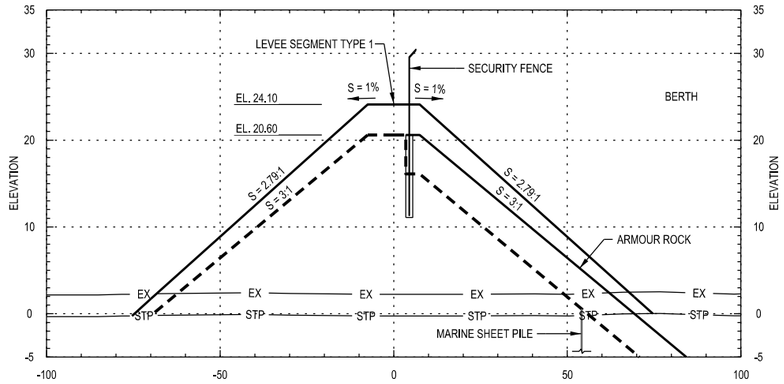
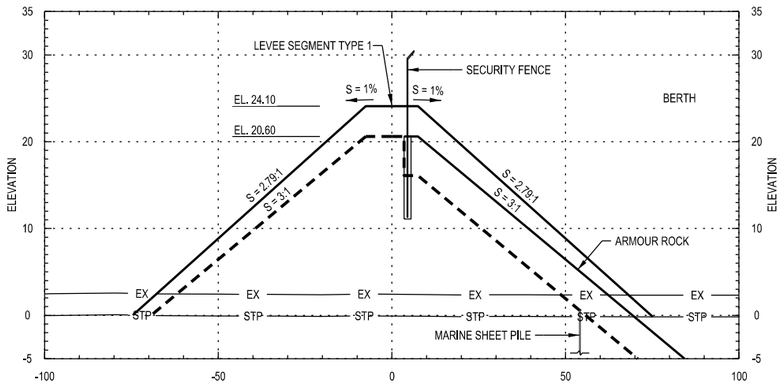
SEGMENT TYPE 1 - STA.25+00 TO STA.30+00



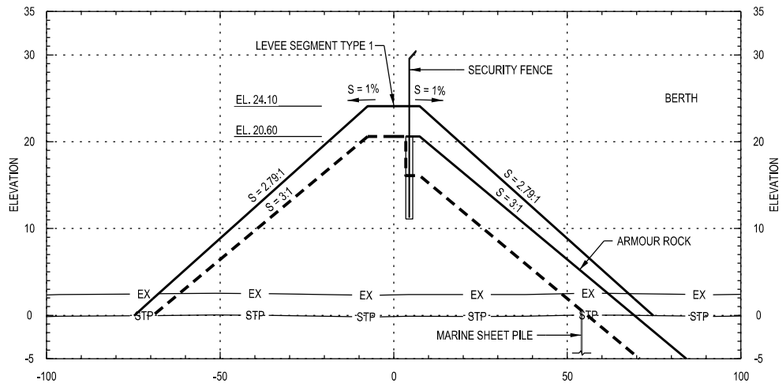
STA. 27+00



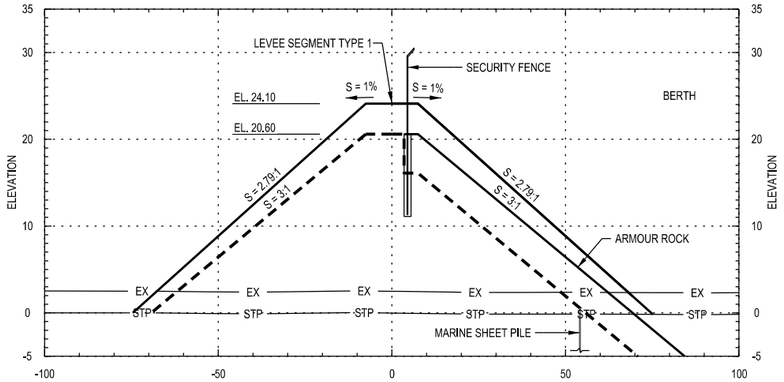
STA. 30+00



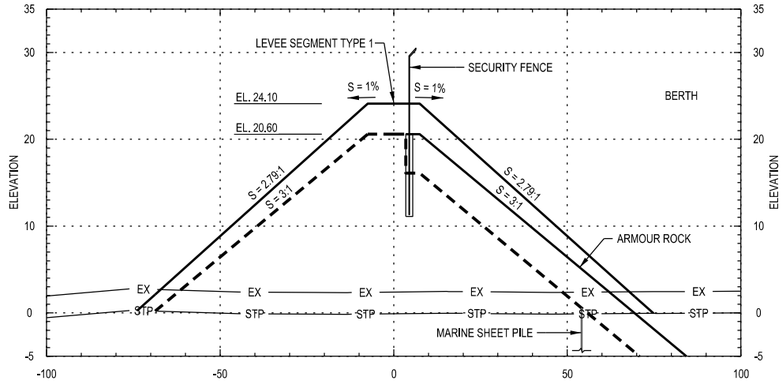
STA. 26+00



STA. 29+00



STA. 25+00



STA. 28+00

NOTES

3581

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWING 26196-100-CG-000-00603 (PAL-PJT-CIV-DWG-00-X-7603).

LEGEND

EX	EXISTING GRADE
STP	STRIPPED GRADE (-2.5')
	SURCHARGE FILL
	LEVEE FILL

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O. "26196-100-" BECHTEL ("PAL-PJT-CIV-" PALNG)

20' 0 20' 40'
1" = 20'

Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/YY	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 1 CROSS SECTION
STA. 25+00 TO STA. 30+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7620	000	26196-100-CG-000-00620	000

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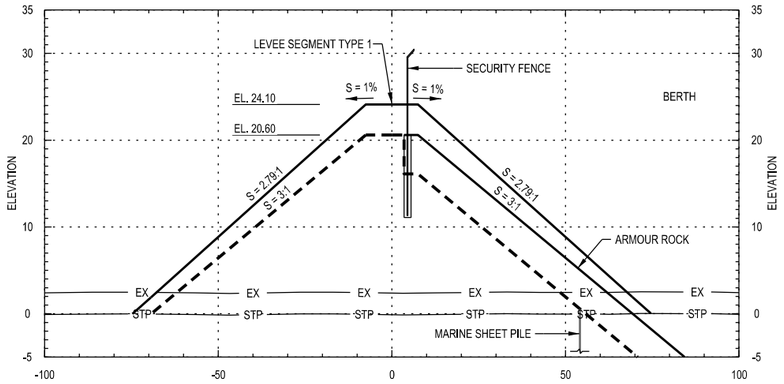
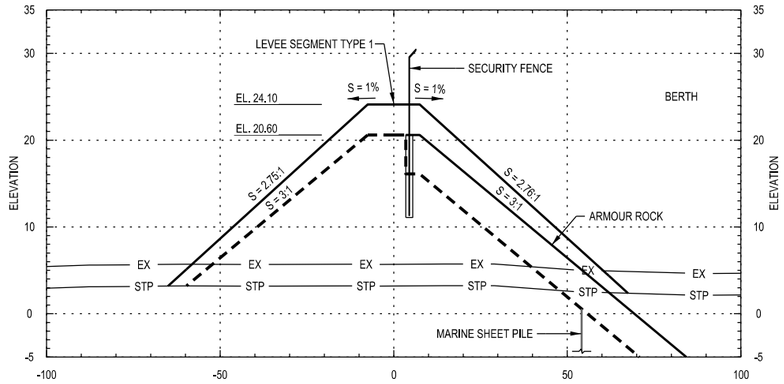
by and among Port Arthur LNG, LLC, PALNG Common Facilities Company, LLC and Bechtel Oil, Gas and Chemicals, Inc.

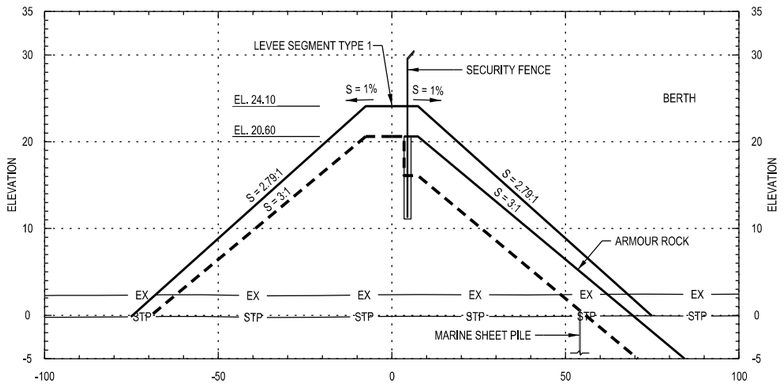
SEGMENT TYPE 1 - STA.31+00 TO STA.36+00



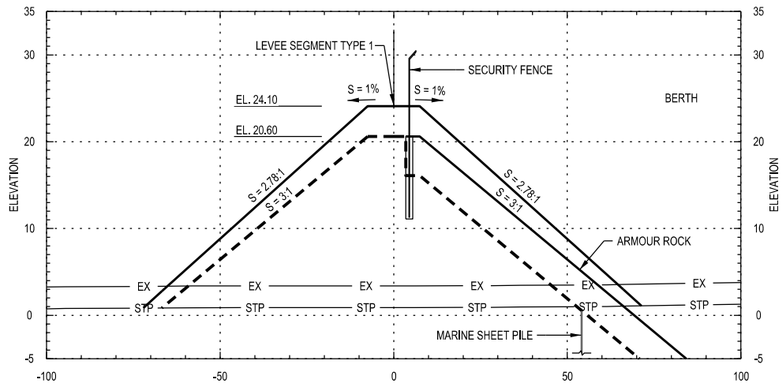
STA. 33+00



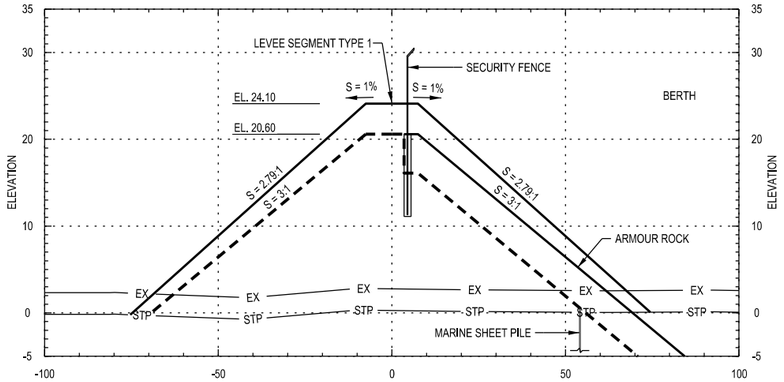
STA. 36+00



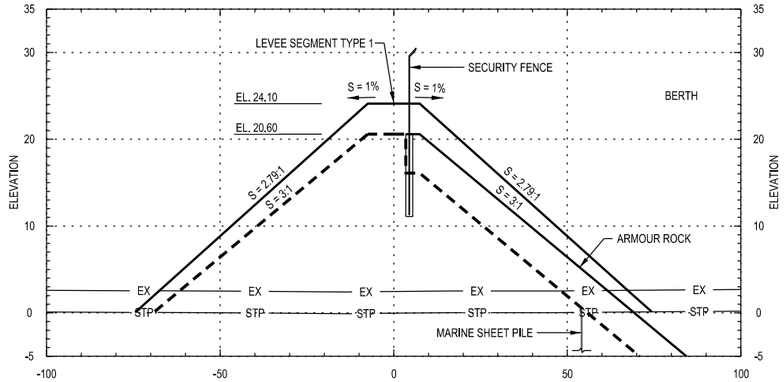
STA. 32+00



STA. 35+00



STA. 31+00



STA. 34+00

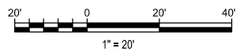
NOTES

3582

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWINGS 26196-100-CG-000-00603 (PAL-PJT-CIV-DWG-00-X-7603) & 26196-100-CG-000-00604 (PAL-PJT-CIV-DWG-00-X-7604).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL



DRAWING PREFIX U.N.O. "26196-100-" BECHTEL ("PAL-PJT-CIV-" PALNG)



Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/YY	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 1 CROSS SECTION
STA. 31+00 TO STA. 36+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7621	000	26196-100-CG-000-00621	000

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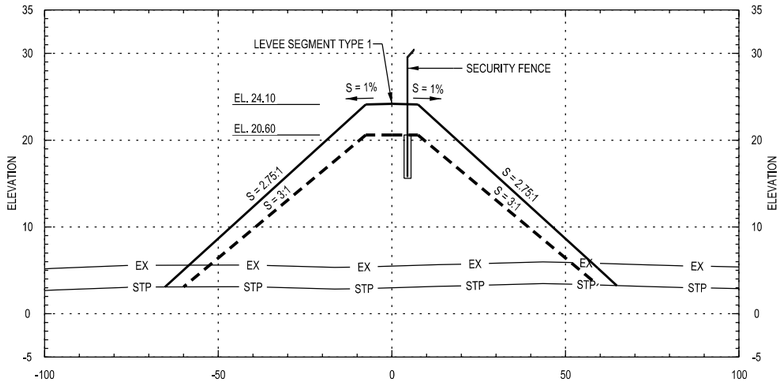
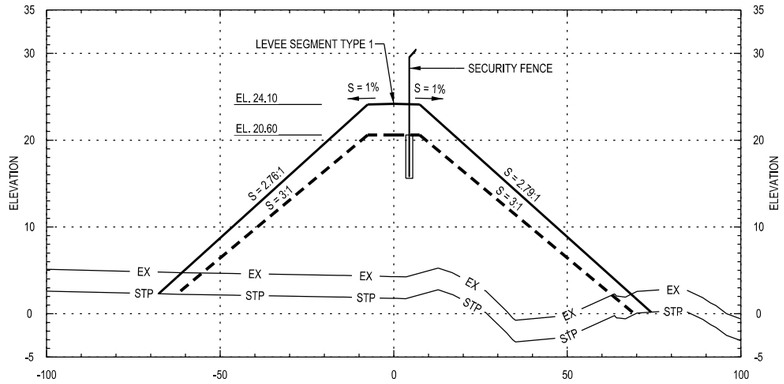
by and among Port Arthur LNG, LLC, PALNG Common Facilities Company, LLC and Bechtel Oil, Gas and Chemicals, Inc.

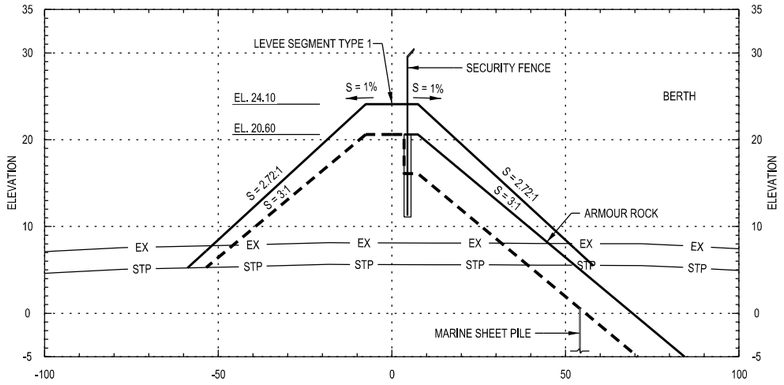
SEGMENT TYPE 1 - STA.37+00 TO STA.42+00



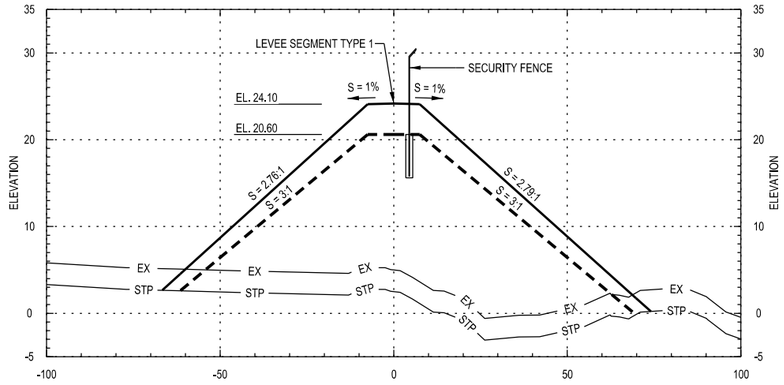
STA. 39+00



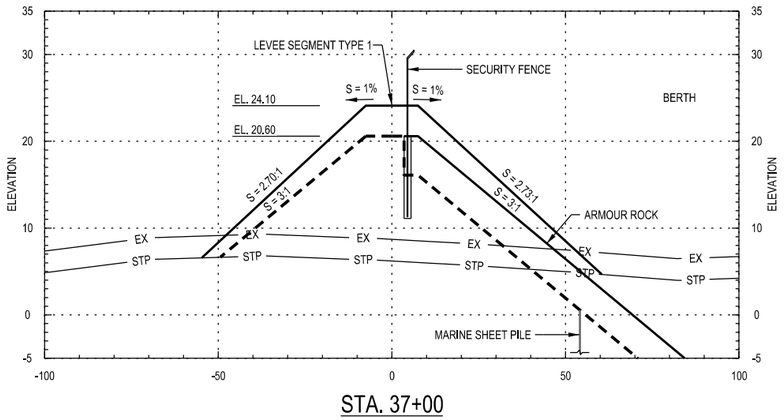
STA. 42+00



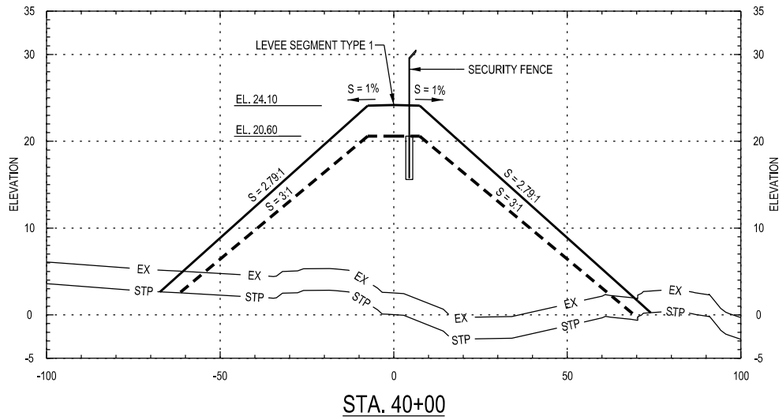
STA. 38+00



STA. 41+00



STA. 37+00



STA. 40+00

20' 0 20' 40'
1" = 20'

NOTES

3583

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWING 26196-100-CG-000-00604 (PAL-PJT-CIV-DWG-00-X-7604).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O. "26196-100-" BECHTEL ("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/YY	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 1 CROSS SECTION
STA. 37+00 TO STA. 42+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7622	000	26196-100-CG-000-00622	000

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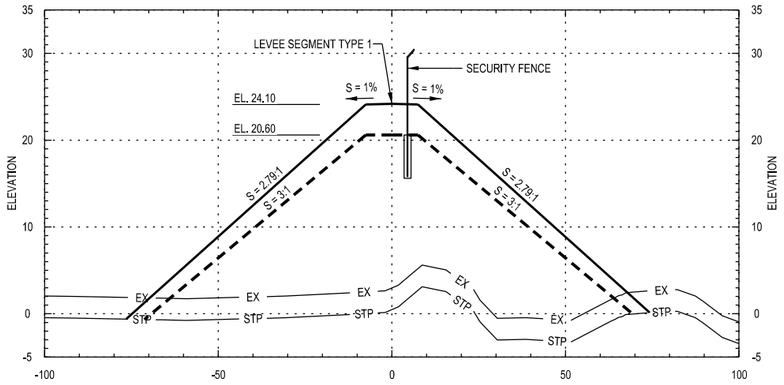
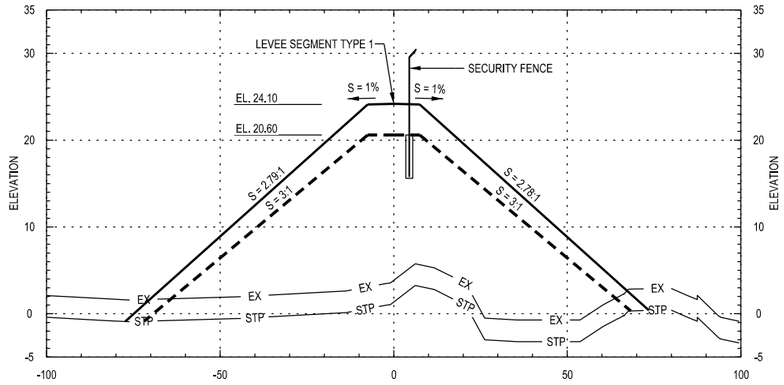
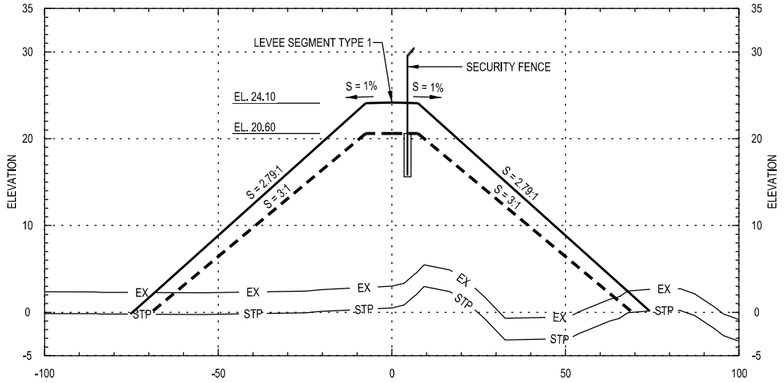
SEGMENT TYPE 1 - STA.43+00 TO STA.48+00



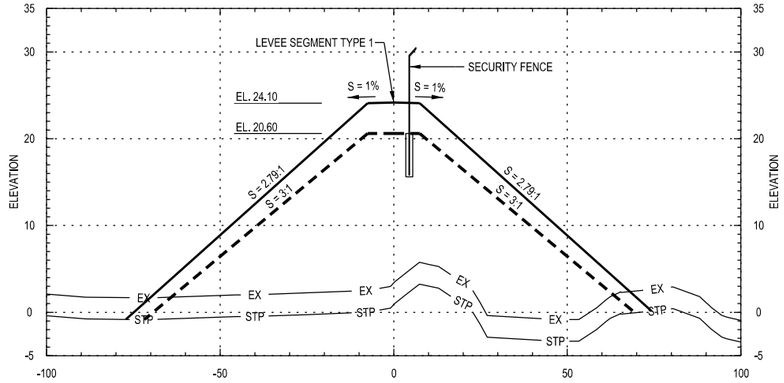
STA. 45+00



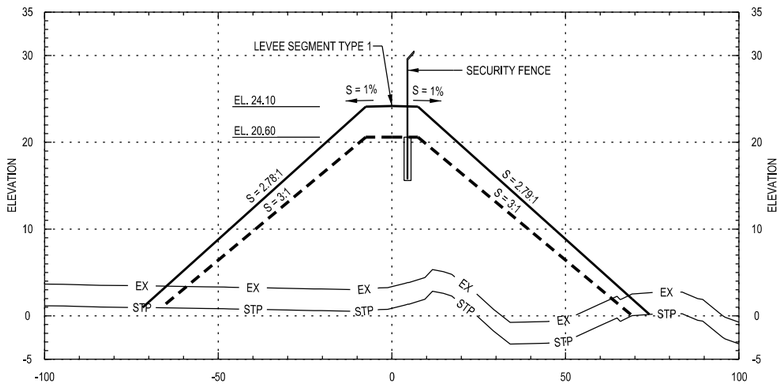
STA. 48+00



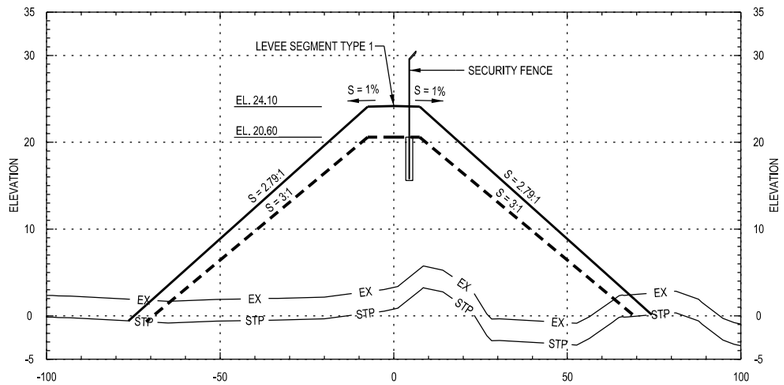
STA. 44+00



STA. 47+00



STA. 43+00



STA. 46+00

NOTES

3584

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWINGS 26196-100-CG-000-00604 (PAL-PJT-CIV-DWG-00-X-7604) & 26196-100-CG-000-00605 (PAL-PJT-CIV-DWG-00-X-7605).

LEGEND

EX	EXISTING GRADE
STP	STRIPPED GRADE (-2.5')
	SURCHARGE FILL
	LEVEE FILL

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

20' 0 20' 40'
1" = 20'

Port Arthur LNG

Bechtel OG&C.
26196-100
FIRM NO.
F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 1 CROSS SECTION
STA. 43+00 TO STA. 48+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7623	000	26196-100-CG-000-00623	000

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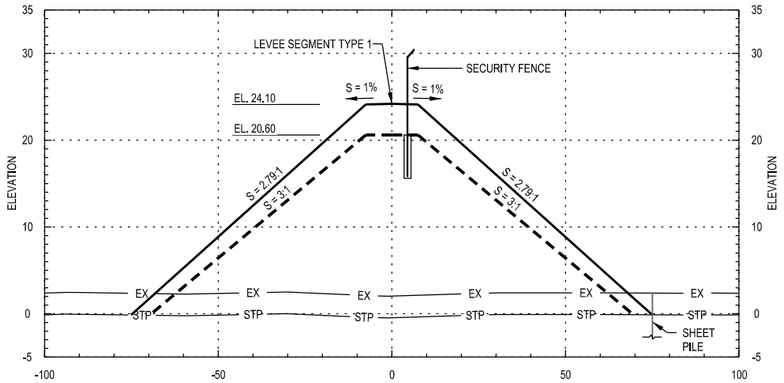
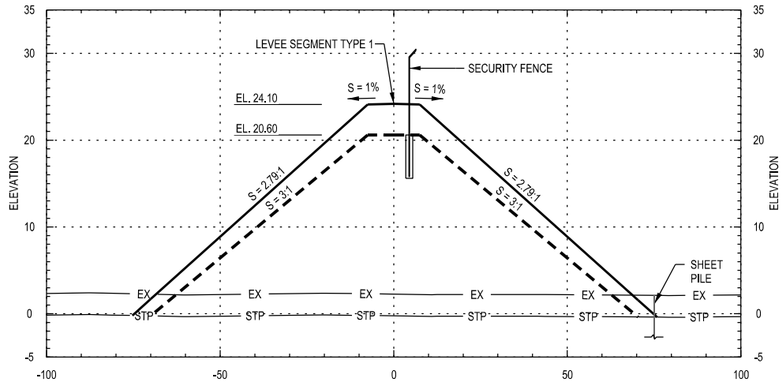
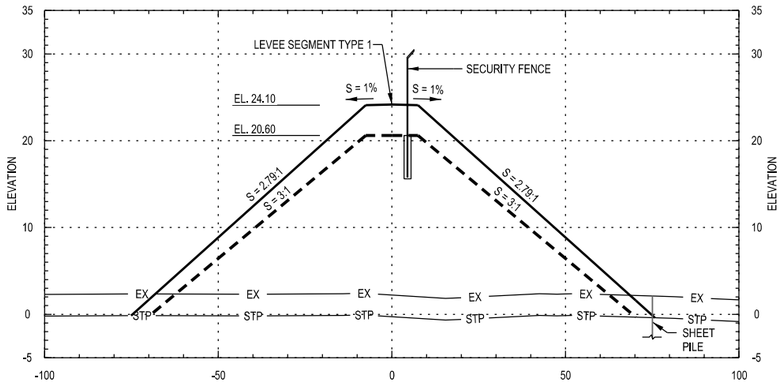
SEGMENT TYPE 1 - STA.49+00 TO STA.54+00



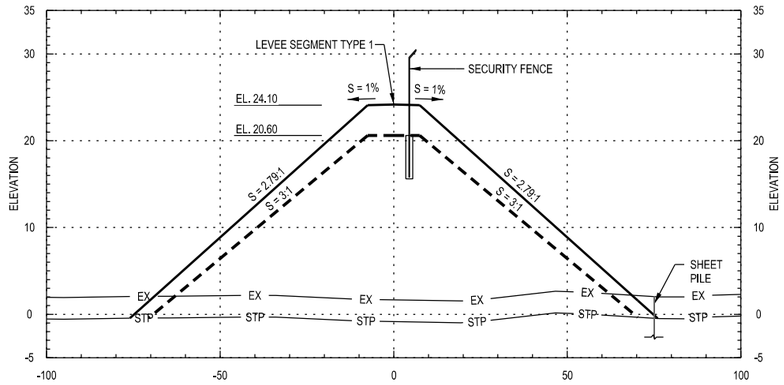
STA. 51+00



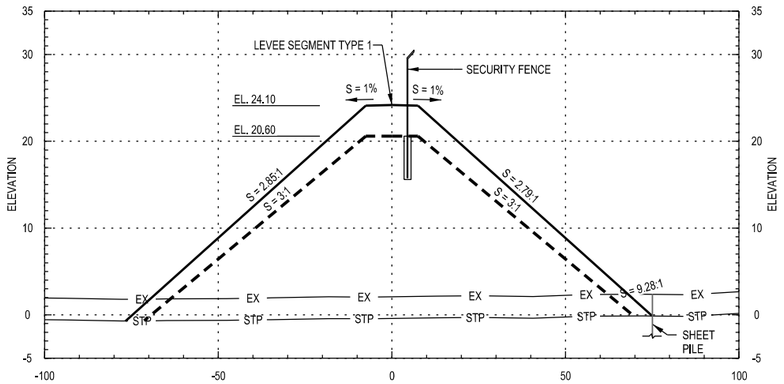
STA. 54+00



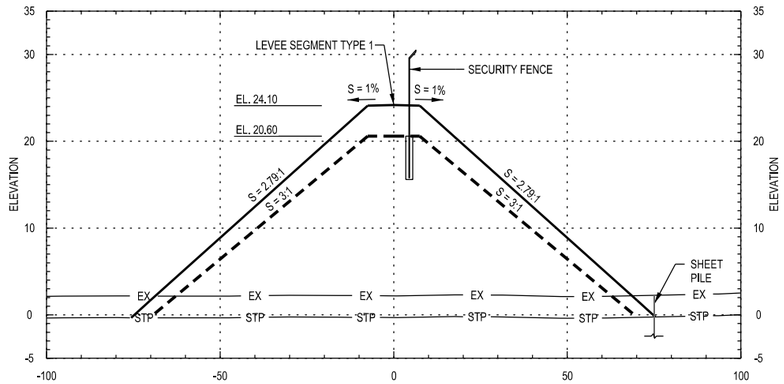
STA. 50+00



STA. 53+00



STA. 49+00



STA. 52+00

20' 0 20' 40'

1" = 20'

NOTES

3585

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWING 26196-100-CG-000-00605 (PAL-PJT-CIV-DWG-00-X-7605).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

BECHTEL

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 1 CROSS SECTION
STA. 49+00 TO STA. 54+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7624	000	26196-100-CG-000-00624	000

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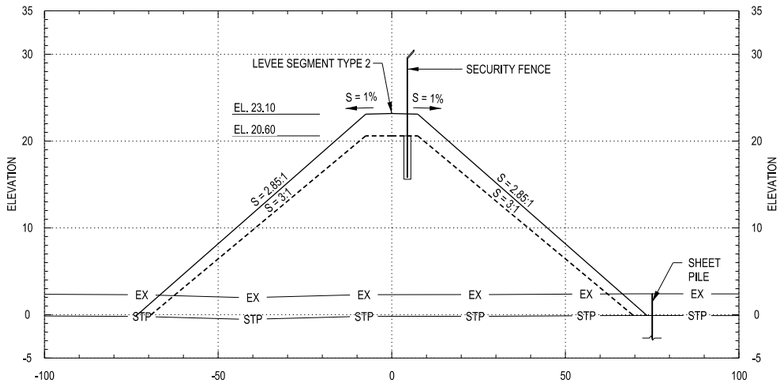
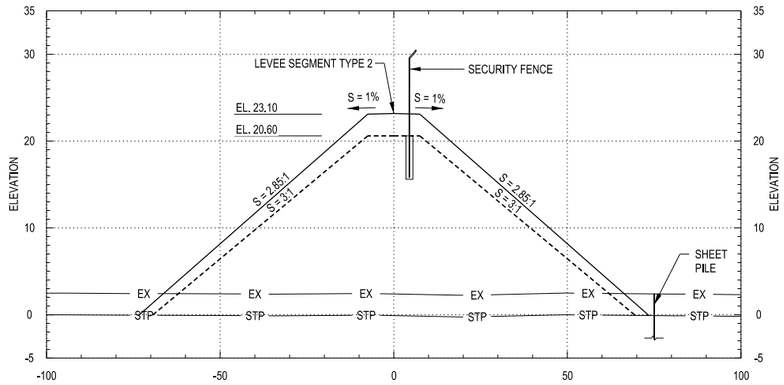
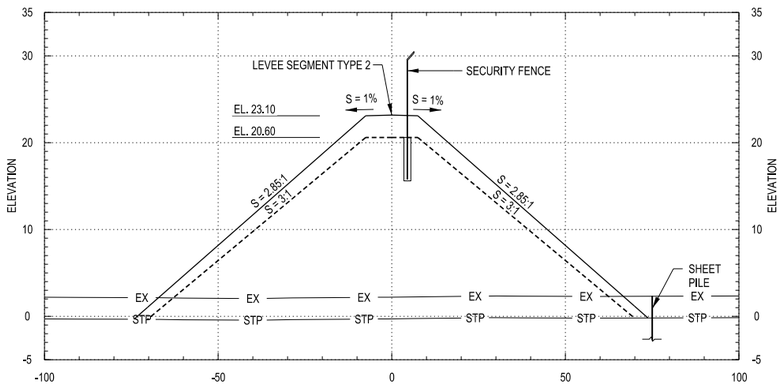
SEGMENT TYPE 1 - STA.55+00
SEGMENT TYPE 2 - STA.56+00 TO STA.60+00



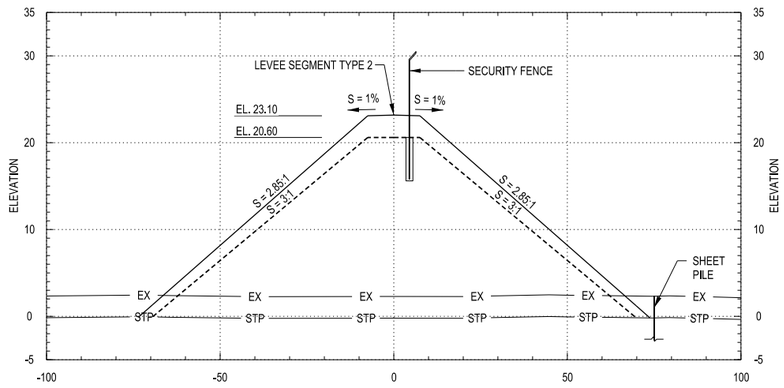
STA. 57+00



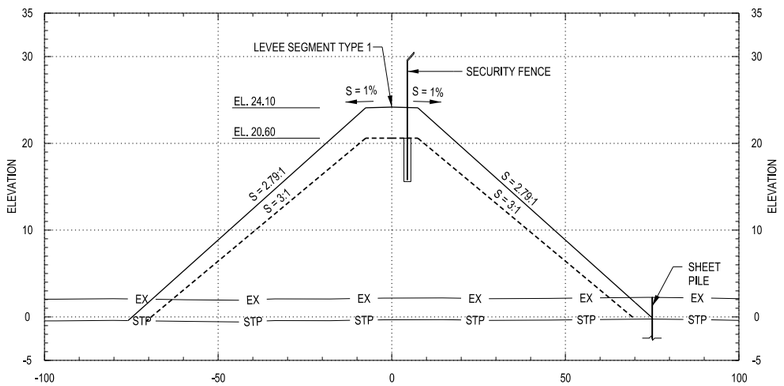
STA. 60+00



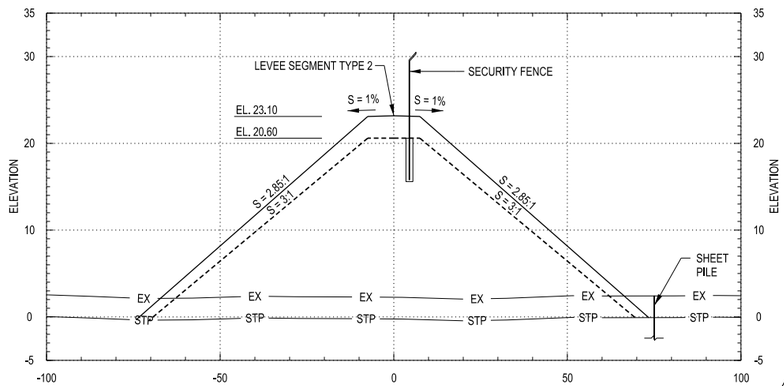
STA. 56+00



STA. 59+00



STA. 55+00



STA. 58+00

20' 0 20' 40'
1" = 20'

NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWINGS 26196-100-CG-000-00605 (PAL-PJT-CIV-DWG-00-X-7605) & 26196-100-CG-000-00606 (PAL-PJT-CIV-DWG-00-X-7606).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL

ARTURO PALACIOS
101215
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS

Port Arthur LNG

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								
001	09-29-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/DL	NJ/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 1 & 2 CROSS SECTION
STA. 55+00 TO STA. 60+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7625	001	26196-100-CG-000-00625	001

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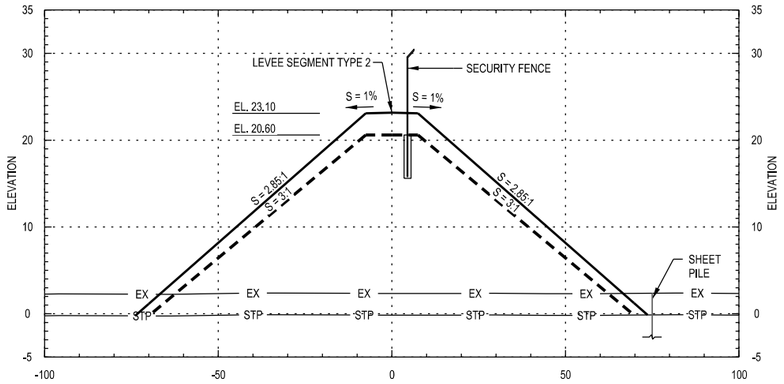
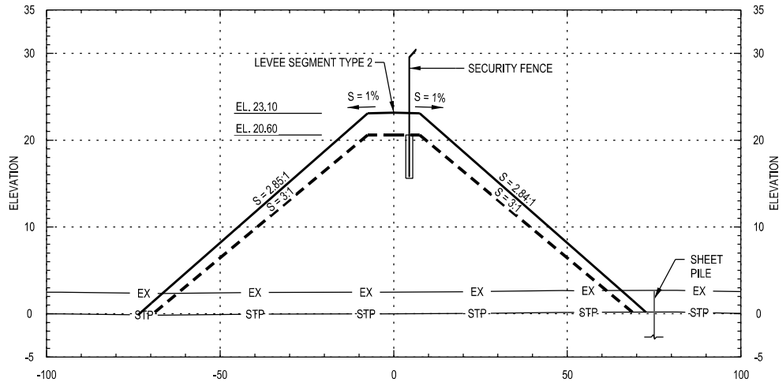
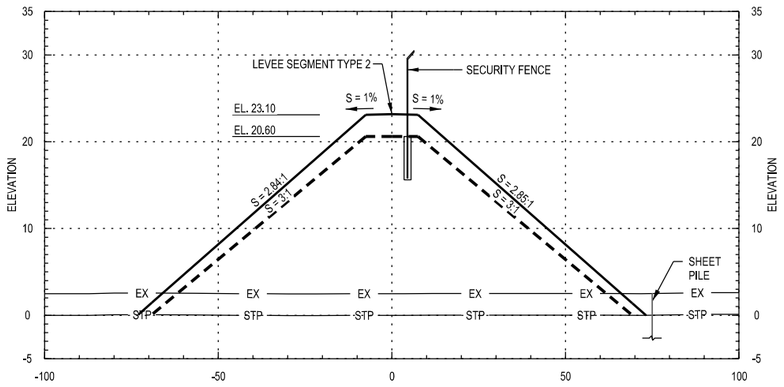
SEGMENT TYPE 2 - STA.61+00 TO STA.66+00



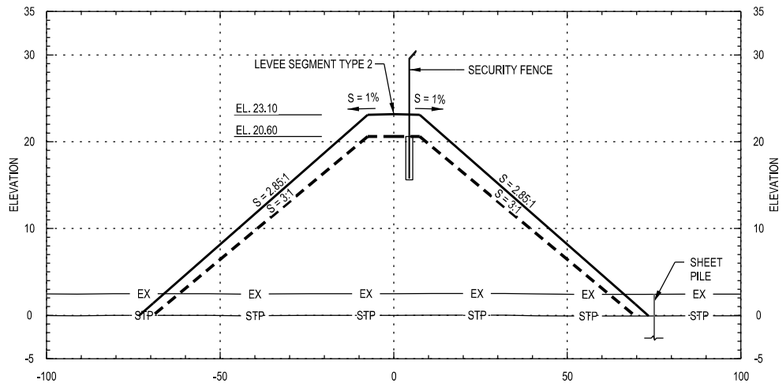
STA. 63+00



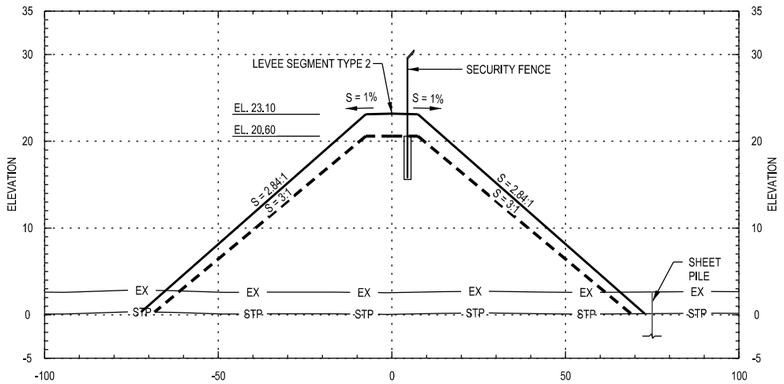
STA. 66+00



STA. 62+00



STA. 65+00



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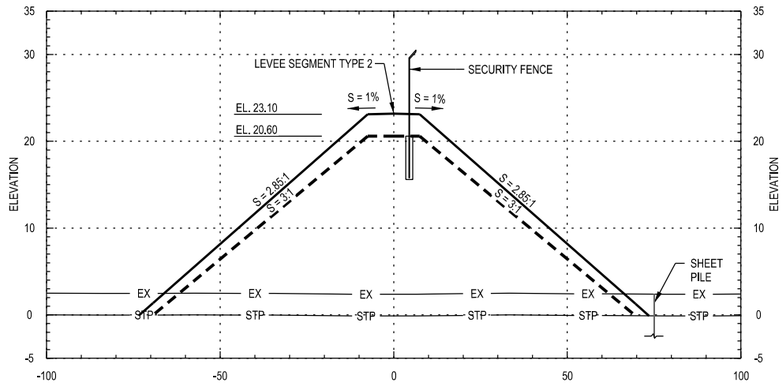
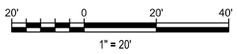


STA. 64+00



NOTES

3587

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWINGS 26196-100-CG-000-00606 (PAL-PJT-CIV-DWG-00-X-7606) & 26196-100-CG-000-00607 (PAL-PJT-CIV-DWG-00-X-7607).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O. "26196-100-" BECHTEL ("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 CROSS SECTION
STA. 61+00 TO STA. 66+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7626	000	26196-100-CG-000-00626	000

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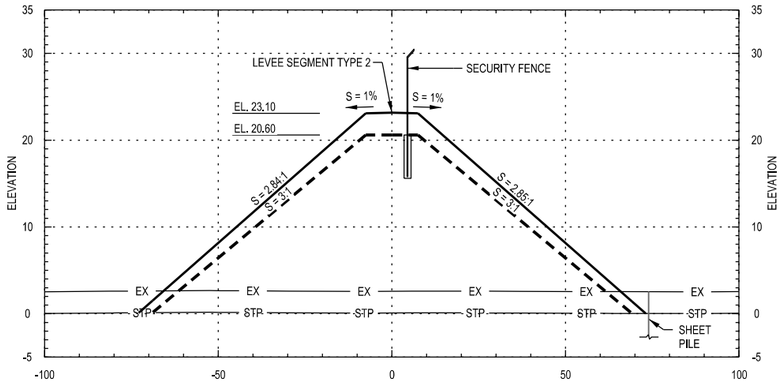
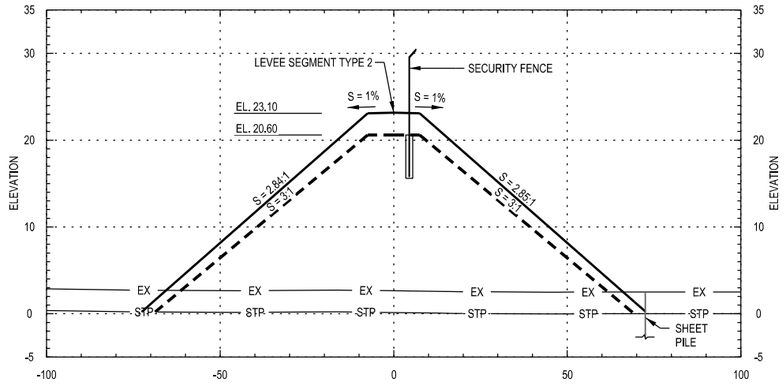
by and among Port Arthur LNG, LLC, PALNG Common Facilities Company, LLC and Bechtel Oil, Gas and Chemicals, Inc.

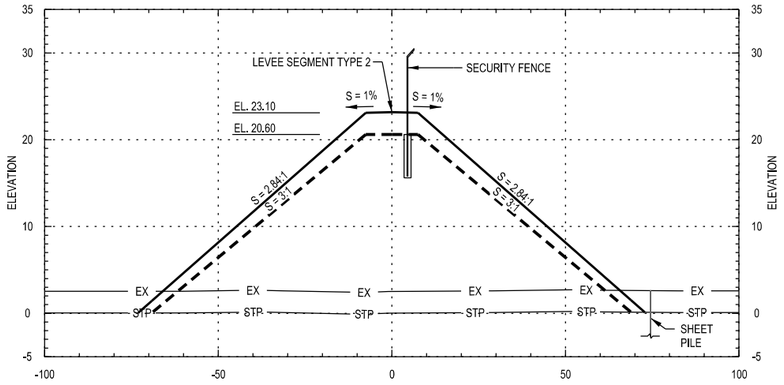
SEGMENT TYPE 2 - STA.67+00 TO STA.72+00



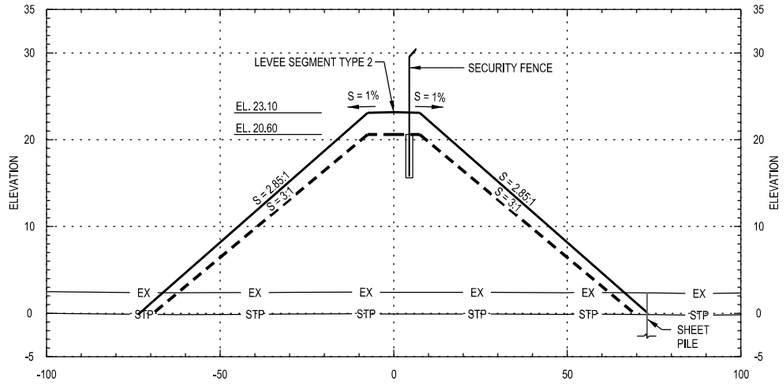
STA. 69+00



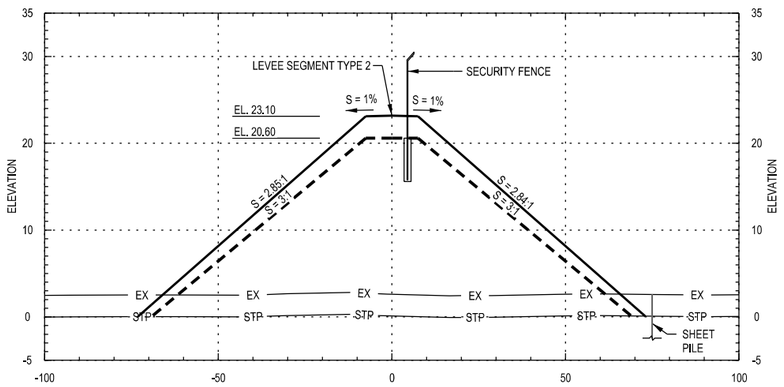
STA. 72+00



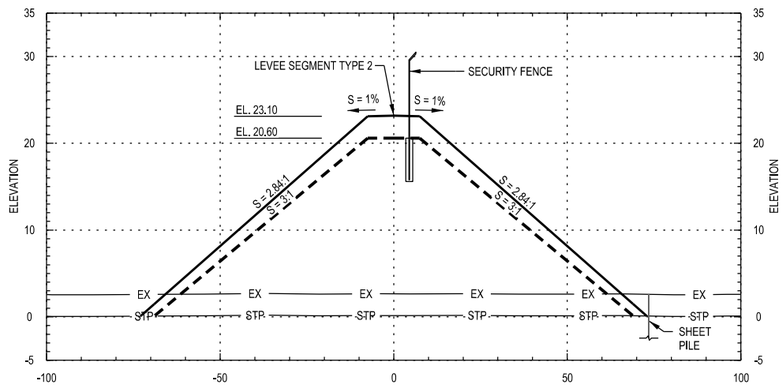
STA. 68+00



STA. 71+00



STA. 67+00



STA. 70+00

NOTES

3588

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWING 26196-100-CG-000-00607 (PAL-PJT-CIV-DWG-00-X-7607).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL



DRAWING PREFIX U.N.O. "26196-100-" BECHTEL ("PAL-PJT-CIV-" PALNG)

20' 0 20' 40'
1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 20'

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 CROSS SECTION
STA. 67+00 TO STA. 72+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7627	000	26196-100-CG-000-00627	000

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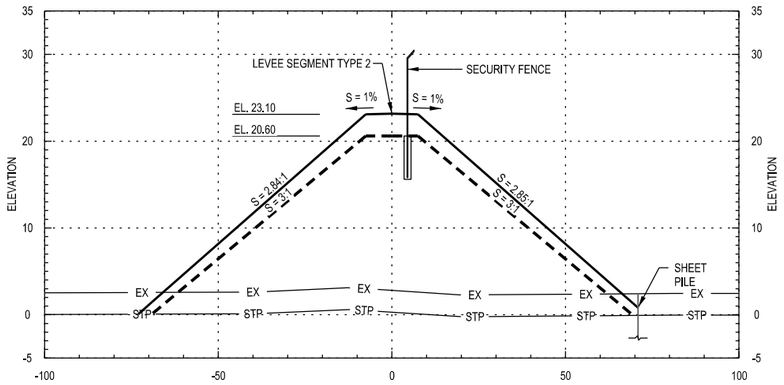
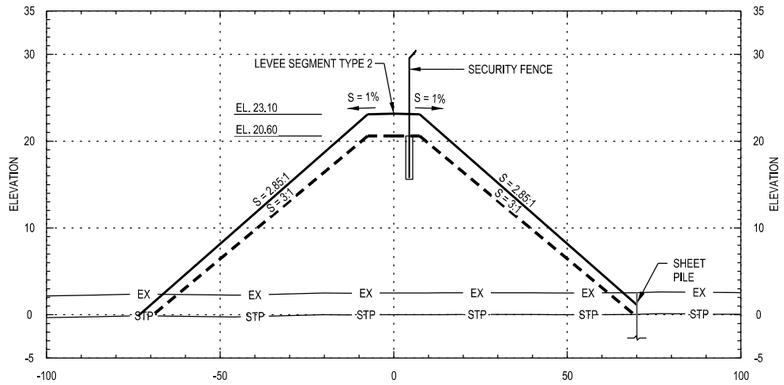
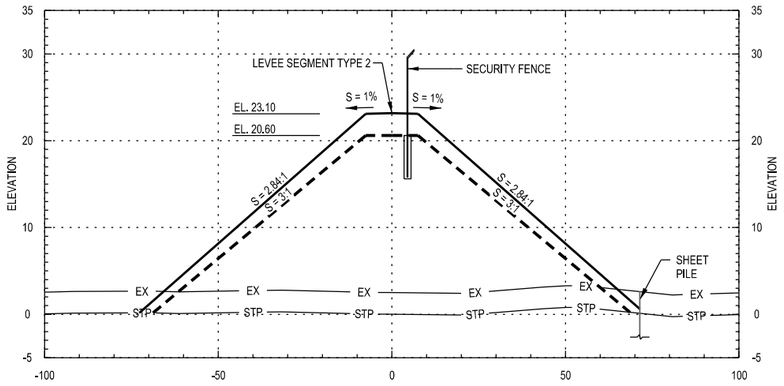
SEGMENT TYPE 2 - STA.73+00 TO STA.78+00



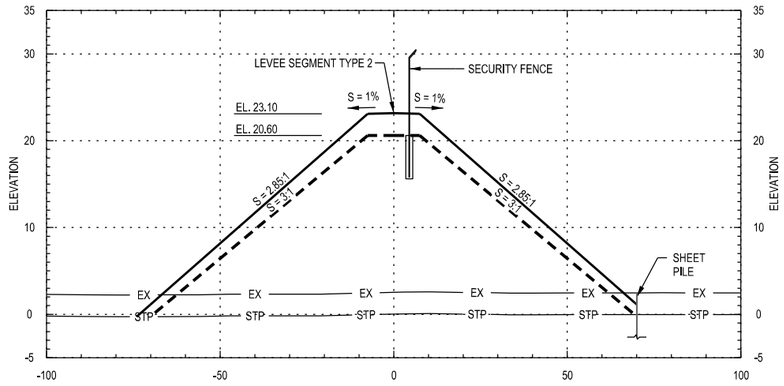
STA. 75+00



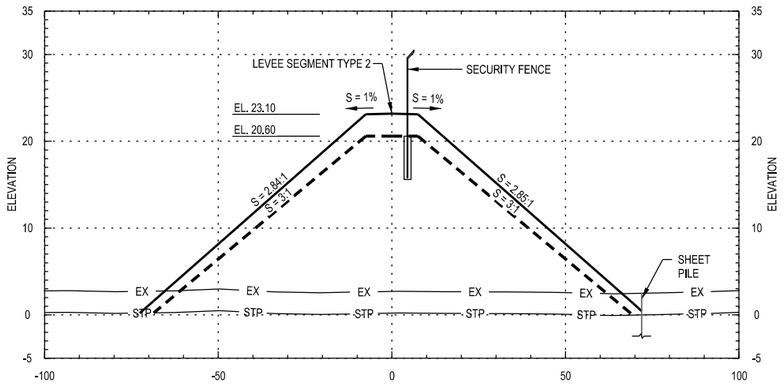
STA. 78+00



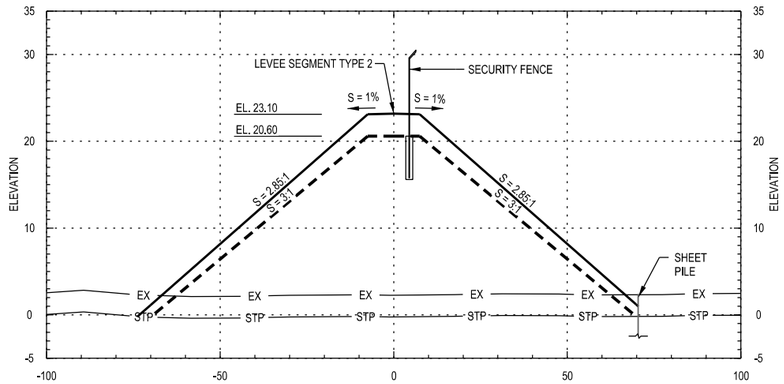
STA. 74+00



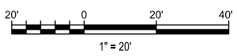
STA. 77+00



STA. 73+00



STA. 76+00



NOTES

3589

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWINGS 26196-100-CG-000-00607 (PAL-PJT-CIV-DWG-00-X-7607) & 26196-100-CG-000-00608 (PAL-PJT-CIV-DWG-00-X-7608).

LEGEND

EX	EXISTING GRADE
STP	STRIPPED GRADE (-2.5')
	SURCHARGE FILL
	LEVEE FILL

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O. "26196-100-" BECHTEL ("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 CROSS SECTION
STA. 73+00 TO STA. 78+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7628	000	26196-100-CG-000-00628	000

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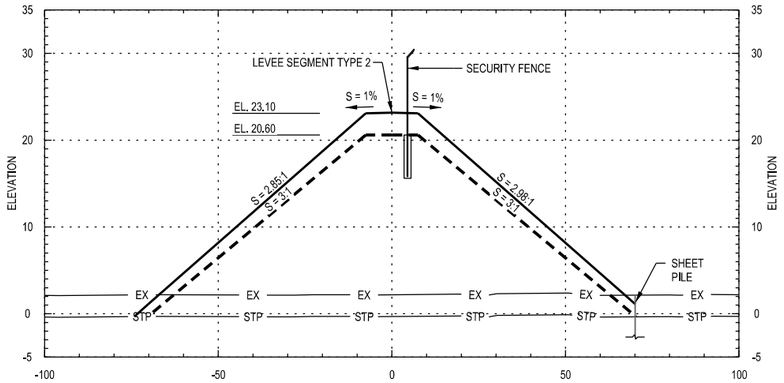
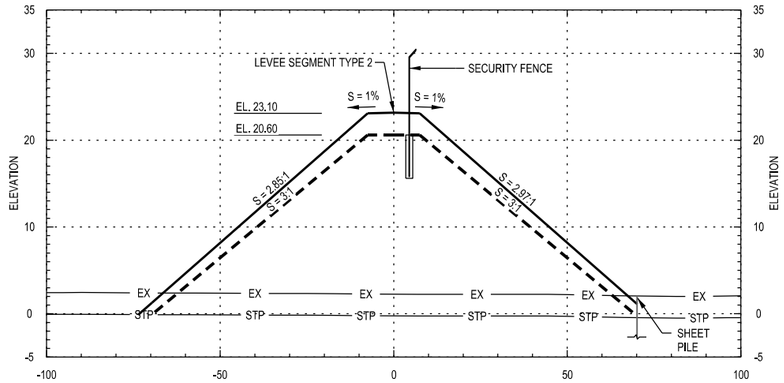
by and among Port Arthur LNG1, LLC, PALNG Common Facilities Company, LLC and Bechtel Oil, Gas and Chemicals, Inc.

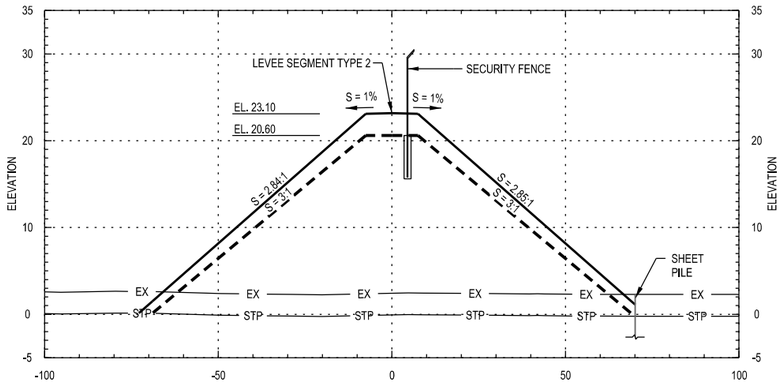
SEGMENT TYPE 2 - STA.79+00 TO STA.84+00



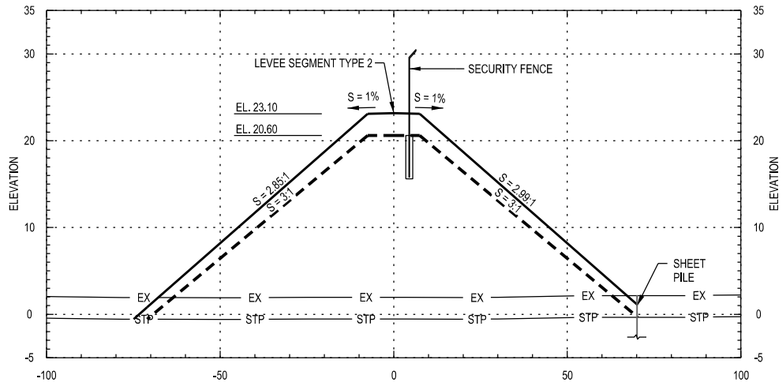
STA. 81+00



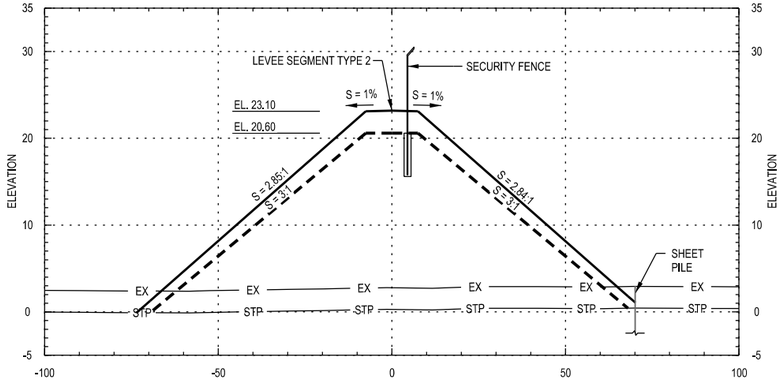
STA. 84+00



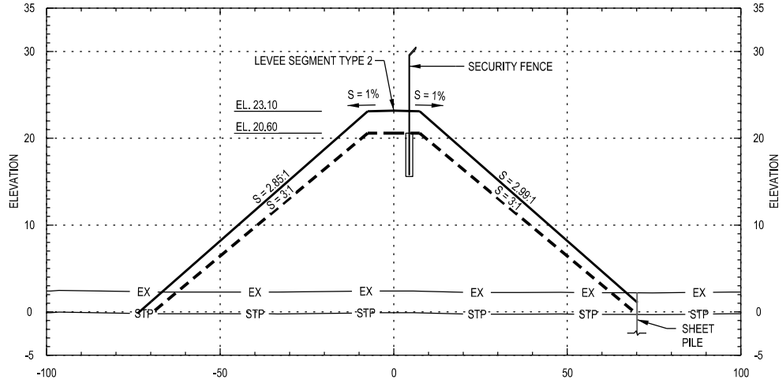
STA. 80+00



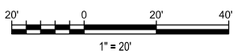
STA. 83+00



STA. 79+00



STA. 82+00



NOTES

3590

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWING 26196-100-CG-000-00608 (PAL-PJT-CIV-DWG-00-X-7608).

LEGEND

EX	EXISTING GRADE
STP	STRIPPED GRADE (-2.5')
	SURCHARGE FILL
	LEVEE FILL

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 CROSS SECTION
STA. 79+00 TO STA. 84+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7629	000	26196-100-CG-000-00629	000

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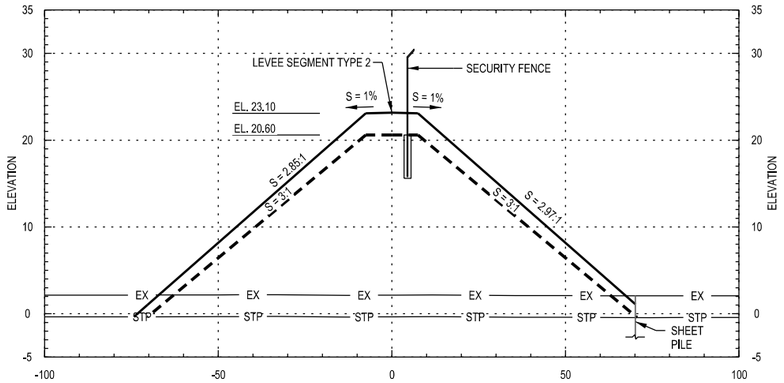
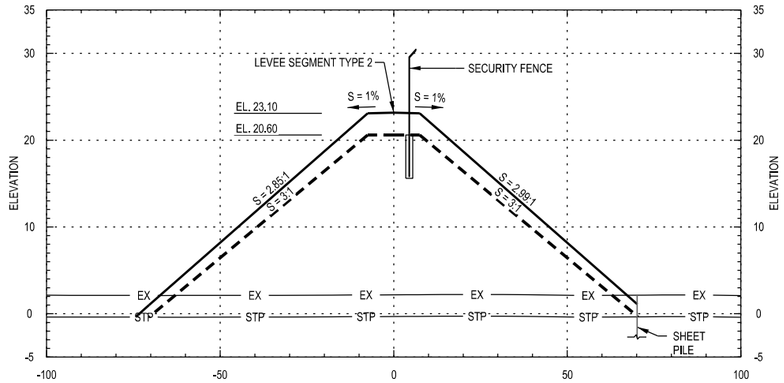
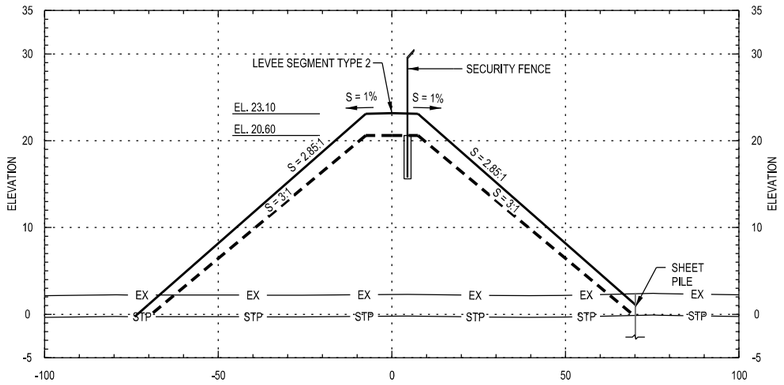
SEGMENT TYPE 2 - STA.85+00 TO STA.90+00



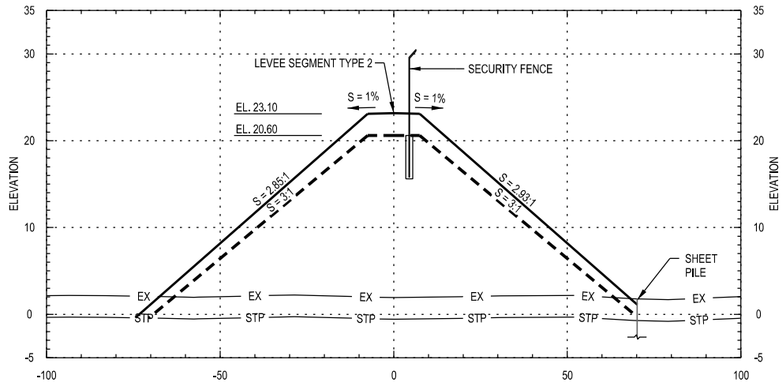
STA. 87+00



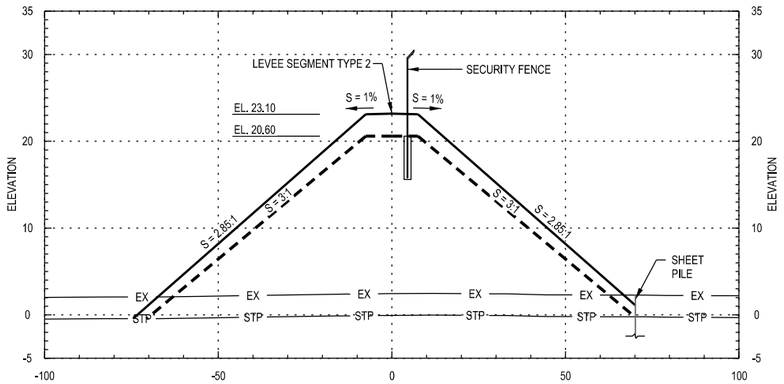
STA. 90+00



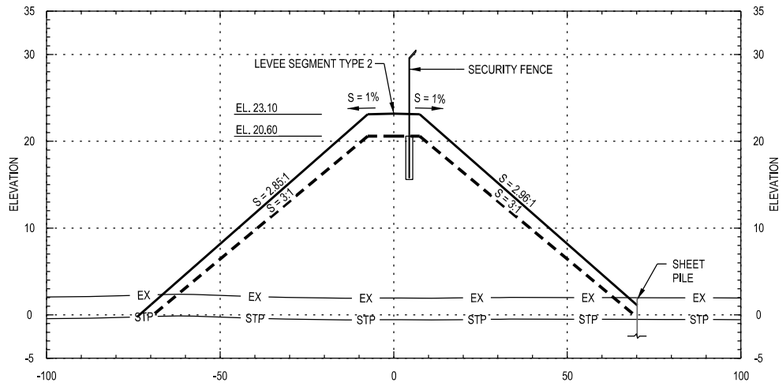
STA. 86+00



STA. 89+00



STA. 85+00



STA. 88+00

NOTES

3591

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWINGS 26196-100-CG-000-00608 (PAL-PJT-CIV-DWG-00-X-7608) & 26196-100-CG-000-00609 (PAL-PJT-CIV-DWG-00-X-7609).

LEGEND

EX	EXISTING GRADE
STP	STRIPPED GRADE (-2.5')
	SURCHARGE FILL
	LEVEE FILL

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

20' 0 20' 40'
1" = 20'

Port Arthur LNG

BECHTEL

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 CROSS SECTION
STA. 85+00 TO STA. 90+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7630	000	26196-100-CG-000-00630	000

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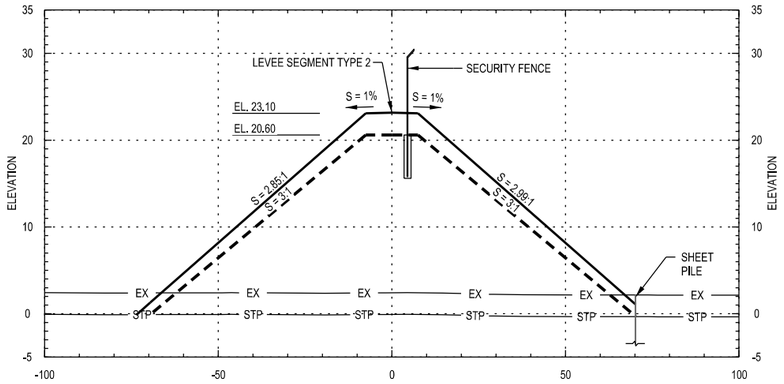
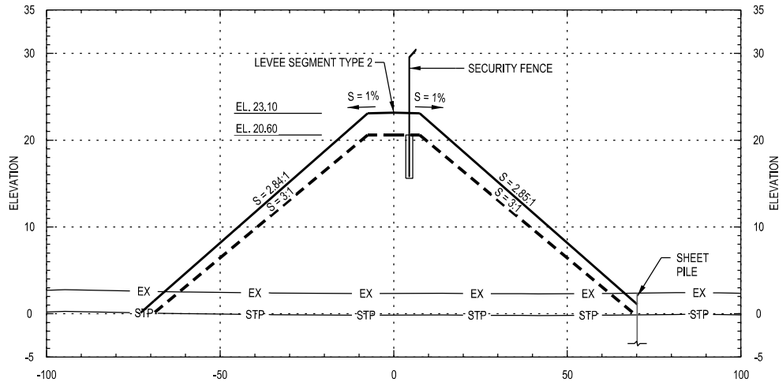
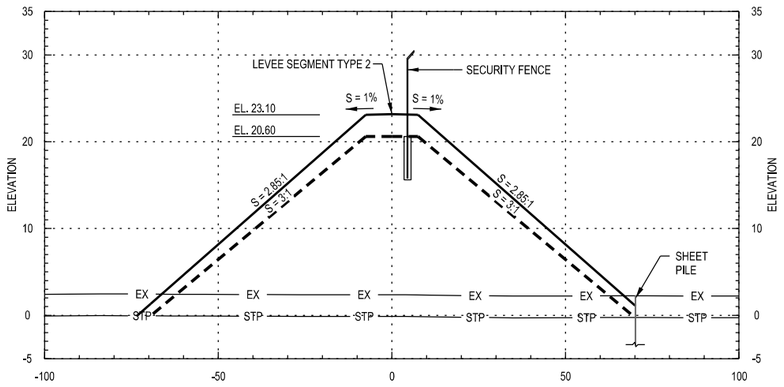
SEGMENT TYPE 2 - STA.91+00 TO STA.96+00



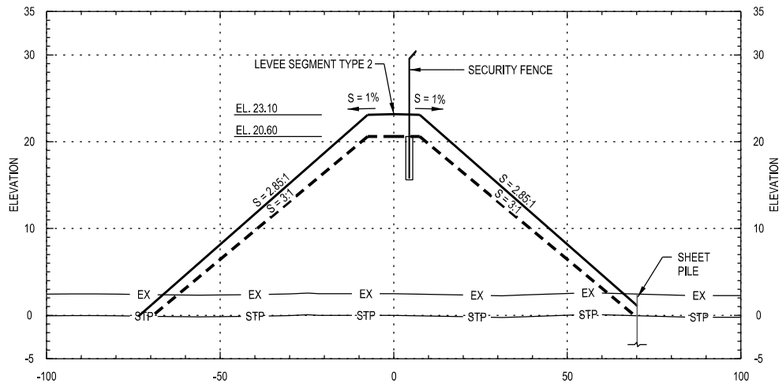
STA. 93+00



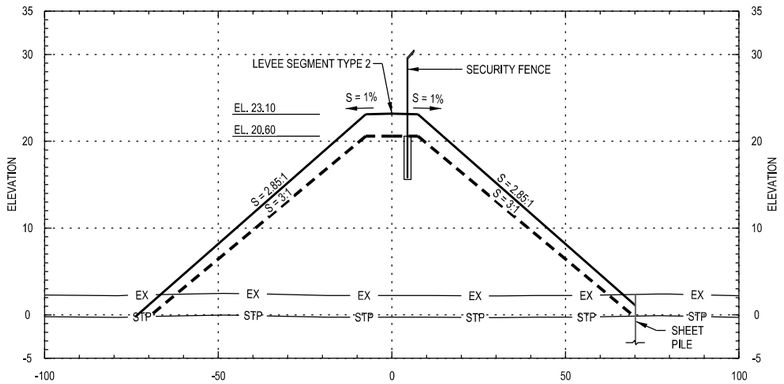
STA. 96+00



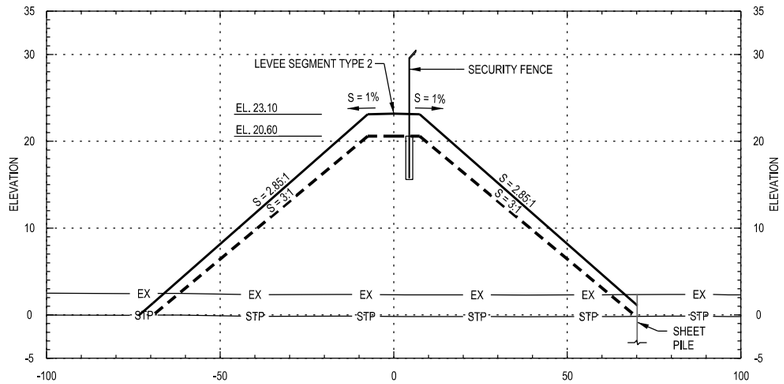
STA. 92+00



STA. 95+00



STA. 91+00



STA. 94+00

NOTES

3592

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWING 26196-100-CG-000-00609 (PAL-PJT-CIV-DWG-00-X-7609).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL

DRAWING PREFIX U.N.O. "26196-100-" BECHTEL ("PAL-PJT-CIV-" PALNG)

20' 0 20' 40'
1" = 20'

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 CROSS SECTION
STA. 91+00 TO STA. 96+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7631	000	26196-100-CG-000-00631	000

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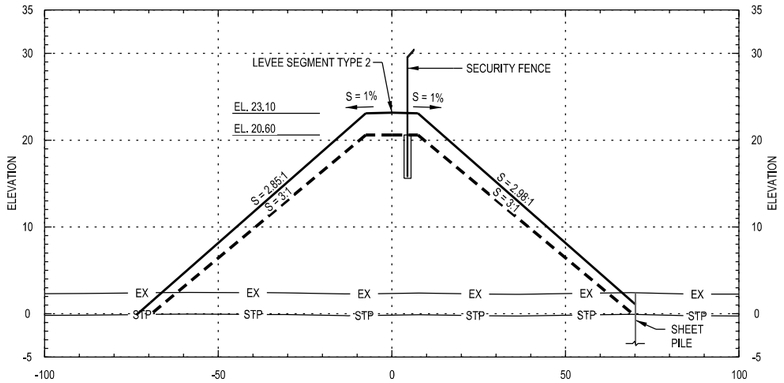
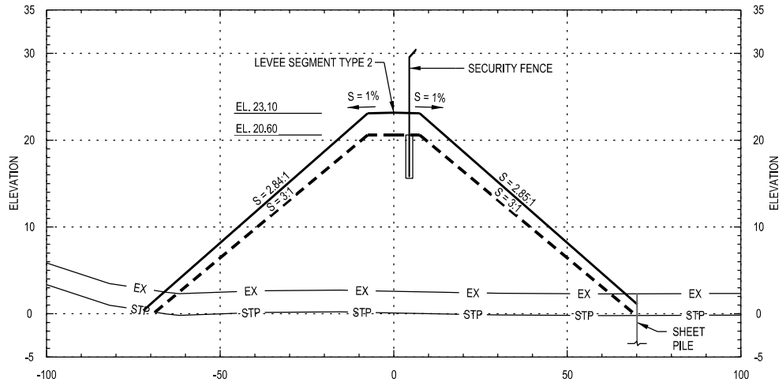
by and among Port Arthur LNG1, LLC, PALNG Common Facilities Company, LLC and Bechtel Oil, Gas and Chemicals, Inc.

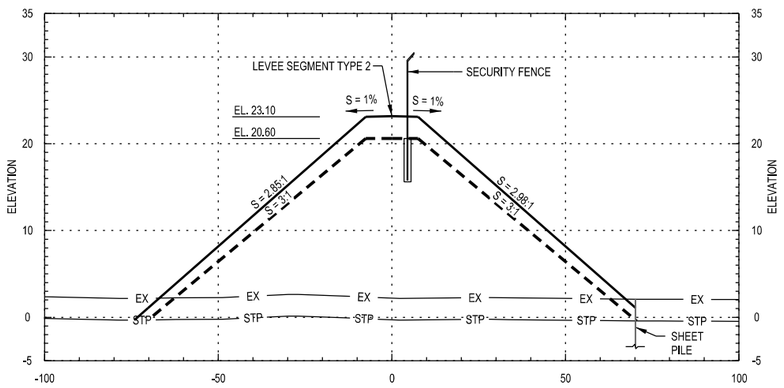
SEGMENT TYPE 2 - STA.97+00 TO STA.102+00



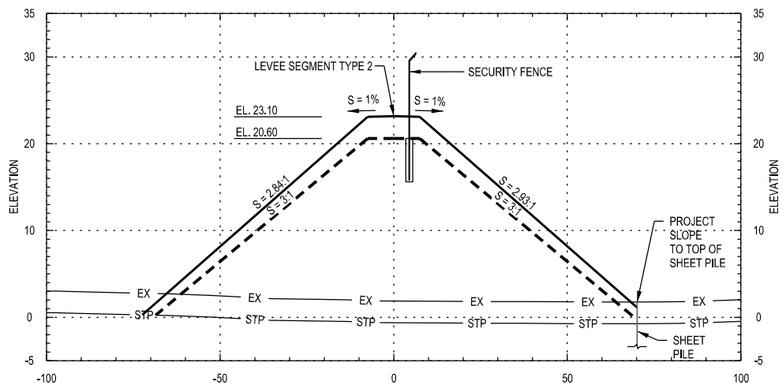
STA. 99+00



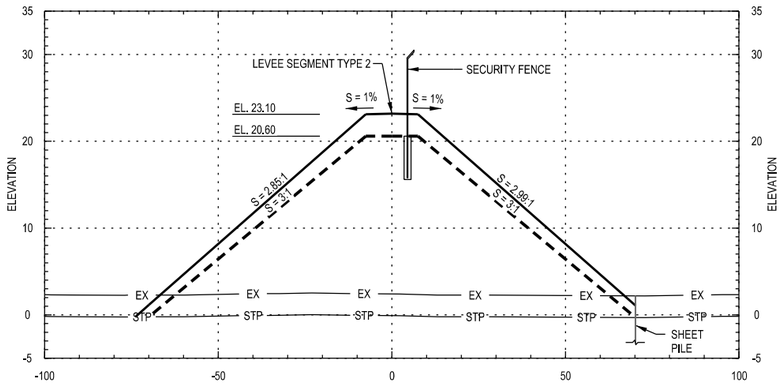
STA. 102+00



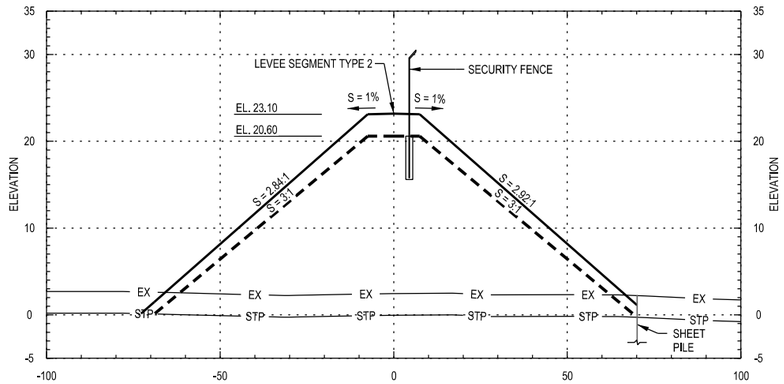
STA. 98+00



STA. 101+00



STA. 97+00



STA. 100+00

20' 0 20' 40'
1" = 20'

NOTES

3593

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWINGS 26196-100-CG-000-00609 (PAL-PJT-CIV-DWG-00-X-7609) & 26196-100-CG-000-00610 (PAL-PJT-CIV-DWG-00-X-7610).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O. "26196-100-" BECHTEL ("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

BECHTEL

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 CROSS SECTION
STA. 97+00 TO STA. 102+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7632	000	26196-100-CG-000-00632	000

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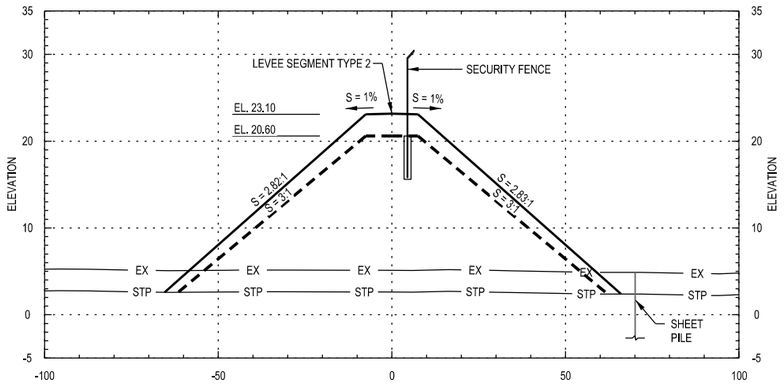
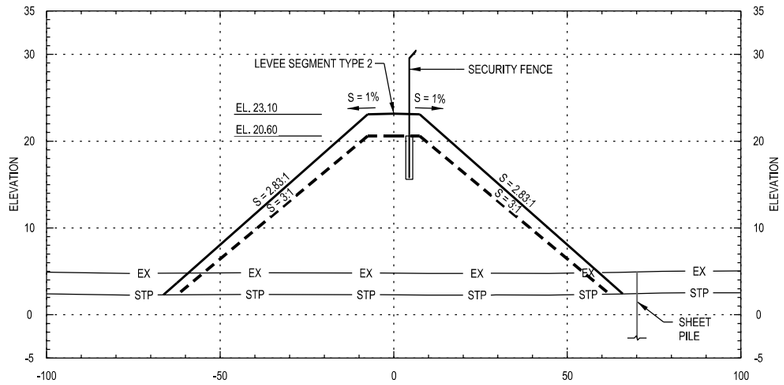
by and among Port Arthur LNG, LLC, PALNG Common Facilities Company, LLC and Bechtel Oil, Gas and Chemicals, Inc.

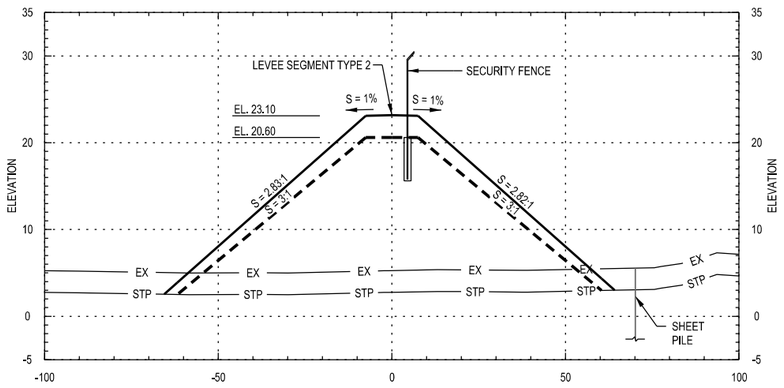
SEGMENT TYPE 2 - STA.103+00 TO STA.108+00



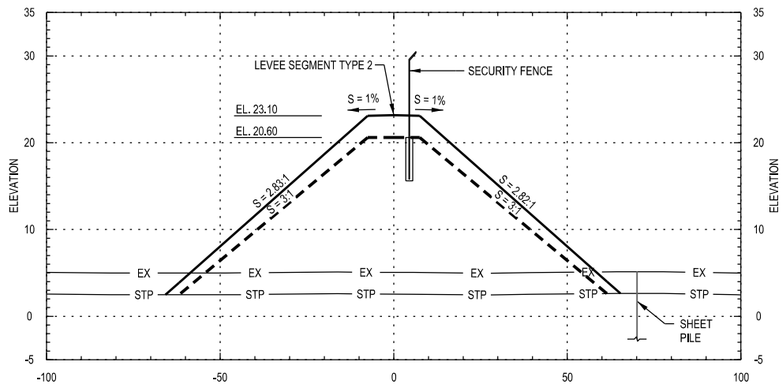
STA. 105+00



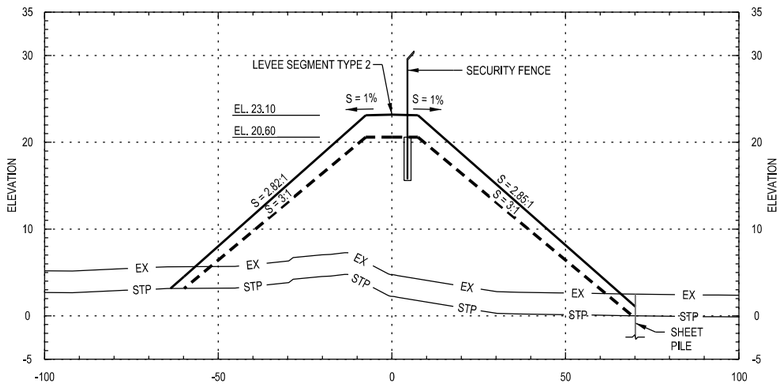
STA. 108+00



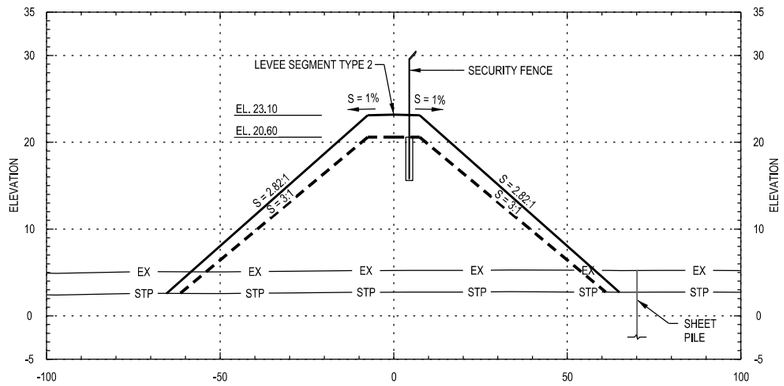
STA. 104+00



STA. 107+00



STA. 103+00



STA. 106+00

NOTES

3594

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWING 26196-100-CG-000-00610 (PAL-PJT-CIV-DWG-00-X-7610).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

20' 0 20' 40'
1" = 20'

Port Arthur LNG

BECHTEL
Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 CROSS SECTION
STA. 103+00 TO STA. 108+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7633	000	26196-100-CG-000-00633	000

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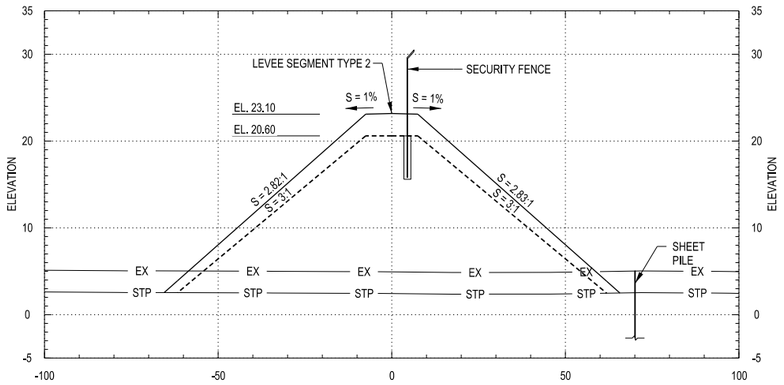
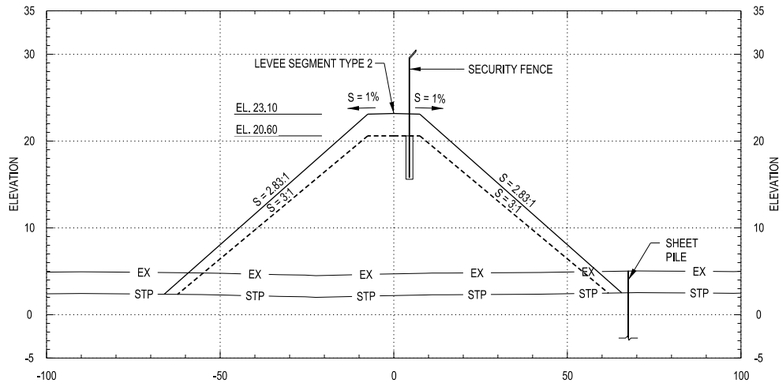
by and among Port Arthur LNG, LLC, PALNG Common Facilities Company, LLC and Bechtel E&C, Gas and Chemicals, Inc.

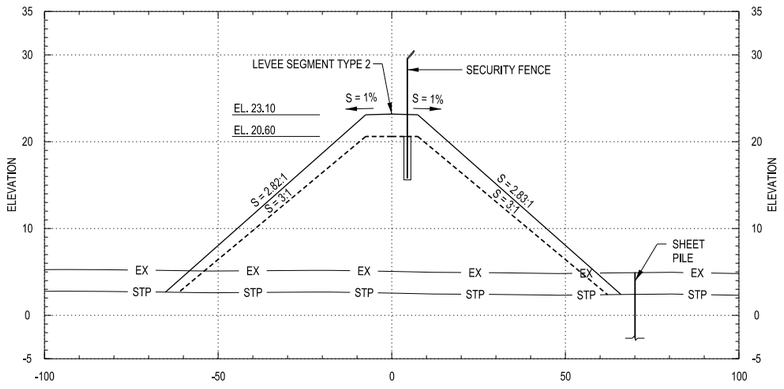
SEGMENT TYPE 2 - STA.109+00 TO STA.114+00



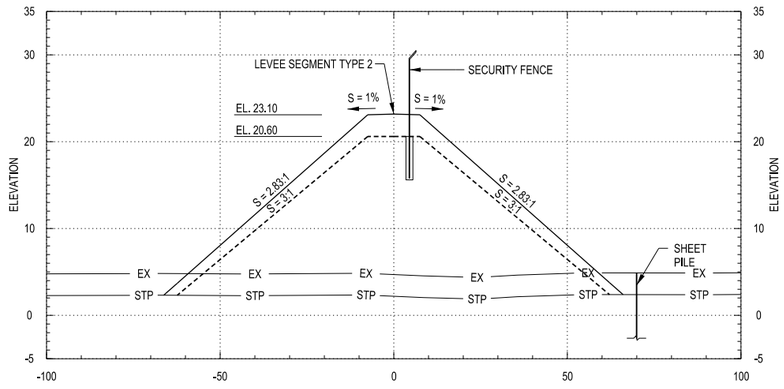
STA. 111+00



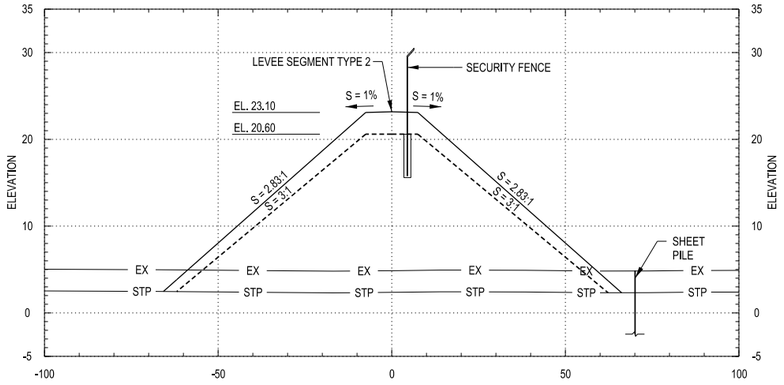
STA. 114+00



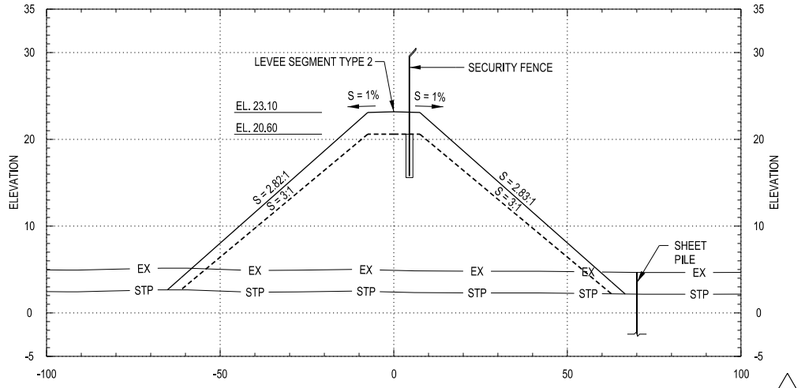
STA. 110+00



STA. 113+00



STA. 109+00



STA. 112+00

20' 0 20' 40'
1" = 20'

NOTES

3595

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWINGS 26196-100-CG-000-00610 (PAL-PJT-CIV-DWG-00-X-7610) & 26196-100-CG-000-00611 (PAL-PJT-CIV-DWG-00-X-7611).

LEGEND

EX	EXISTING GRADE
STP	STRIPPED GRADE (-2.5')
	SURCHARGE FILL
	LEVEE FILL

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								
001	09-29-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/DL	NJ/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 CROSS SECTION
STA. 109+00 TO STA. 114+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7634	001	26196-100-CG-000-00634	001

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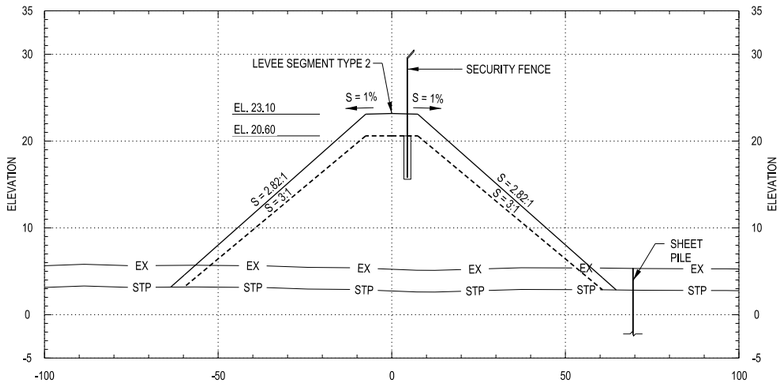
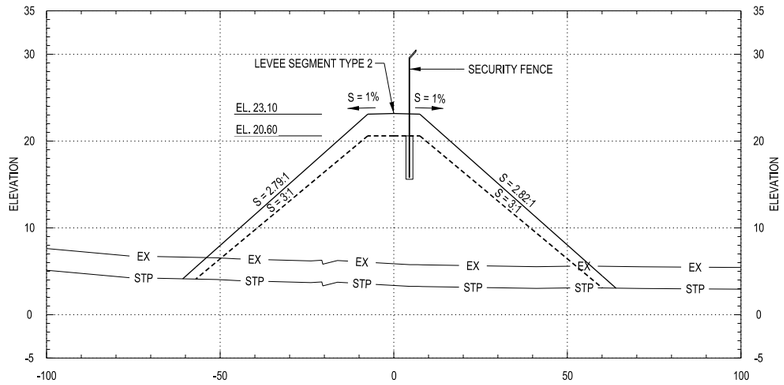
by and among Port Arthur LNG, LLC, PALNG Common Facilities Company, LLC and Bechtel E&C, Gas and Chemicals, Inc.

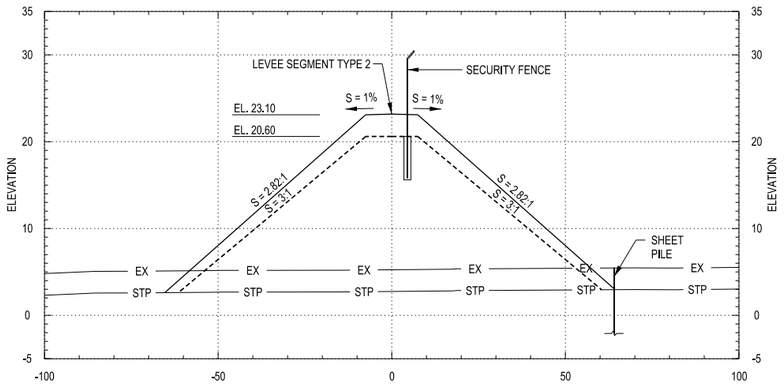
SEGMENT TYPE 2 - STA.115+00 TO STA.120+00



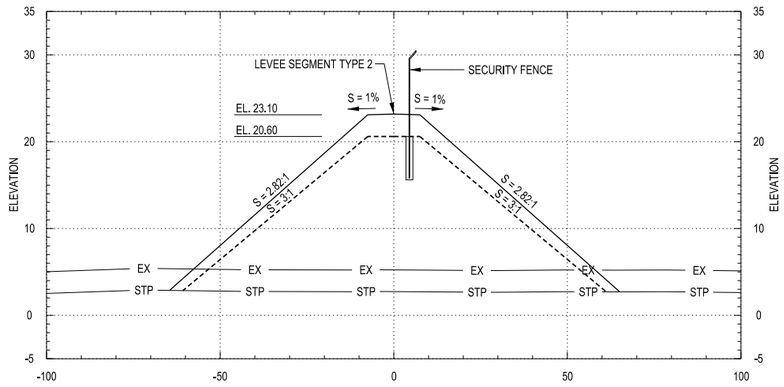
STA. 117+00



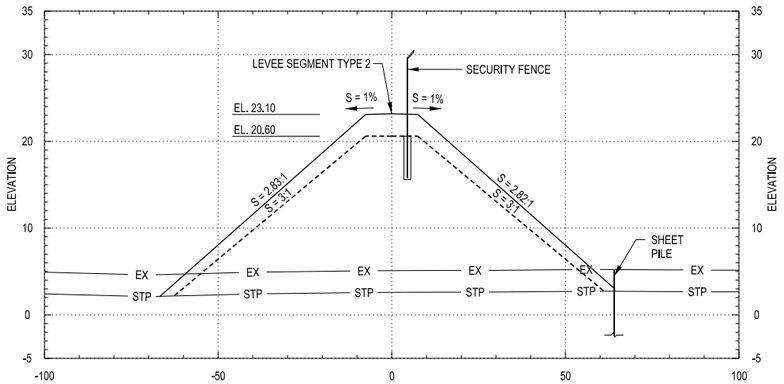
STA. 120+00



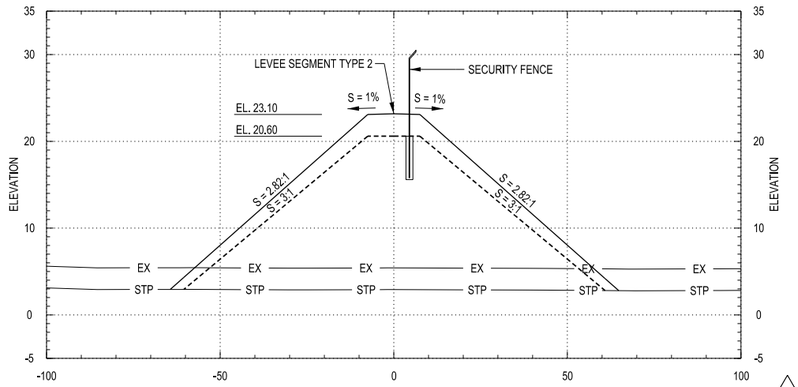
STA. 116+00



STA. 119+00



STA. 115+00



STA. 118+00

20' 0 20' 40'
1" = 20'

NOTES

3596

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWINGS 26196-100-CG-000-00611 (PAL-PJT-CIV-DWG-00-X-7611) & 26196-100-CG-000-00612 (PAL-PJT-CIV-DWG-00-X-7612).

001

LEGEND

EX	EXISTING GRADE
STP	STRIPPED GRADE (-2,5')
	SURCHARGE FILL
	LEVEE FILL

001

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								
001	09-29-2020	RE-ISSUED FOR CONSTRUCTION	DF	AP/DL	NJ/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 CROSS SECTION
STA. 115+00 TO STA. 120+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7635	001	26196-100-CG-000-00635	001

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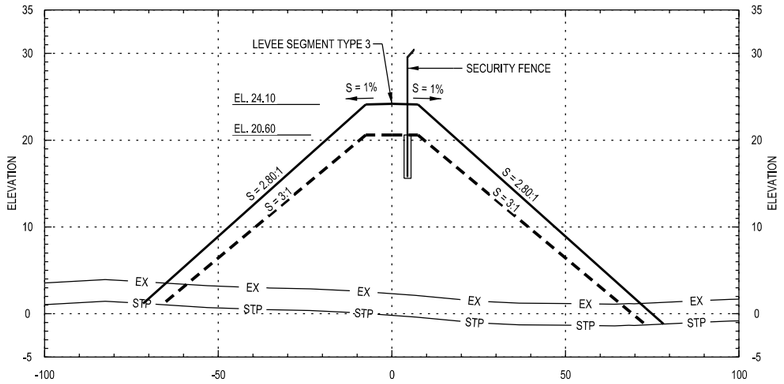
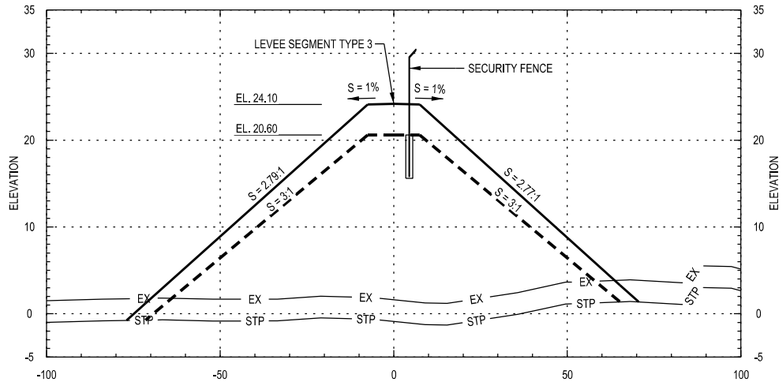
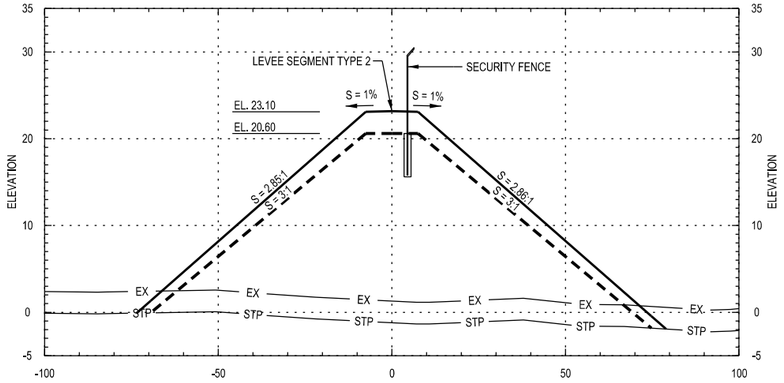
SEGMENT TYPE 2 - STA.121+00 TO STA.122+00
SEGMENT TYPE 3 - STA.123+00 TO STA.126+00



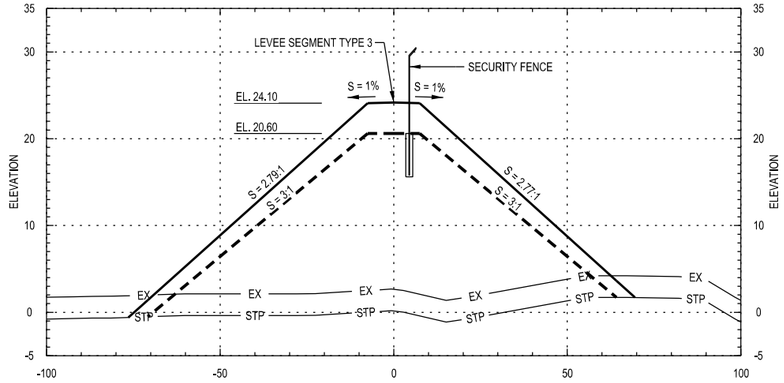
STA. 123+00



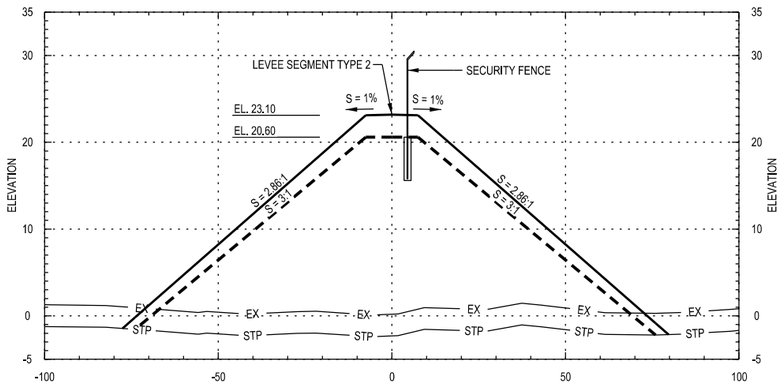
STA. 126+00



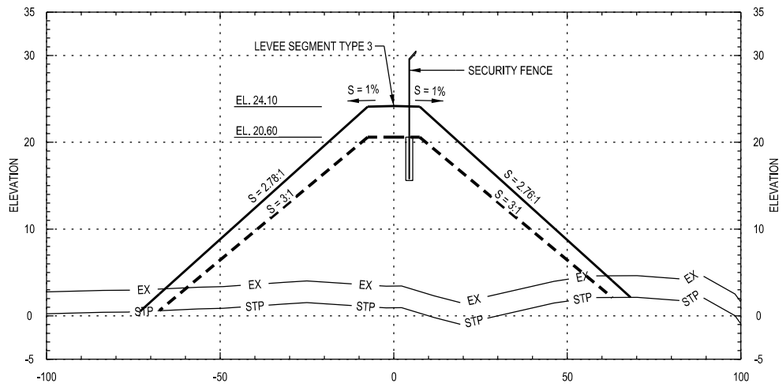
STA. 122+00



STA. 125+00



STA. 121+00



STA. 124+00

NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWING 26196-100-CG-000-00612 (PAL-PJT-CIV-DWG-00-X-7612).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

20' 0 20' 40'
1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

Port Arthur LNG

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1" = 20'

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 & 3 CROSS SECTION
STA. 121+00 TO STA. 126+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7636	000	26196-100-CG-000-00636	000

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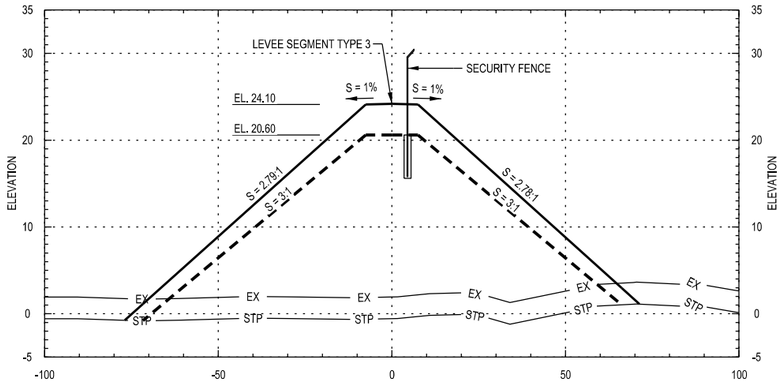
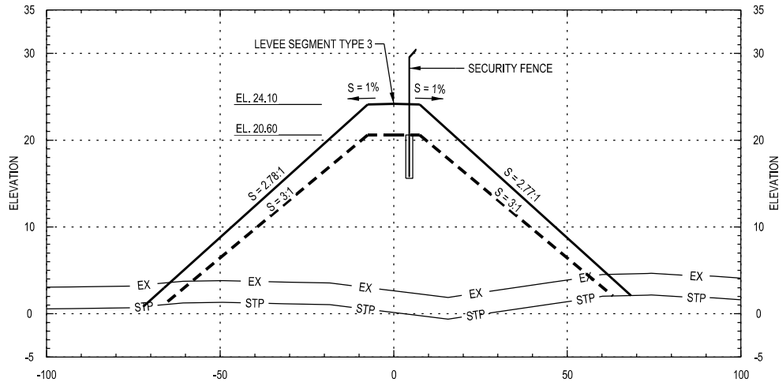
by and among Port Arthur LNG, LLC, PALNG Common Facilities Company, LLC and Bechtel Oil, Gas and Chemicals, Inc.

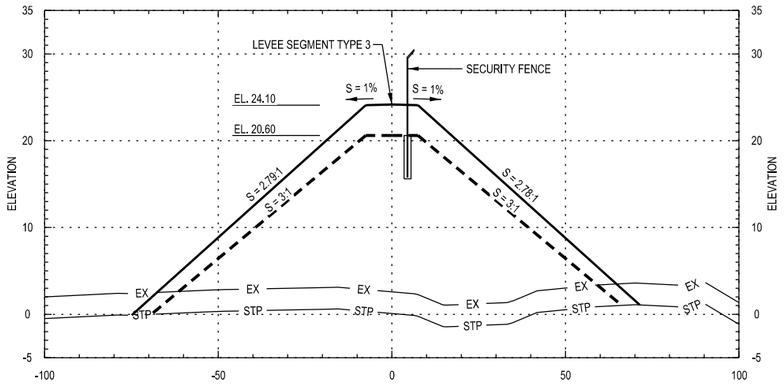
SEGMENT TYPE 3 - STA.127+00 TO STA.132+00



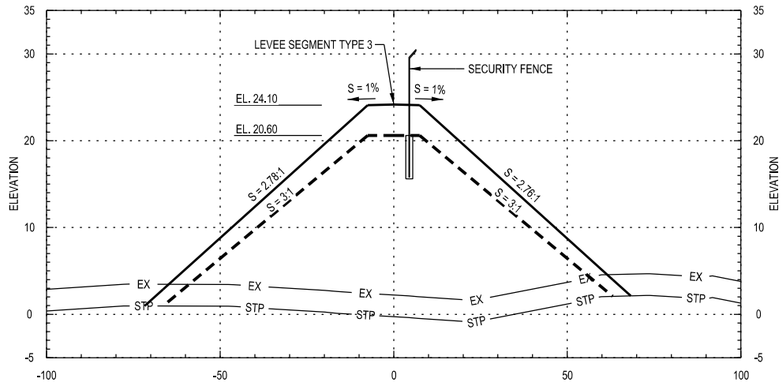
STA. 129+00



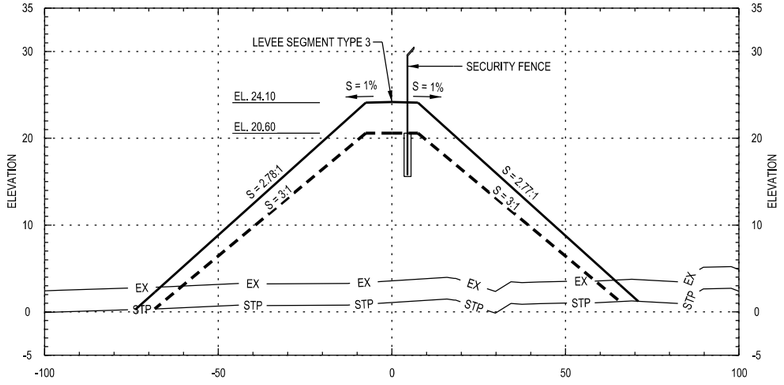
STA. 132+00



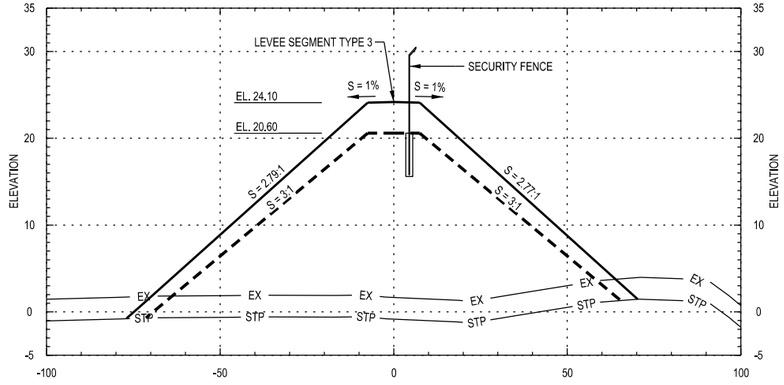
STA. 128+00



STA. 131+00



STA. 127+00



STA. 130+00

20' 0 20' 40'
1" = 20'

NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWINGS 26196-100-CG-000-00612 (PAL-PJT-CIV-DWG-00-X-7612) & 26196-100-CG-000-00613 (PAL-PJT-CIV-DWG-00-X-7613).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 3 CROSS SECTION
STA. 127+00 TO STA. 132+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7637	000	26196-100-CG-000-00637	000

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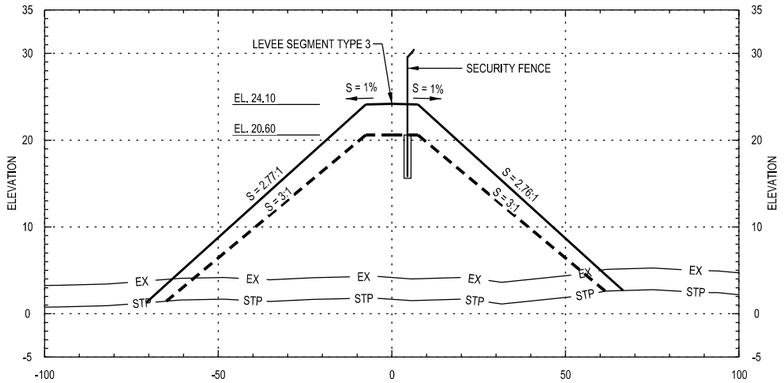
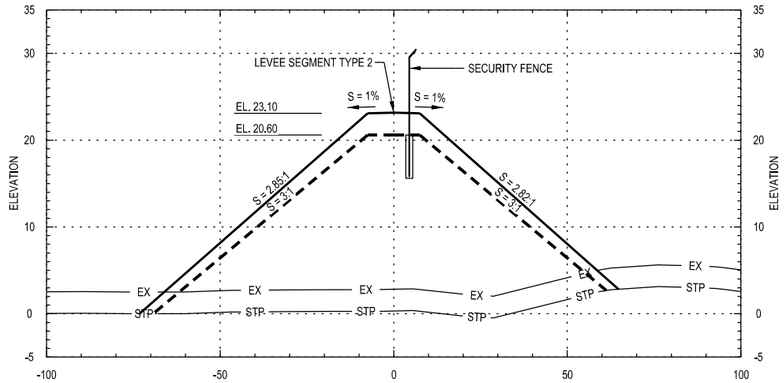
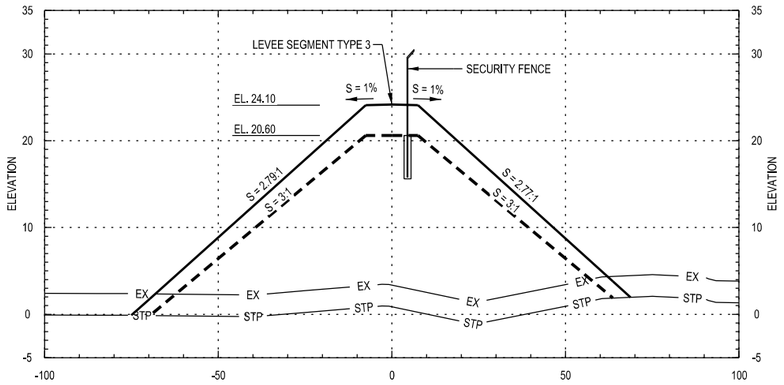
SEGMENT TYPE 3 - STA.133+00 TO STA.136+00
SEGMENT TYPE 2 - STA.137+00 TO STA.138+00



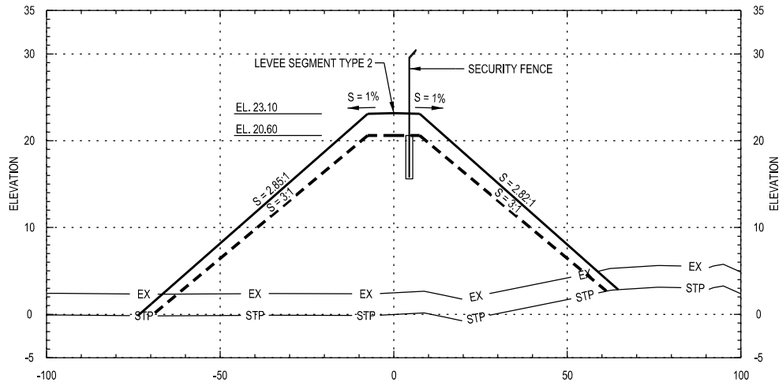
STA. 135+00



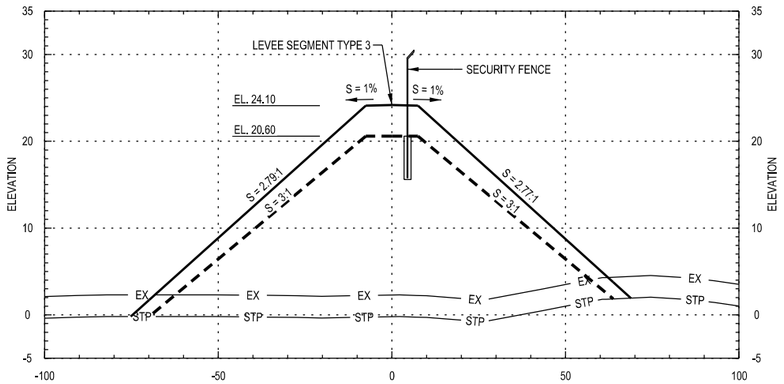
STA. 138+00



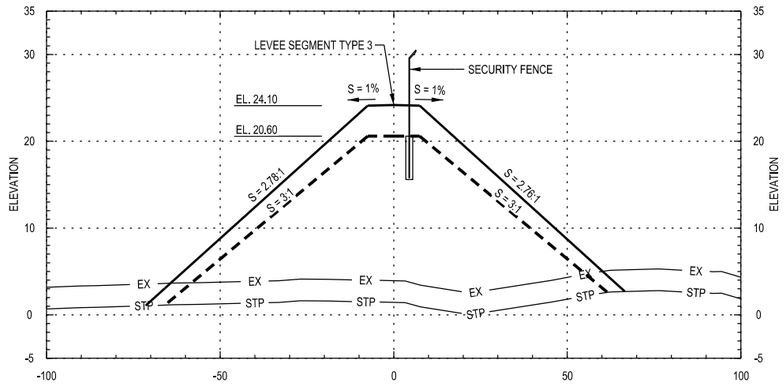
STA. 134+00



STA. 137+00



STA. 133+00



STA. 136+00

NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWINGS 26196-100-CG-000-00613 (PAL-PJT-CIV-DWG-00-X-7613).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

20' 0 20' 40'
1" = 20'

Port Arthur LNG

BECHTEL

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 3 & 2 CROSS SECTION
STA. 133+00 TO STA. 138+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7638	000	26196-100-CG-000-00638	000

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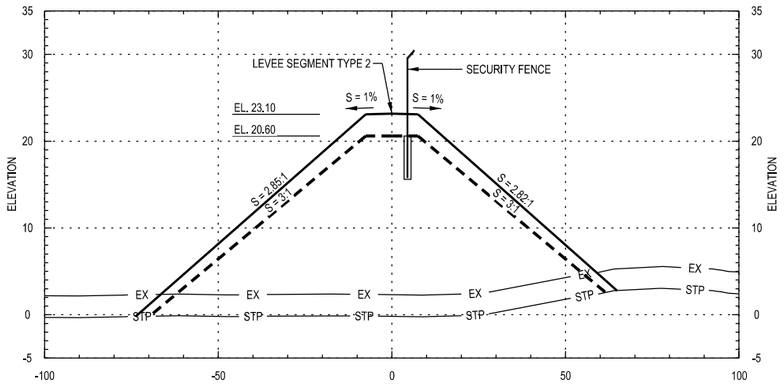
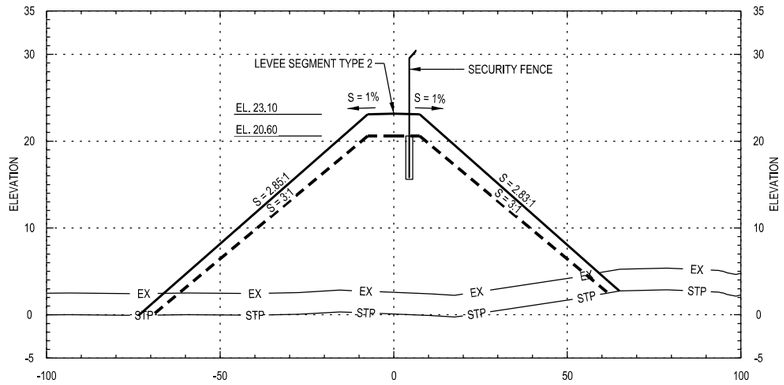
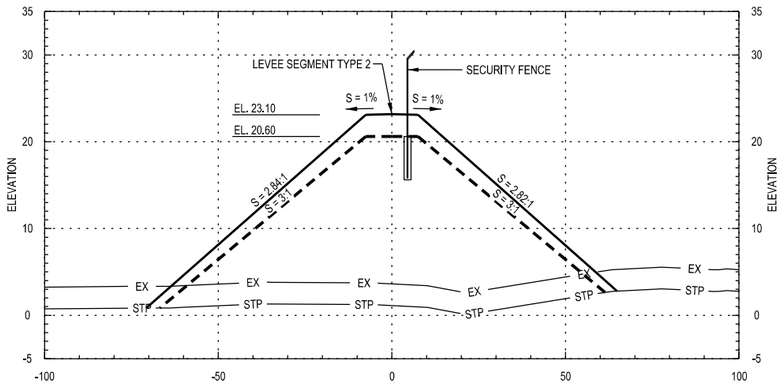
SEGMENT TYPE 2 - STA.139+00 TO STA.144+00



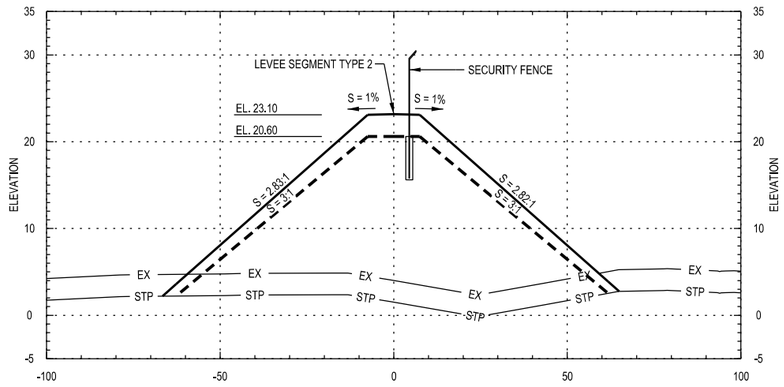
STA. 141+00



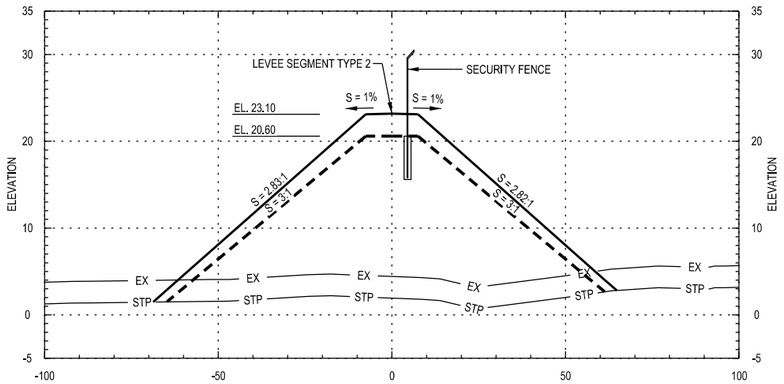
STA. 144+00



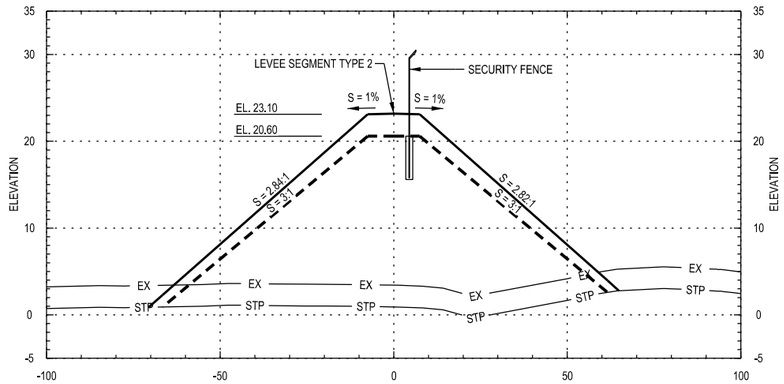
STA. 140+00



STA. 143+00



STA. 139+00



STA. 142+00

NOTES

3600

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWINGS 26196-100-CG-000-00613 (PAL-PJT-CIV-DWG-00-X-7613) & 26196-100-CG-000-00614 (PAL-PJT-CIV-DWG-00-X-7614).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL

DRAWING PREFIX U.N.O. "26196-100-" BECHTEL ("PAL-PJT-CIV-" PALNG)

20' 0 20' 40'
1" = 20'

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 CROSS SECTION
STA. 139+00 TO STA. 144+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7639	000	26196-100-CG-000-00639	000

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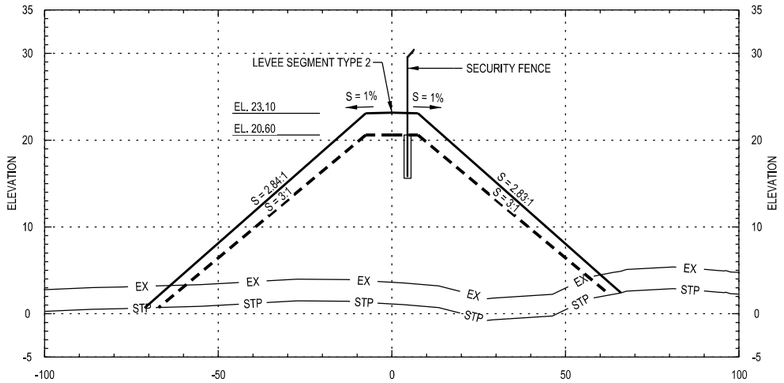
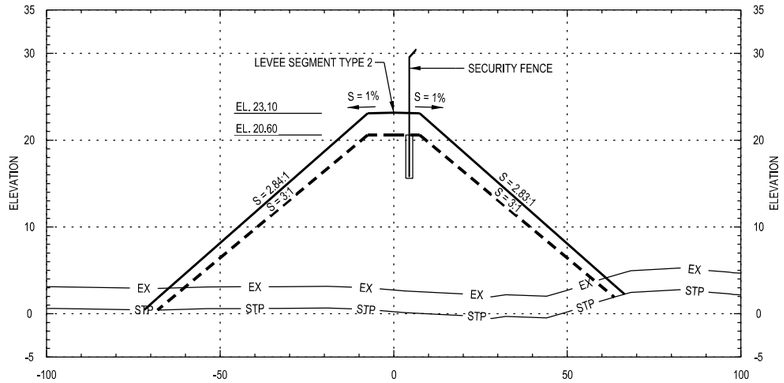
by and among Port Arthur LNG1, LLC, PALNG Common Facilities Company, LLC and Bechtel Oil, Gas and Chemicals, Inc.

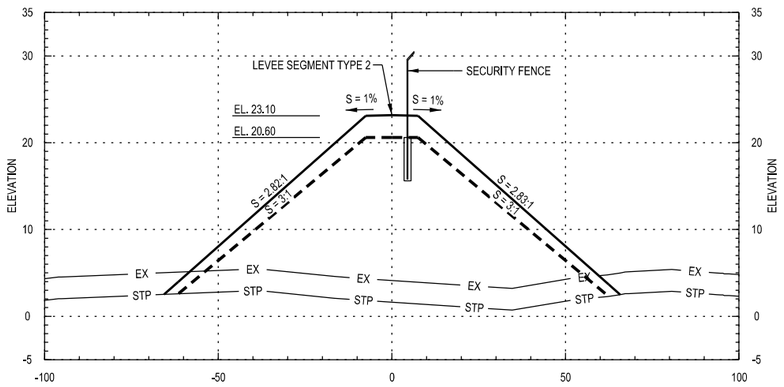
SEGMENT TYPE 2 - STA.145+00 TO STA.150+00



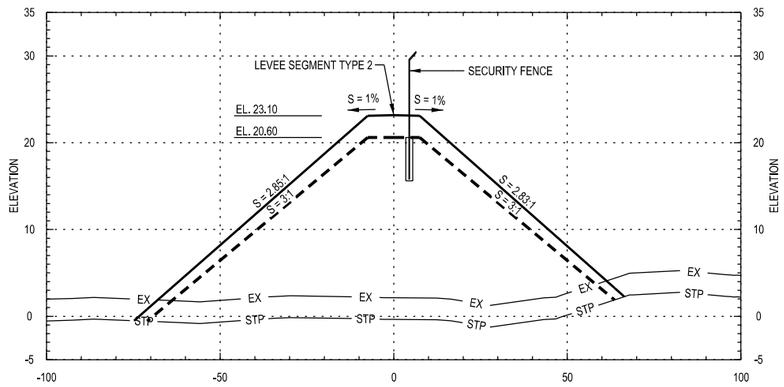
STA. 147+00



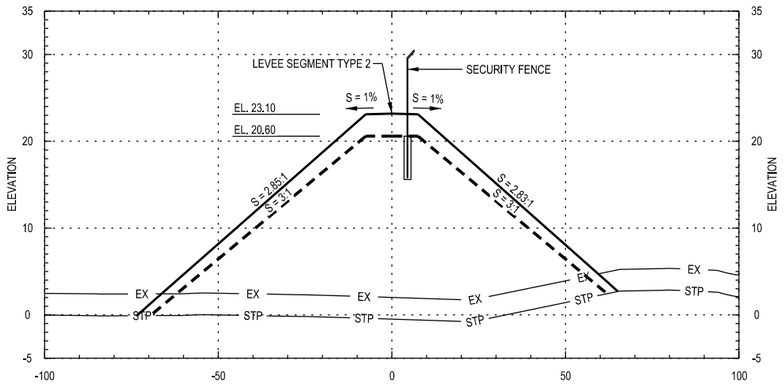
STA. 150+00



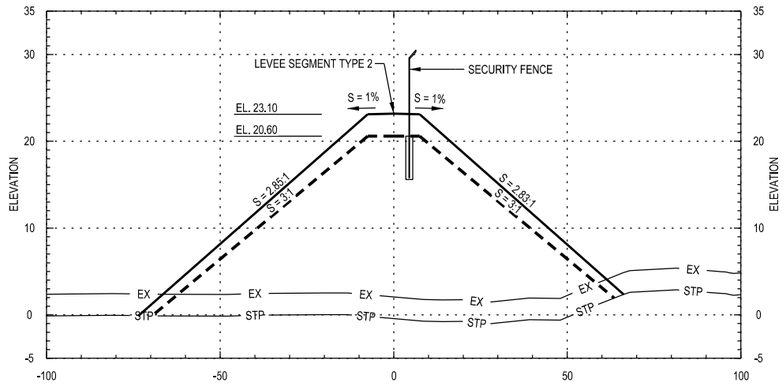
STA. 146+00



STA. 149+00



STA. 145+00



STA. 148+00

NOTES

3601

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWING 26196-100-CG-000-00614 (PAL-PJT-CIV-DWG-00-X-7614).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL



DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)



Port Arthur LNG

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 CROSS SECTION
STA. 145+00 TO STA. 150+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7640	000	26196-100-CG-000-00640	000

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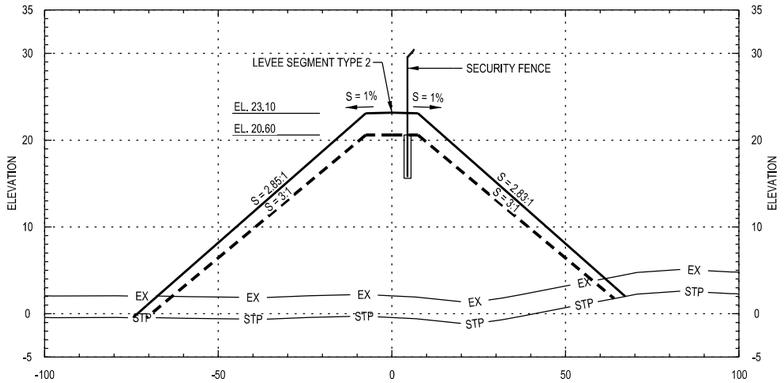
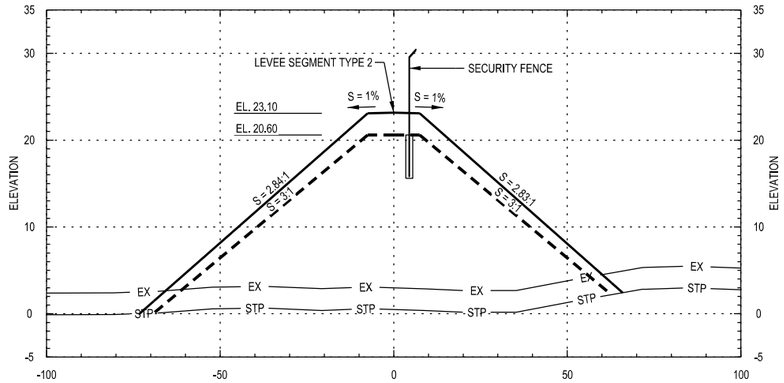
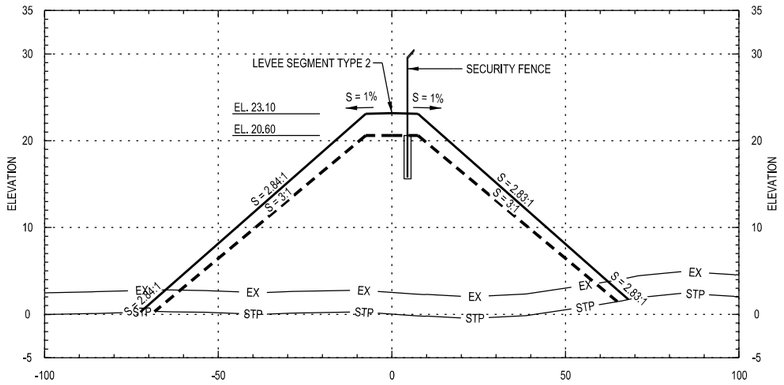
SEGMENT TYPE 2 - STA.151+00 TO STA.156+00



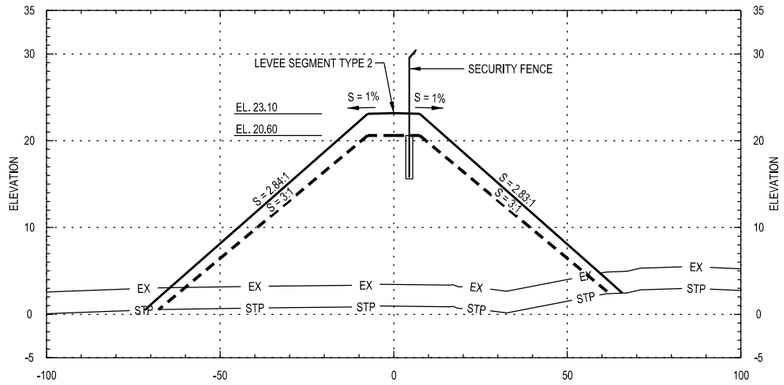
STA. 153+00



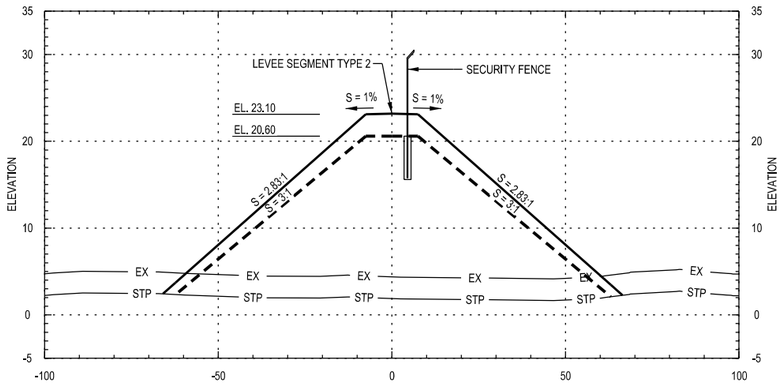
STA. 156+00



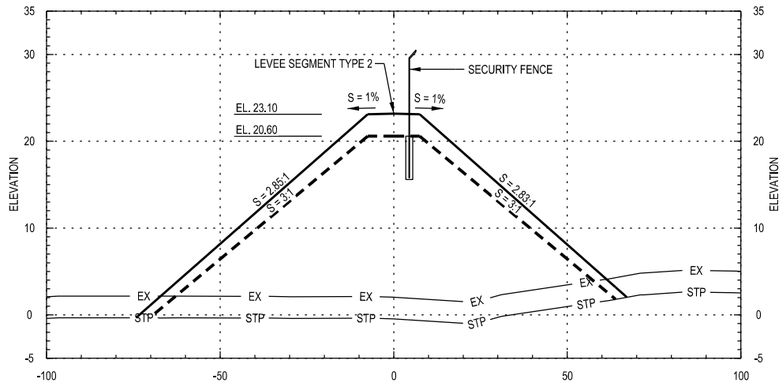
STA. 152+00



STA. 155+00



STA. 151+00



STA. 154+00

20' 0 20' 40'

1" = 20'

NOTES

1. FOR NOTES AND REFERENCES SEE DRAWING 26196-100-CG-000-00600 (PAL-PJT-CIV-DWG-00-X-7600).
2. FOR PLAN & PROFILE SEE DRAWINGS 26196-100-CG-000-00614 (PAL-PJT-CIV-DWG-00-X-7614) & 26196-100-CG-000-00615 (PAL-PJT-CIV-DWG-00-X-7615).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

DRAWING PREFIX U.N.O.
"26196-100-" BECHTEL
("PAL-PJT-CIV-" PALNG)

Port Arthur LNG

BECHTEL

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: 1" = 20'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-03-2020	ISSUED FOR CONSTRUCTION	WY	VJD/NP	AP/JS	CD	SK								

PORT ARTHUR LIQUEFACTION PROJECT
LEVEE SEGMENT TYPE 2 CROSS SECTION
STA. 151+00 TO STA. 156+00

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-CIV-DWG-00-X-7641	000	26196-100-CG-000-00641	000

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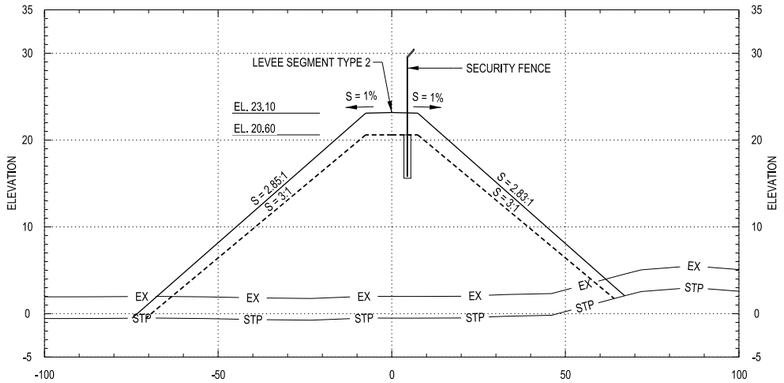
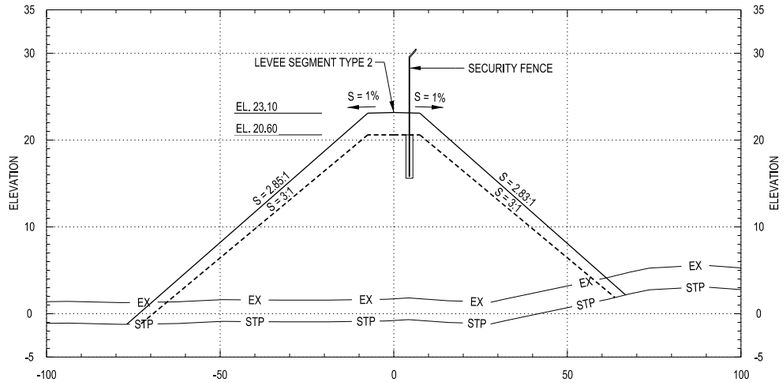
SEGMENT TYPE 2 - STA.157+00 TO STA.162+52

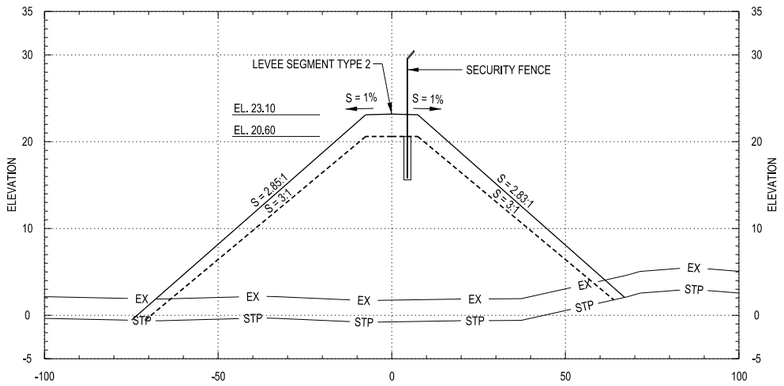
001



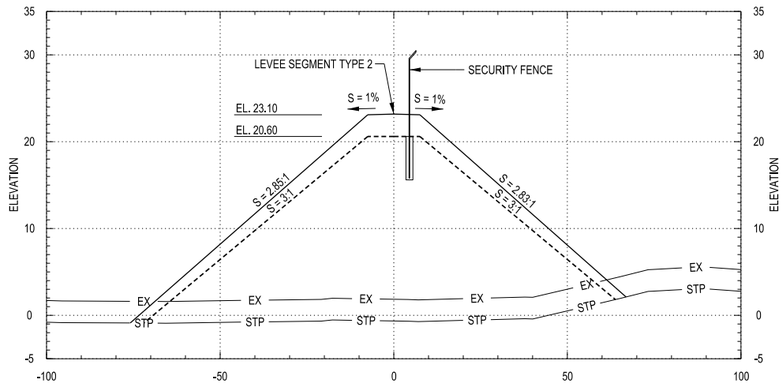
STA. 159+00



STA. 162+00 & STA. 162+52



STA. 158+00



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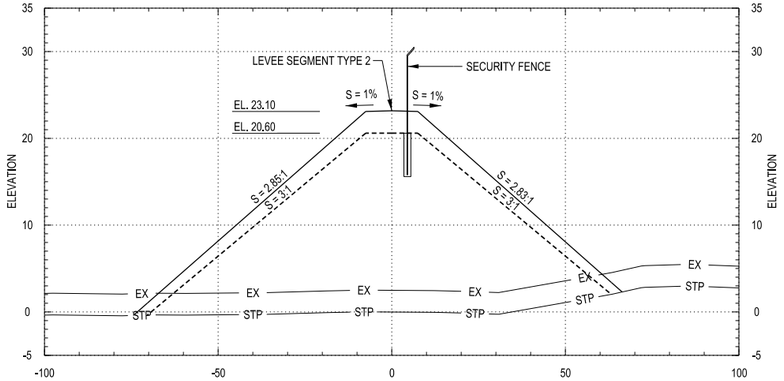

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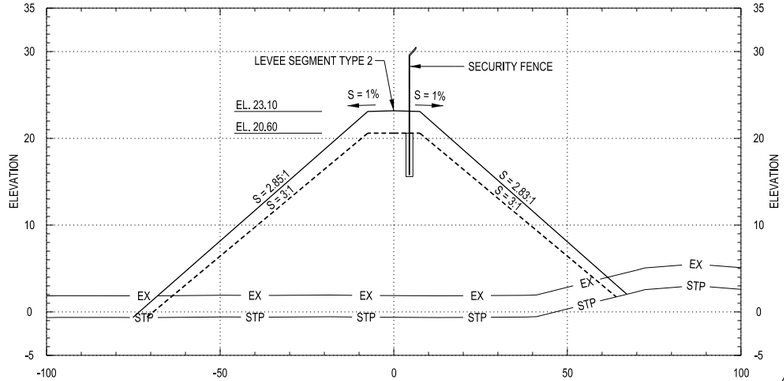

STA. 160+00

001

20' 0 20' 40'
1" = 20'

NOTES

3603

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2. FOR PLAN & PROFILE SEE DRAWING 26196-100-CG-000-00615 (PAL-PJT-CIV-DWG-00-X-7615).

LEGEND

- EX — EXISTING GRADE
- STP — STRIPPED GRADE (-2.5')
- SURCHARGE FILL
- LEVEE FILL

STATE OF TEXAS
ARTURO PALACIOS
101215
LICENSED
PROFESSIONAL ENGINEER

Port Arthur LNG

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

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LEVEE SEGMENT TYPE 2 CROSS SECTION
STA. 157+00 TO STA. 162+52

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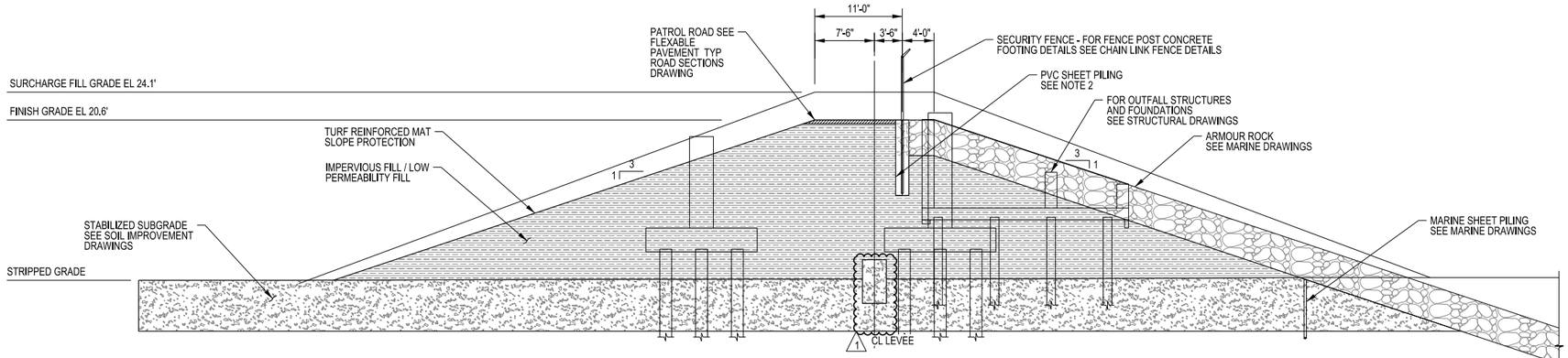

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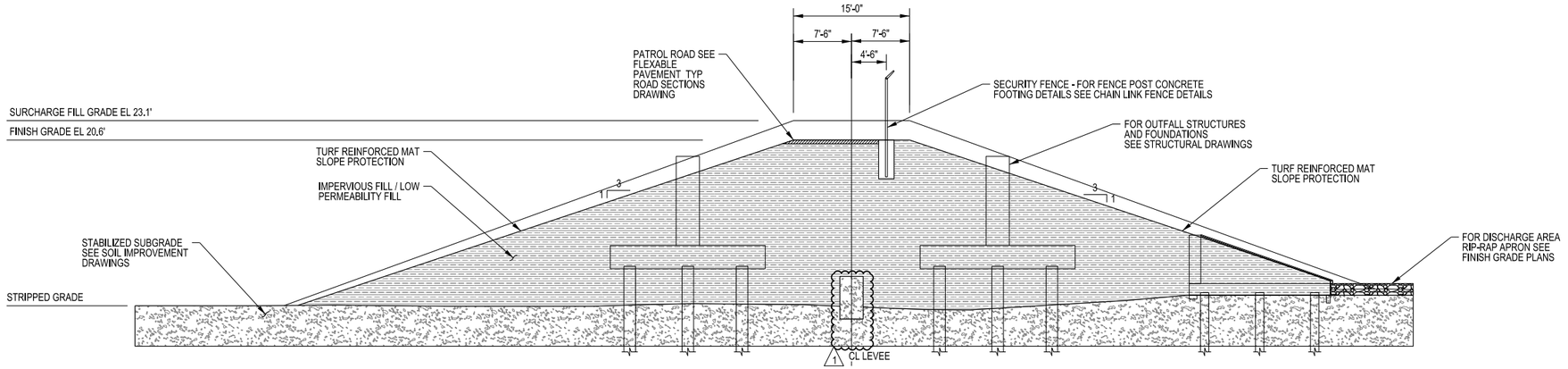

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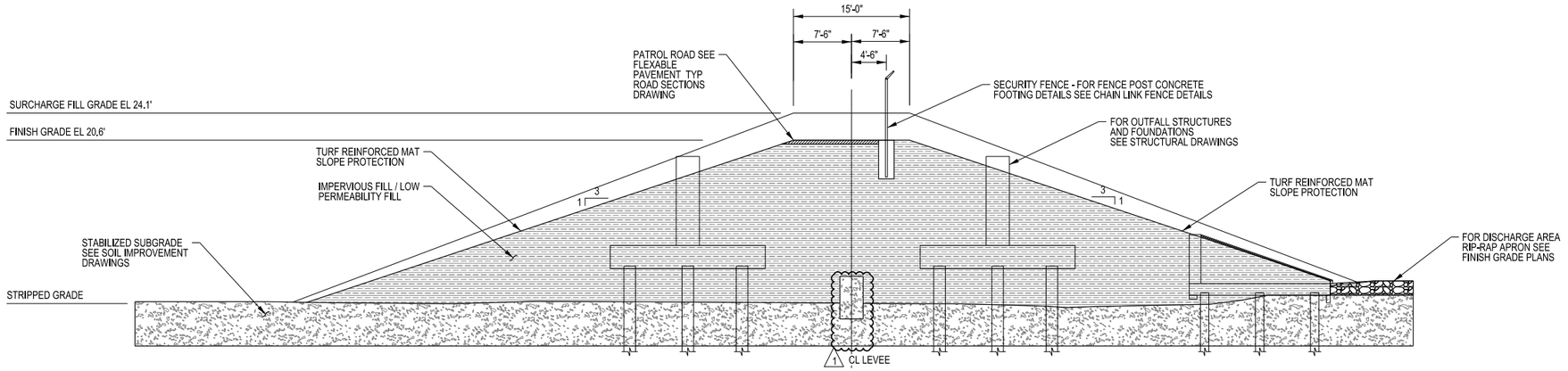

SECTION-C - AT LEVEE SEGMENT TYPE 3

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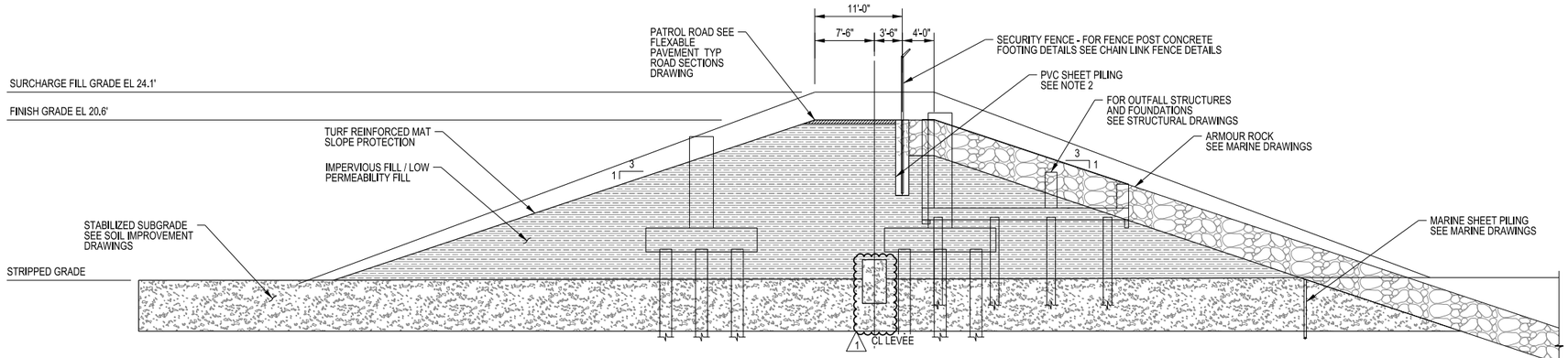

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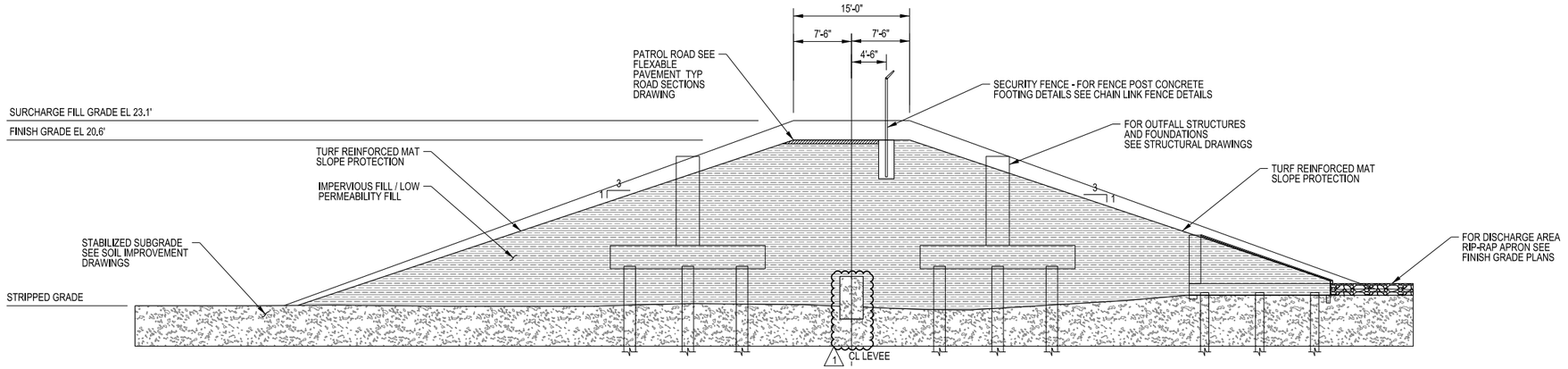
(LOOKING NORTH)



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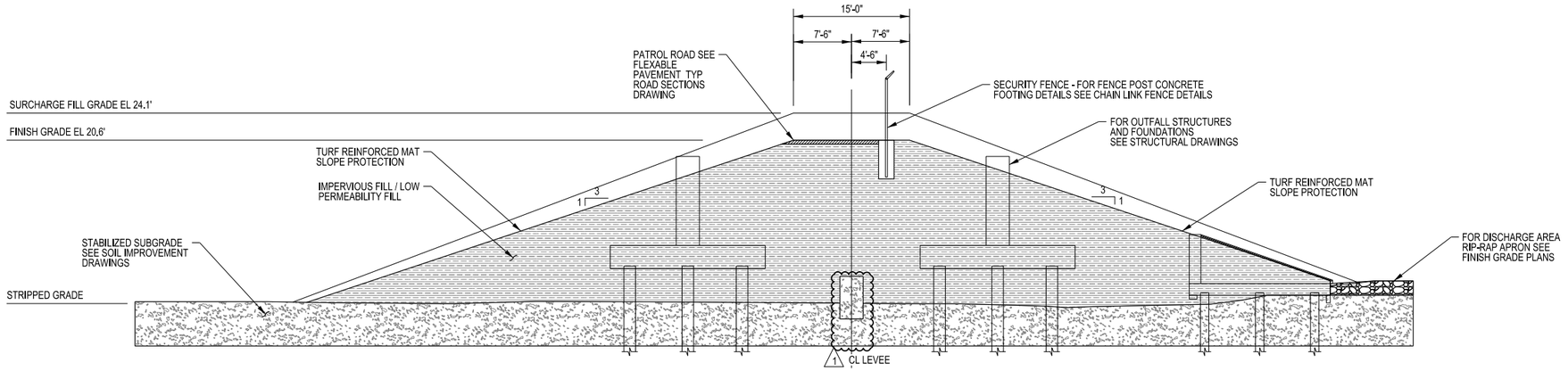

SECTION-C - AT LEVEE SEGMENT TYPE 3

(LOOKING NORTH)

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LEVEE TYPICAL SECTIONS AND DETAILS - SHEET 1 OF 2

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
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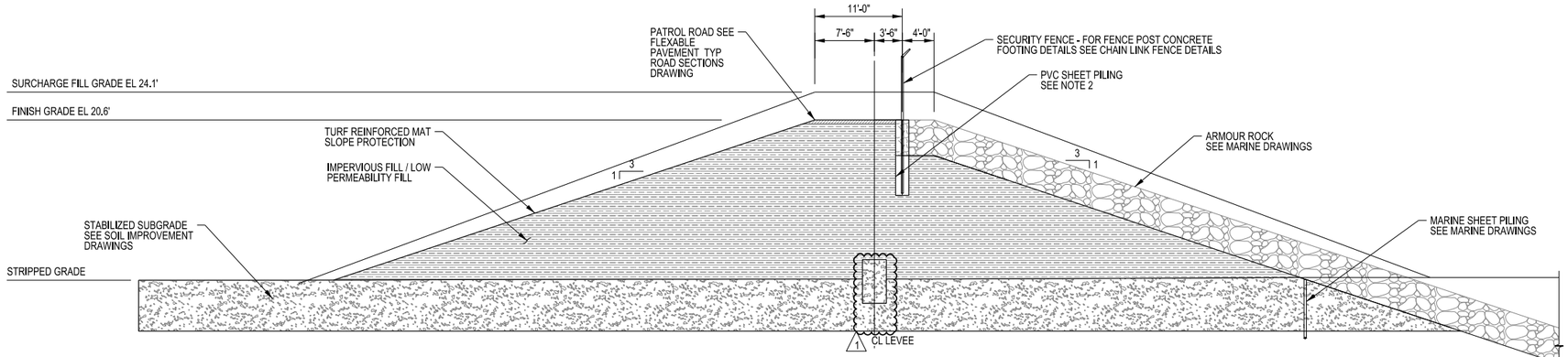

SECTION D - GENERAL LEVEE TYPICAL SECTION SEGMENT TYPE 1

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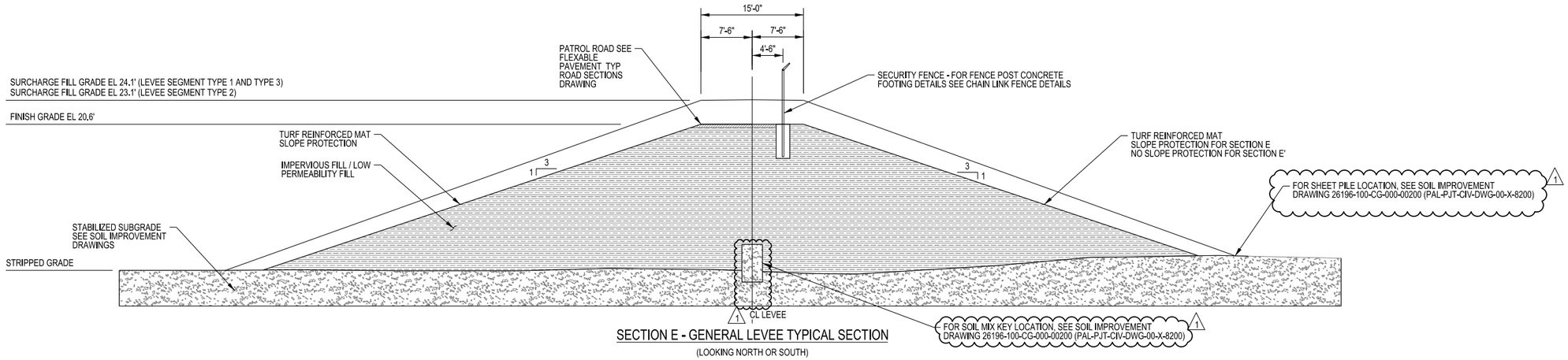
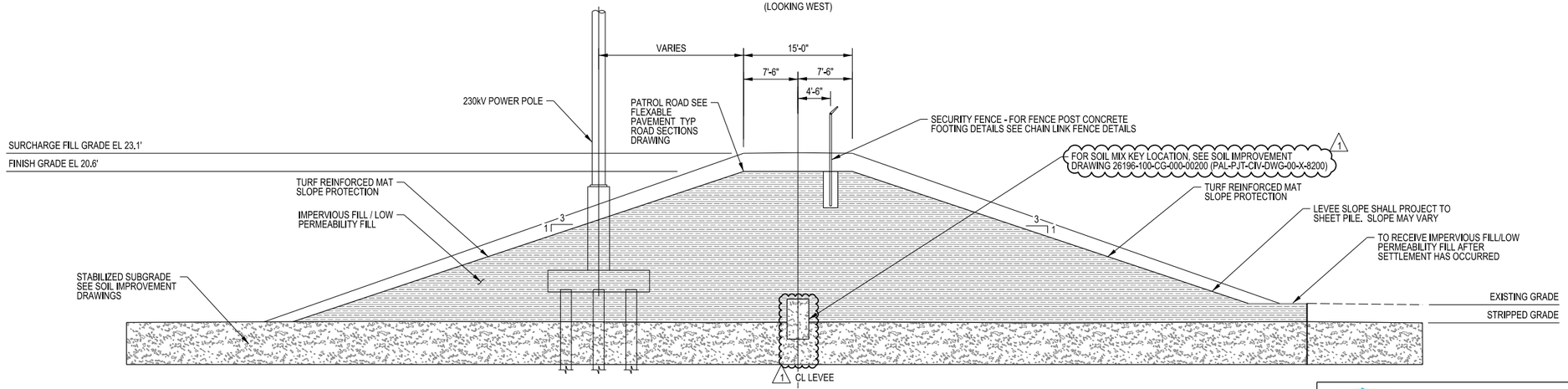


SECTION E - GENERAL LEVEE TYPICAL SECTION

(LOOKING NORTH OR SOUTH)

SECTION E' - GENERAL LEVEE TYPICAL SECTION

(LOOKING WEST)



SECTION F - GENERAL LEVEE TYPICAL SECTION SEGMENT TYPE 2 AT 230 kV POWER POLES

(LOOKING SOUTH)

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PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
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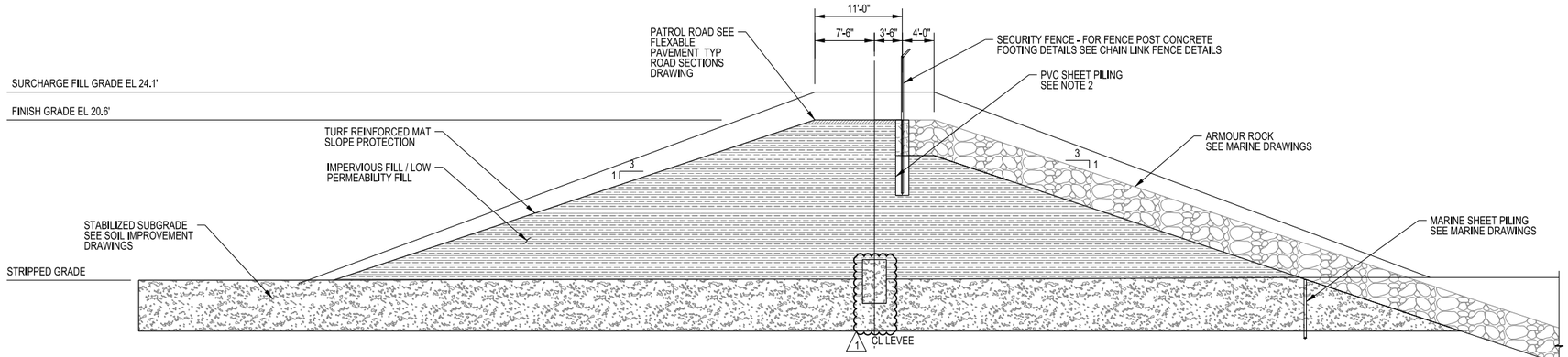

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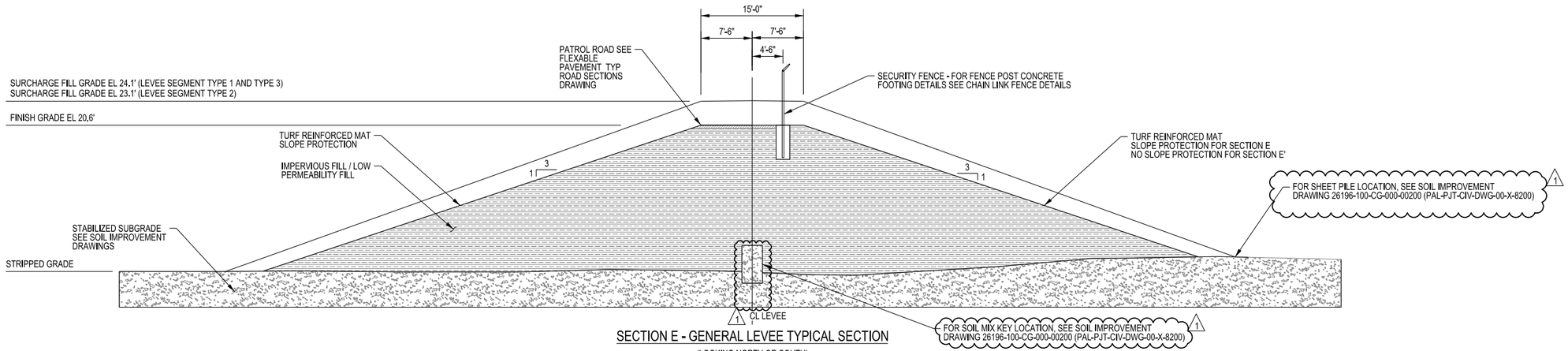

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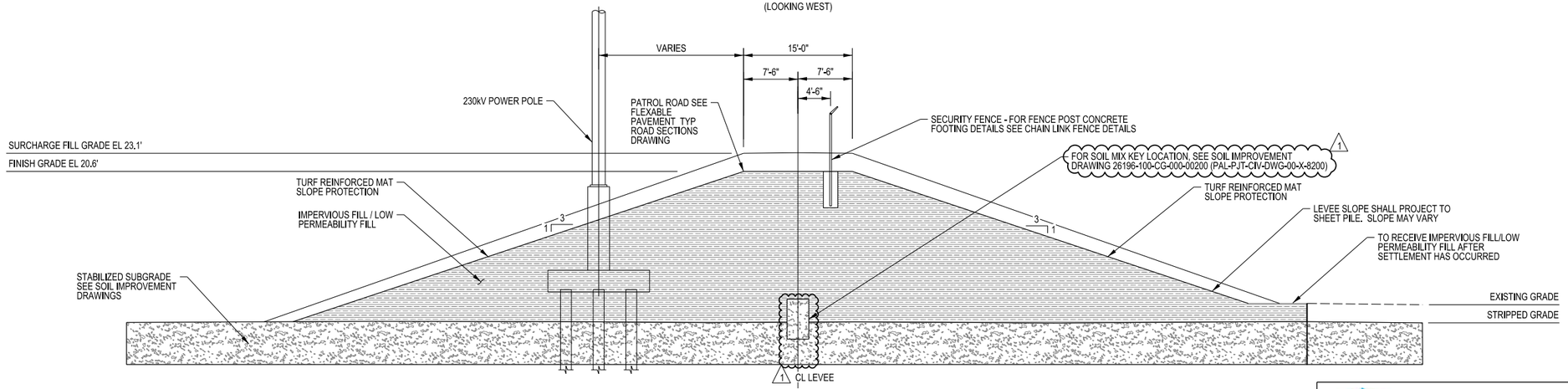
(LOOKING NORTH OR SOUTH)

SECTION E' - GENERAL LEVEE TYPICAL SECTION

(LOOKING WEST)



SECTION F - GENERAL LEVEE TYPICAL SECTION SEGMENT TYPE 2 AT 230 kV POWER POLES

(LOOKING SOUTH)

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101215
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PROFESSIONAL ENGINEER

Port Arthur LNG

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Firm No. F-9684

PORT ARTHUR LIQUEFACTION PROJECT

Shore Protection Calculation for LNG Berth Area and Storm Water Drainage (Berth Area)

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Shore Protection Calculation for LNG Berth Area and Storm Water Drainage (Berth Area)		**Bechtel Document No.**	**Rev.**
		26196-100-CMC-000-00016	000
		PALNG Document No.	**Rev.**
Page 1 of 37	Job No: 26196-100	PAL-T0-MAR-CAL-24-GEN-0002	000

CALCULATION COVER SHEET

PROJECT:	JOB NO.	CALC.NO.	SHEET
Port Arthur Liquefaction Project	26196-100	26196-100-CMC-000-00016 (PAL-T0-MAR-CAL-24-GEN-0002)	2

SUBJECT:	DISCIPLINE:
Shore Protection Calculation for LNG Berth Area and Storm Water Drainage (Berth Area)	Marine

CALCULATION STATUS DESIGNATION	PRELIMINARY	CONFIRMED	SUPERCEDED	VOIDED
	☐	☒	☐	☐

COMPUTER PROGRAM TYPE:	SCP YES	SCP NO	MAINFRAME	PC	PROGRAM NO.	VERSION/RELEASE NO.
Microsoft Excel	☒	☐	☐	☒		

USE OF THESE CALCULATIONS BY PERSONS, WITHOUT ACCESS TO PERTINENT FACTORS AND WITHOUT REGARD FOR THEIR PURPOSE, COULD LEAD TO ERRONEOUS CONCLUSIONS. FURTHER, NO INDIVIDUAL SEGMENT OR PROVISION THEREOF SHOULD BE USED AS A STANDALONE ITEM WITHOUT DUE CONSIDERATION OF THE CONTEXT IN WHICH IT WAS GENERATED.

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RECORD OF REVISION

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3.0 DESIGN METHODOLOGY 6
4.0 DESIGN INPUTS 8
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6.0 CONCLUSION AND RECOMMENDATION 14

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ATTACHMENT -B REVETMENT DESIGN FOR PASSING VESSEL - ABOVE WATER SECTION 26
ATTACHMENT -C REVETMENT DESIGN FOR PROPELLER WASH OF TUGBOAT – BELOW WATER SECTION 30
ATTACHMENT -D REVETMENT DESIGN – ARMOUR ROCK SIZE, ARMOR ROCK THICKNESS AND GRADATION FOR W50 = 600 LB/22LB 36

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1.0 DESIGN BASIS

1.1 Purpose and Scope

The purpose of this Shore Protection calculation report is to present the design calculations on the shore protection at the dredging slope for the proposed LNG basin and LNG plant's shoreline of the Port Arthur Liquefaction Project. This also includes the shore protection for the Storm Water Drainage that is located within the LNG Berth Area. The Shore Protection is designed to withstand wind generated storm waves, passing vessel generated wakes, and propeller wash from tugboats. This calculation report will carry out the detailed design of shore protection of the Port Arthur Liquefaction Project.

1.2 Shore Protection Design Description

At the berthing pocket of the LNG terminal, the existing land will be excavated and dredged to accommodate the design LNG vessels while the existing shoreline in the property of the Project will be excavated accordingly to form a new slope on which the shore protection will be installed. The levee and shoreline protection proposed in the Project are shown in Figure 1:

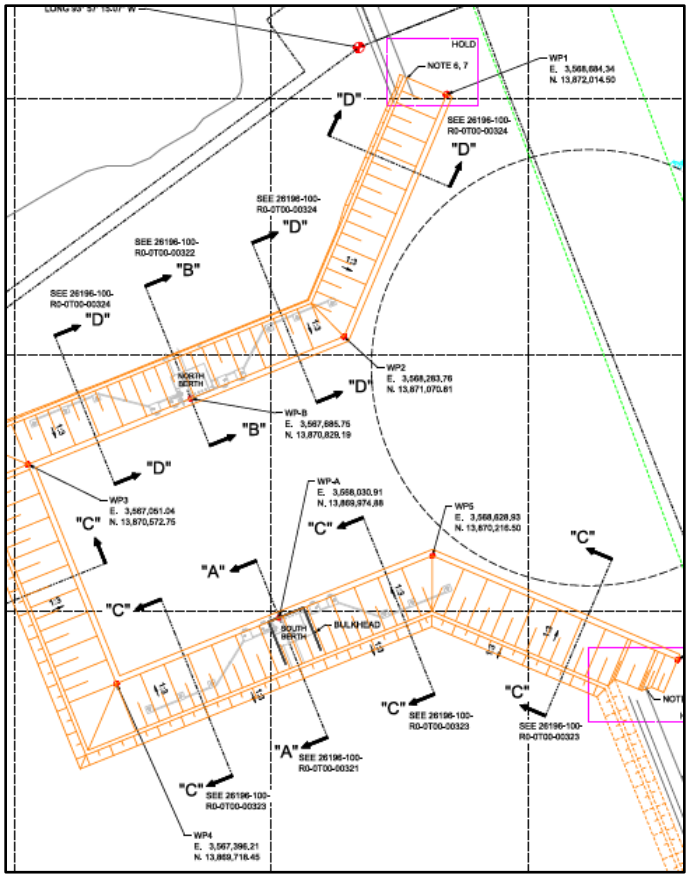

Figure 1 Plan of Shore Protection

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The slope stability at LNG basin and shoreline has been checked by Geotechnical analysis. Slope stability analysis indicates the proposed 3H:1V slope will be stable with the addition of sheet piling to provide the required factor of safety. Refer to 26196-100-3DR-K04F-00003 (PAL-PJT-CSA-RPT-00-GEN-0003), EPC Geotechnical Design Basis Report and 26196-100-CMC-000-00010 (PAL-T0-MAR-CAL-82-GEN-0010) Shore Protection Sheet Pile Structural Strength Calculation.

2.0 REFERENCES

2.1 Project Specifications, Design Criteria and Reference Reports

2.1.1	Marine Facilities Design Criteria for LNG Loading Berths	26196-100-3DR-R04-00001 (PAL-T0-MAR-DEC-24-GEN-0001)
2.1.2	Basic Engineering Design Data	26196-100-3BD-M04F-00001 (PAL-PJT-PRO-BOD-00-GEN-0002)
2.1.4	Project Specification for Rock Rip Rap for Marine Facilities	26196-100-3PS-CM00-00010 (PAL-T0-MAR-STD-00-GEN-0010)
2.1.5	Shoreline Protection Report	PAL0-MAR-RPT-0012
2.1.6	Marine Site Characteristics Report	PAL0-10-MAR-RPT-0002
2.1.7	EPC Geotechnical Design Basis Report	26196-100-3DR-K04F-00003 (PAL-PJT-CSA-RPT-00-GEN-0003)
2.1.8	Overtopping and Levee Elevation Assessment	26196-100-30R-K01-0000 (PAL-T0-MAR-RPT-00-GEN-0001)

2.2 Codes & Standards

2.2.1	USACE Coastal Engineering Manual	EM1110-2-1100
2.2.2	BAW Code of Practice Principles for the Design of Bank and Bottom Protection for Inland Waterways (GBB)	2010
2.2.3	PIANC WG 180: Guidelines for Protecting Berthing Structures from Scour Caused by Ships	2015
2.2.4	CIRIA/CUR Rock Manual	2007

2.3 Reference Drawings

2.3.1	LNG Loading Berth Basin Slope Protection Sheet Pile Overall Plan	26196-100-R0-100A2-00301, Rev 000 (PAL-T0-MAR-DWG-24-GEN-0301)
2.3.2	LNG Basin Slope Protection Sheet Pile Protection Plan	26196-100-R0-100A2-00302, Rev 000 (PAL-T0-MAR-DWG-24-GEN-0302)
2.3.3	LNG Basin Slope Protection Sheet Pile Protection Plan – Section - Sheet 1	26196-100-R0-100A2-00332, Rev 000 (PAL-T0-MAR-DWG-24-GEN-0332)
2.3.4	LNG Basin Slope Protection Sheet Pile Protection Plan – Section - Sheet 2	26196-100-R0-100A2-00333, Rev 000 (PAL-T0-MAR-DWG-24-GEN-0333)

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3.0 DESIGN METHODOLOGY

3.1 Revetment Design on 100- and 500-year Storm Wave

For the riprap revetments, the stability of the protection layer primarily depends on the specified rock size being able to resist the wave action. In this calculation, the design storm wave is the **100-year** storm wave at PALNG basin and property shoreline while **500-year** storm wave is for levee which surround the LNG Plant.

The excel spreadsheet developed per Reference 2.2.4 "Rock Manual" (CIRIA, 2007), was used for this slope protection revetment design. This application provides estimates for revetment amour and bedding layer stone sizes, thicknesses, and gradation characteristics.

3.2 Revetment Design on Wake of Passing Vessels

Per Principles for the Design of Bank and Bottom Protection for Inland Waterways (GBB), BAW Code of Practice (reference 2.2.2), the primary wave (transverse stern wave), secondary wave, return and slope supply flow due to the passing vessel are calculated for revetment design. The result on required rock size is determined by the Figure 3-1 below.

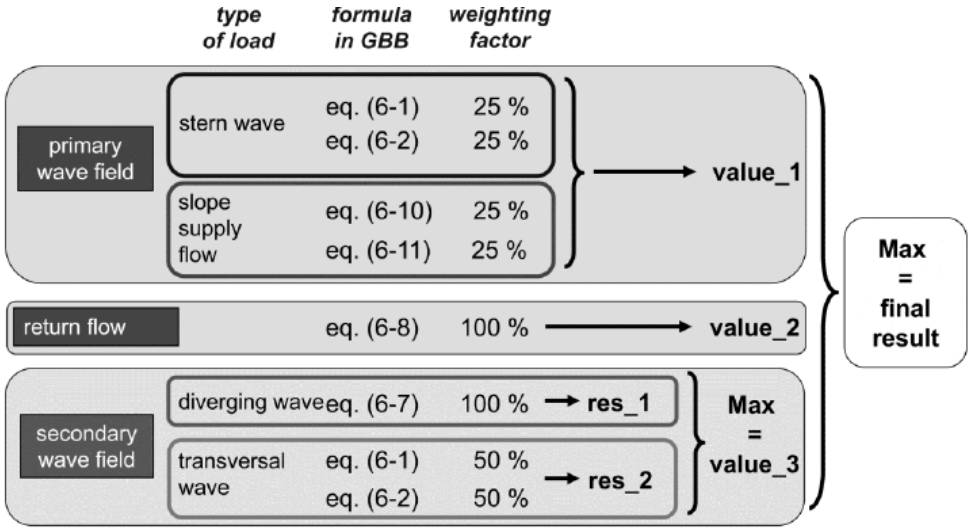

Figure 3-1. BAW Code for Required Armor Stone Size

3.3 Revetment Design on Propeller Wash

The method used for this design was taken from the Rock Manual (CIRIA, 2007), which uses the following equations to estimate the time-averaged current velocities in these propeller jets.

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Initial velocity behind propeller:

$$u_{p,0} = 1.15\left(\frac{P}{\rho_w {D_0}^2}\right)^{1/3}$$

Velocity along jet axis:

$$u_{p,axis}(x) = a\, u_{p,0}\left(\frac{D_0}{x}\right)^m$$

$$u_p(x,r) = u_{p,axis}(x) exp\left[\frac{-br^2}{x^2}\right]$$

Velocity distribution along slope.

Maximum bed velocity;

$$u_{p,\max bed} = c\, u_{p,0}\left(\frac{D_0}{z_p}\right)^n$$

where:

P = applied power

D_p = propeller diameter

D_0 = effective diameter of propeller (= $0.7D_p$ or $1.0D_p$)

zp = distance between propeller axis and bed

ρ_w = Water density

a, b, c, m, n = empirical coefficients for describing jet turbulence

Given the flow velocities calculated from the above equations, by using the Izbash approach (presented in the Rock Manual), the following method is used to determine the rock stability.

$$\frac{\left(\frac{u_p(x,r)^2}{2g}\right)}{\Delta D_{50}} = 2\frac{k_{sl}}{{k_t}^2}$$

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where;

$u_p(x,r)$ = propeller jet velocity along slope
Δ = relative density
D_{50} = median stone diameter
g = gravity
k_t = Empirical turbulence factor

$$k_{sl} = \text{slope factor} = \cos\alpha \sqrt{1 - \left(\frac{\cos\alpha}{\tan\emptyset}\right)^2}$$

α = slope angle
ϕ = protection material angle of repose

4.0 DESIGN INPUTS

4.1 Water Level

Reference 2.1.6 provides the water levels at various storm events and Relative Sea Level Rise (RSLR) as represented in Table 1.

Table 1 Water Level at Varied Storm Event [Ref. 2.1.1]

Return Period	SWEL + RSLR (ft, NAVD88)
100-year	10.2 + 0.6
500-year	14.0 + 0.6

4.2 Design Conditions

The conditions considered in the Shore Protection design are as following:

- 100- and 500-year Storm Wave
- Passing Vessel in Port Arthur Channel
- Propeller Wash in LNG berthing and turning basin.

4.3 Design Condition Details

4.3.1 Shoreline Protection Design at 100-year Storm Wave

Provided by both reference 2.1.5 and 2.1.6, the wave parameters at the location of LNG basin were represented in Table 2. The average 4.4ft wave height was adopt in this shore protection design.

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Table 2 Design Wave at 100-year Storm

Data Source	At shoreline - wave height Hs and period Tp	In LNG basin* - wave height Hs and period Tp
From Shoreline Protection, Reference 2.1.5	4.0 ft and 3.3 seconds	2.2 ft and 3.3 seconds
From Metocean Report, Reference 2.1.6	4.8 ft and 3.8 seconds	2.6 ft and 3.8 seconds
Adopted Wave in this Shoreline Protection Design	4.4 ft and 3.8 seconds**	2.5 ft and 3.8 seconds

*Note: a diffraction coefficient of 0.55 was applied in dredged LNG basin per CEM
** Average wave height between identified sources

In this shore protection design, the adopted inputs for riprap revetment design are:

- Wave Hs = 4.4 ft and T_p = 3.8 seconds at all property shoreline.
- Wave Hs = 2.5 ft and T_p = 3.8 seconds in LNG basin.

4.3.2 Shoreline Protection Design at 500-year Storm Wave

Provided by the reference 2.1.5, the wave parameters at the location of LNG basin were represented in Table 3.

Table 3 Design Wave at 500-year Storm

Data Source	At shoreline - wave height Hs and period Tp	In LNG basin* - wave height Hs and period Tp
From Shoreline Protection, Reference 2.1.5	5.9 ft and 4.0 seconds	3.3 ft and 4.0 seconds
Adopted Wave in this Shoreline Protection Design	5.9 ft and 4.0 seconds	3.3 ft and 4 seconds

In this shore protection design, the adopted inputs for riprap revetment design are:

- Wave Hs = 5.9 ft and T_p = 4.0 seconds at all property shoreline.
- Wave Hs = 3.3 ft and T_p = 4.0 seconds in LNG basin.

4.3.3 Passing Vessel in Port Arthur Canal

Reference 2.1.6 stated that “vessel passing by Port Arthur LNG are expected to travel at speeds between 6 and 7 knots”. In this shoreline protection design, for a conservative maximum as did in Reference 2.1.6, the passing vessel’s speed with 10 knots were adopted. The particulars of the passing vessel and associated parameters are listed in the following Table 4Table 4.

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Table 4 Passing Ship Particulars

Passing Crude Oil Tanker	Characteristics
Length Overall (ft)	810
Breadth (ft)	137
Draft, loaded (ft)	40
Passing speed (knots)	10
Distance from Shoreline to CL of channel (ft)	550
Design travel speed (knot)	10

4.3.4 Propeller Wash

The PALNG Navigation Simulation provided by Client, the 4 assistant tugs with 80 mt bollard pull capacity were applied during maneuvering within turning basin and LNG basin. Thus, the Robert Allen RA 3200 tug was selected in this LNG berthing and turning basin propeller wash calculation. The assistant tugboat's particulars and associated parameters are listed in the following Table 5.

Due to the arrangement on using 4 tugs to assist the arrival and departure of the LNG vessels in the LNG terminal, the propeller wash from LNG vessel's main propulsion and thruster are not included in this calculation – LNG vessel's main propulsion and thruster are assumed to not be used in the basins.

Table 5 Design Tug Particulars

Tug – Robert Allen RAstar 3200	Characteristics
Length Overall (ft)	105 (32m)
Breadth (ft)	42 (12.8m)
Draft, loaded (ft)	19 (5.8m)
Depth (ft)	17.6 (5.37m)
Propeller Diameter (ft)	8.9 (2.7m)
Engine Power (watt) – Twin	2 x 2,240,000
Bollard Pull (mt)	80

Reference 2.1.9 stated that "pilots generally used the least tug power possible to safely complete the simulation, …… the most simulations rarely exceeded 75% sustained tug power usage". Combined with PIANC recommendation of Reference 2.2.3, the power usages of the assistant tugboats are assumed in the Table 6.

Noted that in the basin, the assistant tug is restricted to keep a minimum clearance of 50 ft from the toe of the dredged slope (fender line).

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Table 6 Tug Power Usage Regarding the Separated Distance to the Toe of Slope

Distance from Toe of the Dredged Slopes	Power Usage in Berthing Basin – PIANC &Typical	Power Usage in Berthing Basin – Reference 2.1.8
More than 100 ft (about 1.0 tug LOA)	100%	75%
50 to 100 ft (about 0.5 -1.0 tug LOA)	50%	*75%
0 to 50 ft (about < 0.5 tug LOA)	Not Allowed	-

*Noted that the 75% in Reference 2.1.8 is also assumed in this range for checking the most conservative scenario.

5.0 CALCULATIONS ON MOF REVETMENT ROCK

5.1 General

The calculated rock sizes (by weight) are summarized in Table 7, while the detailed calculations are included in the attachments.

5.2 Required Rock Sizes by 100- and 500-year Storm Waves

Following table is the summary for the required rock size for the 100- and 500-year storm wave conditions. Detailed calculations are presented in Attachment A (A1 to A4). (Note: Ts = Tp/1.1 per Random Sea and Design for Maritime Structure, Goda).

Noted that the functional requirement for installed riprap shore protection is to have minimum damage “initial damage” for 100-year storm while the requirement for installed riprap levee protection is to allow certain damage of “intermediate damage” for 500-year storm.

The permeability coefficient P was categorized between 0.1 to 0.4 per CEM – most conservative and least conservative.

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Table 7 Required Stone Size for 100- and 500-year Storm Wave Conditions

Location	Design Storm	Storm Wave Hs and Tp	Permeability Coefficient P	Allowed Damage Coefficient S	Required Rock Size W_{50} (lb)
Property shoreline	100-year	4.4 ft 3.8 sec	0.1 to 0.4	2 for "initial"	496 to 235
	500-year	5.9 ft 4.0 sec	0.1 to 0.4	6 for "intermediate l"	**536** to 254
LNG berthing basin	100-year	2.5 ft 3.8 sec	0.1 to 0.4	2 for "initial"	139 to 66
	500-year	3.3 ft 4.0 sec	0.1 to 0.4	6 for "intermediate"	**145** to 69

5.3 Required Rock Size by Passing Vessel

The passing vessel-generated wave and flow are calculated per BAW equations and summarized in the below table. The required rock sizes (by D_{50}) for each equation are included in the last column. Note that BAW equations for passing vessel are only to produce the required rock size but not rock weight. For the consistency with Section 5.2 and 5.4, the final rock weight determined by Figure 3-1 (Figure 6-3 in Ref 2.2.2.) is calculated by cube shape – required rock size by D_{50} is 1.12 ft and rock weight by W_{50} is 230 lb.

The results are tabulated in Table 8 below, with the detailed calculations of BAW equations presented in the Attachment B.

Table 8 Required Armor Stone Size by Passing Vessel

Items by Equations	Required Size by D_{50}
Design Transversal Stern Wave (BAW Eq 6-1)	1.53 ft
Design Primary Stern Wave (BAW Eq 6-2)	0.70 ft
Secondary Wave (BAW Eq 6-7)	0.73 ft
Return Flow Velocity (BAW Eq 6-8)	0.54 ft
Slope Supply Flow (BAW Eq 6-10)	0.62 ft
Slope Supply Flow & Primary Stern Wave (BAW Eq 6-11)	0.42 ft
BAW Figure 6-3 – Weighted in Size, ft	**1.12 ft**
BAW Figure 6-3 – Weighted in Weight, lb	**230 lb**

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5.4 Required Rock Size by Propeller Wash of Tugboats

Following Table 9 is the summary for the required rock sizes for Tugboats propeller wash at varied separated distance with different power levels. In the typical propeller wash scenario per PIANC, the required rock size is 225 lb. For checking purpose, the 75% power usage in Reference 2.1.8 is also assumed at the distance range of 50 to 100 ft, then the required rock size is 506lb. Detailed design calculations are presented in Attachment C.

Table 9 Required Armour Stone Size by Propeller Wash of Tugboats

Clearance from Toe of the Dredged Slopes	Required Rock Size W_{50} (lb) - Typical	Required Rock Size W_{50} (lb) by Reference 2.1.8
More than 100 ft (> 1.0 tug LOA)	145	81
50 to 100 ft (0.5 -1.0 tug LOA)	225	506
0 to 50 ft (0.5 tug LOA)	-	-

5.5 Required Revetment Rock Size and Armor Rock Thickness

Among all scenario from section 5.2, 5.3 and 5.4, the required riprap revetment is listed in the Table 10 the section at and above water surface is subject to the action of storm wave and passing ship navigated in Port Arthur Channel while the section below water surface is only subject to propeller wash from the terminal assistant tugboats in operation. This is also applicable to the storm water drainage within the LNG basis, as wave and vessel wake will control the rock sizing.

From the varied requirements in Table 10, if a single rock size was recommended to satisfy all requirements at all locations and both of above and below water surface, it will be:

- W_{50} = 550 lb by rock weight.
- 3.0 ft thickness of rock.

The calculation of rock thickness and rock gradation are presented in Attachment A (A6).

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Table 10 Summary of Required Armour Stone

	Location	Determined by	Required Rock Weight by W_{50} (lb)
Riprap Revetment Section at & above Waterline	at property shoreline	500-year storm – intermediate damage	536
		100-year storm – initial damage	496
		Passing ship at Port Author Channel	230
	at LNG basin	500-year storm – intermediate damage	145
		100-year storm – initial damage	139
		Passing ship in Port Author Channel	< 230*
Riprap Revetment Section below Waterline	at LNG basin	Propeller wash from tugboats – worst manoeuvring	506
		Propeller wash from tugboats – typical manoeuvring	225

*Not calculated but the wake diffracted into the LNG basin should be less than that at the property shoreline.

6.0 CONCLUSION AND RECOMMENDATION

Based on the Coastal Engineering Analysis, the following are recommended for the LNG Berth Shore Protection:

1. The coastal engineering calculations suggest that the following shore protection design summarized in Table 11 meets the design requirements including the storm wave, passing vessels and propeller wash in the LNG basin and property shoreline area.

2. By consolidating the rock sizes required at property shoreline and LNG basin, the recommended option is:

    - The required armour rock size by weight W_{50} is 550 lb
    - The required thickness of the 550 lb armour rock is 3.0 ft.
    - The required bedding stone size by weight W_{50} is 50 lb and thickness of bedding layer is 1.0 ft.

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Table 11 Rock Size Recommendations for PALNG Shoreline and Basin Revetment

Basin and Shore Protection	Recommended Armour Rock	Recommended Bedding Stone
Rock Size by Weight W_{50}	550 lb	50 lb
Thickness of Rock Layer	3.0 ft	1.0 ft

For both 550lb armour rock and its bedding stone, the calculations on layer thickness and rock gradation are included at Attachment D (D1 for 550 lb armour rock and D2 for bedding stone).

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APPENDIX A

REQUIRED ROCK SIZE BY STORM WAVE - ABOVE WATER SECTION

ATTACHEMNT A-1: REVETMENT DESIGN CASE 1- 100-year Storm Wave at property shore line
ATTACHEMNT A-2: REVETMENT DESIGN CASE 2- 100-year Storm Wave in Berthing Basin
ATTACHEMNT A-3: REVETMENT DESIGN CASE 3- 500-year Storm Wave at property shoreline
ATTACHEMNT A-4: REVETMENT DESIGN CASE 4- 500-year Storm Wave in Berthing Basin

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ATTACHEMNT A-1: REVETMENT DESIGN CASE 1- 100-year Storm Wave at property shore line P=0.1 first and P=0.4 second

1	**van der Meer equations - Deep Water Conditions**				CIRA C683 "The Rock Manual" para 5.2.2.2 page 567 and following	
2						
3	For *plunging waves* ($\xi_m < \xi_{cr}$):				and for *surging waves* ($\xi_m \geq \xi_{cr}$):	
4						
5	$\frac{H_s}{\Delta D_{n50}} = c_{pl} P^{0.18} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \xi_m^{-0.5}$				$\frac{H_s}{\Delta D_{n50}} = c_s P^{-0.13} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \sqrt{\cot\alpha}\, \xi_m^P$	
6						
7						
8						
9		Sea bottom level	=	-46.00	ft NAVD 88	
10		Bed Slope- Horizontal	=	100.00		
11		Bed Slope- Vertical	=	1.00		
12		Bed Slope	=	0.57		
13		Structure Slope- Horizontal	=	3.00		1.5 to 6, Table 5.24, Page 570, Chapter 5, Rock Manual
14		Structure Slope- Vertical	=	1.00		
15		Structure Slope	=	18.43		
16		Design Water Level	=	10.20	ft NAVD 88	
17	h	Water Depth	=	56.20	ft	Deep Water
18		Water Density	=	63.99	lbs./ft3	
19		Rock Density	=	165.43	lbs./ft3	
20	Δ	Relative Buoyant Density	=	1.59		
21	Hs	Significant Wave Height	=	4.40	ft	
22	Tp	Peak Wave Period	=	3.80	s	
23	Tm-1,0	Mean Wave Energy Period	=	3.45	s	Eq 4.62, Page 362, Chapter 4, Rock Manual
24	Tm	Mean Period	=	3.31	s	JONSWAP, Page 367, Chapter 4, Rock Manual
25		Theoretic Breaking Wave Height	=	43.83	ft	
26		Accelaration due to gravity	=	32.19	ft/s2	
27	ξm	Surf Similarity Mean	=	1.19		Page 575, Chapter 5, Rock Manual using Tm
28		Surf Similarity Mean Validity: 0.7 to 7	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
29		Design Approach	=	**Best Fit**		Table 5.25, Page 570,Chapter 5, Rock Manual
30	C_{pl}	Coefficient	=	6.20		
31	C_s	Coefficient	=	1.00		
32	P	Notional Permeability Factor	=	**0.1**		Table 5.39, Page 568,Chapter 5, Rock Manual
33	ξ_{cr}	Surf Similarity Critical	=	2.55		Eq 5.138, Page 567, Chapter 5, Rock Manual
34		Wave Type	=	**Plunging**		
35		Storm Duration	=	**3**	h	
36		Number of Waves	=	3266.79		Box 5.13, Page 572, Chapter 5, Rock Manual
37		Selected Number of Waves	=	**3200**		Max. 3000,Table 5.26, Page 576, Chapter 5, Rock Manual
38		Wave Length	=	55.98605787	ft	Page 329, Chapter 4, Rock Manual
39		Wave Steepness	=	0.078590995		Page 352, Chapter 4, Rock Manual
40		Wave Steepness Validity : 0.001 to 0.006	=	Not Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
41	Sd	Damage Parameter	=	**2**		Table 5.23, Page 569, Chapter 5, Rock Manual
42		Rock Mass Weathering	=	**1**		1 indicates no weathering
43						
44				**Primary Armour**		
45		**Nominal Diameter**	=	1.44	ft	
46		**Nominal Weight**	=	495.60	lbs.	
47	**W50**	**Nominal Weight (after Weathering)**	=	**495.60**	lbs.	
48	**D50**	**Nominal Diameter (after Weatherin**	=	**1.44**	ft	
49	kt	Layer Coefficient	=	**1.02**		Table VI-5-51, Page VI-5-136, CEM
50	n	Number of Layers	=	**2**		

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1	**van der Meer equations - Deep Water Conditions**				CIRA C683 "The Rock Manual" para 5.2.2.2 page 567 and following	
2						
3	For *plunging waves* ($\xi_m < \xi_{cr}$):				and for *surging waves* ($\xi_m \geq \xi_{cr}$):	
4						
5	$\frac{H_s}{\Delta D_{n50}} = c_{pl} P^{0.18} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \xi_m^{-0.5}$				$\frac{H_s}{\Delta D_{n50}} = c_s P^{-0.13} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \sqrt{\cot\alpha}\, \xi_m^{P}$	
6						
7						
8						
9		Sea bottom level	=	-46.00	ft NAVD 88	
10		Bed Slope- Horizontal	=	100.00		
11		Bed Slope- Vertical	=	1.00		
12		Bed Slope	=	0.57		
13		Structure Slope- Horizontal	=	3.00		1.5 to 6, Table 5.24, Page 570, Chapter 5, Rock Manual
14		Structure Slope- Vertical	=	1.00		
15		Structure Slope	=	18.43		
16		Design Water Level	=	10.20	ft NAVD 88	
17	h	Water Depth	=	56.20	ft	Deep Water
18		Water Density	=	63.99	lbs./ft3	
19		Rock Density	=	165.43	lbs./ft3	
20	Δ	Relative Buoyant Density	=	1.59		
21	Hs	Significant Wave Height	=	4.40	ft	
22	Tp	Peak Wave Period	=	3.80	s	
23	Tm-1,0	Mean Wave Energy Period	=	3.45	s	Eq 4.62, Page 362, Chapter 4, Rock Manual
24	Tm	Mean Period	=	3.31	s	JONSWAP, Page 367, Chapter 4, Rock Manual
25		Theoretic Breaking Wave Height	=	43.83	ft	
26		Accelaration due to gravity	=	32.19	ft/s2	
27	ξm	Surf Similarity Mean	=	1.19		Page 575, Chapter 5, Rock Manual using Tm
28		Surf Similarity Mean Validity: 0.7 to 7	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
29		Design Approach	=	**Best Fit**		Table 5.25, Page 570,Chapter 5, Rock Manual
30	C_{pl}	Coefficient	=	6.20		
31	C_s	Coefficient	=	1.00		
32	P	Notional Permeability Factor	=	**0.4**		Table 5.39, Page 568,Chapter 5, Rock Manual
33	ξ_{cr}	Surf Similarity Critical	=	3.01		Eq 5.138, Page 567, Chapter 5, Rock Manual
34		Wave Type	=	**Plunging**		
35		Storm Duration	=	**3**	h	
36		Number of Waves	=	3266.79		Box 5.13, Page 572, Chapter 5, Rock Manual
37		Selected Number of Waves	=	**3200**		Max. 3000,Table 5.26, Page 576, Chapter 5, Rock Manual
38		Wave Length	=	55.98605787	ft	Page 329, Chapter 4, Rock Manual
39		Wave Steepness	=	0.078590995		Page 352, Chapter 4, Rock Manual
40		Wave Steepness Validity : 0.001 to 0.006	=	Not Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
41	Sd	Damage Parameter	=	**2**		Table 5.23, Page 569, Chapter 5, Rock Manual
42		Rock Mass Weathering	=	**1**		1 indicates no weathering
43						
44		**Primary Armour**				
45		**Nominal Diameter**	=	1.12	ft	
46		**Nominal Weight**	=	234.44	lbs.	
47	**W50**	**Nominal Weight (after Weathering)**	=	**234.44**	lbs.	
48	**D50**	**Nominal Diameter (after Weatherin**	=	**1.12**	ft	
49	kt	Layer Coefficient	=	**1.02**		Table VI-5-51, Page VI-5-136, CEM
50	n	Number of Layers	=	**2**		

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ATTACHEMNT A-2: REVETMENT DESIGN CASE 2- 100-year Storm Wave in Berthing Basin P=0.1 first and P=0.4 second

1	**van der Meer equations - Deep Water Conditions**				CIRA C683 "The Rock Manual" para 5.2.2.2 page 567 and following	
2						
3	For *plunging waves* ($\xi_m < \xi_{cr}$):				and for *surging waves* ($\xi_m \geq \xi_{cr}$):	
4						
5	$\frac{H_s}{\Delta D_{n50}} = c_{pl} P^{0.18} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \xi_m^{-0.5}$				$\frac{H_s}{\Delta D_{n50}} = c_s P^{-0.13} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \sqrt{\cot\alpha}\, \xi_m^P$	
6						
7						
8						
9		Sea bottom level	=	-46.00	ft NAVD 88	
10		Bed Slope- Horizontal	=	100.00		
11		Bed Slope- Vertical	=	1.00		
12		Bed Slope	=	0.57		
13		Structure Slope- Horizontal	=	3.00		1.5 to 6, Table 5.24, Page 570, Chapter 5, Rock Manual
14		Structure Slope- Vertical	=	1.00		
15		Structure Slope	=	18.43		
16		Design Water Level	=	10.20	ft NAVD 88	
17	h	Water Depth	=	56.20	ft	Deep Water
18		Water Density	=	63.99	lbs./ft3	
19		Rock Density	=	165.43	lbs./ft3	
20	Δ	Relative Buoyant Density	=	1.59		
21	Hs	Significant Wave Height	=	2.50	ft	
22	Tp	Peak Wave Period	=	3.80	s	
23	Tm-1,0	Mean Wave Energy Period	=	3.45	s	Eq 4.62, Page 362, Chapter 4, Rock Manual
24	Tm	Mean Period	=	3.31	s	JONSWAP, Page 367, Chapter 4, Rock Manual
25		Theoretic Breaking Wave Height	=	43.83	ft	
26		Accelaration due to gravity	=	32.19	ft/s2	
27	ξm	Surf Similarity Mean	=	1.58		Page 575, Chapter 5, Rock Manual using Tm
28		Surf Similarity Mean Validity: 0.7 to 7	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
29		Design Approach	=	**Best Fit**		Table 5.25, Page 570,Chapter 5, Rock Manual
30	C_{pl}	Coefficient	=	6.20		
31	C_s	Coefficient	=	1.00		
32	P	Notional Permeability Factor	=	**0.1**		Table 5.39, Page 568,Chapter 5, Rock Manual
33	ξ_{cr}	Surf Similarity Critical	=	2.55		Eq 5.138, Page 567, Chapter 5, Rock Manual
34		Wave Type	=	**Plunging**		
35		Storm Duration	=	**3**	h	
36		Number of Waves	=	3266.79		Box 5.13, Page 572, Chapter 5, Rock Manual
37		Selected Number of Waves	=	**3200**		Max. 3000,Table 5.26, Page 576, Chapter 5, Rock Manual
38		Wave Length	=	55.98605787	ft	Page 329, Chapter 4, Rock Manual
39		Wave Steepness	=	0.044653976		Page 352, Chapter 4, Rock Manual
40		Wave Steepness Validity : 0.001 to 0.006	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
41	Sd	Damage Parameter	=	**2**		Table 5.23, Page 569, Chapter 5, Rock Manual
42		Rock Mass Weathering	=	**1**		1 indicates no weathering
43						
44		**Primary Armour**				
45		**Nominal Diameter**	=	0.94	ft	
46		**Nominal Weight**	=	138.91	lbs.	
47	**W50**	**Nominal Weight (after Weathering)**	=	**138.91**	lbs.	
48	**D50**	**Nominal Diameter (after Weatherin**	=	**0.94**	ft	
49	kt	Layer Coefficient	=	**1.02**		Table VI-5-51, Page VI-5-136, CEM
50	n	Number of Layers	=	**2**		

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van der Meer equations - Deep Water Conditions — CIRA C683 "The Rock Manual" para 5.2.2.2 page 567 and following

For *plunging waves* ($\xi_m < \xi_{cr}$):

$$\frac{H_s}{\Delta D_{n50}} = c_{pl}\, P^{0.18}\left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \xi_m^{-0.5}$$

and for *surging waves* ($\xi_m \geq \xi_{cr}$):

$$\frac{H_s}{\Delta D_{n50}} = c_s\, P^{-0.13}\left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \sqrt{\cot\alpha}\, \xi_m^{P}$$

		Sea bottom level	=	-46.00	ft NAVD 88	
		Bed Slope- Horizontal	=	100.00		
		Bed Slope- Vertical	=	1.00		
		Bed Slope	=	0.57		
		Structure Slope- Horizontal	=	3.00		1.5 to 6, Table 5.24, Page 570, Chapter 5, Rock Manual
		Structure Slope- Vertical	=	1.00		
		Structure Slope	=	18.43		
		Design Water Level	=	10.20	ft NAVD 88	
	h	Water Depth	=	56.20	ft	Deep Water
		Water Density	=	63.99	lbs./ft3	
		Rock Density	=	165.43	lbs./ft3	
	Δ	Relative Buoyant Density	=	1.59		
	Hs	Significant Wave Height	=	2.50	ft	
	Tp	Peak Wave Period	=	3.80	s	
	Tm-1,0	Mean Wave Energy Period	=	3.45	s	Eq 4.62, Page 362, Chapter 4, Rock Manual
	Tm	Mean Period	=	3.31	s	JONSWAP, Page 367, Chapter 4, Rock Manual
		Theoretic Breaking Wave Height	=	43.83	ft	
		Accelaration due to gravity	=	32.19	ft/s2	
	ξm	Surf Similarity Mean	=	1.58		Page 575, Chapter 5, Rock Manual using Tm
		Surf Similarity Mean Validity: 0.7 to 7	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
		Design Approach	=	**Best Fit**		Table 5.25, Page 570,Chapter 5, Rock Manual
	C_{pl}	Coefficient	=	6.20		
	C_s	Coefficient	=	1.00		
	P	Notional Permeability Factor	=	**0.4**		Table 5.39, Page 568,Chapter 5, Rock Manual
	ξ_{cr}	Surf Similarity Critical	=	3.01		Eq 5.138, Page 567, Chapter 5, Rock Manual
		Wave Type	=	**Plunging**		
		Storm Duration	=	**3**	h	
		Number of Waves	=	3266.79		Box 5.13, Page 572, Chapter 5, Rock Manual
		Selected Number of Waves	=	**3200**		Max. 3000,Table 5.26, Page 576, Chapter 5, Rock Manual
		Wave Length	=	55.98605787	ft	Page 329, Chapter 4, Rock Manual
		Wave Steepness	=	0.044653976		Page 352, Chapter 4, Rock Manual
		Wave Steepness Validity : 0.001 to 0.006	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
	Sd	Damage Parameter	=	**2**		Table 5.23, Page 569, Chapter 5, Rock Manual
		Rock Mass Weathering	=	**1**		1 indicates no weathering
		Primary Armour				
		Nominal Diameter	=	0.74	ft	
		Nominal Weight	=	65.71	lbs.	
	W50	**Nominal Weight (after Weathering)**	=	**65.71**	lbs.	
	D50	**Nominal Diameter (after Weatherin**	=	**0.74**	ft	
	kt	Layer Coefficient	=	**1.02**		Table VI-5-51, Page VI-5-136, CEM
	n	Number of Layers	=	**2**		

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ATTACHEMNT A-3: REVETMENT DESIGN CASE 3- 500-year Storm Wave at property shoreline

P=0.1 first and P=0.4 second

1	**van der Meer equations - Deep Water Conditions**				CIRA C683 "The Rock Manual" para 5.2.2.2 page 567 and following	
2						
3	For *plunging waves* ($\xi_m < \xi_{cr}$):				and for *surging waves* ($\xi_m \geq \xi_{cr}$):	
4						
5	$\frac{H_s}{\Delta D_{n50}} = c_{pl} P^{0.18} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \xi_m^{-0.5}$				$\frac{H_s}{\Delta D_{n50}} = c_s P^{-0.13} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \sqrt{\cot\alpha}\, \xi_m^P$	
6						
7						
8						
9		Sea bottom level	=	-46.00	ft NAVD 88	
10		Bed Slope- Horizontal	=	100.00		
11		Bed Slope- Vertical	=	1.00		
12		Bed Slope	=	0.57		
13		Structure Slope- Horizontal	=	3.00		1.5 to 6, Table 5.24, Page 570, Chapter 5, Rock Manual
14		Structure Slope- Vertical	=	1.00		
15		Structure Slope	=	18.43		
16		Design Water Level	=	14.00	ft NAVD 88	
17	h	Water Depth	=	60.00	ft	Deep Water
18		Water Density	=	63.99	lbs./ft3	
19		Rock Density	=	165.43	lbs./ft3	
20	Δ	Relative Buoyant Density	=	1.59		
21	Hs	Significant Wave Height	=	5.90	ft	
22	Tp	Peak Wave Period	=	4.00	s	
23	Tm-1,0	Mean Wave Energy Period	=	3.64	s	Eq 4.62, Page 362, Chapter 4, Rock Manual
24	Tm	Mean Period	=	3.48	s	JONSWAP, Page 367, Chapter 4, Rock Manual
25		Theoretic Breaking Wave Height	=	46.80	ft	
26		Accelaration due to gravity	=	32.19	ft/s2	
27	ξm	Surf Similarity Mean	=	1.08		Page 575, Chapter 5, Rock Manual using Tm
28		Surf Similarity Mean Validity: 0.7 to 7	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
29		Design Approach	=	**Best Fit**		Table 5.25, Page 570,Chapter 5, Rock Manual
30	C_{pl}	Coefficient	=	6.20		
31	C_s	Coefficient	=	1.00		
32	P	Notional Permeability Factor	=	**0.1**		Table 5.39, Page 568,Chapter 5, Rock Manual
33	ξ_{cr}	Surf Similarity Critical	=	2.55		Eq 5.138, Page 567, Chapter 5, Rock Manual
34		Wave Type	=	**Plunging**		
35		Storm Duration	=	**3**	h	
36		Number of Waves	=	3103.45		Box 5.13, Page 572, Chapter 5, Rock Manual
37		Selected Number of Waves	=	**3200**		Max. 3000,Table 5.26, Page 576, Chapter 5, Rock Manual
38		Wave Length	=	62.03441315	ft	Page 329, Chapter 4, Rock Manual
39		Wave Steepness	=	0.0951085		Page 352, Chapter 4, Rock Manual
40		Wave Steepness Validity : 0.001 to 0.006	=	Not Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
41	Sd	Damage Parameter	=	**6**		Table 5.23, Page 569, Chapter 5, Rock Manual
42		Rock Mass Weathering	=	**1**		1 indicates no weathering
43						
44		**Primary Armour**				
45		**Nominal Diameter**	=	1.48	ft	
46		**Nominal Weight**	=	535.70	lbs.	
47	**W50**	**Nominal Weight (after Weathering)**	=	**535.70**	lbs.	
48	**D50**	**Nominal Diameter (after Weatherin**	=	**1.48**	ft	
49	kt	Layer Coefficient	=	**1.02**		Table VI-5-51, Page VI-5-136, CEM
50	n	Number of Layers	=	**2**		

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1	**van der Meer equations - Deep Water Conditions**				CIRA C683 "The Rock Manual" para 5.2.2.2 page 567 and following	
2						
3	For *plunging waves* ($\xi_m < \xi_{cr}$):				and for *surging waves* ($\xi_m \geq \xi_{cr}$):	
4						
5	$\frac{H_s}{\Delta D_{n50}} = c_{pl} P^{0.18} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \xi_m^{-0.5}$				$\frac{H_s}{\Delta D_{n50}} = c_s P^{-0.13} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \sqrt{\cot\alpha}\, \xi_m^P$	
6						
7						
8						
9		Sea bottom level	=	-46.00	ft NAVD 88	
10		Bed Slope- Horizontal	=	100.00		
11		Bed Slope- Vertical	=	1.00		
12		Bed Slope	=	0.57		
13		Structure Slope- Horizontal	=	3.00		1.5 to 6, Table 5.24, Page 570, Chapter 5, Rock Manual
14		Structure Slope- Vertical	=	1.00		
15		Structure Slope	=	18.43		
16		Design Water Level	=	14.00	ft NAVD 88	
17	h	Water Depth	=	60.00	ft	Deep Water
18		Water Density	=	63.99	lbs./ft3	
19		Rock Density	=	165.43	lbs./ft3	
20	Δ	Relative Buoyant Density	=	1.59		
21	Hs	Significant Wave Height	=	5.90	ft	
22	Tp	Peak Wave Period	=	4.00	s	
23	Tm-1,0	Mean Wave Energy Period	=	3.64	s	Eq 4.62, Page 362, Chapter 4, Rock Manual
24	Tm	Mean Period	=	3.48	s	JONSWAP, Page 367, Chapter 4, Rock Manual
25		Theoretic Breaking Wave Height	=	46.80	ft	
26		Accelaration due to gravity	=	32.19	ft/s2	
27	ξm	Surf Similarity Mean	=	1.08		Page 575, Chapter 5, Rock Manual using Tm
28		Surf Similarity Mean Validity: 0.7 to 7	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
29		Design Approach	=	**Best Fit**		Table 5.25, Page 570,Chapter 5, Rock Manual
30	C_{pl}	Coefficient	=	6.20		
31	C_s	Coefficient	=	1.00		
32	P	Notional Permeability Factor	=	**0.4**		Table 5.39, Page 568,Chapter 5, Rock Manual
33	ξ_{cr}	Surf Similarity Critical	=	3.01		Eq 5.138, Page 567, Chapter 5, Rock Manual
34		Wave Type	=	**Plunging**		
35		Storm Duration	=	**3**	h	
36		Number of Waves	=	3103.45		Box 5.13, Page 572, Chapter 5, Rock Manual
37		Selected Number of Waves	=	**3200**		Max. 3000,Table 5.26, Page 576, Chapter 5, Rock Manual
38		Wave Length	=	62.03441315	ft	Page 329, Chapter 4, Rock Manual
39		Wave Steepness	=	0.0951085		Page 352, Chapter 4, Rock Manual
40		Wave Steepness Validity : 0.001 to 0.006	=	Not Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
41	Sd	Damage Parameter	=	**6**		Table 5.23, Page 569, Chapter 5, Rock Manual
42		Rock Mass Weathering	=	**1**		1 indicates no weathering
43						
44		**Primary Armour**				
45		**Nominal Diameter**	=	1.15	ft	
46		**Nominal Weight**	=	253.40	lbs.	
47	**W50**	**Nominal Weight (after Weathering)**	=	**253.40**	lbs.	
48	**D50**	**Nominal Diameter (after Weatherin**	=	**1.15**	ft	
49	kt	Layer Coefficient	=	**1.02**		Table VI-5-51, Page VI-5-136, CEM
50	n	Number of Layers	=	**2**		

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ATTACHEMNT A-4: REVETMENT DESIGN CASE 4- 500-year Storm Wave in Berthing Basin P=0.1 first and P=0.4 second

1	**van der Meer equations - Deep Water Conditions**				CIRA C683 "The Rock Manual" para 5.2.2.2 page 567 and following	
2						
3	For *plunging waves* ($\xi_m < \xi_{cr}$):				and for *surging waves* ($\xi_m \geq \xi_{cr}$):	
4						
5	$\frac{H_s}{\Delta D_{n50}} = c_{pl} P^{0.18} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \xi_m^{-0.5}$				$\frac{H_s}{\Delta D_{n50}} = c_s P^{-0.13} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \sqrt{\cot\alpha}\, \xi_m^P$	
6						
7						
8						
9		Sea bottom level	=	-46.00	ft NAVD 88	
10		Bed Slope- Horizontal	=	100.00		
11		Bed Slope- Vertical	=	1.00		
12		Bed Slope	=	0.57		
13		Structure Slope- Horizontal	=	3.00		1.5 to 6, Table 5.24, Page 570, Chapter 5, Rock Manual
14		Structure Slope- Vertical	=	1.00		
15		Structure Slope	=	18.43		
16		Design Water Level	=	14.00	ft NAVD 88	
17	h	Water Depth	=	60.00	ft	Deep Water
18		Water Density	=	63.99	lbs./ft3	
19		Rock Density	=	165.43	lbs./ft3	
20	Δ	Relative Buoyant Density	=	1.59		
21	Hs	Significant Wave Height	=	3.30	ft	
22	Tp	Peak Wave Period	=	4.00	s	
23	Tm-1,0	Mean Wave Energy Period	=	3.64	s	Eq 4.62, Page 362, Chapter 4, Rock Manual
24	Tm	Mean Period	=	3.48	s	JONSWAP, Page 367, Chapter 4, Rock Manual
25		Theoretic Breaking Wave Height	=	46.80	ft	
26		Accelaration due to gravity	=	32.19	ft/s2	
27	ξm	Surf Similarity Mean	=	1.45		Page 575, Chapter 5, Rock Manual using Tm
28		Surf Similarity Mean Validity: 0.7 to 7	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
29		Design Approach	=	**Best Fit**		Table 5.25, Page 570,Chapter 5, Rock Manual
30	C_{pl}	Coefficient	=	6.20		
31	C_s	Coefficient	=	1.00		
32	P	Notional Permeability Factor	=	**0.1**		Table 5.39, Page 568,Chapter 5, Rock Manual
33	ξ_{cr}	Surf Similarity Critical	=	2.55		Eq 5.138, Page 567, Chapter 5, Rock Manual
34		Wave Type	=	**Plunging**		
35		Storm Duration	=	**3**	h	
36		Number of Waves	=	3103.45		Box 5.13, Page 572, Chapter 5, Rock Manual
37		Selected Number of Waves	=	**3200**		Max. 3000,Table 5.26, Page 576, Chapter 5, Rock Manual
38		Wave Length	=	62.03441315	ft	Page 329, Chapter 4, Rock Manual
39		Wave Steepness	=	0.053196282		Page 352, Chapter 4, Rock Manual
40		Wave Steepness Validity : 0.001 to 0.006	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
41	Sd	Damage Parameter	=	**6**		Table 5.23, Page 569, Chapter 5, Rock Manual
42		Rock Mass Weathering	=	**1**		1 indicates no weathering
43						
44		**Primary Armour**				
45		**Nominal Diameter**	=	0.96	ft	
46		**Nominal Weight**	=	144.93	lbs.	
47	**W50**	**Nominal Weight (after Weathering)**	=	**144.93**	lbs.	
48	**D50**	**Nominal Diameter (after Weatherin**	=	**0.96**	ft	
49	kt	Layer Coefficient	=	**1.02**		Table VI-5-51, Page VI-5-136, CEM
50	n	Number of Layers	=	**2**		

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van der Meer equations - Deep Water Conditions — CIRA C683 "The Rock Manual" para 5.2.2.2 page 567 and following

For *plunging waves* ($\xi_m < \xi_{cr}$):

$$\frac{H_s}{\Delta D_{n50}} = c_{pl} P^{0.18} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \xi_m^{-0.5}$$

and for *surging waves* ($\xi_m \geq \xi_{cr}$):

$$\frac{H_s}{\Delta D_{n50}} = c_s P^{-0.13} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \sqrt{\cot\alpha}\, \xi_m^P$$

		Sea bottom level	=	-46.00	ft NAVD 88	
		Bed Slope- Horizontal	=	100.00		
		Bed Slope- Vertical	=	1.00		
		Bed Slope	=	0.57		
		Structure Slope- Horizontal	=	3.00		1.5 to 6, Table 5.24, Page 570, Chapter 5, Rock Manual
		Structure Slope- Vertical	=	1.00		
		Structure Slope	=	18.43		
		Design Water Level	=	14.00	ft NAVD 88	
	h	Water Depth	=	60.00	ft	Deep Water
		Water Density	=	63.99	lbs./ft3	
		Rock Density	=	165.43	lbs./ft3	
	Δ	Relative Buoyant Density	=	1.59		
	Hs	Significant Wave Height	=	3.30	ft	
	Tp	Peak Wave Period	=	4.00	s	
	Tm-1,0	Mean Wave Energy Period	=	3.64	s	Eq 4.62, Page 362, Chapter 4, Rock Manual
	Tm	Mean Period	=	3.48	s	JONSWAP, Page 367, Chapter 4, Rock Manual
		Theoretic Breaking Wave Height	=	46.80	ft	
		Accelaration due to gravity	=	32.19	ft/s2	
	ξm	Surf Similarity Mean	=	1.45		Page 575, Chapter 5, Rock Manual using Tm
		Surf Similarity Mean Validity: 0.7 to 7	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
		Design Approach	=	**Best Fit**		Table 5.25, Page 570,Chapter 5, Rock Manual
	C_{pl}	Coefficient	=	6.20		
	C_s	Coefficient	=	1.00		
	P	Notional Permeability Factor	=	**0.4**		Table 5.39, Page 568,Chapter 5, Rock Manual
	ξ_{cr}	Surf Similarity Critical	=	3.01		Eq 5.138, Page 567, Chapter 5, Rock Manual
		Wave Type	=	**Plunging**		
		Storm Duration	=	**3**	h	
		Number of Waves	=	3103.45		Box 5.13, Page 572, Chapter 5, Rock Manual
		Selected Number of Waves	=	**3200**		Max. 3000,Table 5.26, Page 576, Chapter 5, Rock Manual
		Wave Length	=	62.03441315	ft	Page 329, Chapter 4, Rock Manual
		Wave Steepness	=	0.053196282		Page 352, Chapter 4, Rock Manual
		Wave Steepness Validity : 0.001 to 0.006	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
	Sd	Damage Parameter	=	**6**		Table 5.23, Page 569, Chapter 5, Rock Manual
		Rock Mass Weathering	=	**1**		1 indicates no weathering
		Primary Armour				
		Nominal Diameter	=	0.75	ft	
		Nominal Weight	=	68.56	lbs.	
	W50	**Nominal Weight (after Weathering)**	=	**68.56**	lbs.	
	D50	**Nominal Diameter (after Weatherin**	=	**0.75**	ft	
	kt	Layer Coefficient	=	**1.02**		Table VI-5-51, Page VI-5-136, CEM
	n	Number of Layers	=	**2**		

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APPENDIX B

REVETMENT DESIGN FOR PASSING VESSEL

REQUIRED ROCK SIZE BY PASSING VESSEL FROM BAW GUILDLINE
- ABOVE WATER SECTION

- ATTACHEMNT B-1: REVETMENT DESIGN BY FIG 6.3 – SHEET B1
- ATTACHEMNT B-2: REVETMENT DESIGN BY EQ 6-1&2 – SHEET B2
- ATTACHEMNT B-3: REVETMENT DESIGN BY EQ 6-7&8 – SHEET B3
- ATTACHEMNT B-4: REVETMENT DESIGN BY EQ 6-10&11 - SHEET B4

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ATTACHEMNT B-1: REVETMENT DESIGN BY BAW FIG 6.3

Project	Port Arthur LNG
Task	Armour Stone Size Required to Resist Load Caused By Passing Ship
Created by	Matt Liu
Created by	T Chris
Standards	BAW Code and Practive Principles for the Design of Bank and Bottom Protection for inland Waterways

	Required Stone Size in ft and Weight in lb					
Primary Wave Field	0.250	m	0.82	ft	91	lb
Return Flow	0.164	m	0.54	ft	26	lb
Secondary Wave Field	0.341	m	1.12	ft	230	lb
Final Required Stone Size	0.341	m	**1.12**	ft	**230**	lb

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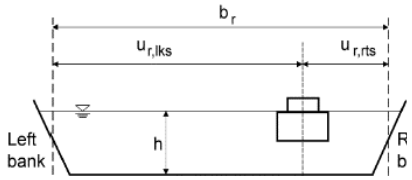
Project	Port Arthur LNG - Shorline Protection
Task	Armour Stone Size Required to Resist Load Caused By Transversal Stern Waves
Created by	Matt Liu
Checked by	
Standards	BAW Code and Practive Principles for the Design of Bank and Bottom Protection for inland Waterways

CONSTANT INPUTS			
Density of Water	ρ_W	1025	kg/m3
Gravity	g	9.81	m/s2
Bulk Density of Armour Stones	ρ_S	2650	kg/m3 N.B.:/TLW 2003/
Slope Angle	β	18	° cot (1/3)
Ship Length	L	247	m
Ship Width	B	42	m
Ship Speed	Vs	5.14	m/s
Water Depth	h	13	m
Flow Mean Vel. In Cross Section	V_{str}	0.5	m/s
Vessel CL to Bank Line	u_{rmin}	165	m, vessel offset 0.5Beam
Canal Width	b_r	390	m



EQ 6-1 & 6-2 INPUTS			
Coef. for wave generating ship	β_λ	0.9	0.72 for fast ship; 0.90 for inland navigation vessels and push-tow
Stability Coefficient	B'_B	1.5	1.5(lower limit of measured values) - 2.3(mean measured value)
Factor of Influence	C_H	1.3	1.3 (T/h=0.7, inland); 1.5 (T/h=0.4, partially laden); 1.1 sea-going vessel,large trim
Mean Drawdown near Bank	$\Delta\bar{h}_{u,Heck}$	1.40208	m, reference to 2.1.6 (p31 of MN report)
Distance Range	U'u	180	m, for Eq 5-54
Wave Height Coefficient	A_W	0.25	0.25 conventional inland vessel/tug; 0.35 empty, single-line push, 0.8 fully laden, multi-line push
Occurance Freq. Coef.	B^*_B	2	2.0 frequently occurs/damage completely avoid; 3.0 infrequently/with maintenace
Critical Ship Speed	V_{krit}	8	m/s, Eq 5-19

EQ 6-1 & 6-2 INTERMEDIATE OUTPUS			
Reduction factor	f_{red}	0.53	Eq 5-54
Slope Inclination	m	3.08	$2 \le m \le 5$
Slope Influence Coef	C_{Bo}	1.11	Eq 6-8
Coef. of Velocity	f_{cr}	1.00	[1, 1.7], Eq 5-57
Coef. Of Wave Length	f_λ	0.9	$0.9\sin[\pi(2Lw/\lambda q-0.5)]$ for $4/3Lw \le \lambda q \le 2Lw$, else 0
Max Waterkeven Drawdown	$\Delta\hat{h}_{u,Heck}$	1.822704	m, Eq 5-29 (FEED report)
Trans. Wave Length	λ_q	444.6	m, Eq 5-55
Wave Generating Ship Length	Lw	222.3	m
Primary Stern Wave Height	$H_{u,Heck}$	1.62	m, Eq 5-32
Distance Case B Design Value	$H_{u,Heck,StBem}$	1.74	m, Eq 5-53
Secondary Wave Height	$H_{sek,q}$	0.46	m, Eq 5-61&65
Design Wave Height	H_{Bem}	1.62	m
		2.67	

EQ 6-1 & 6-2 RESULTS			
Required Stone Size	**D_{50}**	**0.468**	m, Eq 6-1
Required Stone Size	**D_{50}**	**0.213**	m, Eq 6-2

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CALCULATION SHEET

P. O. BOX 2166
HOUSTON, TEXAS 77252-2166

CALC.NO. 26196-100-CMC-000-00016, Rev 000

PAL-T0-MAR-CAL-24-GEN-0002, Rev 000

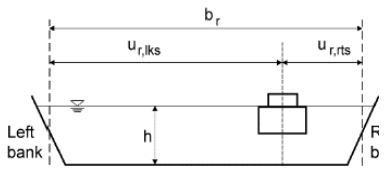
SIGNATURE: M. Liu DATE: 08-10-2023 CHECKED: C Thomas DATE: 08-15-2023

PROJECT: Port Arthur Liquefaction Project JOB NO. 26196-100

SUBJECT: Shore Protection Calculation for LNG Berth Area and Storm Water Drainage (Berth Area) SHEET28 OF 37 SHEETS 37

Project	Port Arthur LNG
Task	Armour Stone Size Required to Resist Load Caused By Secondary Diverging Waves
Created By	Matt Liu
Created On	T Chris
Standards	BAW Code and Practive Principles for the Design of Bank and Bottom Protection for inland Waterways

CONSTANT INPUTS			
Density of Water	ρ_w	1025	kg/m3
Gravity	g	9.81	m/s2
Bulk Density of Armour Stones	ρ_s	2650	kg/m3 N.B.:/TLW 2003/
Slope Angle	β	18	° cot(1/3)
Ship Length	L	247	m
Ship Width	B	42	m
Draft	T	12	m
Ship Speed	Vs	5.14	m/s
Water Depth	h	13	m
Flow Mean Vel. In Cross Section	V_{str}	0.5	m/s
Vessel CL to Bank Line	u_{rmin}	165	m
Canal Width	b_r	390	m



EQ 6-7 & 6-8 INPUTS			
Coef. for wave generating ship	β_λ	0.9	0.72 for fast ship; 0.90 for inland navigation vessels and push-tow
Mean Drawdown near Bank	$\Delta\bar{n}_{u,Heck}$	1	m, reference to 2.1.6 (MN report)
Distance Range	U'u	180	m, for Eq 5-54
Wave Height Coefficient	A_w	0.25	0.25 conventional inland vessel/tug; 0.35 empty, single-line push, 0.8 fully laden, multi-line push
Bank Strickler Roughness	$K_{Str,u}$	30.00	m^(1/3)/s, Eq 5-38
Mean Strickler Roughness	K_{Str}	30.00	m^(1/3)/s, Eq 5-38
Boundary Layer Thickness	δv	1.00	m, Eq 5-38
Flow Velocity	V_{max}	1.81	m/s, Eq 5-39&40, Downstrean V_{ruck} -$V_{Str,Ufer}$; Upstream V_{ruck}+$V_{Str,Ufer}$
Critical Ship Speed	V_{krit}	**8**	m/s, Eq 5-19
Coef. of Velocity	f_{cr}	1.00	[1, 1.7], Eq 5-57
Coef. Of Wave Length	f_λ	0.9	0.9sin[π(2Lw/λq-0.5)] for 4/3Lw≤λq≤2Lw, else 0

EQ 6-7 & 6-8 INTERMEDIATE OUTPUS			
Reduction factor	f_{red}	0.53	Eq 5-54
Slope Inclination	m	3.08	2 ≤ m ≤ 5
Equivalent Width at Water Level	$b_{WS,aqui}$	430.01	m, Eq 5-11
Drawdown Area Mean Width	b_m	426.93	m, Eq 5-23
Return Flow Velocity	V_{ruch}	1.06	m/s, Eq 5-23
Slope Influence Coef	C_{Bo}	1.11	Eq 6-8
Isbash Coefficient	C_{isb}	0.70	Eq 6-8
Surf Similarity Parameter	ζ	8.28	Eq 6-7
Mean Flow Velocity	$V_{Str,Ufer}$	0.75	m/s, Eq 5-28
Trans. Wave Length	λ_q	444.6	m, Eq 5-55
Diverging Wave Length	λ_s	296.4	m, Eq 5-59
Wave Generating Ship Length	Lw	222.3	m
Secondary Wave Height	$H_{sek,q}$	0.46	m, Eq 5-61&65

EQ 6-7 & 6-8 RESULTS			
Required Stone Size	**D_{50}**	**0.22**	m, Eq 6-7
Required Stone Size	**D_{50}**	**0.16**	m, Eq 6-8

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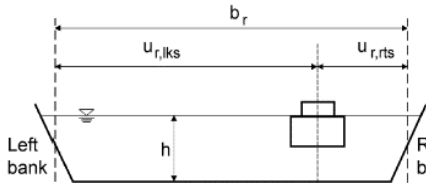
Project	Port Arthur LNG
Task	Armour Stone Size Required to Resist Load Causeddue to Slope Supply Flow
Created by	Matt Liu
Checked by	T Chris
Standards	BAW Code and Practive Principles for the Design of Bank and Bottom Protection for inland Waterways

CONSTANT INPUTS			
Density of Water	ρ_w	1025	kg/m3
Gravity	g	9.81	m/s2
Bulk Density of Armour Stones	ρ_s	2650	kg/m3 N.B.:/TLW 2003/
Slope Angle	β	18	°
Ship Length	L	247	m
Ship Width	B	42	m
Draft	T	12	m
Ship Speed	Vs	5.14	m/s
Water Depth	h	13	m
Flow Mean Vel. In Cross Section	V_{str}	0.5	m/s
Vessel CL to Bank Line	u_{rmin}	165	m
Canal Width	b_r	390	m



EQ 6-10 & 6-11 INPUTS			
Factor of Influence	C_H	1.3	1.3 (T/h=0.7, inland); 1.5 (T/h=0.4, partially laden); 1.1 sea-going vessel,large trim
Mean Drawdown near Bank	$\Delta\bar{h}_{u,Heck}$	1	m, reference to 2.1.6 (MN report)
Bank Strickler Roughness	$K_{Str,u}$	30.00	m^(1/3)/s, Eq 5-38
Mean Strickler Roughness	K_{Str}	30.00	m^(1/3)/s, Eq 5-38
Boundary Layer Thickness	δv	1.00	m, Eq 5-38

EQ 6-10 & 6-11 INTERMEDIATE OUTPUS			
Slope Inclination	m	3.08	2 ≤ m ≤ 5
Equivalent Width at Water Level	$b_{WS,aqui}$	430.01	m, Eq 5-11
Drawdown Area Mean Width	b_m	426.93	m, Eq 5-23
Slope Influence Coef	C_{Bo}	1.11	Eq 6-8
Isbash Coefficient	C_{lsb}	0.70	Eq 6-8
Max Waterkeven Drawdown	$\Delta\hat{h}_{u,Heck}$	1.3	m, Eq 5-29
Mean Flow Velocity	$V_{Str,Ufer}$	0.75	m/s, Eq 5-28
Froude Number Square	Fr^2	2.33	Eq 5-37
Max. Vel of Slope Supply Flow	Umax	1.54	m/s, Eq. 5-36
Slope Supply Flow Design Speed	$U_{max,B}$	2.29	m/s, Eq. 5-41&42, downstream Umax+VStr,Ufer, upstream Umax-VStr,Ufer
Primary Stern Wave Height	$H_{u,Heck}$	1.15	m, Eq 5-32

EQ 6-10 & 6-11 RESULTS			
Required Stone Size	**D_{50}**	**0.19**	m, Eq 6-10
Required Stone Size	**D_{50}**	**0.13**	m, Eq 6-11

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ATTACHMENT – C

COASTAL ENGINEERING DESIGN

REQUIRED ROCK SIZE BY PROPELLER WASH OF TUGBOAT – BELOW WATER SECTION

- ATTACHMENT C-1
  ROBERT ALLEN RASTAR 3200 TUG PARTICULARS – SHEET C1
- ATTACHMENT C-2
  TUG WORKING AT 50% POWER AND AT 0.5LOA DISTANCE FROM THE SLOPE – SHEET C2
- ATTACHMENT C-3
  TUG WORKING AT 75% POWER AND AT 0.5LOA DISTANCE FROM THE SLOPE – SHEET C3
- ATTACHMENT C-4
  TUG WORKING AT 75% POWER AND AT 1.0LOA DISTANCE FROM THE SLOPE – SHEET C4
- ATTACHMENT C-5
  TUG WORKING AT 100% POWER AND AT 1.0LOA DISTANCE FROM THE SLOPE – SHEET C5

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ATTACHMENT C-1
ROBERT ALLEN RASTAR 3200 PARTICULARS

RASTAR 3200 TUG EUGENE FOR KENYA PORTS AUTHORITY (HTTPS://RAL.CA/2018/08/17/RASTAR-3200-TUG-EUGENE-FOR-KENYA-PORTS-AUTHORITY/)

August 17, 2018

Share: ✉ (mailto:?&subject=RAstar+3200+Tug+Eugene+for+Kenya+Ports+Authority at Robert+Allan+Ltd.&body=I%20thought%20you%20might%20be%20interested%20in%20this:%20+RAstar+3200+Tug+Eugene+for+Kenya+Ports+Authority+https%3A%2F%2Fral.ca%2F2018%2F08%2F17%2Frastar-3200-tug-eugene-for-kenya-ports-authority%2F) f (https://www.facebook.com/sharer/sharer.php?u=https%3A%2F%2Fral.ca%2F2018%2F08%2F17%2Frastar-3200-tug-eugene-for-kenya-ports-authority%2F) 🐦 (https://twitter.com/home?status=+RAstar+3200+Tug+Eugene+for+Kenya+Ports+Authority+https%3A%2F%2Fral.ca%2F2018%2F08%2F17%2Frastar-3200-tug-eugene-for-kenya-ports-authority%2F) G+ (https://plus.google.com/share?url=https%3A%2F%2Fral.ca%2F2018%2F08%2F17%2Frastar-3200-tug-eugene-for-kenya-ports-authority%2F) 📌 (https://pinterest.com/pin/create/button/?url=https%3A%2F%2Fral.ca%2F2018%2F08%2F17%2Frastar-3200-tug-eugene-for-kenya-ports-authority%2F&media=https%3A%2F%2Fral.ca%2Fwp-content%2Fuploads%2F2018%2F08%2FIMG_0331.jpg&description=)



The new *RAstar 3200* tug ***Eugene***, constructed by Cheoy Lee Shipyards, Hong Kong, has been delivered to its owners Kenya Ports Authority, Mombasa, Kenya. Principal particulars of this new tug are:

- Length O.A.: 32.00 m
- Beam, moulded: 12.80 m
- Depth, moulded (hull): 5.37 m
- Maximum Draft: 5.80 m

Eugene is classed and built according to the following Lloyd's Register of Shipping notation: ✠100A1, Escort Tug, ✠LMC, UMS, Fire-Fighting Ship 1 with Water Spray, Unrestricted Voyages, IWS

Main Tank Capacities are:

- Fuel Oil: 193 m³
- Fresh Water: 35 m³
- Foam: 16 m³

On trials, the ***Eugene*** met or exceeded all performance expectations, with the following results:

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ATTACHMENT C-2
TUG WORKING AT 50% POWER AND AT 0.5LOA DISTANCE FROM THE SLOPE

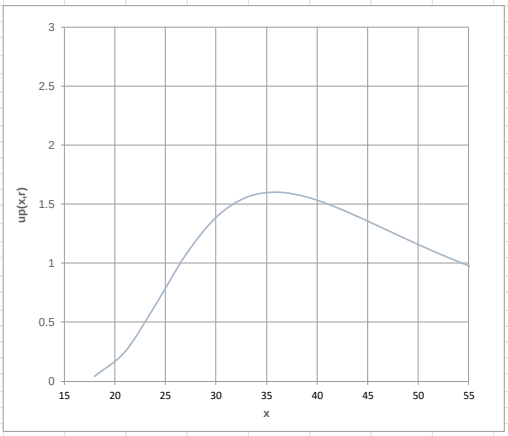
PALNG LNG Basin - Robert Allen Rastar 3200 - 50% Power at 0.5Tug LOA Distance from the Slope

REFERENCE: PIANC Report MARCom #180 (2015) Guidelines for Protecting Berthing Structures from Scour Caused by Ships
The Rock Manual (CIRIA C683), 2007

Water Depth	H	14.00	m	
Propeller Depth		6.00	m	Max draft 5.8m
Water Depth Under Propeller	H_p	8.00	m	
Propeller Diameter	D_p	2.70	m	
Total Installed Power	$P_{installed}$	2,240,000	watts	Twin Engine
Power Applied		50%		
Total Applied Power	$P_{applied}$	1,120,000	watts	
Twin Propeller	Y			
Rudder	N			PALNG Tug
Ducted Propeller	Y			Z-drive 32m

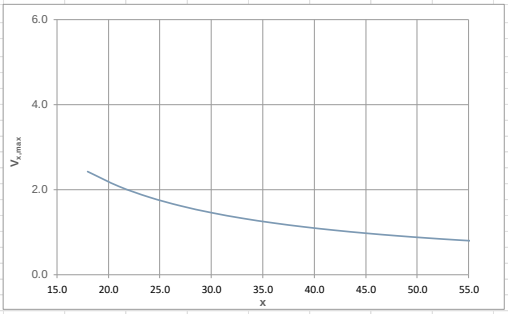
Propeller offset from Stern	$P_{off,stern}$	3	m	0.5 tug LOA
Limit of tug stern (x axis)	$L_{tug,x}$	15	m	49.2126 ft
Water Density	ρ_w	1025	kg/m^3	
Maximum Axial Velocity	V_o	6.22	m/s	
Slope	3	:1		
X step	3			

Erosion Critical Velocity	V_{cr}	1.2	m/s



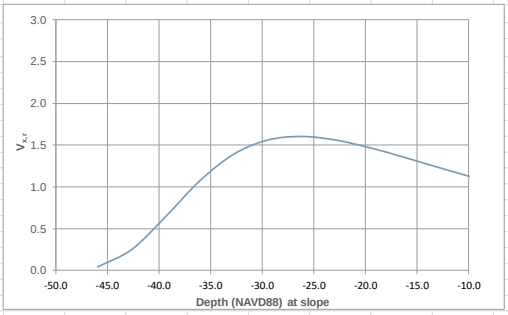
GERMAN Method

Maximum Bottom Velocity	$V_{b,max}$	1.25	m/s	m/s
Datum (NAVD88)	x	r	$V_{x,max}$	$V_{x,r}$
-45.9	18.0	8.0	2.4	0.0
-42.6	21.0	7.0	2.1	0.2
-39.4	24.0	6.0	1.8	0.6
-36.1	27.0	5.0	1.6	1.1
-32.8	30.0	4.0	1.5	1.4
-29.5	33.0	3.0	1.3	1.6
-26.2	36.0	2.0	1.2	1.6
-23.0	39.0	1.0	1.1	1.6
-19.7	42.0	0.0	1.0	1.5
-16.4	45.0	-1.0	1.0	1.4
-13.1	48.0	-2.0	0.9	1.2
-9.8	51.0	-3.0	0.9	1.1
-6.6	54.0	-4.0	0.8	1.0
-3.3	57.0	-5.0	0.8	0.9



DUTCH Method

Maximum Bottom Velocity	$V_{b,max}$	0.91	m/s	m/s
Datum (NAVD88)	x	r	$V_{x,max}$	$V_{x,r}$
-45.9	18.0	8.0	2.6	0.2
-42.6	21.0	7.0	2.2	0.6
-39.4	24.0	6.0	2.0	1.1
-36.1	27.0	5.0	1.7	1.5
-32.8	30.0	4.0	1.6	1.7
-29.5	33.0	3.0	1.4	1.8
-26.2	36.0	2.0	1.3	1.8
-23.0	39.0	1.0	1.2	1.7
-19.7	42.0	0.0	1.1	1.6
-16.4	45.0	-1.0	1.0	1.5
-13.1	48.0	-2.0	1.0	1.3
-9.8	51.0	-3.0	0.9	1.2
-6.6	54.0	-4.0	0.9	1.1
-3.3	57.0	-5.0	0.8	1.0



Rock Size (DUTCH Method)

Slope Parameter	K_{sl}	0.9	*From Rock Manual (5.2.1.3)*
Turbulence Factor	K_t^2	6	*From Rock Manual (5.2.3.1)*
Relative Density	Δ	1.580	
Density of Water	ρ_w	1.025	t/m^3
Density of Rock	ρ_s	2.645	t/m^3

Datum (NAVD88)	$V_{x,r}$	D_{50} (m)	D_{50} (ft)	W_{50} (mt)	W_{50} (kg)	W_{50} (lb)
-45.9	0.2	0.00	0.01	0.00	0	0
-42.6	0.6	0.04	0.12	0.00	0	0
-39.4	1.1	0.12	0.39	0.00	5	10
-36.1	1.5	0.23	0.74	0.03	31	68
-32.8	1.7	0.31	1.00	0.08	75	165
-29.5	1.8	0.34	1.11	0.10	102	225
-26.2	1.8	0.33	1.09	0.10	98	215
-23.0	1.7	0.31	1.00	0.08	76	167
-19.7	1.6	0.27	0.88	0.05	52	114
-16.4	1.5	0.23	0.76	0.03	33	72
-13.1	1.3	0.20	0.64	0.02	20	43
-9.8	1.2	0.16	0.54	0.01	12	26
-6.6	1.1	0.14	0.45	0.01	7	15
-3.3	1.0	0.12	0.38	0.00	4	9

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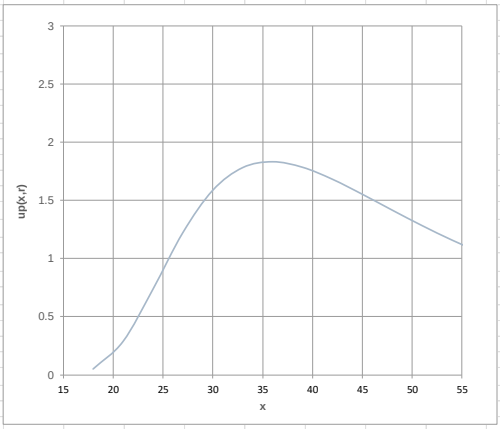
ATTACHMENT C-3
TUG WORKING AT 75% POWER AND AT 0.5LOA DISTANCE FROM THE SLOPE

PALNG LNG Basin - Robert Allen Rastar 3200 - 50% Power at 0.5Tug LOA Distance from the Slope

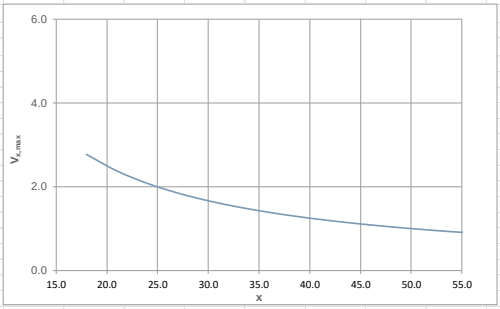
REFERENCE: PIANC Report MARCom #180 (2015) Guidelines for Protecting Berthing Structures from Scour Caused by Ships
The Rock Manual (CIRIA C683), 2007

Water Depth	H	14.00	m	
Propeller Depth		6.00	m	Max draft 5.8m
Water Depth Under Propeller	H_p	8.00	m	
Propeller Diameter	D_p	2.70	m	
Total Installed Power	$P_{installed}$	2,240,000	watts	Twin Engine
Power Applied		75%		
Total Applied Power	$P_{applied}$	1,680,000	watts	
Twin Propeller	Y			
Rudder	N			PALNG Tug
Ducted Propeller	Y			Z-drive 32m
Propeller offset from Stern	$P_{off,stern}$	3	m	0.5 tug LOA
Limit of tug stern (x axis)	$L_{tug,x}$	15	m	49.2126 ft
Water Density	ρ_w	1025	kg/m^3	
Maximum Axial Velocity	V_0	7.11	m/s	
Slope	3	:1		
X step	3			
Erosion Critical Velocity	V_{cr}	1.2	m/s	



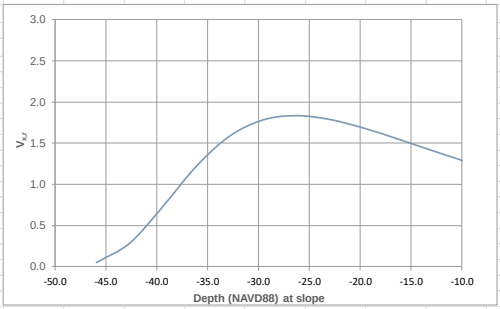
GERMAN Method

Maximum Bottom Velocity	$V_{b,max}$	1.43	m/s	m/s
Datum (NAVD88)	x	r	$V_{x,max}$	$V_{x,r}$
-45.9	18.0	8.0	2.8	0.0
-42.6	21.0	7.0	2.4	0.3
-39.4	24.0	6.0	2.1	0.7
-36.1	27.0	5.0	1.8	1.2
-32.8	30.0	4.0	1.7	1.6
-29.5	33.0	3.0	1.5	1.8
-26.2	36.0	2.0	1.4	1.8
-23.0	39.0	1.0	1.3	1.8
-19.7	42.0	0.0	1.2	1.7
-16.4	45.0	-1.0	1.1	1.6
-13.1	48.0	-2.0	1.0	1.4
-9.8	51.0	-3.0	1.0	1.3
-6.6	54.0	-4.0	0.9	1.2
-3.3	57.0	-5.0	0.9	1.0



DUTCH Method

Maximum Bottom Velocity	$V_{b,max}$	1.04	m/s	m/s
Datum (NAVD88)	x	r	$V_{x,max}$	$V_{x,r}$
-45.9	18.0	8.0	3.0	0.2
-42.6	21.0	7.0	2.6	0.7
-39.4	24.0	6.0	2.2	1.2
-36.1	27.0	5.0	2.0	1.7
-32.8	30.0	4.0	1.8	1.9
-29.5	33.0	3.0	1.6	2.0
-26.2	36.0	2.0	1.5	2.0
-23.0	39.0	1.0	1.4	1.9
-19.7	42.0	0.0	1.3	1.8
-16.4	45.0	-1.0	1.2	1.7
-13.1	48.0	-2.0	1.1	1.5
-9.8	51.0	-3.0	1.1	1.4
-6.6	54.0	-4.0	1.0	1.3
-3.3	57.0	-5.0	0.9	1.2



Rock Size (DUTCH Method)

Slope Parameter	K_{sl}	0.9		*From Rock Manual (5.2.1.3)*
Turbulence Factor	K_t^2	6		*From Rock Manual (5.2.3.1)*
Relative Density	Δ	1.580		
Density of Water	ρ_w	1.025	t/m^3	
Density of Rock	ρ_s	2.645	t/m^3	

Datum (NAVD88)	$V_{x,r}$	D_{50} (m)	D_{50} (ft)	W_{50} (mt)	W_{50} (kg)	W_{50} (lb)
-45.9	0.2	0.00	0.01	0.00	0	0
-42.6	0.7	0.05	0.15	0.00	0	1
-39.4	1.2	0.16	0.52	0.01	10	23
-36.1	1.7	0.30	0.97	0.07	69	152
-32.8	1.9	0.40	1.31	0.17	169	372
-29.5	2.0	0.44	1.45	0.23	230	506
-26.2	2.0	0.44	1.43	0.22	220	485
-23.0	1.9	0.40	1.31	0.17	170	375
-19.7	1.8	0.35	1.16	0.12	116	256
-16.4	1.7	0.30	0.99	0.07	73	161
-13.1	1.5	0.26	0.84	0.04	44	98
-9.8	1.4	0.21	0.70	0.03	26	58
-6.6	1.3	0.18	0.59	0.02	15	34
-3.3	1.2	0.15	0.50	0.01	9	20

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ATTACHMENT C-4
TUG WORKING AT 75% POWER AND AT 1.0LOA DISTANCE FROM THE SLOPE

PALNG LNG Basin - Robert Allen Rastar 3200 - 75% Power at 1.0Tug LOA Distance from the Slope

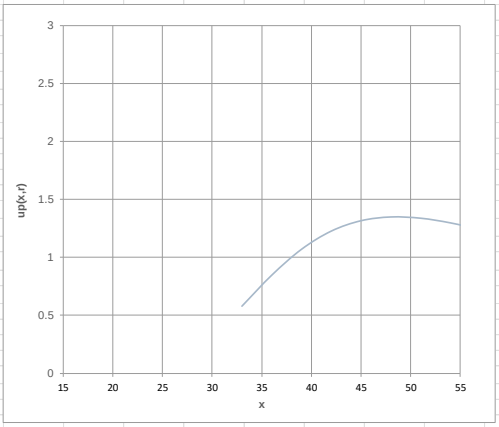
REFERENCE: PIANC Report MARCom #180 (2015) Guidelines for Protecting Berthing Structures from Scour Caused by Ships
The Rock Manual (CIRIA C683), 2007

Water Depth	H	14.00	m	
Propeller Depth		6.00	m	Max draft 5.8m
Water Depth Under Propeller	H_p	8.00	m	
Propeller Diameter	D_p	2.70	m	
Total Installed Power	$P_{installed}$	2,240,000	watts	Twin Engine
Power Applied		75%		
Total Applied Power	$P_{applied}$	1,680,000	watts	

Twin Propeller	Y			
Rudder	N			PALNG Tug
Ducted Propeller	Y			Z-drive 32m

Propeller offset from Stern	$P_{off,stern}$	3	m	
Limit of tug stern (x axis)	$L_{tug,x}$	30	m	1.0 tug LOA
Water Density	ρ_w	1025	kg/m^3	
Maximum Axial Velocity	V_o	7.11	m/s	
Slope	3	:1		
X step	3			

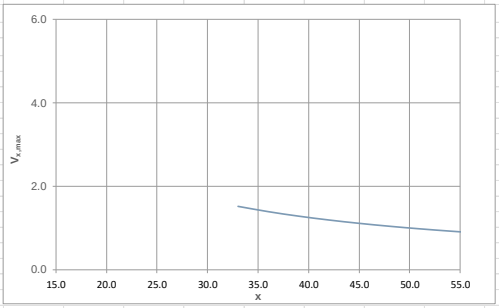
Erosion Critical Velocity	V_{cr}	1.2	m/s	



GERMAN Method

Maximum Bottom Velocity	$V_{b,max}$	1.43	m/s	m/s

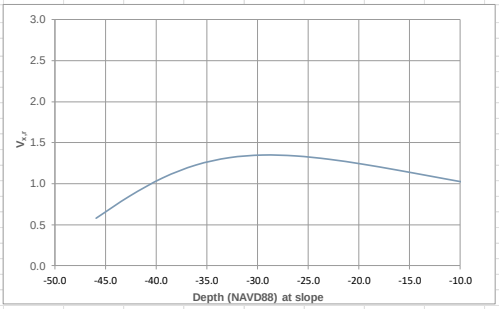
Datum (NAVD88)	x	r	$V_{x,max}$	$V_{x,r}$
-45.9	33.0	8.0	1.5	0.6
-42.6	36.0	7.0	1.4	0.8
-39.4	39.0	6.0	1.3	1.1
-36.1	42.0	5.0	1.2	1.2
-32.8	45.0	4.0	1.1	1.3
-29.5	48.0	3.0	1.0	1.3
-26.2	51.0	2.0	1.0	1.3
-23.0	54.0	1.0	0.9	1.3
-19.7	57.0	0.0	0.9	1.2
-16.4	60.0	-1.0	0.8	1.2
-13.1	63.0	-2.0	0.8	1.1
-9.8	66.0	-3.0	0.8	1.0
-6.6	69.0	-4.0	0.7	1.0
-3.3	72.0	-5.0	0.7	0.9



DUTCH Method

Maximum Bottom Velocity	$V_{b,max}$	1.04	m/s	m/s

Datum (NAVD88)	x	r	$V_{x,max}$	$V_{x,r}$
-45.9	33.0	8.0	1.6	0.9
-42.6	36.0	7.0	1.5	1.2
-39.4	39.0	6.0	1.4	1.4
-36.1	42.0	5.0	1.3	1.5
-32.8	45.0	4.0	1.2	1.5
-29.5	48.0	3.0	1.1	1.5
-26.2	51.0	2.0	1.1	1.5
-23.0	54.0	1.0	1.0	1.4
-19.7	57.0	0.0	0.9	1.3
-16.4	60.0	-1.0	0.9	1.3
-13.1	63.0	-2.0	0.9	1.2
-9.8	66.0	-3.0	0.8	1.1
-6.6	69.0	-4.0	0.8	1.0
-3.3	72.0	-5.0	0.7	1.0



Rock Size (DUTCH Method)

Slope Parameter	K_{sl}	0.9		*From Rock Manual (5.2.1.3)*
Turbulence Factor	K_t^2	6		*From Rock Manual (5.2.3.1)*
Relative Density	Δ	1.580		
Density of Water	ρ_w	1.025	t/m^3	
Density of Rock	ρ_s	2.645	t/m^3	

Datum (NAVD88)	$V_{x,r}$	D_{50} (m)	D_{50} (ft)	W_{50} (mt)	W_{50} (kg)	W_{50} (lb)
-45.9	0.9	0.09	0.31	0.00	2	5
-42.6	1.2	0.15	0.49	0.01	9	20
-39.4	1.4	0.20	0.65	0.02	20	45
-36.1	1.5	0.23	0.75	0.03	31	69
-32.8	1.5	0.24	0.79	0.04	37	81
-29.5	1.5	0.24	0.79	0.04	36	80
-26.2	1.5	0.23	0.75	0.03	31	69
-23.0	1.4	0.21	0.69	0.02	25	55
-19.7	1.3	0.19	0.63	0.02	19	41
-16.4	1.3	0.17	0.56	0.01	13	29
-13.1	1.2	0.15	0.50	0.01	9	20
-9.8	1.1	0.13	0.44	0.01	6	14
-6.6	1.0	0.12	0.39	0.00	4	10
-3.3	1.0	0.10	0.34	0.00	3	6

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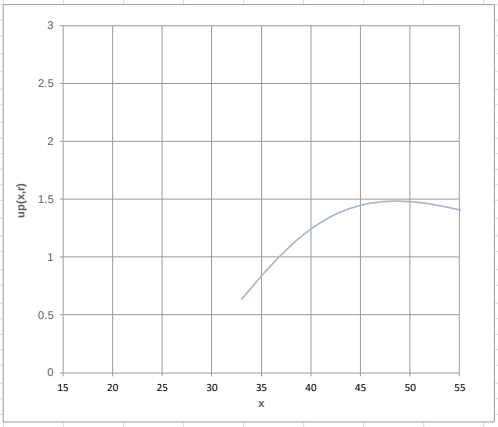
ATTACHMENT C-5
TUG WORKING AT 100% POWER AND AT 1.0LOA DISTANCE FROM THE SLOPE

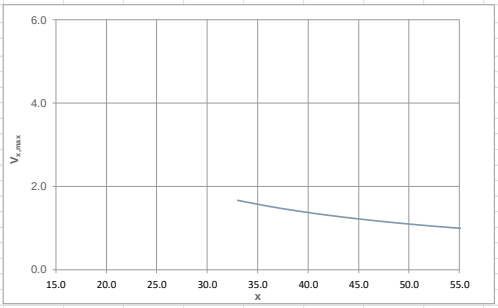
REFERENCE	PIANC Report MARCom #180 (2015) Guidelines for Protecting Berthing Structures from Scour Caused by Ships The Rock Manual (CIRIA C683), 2007			
Water Depth	H	14.00	m	
Propeller Depth		6.00	m	Max draft 5.8m
Water Depth Under Propeller	H_p	8.00	m	
Propeller Diameter	D_p	2.70	m	
Total Installed Power	$P_{installed}$	2,240,000	watts	Twin Engine
Power Applied		100%		
Total Applied Power	$P_{applied}$	2,240,000	watts	
Twin Propeller	Y			
Rudder	N			PALNG Tug
Ducted Propeller	Y			Z-drive 32m
Propeller offset from Stern	$P_{off,stern}$	3	m	
Limit of tug stern (x axis)	$L_{tug,x}$	30	m	1.0 tug LOA
Water Density	ρ_w	1025	kg/m^3	
Maximum Axial Velocity	V_o	7.83	m/s	
Slope	3	:1		
X step	3			
Erosion Critical Velocity	V_{cr}	1.2	m/s	



GERMAN Method

Maximum Bottom Velocity	$V_{b,max}$	1.57	m/s	

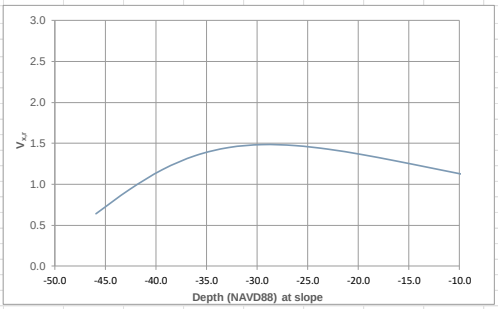
Datum (NAVD88)	x	r	$V_{x,max}$	$V_{x,r}$
-45.9	33.0	8.0	1.7	0.6
-42.6	36.0	7.0	1.5	0.9
-39.4	39.0	6.0	1.4	1.2
-36.1	42.0	5.0	1.3	1.4
-32.8	45.0	4.0	1.2	1.4
-29.5	48.0	3.0	1.1	1.5
-26.2	51.0	2.0	1.1	1.5
-23.0	54.0	1.0	1.0	1.4
-19.7	57.0	0.0	1.0	1.4
-16.4	60.0	-1.0	0.9	1.3
-13.1	63.0	-2.0	0.9	1.2
-9.8	66.0	-3.0	0.8	1.1
-6.6	69.0	-4.0	0.8	1.0
-3.3	72.0	-5.0	0.8	1.0



DUTCH Method

Maximum Bottom Velocity	$V_{b,max}$	1.14	m/s	m/s

Datum (NAVD88)	x	r	$V_{x,max}$	$V_{x,r}$
-45.9	33.0	8.0	1.8	1.0
-42.6	36.0	7.0	1.6	1.3
-39.4	39.0	6.0	1.5	1.5
-36.1	42.0	5.0	1.4	1.6
-32.8	45.0	4.0	1.3	1.6
-29.5	48.0	3.0	1.2	1.6
-26.2	51.0	2.0	1.2	1.6
-23.0	54.0	1.0	1.1	1.5
-19.7	57.0	0.0	1.0	1.5
-16.4	60.0	-1.0	1.0	1.4
-13.1	63.0	-2.0	0.9	1.3
-9.8	66.0	-3.0	0.9	1.2
-6.6	69.0	-4.0	0.9	1.2
-3.3	72.0	-5.0	0.8	1.1



Rock Size (DUTCH Method)

Slope Parameter	K_{sl}	0.9		*From Rock Manual (5.2.1.3)*
Turbulence Factor	K_t^2	6		*From Rock Manual (5.2.3.1)*
Relative Density	Δ	1.580		
Density of Water	ρ_w	1.025	t/m^3	
Density of Rock	ρ_s	2.645	t/m^3	

Datum (NAVD88)	$V_{x,r}$	D_{50} (m)	D_{50} (ft)	W_{50} (mt)	W_{50} (kg)	W_{50} (lb)
-45.9	1.0	0.11	0.37	0.00	4	8
-42.6	1.3	0.18	0.60	0.02	16	35
-39.4	1.5	0.24	0.78	0.04	36	80
-36.1	1.6	0.28	0.91	0.06	56	123
-32.8	1.6	0.29	0.96	0.07	66	145
-29.5	1.6	0.29	0.95	0.06	64	142
-26.2	1.6	0.28	0.91	0.06	56	123
-23.0	1.5	0.26	0.84	0.04	44	97
-19.7	1.5	0.23	0.76	0.03	33	73
-16.4	1.4	0.21	0.68	0.02	24	52
-13.1	1.3	0.18	0.60	0.02	16	36
-9.8	1.2	0.16	0.53	0.01	11	25
-6.6	1.2	0.14	0.47	0.01	8	17
-3.3	1.1	0.13	0.41	0.01	5	11

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ATTACHMENT – D

COASTAL ENGINEERING DESIGN

ATTACHMENT D1

- LNG BASIN AND PROPERTY SHORELINE AMOUR ROCK SIZE, LAYER THICKNESS AND ITS GRADATION
- LNG BASIN AND PROPERTY SHORELINE BEDDING ROCK SIZE, LAYER THICKNESS AND ITS GRADATION

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ATTACHMENT D1: SELECTED ROCK W50 = 550 LB AMOUR LAYER THICKNESS 3.0 FT AND ITS GRADATION

% Lighter than Mass Specified	0 to 15	15 to 50	50 to 100	100 (max)
Riprap Armor stone by weight, lb.	200	550	1200	2500

ATTACHMENT D2: SELECTED BEDDING STONE W50 = 50 LB, LAYER THICKNESS 1.0 FT AND ITS GRADATION

Bedding Stone Size D_{50} = 0.6 ft (or W_{50}=50 lb by weight)
Bedding Stone Layer Thickness 1.0 ft
Gradation of Bedding Stone:

% Lighter than Mass Specified	0 to 15	15 to 50	50 to 100	100 (max)
Bedding stone by weight, lb.	20	50	70	90

Based on Project Reference Document, Shoreline Protection Report, Reference 2.1.5 and Coastal Engineering Manual (CEM), Reference 2.2.1.

- D_{50} of bedding stone - approximated by 0.22*D_{50} of the primary armour rock
- Thickness of bedding layer - 0.5*D_{50} of primary armour rock or minimum of 0.75 ft

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Port Arthur LNG

BECHTEL

Firm No. F-9684

PORT ARTHUR LIQUEFACTION PROJECT

Shore Protection Calculation for LNG Berth Area and Storm Water Drainage (Berth Area)

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000	08-18-2023	ISSUED FOR INFORMATION	ML	CT	CT	-
REV	**DATE**	**REASON FOR REVISION**	**BY**	**CK'D**	**APPR**	**PEM**

Shore Protection Calculation for LNG Berth Area and Storm Water Drainage (Berth Area)		**Bechtel Document No.**	**Rev.**
		26196-100-CMC-000-00016	000
		PALNG Document No.	**Rev.**
Page 1 of 37	Job No: 26196-100	PAL-T0-MAR-CAL-24-GEN-0002	000

CALCULATION COVER SHEET

PROJECT:	JOB NO.	CALC.NO.	SHEET
Port Arthur Liquefaction Project	26196-100	26196-100-CMC-000-00016 (PAL-T0-MAR-CAL-24-GEN-0002)	2

SUBJECT:	DISCIPLINE:
Shore Protection Calculation for LNG Berth Area and Storm Water Drainage (Berth Area)	Marine

CALCULATION STATUS DESIGNATION	PRELIMINARY	CONFIRMED	SUPERCEDED	VOIDED
	☐	☒	☐	☐

COMPUTER PROGRAM TYPE:	SCP YES	SCP NO	MAINFRAME	PC	PROGRAM NO.	VERSION/RELEASE NO.
Microsoft Excel	☒	☐	☐	☒		

USE OF THESE CALCULATIONS BY PERSONS, WITHOUT ACCESS TO PERTINENT FACTORS AND WITHOUT REGARD FOR THEIR PURPOSE, COULD LEAD TO ERRONEOUS CONCLUSIONS. FURTHER, NO INDIVIDUAL SEGMENT OR PROVISION THEREOF SHOULD BE USED AS A STANDALONE ITEM WITHOUT DUE CONSIDERATION OF THE CONTEXT IN WHICH IT WAS GENERATED.

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Bechtel Oil, Gas and Chemicals, Inc. (Firm No. F-9684)

NO.	REASON FOR REVISION	TOTAL NO. OF SHEETS	LAST SHEET NO.	BY	CHECKED	APPROVED /ACCEPTED	DATE
000	ISSUED FOR INFORMATION	38	38	ML	CT	CT	08/15/2023

RECORD OF REVISION

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1.0 DESIGN BASIS

1.1 Purpose and Scope

The purpose of this Shore Protection calculation report is to present the design calculations on the shore protection at the dredging slope for the proposed LNG basin and LNG plant's shoreline of the Port Arthur Liquefaction Project. This also includes the shore protection for the Storm Water Drainage that is located within the LNG Berth Area. The Shore Protection is designed to withstand wind generated storm waves, passing vessel generated wakes, and propeller wash from tugboats. This calculation report will carry out the detailed design of shore protection of the Port Arthur Liquefaction Project.

1.2 Shore Protection Design Description

At the berthing pocket of the LNG terminal, the existing land will be excavated and dredged to accommodate the design LNG vessels while the existing shoreline in the property of the Project will be excavated accordingly to form a new slope on which the shore protection will be installed. The levee and shoreline protection proposed in the Project are shown in Figure 1:

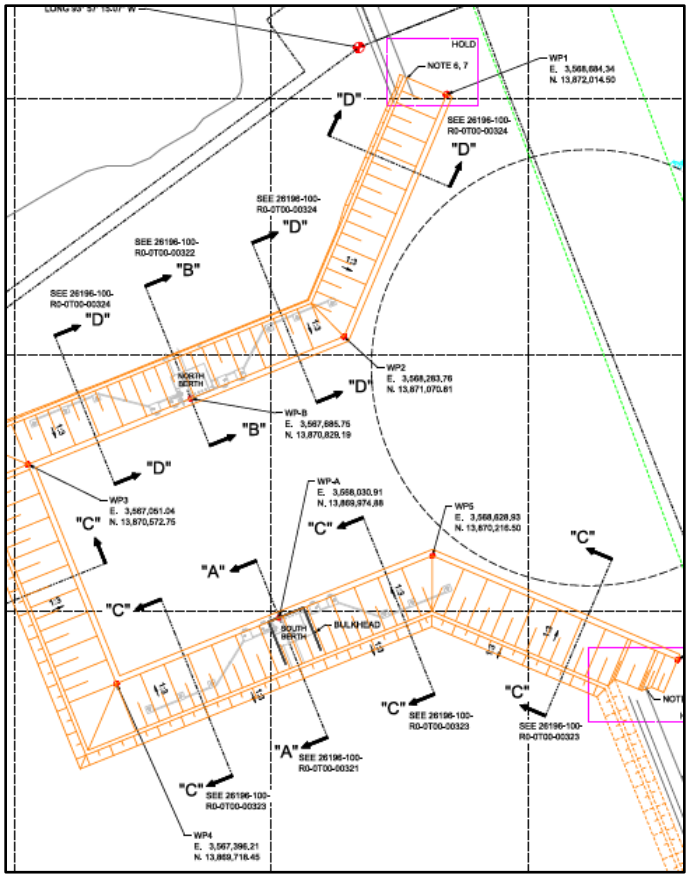

Figure 1 Plan of Shore Protection

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The slope stability at LNG basin and shoreline has been checked by Geotechnical analysis. Slope stability analysis indicates the proposed 3H:1V slope will be stable with the addition of sheet piling to provide the required factor of safety. Refer to 26196-100-3DR-K04F-00003 (PAL-PJT-CSA-RPT-00-GEN-0003), EPC Geotechnical Design Basis Report and 26196-100-CMC-000-00010 (PAL-T0-MAR-CAL-82-GEN-0010) Shore Protection Sheet Pile Structural Strength Calculation.

2.0 REFERENCES

2.1 Project Specifications, Design Criteria and Reference Reports

2.1.1	Marine Facilities Design Criteria for LNG Loading Berths	26196-100-3DR-R04-00001 (PAL-T0-MAR-DEC-24-GEN-0001)
2.1.2	Basic Engineering Design Data	26196-100-3BD-M04F-00001 (PAL-PJT-PRO-BOD-00-GEN-0002)
2.1.4	Project Specification for Rock Rip Rap for Marine Facilities	26196-100-3PS-CM00-00010 (PAL-T0-MAR-STD-00-GEN-0010)
2.1.5	Shoreline Protection Report	PAL0-MAR-RPT-0012
2.1.6	Marine Site Characteristics Report	PAL0-10-MAR-RPT-0002
2.1.7	EPC Geotechnical Design Basis Report	26196-100-3DR-K04F-00003 (PAL-PJT-CSA-RPT-00-GEN-0003)
2.1.8	Overtopping and Levee Elevation Assessment	26196-100-30R-K01-0000 (PAL-T0-MAR-RPT-00-GEN-0001)

2.2 Codes & Standards

2.2.1	USACE Coastal Engineering Manual	EM1110-2-1100
2.2.2	BAW Code of Practice Principles for the Design of Bank and Bottom Protection for Inland Waterways (GBB)	2010
2.2.3	PIANC WG 180: Guidelines for Protecting Berthing Structures from Scour Caused by Ships	2015
2.2.4	CIRIA/CUR Rock Manual	2007

2.3 Reference Drawings

2.3.1	LNG Loading Berth Basin Slope Protection Sheet Pile Overall Plan	26196-100-R0-100A2-00301, Rev 000 (PAL-T0-MAR-DWG-24-GEN-0301)
2.3.2	LNG Basin Slope Protection Sheet Pile Protection Plan	26196-100-R0-100A2-00302, Rev 000 (PAL-T0-MAR-DWG-24-GEN-0302)
2.3.3	LNG Basin Slope Protection Sheet Pile Protection Plan – Section - Sheet 1	26196-100-R0-100A2-00332, Rev 000 (PAL-T0-MAR-DWG-24-GEN-0332)
2.3.4	LNG Basin Slope Protection Sheet Pile Protection Plan – Section - Sheet 2	26196-100-R0-100A2-00333, Rev 000 (PAL-T0-MAR-DWG-24-GEN-0333)

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3.0 DESIGN METHODOLOGY

3.1 Revetment Design on 100- and 500-year Storm Wave

For the riprap revetments, the stability of the protection layer primarily depends on the specified rock size being able to resist the wave action. In this calculation, the design storm wave is the **100-year** storm wave at PALNG basin and property shoreline while **500-year** storm wave is for levee which surround the LNG Plant.

The excel spreadsheet developed per Reference 2.2.4 "Rock Manual" (CIRIA, 2007), was used for this slope protection revetment design. This application provides estimates for revetment amour and bedding layer stone sizes, thicknesses, and gradation characteristics.

3.2 Revetment Design on Wake of Passing Vessels

Per Principles for the Design of Bank and Bottom Protection for Inland Waterways (GBB), BAW Code of Practice (reference 2.2.2), the primary wave (transverse stern wave), secondary wave, return and slope supply flow due to the passing vessel are calculated for revetment design. The result on required rock size is determined by the Figure 3-1 below.

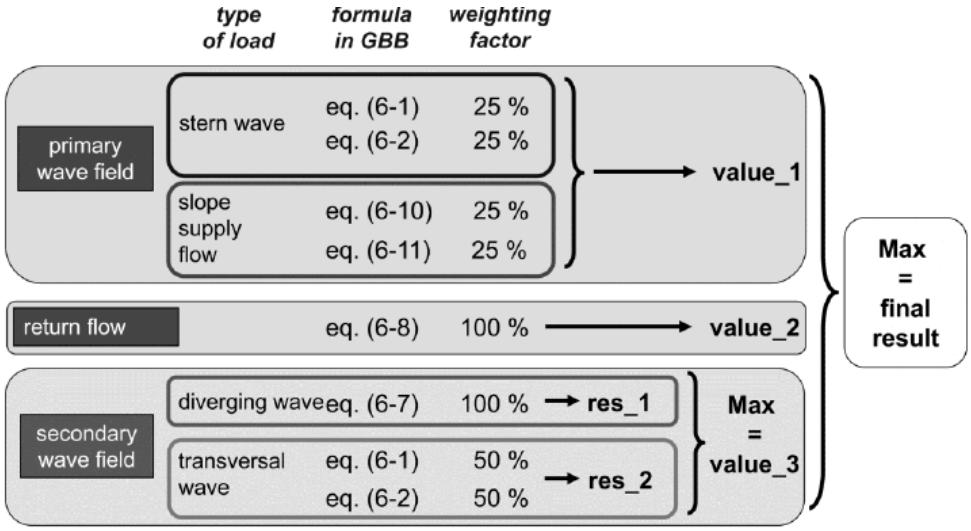

Figure 3-1. BAW Code for Required Armor Stone Size

3.3 Revetment Design on Propeller Wash

The method used for this design was taken from the Rock Manual (CIRIA, 2007), which uses the following equations to estimate the time-averaged current velocities in these propeller jets.

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Initial velocity behind propeller:

$$u_{p,0} = 1.15\left(\frac{P}{\rho_w {D_0}^2}\right)^{1/3}$$

Velocity along jet axis:

$$u_{p,axis}(x) = a\, u_{p,0}\left(\frac{D_0}{x}\right)^m$$

$$u_p(x,r) = u_{p,axis}(x) exp\left[\frac{-br^2}{x^2}\right]$$

Velocity distribution along slope.

Maximum bed velocity;

$$u_{p,\max bed} = c\, u_{p,0}\left(\frac{D_0}{z_p}\right)^n$$

where:

P = applied power

D_p = propeller diameter

D_0 = effective diameter of propeller (= $0.7D_p$ or $1.0D_p$)

zp = distance between propeller axis and bed

ρ_w = Water density

a, b, c, m, n = empirical coefficients for describing jet turbulence

Given the flow velocities calculated from the above equations, by using the Izbash approach (presented in the Rock Manual), the following method is used to determine the rock stability.

$$\frac{\left(\frac{u_p(x,r)^2}{2g}\right)}{\Delta D_{50}} = 2\frac{k_{sl}}{{k_t}^2}$$

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where;

$u_p(x,r)$ = propeller jet velocity along slope
Δ = relative density
D_{50} = median stone diameter
g = gravity
k_t = Empirical turbulence factor

$$k_{sl} = \text{slope factor} = \cos\alpha \sqrt{1 - \left(\frac{\cos\alpha}{\tan\emptyset}\right)^2}$$

α = slope angle
ϕ = protection material angle of repose

4.0 DESIGN INPUTS

4.1 Water Level

Reference 2.1.6 provides the water levels at various storm events and Relative Sea Level Rise (RSLR) as represented in Table 1.

Table 1 Water Level at Varied Storm Event [Ref. 2.1.1]

Return Period	SWEL + RSLR (ft, NAVD88)
100-year	10.2 + 0.6
500-year	14.0 + 0.6

4.2 Design Conditions

The conditions considered in the Shore Protection design are as following:

- 100- and 500-year Storm Wave
- Passing Vessel in Port Arthur Channel
- Propeller Wash in LNG berthing and turning basin.

4.3 Design Condition Details

4.3.1 Shoreline Protection Design at 100-year Storm Wave

Provided by both reference 2.1.5 and 2.1.6, the wave parameters at the location of LNG basin were represented in Table 2. The average 4.4ft wave height was adopt in this shore protection design.

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Table 2 Design Wave at 100-year Storm

Data Source	At shoreline - wave height Hs and period Tp	In LNG basin* - wave height Hs and period Tp
From Shoreline Protection, Reference 2.1.5	4.0 ft and 3.3 seconds	2.2 ft and 3.3 seconds
From Metocean Report, Reference 2.1.6	4.8 ft and 3.8 seconds	2.6 ft and 3.8 seconds
Adopted Wave in this Shoreline Protection Design	4.4 ft and 3.8 seconds**	2.5 ft and 3.8 seconds

*Note: a diffraction coefficient of 0.55 was applied in dredged LNG basin per CEM
** Average wave height between identified sources

In this shore protection design, the adopted inputs for riprap revetment design are:

- Wave Hs = 4.4 ft and T_p = 3.8 seconds at all property shoreline.
- Wave Hs = 2.5 ft and T_p = 3.8 seconds in LNG basin.

4.3.2 Shoreline Protection Design at 500-year Storm Wave

Provided by the reference 2.1.5, the wave parameters at the location of LNG basin were represented in Table 3.

Table 3 Design Wave at 500-year Storm

Data Source	At shoreline - wave height Hs and period Tp	In LNG basin* - wave height Hs and period Tp
From Shoreline Protection, Reference 2.1.5	5.9 ft and 4.0 seconds	3.3 ft and 4.0 seconds
Adopted Wave in this Shoreline Protection Design	5.9 ft and 4.0 seconds	3.3 ft and 4 seconds

In this shore protection design, the adopted inputs for riprap revetment design are:

- Wave Hs = 5.9 ft and T_p = 4.0 seconds at all property shoreline.
- Wave Hs = 3.3 ft and T_p = 4.0 seconds in LNG basin.

4.3.3 Passing Vessel in Port Arthur Canal

Reference 2.1.6 stated that “vessel passing by Port Arthur LNG are expected to travel at speeds between 6 and 7 knots”. In this shoreline protection design, for a conservative maximum as did in Reference 2.1.6, the passing vessel’s speed with 10 knots were adopted. The particulars of the passing vessel and associated parameters are listed in the following Table 4Table 4.

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Table 4 Passing Ship Particulars

Passing Crude Oil Tanker	Characteristics
Length Overall (ft)	810
Breadth (ft)	137
Draft, loaded (ft)	40
Passing speed (knots)	10
Distance from Shoreline to CL of channel (ft)	550
Design travel speed (knot)	10

4.3.4 Propeller Wash

The PALNG Navigation Simulation provided by Client, the 4 assistant tugs with 80 mt bollard pull capacity were applied during maneuvering within turning basin and LNG basin. Thus, the Robert Allen RA 3200 tug was selected in this LNG berthing and turning basin propeller wash calculation. The assistant tugboat's particulars and associated parameters are listed in the following Table 5.

Due to the arrangement on using 4 tugs to assist the arrival and departure of the LNG vessels in the LNG terminal, the propeller wash from LNG vessel's main propulsion and thruster are not included in this calculation – LNG vessel's main propulsion and thruster are assumed to not be used in the basins.

Table 5 Design Tug Particulars

Tug – Robert Allen RAstar 3200	Characteristics
Length Overall (ft)	105 (32m)
Breadth (ft)	42 (12.8m)
Draft, loaded (ft)	19 (5.8m)
Depth (ft)	17.6 (5.37m)
Propeller Diameter (ft)	8.9 (2.7m)
Engine Power (watt) – Twin	2 x 2,240,000
Bollard Pull (mt)	80

Reference 2.1.9 stated that "pilots generally used the least tug power possible to safely complete the simulation, …… the most simulations rarely exceeded 75% sustained tug power usage". Combined with PIANC recommendation of Reference 2.2.3, the power usages of the assistant tugboats are assumed in the Table 6.

Noted that in the basin, the assistant tug is restricted to keep a minimum clearance of 50 ft from the toe of the dredged slope (fender line).

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Table 6 Tug Power Usage Regarding the Separated Distance to the Toe of Slope

Distance from Toe of the Dredged Slopes	Power Usage in Berthing Basin – PIANC &Typical	Power Usage in Berthing Basin – Reference 2.1.8
More than 100 ft (about 1.0 tug LOA)	100%	75%
50 to 100 ft (about 0.5 -1.0 tug LOA)	50%	*75%
0 to 50 ft (about < 0.5 tug LOA)	Not Allowed	-

*Noted that the 75% in Reference 2.1.8 is also assumed in this range for checking the most conservative scenario.

5.0 CALCULATIONS ON MOF REVETMENT ROCK

5.1 General

The calculated rock sizes (by weight) are summarized in Table 7, while the detailed calculations are included in the attachments.

5.2 Required Rock Sizes by 100- and 500-year Storm Waves

Following table is the summary for the required rock size for the 100- and 500-year storm wave conditions. Detailed calculations are presented in Attachment A (A1 to A4). (Note: Ts = Tp/1.1 per Random Sea and Design for Maritime Structure, Goda).

Noted that the functional requirement for installed riprap shore protection is to have minimum damage “initial damage” for 100-year storm while the requirement for installed riprap levee protection is to allow certain damage of “intermediate damage” for 500-year storm.

The permeability coefficient P was categorized between 0.1 to 0.4 per CEM – most conservative and least conservative.

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Table 7 Required Stone Size for 100- and 500-year Storm Wave Conditions

Location	Design Storm	Storm Wave Hs and Tp	Permeability Coefficient P	Allowed Damage Coefficient S	Required Rock Size W_{50} (lb)
Property shoreline	100-year	4.4 ft 3.8 sec	0.1 to 0.4	2 for "initial"	496 to 235
	500-year	5.9 ft 4.0 sec	0.1 to 0.4	6 for "intermediate l"	**536** to 254
LNG berthing basin	100-year	2.5 ft 3.8 sec	0.1 to 0.4	2 for "initial"	139 to 66
	500-year	3.3 ft 4.0 sec	0.1 to 0.4	6 for "intermediate"	**145** to 69

5.3 Required Rock Size by Passing Vessel

The passing vessel-generated wave and flow are calculated per BAW equations and summarized in the below table. The required rock sizes (by D_{50}) for each equation are included in the last column. Note that BAW equations for passing vessel are only to produce the required rock size but not rock weight. For the consistency with Section 5.2 and 5.4, the final rock weight determined by Figure 3-1 (Figure 6-3 in Ref 2.2.2.) is calculated by cube shape – required rock size by D_{50} is 1.12 ft and rock weight by W_{50} is 230 lb.

The results are tabulated in Table 8 below, with the detailed calculations of BAW equations presented in the Attachment B.

Table 8 Required Armor Stone Size by Passing Vessel

Items by Equations	Required Size by D_{50}
Design Transversal Stern Wave (BAW Eq 6-1)	1.53 ft
Design Primary Stern Wave (BAW Eq 6-2)	0.70 ft
Secondary Wave (BAW Eq 6-7)	0.73 ft
Return Flow Velocity (BAW Eq 6-8)	0.54 ft
Slope Supply Flow (BAW Eq 6-10)	0.62 ft
Slope Supply Flow & Primary Stern Wave (BAW Eq 6-11)	0.42 ft
BAW Figure 6-3 – Weighted in Size, ft	**1.12 ft**
BAW Figure 6-3 – Weighted in Weight, lb	**230 lb**

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5.4 Required Rock Size by Propeller Wash of Tugboats

Following Table 9 is the summary for the required rock sizes for Tugboats propeller wash at varied separated distance with different power levels. In the typical propeller wash scenario per PIANC, the required rock size is 225 lb. For checking purpose, the 75% power usage in Reference 2.1.8 is also assumed at the distance range of 50 to 100 ft, then the required rock size is 506lb. Detailed design calculations are presented in Attachment C.

Table 9 Required Armour Stone Size by Propeller Wash of Tugboats

Clearance from Toe of the Dredged Slopes	Required Rock Size W_{50} (lb) - Typical	Required Rock Size W_{50} (lb) by Reference 2.1.8
More than 100 ft (> 1.0 tug LOA)	145	81
50 to 100 ft (0.5 -1.0 tug LOA)	225	506
0 to 50 ft (0.5 tug LOA)	-	-

5.5 Required Revetment Rock Size and Armor Rock Thickness

Among all scenario from section 5.2, 5.3 and 5.4, the required riprap revetment is listed in the Table 10 the section at and above water surface is subject to the action of storm wave and passing ship navigated in Port Arthur Channel while the section below water surface is only subject to propeller wash from the terminal assistant tugboats in operation. This is also applicable to the storm water drainage within the LNG basis, as wave and vessel wake will control the rock sizing.

From the varied requirements in Table 10, if a single rock size was recommended to satisfy all requirements at all locations and both of above and below water surface, it will be:

- W_{50} = 550 lb by rock weight.
- 3.0 ft thickness of rock.

The calculation of rock thickness and rock gradation are presented in Attachment A (A6).

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Table 10 Summary of Required Armour Stone

	Location	Determined by	Required Rock Weight by W_{50} (lb)
Riprap Revetment Section at & above Waterline	at property shoreline	500-year storm – intermediate damage	536
		100-year storm – initial damage	496
		Passing ship at Port Author Channel	230
	at LNG basin	500-year storm – intermediate damage	145
		100-year storm – initial damage	139
		Passing ship in Port Author Channel	< 230*
Riprap Revetment Section below Waterline	at LNG basin	Propeller wash from tugboats – worst manoeuvring	506
		Propeller wash from tugboats – typical manoeuvring	225

*Not calculated but the wake diffracted into the LNG basin should be less than that at the property shoreline.

6.0 CONCLUSION AND RECOMMENDATION

Based on the Coastal Engineering Analysis, the following are recommended for the LNG Berth Shore Protection:

1. The coastal engineering calculations suggest that the following shore protection design summarized in Table 11 meets the design requirements including the storm wave, passing vessels and propeller wash in the LNG basin and property shoreline area.

2. By consolidating the rock sizes required at property shoreline and LNG basin, the recommended option is:

    - The required armour rock size by weight W_{50} is 550 lb
    - The required thickness of the 550 lb armour rock is 3.0 ft.
    - The required bedding stone size by weight W_{50} is 50 lb and thickness of bedding layer is 1.0 ft.

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Table 11 Rock Size Recommendations for PALNG Shoreline and Basin Revetment

Basin and Shore Protection	Recommended Armour Rock	Recommended Bedding Stone
Rock Size by Weight W_{50}	550 lb	50 lb
Thickness of Rock Layer	3.0 ft	1.0 ft

For both 550lb armour rock and its bedding stone, the calculations on layer thickness and rock gradation are included at Attachment D (D1 for 550 lb armour rock and D2 for bedding stone).

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APPENDIX A

REQUIRED ROCK SIZE BY STORM WAVE - ABOVE WATER SECTION

ATTACHEMNT A-1: REVETMENT DESIGN CASE 1- 100-year Storm Wave at property shore line
ATTACHEMNT A-2: REVETMENT DESIGN CASE 2- 100-year Storm Wave in Berthing Basin
ATTACHEMNT A-3: REVETMENT DESIGN CASE 3- 500-year Storm Wave at property shoreline
ATTACHEMNT A-4: REVETMENT DESIGN CASE 4- 500-year Storm Wave in Berthing Basin

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ATTACHEMNT A-1: REVETMENT DESIGN CASE 1- 100-year Storm Wave at property shore line P=0.1 first and P=0.4 second

1	**van der Meer equations - Deep Water Conditions**				CIRA C683 "The Rock Manual" para 5.2.2.2 page 567 and following	
2						
3	For *plunging waves* ($\xi_m < \xi_{cr}$):				and for *surging waves* ($\xi_m \geq \xi_{cr}$):	
4						
5	$\frac{H_s}{\Delta D_{n50}} = c_{pl} P^{0.18} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \xi_m^{-0.5}$				$\frac{H_s}{\Delta D_{n50}} = c_s P^{-0.13} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \sqrt{\cot\alpha}\, \xi_m^P$	
6						
7						
8						
9		Sea bottom level	=	-46.00	ft NAVD 88	
10		Bed Slope- Horizontal	=	100.00		
11		Bed Slope- Vertical	=	1.00		
12		Bed Slope	=	0.57		
13		Structure Slope- Horizontal	=	3.00		1.5 to 6, Table 5.24, Page 570, Chapter 5, Rock Manual
14		Structure Slope- Vertical	=	1.00		
15		Structure Slope	=	18.43		
16		Design Water Level	=	10.20	ft NAVD 88	
17	h	Water Depth	=	56.20	ft	Deep Water
18		Water Density	=	63.99	lbs./ft3	
19		Rock Density	=	165.43	lbs./ft3	
20	Δ	Relative Buoyant Density	=	1.59		
21	Hs	Significant Wave Height	=	4.40	ft	
22	Tp	Peak Wave Period	=	3.80	s	
23	Tm-1,0	Mean Wave Energy Period	=	3.45	s	Eq 4.62, Page 362, Chapter 4, Rock Manual
24	Tm	Mean Period	=	3.31	s	JONSWAP, Page 367, Chapter 4, Rock Manual
25		Theoretic Breaking Wave Height	=	43.83	ft	
26		Accelaration due to gravity	=	32.19	ft/s2	
27	ξm	Surf Similarity Mean	=	1.19		Page 575, Chapter 5, Rock Manual using Tm
28		Surf Similarity Mean Validity: 0.7 to 7	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
29		Design Approach	=	**Best Fit**		Table 5.25, Page 570,Chapter 5, Rock Manual
30	C_{pl}	Coefficient	=	6.20		
31	C_s	Coefficient	=	1.00		
32	P	Notional Permeability Factor	=	**0.1**		Table 5.39, Page 568,Chapter 5, Rock Manual
33	ξ_{cr}	Surf Similarity Critical	=	2.55		Eq 5.138, Page 567, Chapter 5, Rock Manual
34		Wave Type	=	**Plunging**		
35		Storm Duration	=	**3**	h	
36		Number of Waves	=	3266.79		Box 5.13, Page 572, Chapter 5, Rock Manual
37		Selected Number of Waves	=	**3200**		Max. 3000,Table 5.26, Page 576, Chapter 5, Rock Manual
38		Wave Length	=	55.98605787	ft	Page 329, Chapter 4, Rock Manual
39		Wave Steepness	=	0.078590995		Page 352, Chapter 4, Rock Manual
40		Wave Steepness Validity : 0.001 to 0.006	=	Not Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
41	Sd	Damage Parameter	=	**2**		Table 5.23, Page 569, Chapter 5, Rock Manual
42		Rock Mass Weathering	=	**1**		1 indicates no weathering
43						
44		**Primary Armour**				
45		**Nominal Diameter**	=	1.44	ft	
46		**Nominal Weight**	=	495.60	lbs.	
47	**W50**	**Nominal Weight (after Weathering)**	=	**495.60**	lbs.	
48	**D50**	**Nominal Diameter (after Weatherin**	=	**1.44**	ft	
49	kt	Layer Coefficient	=	**1.02**		Table VI-5-51, Page VI-5-136, CEM
50	n	Number of Layers	=	**2**		

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1	**van der Meer equations - Deep Water Conditions**				CIRA C683 "The Rock Manual" para 5.2.2.2 page 567 and following	
2						
3	For *plunging waves* ($\xi_m < \xi_{cr}$):				and for *surging waves* ($\xi_m \geq \xi_{cr}$):	
4						
5	$\frac{H_s}{\Delta D_{n50}} = c_{pl} P^{0.18} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \xi_m^{-0.5}$				$\frac{H_s}{\Delta D_{n50}} = c_s P^{-0.13} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \sqrt{\cot\alpha}\, \xi_m^{P}$	
6						
7						
8						
9		Sea bottom level	=	-46.00	ft NAVD 88	
10		Bed Slope- Horizontal	=	100.00		
11		Bed Slope- Vertical	=	1.00		
12		Bed Slope	=	0.57		
13		Structure Slope- Horizontal	=	3.00		1.5 to 6, Table 5.24, Page 570, Chapter 5, Rock Manual
14		Structure Slope- Vertical	=	1.00		
15		Structure Slope	=	18.43		
16		Design Water Level	=	10.20	ft NAVD 88	
17	h	Water Depth	=	56.20	ft	Deep Water
18		Water Density	=	63.99	lbs./ft3	
19		Rock Density	=	165.43	lbs./ft3	
20	Δ	Relative Buoyant Density	=	1.59		
21	Hs	Significant Wave Height	=	4.40	ft	
22	Tp	Peak Wave Period	=	3.80	s	
23	Tm-1,0	Mean Wave Energy Period	=	3.45	s	Eq 4.62, Page 362, Chapter 4, Rock Manual
24	Tm	Mean Period	=	3.31	s	JONSWAP, Page 367, Chapter 4, Rock Manual
25		Theoretic Breaking Wave Height	=	43.83	ft	
26		Accelaration due to gravity	=	32.19	ft/s2	
27	ξm	Surf Similarity Mean	=	1.19		Page 575, Chapter 5, Rock Manual using Tm
28		Surf Similarity Mean Validity: 0.7 to 7	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
29		Design Approach	=	**Best Fit**		Table 5.25, Page 570,Chapter 5, Rock Manual
30	C_{pl}	Coefficient	=	6.20		
31	C_s	Coefficient	=	1.00		
32	P	Notional Permeability Factor	=	**0.4**		Table 5.39, Page 568,Chapter 5, Rock Manual
33	ξ_{cr}	Surf Similarity Critical	=	3.01		Eq 5.138, Page 567, Chapter 5, Rock Manual
34		Wave Type	=	**Plunging**		
35		Storm Duration	=	**3**	h	
36		Number of Waves	=	3266.79		Box 5.13, Page 572, Chapter 5, Rock Manual
37		Selected Number of Waves	=	**3200**		Max. 3000,Table 5.26, Page 576, Chapter 5, Rock Manual
38		Wave Length	=	55.98605787	ft	Page 329, Chapter 4, Rock Manual
39		Wave Steepness	=	0.078590995		Page 352, Chapter 4, Rock Manual
40		Wave Steepness Validity : 0.001 to 0.006	=	Not Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
41	Sd	Damage Parameter	=	**2**		Table 5.23, Page 569, Chapter 5, Rock Manual
42		Rock Mass Weathering	=	**1**		1 indicates no weathering
43						
44		**Primary Armour**				
45		**Nominal Diameter**	=	1.12	ft	
46		**Nominal Weight**	=	234.44	lbs.	
47	**W50**	**Nominal Weight (after Weathering)**	=	**234.44**	lbs.	
48	**D50**	**Nominal Diameter (after Weatherin**	=	**1.12**	ft	
49	kt	Layer Coefficient	=	**1.02**		Table VI-5-51, Page VI-5-136, CEM
50	n	Number of Layers	=	**2**		

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ATTACHEMNT A-2: REVETMENT DESIGN CASE 2- 100-year Storm Wave in Berthing Basin P=0.1 first and P=0.4 second

1	**van der Meer equations - Deep Water Conditions**				CIRA C683 "The Rock Manual" para 5.2.2.2 page 567 and following	
2						
3	For *plunging waves* ($\xi_m < \xi_{cr}$):				and for *surging waves* ($\xi_m \geq \xi_{cr}$):	
4						
5	$\frac{H_s}{\Delta D_{n50}} = c_{pl} P^{0.18} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \xi_m^{-0.5}$				$\frac{H_s}{\Delta D_{n50}} = c_s P^{-0.13} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \sqrt{\cot\alpha}\, \xi_m^P$	
6						
7						
8						
9		Sea bottom level	=	-46.00	ft NAVD 88	
10		Bed Slope- Horizontal	=	100.00		
11		Bed Slope- Vertical	=	1.00		
12		Bed Slope	=	0.57		
13		Structure Slope- Horizontal	=	3.00		1.5 to 6, Table 5.24, Page 570, Chapter 5, Rock Manual
14		Structure Slope- Vertical	=	1.00		
15		Structure Slope	=	18.43		
16		Design Water Level	=	10.20	ft NAVD 88	
17	h	Water Depth	=	56.20	ft	Deep Water
18		Water Density	=	63.99	lbs./ft3	
19		Rock Density	=	165.43	lbs./ft3	
20	Δ	Relative Buoyant Density	=	1.59		
21	Hs	Significant Wave Height	=	2.50	ft	
22	Tp	Peak Wave Period	=	3.80	s	
23	Tm-1,0	Mean Wave Energy Period	=	3.45	s	Eq 4.62, Page 362, Chapter 4, Rock Manual
24	Tm	Mean Period	=	3.31	s	JONSWAP, Page 367, Chapter 4, Rock Manual
25		Theoretic Breaking Wave Height	=	43.83	ft	
26		Accelaration due to gravity	=	32.19	ft/s2	
27	ξm	Surf Similarity Mean	=	1.58		Page 575, Chapter 5, Rock Manual using Tm
28		Surf Similarity Mean Validity: 0.7 to 7	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
29		Design Approach	=	**Best Fit**		Table 5.25, Page 570,Chapter 5, Rock Manual
30	C_{pl}	Coefficient	=	6.20		
31	C_s	Coefficient	=	1.00		
32	P	Notional Permeability Factor	=	**0.1**		Table 5.39, Page 568,Chapter 5, Rock Manual
33	ξ_{cr}	Surf Similarity Critical	=	2.55		Eq 5.138, Page 567, Chapter 5, Rock Manual
34		Wave Type	=	**Plunging**		
35		Storm Duration	=	**3**	h	
36		Number of Waves	=	3266.79		Box 5.13, Page 572, Chapter 5, Rock Manual
37		Selected Number of Waves	=	**3200**		Max. 3000,Table 5.26, Page 576, Chapter 5, Rock Manual
38		Wave Length	=	55.98605787	ft	Page 329, Chapter 4, Rock Manual
39		Wave Steepness	=	0.044653976		Page 352, Chapter 4, Rock Manual
40		Wave Steepness Validity : 0.001 to 0.006	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
41	Sd	Damage Parameter	=	**2**		Table 5.23, Page 569, Chapter 5, Rock Manual
42		Rock Mass Weathering	=	**1**		1 indicates no weathering
43						
44		**Primary Armour**				
45		**Nominal Diameter**	=	0.94	ft	
46		**Nominal Weight**	=	138.91	lbs.	
47	**W50**	**Nominal Weight (after Weathering)**	=	**138.91**	lbs.	
48	**D50**	**Nominal Diameter (after Weatherin**	=	**0.94**	ft	
49	kt	Layer Coefficient	=	**1.02**		Table VI-5-51, Page VI-5-136, CEM
50	n	Number of Layers	=	**2**		

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1	**van der Meer equations - Deep Water Conditions**				CIRA C683 "The Rock Manual" para 5.2.2.2 page 567 and following	
2						
3	For *plunging waves* ($\xi_m < \xi_{cr}$):				and for *surging waves* ($\xi_m \geq \xi_{cr}$):	
4						
5	$\frac{H_s}{\Delta D_{n50}} = c_{pl} P^{0.18} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \xi_m^{-0.5}$				$\frac{H_s}{\Delta D_{n50}} = c_s P^{-0.13} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \sqrt{\cot\alpha}\, \xi_m^P$	
6						
7						
8						
9		Sea bottom level	=	-46.00	ft NAVD 88	
10		Bed Slope- Horizontal	=	100.00		
11		Bed Slope- Vertical	=	1.00		
12		Bed Slope	=	0.57		
13		Structure Slope- Horizontal	=	3.00		1.5 to 6, Table 5.24, Page 570, Chapter 5, Rock Manual
14		Structure Slope- Vertical	=	1.00		
15		Structure Slope	=	18.43		
16		Design Water Level	=	10.20	ft NAVD 88	
17	h	Water Depth	=	56.20	ft	Deep Water
18		Water Density	=	63.99	lbs./ft3	
19		Rock Density	=	165.43	lbs./ft3	
20	Δ	Relative Buoyant Density	=	1.59		
21	Hs	Significant Wave Height	=	2.50	ft	
22	Tp	Peak Wave Period	=	3.80	s	
23	Tm-1,0	Mean Wave Energy Period	=	3.45	s	Eq 4.62, Page 362, Chapter 4, Rock Manual
24	Tm	Mean Period	=	3.31	s	JONSWAP, Page 367, Chapter 4, Rock Manual
25		Theoretic Breaking Wave Height	=	43.83	ft	
26		Accelaration due to gravity	=	32.19	ft/s2	
27	ξm	Surf Similarity Mean	=	1.58		Page 575, Chapter 5, Rock Manual using Tm
28		Surf Similarity Mean Validity: 0.7 to 7	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
29		Design Approach	=	**Best Fit**		Table 5.25, Page 570,Chapter 5, Rock Manual
30	C_{pl}	Coefficient	=	6.20		
31	C_s	Coefficient	=	1.00		
32	P	Notional Permeability Factor	=	**0.4**		Table 5.39, Page 568,Chapter 5, Rock Manual
33	ξ_{cr}	Surf Similarity Critical	=	3.01		Eq 5.138, Page 567, Chapter 5, Rock Manual
34		Wave Type	=	**Plunging**		
35		Storm Duration	=	**3**	h	
36		Number of Waves	=	3266.79		Box 5.13, Page 572, Chapter 5, Rock Manual
37		Selected Number of Waves	=	**3200**		Max. 3000,Table 5.26, Page 576, Chapter 5, Rock Manual
38		Wave Length	=	55.98605787	ft	Page 329, Chapter 4, Rock Manual
39		Wave Steepness	=	0.044653976		Page 352, Chapter 4, Rock Manual
40		Wave Steepness Validity : 0.001 to 0.006	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
41	Sd	Damage Parameter	=	**2**		Table 5.23, Page 569, Chapter 5, Rock Manual
42		Rock Mass Weathering	=	**1**		1 indicates no weathering
43						
44		**Primary Armour**				
45		**Nominal Diameter**	=	0.74	ft	
46		**Nominal Weight**	=	65.71	lbs.	
47	**W50**	**Nominal Weight (after Weathering)**	=	**65.71**	lbs.	
48	**D50**	**Nominal Diameter (after Weatherin**	=	**0.74**	ft	
49	kt	Layer Coefficient	=	**1.02**		Table VI-5-51, Page VI-5-136, CEM
50	n	Number of Layers	=	**2**		

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ATTACHEMNT A-3: REVETMENT DESIGN CASE 3- 500-year Storm Wave at property shoreline

P=0.1 first and P=0.4 second

1	**van der Meer equations - Deep Water Conditions**				CIRA C683 "The Rock Manual" para 5.2.2.2 page 567 and following	
2						
3	For *plunging waves* ($\xi_m < \xi_{cr}$):				and for *surging waves* ($\xi_m \geq \xi_{cr}$):	
4						
5	$\frac{H_s}{\Delta D_{n50}} = c_{pl} P^{0.18} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \xi_m^{-0.5}$				$\frac{H_s}{\Delta D_{n50}} = c_s P^{-0.13} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \sqrt{\cot\alpha}\, \xi_m^P$	
6						
7						
8						
9		Sea bottom level	=	-46.00	ft NAVD 88	
10		Bed Slope- Horizontal	=	100.00		
11		Bed Slope- Vertical	=	1.00		
12		Bed Slope	=	0.57		
13		Structure Slope- Horizontal	=	3.00		1.5 to 6, Table 5.24, Page 570, Chapter 5, Rock Manual
14		Structure Slope- Vertical	=	1.00		
15		Structure Slope	=	18.43		
16		Design Water Level	=	14.00	ft NAVD 88	
17	h	Water Depth	=	60.00	ft	Deep Water
18		Water Density	=	63.99	lbs./ft3	
19		Rock Density	=	165.43	lbs./ft3	
20	Δ	Relative Buoyant Density	=	1.59		
21	Hs	Significant Wave Height	=	5.90	ft	
22	Tp	Peak Wave Period	=	4.00	s	
23	Tm-1,0	Mean Wave Energy Period	=	3.64	s	Eq 4.62, Page 362, Chapter 4, Rock Manual
24	Tm	Mean Period	=	3.48	s	JONSWAP, Page 367, Chapter 4, Rock Manual
25		Theoretic Breaking Wave Height	=	46.80	ft	
26		Accelaration due to gravity	=	32.19	ft/s2	
27	ξm	Surf Similarity Mean	=	1.08		Page 575, Chapter 5, Rock Manual using Tm
28		Surf Similarity Mean Validity: 0.7 to 7	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
29		Design Approach	=	**Best Fit**		Table 5.25, Page 570,Chapter 5, Rock Manual
30	C_{pl}	Coefficient	=	6.20		
31	C_s	Coefficient	=	1.00		
32	P	Notional Permeability Factor	=	**0.1**		Table 5.39, Page 568,Chapter 5, Rock Manual
33	ξ_{cr}	Surf Similarity Critical	=	2.55		Eq 5.138, Page 567, Chapter 5, Rock Manual
34		Wave Type	=	**Plunging**		
35		Storm Duration	=	**3**	h	
36		Number of Waves	=	3103.45		Box 5.13, Page 572, Chapter 5, Rock Manual
37		Selected Number of Waves	=	**3200**		Max. 3000,Table 5.26, Page 576, Chapter 5, Rock Manual
38		Wave Length	=	62.03441315	ft	Page 329, Chapter 4, Rock Manual
39		Wave Steepness	=	0.0951085		Page 352, Chapter 4, Rock Manual
40		Wave Steepness Validity : 0.001 to 0.006	=	Not Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
41	Sd	Damage Parameter	=	**6**		Table 5.23, Page 569, Chapter 5, Rock Manual
42		Rock Mass Weathering	=	**1**		1 indicates no weathering
43						
44		**Primary Armour**				
45		**Nominal Diameter**	=	1.48	ft	
46		**Nominal Weight**	=	535.70	lbs.	
47	**W50**	**Nominal Weight (after Weathering)**	=	**535.70**	lbs.	
48	**D50**	**Nominal Diameter (after Weatherin**	=	**1.48**	ft	
49	kt	Layer Coefficient	=	**1.02**		Table VI-5-51, Page VI-5-136, CEM
50	n	Number of Layers	=	**2**		

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1	**van der Meer equations - Deep Water Conditions**				CIRA C683 "The Rock Manual" para 5.2.2.2 page 567 and following	
2						
3	For *plunging waves* ($\xi_m < \xi_{cr}$):				and for *surging waves* ($\xi_m \geq \xi_{cr}$):	
4						
5	$\frac{H_s}{\Delta D_{n50}} = c_{pl} P^{0.18} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \xi_m^{-0.5}$				$\frac{H_s}{\Delta D_{n50}} = c_s P^{-0.13} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \sqrt{\cot\alpha}\, \xi_m^P$	
6						
7						
8						
9		Sea bottom level	=	-46.00	ft NAVD 88	
10		Bed Slope- Horizontal	=	100.00		
11		Bed Slope- Vertical	=	1.00		
12		Bed Slope	=	0.57		
13		Structure Slope- Horizontal	=	3.00		1.5 to 6, Table 5.24, Page 570, Chapter 5, Rock Manual
14		Structure Slope- Vertical	=	1.00		
15		Structure Slope	=	18.43		
16		Design Water Level	=	14.00	ft NAVD 88	
17	h	Water Depth	=	60.00	ft	Deep Water
18		Water Density	=	63.99	lbs./ft3	
19		Rock Density	=	165.43	lbs./ft3	
20	Δ	Relative Buoyant Density	=	1.59		
21	Hs	Significant Wave Height	=	5.90	ft	
22	Tp	Peak Wave Period	=	4.00	s	
23	Tm-1,0	Mean Wave Energy Period	=	3.64	s	Eq 4.62, Page 362, Chapter 4, Rock Manual
24	Tm	Mean Period	=	3.48	s	JONSWAP, Page 367, Chapter 4, Rock Manual
25		Theoretic Breaking Wave Height	=	46.80	ft	
26		Accelaration due to gravity	=	32.19	ft/s2	
27	ξm	Surf Similarity Mean	=	1.08		Page 575, Chapter 5, Rock Manual using Tm
28		Surf Similarity Mean Validity: 0.7 to 7	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
29		Design Approach	=	**Best Fit**		Table 5.25, Page 570,Chapter 5, Rock Manual
30	C_{pl}	Coefficient	=	6.20		
31	C_s	Coefficient	=	1.00		
32	P	Notional Permeability Factor	=	**0.4**		Table 5.39, Page 568,Chapter 5, Rock Manual
33	ξ_{cr}	Surf Similarity Critical	=	3.01		Eq 5.138, Page 567, Chapter 5, Rock Manual
34		Wave Type	=	**Plunging**		
35		Storm Duration	=	**3**	h	
36		Number of Waves	=	3103.45		Box 5.13, Page 572, Chapter 5, Rock Manual
37		Selected Number of Waves	=	**3200**		Max. 3000,Table 5.26, Page 576, Chapter 5, Rock Manual
38		Wave Length	=	62.03441315	ft	Page 329, Chapter 4, Rock Manual
39		Wave Steepness	=	0.0951085		Page 352, Chapter 4, Rock Manual
40		Wave Steepness Validity : 0.001 to 0.006	=	Not Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
41	Sd	Damage Parameter	=	**6**		Table 5.23, Page 569, Chapter 5, Rock Manual
42		Rock Mass Weathering	=	**1**		1 indicates no weathering
43						
44		**Primary Armour**				
45		**Nominal Diameter**	=	1.15	ft	
46		**Nominal Weight**	=	253.40	lbs.	
47	**W50**	**Nominal Weight (after Weathering)**	=	**253.40**	lbs.	
48	**D50**	**Nominal Diameter (after Weatherin**	=	**1.15**	ft	
49	kt	Layer Coefficient	=	**1.02**		Table VI-5-51, Page VI-5-136, CEM
50	n	Number of Layers	=	**2**		

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ATTACHEMNT A-4: REVETMENT DESIGN CASE 4- 500-year Storm Wave in Berthing Basin P=0.1 first and P=0.4 second

1	**van der Meer equations - Deep Water Conditions**				CIRA C683 "The Rock Manual" para 5.2.2.2 page 567 and following	
2						
3	For *plunging waves* ($\xi_m < \xi_{cr}$):				and for *surging waves* ($\xi_m \geq \xi_{cr}$):	
4						
5	$\frac{H_s}{\Delta D_{n50}} = c_{pl} P^{0.18} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \xi_m^{-0.5}$				$\frac{H_s}{\Delta D_{n50}} = c_s P^{-0.13} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \sqrt{\cot\alpha}\, \xi_m^P$	
6						
7						
8						
9		Sea bottom level	=	-46.00	ft NAVD 88	
10		Bed Slope- Horizontal	=	100.00		
11		Bed Slope- Vertical	=	1.00		
12		Bed Slope	=	0.57		
13		Structure Slope- Horizontal	=	3.00		1.5 to 6, Table 5.24, Page 570, Chapter 5, Rock Manual
14		Structure Slope- Vertical	=	1.00		
15		Structure Slope	=	18.43		
16		Design Water Level	=	14.00	ft NAVD 88	
17	h	Water Depth	=	60.00	ft	Deep Water
18		Water Density	=	63.99	lbs./ft3	
19		Rock Density	=	165.43	lbs./ft3	
20	Δ	Relative Buoyant Density	=	1.59		
21	Hs	Significant Wave Height	=	3.30	ft	
22	Tp	Peak Wave Period	=	4.00	s	
23	Tm-1,0	Mean Wave Energy Period	=	3.64	s	Eq 4.62, Page 362, Chapter 4, Rock Manual
24	Tm	Mean Period	=	3.48	s	JONSWAP, Page 367, Chapter 4, Rock Manual
25		Theoretic Breaking Wave Height	=	46.80	ft	
26		Accelaration due to gravity	=	32.19	ft/s2	
27	ξm	Surf Similarity Mean	=	1.45		Page 575, Chapter 5, Rock Manual using Tm
28		Surf Similarity Mean Validity: 0.7 to 7	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
29		Design Approach	=	**Best Fit**		Table 5.25, Page 570,Chapter 5, Rock Manual
30	C_{pl}	Coefficient	=	6.20		
31	C_s	Coefficient	=	1.00		
32	P	Notional Permeability Factor	=	**0.1**		Table 5.39, Page 568,Chapter 5, Rock Manual
33	ξ_{cr}	Surf Similarity Critical	=	2.55		Eq 5.138, Page 567, Chapter 5, Rock Manual
34		Wave Type	=	**Plunging**		
35		Storm Duration	=	**3**	h	
36		Number of Waves	=	3103.45		Box 5.13, Page 572, Chapter 5, Rock Manual
37		Selected Number of Waves	=	**3200**		Max. 3000,Table 5.26, Page 576, Chapter 5, Rock Manual
38		Wave Length	=	62.03441315	ft	Page 329, Chapter 4, Rock Manual
39		Wave Steepness	=	0.053196282		Page 352, Chapter 4, Rock Manual
40		Wave Steepness Validity : 0.001 to 0.006	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
41	Sd	Damage Parameter	=	**6**		Table 5.23, Page 569, Chapter 5, Rock Manual
42		Rock Mass Weathering	=	**1**		1 indicates no weathering
43						
44		**Primary Armour**				
45		**Nominal Diameter**	=	0.96	ft	
46		**Nominal Weight**	=	144.93	lbs.	
47	**W50**	**Nominal Weight (after Weathering)**	=	**144.93**	lbs.	
48	**D50**	**Nominal Diameter (after Weatherin**	=	**0.96**	ft	
49	kt	Layer Coefficient	=	**1.02**		Table VI-5-51, Page VI-5-136, CEM
50	n	Number of Layers	=	**2**		

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van der Meer equations - Deep Water Conditions — CIRA C683 "The Rock Manual" para 5.2.2.2 page 567 and following

For *plunging waves* ($\xi_m < \xi_{cr}$):

$$\frac{H_s}{\Delta D_{n50}} = c_{pl} P^{0.18} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \xi_m^{-0.5}$$

and for *surging waves* ($\xi_m \geq \xi_{cr}$):

$$\frac{H_s}{\Delta D_{n50}} = c_s P^{-0.13} \left(\frac{S_d}{\sqrt{N}}\right)^{0.2} \sqrt{\cot\alpha}\, \xi_m^P$$

		Sea bottom level	=	-46.00	ft NAVD 88	
		Bed Slope- Horizontal	=	100.00		
		Bed Slope- Vertical	=	1.00		
		Bed Slope	=	0.57		
		Structure Slope- Horizontal	=	3.00		1.5 to 6, Table 5.24, Page 570, Chapter 5, Rock Manual
		Structure Slope- Vertical	=	1.00		
		Structure Slope	=	18.43		
		Design Water Level	=	14.00	ft NAVD 88	
	h	Water Depth	=	60.00	ft	Deep Water
		Water Density	=	63.99	lbs./ft3	
		Rock Density	=	165.43	lbs./ft3	
	Δ	Relative Buoyant Density	=	1.59		
	Hs	Significant Wave Height	=	3.30	ft	
	Tp	Peak Wave Period	=	4.00	s	
	Tm-1,0	Mean Wave Energy Period	=	3.64	s	Eq 4.62, Page 362, Chapter 4, Rock Manual
	Tm	Mean Period	=	3.48	s	JONSWAP, Page 367, Chapter 4, Rock Manual
		Theoretic Breaking Wave Height	=	46.80	ft	
		Accelaration due to gravity	=	32.19	ft/s2	
	ξm	Surf Similarity Mean	=	1.45		Page 575, Chapter 5, Rock Manual using Tm
		Surf Similarity Mean Validity: 0.7 to 7	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
		Design Approach	=	**Best Fit**		Table 5.25, Page 570,Chapter 5, Rock Manual
	C_{pl}	Coefficient	=	6.20		
	C_s	Coefficient	=	1.00		
	P	Notional Permeability Factor	=	**0.4**		Table 5.39, Page 568,Chapter 5, Rock Manual
	ξ_{cr}	Surf Similarity Critical	=	3.01		Eq 5.138, Page 567, Chapter 5, Rock Manual
		Wave Type	=	**Plunging**		
		Storm Duration	=	**3**	h	
		Number of Waves	=	3103.45		Box 5.13, Page 572, Chapter 5, Rock Manual
		Selected Number of Waves	=	**3200**		Max. 3000,Table 5.26, Page 576, Chapter 5, Rock Manual
		Wave Length	=	62.03441315	ft	Page 329, Chapter 4, Rock Manual
		Wave Steepness	=	0.053196282		Page 352, Chapter 4, Rock Manual
		Wave Steepness Validity : 0.001 to 0.006	=	Valid		Table 5.24, Page 570, Chapter 5, Rock Manual
	Sd	Damage Parameter	=	**6**		Table 5.23, Page 569, Chapter 5, Rock Manual
		Rock Mass Weathering	=	**1**		1 indicates no weathering
		Primary Armour				
		Nominal Diameter	=	0.75	ft	
		Nominal Weight	=	68.56	lbs.	
	W50	**Nominal Weight (after Weathering)**	=	**68.56**	lbs.	
	D50	**Nominal Diameter (after Weatherin**	=	**0.75**	ft	
	kt	Layer Coefficient	=	**1.02**		Table VI-5-51, Page VI-5-136, CEM
	n	Number of Layers	=	**2**		

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APPENDIX B

REVETMENT DESIGN FOR PASSING VESSEL

REQUIRED ROCK SIZE BY PASSING VESSEL FROM BAW GUILDLINE
- ABOVE WATER SECTION

- ATTACHEMNT B-1: REVETMENT DESIGN BY FIG 6.3 – SHEET B1
- ATTACHEMNT B-2: REVETMENT DESIGN BY EQ 6-1&2 – SHEET B2
- ATTACHEMNT B-3: REVETMENT DESIGN BY EQ 6-7&8 – SHEET B3
- ATTACHEMNT B-4: REVETMENT DESIGN BY EQ 6-10&11 - SHEET B4

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ATTACHEMNT B-1: REVETMENT DESIGN BY BAW FIG 6.3

Project	Port Arthur LNG
Task	Armour Stone Size Required to Resist Load Caused By Passing Ship
Created by	Matt Liu
Created by	T Chris
Standards	BAW Code and Practive Principles for the Design of Bank and Bottom Protection for inland Waterways

	Required Stone Size in ft and Weight in lb					
Primary Wave Field	0.250	m	0.82	ft	91	lb
Return Flow	0.164	m	0.54	ft	26	lb
Secondary Wave Field	0.341	m	1.12	ft	230	lb
Final Required Stone Size	0.341	m	**1.12**	ft	**230**	lb

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CALCULATION SHEET

P. O. BOX 2166
HOUSTON, TEXAS 77252-2166

CALC.NO. 26196-100-CMC-000-00016, Rev 000

PAL-T0-MAR-CAL-24-GEN-0002, Rev 000

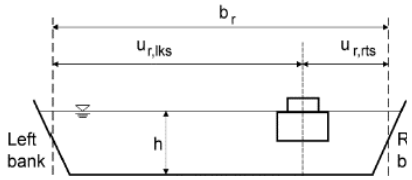
SIGNATURE: M. Liu DATE: 08-10-2023 CHECKED: C Thomas DATE: 08-15-2023

PROJECT: Port Arthur Liquefaction Project JOB NO. 26196-100

SUBJECT: Shore Protection Calculation for LNG Berth Area and Storm Water Drainage (Berth Area) SHEET27 OF 37 SHEETS 37

Project	Port Arthur LNG - Shorline Protection
Task	Armour Stone Size Required to Resist Load Caused By Transversal Stern Waves
Created by	Matt Liu
Checked by	
Standards	BAW Code and Practive Principles for the Design of Bank and Bottom Protection for inland Waterways

CONSTANT INPUTS			
Density of Water	ρ_W	1025	kg/m3
Gravity	g	9.81	m/s2
Bulk Density of Armour Stones	ρ_S	2650	kg/m3 N.B.:/TLW 2003/
Slope Angle	β	18	° cot (1/3)
Ship Length	L	247	m
Ship Width	B	42	m
Ship Speed	Vs	5.14	m/s
Water Depth	h	13	m
Flow Mean Vel. In Cross Section	V_{str}	0.5	m/s
Vessel CL to Bank Line	u_{rmin}	165	m, vessel offset 0.5Beam
Canal Width	b_r	390	m



EQ 6-1 & 6-2 INPUTS			
Coef. for wave generating ship	β_λ	0.9	0.72 for fast ship; 0.90 for inland navigation vessels and push-tow
Stability Coefficient	B'_B	1.5	1.5(lower limit of measured values) - 2.3(mean measured value)
Factor of Influence	C_H	1.3	1.3 (T/h=0.7, inland); 1.5 (T/h=0.4, partially laden); 1.1 sea-going vessel,large trim
Mean Drawdown near Bank	$\Delta\bar{h}_{u,Heck}$	1.40208	m, reference to 2.1.6 (p31 of MN report)
Distance Range	U'u	180	m, for Eq 5-54
Wave Height Coefficient	A_W	0.25	0.25 conventional inland vessel/tug; 0.35 empty, single-line push, 0.8 fully laden, multi-line push
Occurance Freq. Coef.	$B*_B$	2	2.0 frequently occurs/damage completely avoid; 3.0 infrequently/with maintenace
Critical Ship Speed	V_{krit}	8	m/s, Eq 5-19

EQ 6-1 & 6-2 INTERMEDIATE OUTPUS			
Reduction factor	f_{red}	0.53	Eq 5-54
Slope Inclination	m	3.08	$2 \le m \le 5$
Slope Influence Coef	C_{Bo}	1.11	Eq 6-8
Coef. of Velocity	f_{cr}	1.00	[1, 1.7], Eq 5-57
Coef. Of Wave Length	f_λ	0.9	$0.9\sin[\pi(2Lw/\lambda q-0.5)]$ for $4/3Lw \le \lambda q \le 2Lw$, else 0
Max Waterkeven Drawdown	$\Delta\bar{h}_{u,Heck}$	1.822704	m, Eq 5-29 (FEED report)
Trans. Wave Length	λ_q	444.6	m, Eq 5-55
Wave Generating Ship Length	Lw	222.3	m
Primary Stern Wave Height	$H_{u,Heck}$	1.62	m, Eq 5-32
Distance Case B Design Value	$H_{u,Heck,StBem}$	1.74	m, Eq 5-53
Secondary Wave Height	$H_{sek,q}$	0.46	m, Eq 5-61&65
Design Wave Height	H_{Bem}	1.62	m
		2.67	

EQ 6-1 & 6-2 RESULTS			
Required Stone Size	**D_{50}**	**0.468**	m, Eq 6-1
Required Stone Size	**D_{50}**	**0.213**	m, Eq 6-2

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CALCULATION SHEET

P. O. BOX 2166
HOUSTON, TEXAS 77252-2166

CALC.NO. 26196-100-CMC-000-00016, Rev 000

PAL-T0-MAR-CAL-24-GEN-0002, Rev 000

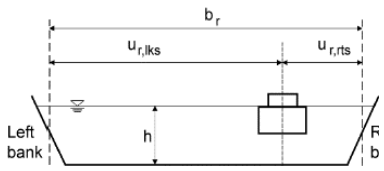
SIGNATURE: M. Liu DATE: 08-10-2023 CHECKED: C Thomas DATE: 08-15-2023

PROJECT: Port Arthur Liquefaction Project JOB NO. 26196-100

SUBJECT: Shore Protection Calculation for LNG Berth Area and Storm Water Drainage (Berth Area) SHEET28 OF 37 SHEETS 37

Project	Port Arthur LNG
Task	Armour Stone Size Required to Resist Load Caused By Secondary Diverging Waves
Created By	Matt Liu
Created On	T Chris
Standards	BAW Code and Practive Principles for the Design of Bank and Bottom Protection for inland Waterways

CONSTANT INPUTS			
Density of Water	ρ_w	1025	kg/m3
Gravity	g	9.81	m/s2
Bulk Density of Armour Stones	ρ_s	2650	kg/m3 N.B.:/TLW 2003/
Slope Angle	β	18	° cot(1/3)
Ship Length	L	247	m
Ship Width	B	42	m
Draft	T	12	m
Ship Speed	Vs	5.14	m/s
Water Depth	h	13	m
Flow Mean Vel. In Cross Section	V_{str}	0.5	m/s
Vessel CL to Bank Line	u_{rmin}	165	m
Canal Width	b_r	390	m



EQ 6-7 & 6-8 INPUTS			
Coef. for wave generating ship	β_λ	0.9	0.72 for fast ship; 0.90 for inland navigation vessels and push-tow
Mean Drawdown near Bank	$\Delta\bar{n}_{u,Heck}$	1	m, reference to 2.1.6 (MN report)
Distance Range	U'u	180	m, for Eq 5-54
Wave Height Coefficient	A_w	0.25	0.25 conventional inland vessel/tug; 0.35 empty, single-line push, 0.8 fully laden, multi-line push
Bank Strickler Roughness	$K_{Str,u}$	30.00	m^(1/3)/s, Eq 5-38
Mean Strickler Roughness	K_{Str}	30.00	m^(1/3)/s, Eq 5-38
Boundary Layer Thickness	δv	1.00	m, Eq 5-38
Flow Velocity	V_{max}	1.81	m/s, Eq 5-39&40, Downstrean V_{ruck} -$V_{Str,Ufer}$; Upstream V_{ruck}+$V_{Str,Ufer}$
Critical Ship Speed	V_{krit}	**8**	m/s, Eq 5-19
Coef. of Velocity	f_{cr}	1.00	[1, 1.7], Eq 5-57
Coef. Of Wave Length	f_λ	0.9	0.9sin[π(2Lw/λq-0.5)] for 4/3Lw≤λq≤2Lw, else 0

EQ 6-7 & 6-8 INTERMEDIATE OUTPUS			
Reduction factor	f_{red}	0.53	Eq 5-54
Slope Inclination	m	3.08	2 ≤ m ≤ 5
Equivalent Width at Water Level	$b_{WS,aqui}$	430.01	m, Eq 5-11
Drawdown Area Mean Width	b_m	426.93	m, Eq 5-23
Return Flow Velocity	V_{ruch}	1.06	m/s, Eq 5-23
Slope Influence Coef	C_{Bo}	1.11	Eq 6-8
Isbash Coefficient	C_{isb}	0.70	Eq 6-8
Surf Similarity Parameter	ζ	8.28	Eq 6-7
Mean Flow Velocity	$V_{Str,Ufer}$	0.75	m/s, Eq 5-28
Trans. Wave Length	λ_q	444.6	m, Eq 5-55
Diverging Wave Length	λ_s	296.4	m, Eq 5-59
Wave Generating Ship Length	Lw	222.3	m
Secondary Wave Height	$H_{sek,q}$	0.46	m, Eq 5-61&65

EQ 6-7 & 6-8 RESULTS			
Required Stone Size	**D_{50}**	**0.22**	m, Eq 6-7
Required Stone Size	**D_{50}**	**0.16**	m, Eq 6-8

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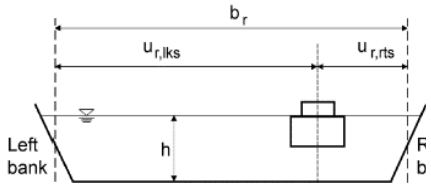
Project	Port Arthur LNG
Task	Armour Stone Size Required to Resist Load Causeddue to Slope Supply Flow
Created by	Matt Liu
Checked by	T Chris
Standards	BAW Code and Practive Principles for the Design of Bank and Bottom Protection for inland Waterways

CONSTANT INPUTS			
Density of Water	ρ_w	1025	kg/m3
Gravity	g	9.81	m/s2
Bulk Density of Armour Stones	ρ_s	2650	kg/m3 N.B.:/TLW 2003/
Slope Angle	β	18	°
Ship Length	L	247	m
Ship Width	B	42	m
Draft	T	12	m
Ship Speed	Vs	5.14	m/s
Water Depth	h	13	m
Flow Mean Vel. In Cross Section	V_{str}	0.5	m/s
Vessel CL to Bank Line	u_{rmin}	165	m
Canal Width	b_r	390	m



EQ 6-10 & 6-11 INPUTS			
Factor of Influence	C_H	1.3	1.3 (T/h=0.7, inland); 1.5 (T/h=0.4, partially laden); 1.1 sea-going vessel,large trim
Mean Drawdown near Bank	$\Delta\bar{h}_{u,Heck}$	1	m, reference to 2.1.6 (MN report)
Bank Strickler Roughness	$K_{Str,u}$	30.00	m^(1/3)/s, Eq 5-38
Mean Strickler Roughness	K_{Str}	30.00	m^(1/3)/s, Eq 5-38
Boundary Layer Thickness	δv	1.00	m, Eq 5-38

EQ 6-10 & 6-11 INTERMEDIATE OUTPUS			
Slope Inclination	m	3.08	2 ≤ m ≤ 5
Equivalent Width at Water Level	$b_{WS,aqui}$	430.01	m, Eq 5-11
Drawdown Area Mean Width	b_m	426.93	m, Eq 5-23
Slope Influence Coef	C_{Bo}	1.11	Eq 6-8
Isbash Coefficient	C_{Isb}	0.70	Eq 6-8
Max Waterkeven Drawdown	$\Delta\hat{h}_{u,Heck}$	1.3	m, Eq 5-29
Mean Flow Velocity	$V_{Str,Ufer}$	0.75	m/s, Eq 5-28
Froude Number Square	Fr^2	2.33	Eq 5-37
Max. Vel of Slope Supply Flow	Umax	1.54	m/s, Eq. 5-36
Slope Supply Flow Design Speed	$U_{max,B}$	2.29	m/s, Eq. 5-41&42, downstream Umax+VStr,Ufer, upstream Umax-VStr,Ufer
Primary Stern Wave Height	$H_{u,Heck}$	1.15	m, Eq 5-32

EQ 6-10 & 6-11 RESULTS			
Required Stone Size	**D_{50}**	**0.19**	m, Eq 6-10
Required Stone Size	**D_{50}**	**0.13**	m, Eq 6-11

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ATTACHMENT – C

COASTAL ENGINEERING DESIGN

REQUIRED ROCK SIZE BY PROPELLER WASH OF TUGBOAT – BELOW WATER SECTION

- ATTACHMENT C-1
  ROBERT ALLEN RASTAR 3200 TUG PARTICULARS – SHEET C1
- ATTACHMENT C-2
  TUG WORKING AT 50% POWER AND AT 0.5LOA DISTANCE FROM THE SLOPE – SHEET C2
- ATTACHMENT C-3
  TUG WORKING AT 75% POWER AND AT 0.5LOA DISTANCE FROM THE SLOPE – SHEET C3
- ATTACHMENT C-4
  TUG WORKING AT 75% POWER AND AT 1.0LOA DISTANCE FROM THE SLOPE – SHEET C4
- ATTACHMENT C-5
  TUG WORKING AT 100% POWER AND AT 1.0LOA DISTANCE FROM THE SLOPE – SHEET C5

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ATTACHMENT C-1
ROBERT ALLEN RASTAR 3200 PARTICULARS

RASTAR 3200 TUG EUGENE FOR KENYA PORTS AUTHORITY (HTTPS://RAL.CA/2018/08/17/RASTAR-3200-TUG-EUGENE-FOR-KENYA-PORTS-AUTHORITY/)

August 17, 2018

Share: ✉ (mailto:?&subject=RAstar+3200+Tug+Eugene+for+Kenya+Ports+Authority at Robert+Allan+Ltd.&body=I%20thought%20you%20might%20be%20interested%20in%20this:%20+RAstar+3200+Tug+Eugene+for+Kenya+Ports+Authority+https%3A%2F%2Fral.ca%2F2018%2F08%2F17%2Frastar-3200-tug-eugene-for-kenya-ports-authority%2F) f (https://www.facebook.com/sharer/sharer.php?u=https%3A%2F%2Fral.ca%2F2018%2F08%2F17%2Frastar-3200-tug-eugene-for-kenya-ports-authority%2F) 🐦 (https://twitter.com/home?status=+RAstar+3200+Tug+Eugene+for+Kenya+Ports+Authority+https%3A%2F%2Fral.ca%2F2018%2F08%2F17%2Frastar-3200-tug-eugene-for-kenya-ports-authority%2F) G+ (https://plus.google.com/share?url=https%3A%2F%2Fral.ca%2F2018%2F08%2F17%2Frastar-3200-tug-eugene-for-kenya-ports-authority%2F) 📌 (https://pinterest.com/pin/create/button/?url=https%3A%2F%2Fral.ca%2F2018%2F08%2F17%2Frastar-3200-tug-eugene-for-kenya-ports-authority%2F&media=https%3A%2F%2Fral.ca%2Fwp-content%2Fuploads%2F2018%2F08%2FIMG_0331.jpg&description=)



The new *RAstar 3200* tug ***Eugene***, constructed by Cheoy Lee Shipyards, Hong Kong, has been delivered to its owners Kenya Ports Authority, Mombasa, Kenya. Principal particulars of this new tug are:

- Length O.A.: 32.00 m
- Beam, moulded: 12.80 m
- Depth, moulded (hull): 5.37 m
- Maximum Draft: 5.80 m

Eugene is classed and built according to the following Lloyd's Register of Shipping notation: ✠100A1, Escort Tug, ✠LMC, UMS, Fire-Fighting Ship 1 with Water Spray, Unrestricted Voyages, IWS

Main Tank Capacities are:

- Fuel Oil: 193 m³
- Fresh Water: 35 m³
- Foam: 16 m³

On trials, the ***Eugene*** met or exceeded all performance expectations, with the following results:

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ATTACHMENT C-2
TUG WORKING AT 50% POWER AND AT 0.5LOA DISTANCE FROM THE SLOPE

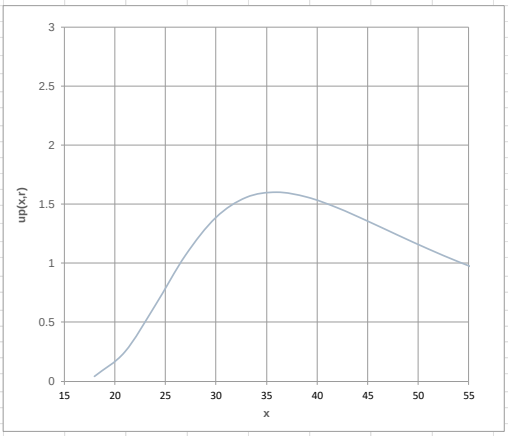
PALNG LNG Basin - Robert Allen Rastar 3200 - 50% Power at 0.5Tug LOA Distance from the Slope

REFERENCE: PIANC Report MARCom #180 (2015) Guidelines for Protecting Berthing Structures from Scour Caused by Ships
The Rock Manual (CIRIA C683), 2007

Water Depth	H	14.00	m	
Propeller Depth		6.00	m	Max draft 5.8m
Water Depth Under Propeller	H_p	8.00	m	
Propeller Diameter	D_p	2.70	m	
Total Installed Power	$P_{installed}$	2,240,000	watts	Twin Engine
Power Applied		50%		
Total Applied Power	$P_{applied}$	1,120,000	watts	
Twin Propeller	Y			
Rudder	N			PALNG Tug
Ducted Propeller	Y			Z-drive 32m

Propeller offset from Stern	$P_{off,stern}$	3	m	0.5 tug LOA	
Limit of tug stern (x axis)	$L_{tug,x}$	15	m	49.2126	ft
Water Density	ρ_w	1025	kg/m^3		
Maximum Axial Velocity	V_o	6.22	m/s		
Slope	3	:1			
X step	3				

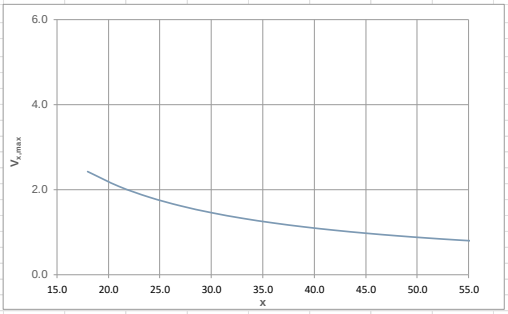
Erosion Critical Velocity	V_{cr}	1.2	m/s



GERMAN Method

Maximum Bottom Velocity	$V_{b,max}$	1.25	m/s	m/s

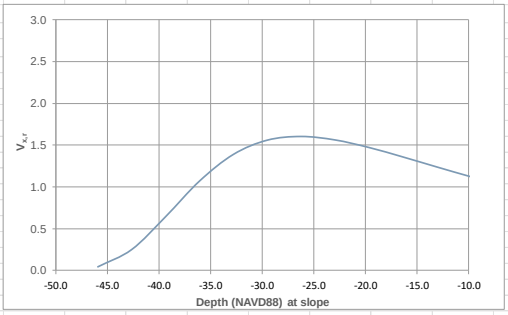
Datum (NAVD88)	x	r	$V_{x,max}$	$V_{x,r}$
-45.9	18.0	8.0	2.4	0.0
-42.6	21.0	7.0	2.1	0.2
-39.4	24.0	6.0	1.8	0.6
-36.1	27.0	5.0	1.6	1.1
-32.8	30.0	4.0	1.5	1.4
-29.5	33.0	3.0	1.3	1.6
-26.2	36.0	2.0	1.2	1.6
-23.0	39.0	1.0	1.1	1.6
-19.7	42.0	0.0	1.0	1.5
-16.4	45.0	-1.0	1.0	1.4
-13.1	48.0	-2.0	0.9	1.2
-9.8	51.0	-3.0	0.9	1.1
-6.6	54.0	-4.0	0.8	1.0
-3.3	57.0	-5.0	0.8	0.9



DUTCH Method

Maximum Bottom Velocity	$V_{b,max}$	0.91	m/s	m/s

Datum (NAVD88)	x	r	$V_{x,max}$	$V_{x,r}$
-45.9	18.0	8.0	2.6	0.2
-42.6	21.0	7.0	2.2	0.6
-39.4	24.0	6.0	2.0	1.1
-36.1	27.0	5.0	1.7	1.5
-32.8	30.0	4.0	1.6	1.7
-29.5	33.0	3.0	1.4	1.8
-26.2	36.0	2.0	1.3	1.8
-23.0	39.0	1.0	1.2	1.7
-19.7	42.0	0.0	1.1	1.6
-16.4	45.0	-1.0	1.0	1.5
-13.1	48.0	-2.0	1.0	1.3
-9.8	51.0	-3.0	0.9	1.2
-6.6	54.0	-4.0	0.9	1.1
-3.3	57.0	-5.0	0.8	1.0



Rock Size (DUTCH Method)

Slope Parameter	K_{sl}	0.9	*From Rock Manual (5.2.1.3)*
Turbulence Factor	K_t^2	6	*From Rock Manual (5.2.3.1)*
Relative Density	Δ	1.580	
Density of Water	ρ_w	1.025	t/m^3
Density of Rock	ρ_s	2.645	t/m^3

Datum (NAVD88)	$V_{x,r}$	D_{50} (m)	D_{50} (ft)	W_{50} (mt)	W_{50} (kg)	W_{50} (lb)
-45.9	0.2	0.00	0.01	0.00	0	0
-42.6	0.6	0.04	0.12	0.00	0	0
-39.4	1.1	0.12	0.39	0.00	5	10
-36.1	1.5	0.23	0.74	0.03	31	68
-32.8	1.7	0.31	1.00	0.08	75	165
-29.5	1.8	0.34	1.11	0.10	102	225
-26.2	1.8	0.33	1.09	0.10	98	215
-23.0	1.7	0.31	1.00	0.08	76	167
-19.7	1.6	0.27	0.88	0.05	52	114
-16.4	1.5	0.23	0.76	0.03	33	72
-13.1	1.3	0.20	0.64	0.02	20	43
-9.8	1.2	0.16	0.54	0.01	12	26
-6.6	1.1	0.14	0.45	0.01	7	15
-3.3	1.0	0.12	0.38	0.00	4	9

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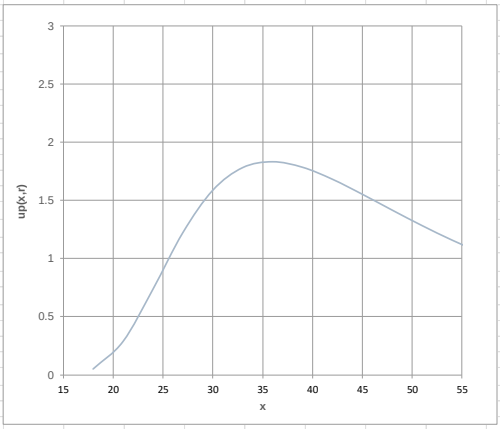
ATTACHMENT C-3
TUG WORKING AT 75% POWER AND AT 0.5LOA DISTANCE FROM THE SLOPE

PALNG LNG Basin - Robert Allen Rastar 3200 - 50% Power at 0.5Tug LOA Distance from the Slope

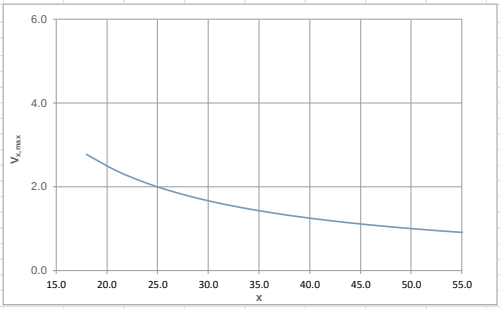
REFERENCE: PIANC Report MARCom #180 (2015) Guidelines for Protecting Berthing Structures from Scour Caused by Ships
The Rock Manual (CIRIA C683), 2007

Water Depth	H	14.00	m	
Propeller Depth		6.00	m	Max draft 5.8m
Water Depth Under Propeller	H_p	8.00	m	
Propeller Diameter	D_p	2.70	m	
Total Installed Power	$P_{installed}$	2,240,000	watts	Twin Engine
Power Applied		75%		
Total Applied Power	$P_{applied}$	1,680,000	watts	
Twin Propeller	Y			
Rudder	N			PALNG Tug
Ducted Propeller	Y			Z-drive 32m
Propeller offset from Stern	$P_{off,stern}$	3	m	0.5 tug LOA
Limit of tug stern (x axis)	$L_{tug,x}$	15	m	49.2126 ft
Water Density	ρ_w	1025	kg/m^3	
Maximum Axial Velocity	V_0	7.11	m/s	
Slope	3	:1		
X step	3			
Erosion Critical Velocity	V_{cr}	1.2	m/s	



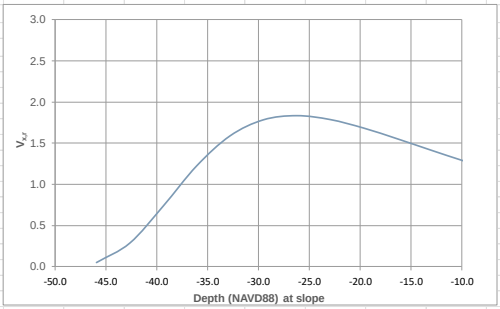
GERMAN Method

Maximum Bottom Velocity	$V_{b,max}$	1.43	m/s	m/s
Datum (NAVD88)	x	r	$V_{x,max}$	$V_{x,r}$
-45.9	18.0	8.0	2.8	0.0
-42.6	21.0	7.0	2.4	0.3
-39.4	24.0	6.0	2.1	0.7
-36.1	27.0	5.0	1.8	1.2
-32.8	30.0	4.0	1.7	1.6
-29.5	33.0	3.0	1.5	1.8
-26.2	36.0	2.0	1.4	1.8
-23.0	39.0	1.0	1.3	1.8
-19.7	42.0	0.0	1.2	1.7
-16.4	45.0	-1.0	1.1	1.6
-13.1	48.0	-2.0	1.0	1.4
-9.8	51.0	-3.0	1.0	1.3
-6.6	54.0	-4.0	0.9	1.2
-3.3	57.0	-5.0	0.9	1.0



DUTCH Method

Maximum Bottom Velocity	$V_{b,max}$	1.04	m/s	m/s
Datum (NAVD88)	x	r	$V_{x,max}$	$V_{x,r}$
-45.9	18.0	8.0	3.0	0.2
-42.6	21.0	7.0	2.6	0.7
-39.4	24.0	6.0	2.2	1.2
-36.1	27.0	5.0	2.0	1.7
-32.8	30.0	4.0	1.8	1.9
-29.5	33.0	3.0	1.6	2.0
-26.2	36.0	2.0	1.5	2.0
-23.0	39.0	1.0	1.4	1.9
-19.7	42.0	0.0	1.3	1.8
-16.4	45.0	-1.0	1.2	1.7
-13.1	48.0	-2.0	1.1	1.5
-9.8	51.0	-3.0	1.1	1.4
-6.6	54.0	-4.0	1.0	1.3
-3.3	57.0	-5.0	0.9	1.2



Rock Size (DUTCH Method)

Slope Parameter	K_{sl}	0.9	*From Rock Manual (5.2.1.3)*
Turbulence Factor	K_t^2	6	*From Rock Manual (5.2.3.1)*
Relative Density	Δ	1.580	
Density of Water	ρ_w	1.025	t/m^3
Density of Rock	ρ_s	2.645	t/m^3

Datum (NAVD88)	$V_{x,r}$	D_{50} (m)	D_{50} (ft)	W_{50} (mt)	W_{50} (kg)	W_{50} (lb)
-45.9	0.2	0.00	0.01	0.00	0	0
-42.6	0.7	0.05	0.15	0.00	0	1
-39.4	1.2	0.16	0.52	0.01	10	23
-36.1	1.7	0.30	0.97	0.07	69	152
-32.8	1.9	0.40	1.31	0.17	169	372
-29.5	2.0	0.44	1.45	0.23	230	506
-26.2	2.0	0.44	1.43	0.22	220	485
-23.0	1.9	0.40	1.31	0.17	170	375
-19.7	1.8	0.35	1.16	0.12	116	256
-16.4	1.7	0.30	0.99	0.07	73	161
-13.1	1.5	0.26	0.84	0.04	44	98
-9.8	1.4	0.21	0.70	0.03	26	58
-6.6	1.3	0.18	0.59	0.02	15	34
-3.3	1.2	0.15	0.50	0.01	9	20

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ATTACHMENT C-4
TUG WORKING AT 75% POWER AND AT 1.0LOA DISTANCE FROM THE SLOPE

PALNG LNG Basin - Robert Allen Rastar 3200 - 75% Power at 1.0Tug LOA Distance from the Slope

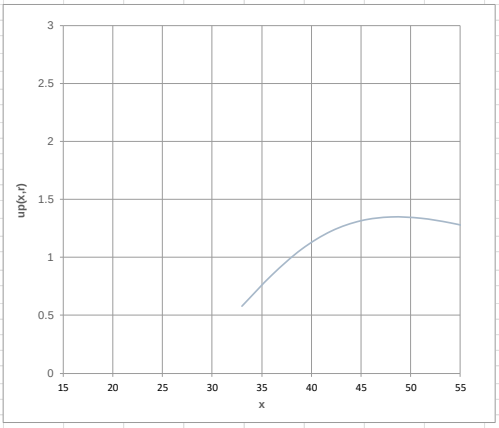
REFERENCE: PIANC Report MARCom #180 (2015) Guidelines for Protecting Berthing Structures from Scour Caused by Ships
The Rock Manual (CIRIA C683), 2007

Water Depth	H	14.00	m	
Propeller Depth		6.00	m	Max draft 5.8m
Water Depth Under Propeller	H_p	8.00	m	
Propeller Diameter	D_p	2.70	m	
Total Installed Power	$P_{installed}$	2,240,000	watts	Twin Engine
Power Applied		75%		
Total Applied Power	$P_{applied}$	1,680,000	watts	

Twin Propeller	Y			
Rudder	N			PALNG Tug
Ducted Propeller	Y			Z-drive 32m

Propeller offset from Stern	$P_{off,stern}$	3	m	
Limit of tug stern (x axis)	$L_{tug,x}$	30	m	1.0 tug LOA
Water Density	ρ_w	1025	kg/m^3	
Maximum Axial Velocity	V_o	7.11	m/s	
Slope	3	:1		
X step	3			

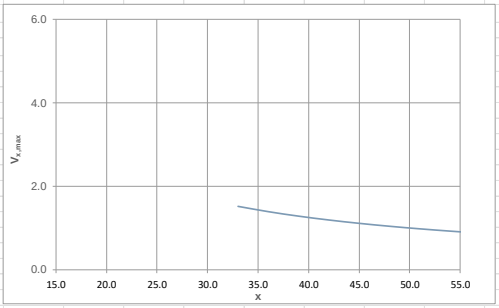
Erosion Critical Velocity	V_{cr}	1.2	m/s	



GERMAN Method

Maximum Bottom Velocity	$V_{b,max}$	1.43	m/s	m/s

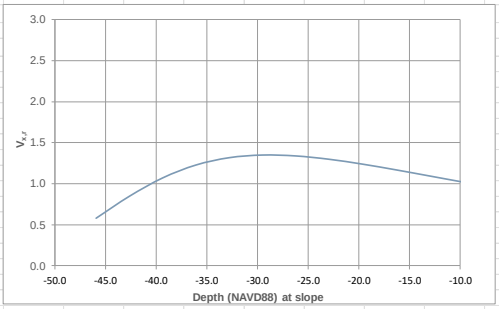
Datum (NAVD88)	x	r	$V_{x,max}$	$V_{x,r}$
-45.9	33.0	8.0	1.5	0.6
-42.6	36.0	7.0	1.4	0.8
-39.4	39.0	6.0	1.3	1.1
-36.1	42.0	5.0	1.2	1.2
-32.8	45.0	4.0	1.1	1.3
-29.5	48.0	3.0	1.0	1.3
-26.2	51.0	2.0	1.0	1.3
-23.0	54.0	1.0	0.9	1.3
-19.7	57.0	0.0	0.9	1.2
-16.4	60.0	-1.0	0.8	1.2
-13.1	63.0	-2.0	0.8	1.1
-9.8	66.0	-3.0	0.8	1.0
-6.6	69.0	-4.0	0.7	1.0
-3.3	72.0	-5.0	0.7	0.9



DUTCH Method

Maximum Bottom Velocity	$V_{b,max}$	1.04	m/s	m/s

Datum (NAVD88)	x	r	$V_{x,max}$	$V_{x,r}$
-45.9	33.0	8.0	1.6	0.9
-42.6	36.0	7.0	1.5	1.2
-39.4	39.0	6.0	1.4	1.4
-36.1	42.0	5.0	1.3	1.5
-32.8	45.0	4.0	1.2	1.5
-29.5	48.0	3.0	1.1	1.5
-26.2	51.0	2.0	1.1	1.5
-23.0	54.0	1.0	1.0	1.4
-19.7	57.0	0.0	0.9	1.3
-16.4	60.0	-1.0	0.9	1.3
-13.1	63.0	-2.0	0.9	1.2
-9.8	66.0	-3.0	0.8	1.1
-6.6	69.0	-4.0	0.8	1.0
-3.3	72.0	-5.0	0.7	1.0



Rock Size (DUTCH Method)

Slope Parameter	K_{sl}	0.9	*From Rock Manual (5.2.1.3)*
Turbulence Factor	K_t^2	6	*From Rock Manual (5.2.3.1)*
Relative Density	Δ	1.580	
Density of Water	ρ_w	1.025	t/m^3
Density of Rock	ρ_s	2.645	t/m^3

Datum (NAVD88)	$V_{x,r}$	D_{50} (m)	D_{50} (ft)	W_{50} (mt)	W_{50} (kg)	W_{50} (lb)
-45.9	0.9	0.09	0.31	0.00	2	5
-42.6	1.2	0.15	0.49	0.01	9	20
-39.4	1.4	0.20	0.65	0.02	20	45
-36.1	1.5	0.23	0.75	0.03	31	69
-32.8	1.5	0.24	0.79	0.04	37	81
-29.5	1.5	0.24	0.79	0.04	36	80
-26.2	1.5	0.23	0.75	0.03	31	69
-23.0	1.4	0.21	0.69	0.02	25	55
-19.7	1.3	0.19	0.63	0.02	19	41
-16.4	1.3	0.17	0.56	0.01	13	29
-13.1	1.2	0.15	0.50	0.01	9	20
-9.8	1.1	0.13	0.44	0.01	6	14
-6.6	1.0	0.12	0.39	0.00	4	10
-3.3	1.0	0.10	0.34	0.00	3	6

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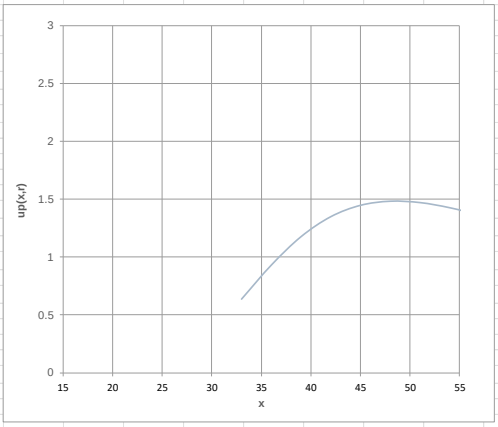
ATTACHMENT C-5
TUG WORKING AT 100% POWER AND AT 1.0LOA DISTANCE FROM THE SLOPE

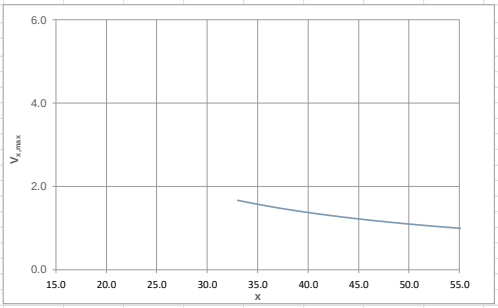
REFERENCE	PIANC Report MARCom #180 (2015) Guidelines for Protecting Berthing Structures from Scour Caused by Ships The Rock Manual (CIRIA C683), 2007			
Water Depth	H	14.00	m	
Propeller Depth		6.00	m	Max draft 5.8m
Water Depth Under Propeller	H_p	8.00	m	
Propeller Diameter	D_p	2.70	m	
Total Installed Power	$P_{installed}$	2,240,000	watts	Twin Engine
Power Applied		100%		
Total Applied Power	$P_{applied}$	2,240,000	watts	
Twin Propeller	Y			
Rudder	N			PALNG Tug
Ducted Propeller	Y			Z-drive 32m
Propeller offset from Stern	$P_{off,stern}$	3	m	
Limit of tug stern (x axis)	$L_{tug,x}$	30	m	1.0 tug LOA
Water Density	ρ_w	1025	kg/m^3	
Maximum Axial Velocity	V_o	7.83	m/s	
Slope	3	:1		
X step	3			
Erosion Critical Velocity	V_{cr}	1.2	m/s	



GERMAN Method

Maximum Bottom Velocity	$V_{b,max}$	1.57	m/s	

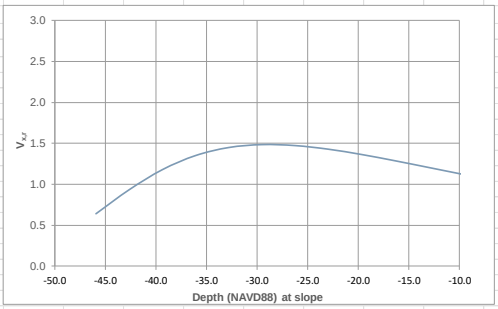
Datum (NAVD88)	x	r	$V_{x,max}$	$V_{x,r}$
-45.9	33.0	8.0	1.7	0.6
-42.6	36.0	7.0	1.5	0.9
-39.4	39.0	6.0	1.4	1.2
-36.1	42.0	5.0	1.3	1.4
-32.8	45.0	4.0	1.2	1.4
-29.5	48.0	3.0	1.1	1.5
-26.2	51.0	2.0	1.1	1.5
-23.0	54.0	1.0	1.0	1.4
-19.7	57.0	0.0	1.0	1.4
-16.4	60.0	-1.0	0.9	1.3
-13.1	63.0	-2.0	0.9	1.2
-9.8	66.0	-3.0	0.8	1.1
-6.6	69.0	-4.0	0.8	1.0
-3.3	72.0	-5.0	0.8	1.0



DUTCH Method

Maximum Bottom Velocity	$V_{b,max}$	1.14	m/s	m/s

Datum (NAVD88)	x	r	$V_{x,max}$	$V_{x,r}$
-45.9	33.0	8.0	1.8	1.0
-42.6	36.0	7.0	1.6	1.3
-39.4	39.0	6.0	1.5	1.5
-36.1	42.0	5.0	1.4	1.6
-32.8	45.0	4.0	1.3	1.6
-29.5	48.0	3.0	1.2	1.6
-26.2	51.0	2.0	1.2	1.6
-23.0	54.0	1.0	1.1	1.5
-19.7	57.0	0.0	1.0	1.5
-16.4	60.0	-1.0	1.0	1.4
-13.1	63.0	-2.0	0.9	1.3
-9.8	66.0	-3.0	0.9	1.2
-6.6	69.0	-4.0	0.9	1.2
-3.3	72.0	-5.0	0.8	1.1



Rock Size (DUTCH Method)

Slope Parameter	K_{sl}	0.9		*From Rock Manual (5.2.1.3)*
Turbulence Factor	K_t^2	6		*From Rock Manual (5.2.3.1)*
Relative Density	Δ	1.580		
Density of Water	ρ_w	1.025	t/m^3	
Density of Rock	ρ_s	2.645	t/m^3	

Datum (NAVD88)	$V_{x,r}$	D_{50} (m)	D_{50} (ft)	W_{50} (mt)	W_{50} (kg)	W_{50} (lb)
-45.9	1.0	0.11	0.37	0.00	4	8
-42.6	1.3	0.18	0.60	0.02	16	35
-39.4	1.5	0.24	0.78	0.04	36	80
-36.1	1.6	0.28	0.91	0.06	56	123
-32.8	1.6	0.29	0.96	0.07	66	145
-29.5	1.6	0.29	0.95	0.06	64	142
-26.2	1.6	0.28	0.91	0.06	56	123
-23.0	1.5	0.26	0.84	0.04	44	97
-19.7	1.5	0.23	0.76	0.03	33	73
-16.4	1.4	0.21	0.68	0.02	24	52
-13.1	1.3	0.18	0.60	0.02	16	36
-9.8	1.2	0.16	0.53	0.01	11	25
-6.6	1.2	0.14	0.47	0.01	8	17
-3.3	1.1	0.13	0.41	0.01	5	11

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ATTACHMENT – D

COASTAL ENGINEERING DESIGN

ATTACHMENT D1

- LNG BASIN AND PROPERTY SHORELINE AMOUR ROCK SIZE, LAYER THICKNESS AND ITS GRADATION
- LNG BASIN AND PROPERTY SHORELINE BEDDING ROCK SIZE, LAYER THICKNESS AND ITS GRADATION

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ATTACHMENT D1: SELECTED ROCK W50 = 550 LB AMOUR LAYER THICKNESS 3.0 FT AND ITS GRADATION

% Lighter than Mass Specified	0 to 15	15 to 50	50 to 100	100 (max)
Riprap Armor stone by weight, lb.	200	550	1200	2500

ATTACHMENT D2: SELECTED BEDDING STONE W50 = 50 LB, LAYER THICKNESS 1.0 FT AND ITS GRADATION

Bedding Stone Size D_{50} = 0.6 ft (or W_{50}=50 lb by weight)
Bedding Stone Layer Thickness 1.0 ft
Gradation of Bedding Stone:

% Lighter than Mass Specified	0 to 15	15 to 50	50 to 100	100 (max)
Bedding stone by weight, lb.	20	50	70	90

Based on Project Reference Document, Shoreline Protection Report, Reference 2.1.5 and Coastal Engineering Manual (CEM), Reference 2.2.1.

- D_{50} of bedding stone - approximated by 0.22*D_{50} of the primary armour rock
- Thickness of bedding layer - 0.5*D_{50} of primary armour rock or minimum of 0.75 ft

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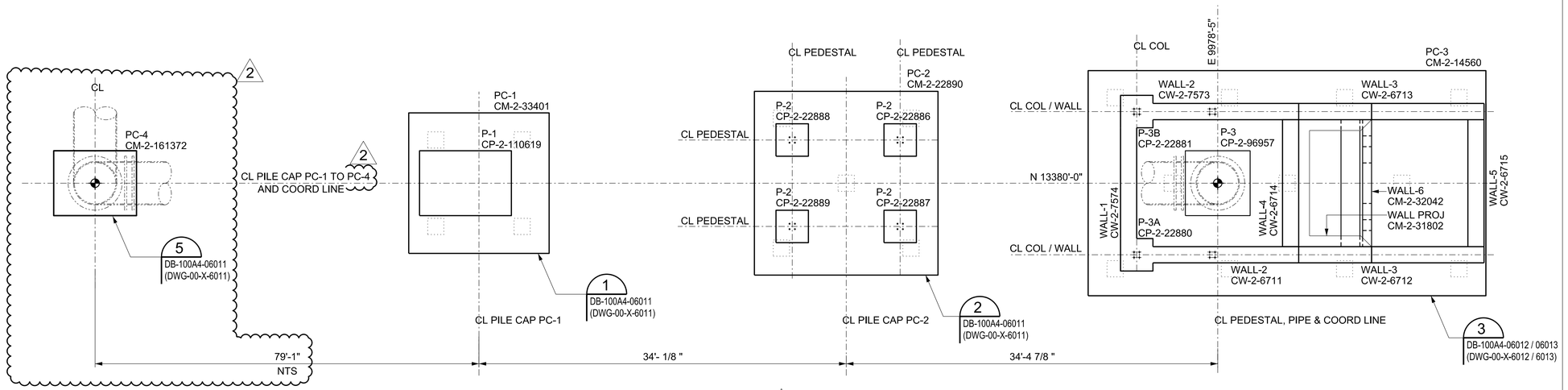
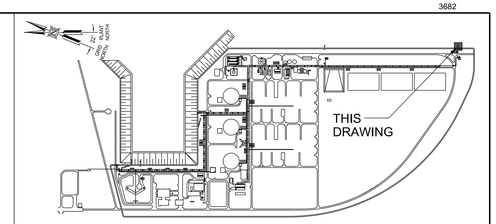


2

PC-1 TO PC-4 PILE CAP PLAN FOR OUT FALL STRUCTURE - 1

SCALE 3/16" = 1'-0"

CWP:108D1-02Z-D



KEY PLAN

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR CONCRETE GENERAL NOTES, REFERENCES AND ABBREVIATIONS SEE STD DRAWING 26196-100-DB-000-00001 (PAL-PJT-CIV-DWG-00-X-6001).
3. PILE TO PILE CAP INTERFACE DETAIL SEE DRAWING 26196-100-CP-000-00001 (PAL-PJT-CIV-DWG-00-X-4001).
4. UNO GROUT SHALL BE NON SHRINK CEMENT BASED TYPE IN ACCORDANCE WITH SPECIFICATION 26196-100-3PS-DB01-00002 (PAL-PJT-CIV-STD-00-X-0011).
5. ANCHOR BOLT SHALL BE IN ACCORDANCE WITH STD DRAWING 26196-100-DB-000-00008 (PAL-PJT-CIV-DWG-00-X-6008).
6. FOR POST INSTALLED ANCHORS, SEE DRAWING 26196-100-DB-000-00009 (PAL-PJT-CIV-DWG-00-X-6009).
7. FOR ELECTRICAL GROUNDING LAYOUT SEE GROUNDING KEY PLAN OSBL AREA DRAWING 26196-100-EG-100-00001 (PAL-T0-ELE-PLN-00-GEN-4001).
8. FOR PILE LAYOUT SEE DRAWING 26196-100-CP-100A4-04001 (PAL-T0-CIV-DWG-00-X-4001).
9. REBAR SHALL BE ADJUSTED TO AVOID CLASH WITH ANCHOR BOLT.
10. ALL CONSTRUCTION JOINT LOCATIONS SHALL BE DECIDED BY CONSTRUCTION TO SUIT AT SITE. STANDARD DETAIL-2 DRAWING 26196-100-DWG-000-00004 (PAL-PJT-CIV-DWG-00-X-6004).
11. ALL ELECTRICAL & PIPING UNDERGROUND & EMBEDMENTS SHALL BE IN PLACE PRIOR TO PLACING OF CONCRETE.
12. CONTINOUS DEWATERING OF WATER SHALL BE ENSURED DURING CONSTRUCTION OF WALLS.
13. WATERSTOP SHALL BE 4" RIBBED CENTERBULB THERMOPLASTIC ELASTOMERIC RUBBER (TPER/TPV) WATERSTOP
14. REBAR DEVELOPMENT LENGTHS AND SPLICES REFER TO DRAWING 26196-100-DB -000-00012 (PAL-PJT-CIV-DWG-00-X-6012).
15. ANY CJ IN WALL SHOULD BE BRING IN NOTICE TO RE IF REQUIRED FROM FIELD ENGINEER.
16. READ THIS DWG IN CONJUCTION WITH THE FOLLOWING DRAWINGS:
    A) 26196-100-DB-100A4-06011 (PAL-T0-CIV-DWG-00-X-6011) TO
    B) 26196-100-DB-100A4-06014 (PAL-T0-CIV-DWG-00-X-6014).

LEGEND:

CWP : CONSTRUCTION WORK PACKAGE
BOC : BOTTOM OF CONCRETE

BILL OF MATERIALS

FDN TYPE	MIX	QTY
CONC BASE SLAB	CLASS S-1	135.85 CY
CONC WALL	CLASS S-1	49.96 CY
PEDESTAL P-1, P-2, P-3, P-3A, P-3B & P-4 2	CLASS S-1	47.50 CY 2

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	4-30-2024	ISSUED FOR CONSTRUCTION	SB	YP/AB	KS/NG	SS	SS								
001	06-07-2024	ISSUED FOR CONSTRUCTION	MR	YP/AB	KS/NG	SA	SS								
002	08-29-2025	ISSUED FOR CONSTRUCTION	SB	AH	KS	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
100A4 FACILITY PLAN BERM
OUT FALL STRUCTURE - 1, PILE CAP LAYOUT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-00-X-6010	002	26196-100-DB-100A4-06010	002

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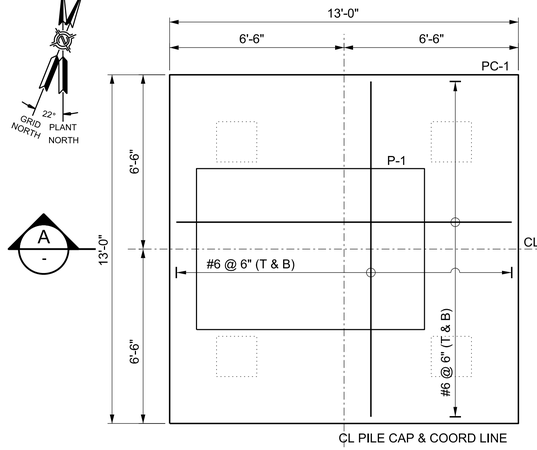
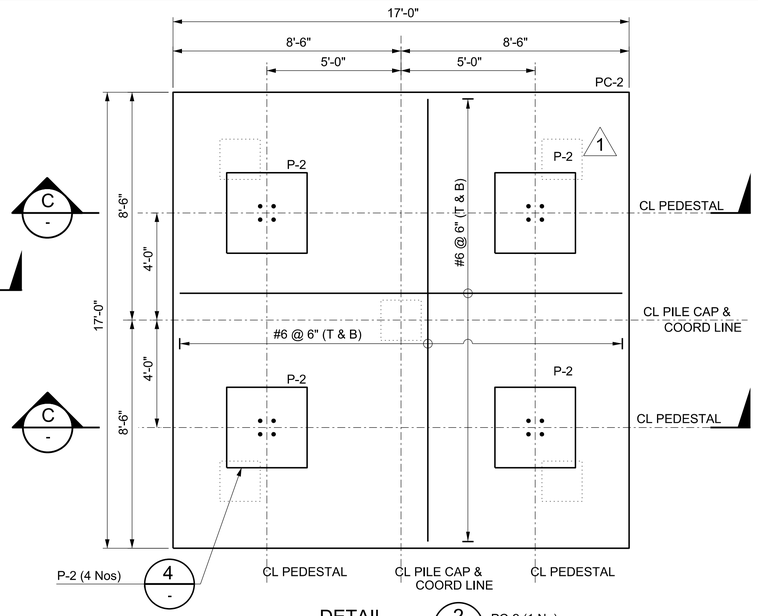
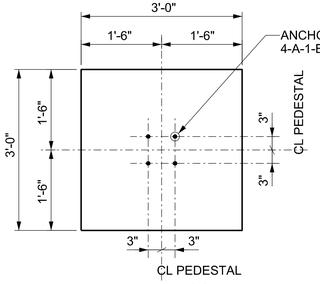
GRID NORTH / PLANT NORTH 22°



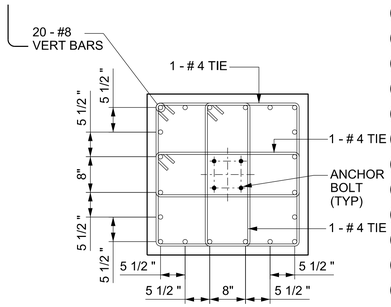
DETAIL A - SCALE 3/8" = 1'-0" — 1 PC-1 (1 No) — DB-100A4-06010 (DWG-00-X-6010)



DETAIL C - SCALE 3/8" = 1'-0" — 2 PC-2 (1 No) — DB-100A4-06010 (DWG-00-X-6010)



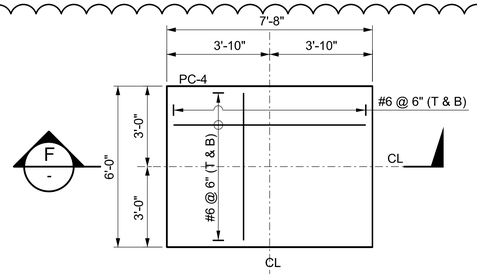
DETAIL D - SCALE 3/8" = 1'-0" — 4 P-2 (4 Nos) — .



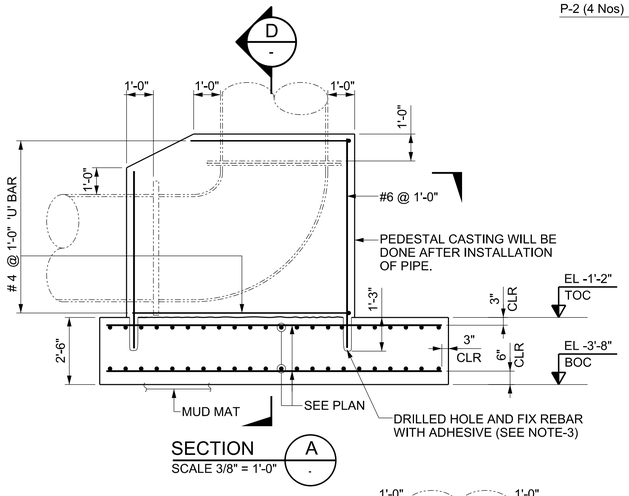
SECTION E - SCALE 3/4" = 1'-0" — P-2 (4 Nos) — .

NOTES:-

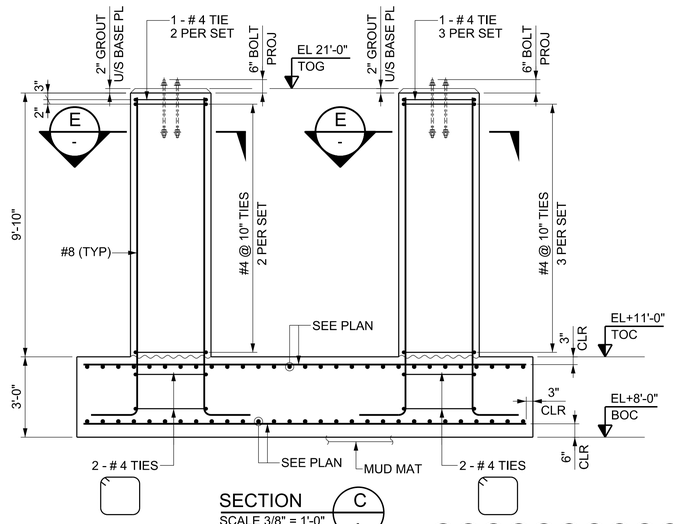
1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-100A4-06010 (PAL-T0-CIV-DWG-00-X-6010).
3. POST-INSTALLED REBAR SEE STANDARD DRAWING 26196-100-DB-000-00009 (PAL-PJT-CIV-DWG-00-X-6009)
4. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-100A4-06010 (PAL-T0-CIV-DWG-00-X-6010)



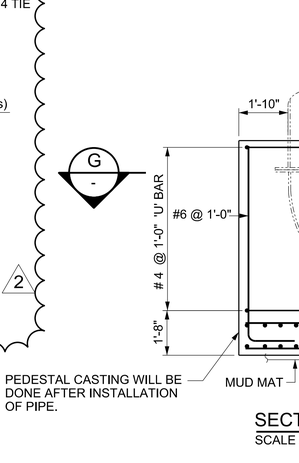
DETAIL F - SCALE 3/8" = 1'-0" — 5 PC-4 (1 No) — DB-100A4-06010 (DWG-00-X-6010)



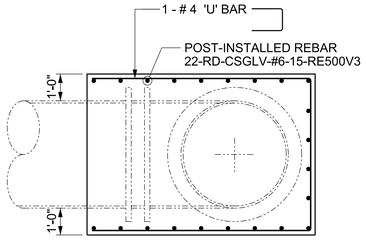
SECTION A - SCALE 3/8" = 1'-0" — .



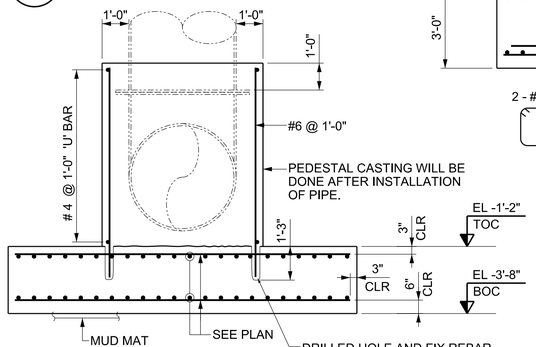
SECTION C - SCALE 3/8" = 1'-0" — .



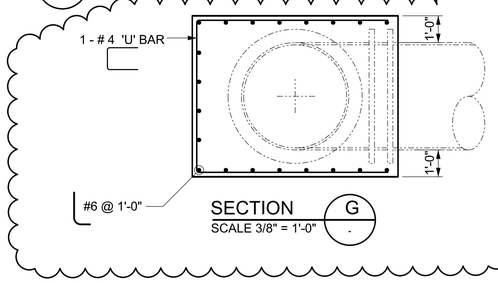
SECTION F - SCALE 3/8" = 1'-0" — .



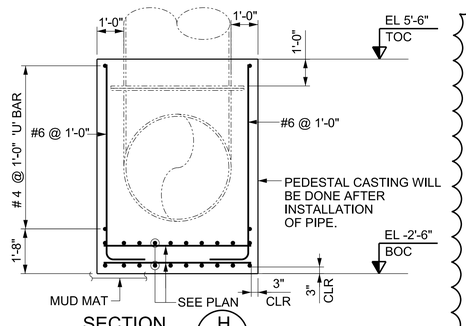
SECTION B - SCALE 3/4" = 1'-0" — P-1 (1 No) — .



SECTION D - SCALE 3/8" = 1'-0" — .



SECTION G - SCALE 3/8" = 1'-0" — .



SECTION H - SCALE 3/8" = 1'-0" — .

Port Arthur LNG

BECHTEL Bechtel Energy Inc. 26196-100 FIRM NO. F-9684

SCALE: AS NOTED

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000	4-30-2024	ISSUED FOR CONSTRUCTION	SB	YP/AB	KS/NG	SS	SS								
001	06-07-2024	ISSUED FOR CONSTRUCTION	MR	YP/AB	KS/NG	SA	SS								
002	08-29-2025	ISSUED FOR CONSTRUCTION	SB	AH	KS	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
100A4 FACILITY PLAN BERM
OUT FALL STRUCTURE - 1, PILE CAP PLAN, SECTIONS & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-00-X-6011	002	26196-100-DB-100A4-06011	002

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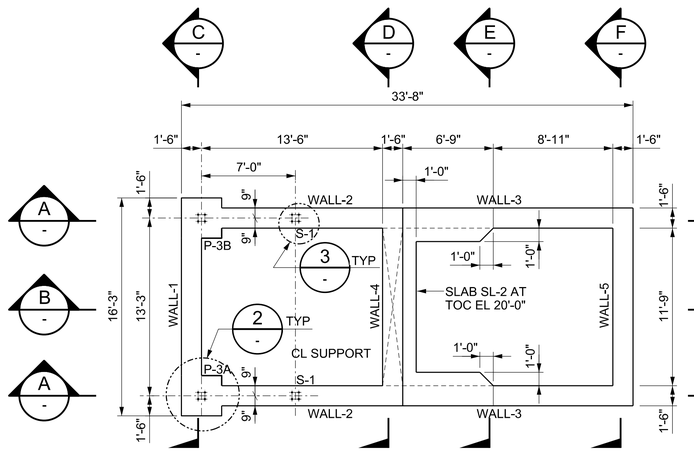
NOTES:-

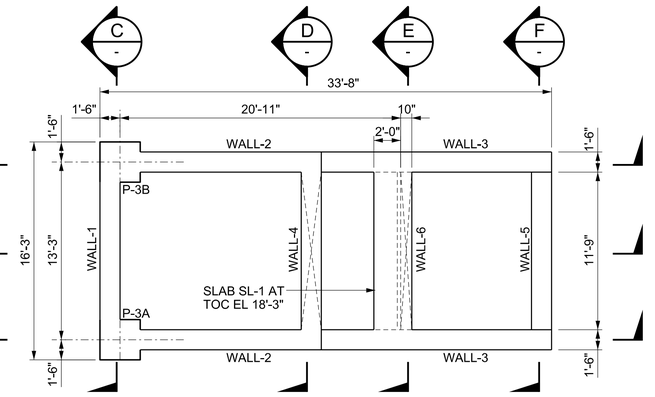
1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-100A4-06010 (PAL-T0-CIV-DWG-00-X-6010).
3. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-100A4-06010 (PAL-T0-CIV-DWG-00-X-6010)



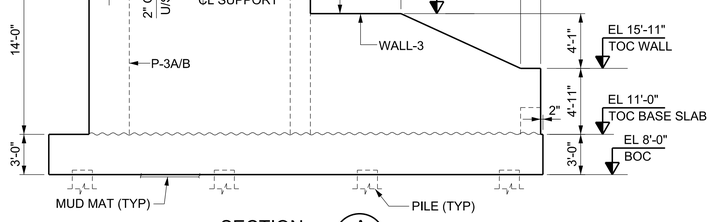
DETAIL 3 PC-3 PILE CAP PLAN (OUT FALL STRUCTURE - 1)
SCALE 3/16" = 1'-0" | DB-100A4-06010 (DWG-00-X-6010)



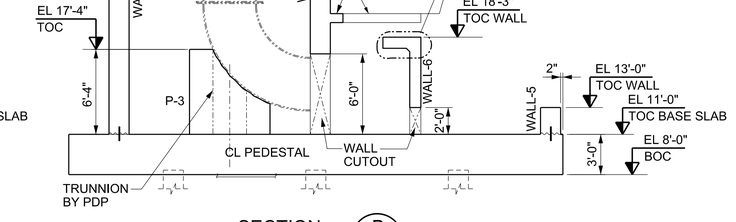
DETAIL 3 PC-3 PILE CAP TOP PLAN
SCALE 3/16" = 1'-0" | DB-100A4-06010 (DWG-00-X-6010)



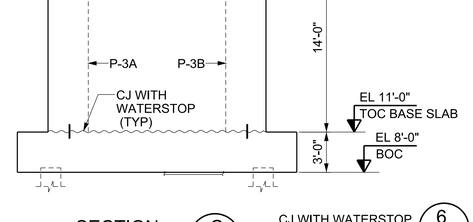
DETAIL 3 PC-3 PILE CAP WALL PLAN AT TOC EL 18'-3"
SCALE 3/16" = 1'-0" | DB-100A4-06010 (DWG-00-X-6010)



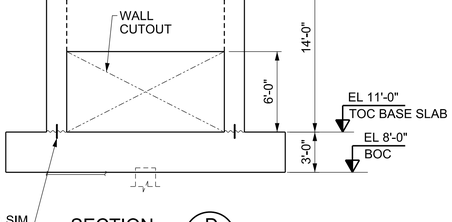
SECTION A
SCALE 3/16" = 1'-0"



SECTION B
SCALE 3/16" = 1'-0"

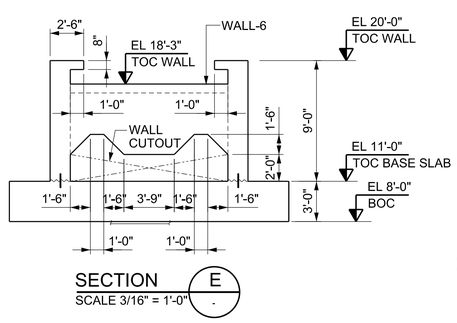


SECTION C
SCALE 3/16" = 1'-0"

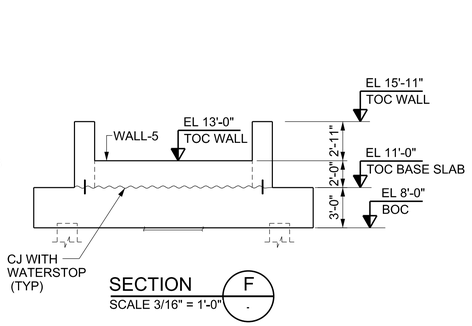


CJ WITH WATERSTOP 6 SIM
DB-000-00010 (DWG-00-X-6010)

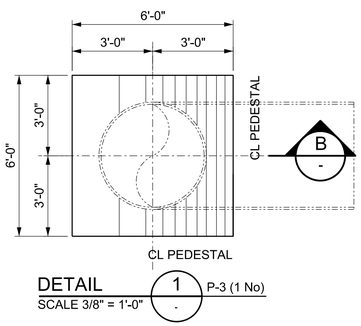
SECTION D
SCALE 3/16" = 1'-0"



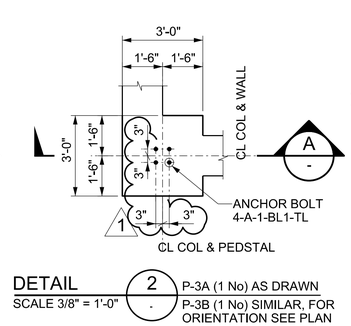
SECTION E
SCALE 3/16" = 1'-0"



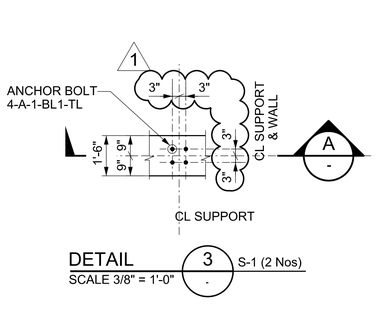
SECTION F
SCALE 3/16" = 1'-0"



DETAIL 1 P-3 (1 No)
SCALE 3/8" = 1'-0"



DETAIL 2 P-3A (1 No) AS DRAWN
SCALE 3/8" = 1'-0" P-3B (1 No) SIMILAR, FOR ORIENTATION SEE PLAN



DETAIL 3 S-1 (2 Nos)
SCALE 3/8" = 1'-0"

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-30-2024	ISSUED FOR CONSTRUCTION	SB	YP/AB	KS/NG	SS	SS								
001	06-07-2024	ISSUED FOR CONSTRUCTION	MR	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
100A4 FACILITY PLAN BERM
OUT FALL STRUCTURE - 1, PILE CAP PLAN, SECTIONS & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-00-X-6012	001	26196-100-DB-100A4-06012	001

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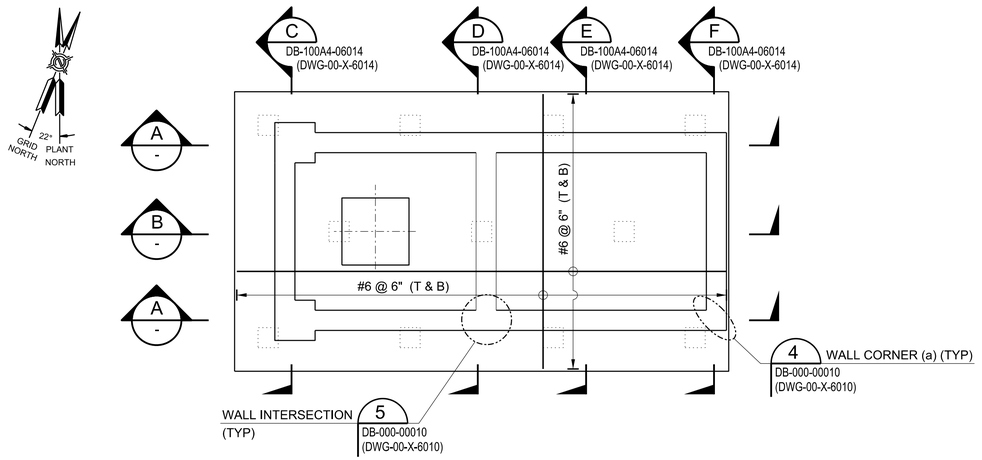
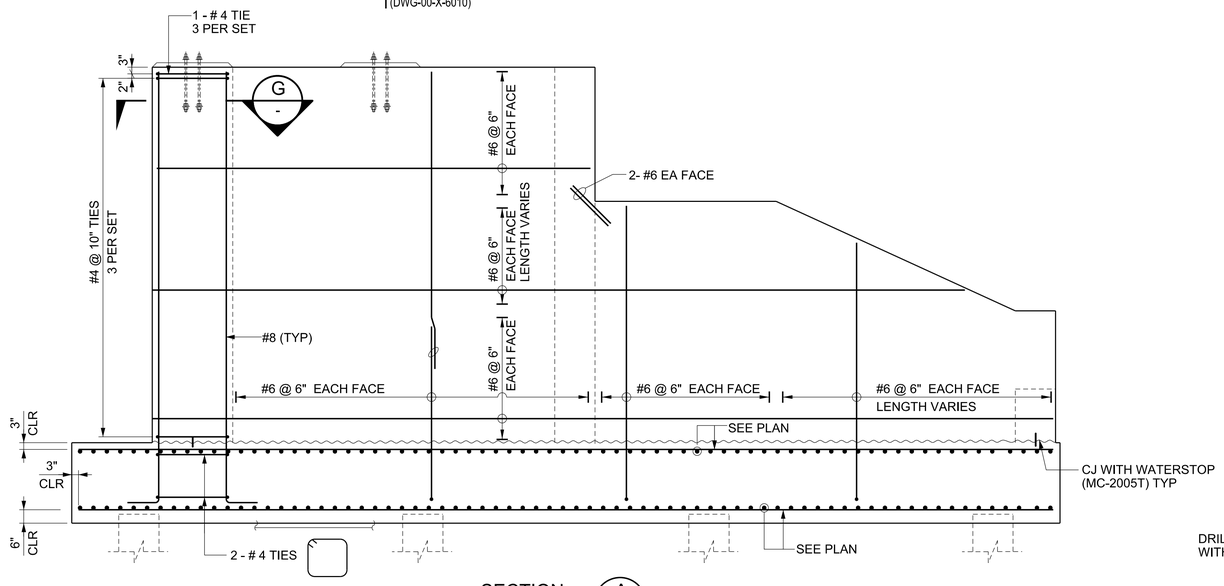
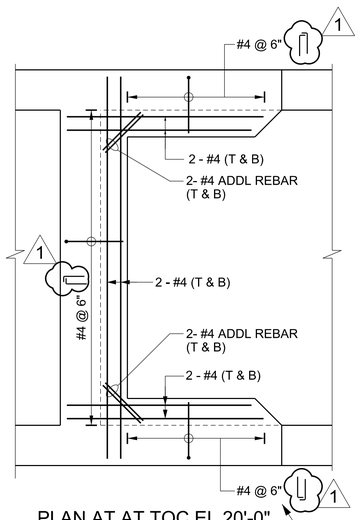


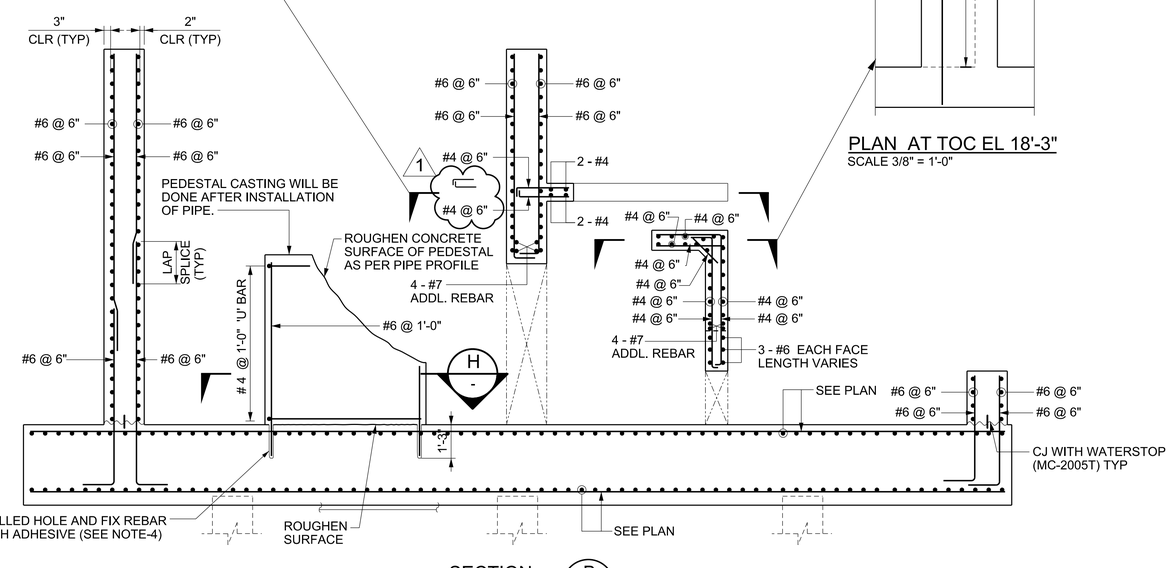
DETAIL 3 PC-3 PILE CAP PLAN (OUT FALL STRU -1)
SCALE 3/16" = 1'-0"
DB-100A4-06010
(DWG-00-X-6010)



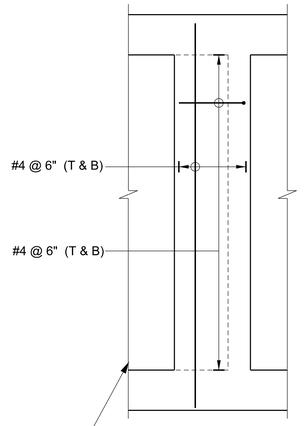
SECTION A
SCALE 3/8" = 1'-0"



PLAN AT AT TOC EL 20'-0"
SCALE 3/8" = 1'-0"



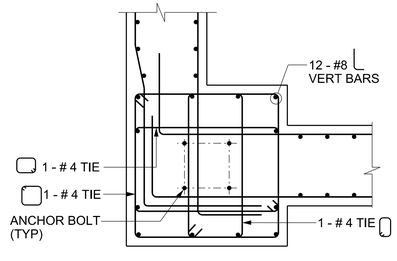
SECTION B
SCALE 3/8" = 1'-0"



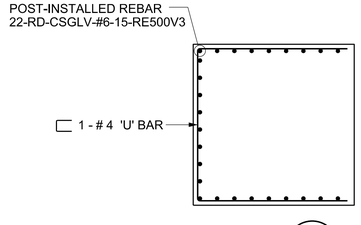
PLAN AT TOC EL 18'-3"
SCALE 3/8" = 1'-0"

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-100A4-06010 (PAL-T0-CIV-DWG-00-X-6010).
3. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-100A4-06012 (PAL-T0-CIV-DWG-00-X-6012)
4. POST-INSTALLED REBAR SEE STANDARD DRAWING 26196-100-DB-000-00009 (PAL-PJT-CIV-DWG-00-X-6009)



SECTION G
SCALE 3/4" = 1'-0"
P-3A (1 No) AS DRAWN
P-3B (1 No) SIMILAR, FOR
ORIENTATION SEE PLAN



SECTION H
SCALE 3/8" = 1'-0"
P-3(1 No)

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	4-30-2024	ISSUED FOR CONSTRUCTION	SB	YP/AB	KS/NG	SS	SS								
001	06-07-2024	ISSUED FOR CONSTRUCTION	MR	YP/AB	KS/NG	SA	SS								

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
100A4 FACILITY PLAN BERM
OUT FALL STRUCTURE - 1, REINFORCEMENT PLAN, SECTIONS & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-00-X-6013	001	26196-100-DB-100A4-06013	001

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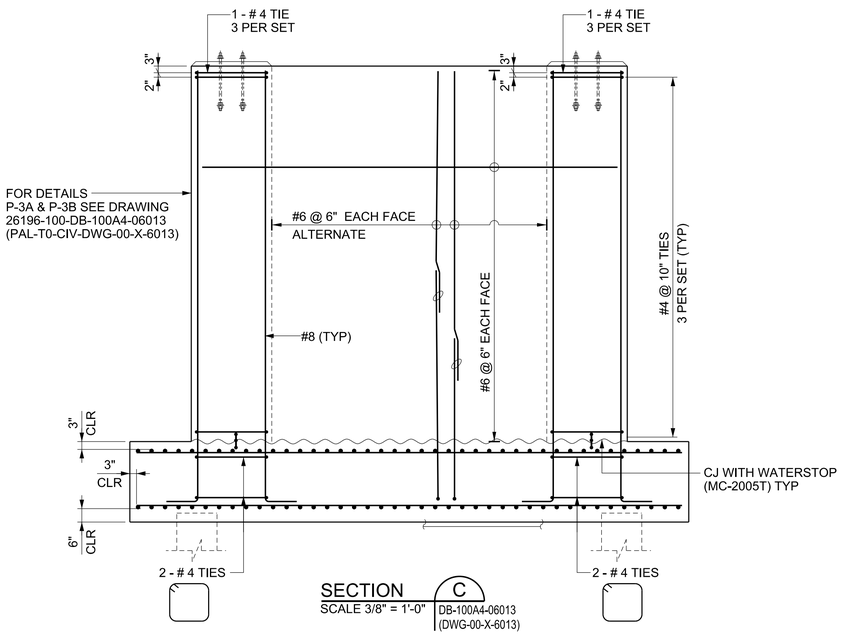
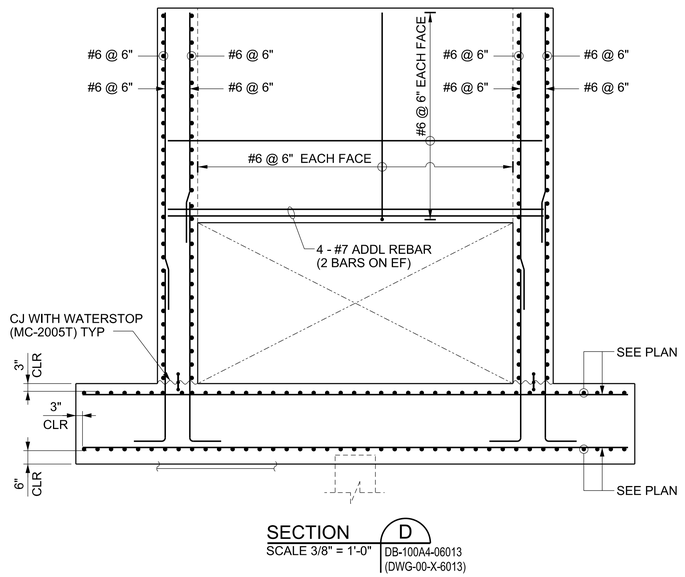
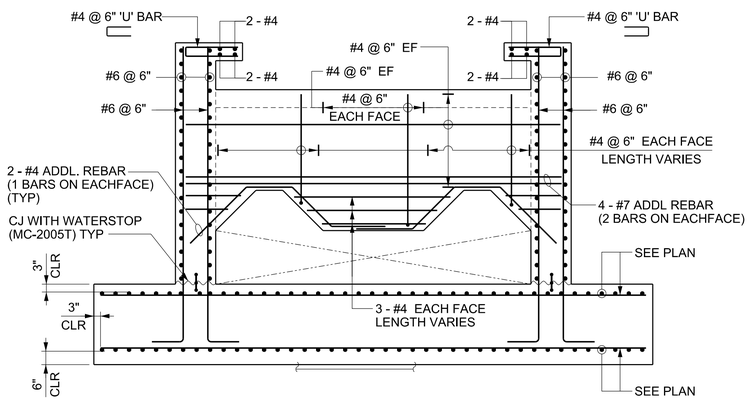


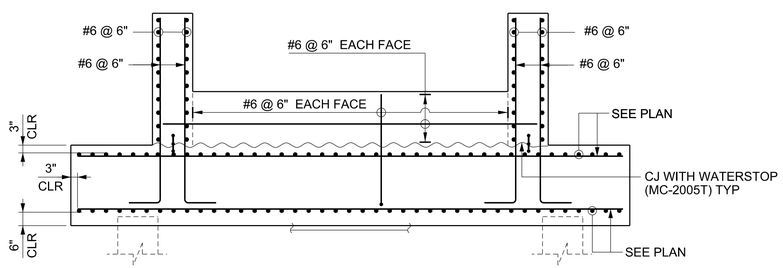
SECTION C
SCALE 3/8" = 1'-0" | DB-100A4-06013 (DWG-00-X-6013)



SECTION D
SCALE 3/8" = 1'-0" | DB-100A4-06013 (DWG-00-X-6013)



SECTION E
SCALE 3/8" = 1'-0" | DB-100A4-06013 (DWG-00-X-6013)



SECTION F
SCALE 3/8" = 1'-0" | DB-100A4-06013 (DWG-00-X-6013)

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-100A4-06010 (PAL-T0-CIV-DWG-00-X-6010)
3. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-100A4-06012 (PAL-T0-CIV-DWG-00-X-6012)

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	04-30-2024	ISSUED FOR CONSTRUCTION	SB	YP/AB	KS/NG	SS	SS								

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26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
100A4 FACILITY PLAN BERM
OUT FALL STRUCTURE - 1, PILE CAP REINFORCEMENT SECTIONS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-00-X-6014	000	26196-100-DB-100A4-06014	000

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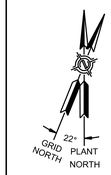
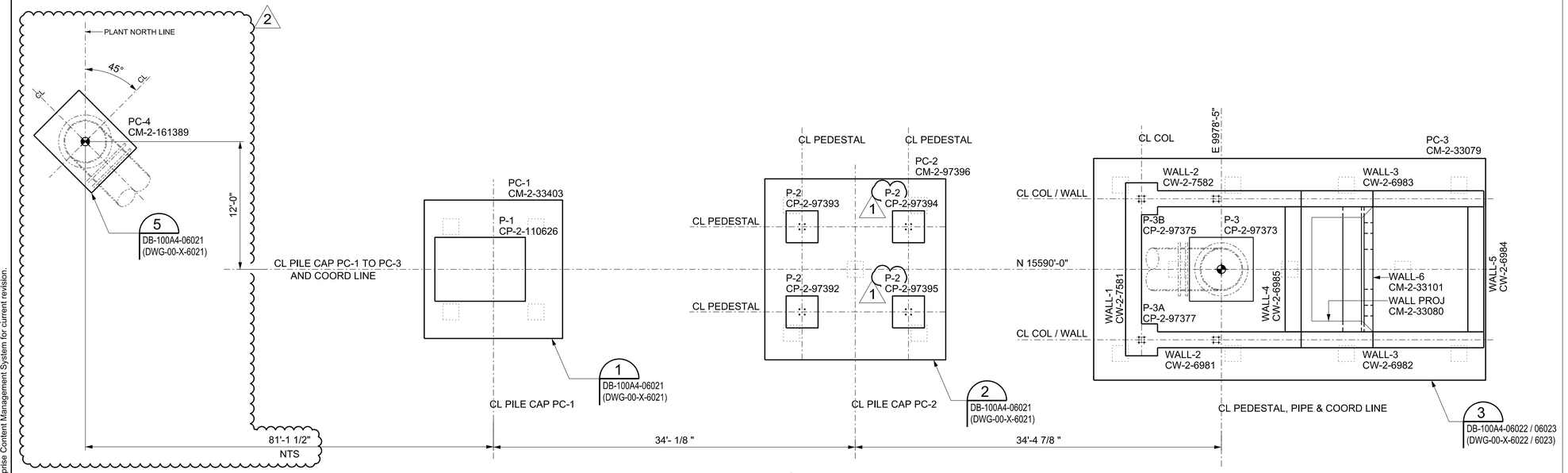


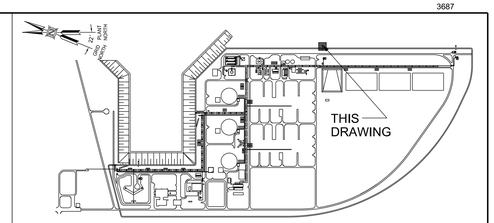


2

PC-1 TO PC-4 PILE CAP PLAN FOR OUT FALL STRUCTURE - 2

SCALE 3/16" = 1'-0"

CWP:108D1-01Z-D



KEY PLAN

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR CONCRETE GENERAL NOTES, REFERENCES AND ABBREVIATIONS SEE STD DRAWING 26196-100-DB-000-00001 (PAL-PJT-CIV-DWG-00-X-6001).
3. PILE TO PILE CAP INTERFACE DETAIL SEE DRAWING 26196-100-CP-000-00001 (PAL-PJT-CIV-DWG-00-X-4001).
4. UNO GROUT SHALL BE NON SHRINK CEMENT BASED TYPE IN ACCORDANCE WITH SPECIFICATION 26196-100-3PS-DB01-00002 (PAL-PJT-CIV-STD-00-X-0011).
5. ANCHOR BOLT SHALL BE IN ACCORDANCE WITH STD DRAWING 26196-100-DB-000-00008 (PAL-PJT-CIV-DWG-00-X-6008).
6. FOR POST INSTALLED ANCHORS, SEE DRAWING 26196-100-DB-000-00009 (PAL-PJT-CIV-DWG-00-X-6009).
7. FOR ELECTRICAL GROUNDING LAYOUT SEE GROUNDING KEY PLAN OSBL AREA DRAWING 26196-100-EG-100-00001 (PAL-T0-ELE-PLN-00-GEN-4001).
8. FOR PILE LAYOUT SEE DRAWING 26196-100-CP-100A4-04002 (PAL-T0-CIV-DWG-00-X-4002).
9. REBAR SHALL BE ADJUSTED TO AVOID CLASH WITH ANCHOR BOLT.
10. ALL CONSTRUCTION JOINT LOCATIONS SHALL BE DECIDED BY CONSTRUCTION TO SUIT AT SITE. STANDARD DETAIL-2 DRAWING 26196-100-DWG-000-00004 (PAL-PJT-CIV-DWG-00-X-6004).
11. ALL ELECTRICAL & PIPING UNDERGROUND & EMBEDMENTS SHALL BE IN PLACE PRIOR TO PLACING OF CONCRETE.
12. CONTINOUS DEWATERING OF WATER SHALL BE ENSURED DURING CONSTRUCTION OF WALLS.
13. WATERSTOP SHALL BE 4" RIBBED CENTERBULB THERMOPLASTIC ELASTOMERIC RUBBER (TPER/TPV) WATERSTOP
14. REBAR DEVELOPMENT LENGTHS AND SPLICES REFER TO DRAWING 26196-100-DB -000-00012 (PAL-PJT-CIV-DWG-00-X-6012).
15. ANY CJ IN WALL SHOULD BE BRING IN NOTICE TO RE IF REQUIRED FROM FIELD ENGINEER.
16. READ THIS DWG IN CONJUCTION WITH THE FOLLOWING DRAWINGS:
    A) 26196-100-DB-100A4-06021 (PAL-T0-CIV-DWG-00-X-6021) TO
    B) 26196-100-DB-100A4-06024 (PAL-T0-CIV-DWG-00-X-6024).

LEGEND:

CWP : CONSTRUCTION WORK PACKAGE

BOC : BOTTOM OF CONCRETE

BILL OF MATERIALS

FDN TYPE	MIX	QTY
CONC BASE SLAB	CLASS S-1	135.85 CY
CONC WALL	CLASS S-1	49.96 CY
PEDESTAL P-1, P-2, P-3, P-3A, P-3B & P-4 2	CLASS S-1	47.50 CY 2

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	4-30-2024	ISSUED FOR CONSTRUCTION	SB	YP/AB	KS/NG	SS	SS								
001	06-07-2024	ISSUED FOR CONSTRUCTION	MR	YP/AB	KS/NG	SA	SS								
002	08-29-2025	ISSUED FOR CONSTRUCTION	SB	AH	KS	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
100A4 FACILITY PLAN BERM
OUT FALL STRUCTURE - 2 , PILE CAP LAYOUT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-00-X-6020	002	26196-100-DB-100A4-06020	002

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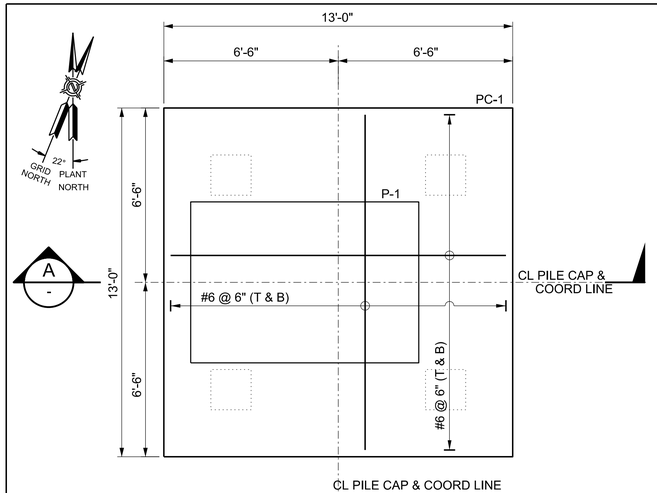
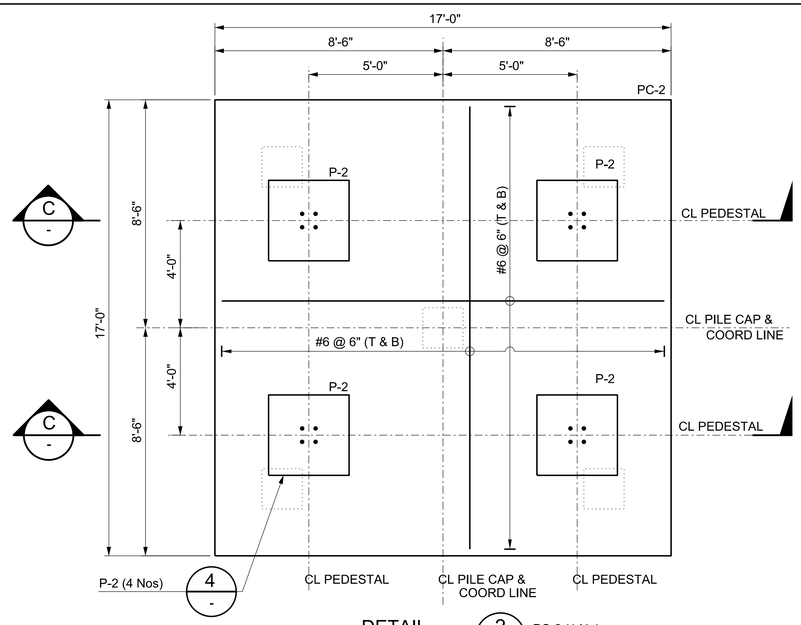
Refer to the Enterprise Content Management System for current revision.

NOTES:-

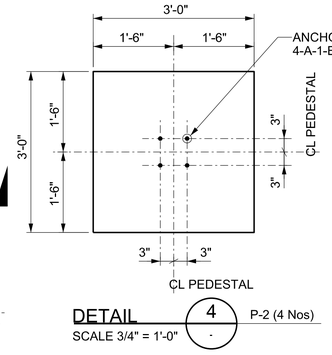
1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-100A4-06020 (PAL-T0-CIV-DWG-00-X-6020).
3. POST-INSTALLED REBAR SEE STANDARD DRAWING 26196-100-DB-000-00009 (PAL-PJT-CIV-DWG-00-X-6009)
4. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-100A4-06020 (PAL-T0-CIV-DWG-00-X-6020)



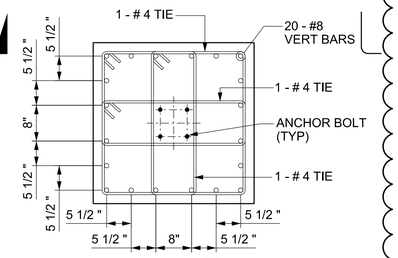
DETAIL 1 PC-1 (1 No)
SCALE 3/8" = 1'-0" DB-100A4-06010 (DWG-00-X-6010)



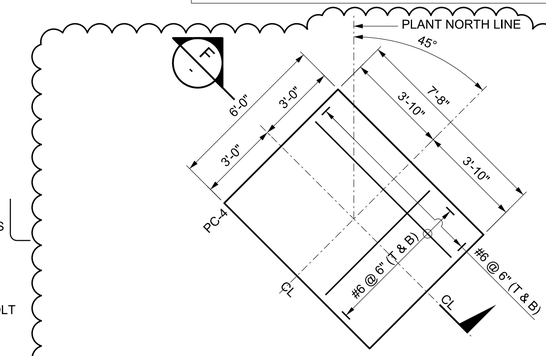
DETAIL 2 PC-2 (1 No)
SCALE 3/8" = 1'-0" DB-100A4-06010 (DWG-00-X-6010)



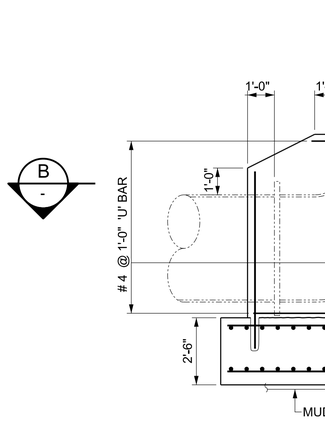
DETAIL 4 P-2 (4 Nos)
SCALE 3/4" = 1'-0"



SECTION E P-2 (4 Nos)
SCALE 3/4" = 1'-0"



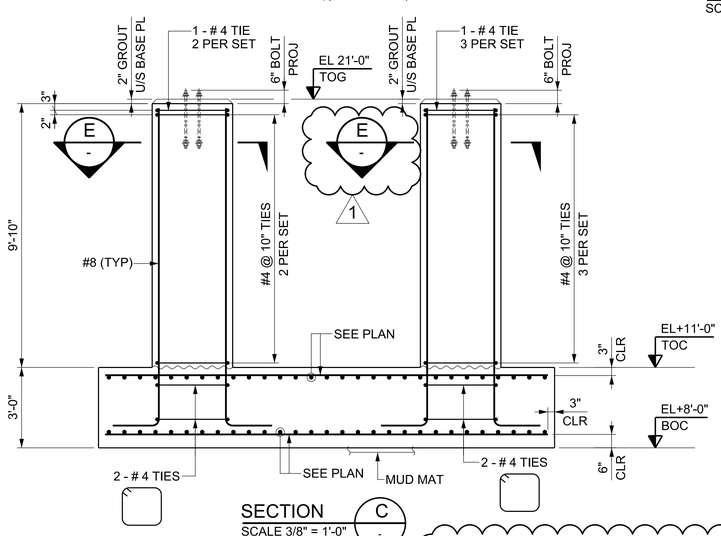
DETAIL 5 PC-4 (1 No)
SCALE 3/8" = 1'-0" DB-100A4-06020 (DWG-00-X-6020)



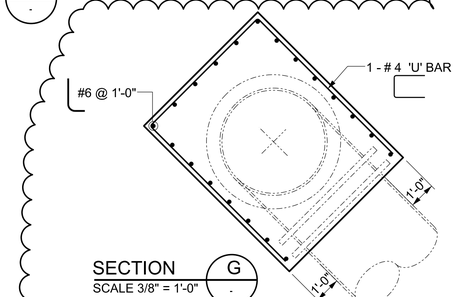
SECTION B P-1 (1 No)
SCALE 3/4" = 1'-0"

SECTION A
SCALE 3/8" = 1'-0"

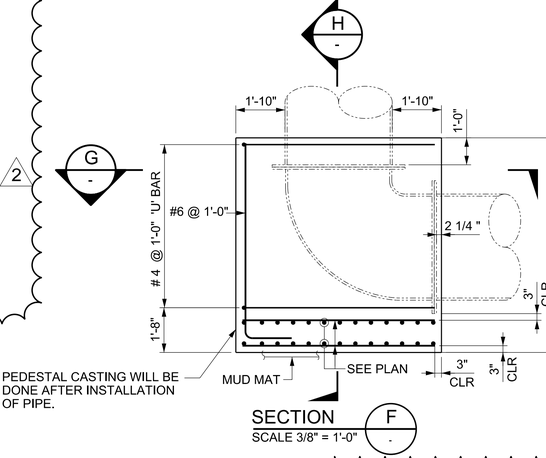
SECTION D
SCALE 3/8" = 1'-0"



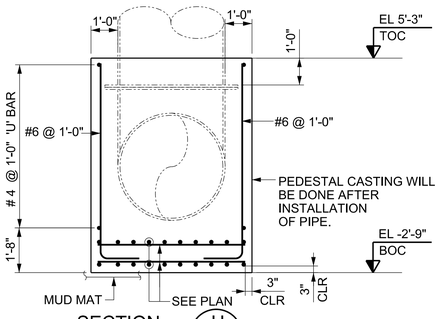
SECTION C
SCALE 3/8" = 1'-0"



SECTION G
SCALE 3/8" = 1'-0"



SECTION F
SCALE 3/8" = 1'-0"



SECTION H
SCALE 3/8" = 1'-0"

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	4-30-2024	ISSUED FOR CONSTRUCTION	SB	YP/AB	KS/NG	SS	SS								
001	06-07-2024	ISSUED FOR CONSTRUCTION	MR	YP/AB	KS/NG	SA	SS								
002	08-29-2025	ISSUED FOR CONSTRUCTION	SB	AH	KS	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
100A4 FACILITY PLAN BERM
OUT FALL STRUCTURE - 2 , PILE CAP PLAN, SECTIONS & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-00-X-6021	002	26196-100-DB-100A4-06021	002

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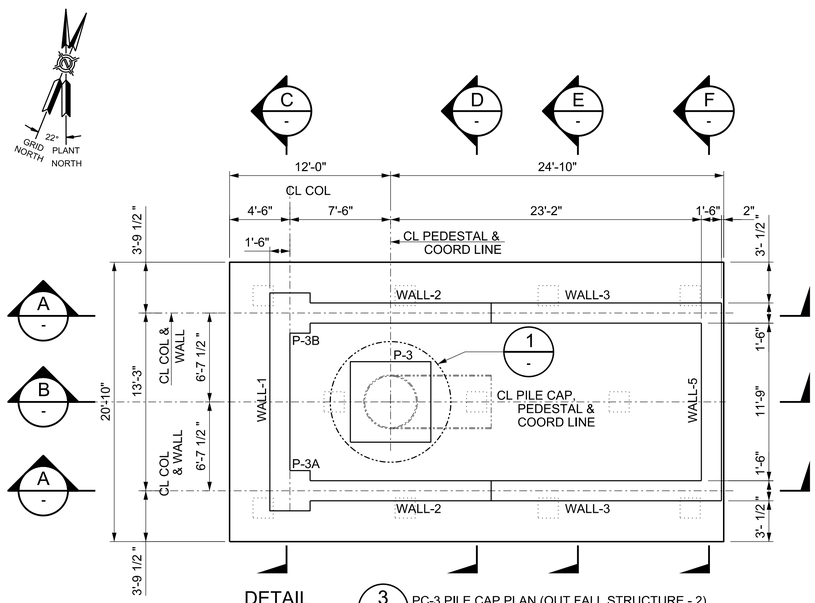
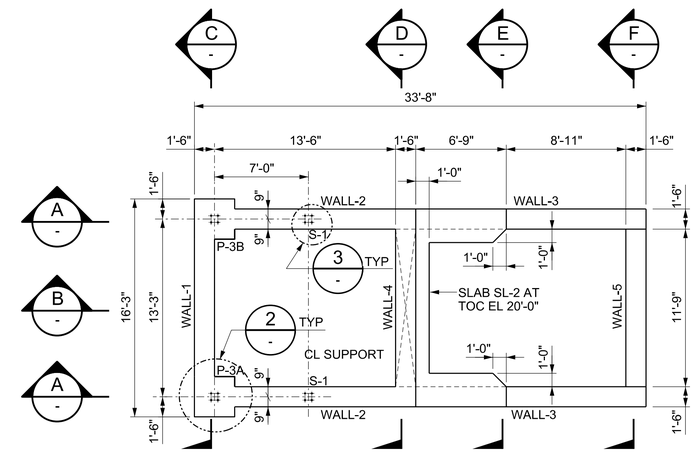
NOTES:-

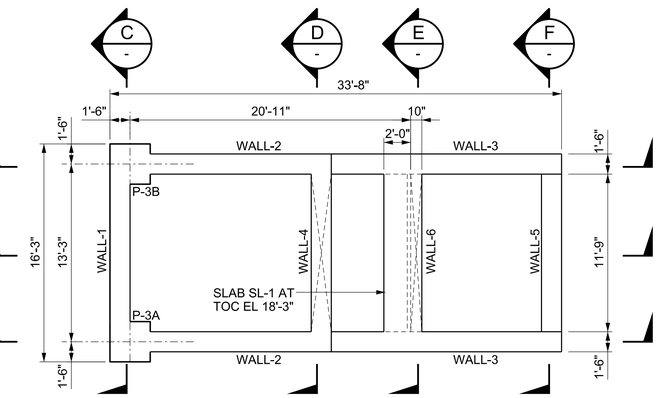
1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-100A4-06020 (PAL-T0-CIV-DWG-00-X-6020).
3. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-100A4-06020 (PAL-T0-CIV-DWG-00-X-6020)



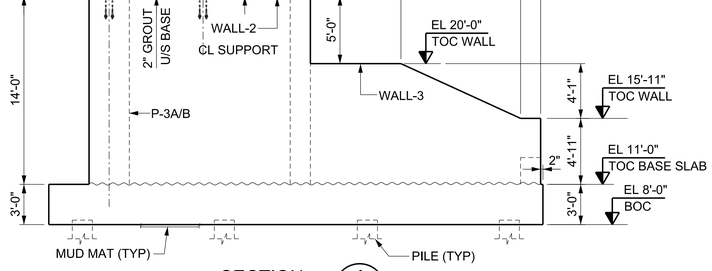
DETAIL 3 PC-3 PILE CAP PLAN (OUT FALL STRUCTURE - 2)
SCALE 3/16" = 1'-0" | DB-100A4-06020 (DWG-00-X-6020)



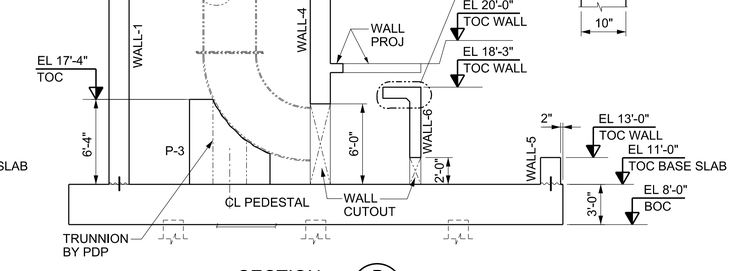
DETAIL 3 PC-3 PILE CAP TOP PLAN
SCALE 3/16" = 1'-0" | DB-100A4-06020 (DWG-00-X-6020)



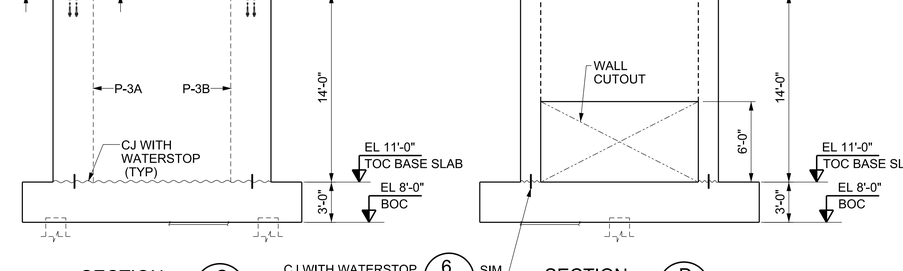
DETAIL 3 PC-3 PILE CAP WALL PLAN AT TOC EL 18'-3"
SCALE 3/16" = 1'-0" | DB-100A4-06020 (DWG-00-X-6020)



SECTION A
SCALE 3/16" = 1'-0"



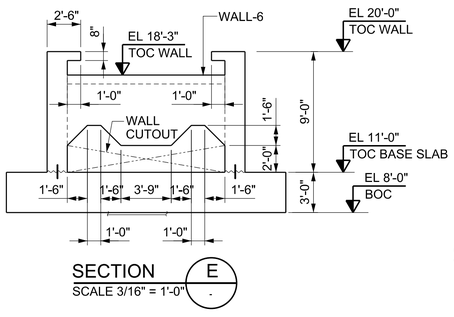
SECTION B
SCALE 3/16" = 1'-0"



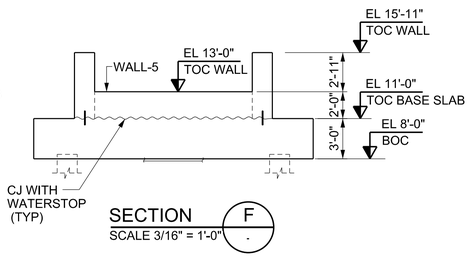
SECTION C
SCALE 3/16" = 1'-0"

CJ WITH WATERSTOP 6 SIM
DB-000-00010 (DWG-00-X-6010)

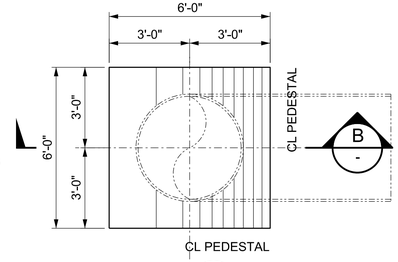
SECTION D
SCALE 3/16" = 1'-0"



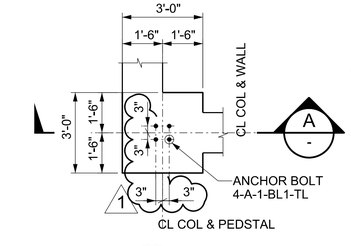
SECTION E
SCALE 3/16" = 1'-0"



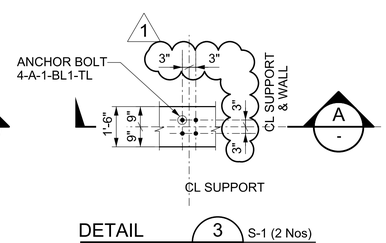
SECTION F
SCALE 3/16" = 1'-0"



DETAIL 1 P-3 (1 No)
SCALE 3/8" = 1'-0"



DETAIL 2 P-3A (1 No) AS DRAWN
SCALE 3/8" = 1'-0" P-3B (1 No) SIMILAR, FOR ORIENTATION SEE PLAN



DETAIL 3 S-1 (2 Nos)
SCALE 3/8" = 1'-0"

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	4-30-2024	ISSUED FOR CONSTRUCTION	SB	YP/AB	KS/NG	SS	SS								
001	06-07-2024	ISSUED FOR CONSTRUCTION	MR	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
100A4 FACILITY PLAN BERM
OUT FALL STRUCTURE - 2 , PILE CAP PLAN, SECTIONS & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-00-X-6022	001	26196-100-DB-100A4-06022	001

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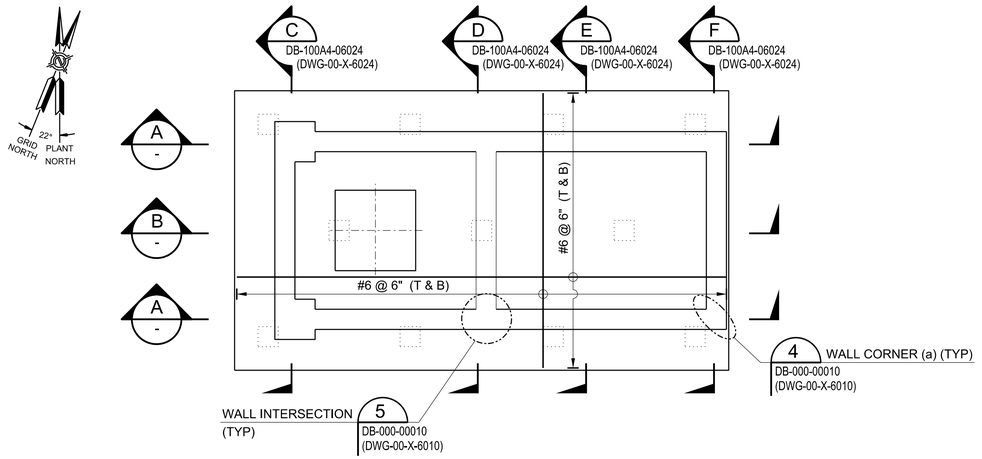
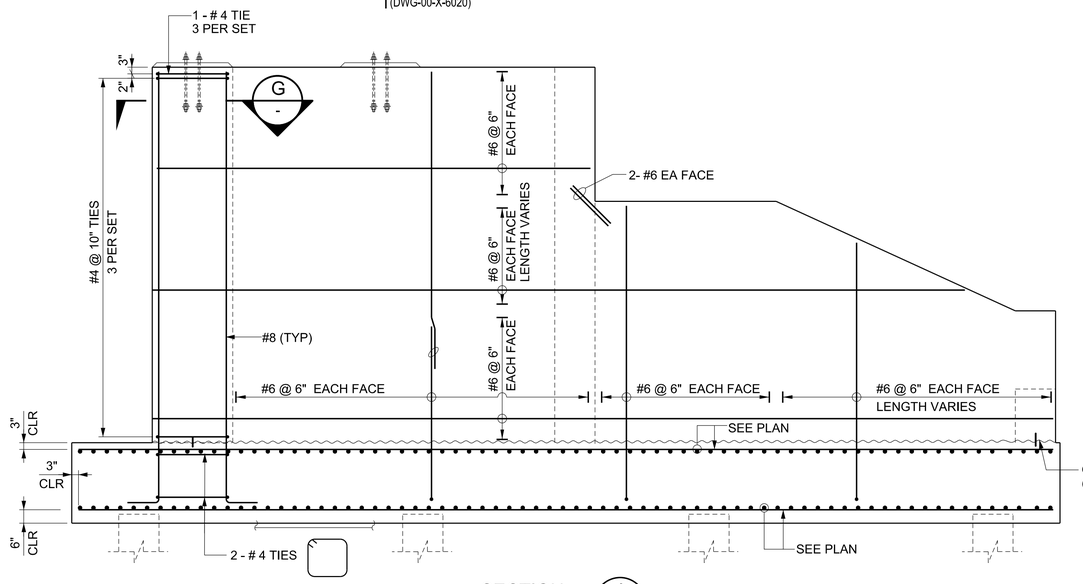
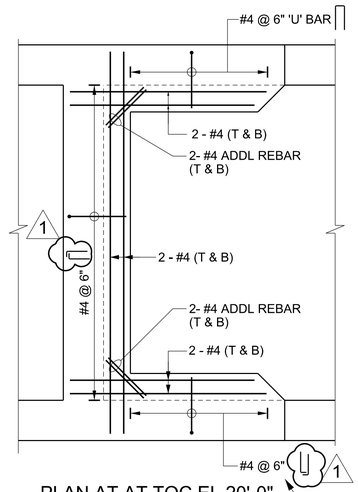


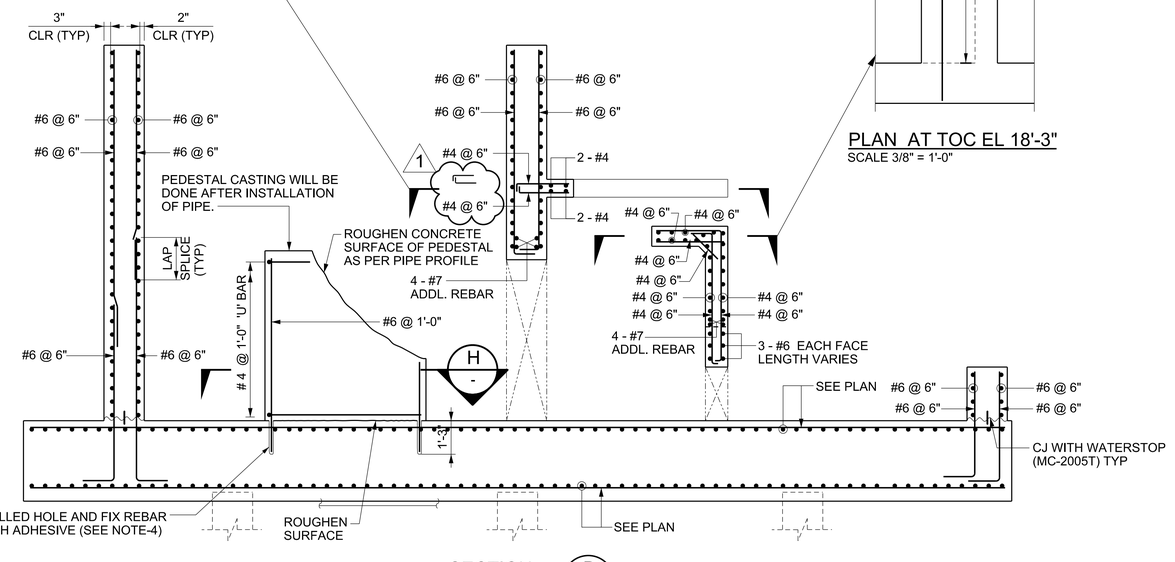
DETAIL 3 — PC-3 PILE CAP PLAN (OUT FALL STRU -2)
SCALE 3/16" = 1'-0"
DB-100A4-06020
(DWG-00-X-6020)



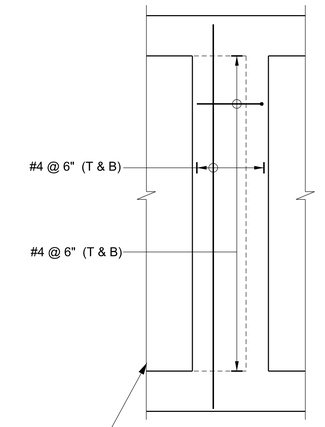
SECTION A
SCALE 3/8" = 1'-0"



PLAN AT AT TOC EL 20'-0"
SCALE 3/8" = 1'-0"



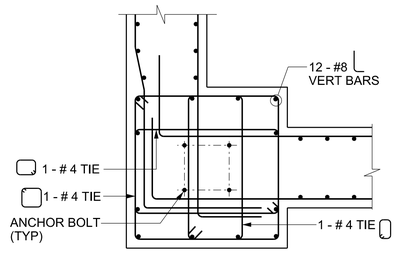
SECTION B
SCALE 3/8" = 1'-0"



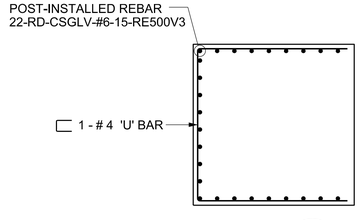
PLAN AT TOC EL 18'-3"
SCALE 3/8" = 1'-0"

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-100A4-06020 (PAL-T0-CIV-DWG-00-X-6020).
3. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-100A4-06022 (PAL-T0-CIV-DWG-00-X-6022)
4. POST-INSTALLED REBAR SEE STANDARD DRAWING 26196-100-DB-000-00009 (PAL-PJT-CIV-DWG-00-X-6009)



SECTION G
SCALE 3/4" = 1'-0"
P-3A (1 No) AS DRAWN
P-3B (1 No) SIMILAR, FOR
ORIENTATION SEE PLAN



SECTION H
SCALE 3/8" = 1'-0"
P-3(1 No)

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	4-30-2024	ISSUED FOR CONSTRUCTION	SB	YP/AB	KS/NG	SS	SS
001	06-07-2024	ISSUED FOR CONSTRUCTION	MR	YP/AB	KS/NG	SA	SS

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
100A4 FACILITY PLAN BERM
OUT FALL STRUCTURE - 2 , REINFORCEMENT PLAN, SECTIONS & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-00-X-6023	001	26196-100-DB-100A4-06023	001

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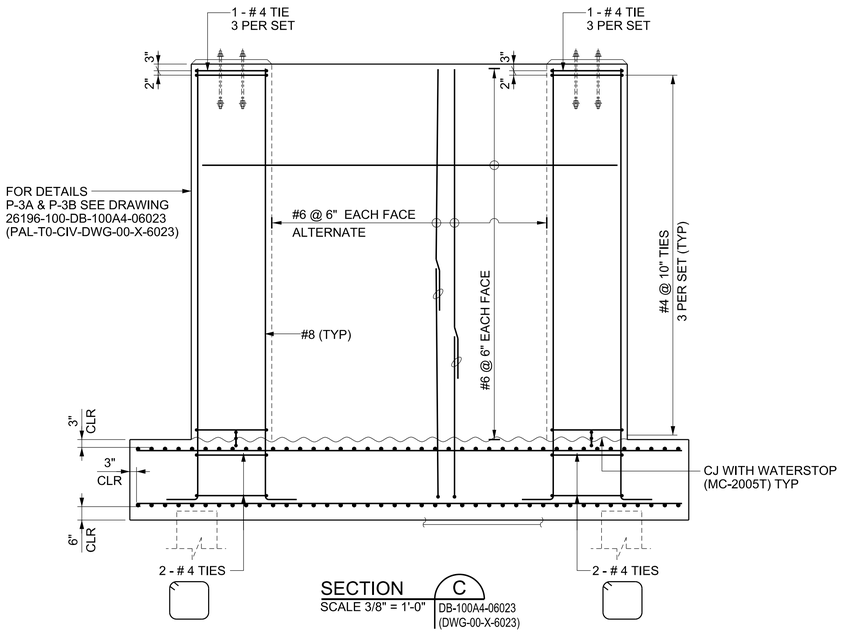
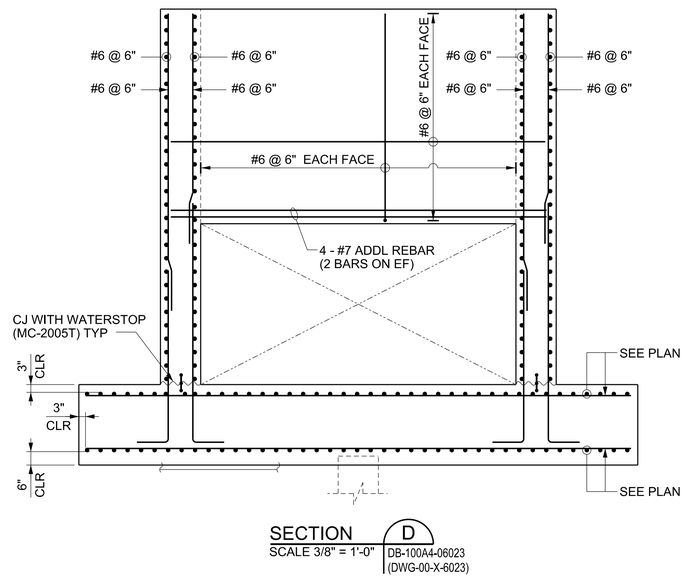
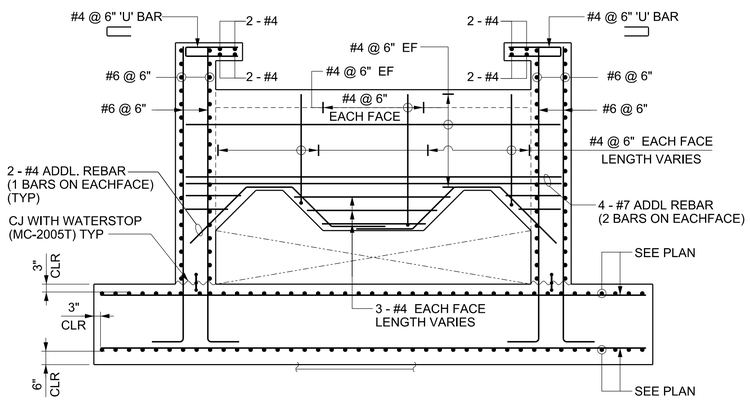


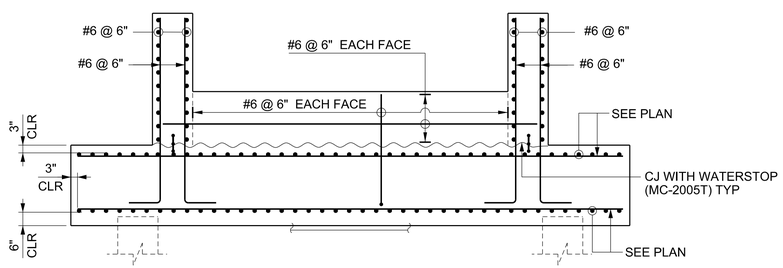
SECTION C
SCALE 3/8" = 1'-0" | DB-100A4-06023 (DWG-00-X-6023)



SECTION D
SCALE 3/8" = 1'-0" | DB-100A4-06023 (DWG-00-X-6023)



SECTION E
SCALE 3/8" = 1'-0" | DB-100A4-06023 (DWG-00-X-6023)



SECTION F
SCALE 3/8" = 1'-0" | DB-100A4-06023 (DWG-00-X-6023)

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-100A4-06020 (PAL-T0-CIV-DWG-00-X-6020)
3. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-100A4-06022 (PAL-T0-CIV-DWG-00-X-6022)

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	4-30-2024	ISSUED FOR CONSTRUCTION	SB	YP/AB	KS/NG	SS	SS								

Port Arthur LNG

Bechtel Energy, Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
100A4 FACILITY PLAN BERM
OUT FALL STRUCTURE - 2 , PILE CAP REINFORCEMENT SECTIONS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-00-X-6024	000	26196-100-DB-100A4-06024	000

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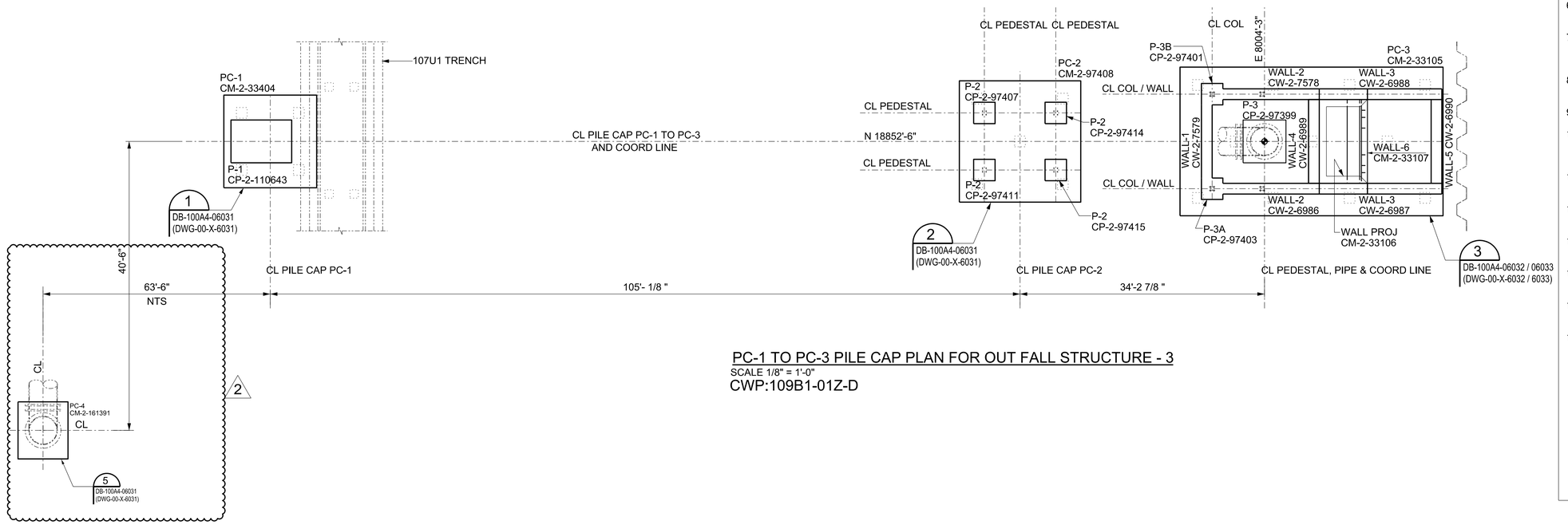
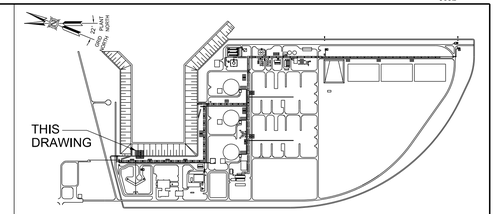


PC-1 TO PC-3 PILE CAP PLAN FOR OUT FALL STRUCTURE - 3

SCALE 1/8" = 1'-0"

CWP:109B1-01Z-D



KEY PLAN

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR CONCRETE GENERAL NOTES, REFERENCES AND ABBREVIATIONS SEE STD DRAWING 26196-100-DB-000-00001 (PAL-PJT-CIV-DWG-00-X-6001).
3. PILE TO PILE CAP INTERFACE DETAIL SEE DRAWING 26196-100-CP-000-00001 (PAL-PJT-CIV-DWG-00-X-4001).
4. UNO GROUT SHALL BE NON SHRINK CEMENT BASED TYPE IN ACCORDANCE WITH SPECIFICATION 26196-100-3PS-DB01-00002 (PAL-PJT-CIV-STD-00-X-0011).
5. ANCHOR BOLT SHALL BE IN ACCORDANCE WITH STD DRAWING 26196-100-DB-000-00008 (PAL-PJT-CIV-DWG-00-X-6008).
6. FOR POST INSTALLED ANCHORS, SEE DRAWING 26196-100-DB-000-00009 (PAL-PJT-CIV-DWG-00-X-6009).
7. FOR ELECTRICAL GROUNDING LAYOUT SEE GROUNDING KEY PLAN OSBL AREA DRAWING 26196-100-EG-100-00001 (PAL-T0-ELE-PLN-00-GEN-4001).
8. FOR PILE LAYOUT SEE DRAWING 26196-100-CP-100A4-04003 (PAL-T0-CIV-DWG-00-X-4003).
9. REBAR SHALL BE ADJUSTED TO AVOID CLASH WITH ANCHOR BOLT.
10. ALL CONSTRUCTION JOINT LOCATIONS SHALL BE DECIDED BY CONSTRUCTION TO SUIT AT SITE. STANDARD DETAIL-2 DRAWING 26196-100-DWG-000-00004 (PAL-PJT-CIV-DWG-00-X-6004).
11. ALL ELECTRICAL & PIPING UNDERGROUND & EMBEDMENTS SHALL BE IN PLACE PRIOR TO PLACING OF CONCRETE.
12. CONTINOUS DEWATERING OF WATER SHALL BE ENSURED DURING CONSTRUCTION OF WALLS.
13. WATERSTOP SHALL BE 4" RIBBED CENTERBULB THERMOPLASTIC ELASTOMERIC RUBBER (TPER/TPV) WATERSTOP
14. REBAR DEVELOPMENT LENGTHS AND SPLICES REFER TO DRAWING 26196-100-DB -000-00012 (PAL-PJT-CIV-DWG-00-X-6012).
15. ANY CJ IN WALL SHOULD BE BRING IN NOTICE TO RE IF REQUIRED FROM FIELD ENGINEER.
16. READ THIS DWG IN CONJUCTION WITH THE FOLLOWING DRAWINGS:
    A) 26196-100-DB-100A4-06031 (PAL-T0-CIV-DWG-00-X-6031) TO
    B) 26196-100-DB-100A4-06034 (PAL-T0-CIV-DWG-00-X-6034).

LEGEND:

CWP : CONSTRUCTION WORK PACKAGE
BOC : BOTTOM OF CONCRETE

BILL OF MATERIALS		
FDN TYPE	MIX	QTY
CONC BASE SLAB	CLASS S-1	135.85 CY
CONC WALL	CLASS S-1	49.96 CY
PEDESTAL P-1, P-2 P-3, P-3A, P-3B & P-4	CLASS S-1	51.60 CY

2 2

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	4-30-2024	ISSUED FOR CONSTRUCTION	SB	YP/AB	KS/NG	SS	SS								
001	06-07-2024	ISSUED FOR CONSTRUCTION	MR	YP/AB	KS/NG	SA	SS								
002	08-29-2025	ISSUED FOR CONSTRUCTION	SB	AH	KS	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
100A4 FACILITY PLAN BERM
OUT FALL STRUCTURE - 3 , PILE CAP LAYOUT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-00-X-6030	002	26196-100-DB-100A4-06030	002

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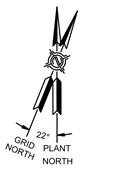
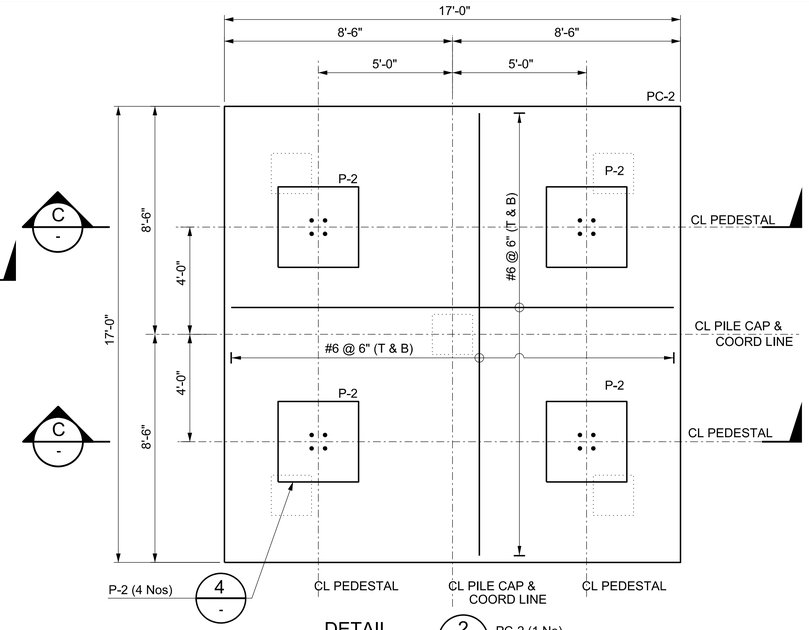
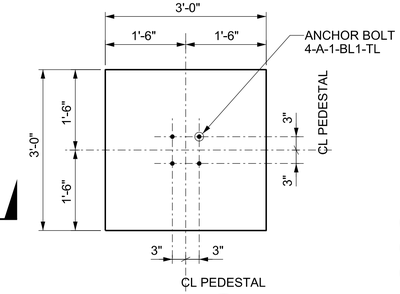


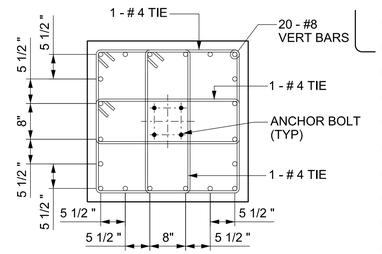
DETAIL 1 — PC-1 (1 No) — SCALE 3/8" = 1'-0" — DB-100A4-06010 (DWG-00-X-6010)



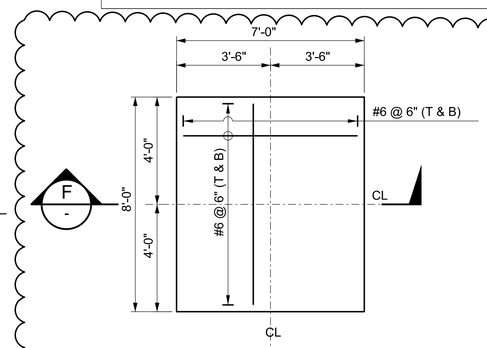
DETAIL 2 — PC-2 (1 No) — SCALE 3/8" = 1'-0" — DB-100A4-06010 (DWG-00-X-6010)



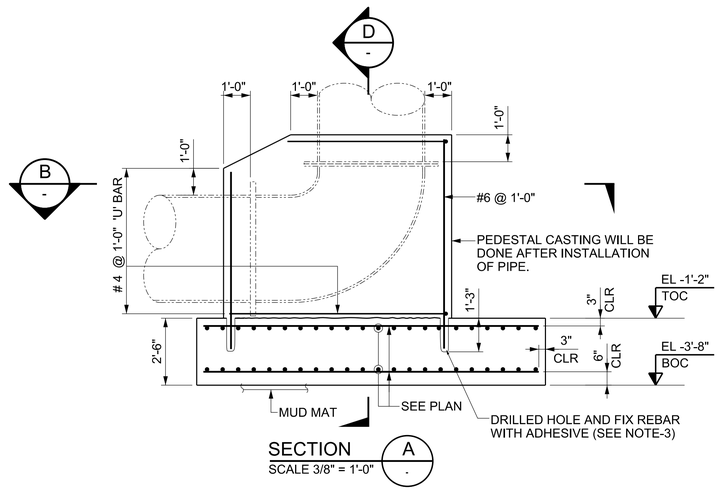
DETAIL 4 — P-2 (4 Nos) — SCALE 3/4" = 1'-0"



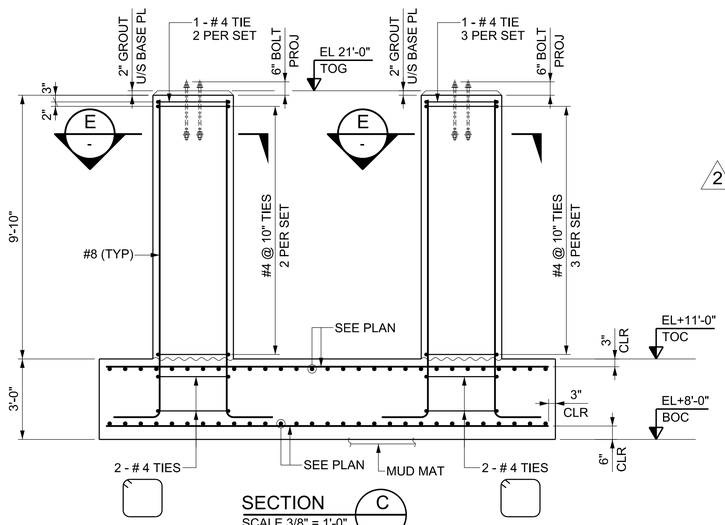
SECTION E — P-2 (4 Nos) — SCALE 3/4" = 1'-0"



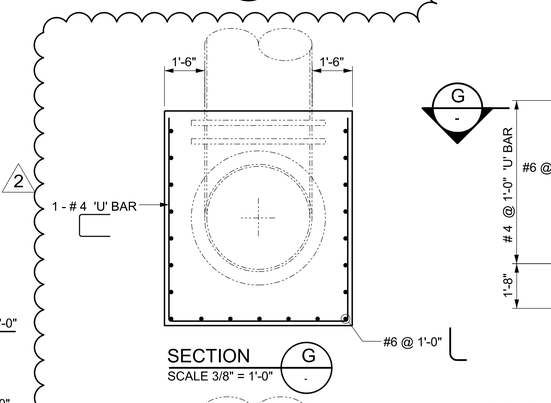
DETAIL 5 — PC-4 (1 No) — SCALE 3/8" = 1'-0" — DB-100A4-06030 (DWG-00-X-6030)



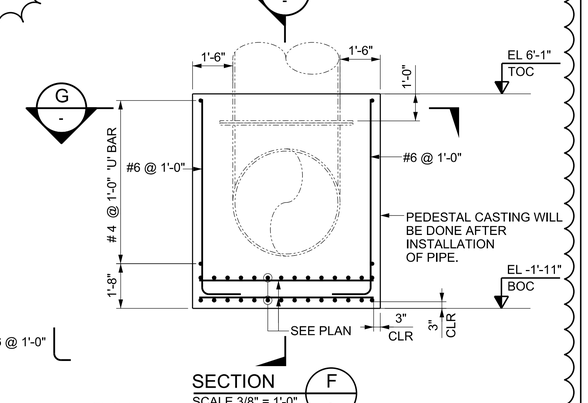
SECTION A — SCALE 3/8" = 1'-0"



SECTION C — SCALE 3/8" = 1'-0"

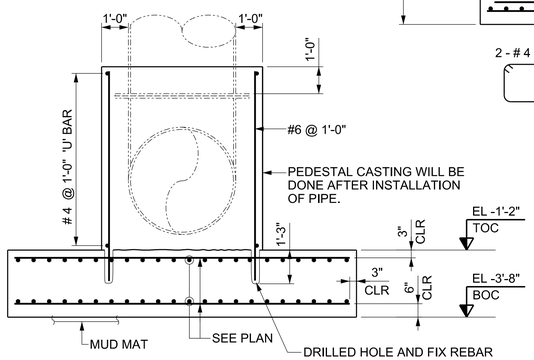


SECTION G — SCALE 3/8" = 1'-0"

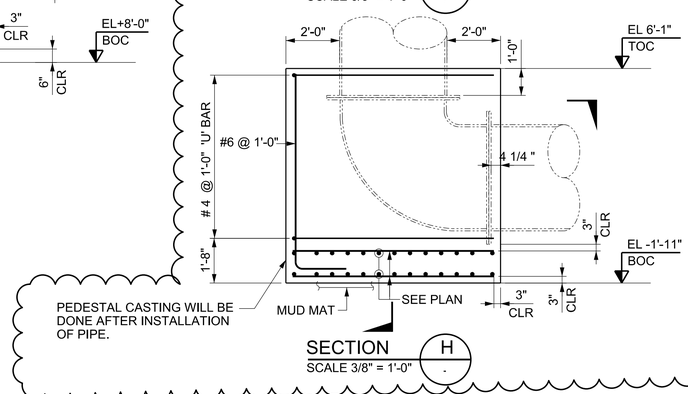


SECTION F — SCALE 3/8" = 1'-0"

SECTION B — P-1 (1 No) — SCALE 3/4" = 1'-0"



SECTION D — SCALE 3/8" = 1'-0"



SECTION H — SCALE 3/8" = 1'-0"

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-100A4-06030 (PAL-T0-CIV-DWG-00-X-6030).
3. POST-INSTALLED REBAR SEE STANDARD DRAWING 26196-100-DB-000-00009 (PAL-PJT-CIV-DWG-00-X-6009)
4. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-100A4-06030 (PAL-T0-CIV-DWG-00-X-6030)

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	4-30-2024	ISSUED FOR CONSTRUCTION	SB	YP/AB	KS/NG	SS	SS								
001	06-07-2024	ISSUED FOR CONSTRUCTION	MR	YP/AB	KS/NG	SA	SS								
002	08-25-2025	ISSUED FOR CONSTRUCTION	SB	AH	KS	SA	SS								

Port Arthur LNG

BECHTEL Bechtel Energy Inc. 26196-100 FIRM NO. F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
100A4 FACILITY PLAN BERM
OUT FALL STRUCTURE - 3 , PILE CAP PLAN, SECTIONS & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-00-X-6031	002	26196-100-DB-100A4-06031	002

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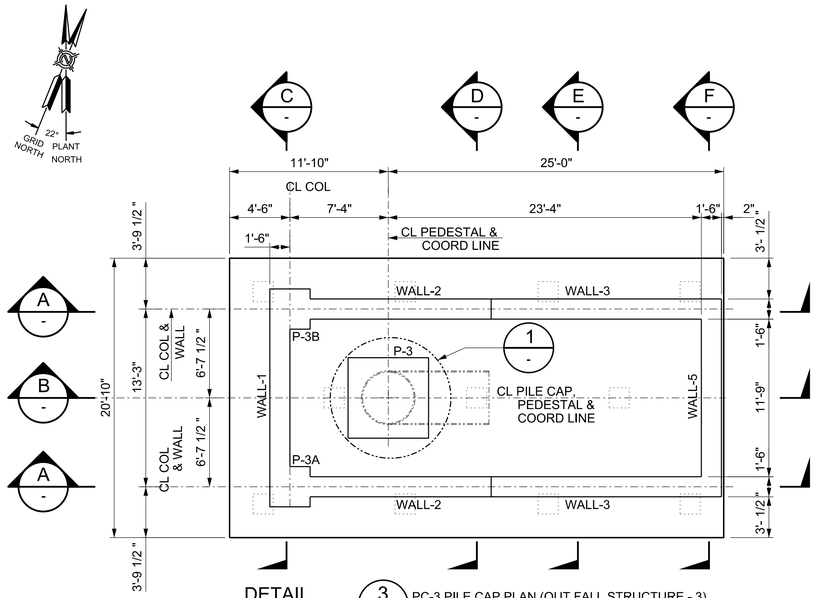
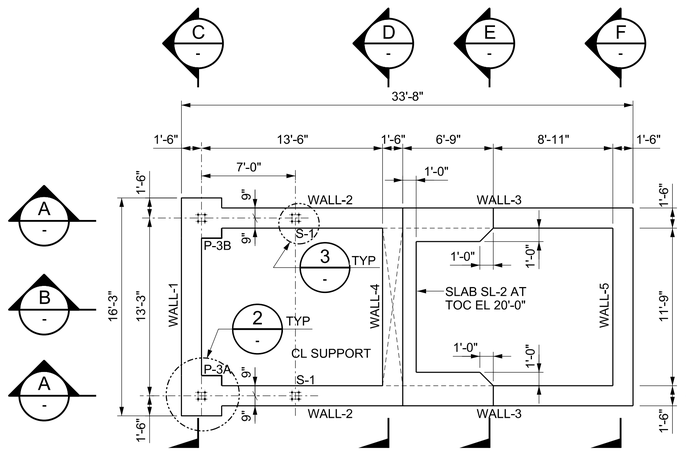
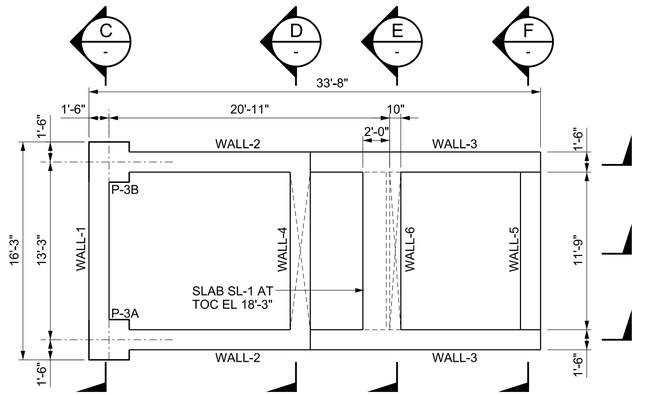
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-100A4-06030 (PAL-T0-CIV-DWG-00-X-6030).
3. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-100A4-06030 (PAL-T0-CIV-DWG-00-X-6030)



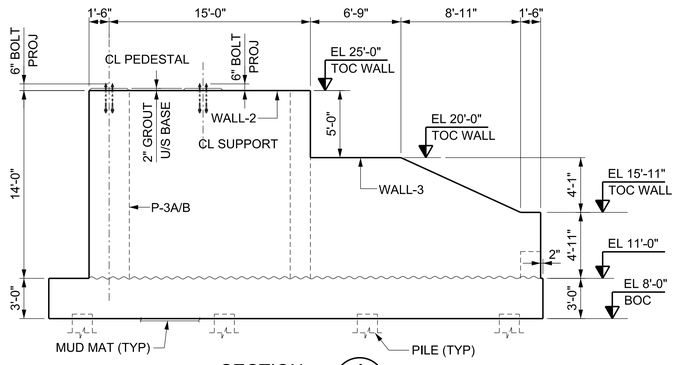
DETAIL 3 PC-3 PILE CAP PLAN (OUT FALL STRUCTURE - 3)
SCALE 3/16" = 1'-0" | DB-100A4-06030 (DWG-00-X-6030)



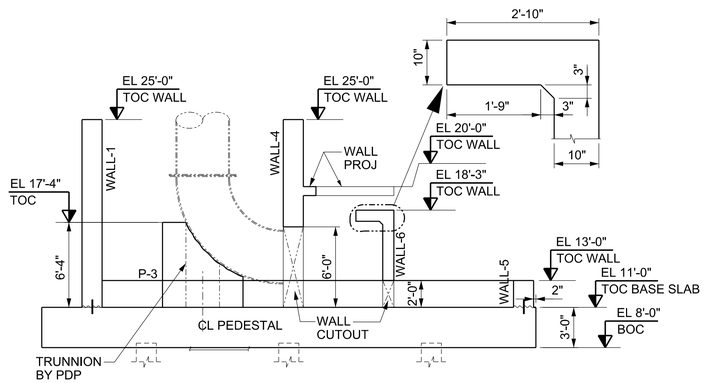
DETAIL 3 PC-3 PILE CAP TOP PLAN
SCALE 3/16" = 1'-0" | DB-100A4-06030 (DWG-00-X-6030)



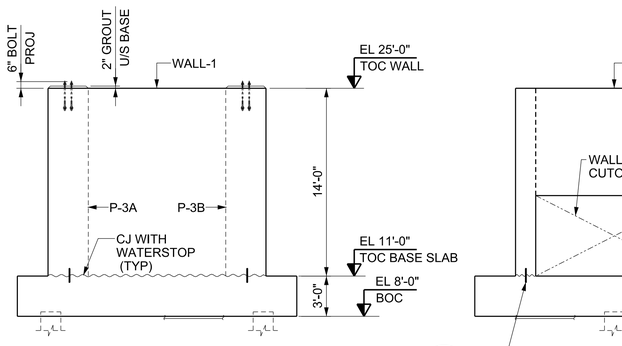
DETAIL 3 PC-3 PILE CAP WALL PLAN AT TOC EL 18'-3"
SCALE 3/16" = 1'-0" | DB-100A4-06030 (DWG-00-X-6030)



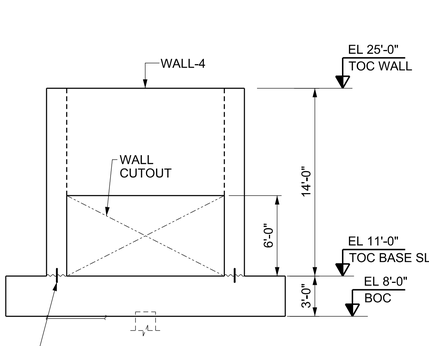
SECTION A
SCALE 3/16" = 1'-0"



SECTION B
SCALE 3/16" = 1'-0"

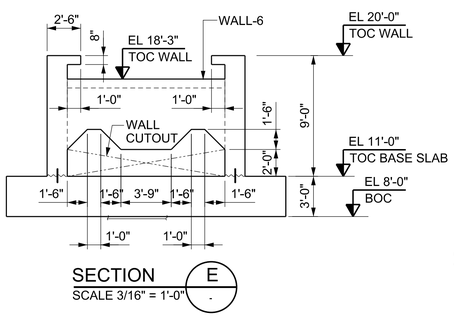


SECTION C
SCALE 3/16" = 1'-0"

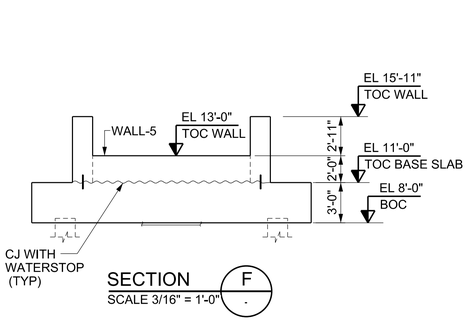


CJ WITH WATERSTOP 6 SIM
DB-000-00010 (DWG-00-X-6010)

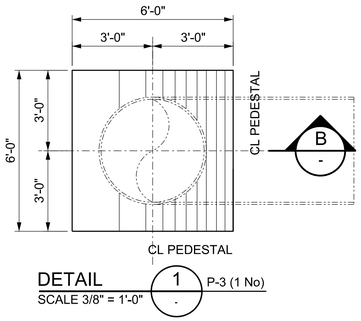
SECTION D
SCALE 3/16" = 1'-0"



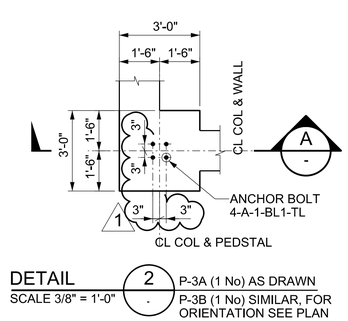
SECTION E
SCALE 3/16" = 1'-0"



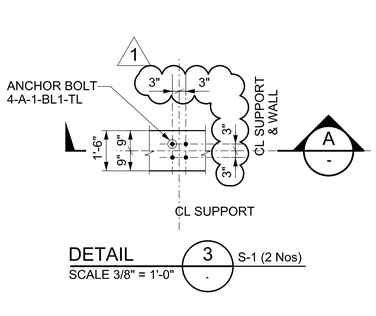
SECTION F
SCALE 3/16" = 1'-0"



DETAIL 1 P-3 (1 No)
SCALE 3/8" = 1'-0"



DETAIL 2 P-3A (1 No) AS DRAWN
SCALE 3/8" = 1'-0" P-3B (1 No) SIMILAR, FOR ORIENTATION SEE PLAN



DETAIL 3 S-1 (2 Nos)
SCALE 3/8" = 1'-0"

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

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000	4-30-2024	ISSUED FOR CONSTRUCTION	SB	YP/AB	KS/NG	SS	SS								
001	06-07-2024	ISSUED FOR CONSTRUCTION	MR	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
100A4 FACILITY PLAN BERM
OUT FALL STRUCTURE - 3 , PILE CAP PLAN, SECTIONS & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-00-X-6032	001	26196-100-DB-100A4-06032	001

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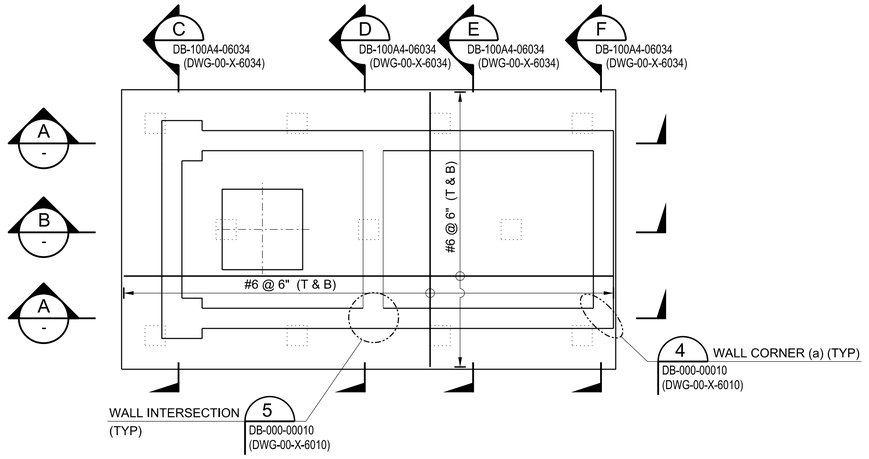
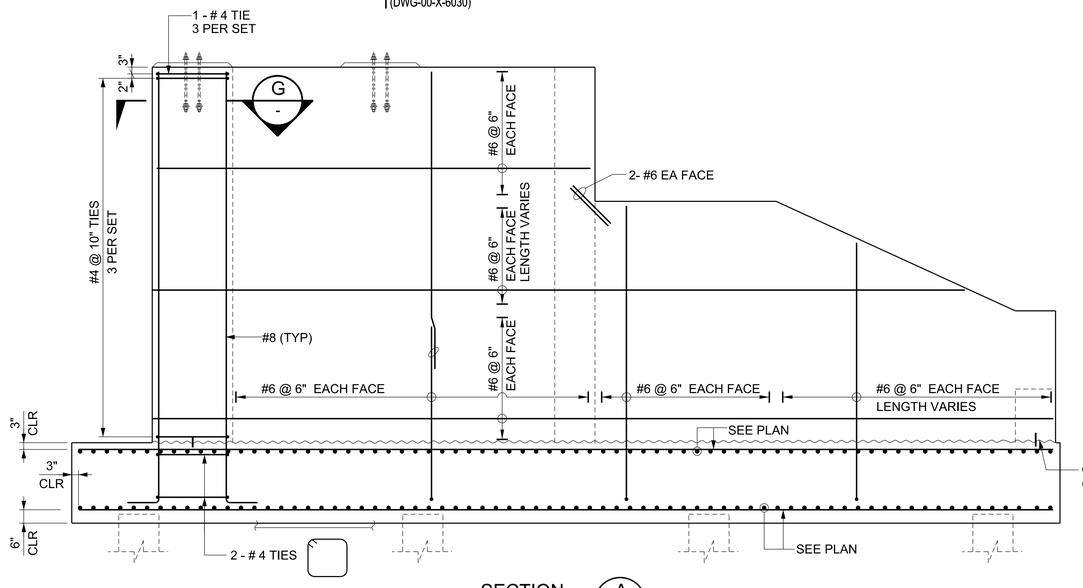
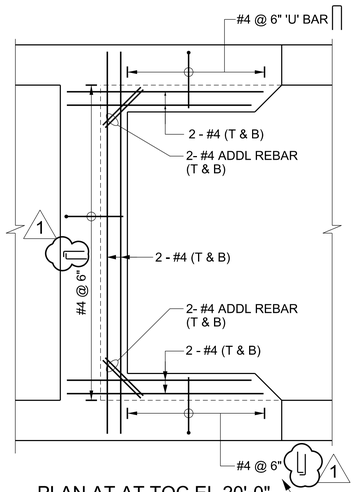
GRID NORTH 22° PLANT NORTH



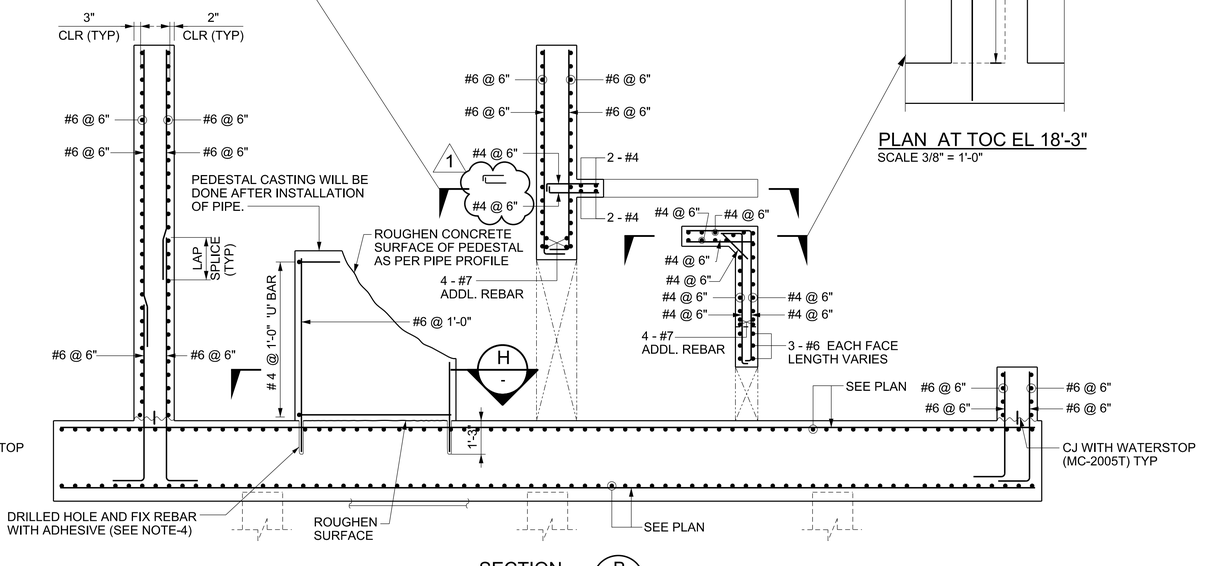
DETAIL 3 — PC-3 PILE CAP PLAN (OUT FALL STRU -3)
SCALE 3/16" = 1'-0"
DB-100A4-06030
(DWG-00-X-6030)



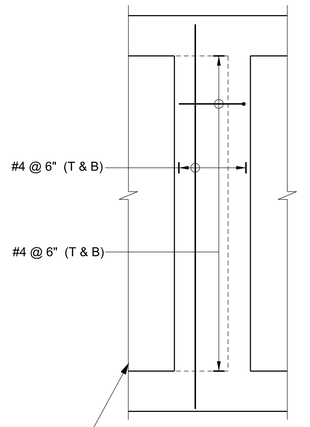
SECTION A
SCALE 3/8" = 1'-0"



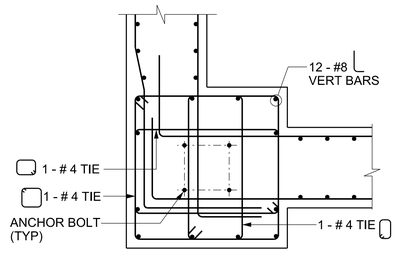
PLAN AT AT TOC EL 20'-0"
SCALE 3/8" = 1'-0"



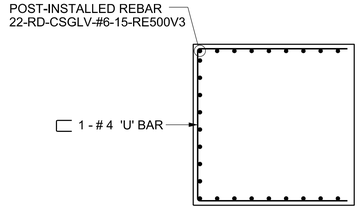
SECTION B
SCALE 3/8" = 1'-0"



PLAN AT TOC EL 18'-3"
SCALE 3/8" = 1'-0"



SECTION G
SCALE 3/4" = 1'-0"
P-3A (1 No) AS DRAWN
P-3B (1 No) SIMILAR, FOR
ORIENTATION SEE PLAN



SECTION H
SCALE 3/8" = 1'-0"
P-3(1 No)

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-100A4-06030 (PAL-T0-CIV-DWG-00-X-6030).
3. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-100A4-06032 (PAL-T0-CIV-DWG-00-X-6032)
4. POST-INSTALLED REBAR SEE STANDARD DRAWING 26196-100-DB-000-00009 (PAL-PJT-CIV-DWG-00-X-6009)

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	4-30-2024	ISSUED FOR CONSTRUCTION	SB	YP/AB	KS/NG	SS	SS
001	06-07-2024	ISSUED FOR CONSTRUCTION	MR	YP/AB	KS/NG	SA	SS

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
100A4 FACILITY PLAN BERM
OUT FALL STRUCTURE - 3, REINFORCEMENT PLAN, SECTIONS & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-00-X-6033	001	26196-100-DB-100A4-06033	001

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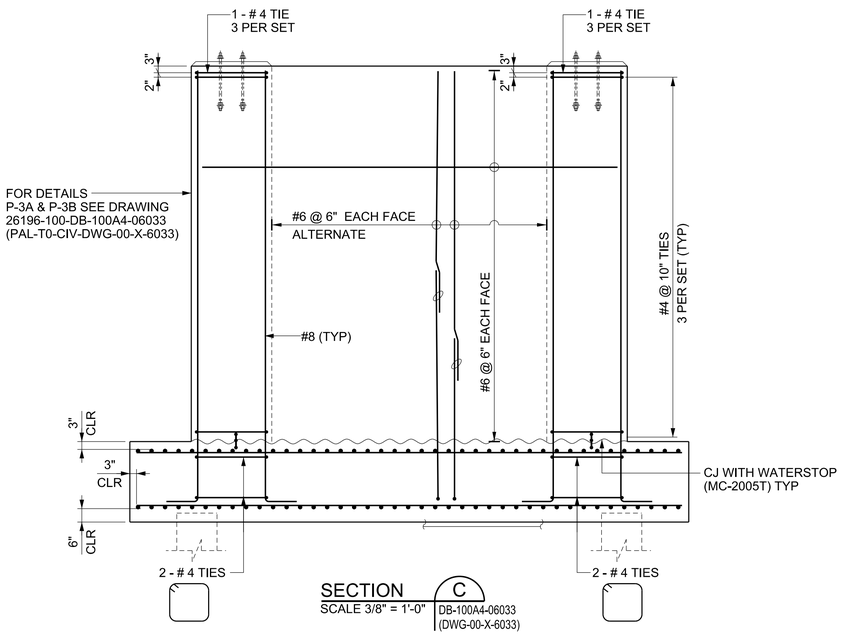
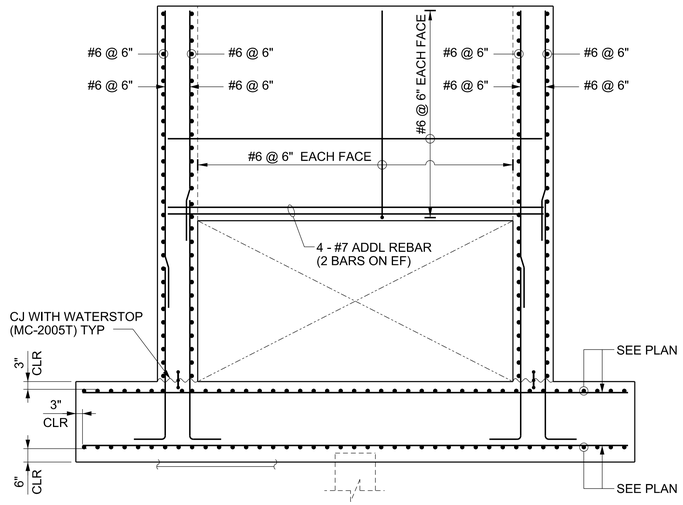
NOTES:-

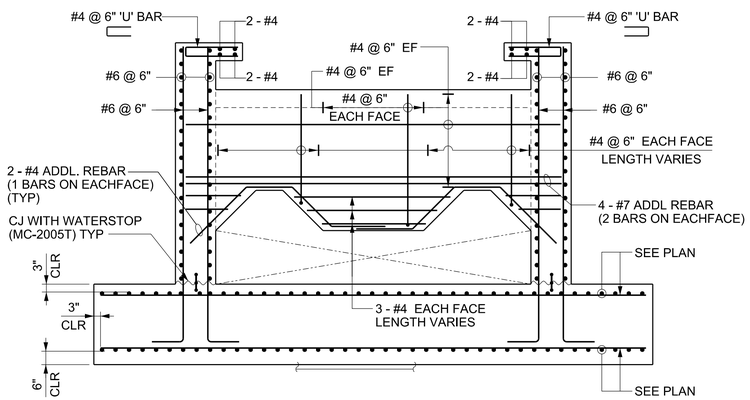
1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-100A4-06030 (PAL-T0-CIV-DWG-00-X-6030)
3. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-100A4-06032 (PAL-T0-CIV-DWG-00-X-6032)



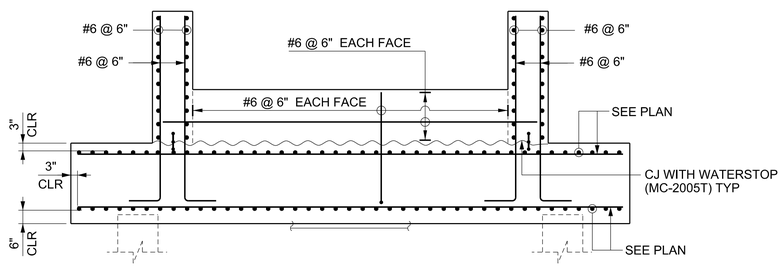
SECTION C
SCALE 3/8" = 1'-0"
DB-100A4-06033
(DWG-00-X-6033)



SECTION D
SCALE 3/8" = 1'-0"
DB-100A4-06033
(DWG-00-X-6033)



SECTION E
SCALE 3/8" = 1'-0"
DB-100A4-06033
(DWG-00-X-6033)



SECTION F
SCALE 3/8" = 1'-0"
DB-100A4-06033
(DWG-00-X-6033)

Port Arthur LNG

BECHTEL Bechtel Energy, Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	4-30-2024	ISSUED FOR CONSTRUCTION	SB	YP/AB	KS/NG	SS	SS								

PORT ARTHUR LIQUEFACTION PROJECT
100A4 FACILITY PLAN BERM
OUT FALL STRUCTURE - 3 , PILE CAP REINFORCEMENT SECTIONS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-00-X-6034	000	26196-100-DB-100A4-06034	000

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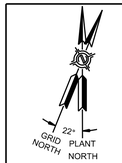
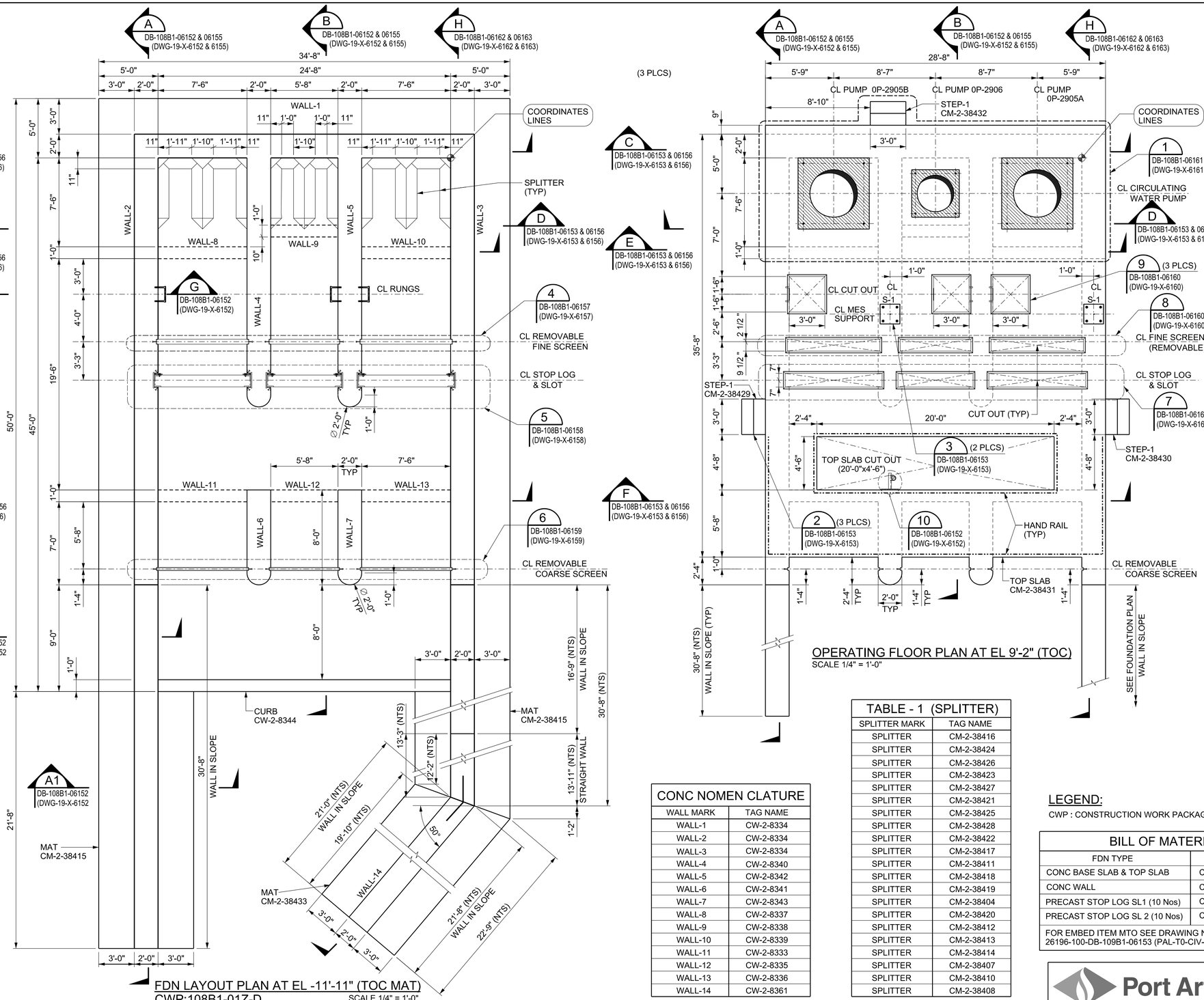
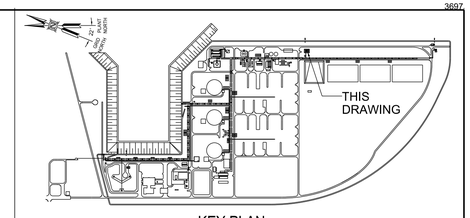




OPERATING FLOOR PLAN AT EL 9'-2" (TOC)
SCALE 1/4" = 1'-0"



KEY PLAN

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR CONCRETE GENERAL NOTES, REFERENCES AND ABBREVIATIONS SEE STD DRAWING 26196-100-DB-000-00001 (PAL-PJT-CIV-DWG-00-X-6001).
3. FOR COORDINATE LINE, SEE EQUIPMENT LOCATION PLAN DWG 26196-100-P1-108B1-00103 (PAL-T0-PIP-PLN-00-GEN-4092).
4. UNO GROUT SHALL BE NON SHRINK CEMENT BASED TYPE IN ACCORDANCE WITH SPECIFICATION 26196-100-3PS-DB01-00002 (PAL-PJT-CIV-STD-00-X-0011).
5. ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH STD DRAWING 26196-100-DB-000-00008 (PAL-PJT-CIV-DWG-00-X-6008).
6. POST-INSTALLED ANCHORS SHALL BE IN ACCORDANCE WITH STD DRAWING 26196-100-DB-000-00009 (PAL-PJT-CIV-DWG-00-X-6009).
7. FOR ELECTRICAL GROUNDING LAYOUT SEE GROUNDING KEY PLAN OSBL AREA DRAWING 26196-100-EG-100-00001 (PAL-T0-ELE-PLN-00-GEN-4001).
8. ALL CONSTRUCTION JOINT LOCATIONS SHALL BE DECIDED BY CONSTRUCTION TO SUIT AT SITE. STANDARD DETAIL-2 DRAWING 26196-100-DWG-000-00004 (PAL-PJT-CIV-DWG-00-X-6004).
9. ALL ELECTRICAL & PIPING UNDERGROUND & EMBEDMENTS SHALL BE IN PLACE PRIOR TO PLACING OF CONCRETE.
10. CONSTRUCTION TO MAINTAIN GROUND WATER ELEVATION AT OR BELOW FOLLOWING LEVELS BY CONTINUOUS PUMPING OF WATER OUT OF THE PIT.
    TILL CASTING OF BASE SLAB .... EL -16'-5"
    TILL CASTING OF WALL FIRST LIFT .... EL -11'-0"
    TILL CASTING OF ALL WALLS .... EL -7'-0"
    TILL CASTING OF TOP SLAB .... EL 0'-0"
    AFTER BACKFILL OF GRANULAR FILL AROUND THE STRUCTURE UP TO FINISH GRADE LEVELS NO DEWATERING IS REQUIRED.
11. WATERSTOP SHALL BE 4" RIBBED CENTERBULB THERMOPLASTIC ELASTOMERIC RUBBER (TPER/TPV) WATERSTOP
12. REBAR DEVELOPMENT LENGTHS AND SPLICES REFER TO DRAWING 26196-100-DB -000-00012 (PAL-PJT-CIV-DWG-00-X-6012).
13. ANY CJ IN WALL SHOULD BE BROUGHT IN NOTICE OF RE IF REQUIRED BY FIELD ENGINEER..
14. READ THIS DRAWING IN CONJUCTION WITH FOLLOWING DRAWINGS;
    26196-100-DB-108B1-06152 (PAL-T0-CIV-DWG-19-X-6152) TO 26196-100-DB-108B1-06163 (PAL-T0-CIV-DWG-19-X-6163).
15. FOR DETAIL OF DMM SEE DWG 26196-100-V295646-CB00-00004 (PAL-PJT-CIV-SDD072-00-X-0004).

VENDOR REFERENCE DRAWINGS	
DRAWING NUMBER	DRAWING TITLE
26196-100-V291048-MPVT-00025 (PAL-T0-MEC-SD065-29-P-0025)	GENERAL ARRANGEMENT DRAWING FOR STORM WATER PUMP (0P- 2902, 0P-2904, 0P-2906 & 0P-2902S)
26196-100-V291048-MPVT-00057 (PAL-T0-MEC-SD065-29-P-0057)	GENERAL ARRANGEMENT DRAWING FOR BUILDING AREA STORM WATER PUMPS (0P-2901A/B, 0P-2903A/B, 0P-2905A/B & 0P-2901S)

CONC NOMEN CLATURE	
WALL MARK	TAG NAME
WALL-1	CW-2-8334
WALL-2	CW-2-8334
WALL-3	CW-2-8334
WALL-4	CW-2-8340
WALL-5	CW-2-8342
WALL-6	CW-2-8341
WALL-7	CW-2-8343
WALL-8	CW-2-8337
WALL-9	CW-2-8338
WALL-10	CW-2-8339
WALL-11	CW-2-8333
WALL-12	CW-2-8335
WALL-13	CW-2-8336
WALL-14	CW-2-8361

TABLE - 1 (SPLITTER)	
SPLITTER MARK	TAG NAME
SPLITTER	CM-2-38416
SPLITTER	CM-2-38424
SPLITTER	CM-2-38426
SPLITTER	CM-2-38423
SPLITTER	CM-2-38427
SPLITTER	CM-2-38421
SPLITTER	CM-2-38425
SPLITTER	CM-2-38428
SPLITTER	CM-2-38422
SPLITTER	CM-2-38417
SPLITTER	CM-2-38411
SPLITTER	CM-2-38418
SPLITTER	CM-2-38419
SPLITTER	CM-2-38404
SPLITTER	CM-2-38420
SPLITTER	CM-2-38412
SPLITTER	CM-2-38413
SPLITTER	CM-2-38414
SPLITTER	CM-2-38407
SPLITTER	CM-2-38410
SPLITTER	CM-2-38408

LEGEND:

CWP : CONSTRUCTION WORK PACKAGE

BILL OF MATERIALS		
FDN TYPE	MIX	QTY
CONC BASE SLAB & TOP SLAB	CLASS S-1	354.60 CY
CONC WALL	CLASS S-1	281.05 CY
PRECAST STOP LOG SL1 (10 Nos)	CLASS S-1	6.0 CY
PRECAST STOP LOG SL 2 (10 Nos)	CLASS S-1	4.5 CY
FOR EMBED ITEM MTO SEE DRAWING NO. 26196-100-DB-109B1-06153 (PAL-T0-CIV-DWG-19-X-6153)		

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	06-28-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
108B1 - GROUND FLARE A & HAZARDOUS CHEMICAL STORAGE AREA INTAKE STRUCTURE - 2, LAYOUT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6151	000	26196-100-DB-108B1-06151	000

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NOTES:-

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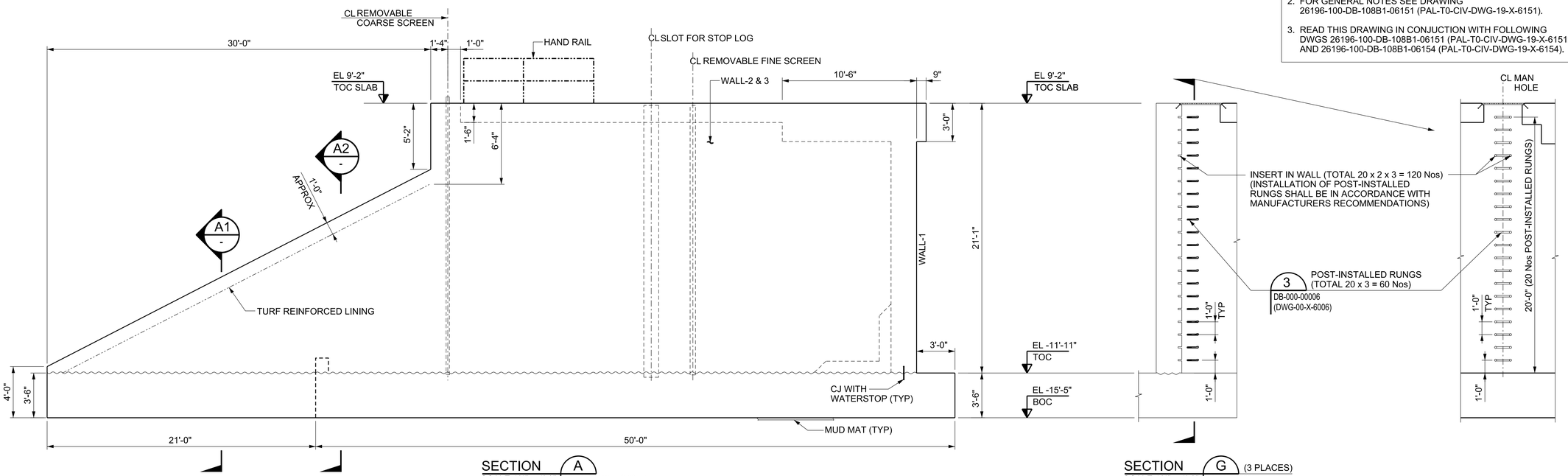
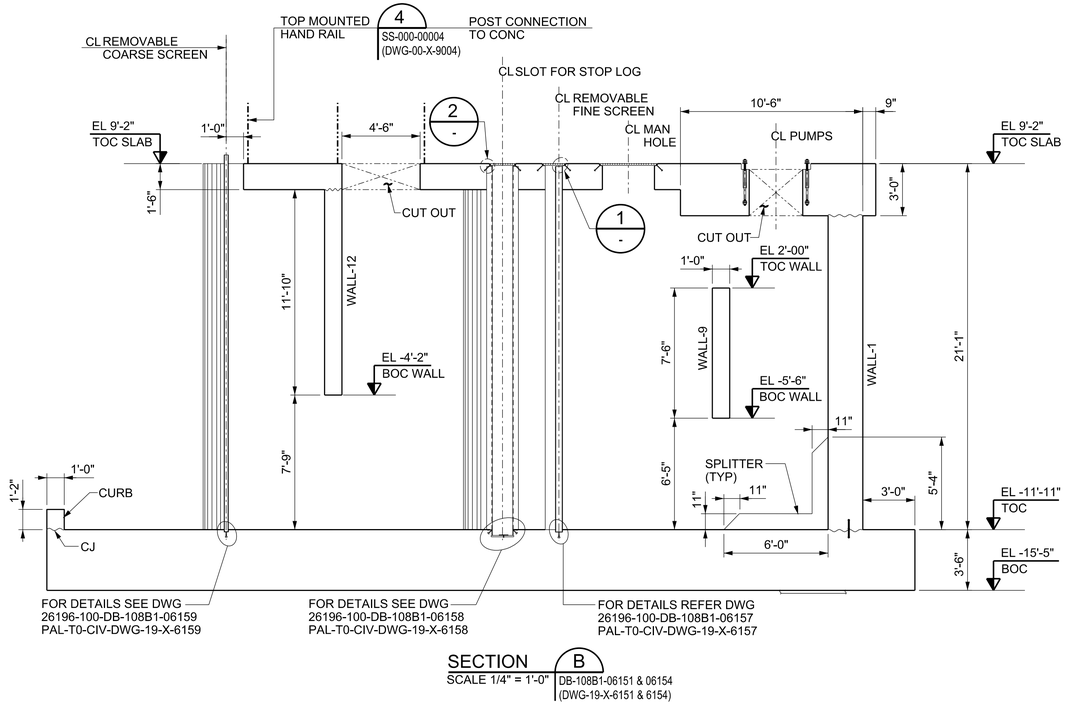
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151).
3. READ THIS DRAWING IN CONJUCTION WITH FOLLOWING DWGS 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151) AND 26196-100-DB-108B1-06154 (PAL-T0-CIV-DWG-19-X-6154).

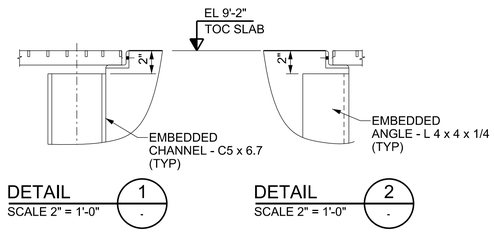


SECTION A (SCALE 1/4" = 1'-0") DB-108B1-06151 & 06154 (DWG-19-X-6151 & 6154)

SECTION G (3 PLACES) (SCALE 1/4" = 1'-0") DB-108B1-06151 (DWG-19-X-6151)

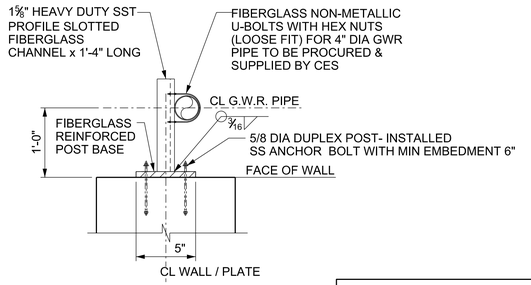


SECTION B (SCALE 1/4" = 1'-0") DB-108B1-06151 & 06154 (DWG-19-X-6151 & 6154)

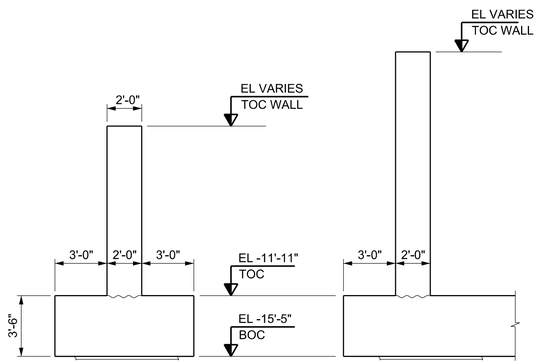


DETAIL 1 (SCALE 2" = 1'-0")

DETAIL 2 (SCALE 2" = 1'-0")



DETAIL 10 VERTICALLY 4 PLACES (SCALE 1/2" = 1'-0") DB-108B1-06151 (DWG-19-X-6151)



SECTION A1 (SCALE 1/4" = 1'-0") DB-108B1-06151 (DWG-19-X-6151)

SECTION A2 (SCALE 1/4" = 1'-0") DB-108B1-06151 (DWG-19-X-6151)

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	06-28-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
108B1 - GROUND FLARE A & HAZARDOUS CHEMICAL STORAGE AREA
INTAKE STRUCTURE - 2, SECTIONS & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6152	000	26196-100-DB-108B1-06152	000

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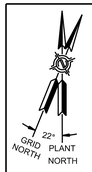
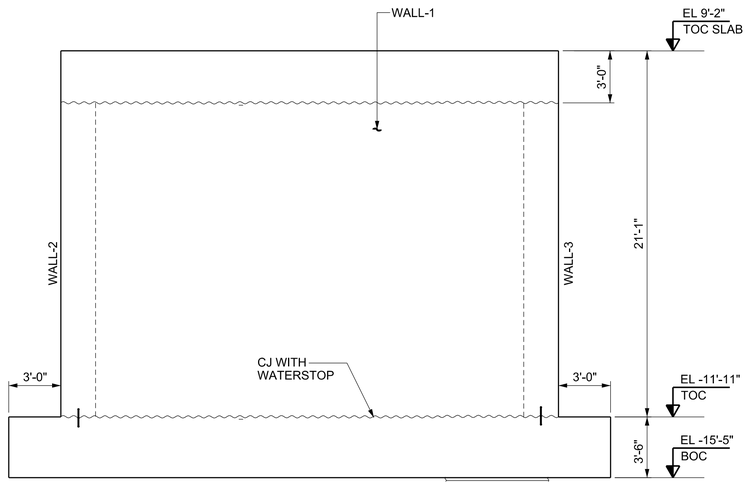
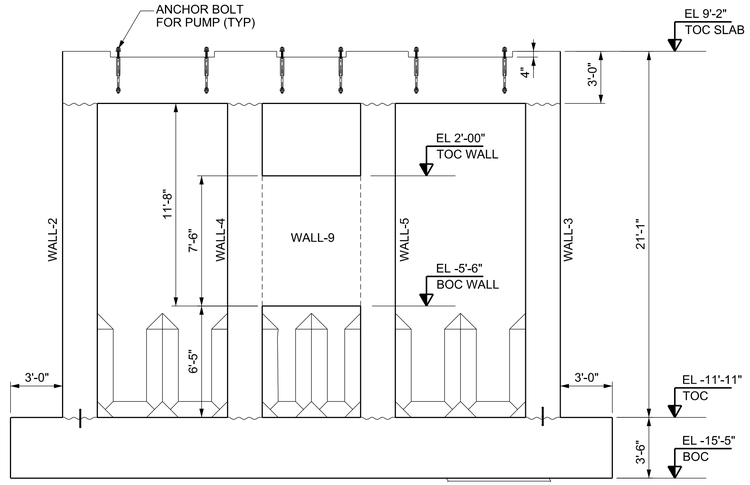


NOTES:-

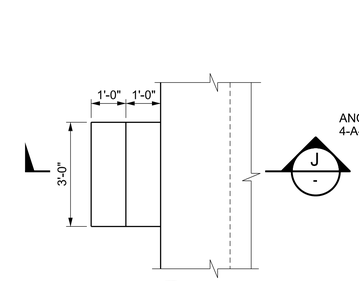
1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151).
3. READ THIS DRAWING IN CONJUCTION WITH DRAWINGS 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151) AND 26196-100-DB-108B1-06154 (PAL-T0-CIV-DWG-19-X-6154).



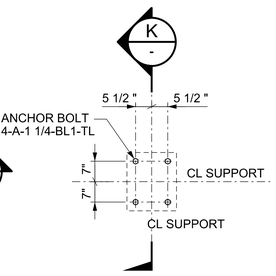
SECTION C
SCALE 1/4" = 1'-0" | DB-108B1-06151 & 06154 (DWG-19-X-6151 & 6154)



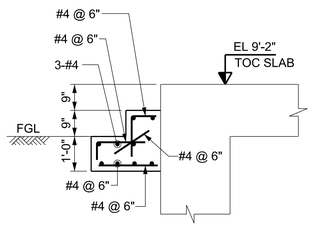
SECTION D
SCALE 1/4" = 1'-0" | DB-108B1-06151 & 06154 (DWG-19-X-6151 & 6154)



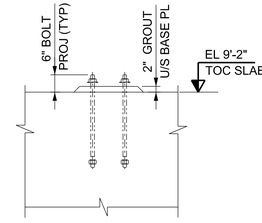
DETAIL 2 (3 PLACES)
SCALE 1/2" = 1'-0" | DB-108B1-06151 (DWG-19-X-6151)
(FOR LOCATION AND ORIANTATION SEE PLAN)



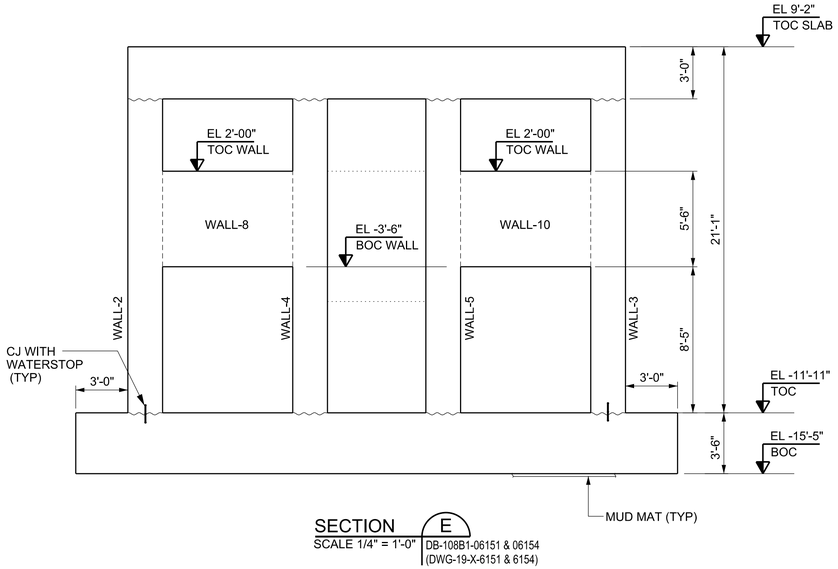
DETAIL 3 S-1 (2 Nos)
SCALE 1/2" = 1'-0" | DB-108B1-06151 (DWG-19-X-6151)



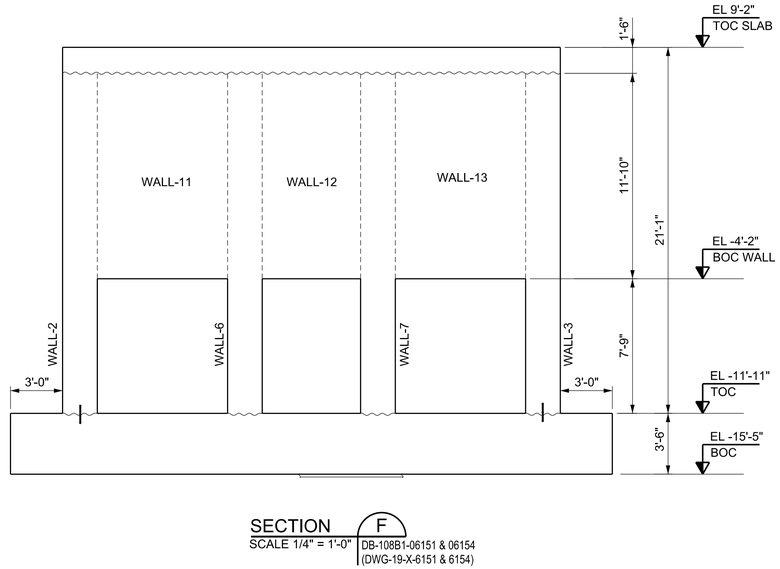
SECTION J
SCALE 1/2" = 1'-0" | J -



SECTION K
SCALE 1/2" = 1'-0" | K -



SECTION E
SCALE 1/4" = 1'-0" | DB-108B1-06151 & 06154 (DWG-19-X-6151 & 6154)



SECTION F
SCALE 1/4" = 1'-0" | DB-108B1-06151 & 06154 (DWG-19-X-6151 & 6154)

EMBEDDED ITEM MTO

MEMBER TYPE	LENGTH	QTY
CHANNEL - C5 x 6.7 WITH STUD	21'-1"	6 Nos
CHANNEL - C5 x 6.7 WITH STUD	7'-6"	2 Nos
CHANNEL - C5 x 6.7 WITH STUD	5'-8"	1 No
ANGLE - L 4 x 4 x 1/4 WITH STUD	21'-3"	12 Nos
ANGLE - L 4 x 4 x 1/4 WITH STUD	7'-6"	4 Nos
ANGLE - L 4 x 4 x 1/4 WITH STUD	5'-8"	2 Nos
BACK PLATE - 16" x 1/2" THK	21'-3"	6 Nos
BACK PLATE - 16" x 1/2" THK	8'-3"	2 Nos
BACK PLATE - 16" x 1/2" THK	6'-5"	1 No
CHANNEL - C3 x 6 WITH STUD	21'-9"	6 Nos
CHANNEL - C3 x 6 WITH STUD	7'-6"	2 Nos
CHANNEL - C3 x 6 WITH STUD	5'-8"	1 No
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	3'-0"	12 Nos
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	8'-6"	4 Nos
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	6'-8"	2 Nos
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	1'-6"	6 Nos
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	8'-1 1/2"	4 Nos
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	6'-3 1/2"	2 Nos
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	1'-4"	6 Nos

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	06-28-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
108B1 - GROUND FLARE A & HAZARDOUS CHEMICAL STORAGE AREA
INTAKE STRUCTURE - 2, PLAN, SECTIONS AND DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6153	000	26196-100-DB-108B1-06153	000

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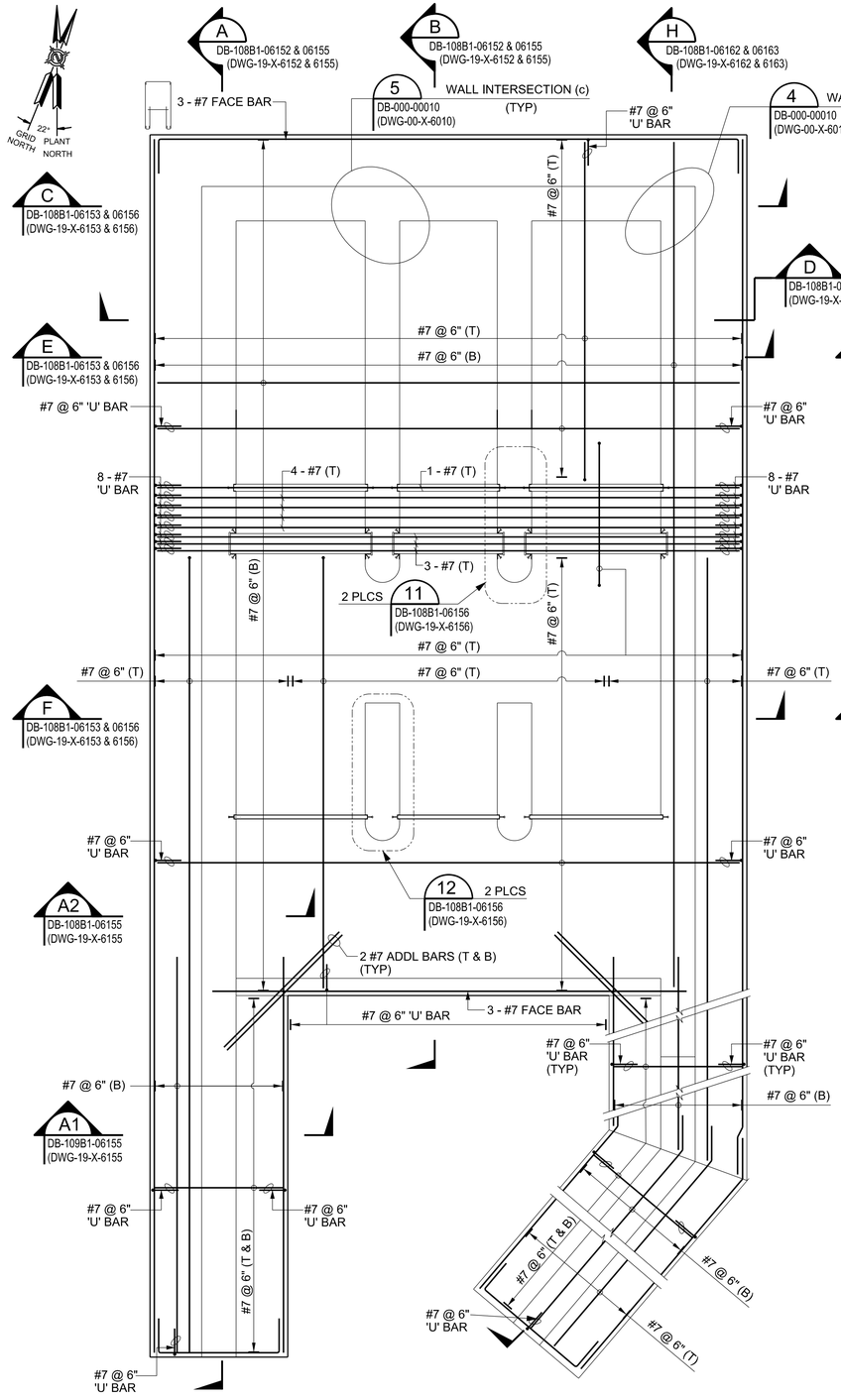
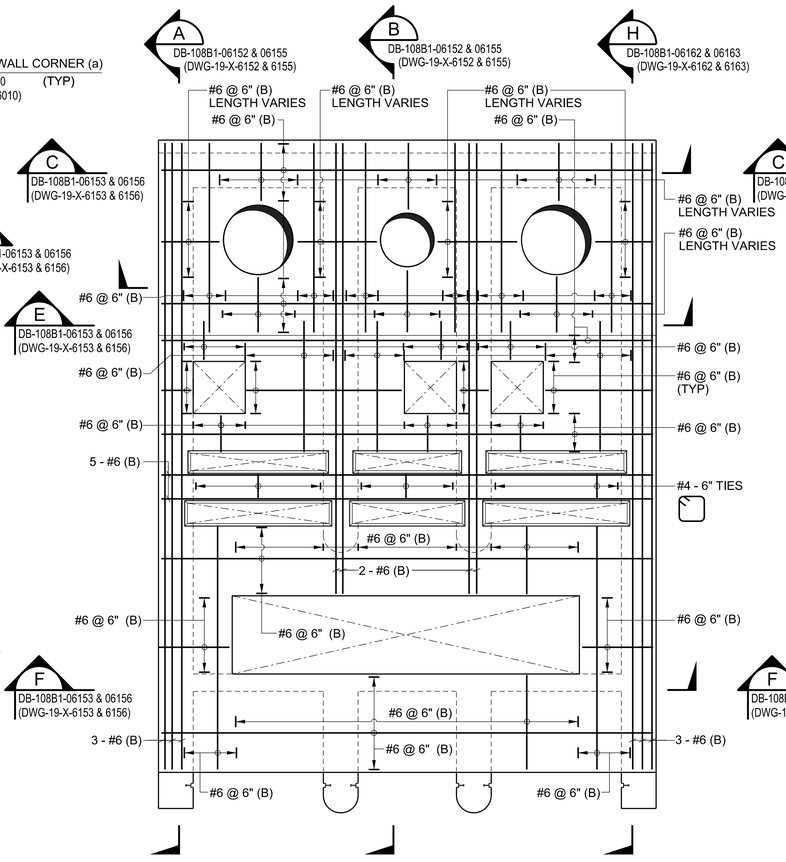


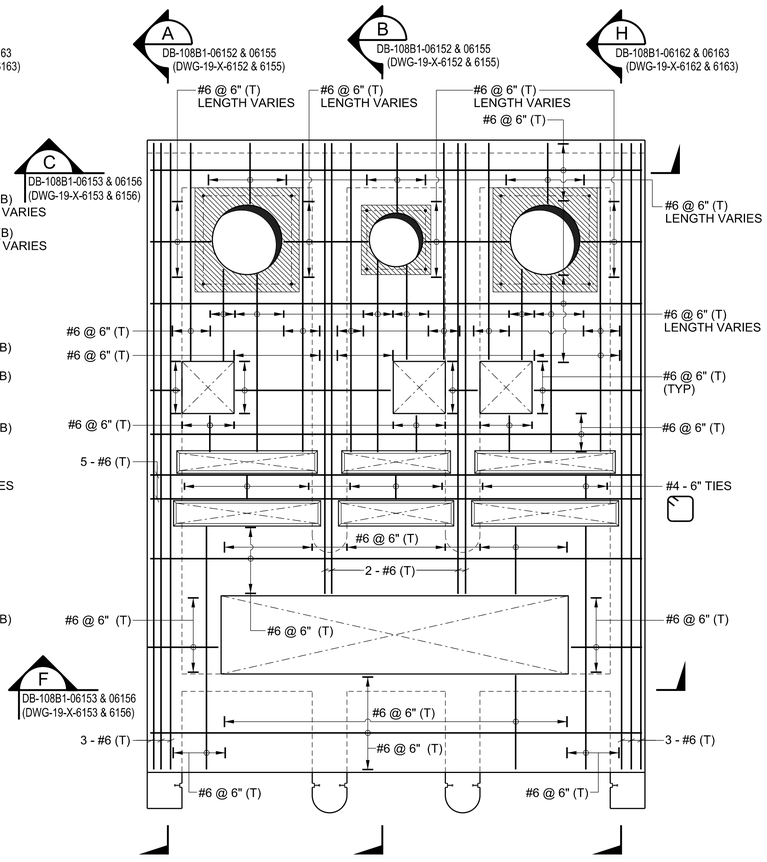
FOUNDATION LAYOUT PLAN AT EL -11'-11" (TOC MAT)

SCALE 1/4" = 1'-0"



OPRATING FLOOR BOTTOM REINF PLAN AT EL 9'-2"

SCALE 1/4" = 1'-0" (FOR ADDL REINF AROUND COUTOUTS PLAN SEE DWG 26196-100-DB- 108B1-06155 (PAL-T0-CIV-DWG-19-X-6155)



OPRATING FLOOR TOP REINF PLAN AT EL 9'-2" (TOC)

SCALE 1/4" = 1'-0" (FOR ADDL REINF AROUND COUTOUTS PLAN SEE DWG 26196-100-DB- 108B1-06155 (PAL-T0-CIV-DWG-19-X-6155)

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. READ THIS DRAWING IN CONJUCTION WITH DRAWING 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151).

Port Arthur LNG

BECHTEL Bechtel Energy Inc. 26196-100 FIRM NO. F-9684

SCALE: AS NOTED

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	06-28-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
108B1 - GROUND FLARE A & HAZARDOUS CHEMICAL STORAGE AREA
INTAKE STRUCTURE - 2, REINFORCEMENT PLANS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6154	000	26196-100-DB-108B1-06154	000

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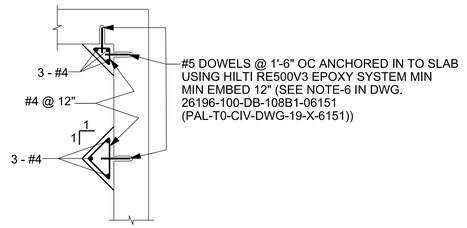
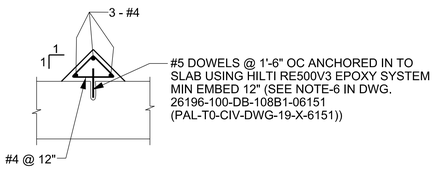
NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151).
3. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151) 26196-100-DB-108B1-06152 (PAL-T0-CIV-DWG-19-X-6152) & 26196-100-DB-108B1-06154 (PAL-T0-CIV-DWG-19-X-6154).

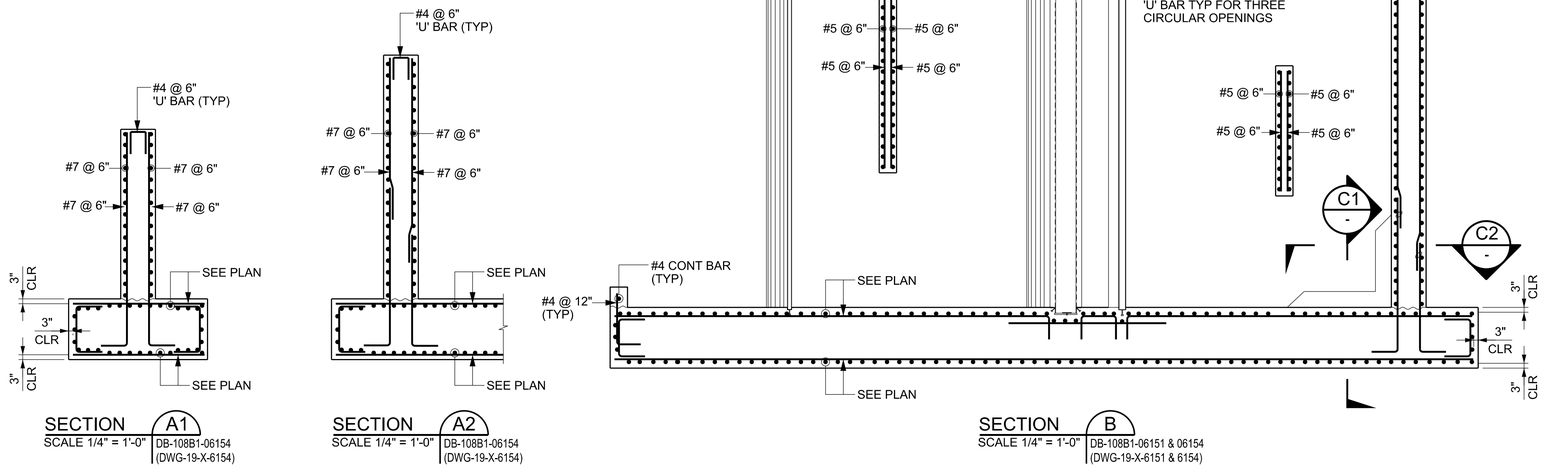


SECTION C2 (-) SCALE 1/2" = 1'-0"

SECTION A (DB-108B1-06151 & 06154 (DWG-19-X-6151 & 6154)) SCALE 1/4" = 1'-0"



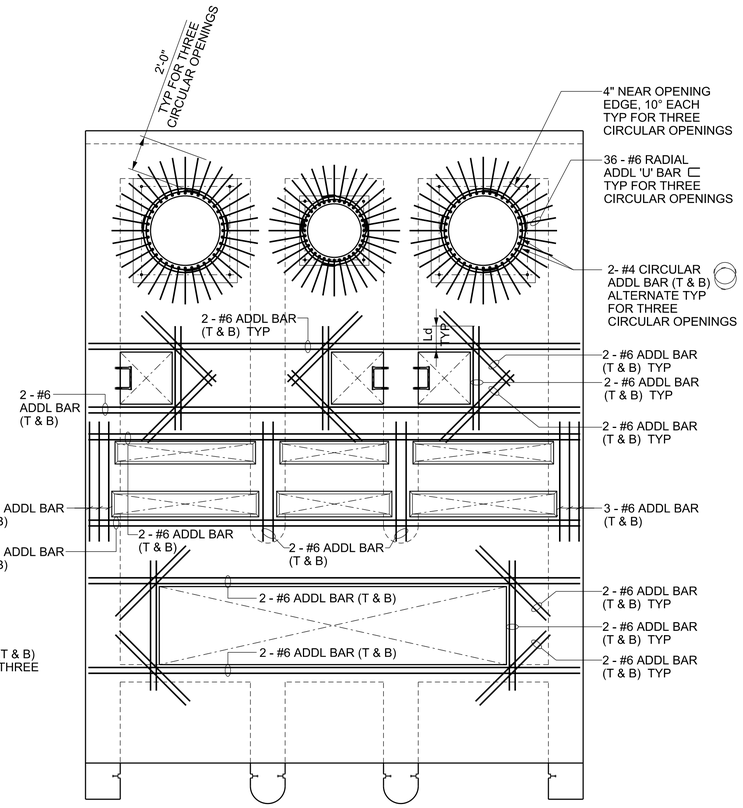
SECTION C1 (-) SCALE 1/2" = 1'-0"



SECTION A1 (DB-108B1-06154 (DWG-19-X-6154)) SCALE 1/4" = 1'-0"

SECTION A2 (DB-108B1-06154 (DWG-19-X-6154)) SCALE 1/4" = 1'-0"

SECTION B (DB-108B1-06151 & 06154 (DWG-19-X-6151 & 6154)) SCALE 1/4" = 1'-0"



OPERATING FLOOR ADDITIONAL REINF PLAN AT EL 9'-2" (TOC)
SCALE 1/4" = 1'-0"

Port Arthur LNG

BECHTEL Bechtel Energy Inc. 26196-100 FIRM NO. F-9684

SCALE: AS NOTED

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	06-28-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
108B1 - GROUND FLARE A & HAZARDOUS CHEMICAL STORAGE AREA
INTAKE STRUCTURE - 2, REINF PLAN, SECTIONS & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6155	000	26196-100-DB-108B1-06155	000

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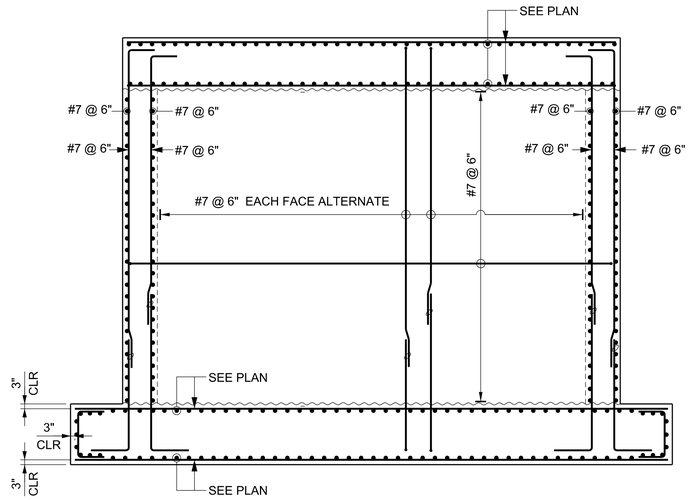
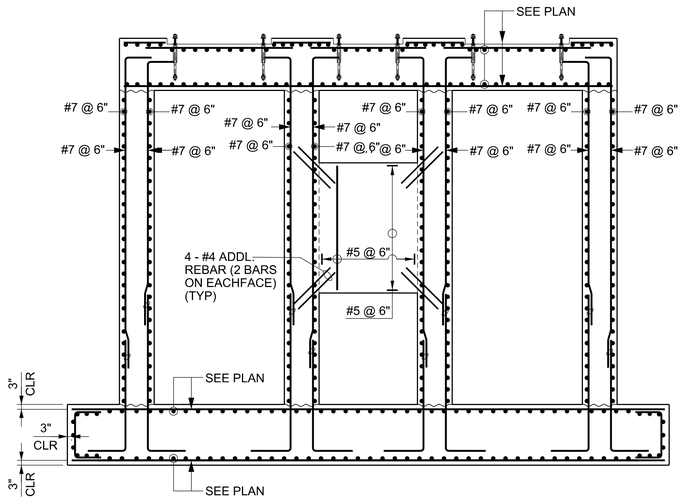
GRID NORTH 22° PLANT NORTH

NOTES:-

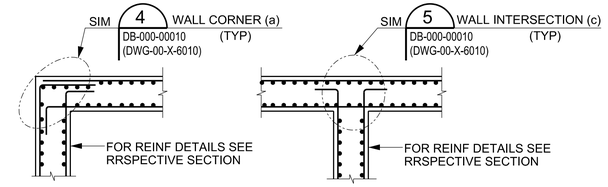
1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151).
3. READ THIS DRAWING IN CONJUCTION WITH FOLLOWING DRAWINGS:
   A) 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151)
   B) 26196-100-DB-108B1-06153 (PAL-T0-CIV-DWG-19-X-6153)
   C) 26196-100-DB-108B1-06154 (PAL-T0-CIV-DWG-19-X-6154).



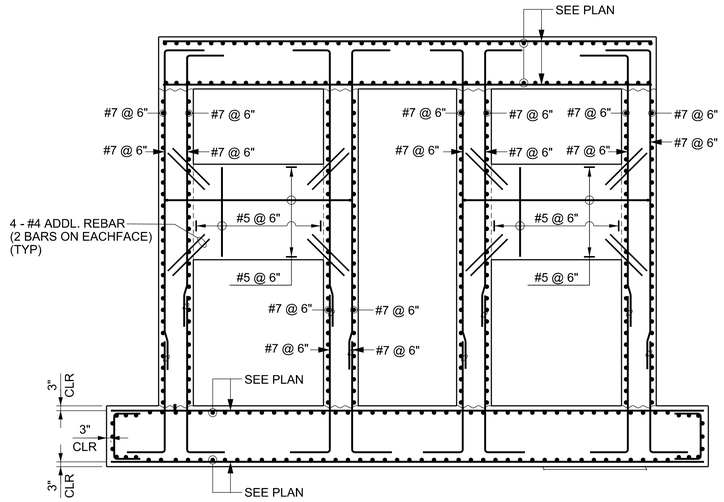
SECTION C
SCALE 1/4" = 1'-0" | DB-108B1-06151 & 06154 (DWG-19-X-6151 & 6154)



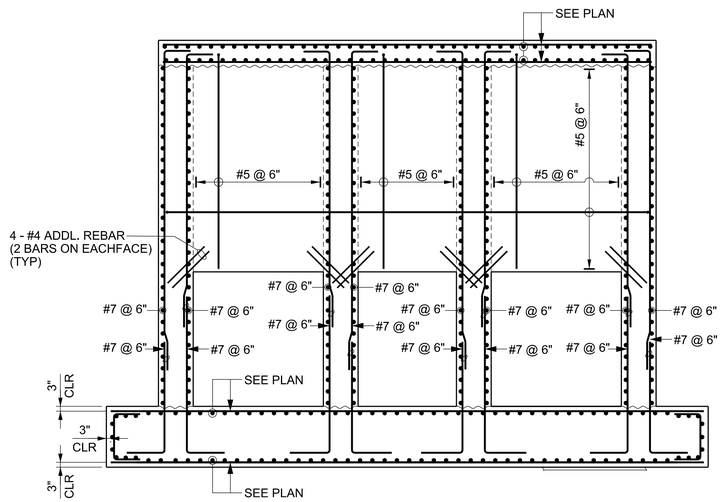
SECTION D
SCALE 1/4" = 1'-0" | DB-108B1-06151 & 06154 (DWG-19-X-6151 & 6154)



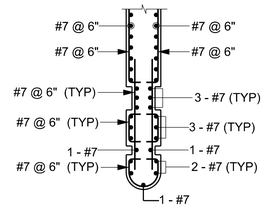
TYP WALL JUNCTION & WALL CORNER REINF PLAN
SCALE 1/4" = 1'-0"



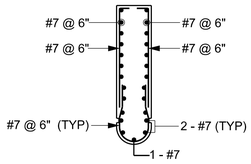
SECTION E
SCALE 1/4" = 1'-0" | DB-108B1-06151 & 06154 (DWG-19-X-6151 & 6154)



SECTION F
SCALE 1/4" = 1'-0" | DB-108B1-06151 & 06154 (DWG-19-X-6151 & 6154)



DETAIL 11
SCALE 1/4" = 1'-0" | DB-108B1-06154 (DWG-19-X-6154)



DETAIL 12
SCALE 1/4" = 1'-0" | DB-108B1-06154 (DWG-19-X-6154)

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO. F-9684

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000	06-28-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
108B1 - GROUND FLARE A & HAZARDOUS CHEMICAL STORAGE AREA INTAKE STRUCTURE - 2, REINF SECTIONS AND DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6156	000	26196-100-DB-108B1-06156	000

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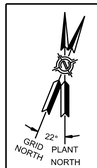
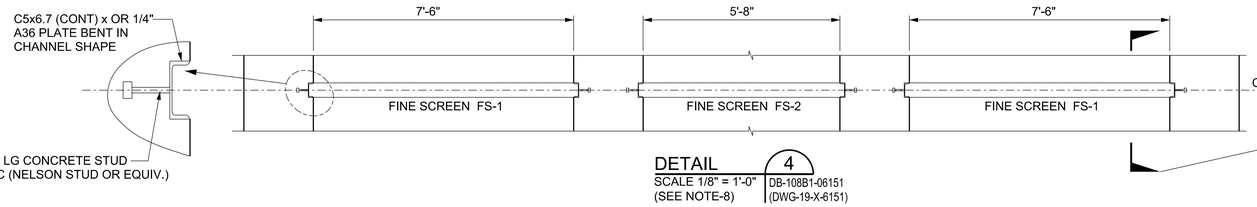
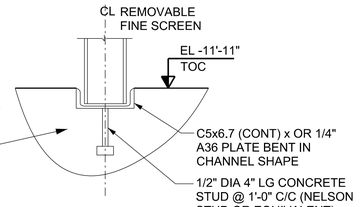
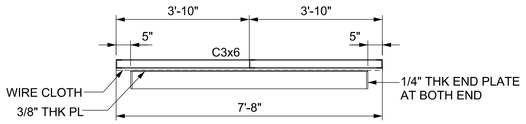


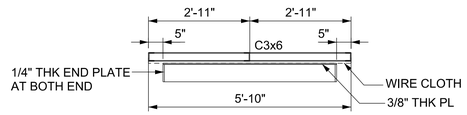


DETAIL 4
SCALE 1/8" = 1'-0" (SEE NOTE-8)
DB-108B1-06151 (DWG-19-X-6151)

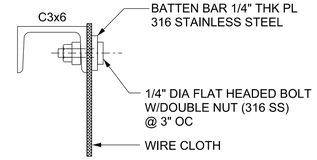




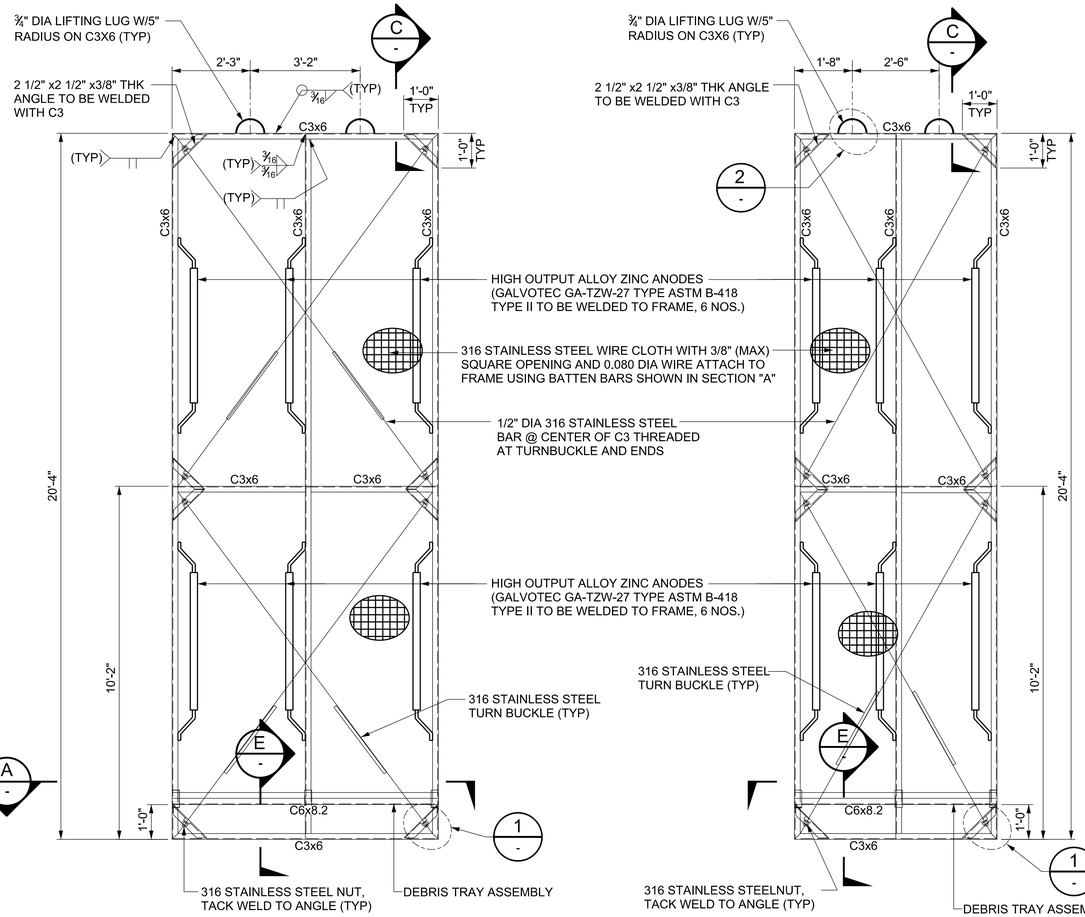
SECTION A
SCALE 1/2" = 1'-0"



SECTION B
SCALE 1/2" = 1'-0"

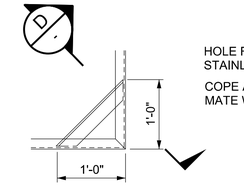


SECTION C
SCALE= NTS

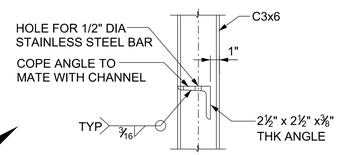


ELE VATION FOR FINE SCREEN FS-1
SCALE 1/2" = 1'-0" (2 Nos)

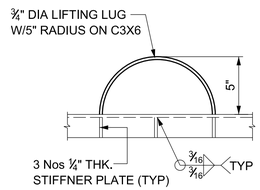
ELE VATION FOR FINE SCREEN FS-2
SCALE 1/2" = 1'-0" (1 No)



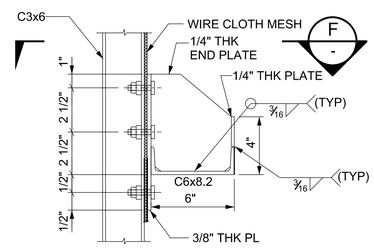
DETAIL 1
SCALE= NTS



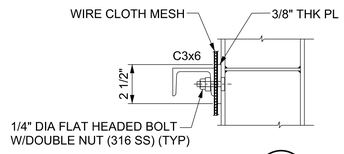
SECTION D
SCALE= NTS



DETAIL 2 (6 PLACES)
SCALE= NTS



SECTION E
SCALE= NTS
DEBRIS TRAY ASSEMBLY



SECTION F
SCALE = NTS

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151).
3. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151).
4. COARSE SCREEN SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. DRY FILM THICKNESS FOR ZINC COATING SHALL BE 3 MILLS PER A123
5. ALL STRUCTURAL STEEL, STEEL SUPPORTS AND HOOKS FOR FINE SCREEN, STEEL SUPPORTS FOR GRATINGS (ALL SIDES, FRAME, HOOKS, & HOLES), EMBEDS (ALL SIDES), AND CHANNELS (ALL SIDES) SHALL BE PREPARED IN ACCORDANCE WITH SSPC-SP 10, NEAR WHITE METAL BLAST CLEANING AND COATED WITH 24-30 MILS OF INTERNATIONAL PAINTS INTERZONE 954 OR DUROMAR 2510. THE COATING SHALL BE APPLIED IN ACCORDANCE WITH AN APPROVED PROCEDURE INCORPORATING THE PAINT MANUFACTURER'S RECOMMENDATION. THE APPLIED COATING MUST BE ESSENTIALLY FREE OF APPLICATION RELATED DEFECTS AND HOLES/VOIDS. COATING FOR CARBON STEEL ONLY, 316 STAINLESS STEEL SHALL NOT BE COATED. FINE SCREEN ASSEMBLY, COARSE SCREEN ASSEMBLY, AND THEIR SUPPORTING COATED CHANNELS, AND COATED EMBEDS SHALL BE CATHODICALLY PROTECTED WITH SACRIFICIAL ANODE OF 5-10 YEARS DESIGN LIFE.
6. ALL PLATES AND CHANNELS SHOWN IN THE DRAWING CONFORM TO ASTM A36.
7. THE SCREEN DETAILS ARE FOR ONE UNIT.
8. ACTUAL DISTANCE BETWEEN SLOTS FOR SCREEN TO BE TAKEN FROM AS BUILT AT SITE AND WIDTH OF THE SCREEN SHALL BE ADJUSTED, IF REQUIRED (FIELD TO PROVIDE AS-BUILT DISTANCE BETWEEN SLOTS @ 1'-0" INTERVALS WITHIN THREE WEEKS OF CONCRETE PLACEMENT)

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	06-28-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
108B1 - GROUND FLARE A & HAZARDOUS CHEMICAL STORAGE AREA
INTAKE STRUCTURE - 2, REMOVABLE FINE SCREEN DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6157	000	26196-100-DB-108B1-06157	000

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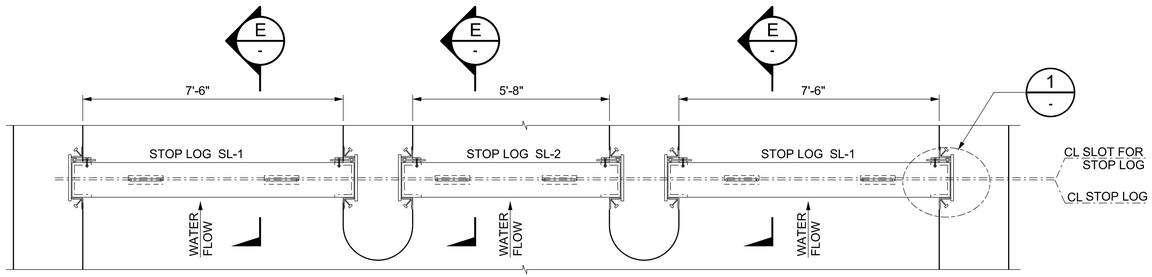
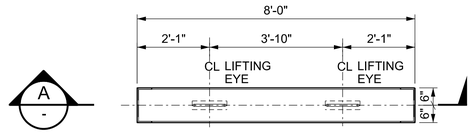
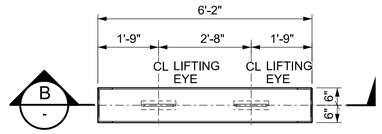


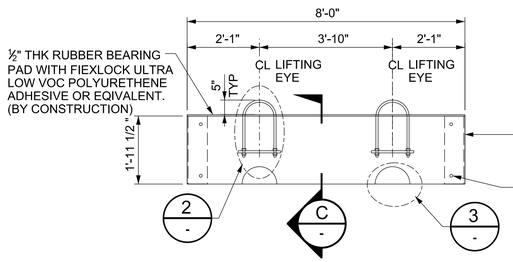
DETAIL 5 — SCALE 1/2" = 1'-0" — DB-108B1-06151 (DWG-19-X-6151)



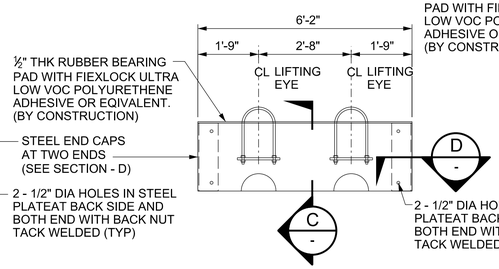
PLAN FOR STOP LOG SL-1 — SCALE 1/2" = 1'-0" (10 Nos)



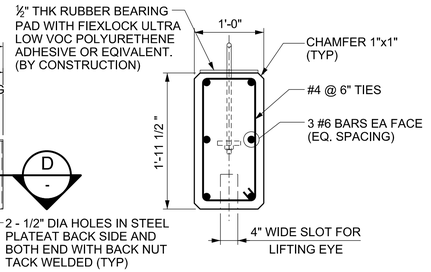
PLAN FOR STOP LOG SL-2 — SCALE 1/2" = 1'-0" (10 Nos)



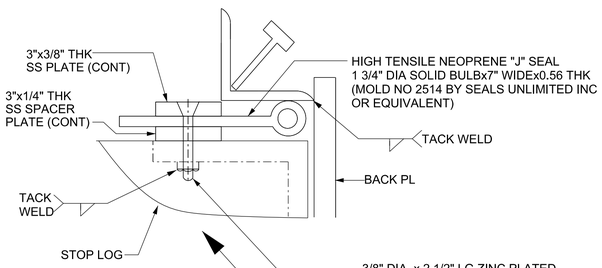
SECTION A — SCALE 1/2" = 1'-0"

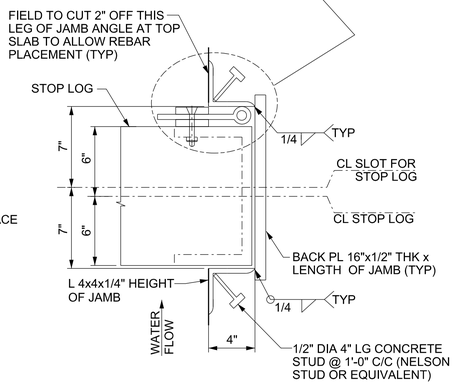


SECTION B — SCALE 1/2" = 1'-0"

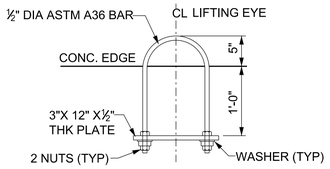


SECTION C — SCALE 1" = 1'-0"

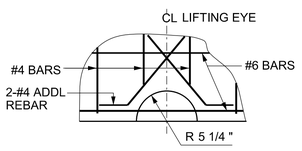




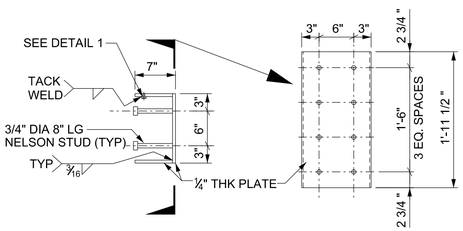
DETAIL 1 — BOTH END — SCALE 2" = 1'-0"



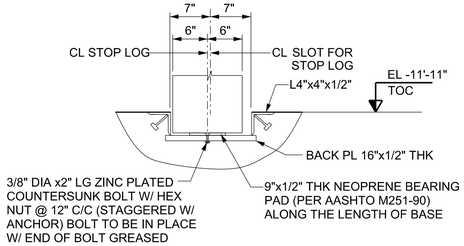
DETAIL 2 — SCALE 1" = 1'-0"



DETAIL 3 — SCALE 1" = 1'-0"



SECTION D — SCALE 1" = 1'-0"



SECTION E — SCALE 1" = 1'-0"

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. READ THIS DRAWING IN CONJUCTION WITH DRAWING 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151).

FIELD VERIFICATION OF THE AS-BUILT HORIZONTAL DIMENSIONS BETWEEN THE EMBEDDED STEEL CHANNELS ON THE CONCRETE INTAKE WALLS, THE VERTICAL ALIGNMENT AND PLUMBNESS OF THE EMBEDDED STEEL CHANNELS, AND THE AS-BUILT TOP ELEVATIONS ON THE CONCRETE INTAKE SLAB ALONG THE ALIGNMENT OF STOP LOGS IS REQUIRED. ONE SET OF STOP LOGS SHALL FIT EACH PUMP BAY SLOT.

BILL OF MATERIALS

TYPE	QTY
STOP LOG SL 1	10 Nos
STOP LOG SL 2	10 Nos

Port Arthur LNG

BECHTEL Bechtel Energy Inc. 26196-100 FIRM NO. F-9684

SCALE: AS NOTED

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
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PORT ARTHUR LIQUEFACTION PROJECT
108B1 - GROUND FLARE A & HAZARDOUS CHEMICAL STORAGE AREA
INTAKE STRUCTURE - 2, STOP LOG DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6158	000	26196-100-DB-108B1-06158	000

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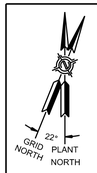
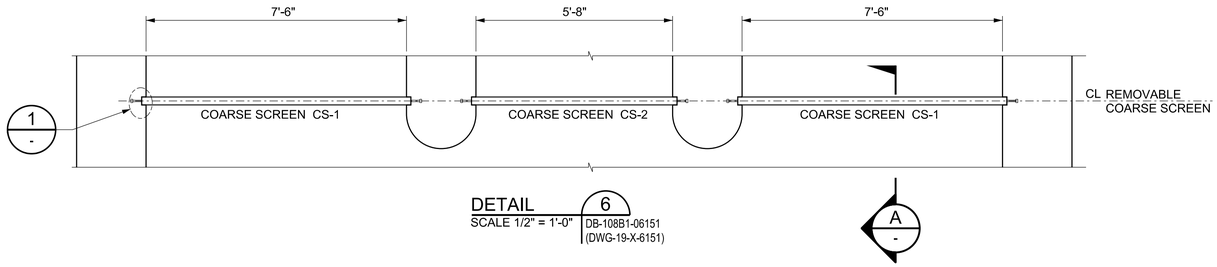
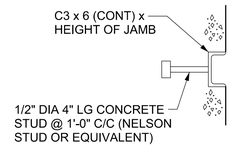
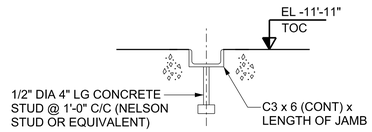




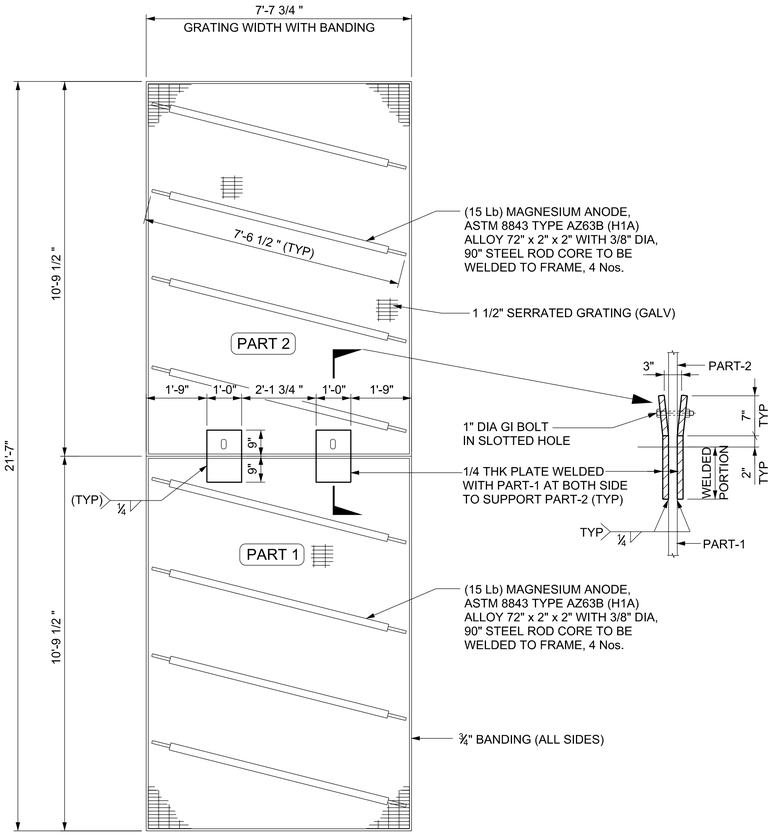
DETAIL 6 — SCALE 1/2" = 1'-0" — DB-108B1-06151 (DWG-19-X-6151)



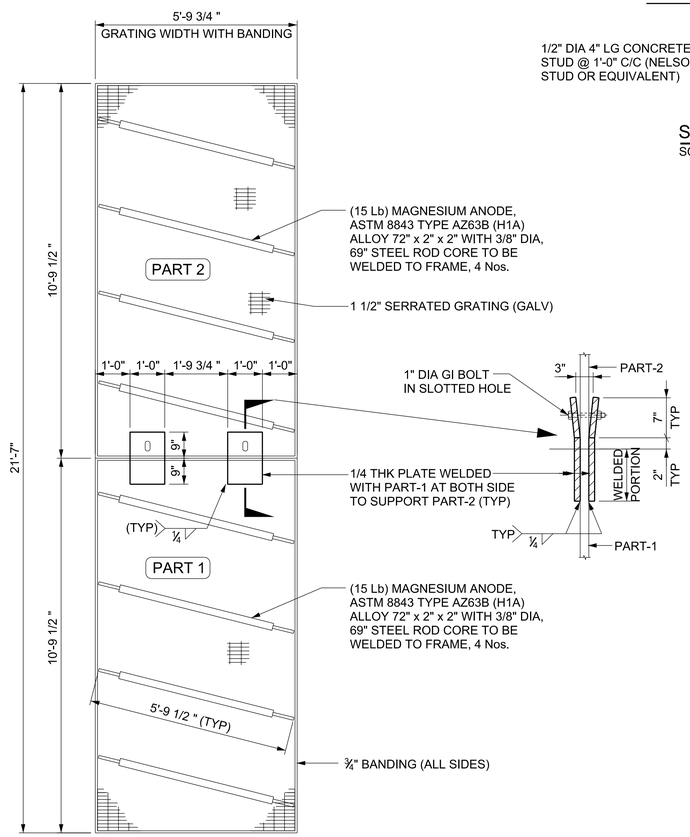
DETAIL 1 — SCALE 2" = 1'-0"



SECTION A — SCALE 2" = 1'-0"



ELEVATION FOR COARSE SCREEN CS-1
SCALE 1/2" = 1'-0" (2 Nos)



ELEVATION FOR COARSE SCREEN CS-2
SCALE 1/2" = 1'-0" (1 No)

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. COARSE SCREEN SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. DRY FILM THICKNESS FOR ZINC COATING SHALL BE 3 MILLS PER A123.
3. ALL STRUCTURAL STEEL, STEEL SUPPORTS AND HOOKS FOR FINE SCREEN, STEEL SUPPORTS FOR GRATINGS (ALL SIDES, FRAME, HOOKS, & HOLES), EMBEDS (ALL SIDES), AND CHANNELS (ALL SIDES) SHALL BE PREPARED IN ACCORDANCE WITH SSPC-SP 10, NEAR WHITE METAL BLAST CLEANING AND COATED WITH 24-30 MILS OF INTERNATIONAL PAINTS INTERZONE 954 OR DUROMAR 2510. THE COATING SHALL BE APPLIED IN ACCORDANCE WITH AN APPROVED PROCEDURE INCORPORATING THE PAINT MANUFACTURER'S RECOMMENDATION. THE APPLIED COATING MUST BE ESSENTIALLY FREE OF APPLICATION RELATED DEFECTS AND HOLES/VOIDS. COATING FOR CARBON STEEL ONLY, 316 STAINLESS STEEL SHALL NOT BE COATED. FINE SCREEN ASSEMBLY, COARSE SCREEN ASSEMBLY, AND THEIR SUPPORTING COATED CHANNELS, AND COATED EMBEDS SHALL BE CATHODICALLY PROTECTED WITH SACRIFICIAL ANODE OF 5-10 YEARS DESIGN LIFE.
4. READ THIS DRAWING IN CONJUCTION WITH DRAWING 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151).
5. THE SCREEN DETAIL ARE FOR 1 UNIT.

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
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Port Arthur LNG

BECHTEL Bechtel Energy Inc. 26196-100 FIRM NO. F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
108B1 - GROUND FLARE A & HAZARDOUS CHEMICAL STORAGE AREA
INTAKE STRUCTURE - 2, REMOVABLE COARSE SCREEN DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6159	000	26196-100-DB-108B1-06159	000

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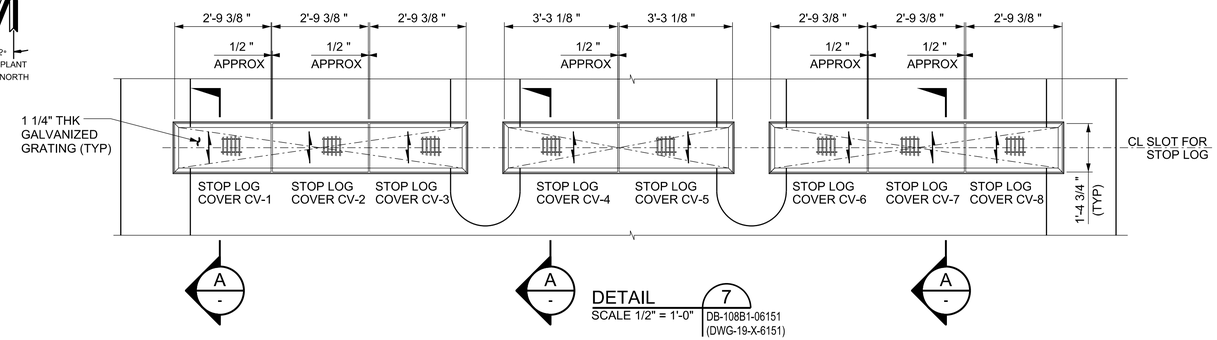
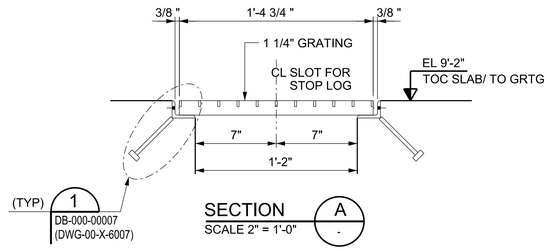
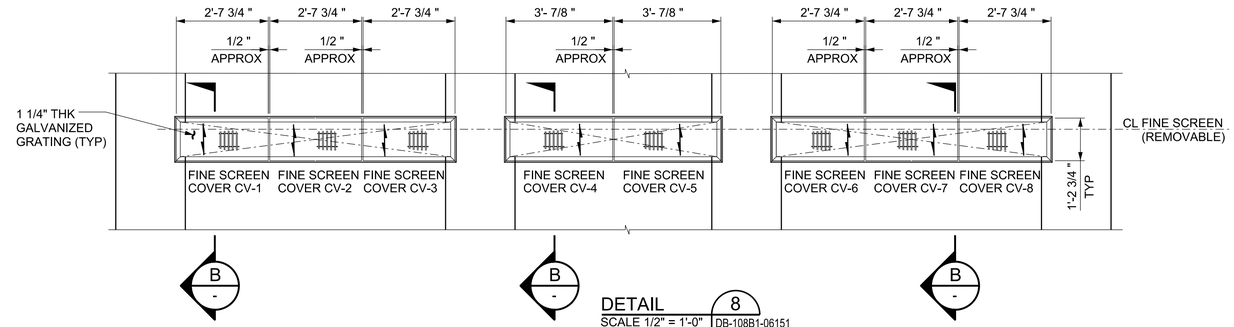


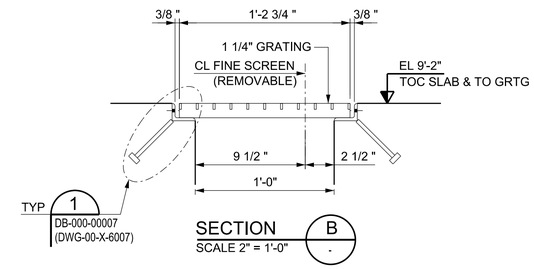
DETAIL 7
SCALE 1/2" = 1'-0"
DB-108B1-06151 (DWG-19-X-6151)



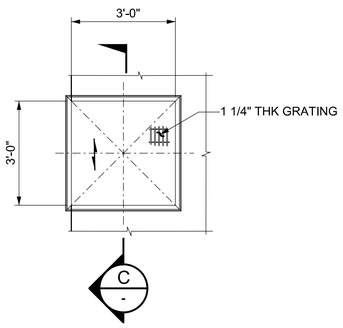
SECTION A
SCALE 2" = 1'-0"



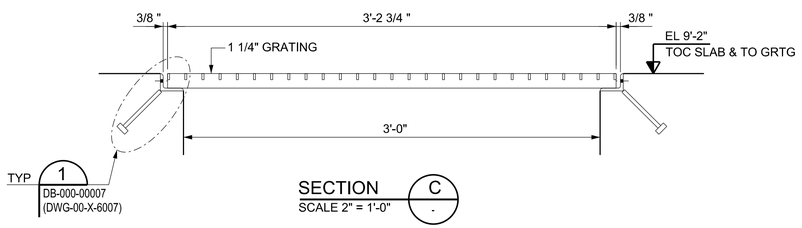
DETAIL 8
SCALE 1/2" = 1'-0"
DB-108B1-06151 (DWG-19-X-6151)



SECTION B
SCALE 2" = 1'-0"



DETAIL 9 3 PLACES
SCALE 1/2" = 1'-0"
DB-108B1-06151 (DWG-19-X-6151)



SECTION C
SCALE 2" = 1'-0"

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. READ THIS DRAWING IN CONJUCTION WITH DRAWING 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151).

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
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PORT ARTHUR LIQUEFACTION PROJECT
108B1 - GROUND FLARE A & HAZARDOUS CHEMICAL STORAGE AREA
INTAKE STRUCTURE - 2, GRATING PLAN, SECTION & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6160	000	26196-100-DB-108B1-06160	000

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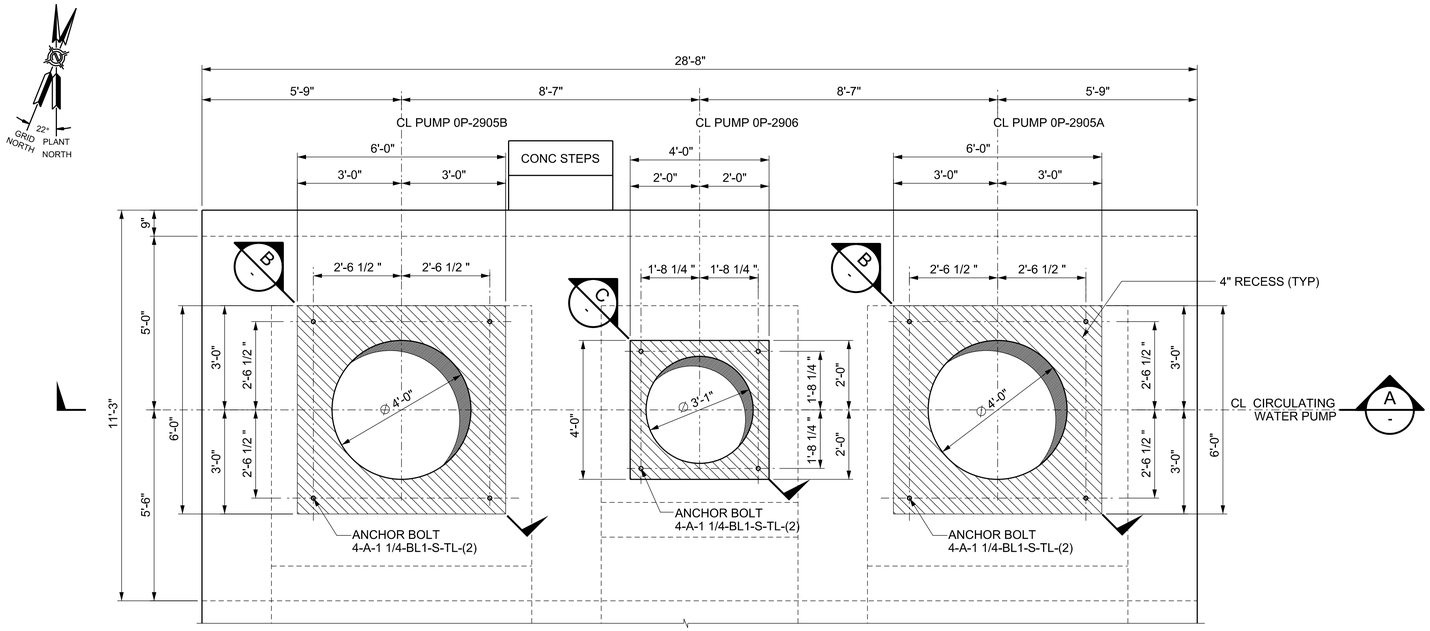
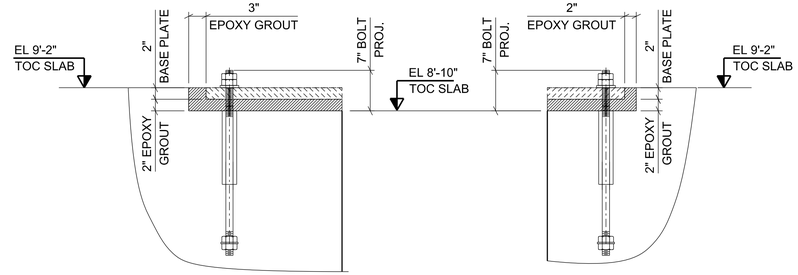
NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151).
3. READ THIS DRAWING IN CONJUCTION WITH FOLLOWING DWGS 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151) AND 26196-100-DB-108B1-06154 (PAL-T0-CIV-DWG-19-X-6154).

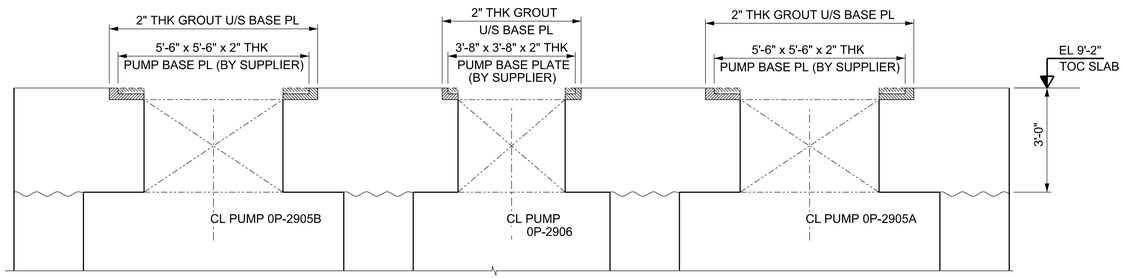


DETAIL 1 PART PLAN AT EL 9'-2"
SCALE 1/2" = 1'-0"
DB-108B1-06151 (DWG-19-X-6151)

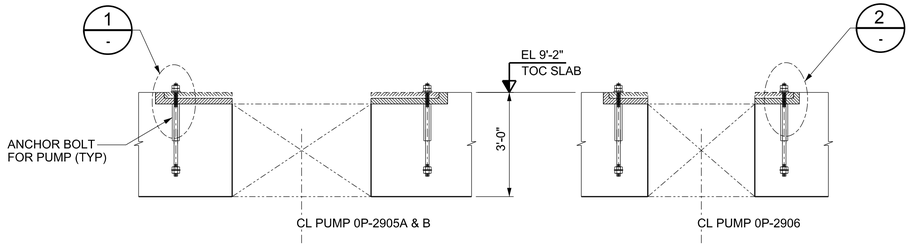


DETAIL 1
SCALE 1" = 1'-0"

DETAIL 2
SCALE 1" = 1'-0"

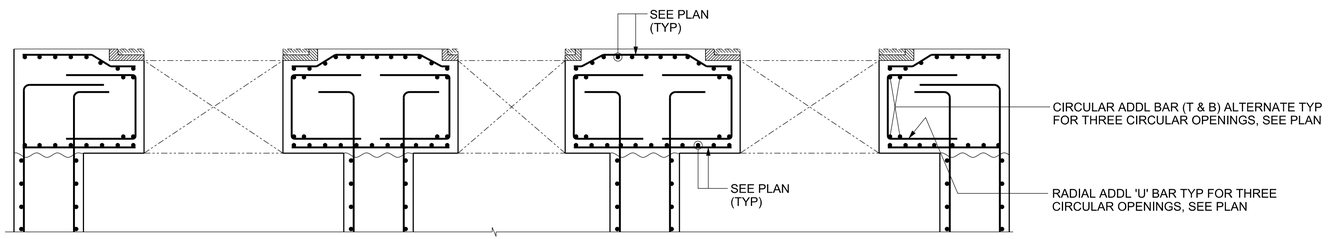


SECTION A
SCALE 1/2" = 1'-0"



SECTION B
SCALE 1/2" = 1'-0"

SECTION C
SCALE 1/2" = 1'-0"



SECTION A
SCALE 1/2" = 1'-0"

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	06-28-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS

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Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
108B1 - GROUND FLARE A & HAZARDOUS CHEMICAL STORAGE AREA
INTAKE STRUCTURE - 2, PLAN, SECTION & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6161	000	26196-100-DB-108B1-06161	000

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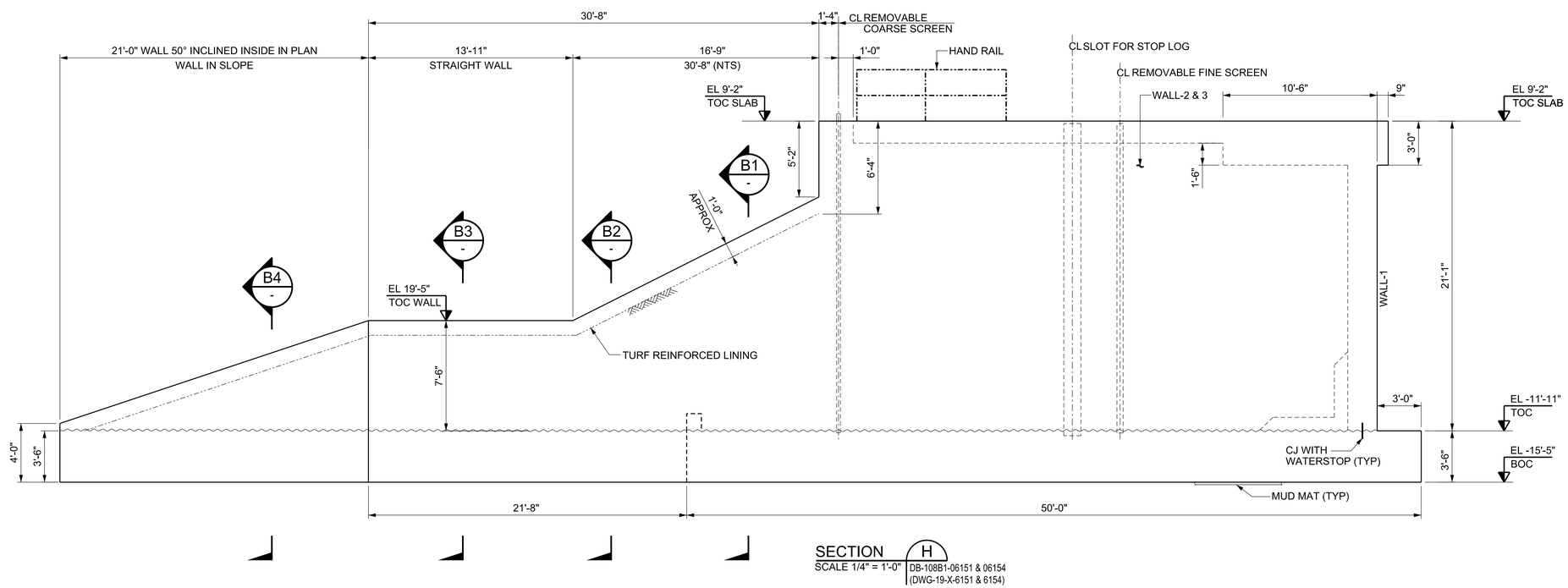
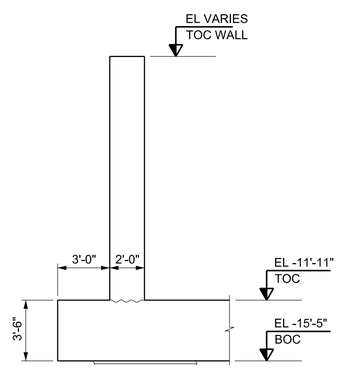
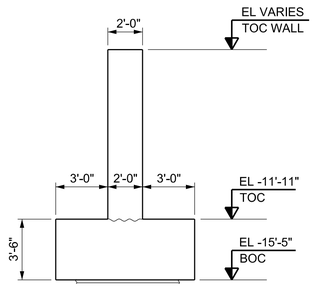


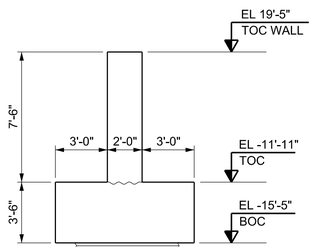
SECTION H
SCALE 1/4" = 1'-0"
DB-108B1-06151 & 06154 (DWG-19-X-6151 & 6154)



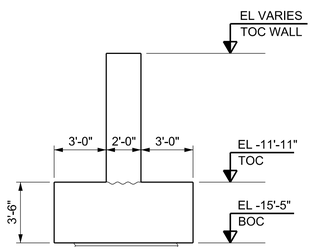
SECTION B1
SCALE 1/4" = 1'-0"



SECTION B2
SCALE 1/4" = 1'-0"



SECTION B3
SCALE 1/4" = 1'-0"



SECTION B4
SCALE 1/4" = 1'-0"

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151).
3. READ THIS DRAWING IN CONJUCTION WITH FOLLOWING DWGS 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151) AND 26196-100-DB-108B1-06154 (PAL-T0-CIV-DWG-19-X-6154).

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	06-28-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
108B1 - GROUND FLARE A & HAZARDOUS CHEMICAL STORAGE AREA
INTAKE STRUCTURE - 2, SECTIONS & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6162	000	26196-100-DB-108B1-06162	000

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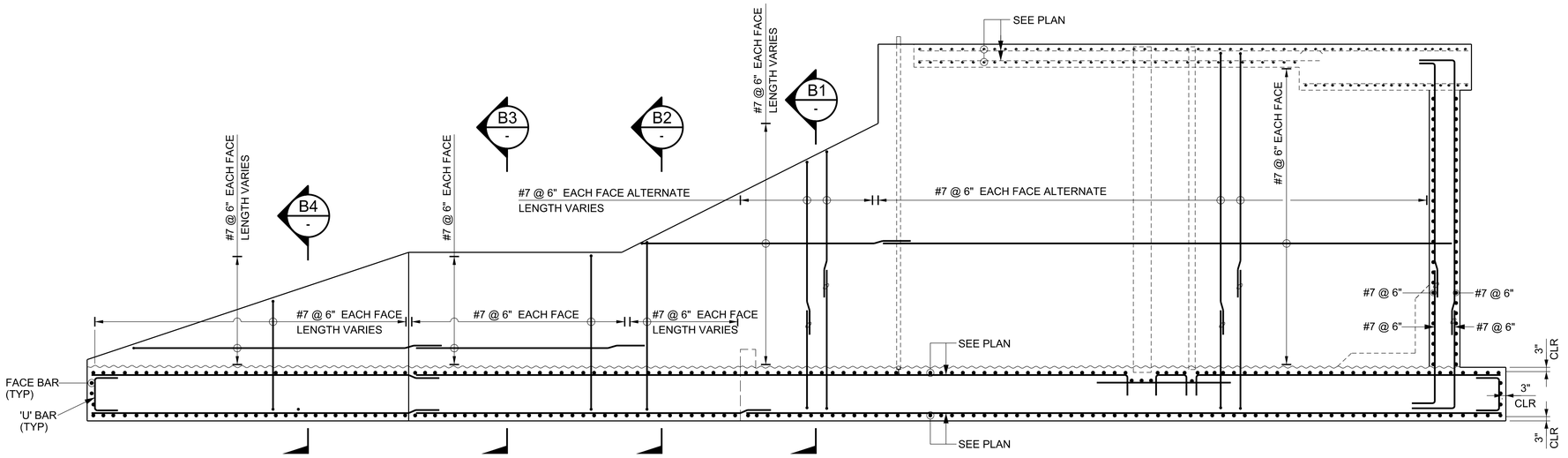
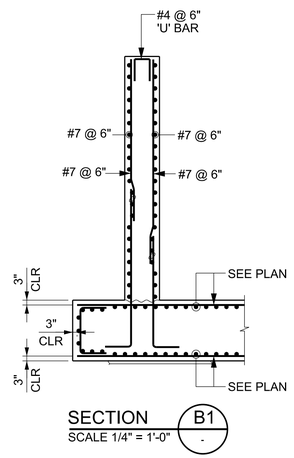
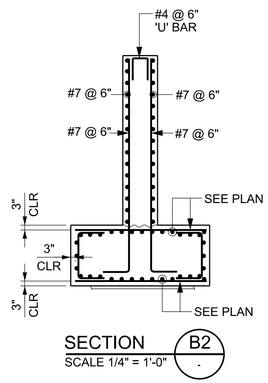


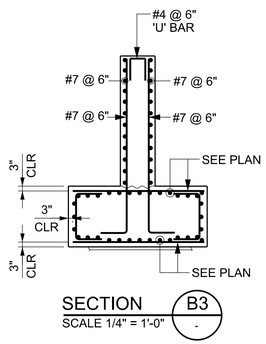
SECTION H
SCALE 1/4" = 1'-0"
DB-108B1-06151 & 06154 (DWG-19-X-6151 & 6154)



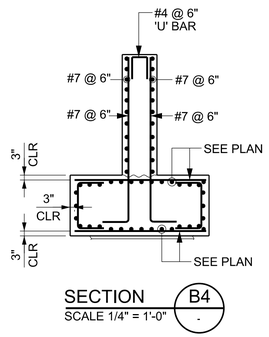
SECTION B1
SCALE 1/4" = 1'-0"



SECTION B2
SCALE 1/4" = 1'-0"



SECTION B3
SCALE 1/4" = 1'-0"



SECTION B4
SCALE 1/4" = 1'-0"

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151).
3. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-108B1-06151 (PAL-T0-CIV-DWG-19-X-6151) 26196-100-DB-108B1-06152 (PAL-T0-CIV-DWG-19-X-6152) & 26196-100-DB-108B1-06154 (PAL-T0-CIV-DWG-19-X-6154).

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	06-28-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

Port Arthur LNG

BECHTEL Bechtel Energy Inc. 26196-100 FIRM NO. F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
108B1 - GROUND FLARE A & HAZARDOUS CHEMICAL STORAGE AREA
INTAKE STRUCTURE - 2, REINFORCEMENT SECTIONS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6163	000	26196-100-DB-108B1-06163	000

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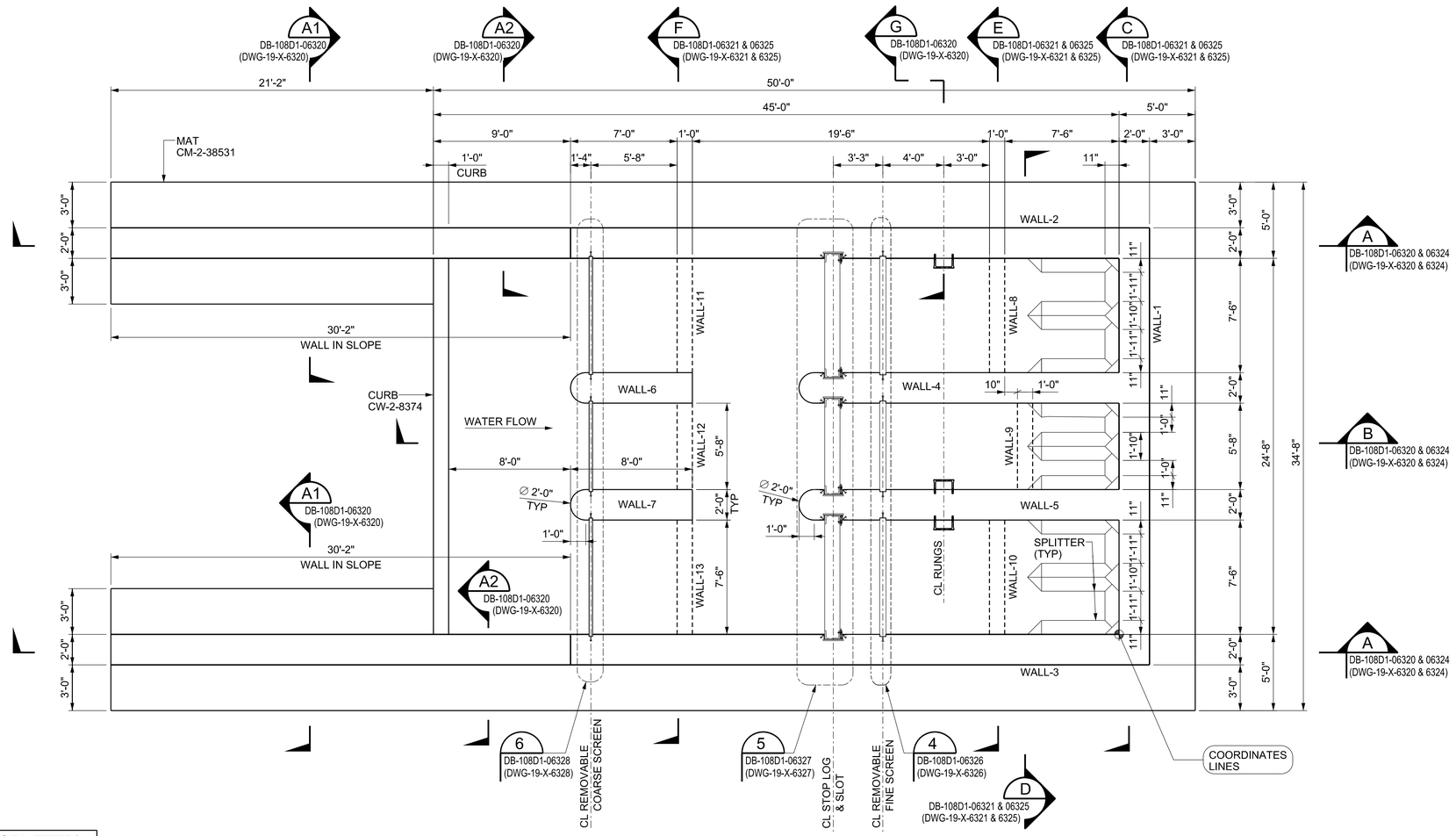
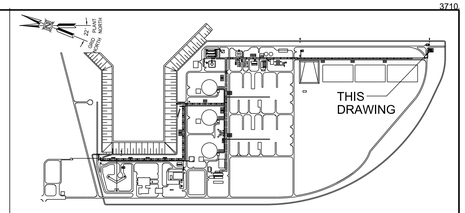


FDN LAYOUT PLAN AT EL -11'-11" (TOC MAT)
CWP:108D1-02Z-D SCALE 1/4" = 1'-0"



KEY PLAN

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR CONCRETE GENERAL NOTES, REFERENCES AND ABBREVIATIONS SEE STD DRAWING 26196-100-DB-000-00001 (PAL-PJT-CIV-DWG-00-X-6001).
3. FOR COORDINATE LINE, SEE EQUIPMENT LOCATION PLAN DWG 26196-100-P1-108D1-00103 (PAL-T0-PIP-PLN-00-GEN-4124).
4. UNO GROUT SHALL BE NON SHRINK CEMENT BASED TYPE IN ACCORDANCE WITH SPECIFICATION 26196-100-3PS-DB01-00002 (PAL-PJT-CIV-STD-00-X-0011).
5. ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH STD DRAWING 26196-100-DB-000-00008 (PAL-PJT-CIV-DWG-00-X-6008).
6. POST-INSTALLED ANCHORS SHALL BE IN ACCORDANCE WITH STD DRAWING 26196-100-DB-000-00009 (PAL-PJT-CIV-DWG-00-X-6009).
7. FOR ELECTRICAL GROUNDING LAYOUT SEE GROUNDING KEY PLAN OSBL AREA DRAWING 26196-100-EG-100-00001 (PAL-T0-ELE-PLN-00-GEN-4001).
8. ALL CONSTRUCTION JOINT LOCATIONS SHALL BE DECIDED BY CONSTRUCTION TO SUIT AT SITE. STANDARD DETAIL-2 DRAWING 26196-100-DWG-000-00004 (PAL-PJT-CIV-DWG-00-X-6004).
9. ALL ELECTRICAL & PIPING UNDERGROUND & EMBEDMENTS SHALL BE IN PLACE PRIOR TO PLACING OF CONCRETE.
10. CONSTRUCTION TO MAINTAIN GROUND WATER ELEVATION AT OR BELOW FOLLOWING LEVELS BY CONTINUOUS PUMPING OF WATER OUT OF THE PIT.
    TILL CASTING OF BASE SLAB .... EL -16'-5"
    TILL CASTING OF WALL FIRST LIFT .... EL -11'-0"
    TILL CASTING OF ALL WALLS .... EL -7'-0"
    TILL CASTING OF TOP SLAB .... EL 0'-0"
    AFTER BACKFILL OF GRANULAR FILL AROUND THE STRUCTURE UP TO FINISH GRADE LEVELS NO DEWATERING IS REQUIRED.
11. WATERSTOP SHALL BE 4" RIBBED CENTERBULB THERMOPLASTIC ELASTOMERIC RUBBER (TPER/TPV) WATERSTOP
12. REBAR DEVELOPMENT LENGTHS AND SPLICES REFER TO DRAWING 26196-100-DB -000-00012 (PAL-PJT-CIV-DWG-00-X-6012).
13. ANY CJ IN WALL SHOULD BE BROUGHT IN NOTICE OF RE IF REQUIRED BY FIELD ENGINEER..
14. READ THIS DRAWING IN CONJUCTION WITH FOLLOWING DRAWINGS:
    26196-100-DB-108D1-06319 (PAL-T0-CIV-DWG-19-X-6319) TO 26196-100-DB-108D1-06330 (PAL-T0-CIV-DWG-19-X-6330).
15. FOR DETAIL OF DMM SEE DWG 26196-100-V295646-CB00-00004 (PAL-PJT-CIV-SDD072-00-X-0004).

VENDOR REFERENCE DRAWINGS	
DRAWING NUMBER	DRAWING TITLE
26196-100-V291048-MPVT-00025 (PAL-T0-MEC-SD065-29-P-0025)	GENERAL ARRANGEMENT DRAWING FOR STORM WATER PUMP (0P- 2902, 0P-2904, 0P-2906 & 0P-2902S)
26196-100-V291048-MPVT-00057 (PAL-T0-MEC-SD065-29-P-0057)	GENERAL ARRANGEMENT DRAWING FOR BUILDING AREA STORM WATER PUMPS (0P-2901A/B, 0P-2903A/B, 0P-2905A/B & 0P-2901S)

TABLE - 1 (SPLITTER)	
SPLITTER MARK	TAG NAME
SPLITTER	CM-2-38513
SPLITTER	CM-2-38514
SPLITTER	CM-2-38515
SPLITTER	CM-2-38516
SPLITTER	CM-2-38517
SPLITTER	CM-2-38518
SPLITTER	CM-2-38519
SPLITTER	CM-2-38520
SPLITTER	CM-2-38532
SPLITTER	CM-2-38533
SPLITTER	CM-2-38534
SPLITTER	CM-2-38535
SPLITTER	CM-2-38536
SPLITTER	CM-2-38537
SPLITTER	CM-2-38538
SPLITTER	CM-2-38540
SPLITTER	CM-2-38542
SPLITTER	CM-2-38543
SPLITTER	CM-2-38544
SPLITTER	CM-2-40011
SPLITTER	CM-2-40012

CONC NOMENCLATURE	
WALL MARK	TAG NAME
WALL-1	CW-2-8364
WALL-2	CW-2-8364
WALL-3	CW-2-8364
WALL-4	CW-2-8370
WALL-5	CW-2-8372
WALL-6	CW-2-8371
WALL-7	CW-2-8373
WALL-8	CW-2-8367
WALL-9	CW-2-8368
WALL-10	CW-2-8369
WALL-11	CW-2-8363
WALL-12	CW-2-8365
WALL-13	CW-2-8366

LEGEND:

CWP : CONSTRUCTION WORK PACKAGE

BILL OF MATERIALS		
FDN TYPE	MIX	QTY
CONC BASE SLAB & TOP SLAB	CLASS S-1	331.32 CY
CONC WALL	CLASS S-1	271.8 CY
PRECAST STOP LOG SL1 (10 Nos)	CLASS S-1	6.0 CY
PRECAST STOP LOG SL 2 (10 Nos)	CLASS S-1	4.5 CY
FOR EMBED ITEM MTO SEE DRAWING NO. 26196-100-DB-108D1-06319 (PAL-T0-CIV-DWG-19-X-6319)		

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000	07-12-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
108D1 GROUND FLARE C
INTAKE STRUCTURE - 1, LAYOUT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6318	000	26196-100-DB-108D1-06318	000

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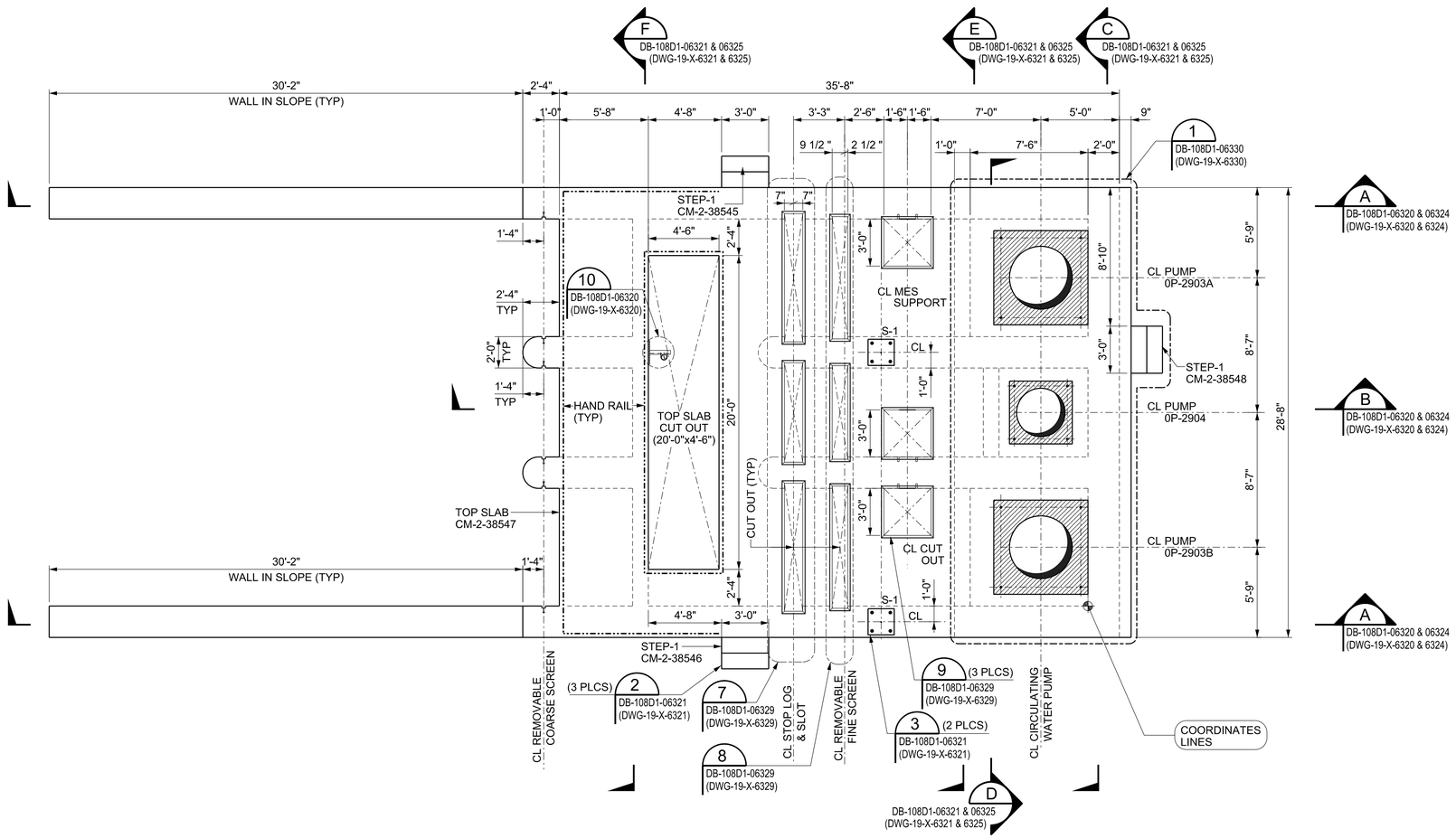

OPERATING FLOOR PLAN AT EL 9'-2" (TOC)
SCALE 1/4" = 1'-0"

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-108D1-06318 (PAL-T0-CIV-DWG-19-X-6318).
3. READ THIS DRAWING IN CONJUCTION WITH FOLLOWING DRAWINGS:
   26196-100-DB-108D1-06318 (PAL-T0-CIV-DWG-19-X-6318) AND
   26196-100-DB-108D1-06320 (PAL-T0-CIV-DWG-19-X-6320) TO
   26196-100-DB-108D1-06330 (PAL-T0-CIV-DWG-19-X-6330).

MTO FOR EMBEDDED ITEMS

MEMBER TYPE	LENGTH	QTY	REMARKS
CHANNEL - C5 x 6.7 WITH STUD	21'-1"	6 Nos	EMBED ITEMS TO BE VARIFIED BY FABRICATOR
CHANNEL - C5 x 6.7 WITH STUD	7'-6"	2 Nos	
CHANNEL - C5 x 6.7 WITH STUD	5'-8"	1 No	
ANGLE - L 4 x 4 x 1/4 WITH STUD	21'-3"	12 Nos	
ANGLE - L 4 x 4 x 1/4 WITH STUD	7'-6"	4 Nos	
ANGLE - L 4 x 4 x 1/4 WITH STUD	5'-8"	2 Nos	
BACK PLATE - 16" x 1/2" THK	21'-3"	6 Nos	
BACK PLATE - 16" x 1/2" THK	8'-3"	2 Nos	
BACK PLATE - 16" x 1/2" THK	6'-5"	1 No	
CHANNEL - C3 x 6 WITH STUD	21'-9"	6 Nos	
CHANNEL - C3 x 6 WITH STUD	7'-6"	2 Nos	
CHANNEL - C3 x 6 WITH STUD	5'-8"	1 No	
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	3'-0"	12 Nos	
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	8'-6"	4 Nos	
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	6'-8"	2 Nos	
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	1'-6"	6 Nos	
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	8'-1 1/2"	4 Nos	
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	6'-3 1/2"	2 Nos	
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	1'-4"	6 Nos	

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Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
108D1 GROUND FLARE C
INTAKE STRUCTURE - 1, OPERATING FLOOR LAYOUT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6319	000	26196-100-DB-108D1-06319	000

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NOTES:-

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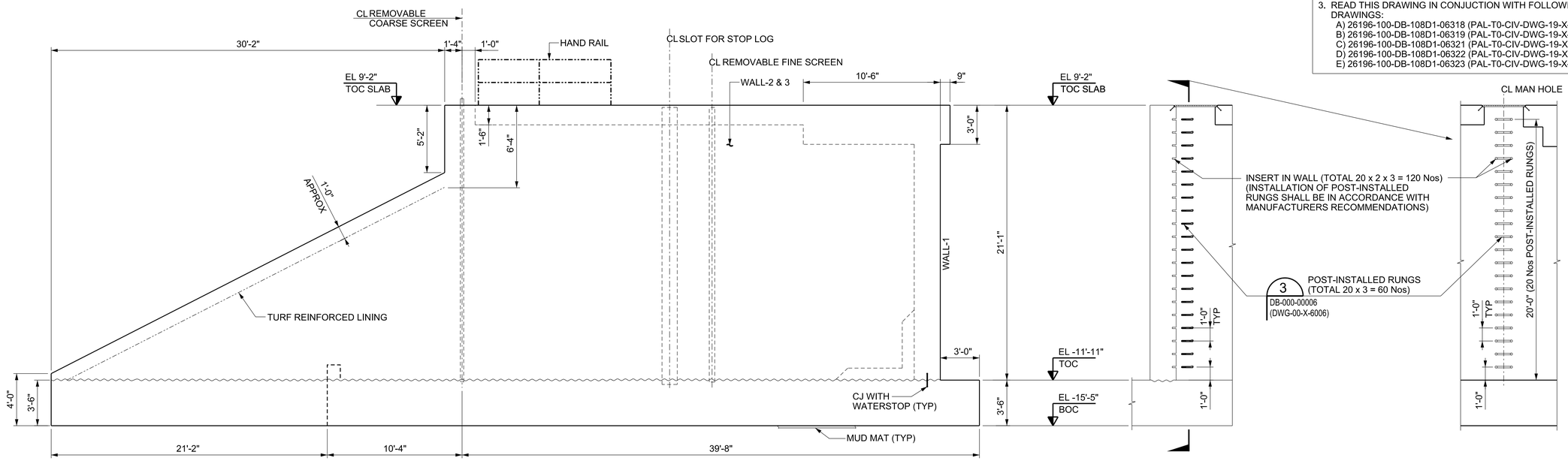
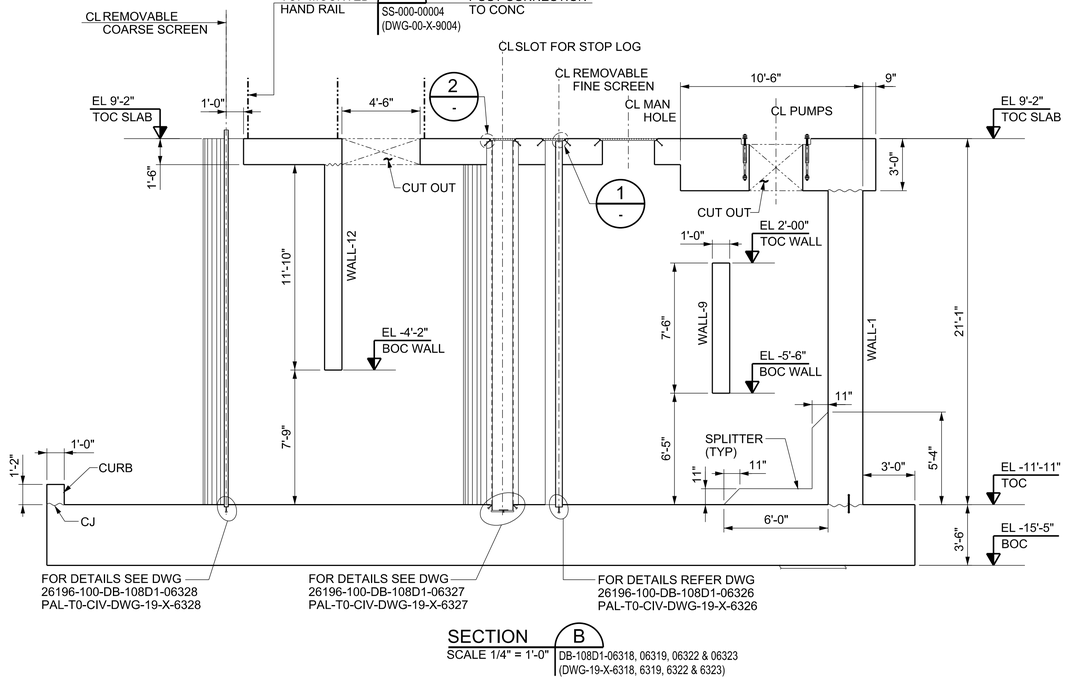
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-108D1-06318 (PAL-T0-CIV-DWG-19-X-6318).
3. READ THIS DRAWING IN CONJUCTION WITH FOLLOWING DRAWINGS:
   A) 26196-100-DB-108D1-06318 (PAL-T0-CIV-DWG-19-X-6318)
   B) 26196-100-DB-108D1-06319 (PAL-T0-CIV-DWG-19-X-6319)
   C) 26196-100-DB-108D1-06321 (PAL-T0-CIV-DWG-19-X-6321)
   D) 26196-100-DB-108D1-06322 (PAL-T0-CIV-DWG-19-X-6322)
   E) 26196-100-DB-108D1-06323 (PAL-T0-CIV-DWG-19-X-6323).

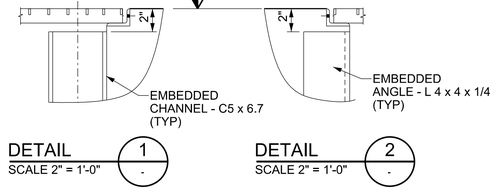


SECTION A (DB-108D1-06318, 06319, 06322 & 06323) (DWG-19-X-6318, 6319, 6322 & 6323)
SCALE 1/4" = 1'-0"

SECTION G (3 PLACES) (DB-108D1-06318) (DWG-19-X-6318)
SCALE 1/4" = 1'-0"

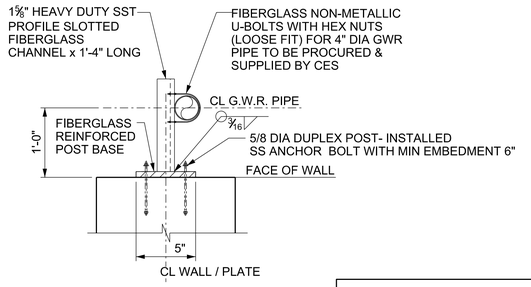


SECTION B (DB-108D1-06318, 06319, 06322 & 06323) (DWG-19-X-6318, 6319, 6322 & 6323)
SCALE 1/4" = 1'-0"

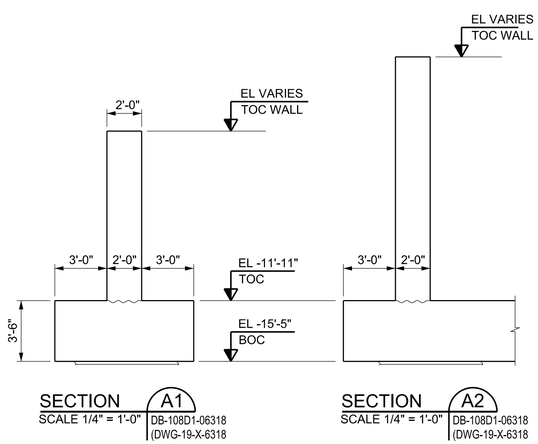


DETAIL 1 SCALE 2" = 1'-0"

DETAIL 2 SCALE 2" = 1'-0"



DETAIL 10 VERTICALLY 4 PLACES (DB-108D1-06319) (DWG-19-X-6319)
SCALE 1/2" = 1'-0"



SECTION A1 (DB-108D1-06318) (DWG-19-X-6318)
SCALE 1/4" = 1'-0"

SECTION A2 (DB-108D1-06318) (DWG-19-X-6318)
SCALE 1/4" = 1'-0"

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

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PORT ARTHUR LIQUEFACTION PROJECT
108D1 GROUND FLARE C
INTAKE STRUCTURE - 1, SECTIONS & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6320	000	26196-100-DB-108D1-06320	000

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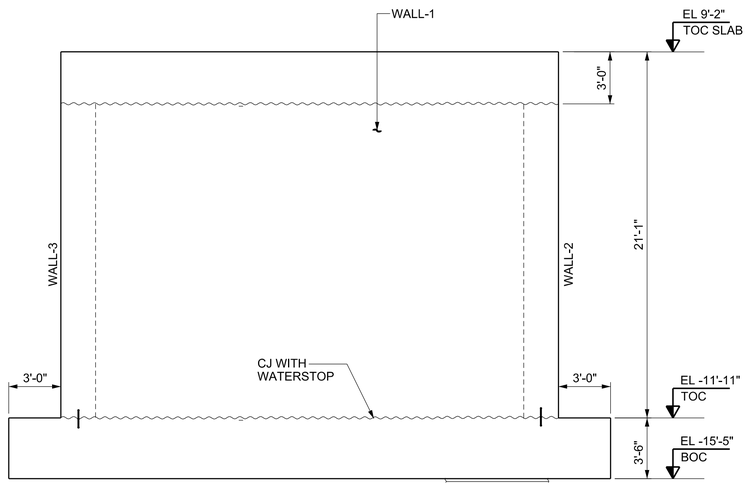
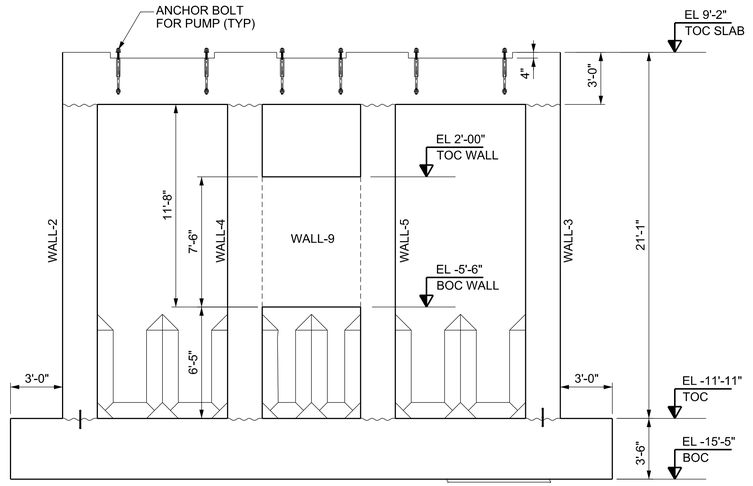
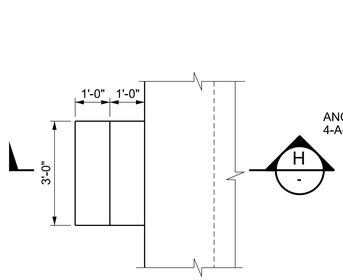
3. READ THIS DRAWING IN CONJUCTION WITH FOLLOWING DRAWINGS:
   A) 26196-100-DB-108D1-06318 (PAL-T0-CIV-DWG-19-X-6318)
   B) 26196-100-DB-108D1-06319 (PAL-T0-CIV-DWG-19-X-6319)
   C) 26196-100-DB-108D1-06320 (PAL-T0-CIV-DWG-19-X-6320)
   D) 26196-100-DB-108D1-06322 (PAL-T0-CIV-DWG-19-X-6322)
   E) 26196-100-DB-108D1-06323 (PAL-T0-CIV-DWG-19-X-6323).



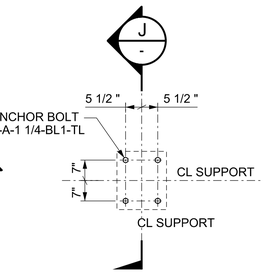
SECTION C
SCALE 1/4" = 1'-0" | DB-108D1-06318, 06319, 06322 & 06323 (DWG-19-X-6318, 6319, 6322 & 6323)



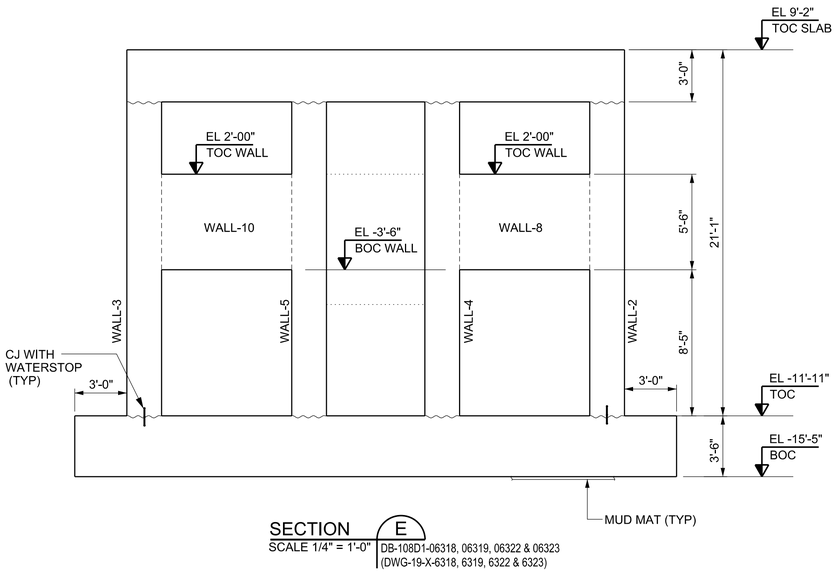
SECTION D
SCALE 1/4" = 1'-0" | DB-108D1-06318, 06319, 06322 & 06323 (DWG-19-X-6318, 6319, 6322 & 6323)



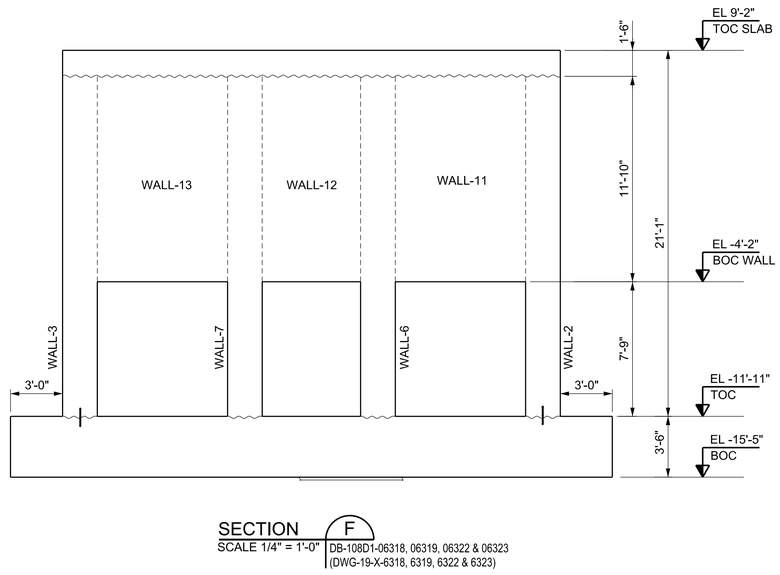
DETAIL 2 (3 PLACES)
SCALE 1/2" = 1'-0" | DB-108D1-06319 (DWG-19-X-6319)
(FOR LOCATION AND ORIANTATION SEE PLAN)



DETAIL 3 S-1 (2 Nos)
SCALE 1/2" = 1'-0" | DB-108D1-06319 (DWG-19-X-6319)



SECTION E
SCALE 1/4" = 1'-0" | DB-108D1-06318, 06319, 06322 & 06323 (DWG-19-X-6318, 6319, 6322 & 6323)



SECTION F
SCALE 1/4" = 1'-0" | DB-108D1-06318, 06319, 06322 & 06323 (DWG-19-X-6318, 6319, 6322 & 6323)

SECTION H
SCALE 1/2" = 1'-0" | -

SECTION J
SCALE 1/2" = 1'-0" | -

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Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
108D GROUND FLARE C
INTAKE STRUCTURE - 1, PLAN, SECTIONS AND DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6321	000	26196-100-DB-108D1-06321	000

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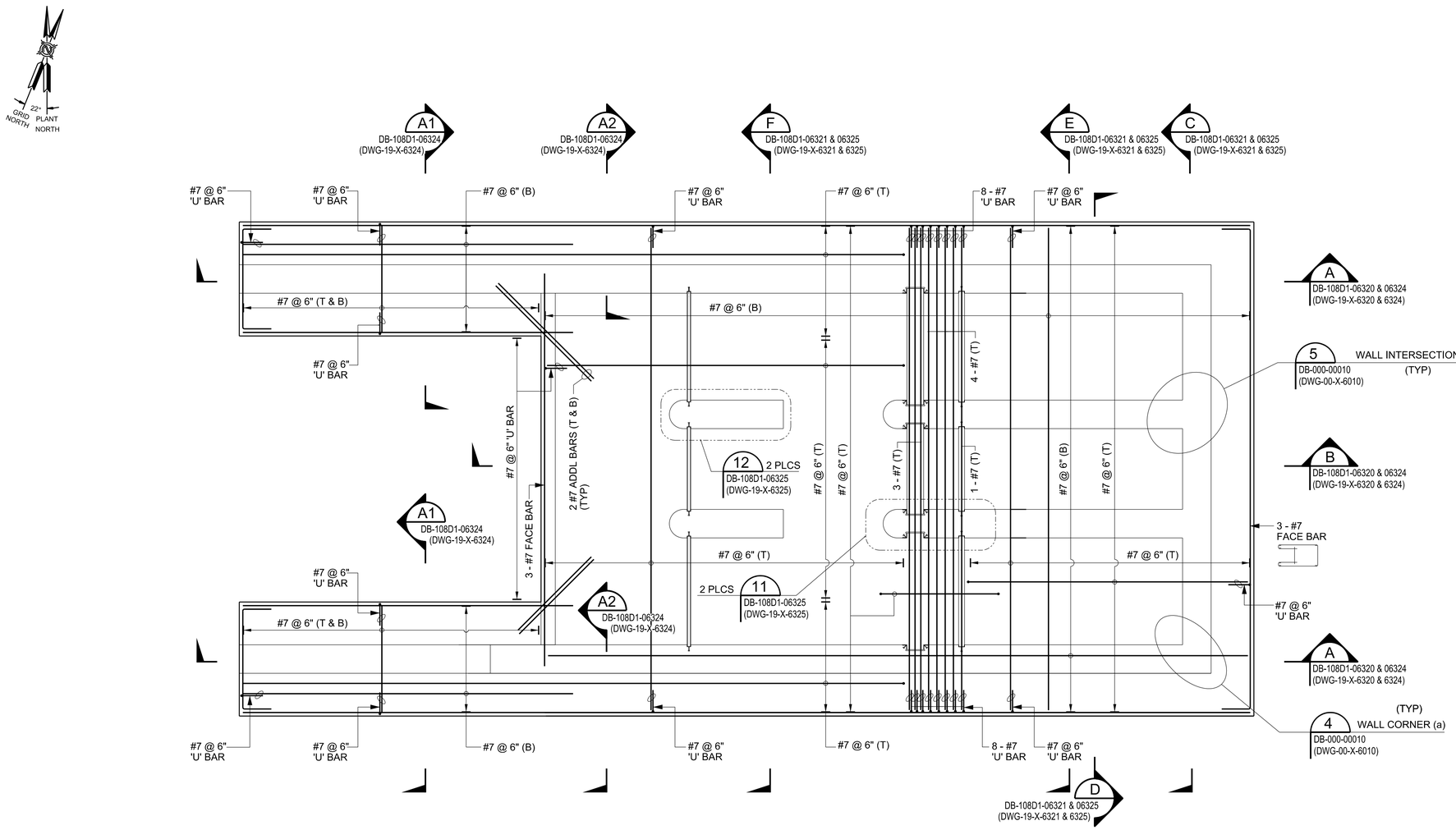

FOUNDATION LAYOUT PLAN AT EL -11'-11" (TOC MAT)
SCALE 1/4" = 1'-0"

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. READ THIS DRAWING IN CONJUCTION WITH DRAWING 26196-100-DB-108D1-06318 (PAL-T0-CIV-DWG-19-X-6318).

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000	07-12-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
108D1 GROUND FLARE C
INTAKE STRUCTURE - 1, FOUNDATION REINF LAYOUT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6322	000	26196-100-DB-108D1-06322	000

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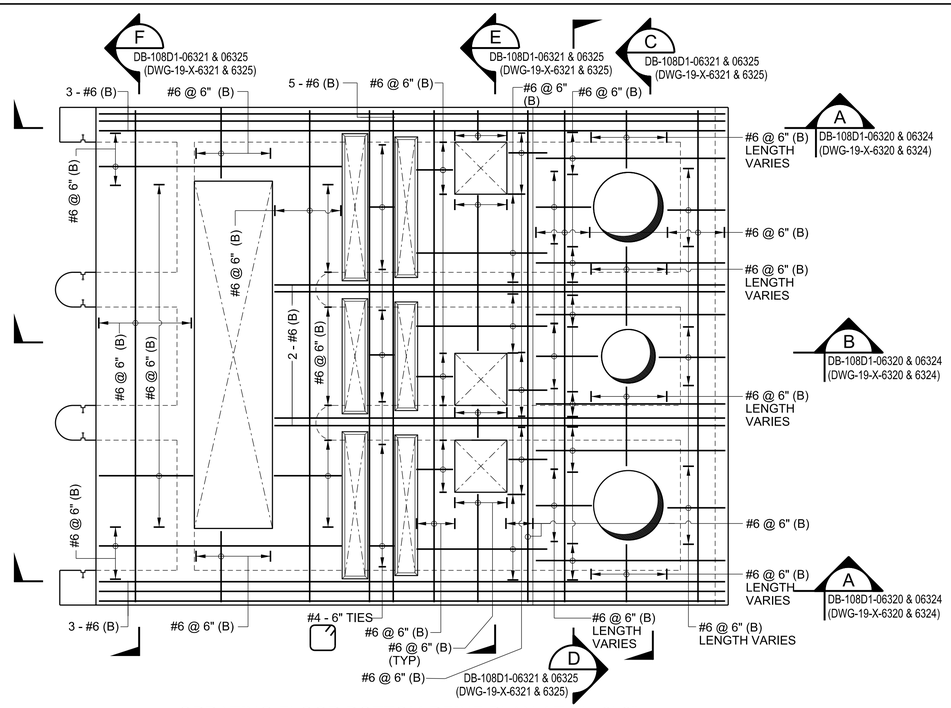
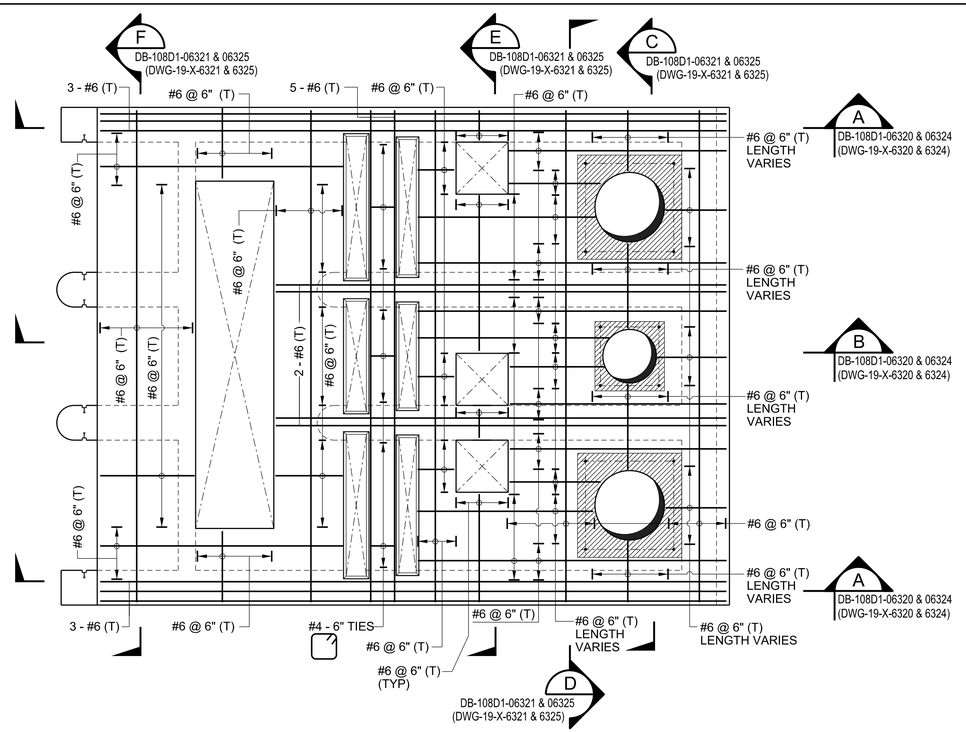


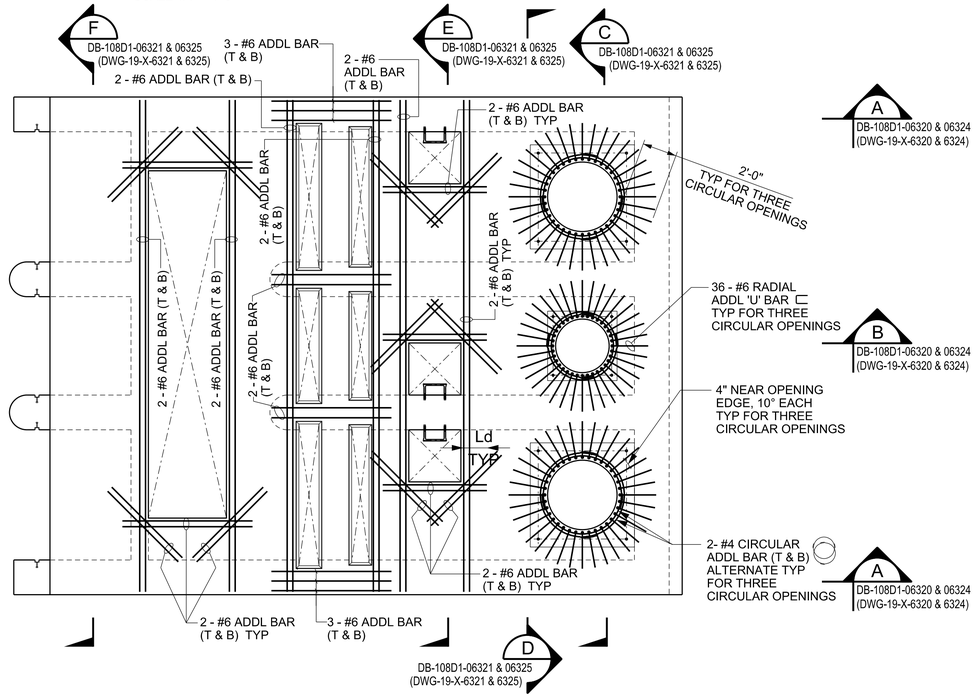
OPRATING FLOOR BOTTOM REINF PLAN AT EL 9'-2"

SCALE 1/4" = 1'-0"



OPRATING FLOOR TOP REINF PLAN AT EL 9'-2" (TOC)

SCALE 1/4" = 1'-0"



OPERATING FLOOR ADDITIONAL REINF PLAN AT EL 9'-2" (TOC)

SCALE 1/4" = 1'-0"

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. READ THIS DRAWING IN CONJUCTION WITH DRAWING 26196-100-DB-108D1-06318 (PAL-T0-CIV-DWG-19-X-6318) & 26196-100-DB-108D1-06319 (PAL-T0-CIV-DWG-19-X-6319).

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26196-100
FIRM NO.
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PORT ARTHUR LIQUEFACTION PROJECT
108D1 GROUND FLARE C
INTAKE STRUCTURE - 1, OPERATING FLOOR REINF LAYOUT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6323	000	26196-100-DB-108D1-06323	000

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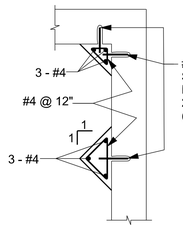
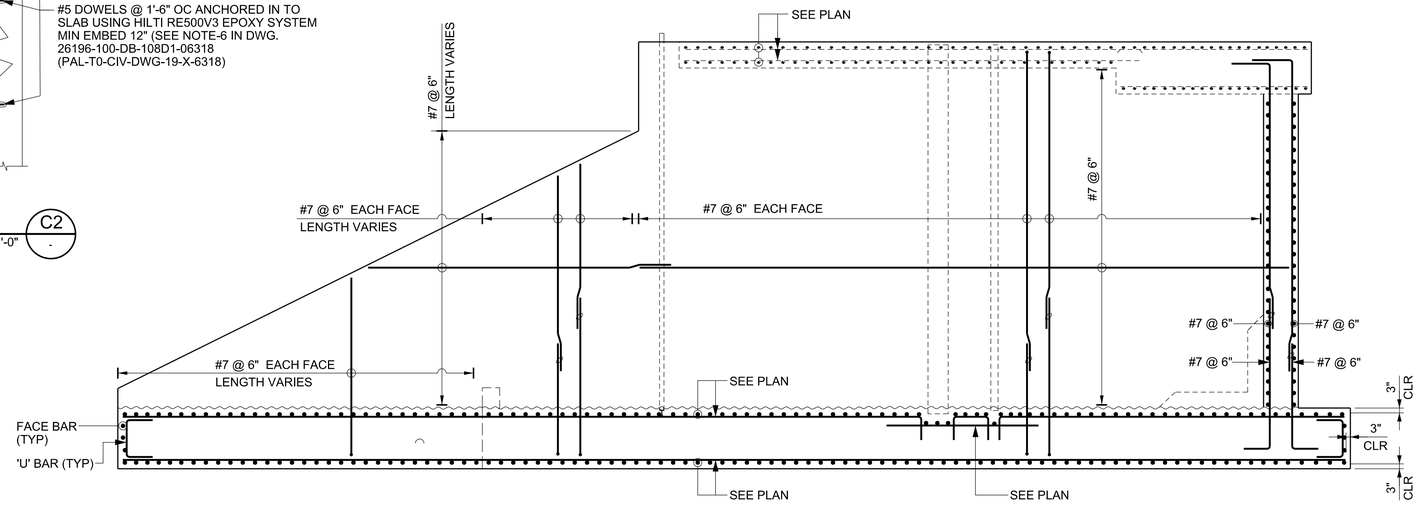
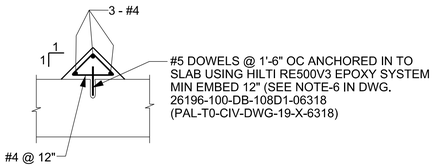


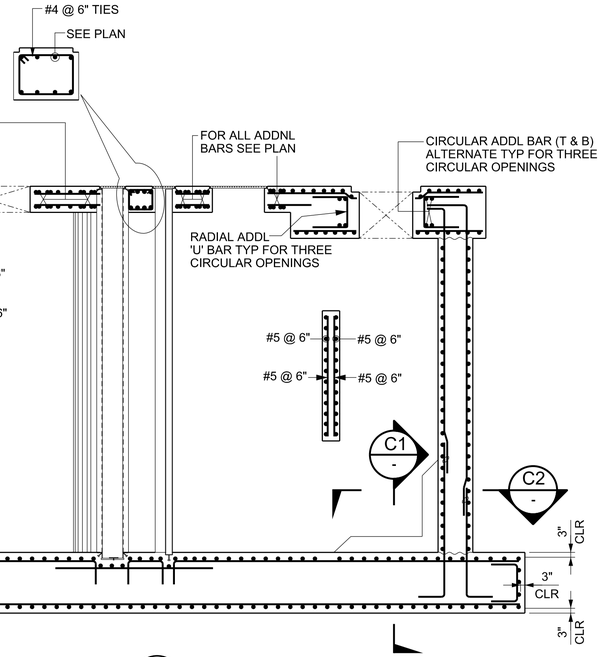
SECTION C2
SCALE 1/2" = 1'-0"

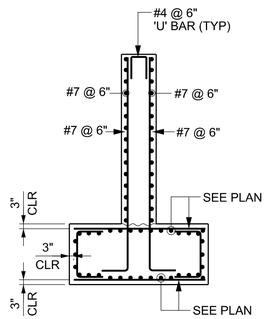


SECTION A
SCALE 1/4" = 1'-0"
DB-108D1-06318, 06319, 06322 & 06323 (DWG-19-X-6318, 6319, 6322 & 6323)

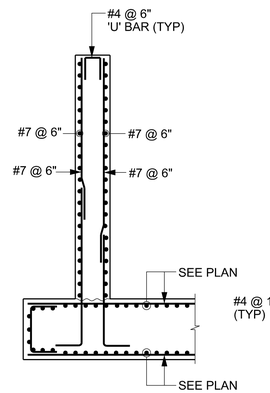


SECTION C1
SCALE 1/2" = 1'-0"





SECTION A1
SCALE 1/4" = 1'-0"
DB-108D1-06322 (DWG-19-X-6322)



SECTION A2
SCALE 1/4" = 1'-0"
DB-108D1-06322 (DWG-19-X-6322)

SECTION B
SCALE 1/4" = 1'-0"
DB-108D1-06318, 06319, 06322 & 06323 (DWG-19-X-6318, 6319, 6322 & 6323)

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-108D1-06318 (PAL-T0-CIV-DWG-19-X-6318).
3. READ THIS DRAWING IN CONJUCTION WITH FOLLOWING DRAWINGS;
   A) 26196-100-DB-108D1-06318 (PAL-T0-CIV-DWG-19-X-6318)
   B) 26196-100-DB-108D1-06319 (PAL-T0-CIV-DWG-19-X-6319)
   C) 26196-100-DB-108D1-06320 (PAL-T0-CIV-DWG-19-X-6320)
   D) 26196-100-DB-108D1-06322 (PAL-T0-CIV-DWG-19-X-6322)
   E) 26196-100-DB-108D1-06323 (PAL-T0-CIV-DWG-19-X-6323).

Port Arthur LNG

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26196-100
FIRM NO.
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PORT ARTHUR LIQUEFACTION PROJECT
108D1 GROUND FLARE C
INTAKE STRUCTURE - 1, REINF PLAN, SECTIONS & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6324	000	26196-100-DB-108D1-06324	000

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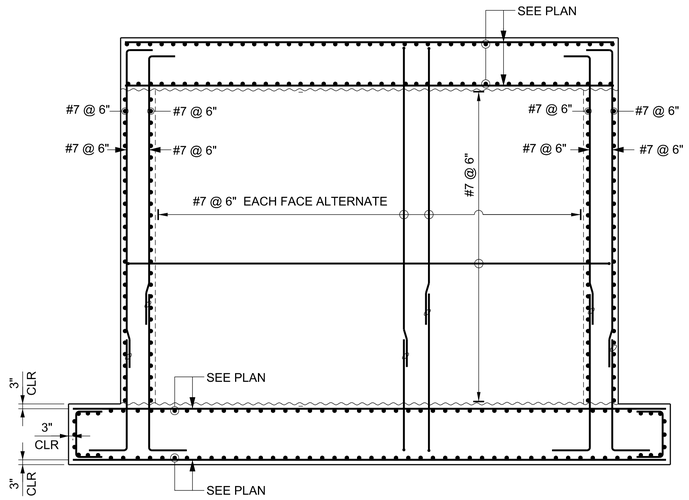
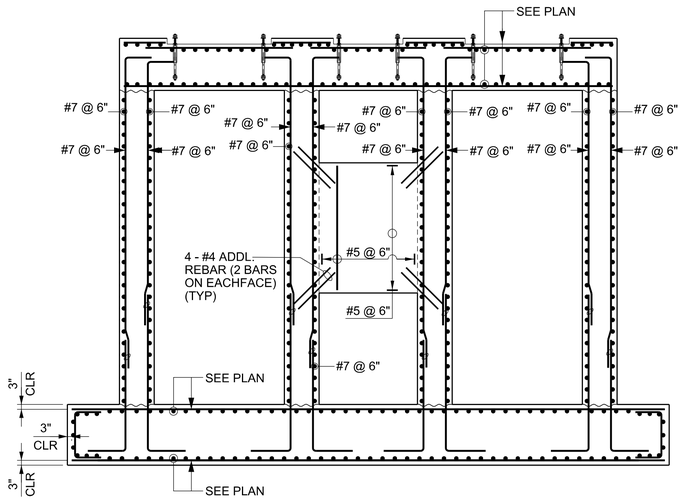
NOTES:-

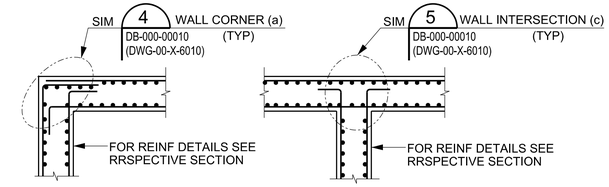
1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-108D1-06318 (PAL-T0-CIV-DWG-19-X-6318).
3. READ THIS DRAWING IN CONJUCTION WITH FOLLOWING DRAWINGS:
   A) 26196-100-DB-108D1-06318 (PAL-T0-CIV-DWG-19-X-6318)
   B) 26196-100-DB-108D1-06319 (PAL-T0-CIV-DWG-19-X-6319)
   C) 26196-100-DB-108D1-06321 (PAL-T0-CIV-DWG-19-X-6321)
   D) 26196-100-DB-108D1-06322 (PAL-T0-CIV-DWG-19-X-6322)
   E) 26196-100-DB-108D1-06323 (PAL-T0-CIV-DWG-19-X-6323).



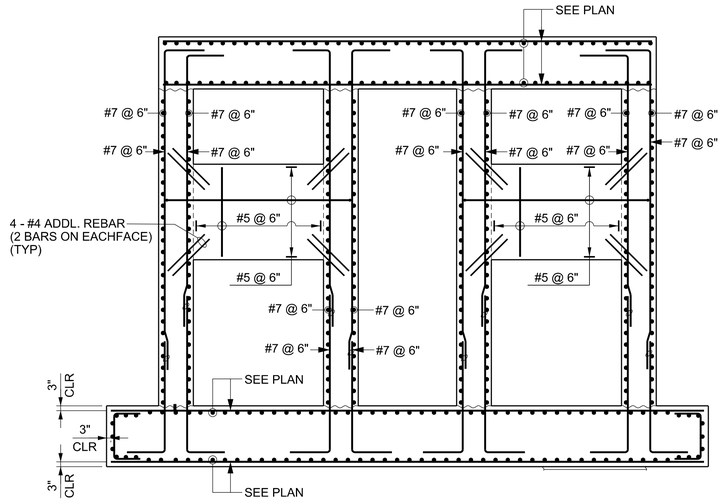
SECTION C
SCALE 1/4" = 1'-0" | DB-108D1-06318, 06319, 06322 & 06323 (DWG-19-X-6318, 6319, 6322 & 6323)



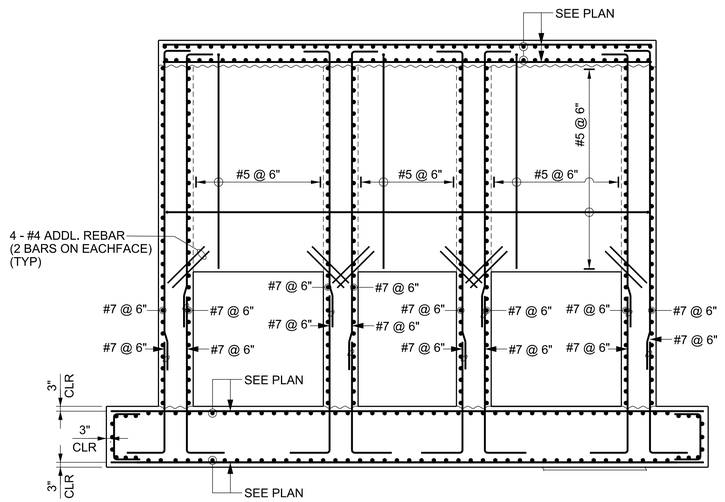
SECTION D
SCALE 1/4" = 1'-0" | DB-108D1-06318, 06319, 06322 & 06323 (DWG-19-X-6318, 6319, 6322 & 6323)



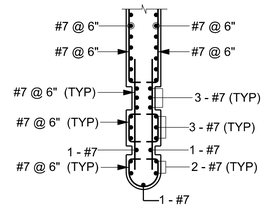
TYP WALL JUNCTION & WALL CORNER REINF PLAN
SCALE 1/4" = 1'-0"



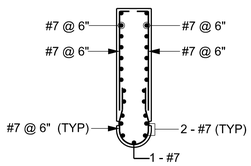
SECTION E
SCALE 1/4" = 1'-0" | DB-108D1-06318, 06319, 06322 & 06323 (DWG-19-X-6318, 6319, 6322 & 6323)



SECTION F
SCALE 1/4" = 1'-0" | DB-108D1-06318, 06319, 06322 & 06323 (DWG-19-X-6318, 6319, 6322 & 6323)



DETAIL 11
SCALE 1/4" = 1'-0" | DB-108D1-06322 (DWG-19-X-6322)



DETAIL 12
SCALE 1/4" = 1'-0" | DB-108D1-06322 (DWG-19-X-6322)

Port Arthur LNG

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PORT ARTHUR LIQUEFACTION PROJECT
108D1 GROUND FLARE C
INTAKE STRUCTURE - 1, REINF SECTIONS AND DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6325	000	26196-100-DB-108D1-06325	000

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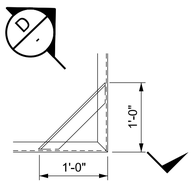
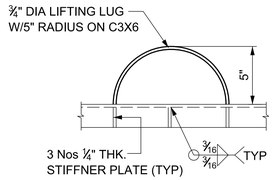
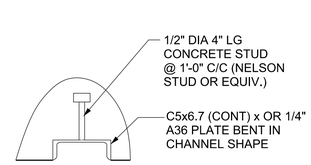


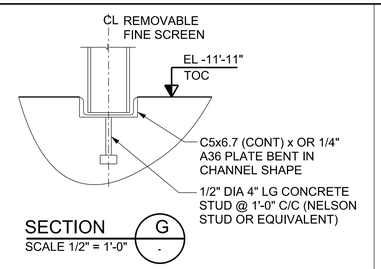
DETAIL 1 / SCALE= NTS



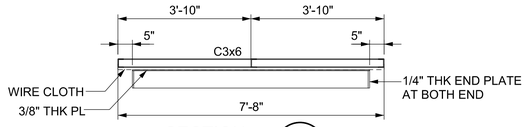
DETAIL 2 / SCALE= NTS (6 PLACES)



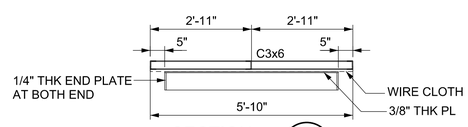
DETAIL 3 / SCALE 1/2" = 1'-0"



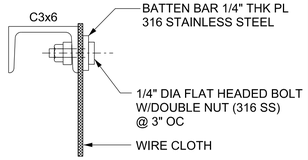
SECTION G / SCALE 1/2" = 1'-0"



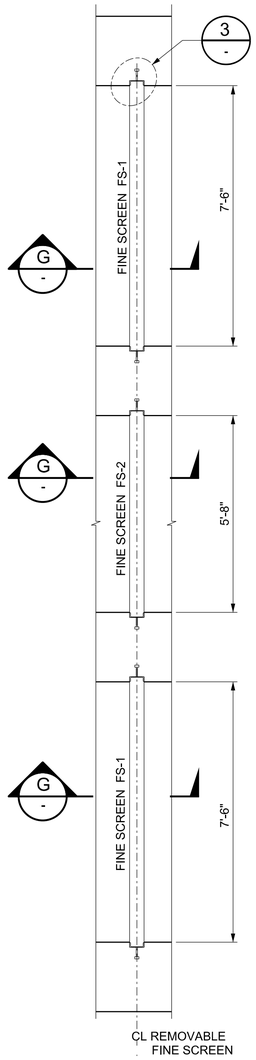
SECTION A / SCALE 1/2" = 1'-0"



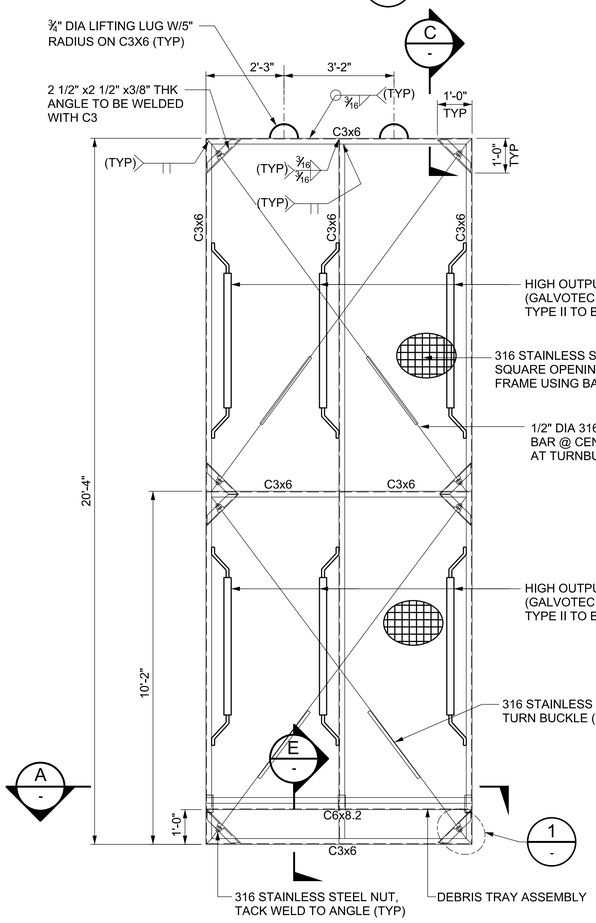
SECTION B / SCALE 1/2" = 1'-0"



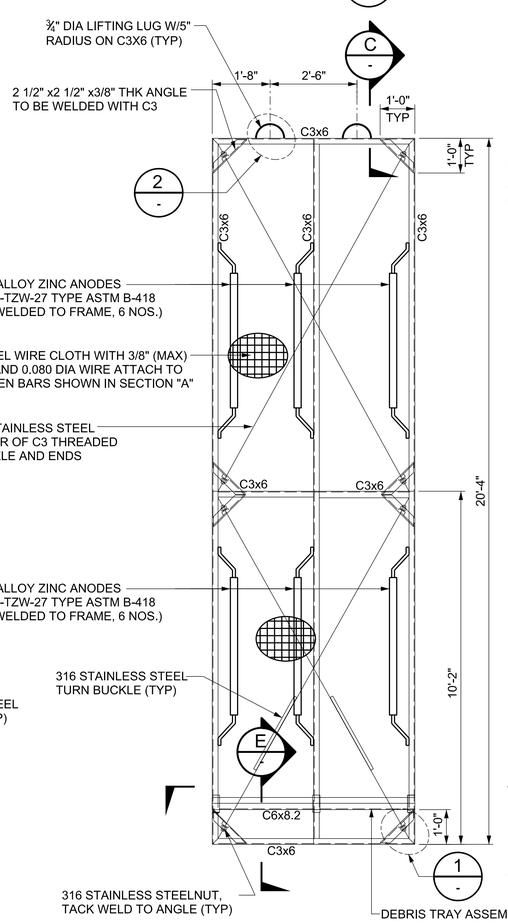
SECTION C / SCALE= NTS



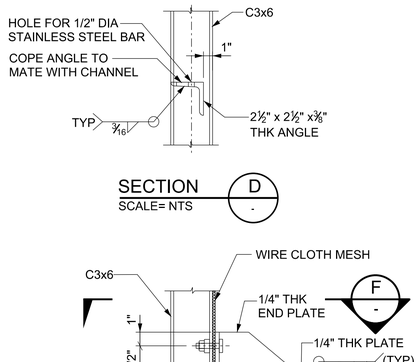
DETAIL 4 / SCALE 1/8" = 1'-0" (SEE NOTE-8) / DB-108D1-06318 (DWG-19-X-6318)



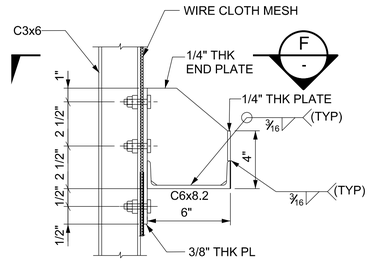
ELE VATION FOR FINE SCREEN FS-1 / SCALE 1/2" = 1'-0" (2 Nos)



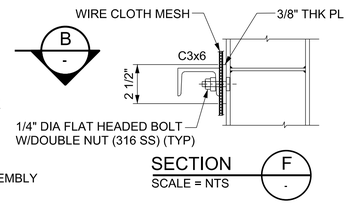
ELE VATION FOR FINE SCREEN FS-2 / SCALE 1/2" = 1'-0" (1 No)



SECTION D / SCALE= NTS



SECTION E / SCALE= NTS DEBRIS TRAY ASSEMBLY



SECTION F / SCALE = NTS

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-108D1-06318 (PAL-T0-CIV-DWG-19-X-6318).
3. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-108D1-06318 (PAL-T0-CIV-DWG-19-X-6318).
4. COARSE SCREEN SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. DRY FILM THICKNESS FOR ZINC COATING SHALL BE 3 MILLS PER A123
5. ALL STRUCTURAL STEEL, STEEL SUPPORTS AND HOOKS FOR FINE SCREEN, STEEL SUPPORTS FOR GRATINGS (ALL SIDES, FRAME, HOOKS, & HOLES), EMBEDS (ALL SIDES), AND CHANNELS (ALL SIDES) SHALL BE PREPARED IN ACCORDANCE WITH SSPC-SP 10, NEAR WHITE METAL BLAST CLEANING AND COATED WITH 24-30 MILS OF INTERNATIONAL PAINTS INTERZONE 954 OR DUROMAR 2510. THE COATING SHALL BE APPLIED IN ACCORDANCE WITH AN APPROVED PROCEDURE INCORPORATING THE PAINT MANUFACTURER'S RECOMMENDATION. THE APPLIED COATING MUST BE ESSENTIALLY FREE OF APPLICATION RELATED DEFECTS AND HOLES/VOIDS. COATING FOR CARBON STEEL ONLY, 316 STAINLESS STEEL SHALL NOT BE COATED. FINE SCREEN ASSEMBLY, COARSE SCREEN ASSEMBLY, AND THEIR SUPPORTING COATED CHANNELS, AND COATED EMBEDS SHALL BE CATHODICALLY PROTECTED WITH SACRIFICIAL ANODE OF 5-10 YEARS DESIGN LIFE.
6. ALL PLATES AND CHANNELS SHOWN IN THE DRAWING CONFORM TO ASTM A36.
7. THE SCREEN DETAILS ARE FOR ONE UNIT.
8. ACTUAL DISTANCE BETWEEN SLOTS FOR SCREEN TO BE TAKEN FROM AS BUILT AT SITE AND WIDTH OF THE SCREEN SHALL BE ADJUSTED, IF REQUIRED (FIELD TO PROVIDE AS-BUILT DISTANCE BETWEEN SLOTS @ 1'-0" INTERVALS WITHIN THREE WEEKS OF CONCRETE PLACEMENT)

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	07-12-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

Port Arthur LNG

BECHTEL Bechtel Energy Inc. 26196-100 FIRM NO. F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
108D1 GROUND FLARE C
INTAKE STRUCTURE - 1, REMOVABLE FINE SCREEN DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6326	000	26196-100-DB-108D1-06326	000

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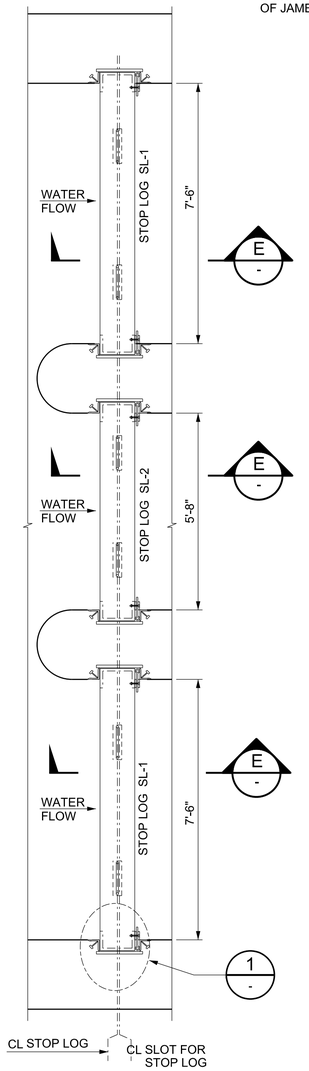
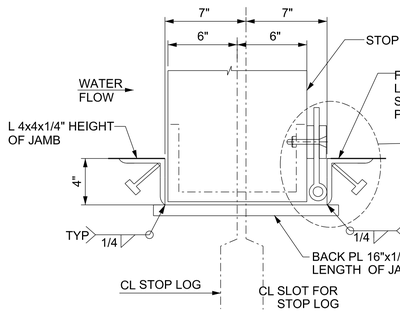
Refer to the Enterprise Content Management System for current revision.

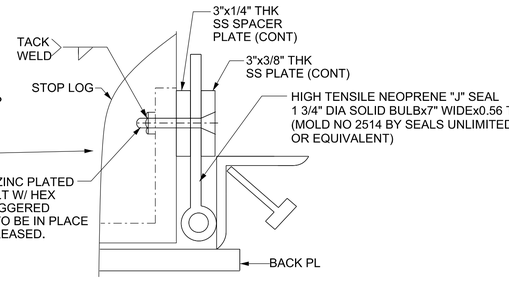
GRID NORTH
22° PLANT NORTH

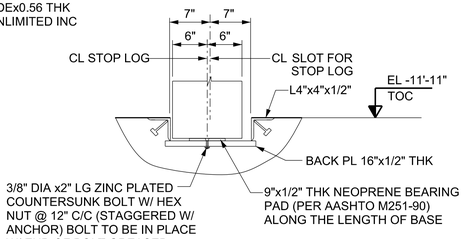


DETAIL 5 — SCALE 1/2" = 1'-0" — DB-108D1-06318 (DWG-19-X-6318)

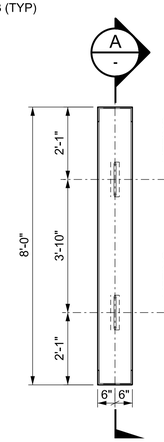


DETAIL 1 — SCALE 2" = 1'-0" — BOTH END

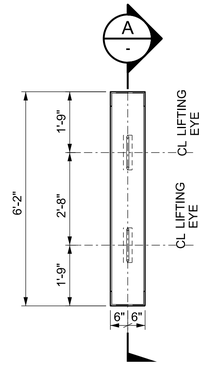




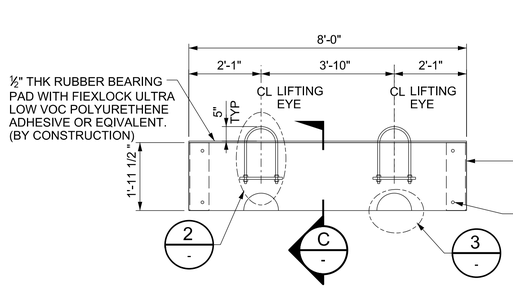
SECTION E — SCALE 1" = 1'-0"



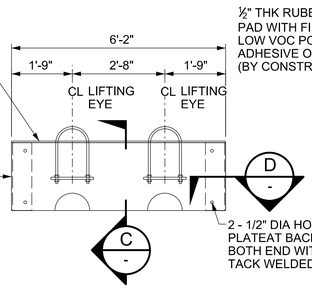
PLAN FOR STOP LOG SL-1 — SCALE 1/2" = 1'-0" — (10 Nos)



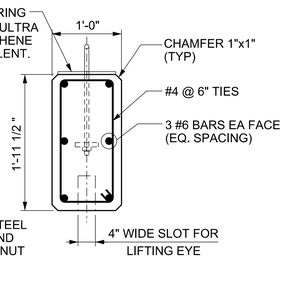
PLAN FOR STOP LOG SL-2 — SCALE 1/2" = 1'-0" — (10 Nos)



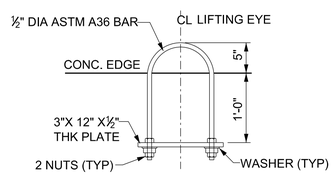
SECTION A — SCALE 1/2" = 1'-0"



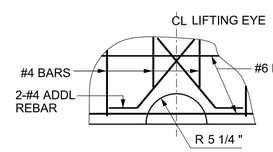
SECTION B — SCALE 1/2" = 1'-0"



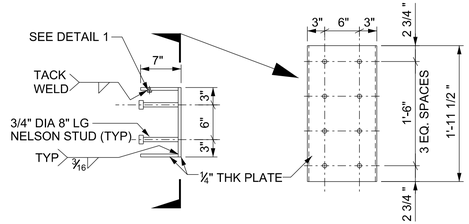
SECTION C — SCALE 1" = 1'-0"



DETAIL 2 — SCALE 1" = 1'-0"



DETAIL 3 — SCALE 1" = 1'-0"



SECTION D — SCALE 1" = 1'-0"

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. READ THIS DRAWING IN CONJUCTION WITH DRAWING 26196-100-DB-108D1-06318 (PAL-T0-CIV-DWG-19-X-6318).

FIELD VERIFICATION OF THE AS-BUILT HORIZONTAL DIMENSIONS BETWEEN THE EMBEDDED STEEL CHANNELS ON THE CONCRETE INTAKE WALLS, THE VERTICAL ALIGNMENT AND PLUMBNESS OF THE EMBEDDED STEEL CHANNELS, AND THE AS-BUILT TOP ELEVATIONS ON THE CONCRETE INTAKE SLAB ALONG THE ALIGNMENT OF STOP LOGS IS REQUIRED. ONE SET OF STOP LOGS SHALL FIT EACH PUMP BAY SLOT.

BILL OF MATERIALS

TYPE	QTY
STOP LOG SL 1	10 Nos
STOP LOG SL 2	10 Nos

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	07-12-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
108D1 GROUND FLARE C
INTAKE STRUCTURE - 1, STOP LOG DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6327	000	26196-100-DB-108D1-06327	000

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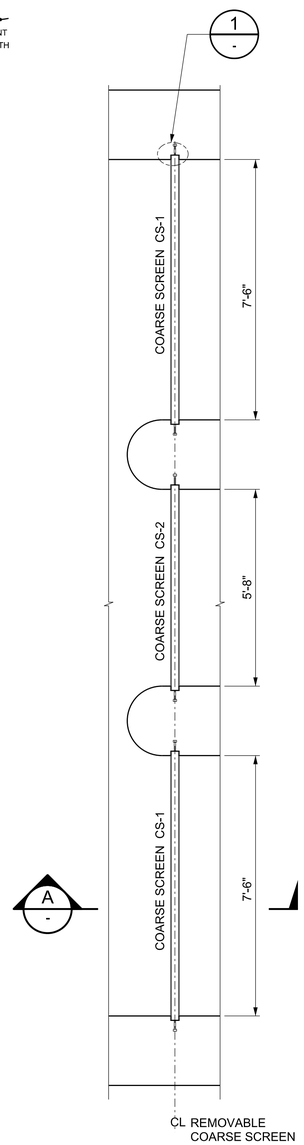
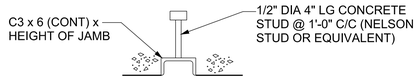
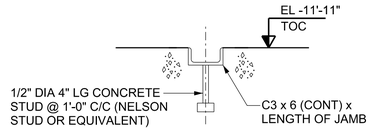
GRID NORTH 22° PLANT NORTH



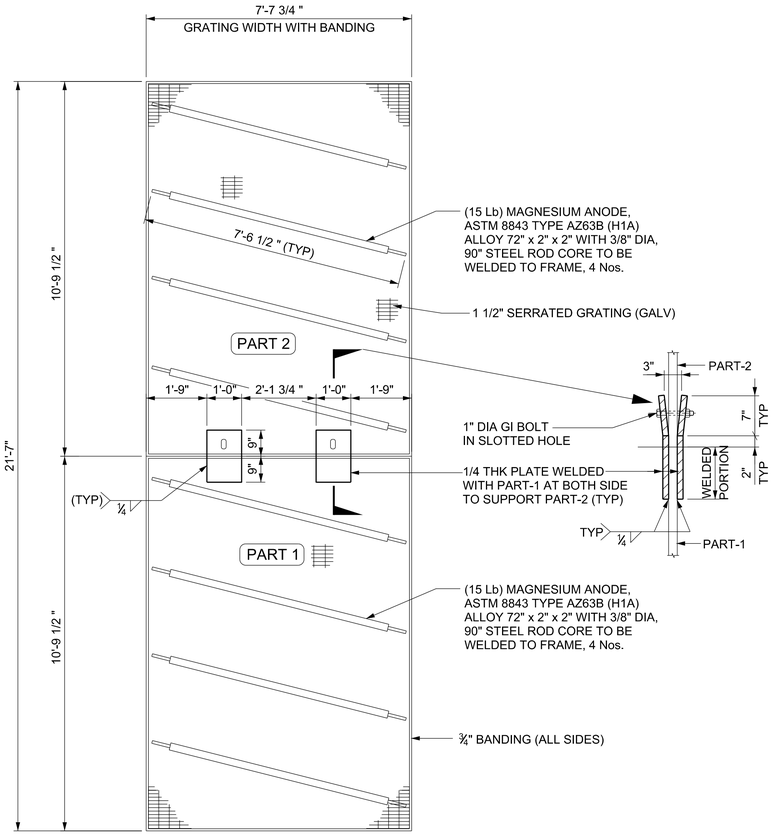
DETAIL 6 (-)
SCALE 1/2" = 1'-0"
DB-108D1-06318 (DWG-19-X-6318)



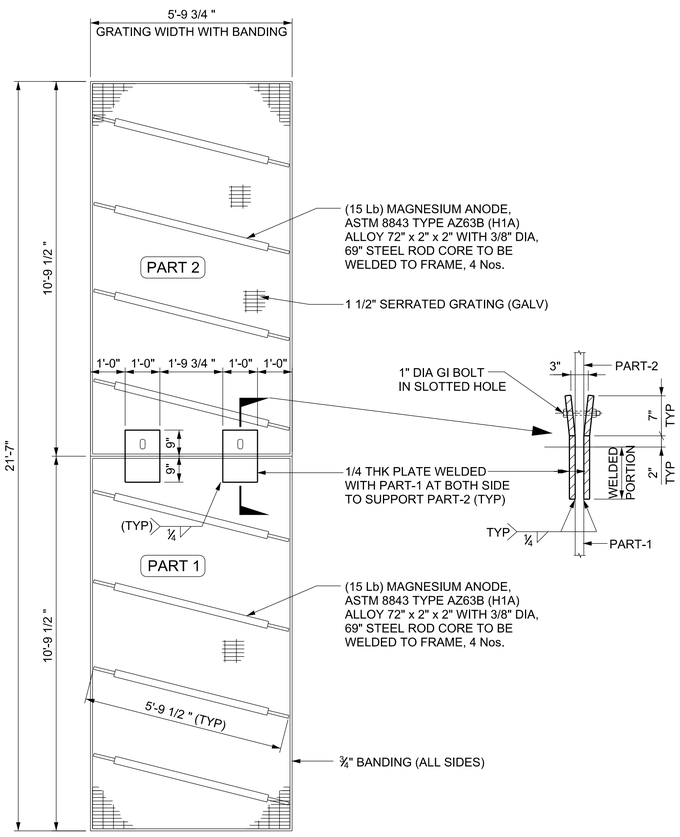
DETAIL 1 (-)
SCALE 2" = 1'-0"



SECTION A (-)
SCALE 2" = 1'-0"



ELEVATION FOR COARSE SCREEN CS-1
SCALE 1/2" = 1'-0" (2 Nos)



ELEVATION FOR COARSE SCREEN CS-2
SCALE 1/2" = 1'-0" (1 No)

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. COARSE SCREEN SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. DRY FILM THICKNESS FOR ZINC COATING SHALL BE 3 MILLS PER A123.
3. ALL STRUCTURAL STEEL, STEEL SUPPORTS AND HOOKS FOR FINE SCREEN, STEEL SUPPORTS FOR GRATINGS (ALL SIDES, FRAME, HOOKS, & HOLES), EMBEDS (ALL SIDES), AND CHANNELS (ALL SIDES) SHALL BE PREPARED IN ACCORDANCE WITH SSPC-SP 10, NEAR WHITE METAL BLAST CLEANING AND COATED WITH 24-30 MILS OF INTERNATIONAL PAINTS INTERZONE 954 OR DUROMAR 2510. THE COATING SHALL BE APPLIED IN ACCORDANCE WITH AN APPROVED PROCEDURE INCORPORATING THE PAINT MANUFACTURER'S RECOMMENDATION. THE APPLIED COATING MUST BE ESSENTIALLY FREE OF APPLICATION RELATED DEFECTS AND HOLES/VOIDS. COATING FOR CARBON STEEL ONLY. 316 STAINLESS STEEL SHALL NOT BE COATED. FINE SCREEN ASSEMBLY, COARSE SCREEN ASSEMBLY, AND THEIR SUPPORTING COATED CHANNELS, AND COATED EMBEDS SHALL BE CATHODICALLY PROTECTED WITH SACRIFICIAL ANODE OF 5-10 YEARS DESIGN LIFE.
4. READ THIS DRAWING IN CONJUCTION WITH DRAWING 26196-100-DB-108D1-06318 (PAL-T0-CIV-DWG-19-X-6318).
5. THE SCREEN DETAIL ARE FOR 1 UNIT.

Port Arthur LNG

BECHTEL Bechtel Energy Inc. 26196-100 FIRM NO. F-9684

SCALE: AS NOTED

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	07-12-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
108D1 GROUND FLARE C
INTAKE STRUCTURE - 1, REMOVABLE COARSE SCREEN DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6328	000	26196-100-DB-108D1-06328	000

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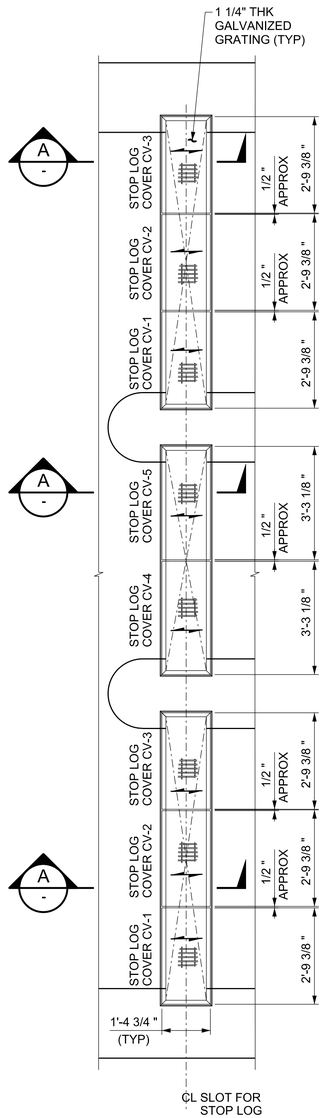
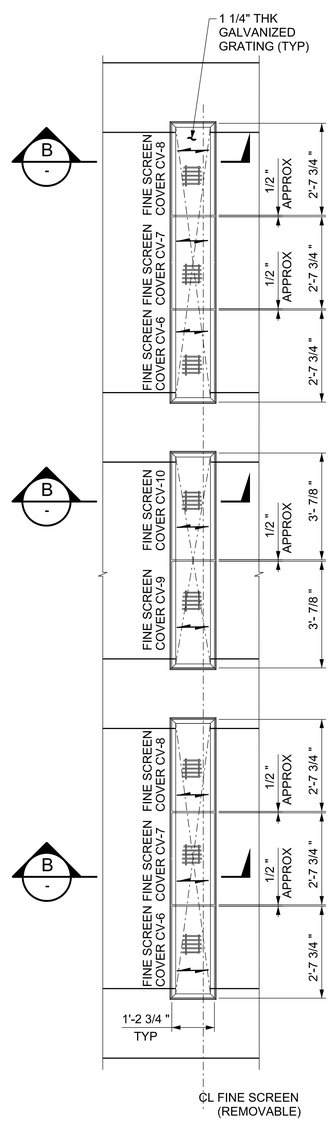
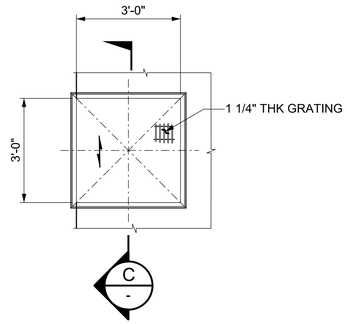


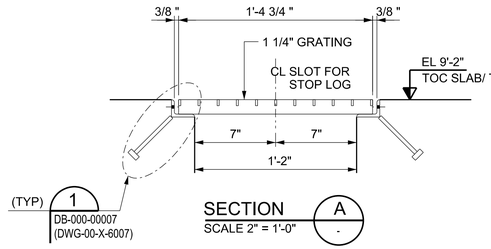
DETAIL 7 — SCALE 1/2" = 1'-0" — DB-108D1-06319 (DWG-19-X-6319)

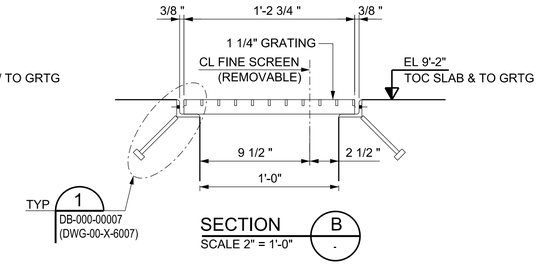


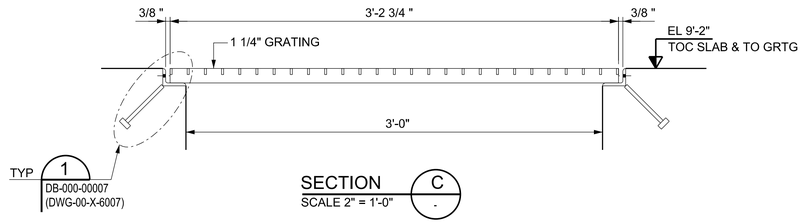
DETAIL 8 — SCALE 1/2" = 1'-0" — DB-108D1-06319 (DWG-19-X-6319)



DETAIL 9 — 3 PLACES — SCALE 1/2" = 1'-0" — DB-108D1-06319 (DWG-19-X-6319)







NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. READ THIS DRAWING IN CONJUCTION WITH DRAWING 26196-100-DB-108D1-06319 (PAL-T0-CIV-DWG-19-X-6319).

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	07-12-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
108D1 GROUND FLARE C
INTAKE STRUCTURE - 1, GRATING PLAN, SECTION & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6329	000	26196-100-DB-108D1-06329	000

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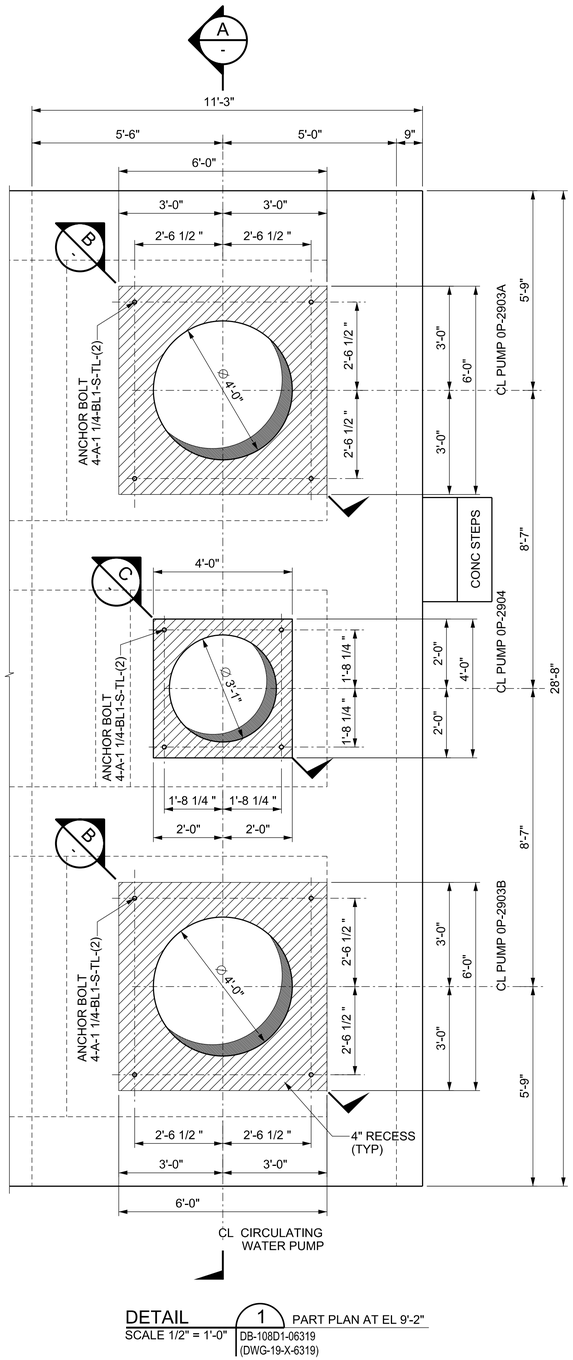
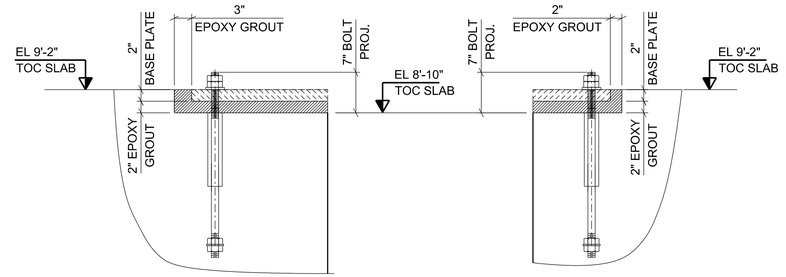
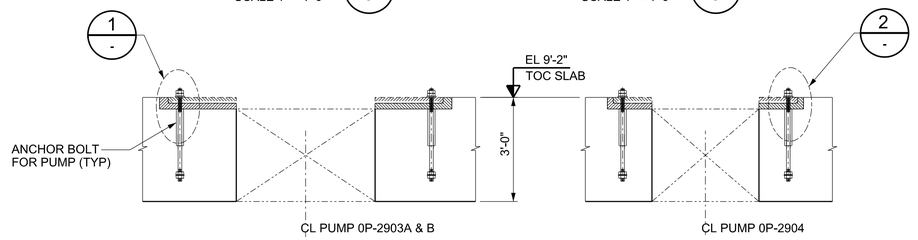


DETAIL 1 - PART PLAN AT EL 9'-2"
SCALE 1/2" = 1'-0" | DB-108D1-06319 (DWG-19-X-6319)



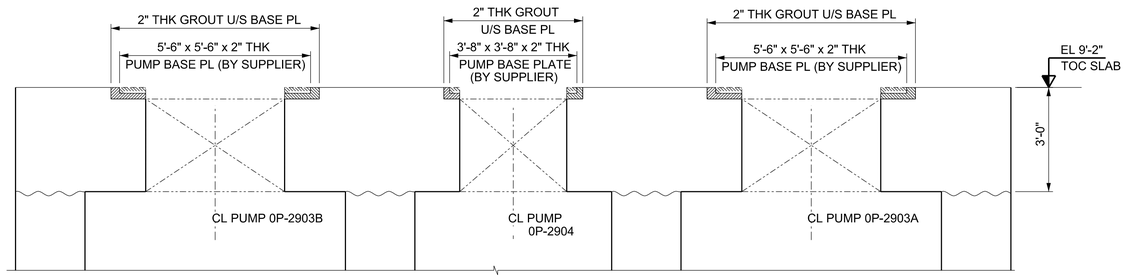
DETAIL 1 - SCALE 1" = 1'-0"

DETAIL 2 - SCALE 1" = 1'-0"

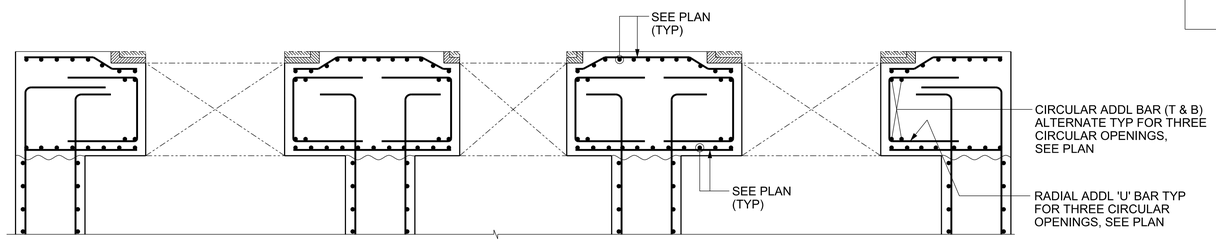


SECTION B - SCALE 1/2" = 1'-0"

SECTION C - SCALE 1/2" = 1'-0"



SECTION A - SCALE 1/2" = 1'-0"



SECTION A - SCALE 1/2" = 1'-0"

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-108D1-06319 (PAL-T0-CIV-DWG-19-X-6319).
3. READ THIS DRAWING IN CONJUCTION WITH FOLLOWING DWGS 26196-100-DB-108D1-06318 (PAL-T0-CIV-DWG-19-X-6318) 26196-100-DB-108D1-06319 (PAL-T0-CIV-DWG-19-X-6319) AND 26196-100-DB-108D1-06323 (PAL-T0-CIV-DWG-19-X-6323).

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

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NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	07-12-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
108D1 GROUND FLARE C
INTAKE STRUCTURE - 1, PLAN, SECTION & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6330	000	26196-100-DB-108D1-06330	000

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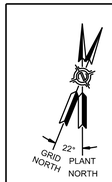
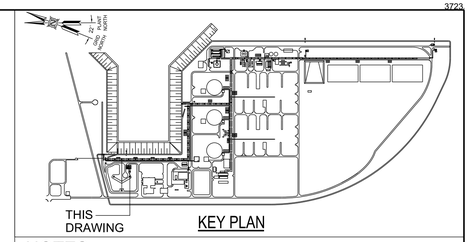


FDN LAYOUT PLAN AT EL -11'-11" (TOC MAT)
CWP:109B1-01Z-D
SCALE 1/4" = 1'-0"

OPERATING FLOOR PLAN AT EL 9'-2" (TOC)
SCALE 1/4" = 1'-0"



KEY PLAN

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR CONCRETE GENERAL NOTES, REFERENCES AND ABBREVIATIONS SEE STD DRAWING 26196-100-DB-000-00001 (PAL-PJT-CIV-DWG-00-X-6001).
3. FOR COORDINATE LINE, SEE EQUIPMENT LOCATION PLAN DWG 26196-100-P1-109B1-00101 (PAL-T0-PIP-PLN-00-GEN-4110) AND 26196-100-P1-109B1-00102 (PAL-T0-PIP-PLN-00-GEN-4111).
4. UNO GROUT SHALL BE NON SHRINK CEMENT BASED TYPE IN ACCORDANCE WITH SPECIFICATION 26196-100-3PS-DB01-00002 (PAL-PJT-CIV-STD-00-X-0011).
5. ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH STD DRAWING 26196-100-DB-000-00008 (PAL-PJT-CIV-DWG-00-X-6008).
6. POST-INSTALLED ANCHORS SHALL BE IN ACCORDANCE WITH STD DRAWING 26196-100-DB-000-00009 (PAL-PJT-CIV-DWG-00-X-6009).
7. FOR ELECTRICAL GROUNDING LAYOUT SEE GROUNDING KEY PLAN OSBL AREA DRAWING 26196-100-EG-100-00001 (PAL-T0-ELE-PLN-00-GEN-4001).
8. ALL CONSTRUCTION JOINT LOCATIONS SHALL BE DECIDED BY CONSTRUCTION TO SUIT AT SITE. STANDARD DETAIL-2 DRAWING 26196-100-DWG-000-00004 (PAL-PJT-CIV-DWG-00-X-6004).
9. ALL ELECTRICAL & PIPING UNDERGROUND & EMBEDMENTS SHALL BE IN PLACE PRIOR TO PLACING OF CONCRETE.
10. CONSTRUCTION TO MAINTAIN GROUND WATER ELEVATION AT OR BELOW FOLLOWING LEVELS BY CONTINUOUS PUMPING OF WATER OUT OF THE PIT.
    TILL CASTING OF BASE SLAB .... EL -16'-5"
    TILL CASTING OF WALL FIRST LIFT .... EL -11'-0"
    TILL CASTING OF ALL WALLS .... EL -7'-0"
    TILL CASTING OF TOP SLAB .... EL 0'-0"
    AFTER BACKFILL OF GRANULAR FILL AROUND THE STRUCTURE UP TO FINISH GRADE LEVELS NO DEWATERING IS REQUIRED.
11. WATERSTOP SHALL BE 4" RIBBED CENTERBULB THERMOPLASTIC ELASTOMERIC RUBBER (TPER/TPV) WATERSTOP.
12. REBAR DEVELOPMENT LENGTHS AND SPLICES REFER TO DRAWING 26196-100-DB -000-00012 (PAL-PJT-CIV-DWG-00-X-6012).
13. ANY CJ IN WALL SHOULD BE BROUGHT IN NOTICE OF RE IF REQUIRED BY FIELD ENGINEER.
14. READ THIS DRAWING IN CONJUCTION WITH FOLLOWING DRAWINGS:
    26196-100-DB-108B1-06526 (PAL-T0-CIV-DWG-19-X-6526) TO 26196-100-DB-108B1-06535 (PAL-T0-CIV-DWG-19-X-6535).
15. FOR DETAIL OF DMM SEE DWG 26196-100-V295646-CB00-00004 (PAL-PJT-CIV-SDD072-00-X-0004).

VENDOR REFERENCE DRAWINGS	
DRAWING NUMBER	DRAWING TITLE
26196-100-V291048-MPVT-00025 (PAL-T0-MEC-SD065-29-P-0025)	GENERAL ARRANGEMENT DRAWING FOR STORM WATER PUMP (0P- 2902, 0P-2904, 0P-2906 & 0P-2902S)
26196-100-V291048-MPVT-00057 (PAL-T0-MEC-SD065-29-P-0057)	GENERAL ARRANGEMENT DRAWING FOR BUILDING AREA STORM WATER PUMPS (0P-2901A/B, 0P-2903A/B, 0P-2905A/B & 0P-2901S)

CONC NOMEN CLATURE	
WALL MARK	TAG NAME
WALL-1	CW-2-7630
WALL-2	CW-2-7630
WALL-3	CW-2-7630
WALL-4	CW-2-7633
WALL-5	CW-2-7635
WALL-6	CW-2-7634
WALL-7	CW-2-7636
WALL-8	CW-2-7931
WALL-9	CW-2-7932
WALL-10	CW-2-7933
WALL-11	CW-2-7629
WALL-12	CW-2-7631
WALL-13	CW-2-7632

TABLE - 1 (SPLITTER)	
SPLITTER MARK	TAG NAME
SPLITTER	CM-2-35669
SPLITTER	CM-2-37473
SPLITTER	CM-2-37472
SPLITTER	CM-2-35705
SPLITTER	CM-2-35711
SPLITTER	CM-2-35706
SPLITTER	CM-2-35703
SPLITTER	CM-2-37466
SPLITTER	CM-2-37475
SPLITTER	CM-2-37468
SPLITTER	CM-2-35707
SPLITTER	CM-2-35712
SPLITTER	CM-2-35708
SPLITTER	CM-2-35704
SPLITTER	CM-2-37465
SPLITTER	CM-2-37474
SPLITTER	CM-2-37471
SPLITTER	CM-2-35717
SPLITTER	CM-2-35718
SPLITTER	CM-2-35719
SPLITTER	CM-2-35714

LEGEND:

CWP : CONSTRUCTION WORK PACKAGE

BILL OF MATERIALS		
FDN TYPE	MIX	QTY
CONC BASE SLAB & TOP SLAB	CLASS S-1	331.32 CY
CONC WALL	CLASS S-1	271.8 CY
PRECAST STOP LOG SL1 (10 Nos)	CLASS S-1	6.0 CY
PRECAST STOP LOG SL 2 (10 Nos)	CLASS S-1	4.5 CY
FOR EMBED ITEM MTO SEE DRAWING NO. 26196-100-DB-109B1-06527 (PAL-T0-CIV-DWG-19-X-6527)		

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
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000	06-25-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
109B1 MARINE FLARE
INTAKE STRUCTURE - 3, LAYOUT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6525	000	26196-100-DB-109B1-06525	000

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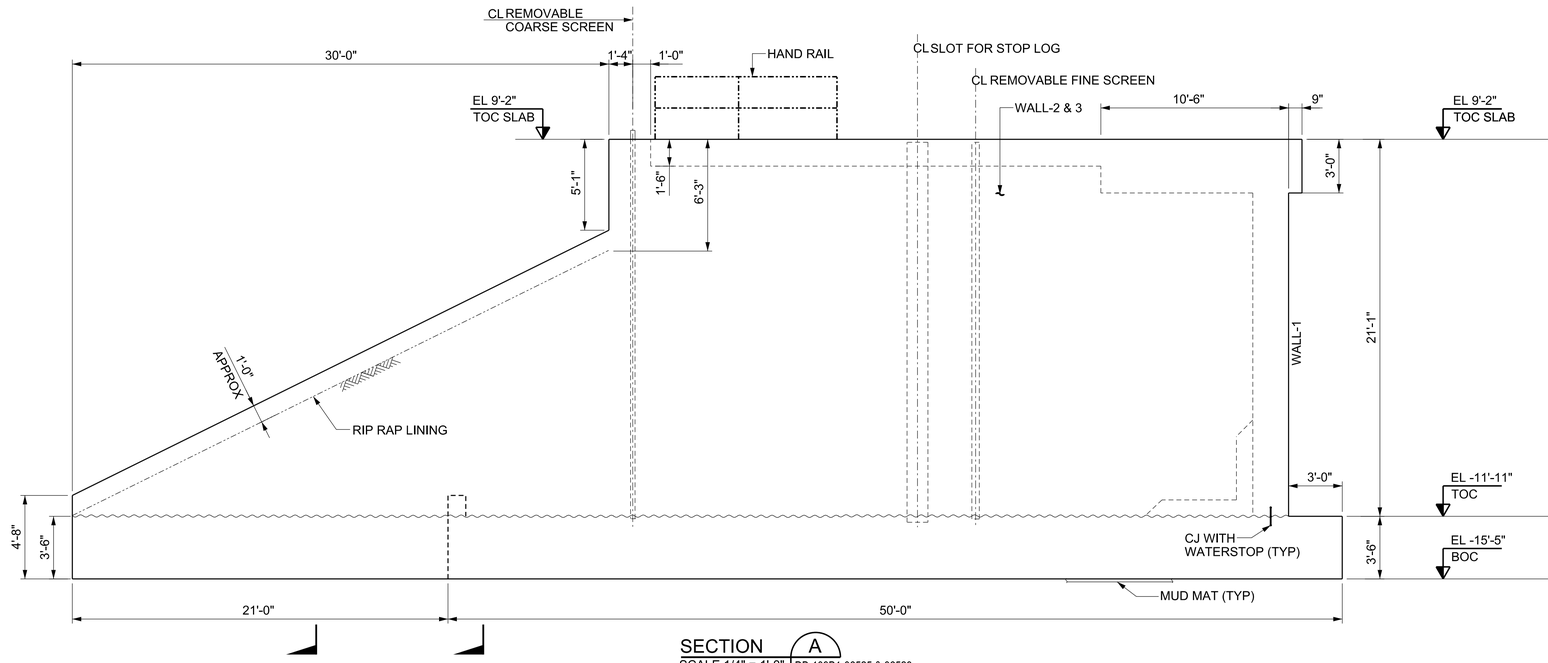
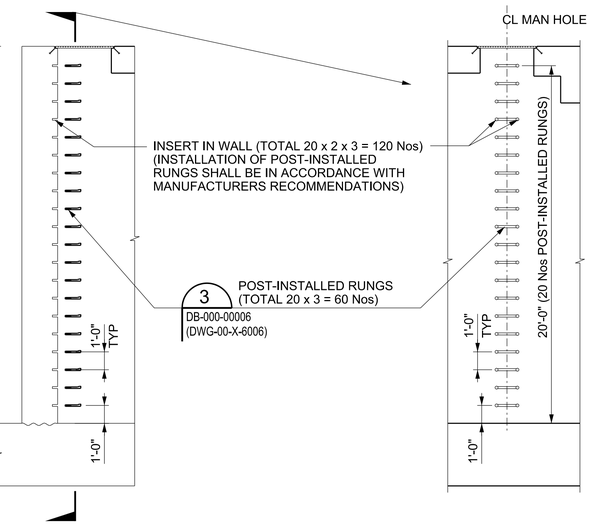
NOTES:-

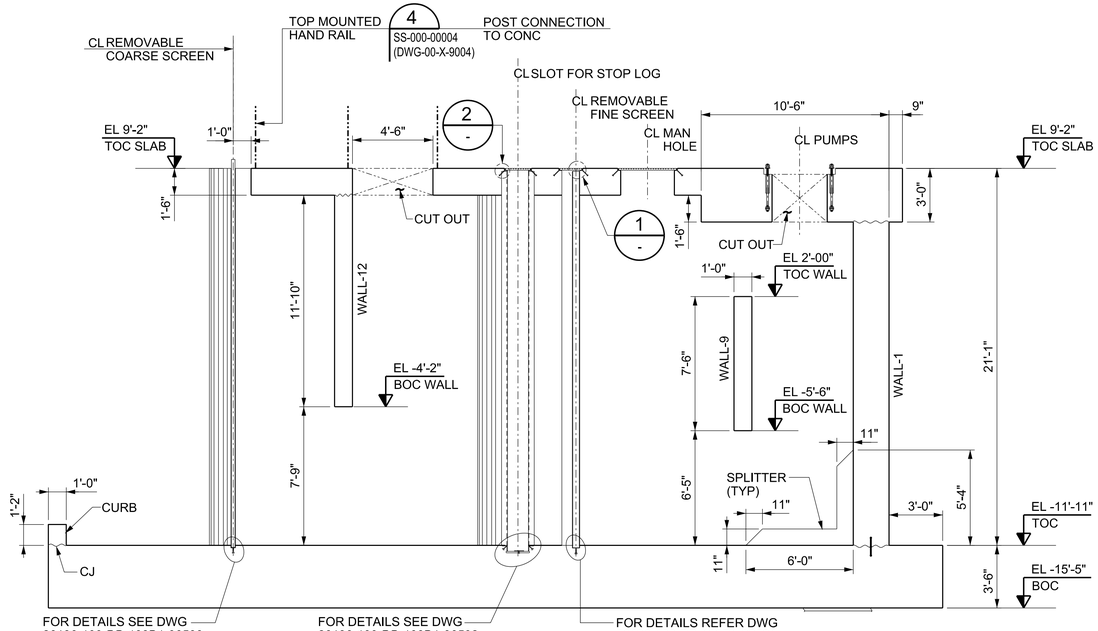
1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-109B1-06525 (PAL-T0-CIV-DWG-19-X-6525).
3. READ THIS DRAWING IN CONJUCTION WITH FOLLOWING DWGS 26196-100-DB-109B1-06525 (PAL-T0-CIV-DWG-19-X-6525) AND 26196-100-DB-109B1-06528 (PAL-T0-CIV-DWG-19-X-6528).



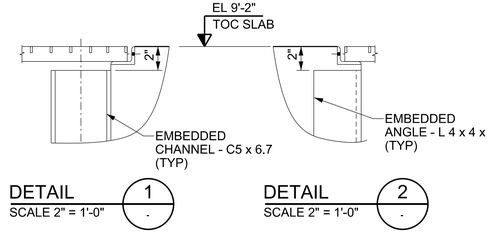
SECTION A (DB-109B1-06525 & 06528 / DWG-19-X-6525 & 6528)
SCALE 1/4" = 1'-0"



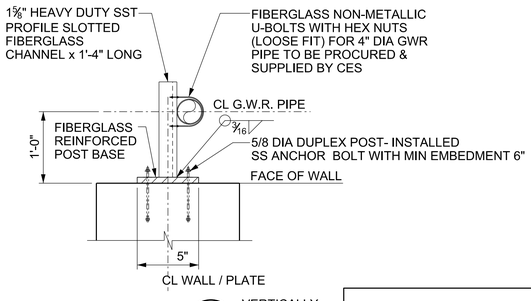
SECTION G (3 PLACES) (DB-109B1-06525 / DWG-19-X-6525)
SCALE 1/4" = 1'-0"



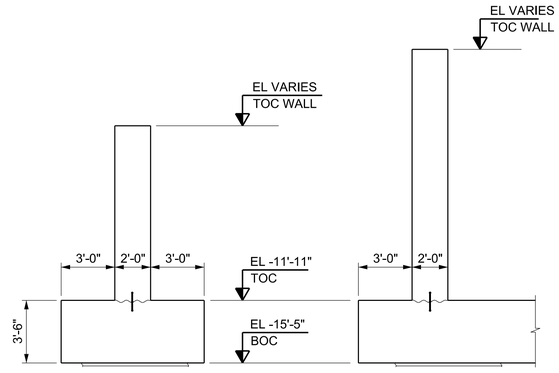
SECTION B (DB-109B1-06525 & 06528 / DWG-19-X-6525 & 6528)
SCALE 1/4" = 1'-0"



DETAIL 1 (SCALE 2" = 1'-0")
DETAIL 2 (SCALE 2" = 1'-0")



DETAIL 10 VERTICALLY 4 PLACES (DB-109B1-06525 / DWG-19-X-6525)
SCALE 1/2" = 1'-0"



SECTION A1 (DB-109B1-06525 / DWG-19-X-6525)
SCALE 1/4" = 1'-0"

SECTION A2 (DB-109B1-06525 / DWG-19-X-6525)
SCALE 1/4" = 1'-0"

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
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000	06-25-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
109B1 MARINE FLARE
INTAKE STRUCTURE - 3, SECTIONS & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6526	000	26196-100-DB-109B1-06526	000

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NOTES:-

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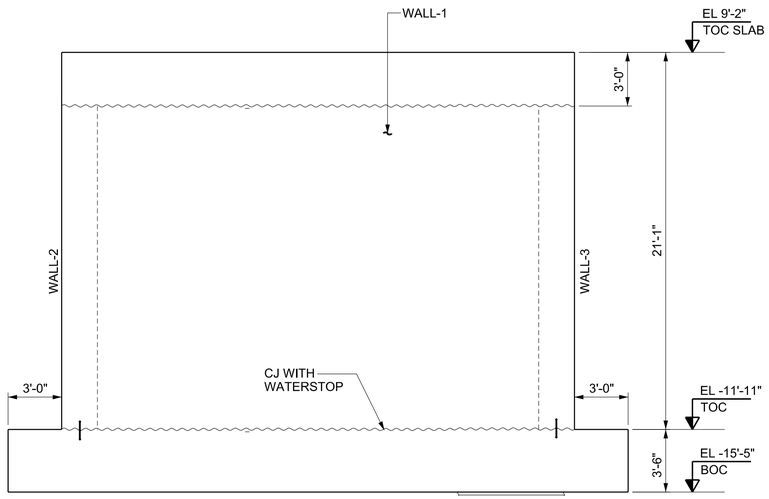
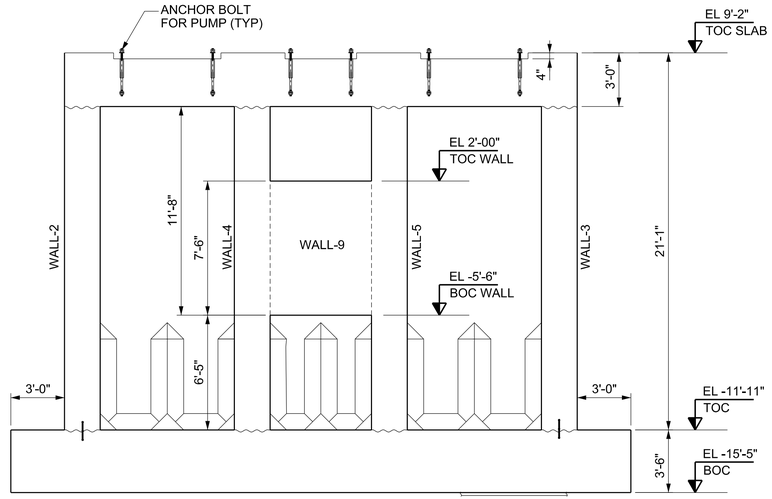
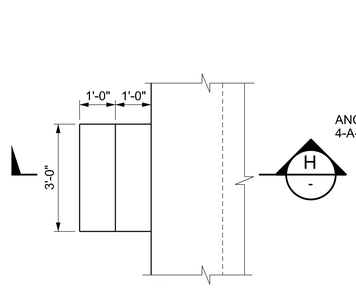
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-109B1-06525 (PAL-T0-CIV-DWG-19-X-6525).
3. READ THIS DRAWING IN CONJUCTION WITH DRAWINGS 26196-100-DB-109B1-06525 (PAL-T0-CIV-DWG-19-X-6525) AND 26196-100-DB-109B1-06528 (PAL-T0-CIV-DWG-19-X-6528).



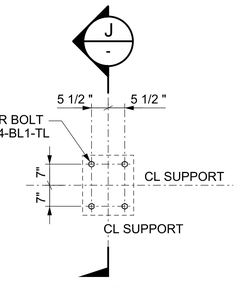
SECTION C
SCALE 1/4" = 1'-0" | DB-109B1-06525 & 06528 (DWG-19-X-6525 & 6528)



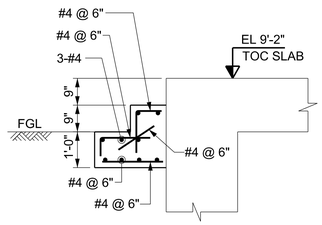
SECTION D
SCALE 1/4" = 1'-0" | DB-109B1-06525 & 06528 (DWG-19-X-6525 & 6528)



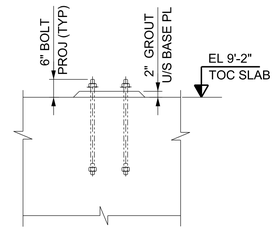
DETAIL 2 (3 PLACES)
SCALE 1/2" = 1'-0" | DB-109B1-06525 (DWG-19-X-6525)
(FOR LOCATION AND ORIANTATION SEE PLAN)



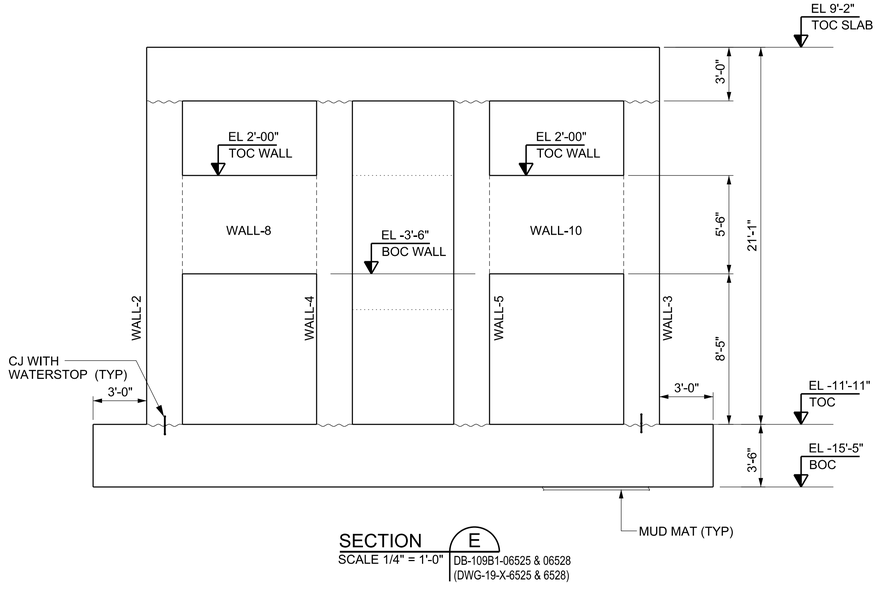
DETAIL 3 S-1 (2 Nos)
SCALE 1/2" = 1'-0" | DB-109B1-06525 (DWG-19-X-6525)



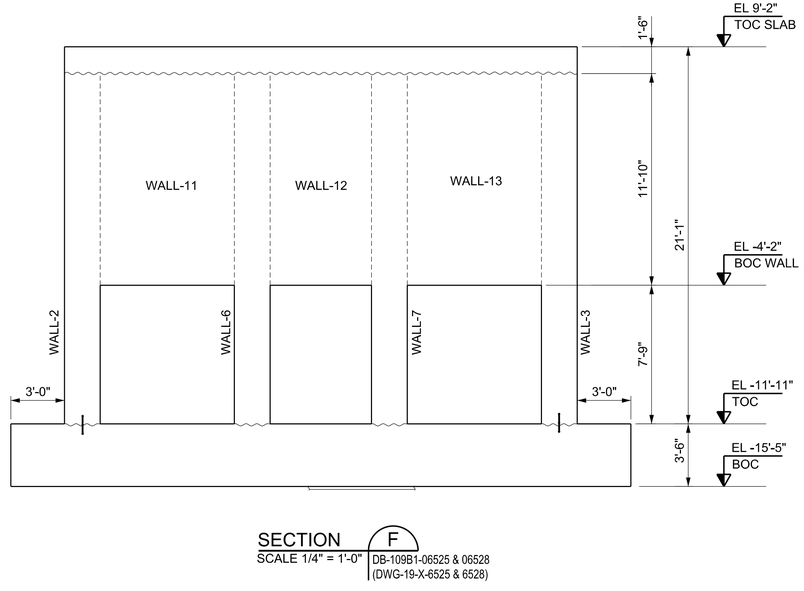
SECTION H
SCALE 1/2" = 1'-0" | .



SECTION J
SCALE 1/2" = 1'-0" | .



SECTION E
SCALE 1/4" = 1'-0" | DB-109B1-06525 & 06528 (DWG-19-X-6525 & 6528)



SECTION F
SCALE 1/4" = 1'-0" | DB-109B1-06525 & 06528 (DWG-19-X-6525 & 6528)

EMBEDDED ITEM MTO

MEMBER TYPE	LENGTH	QTY
CHANNEL - C5 x 6.7 WITH STUD	21'-1"	6 Nos
CHANNEL - C5 x 6.7 WITH STUD	7'-6"	2 Nos
CHANNEL - C5 x 6.7 WITH STUD	5'-8"	1 No
ANGLE - L 4 x 4 x 1/4 WITH STUD	21'-3"	12 Nos
ANGLE - L 4 x 4 x 1/4 WITH STUD	7'-6"	4 Nos
ANGLE - L 4 x 4 x 1/4 WITH STUD	5'-8"	2 Nos
BACK PLATE - 16" x 1/2" THK	21'-3"	6 Nos
BACK PLATE - 16" x 1/2" THK	8'-3"	2 Nos
BACK PLATE - 16" x 1/2" THK	6'-5"	1 No
CHANNEL - C3 x 6 WITH STUD	21'-9"	6 Nos
CHANNEL - C3 x 6 WITH STUD	7'-6"	2 Nos
CHANNEL - C3 x 6 WITH STUD	5'-8"	1 No
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	3'-0"	12 Nos
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	8'-6"	4 Nos
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	6'-8"	2 Nos
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	1'-6"	6 Nos
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	8'-1 1/2"	4 Nos
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	6'-3 1/2"	2 Nos
ANGLE - L 2 x 1 1/2 x 1/4 WITH STUD	1'-4"	6 Nos

Port Arthur LNG

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26196-100
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PORT ARTHUR LIQUEFACTION PROJECT
109B1 MARINE FLARE
INTAKE STRUCTURE - 3, PLAN, SECTIONS AND DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6527	000	26196-100-DB-109B1-06527	000

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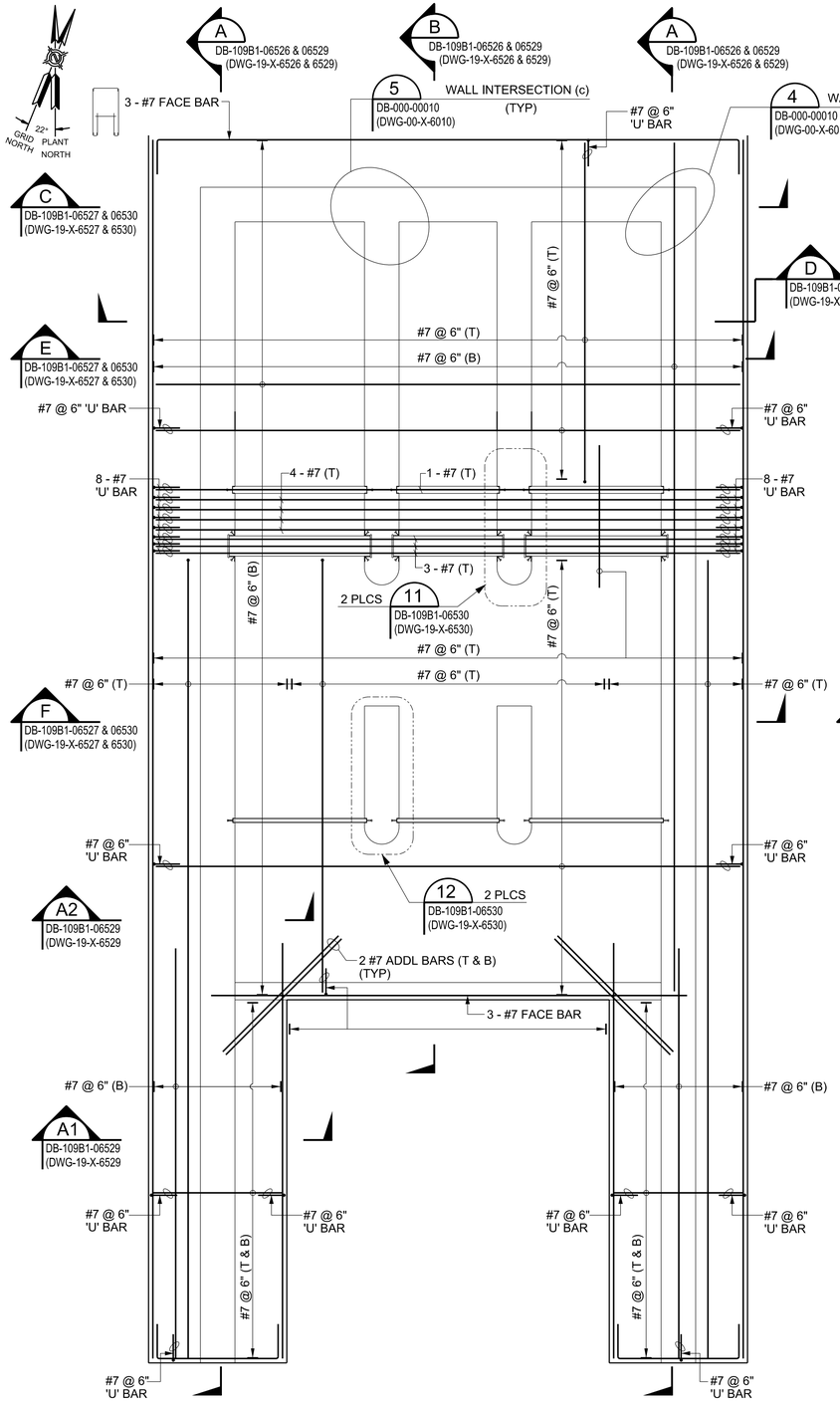
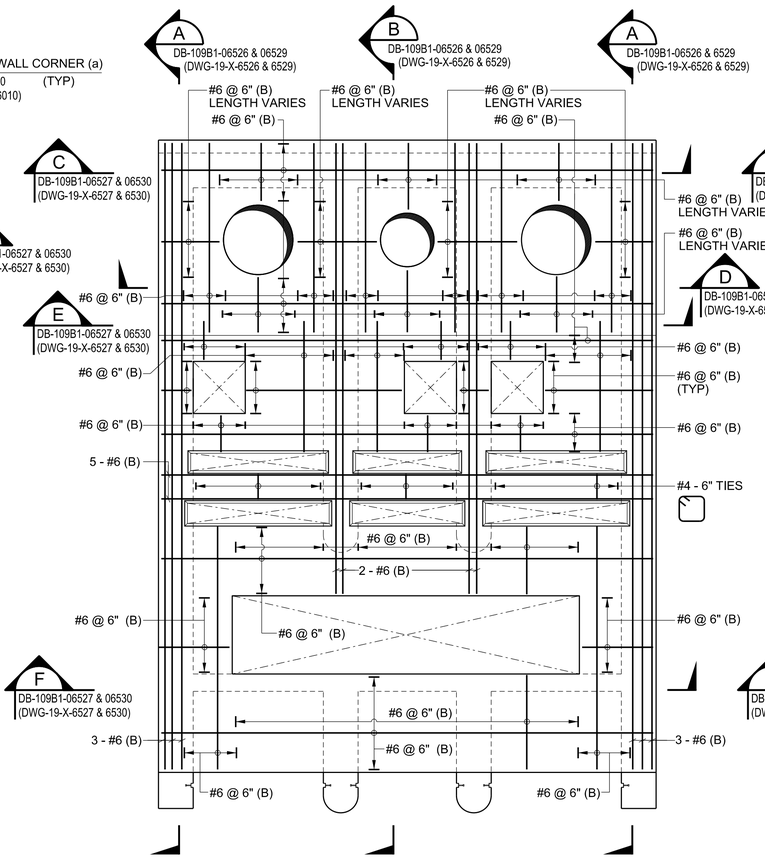


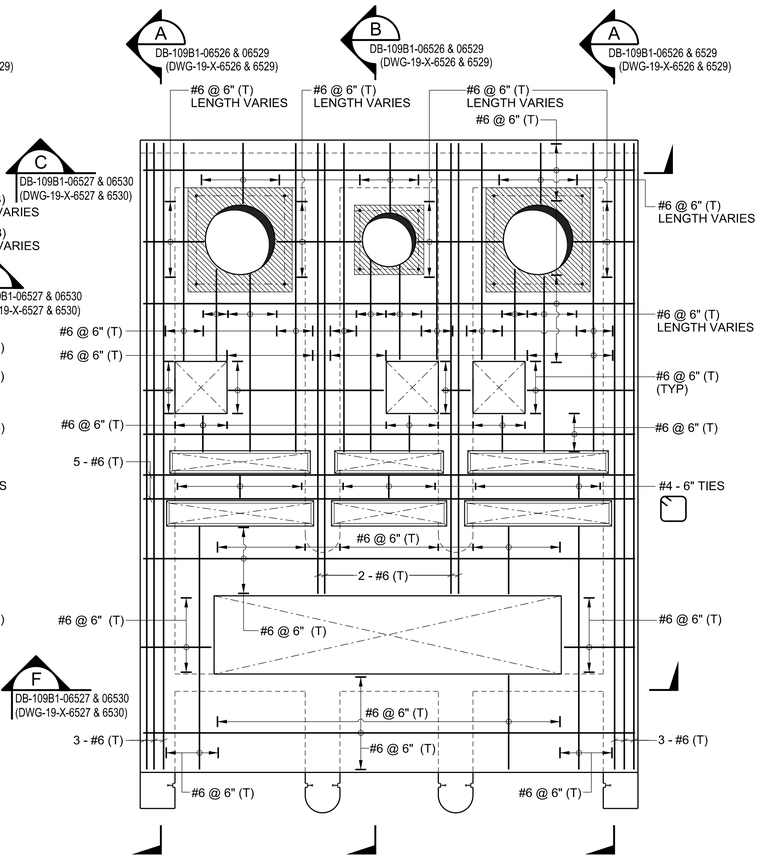
FOUNDATION LAYOUT PLAN AT EL -11'-11" (TOC MAT)

SCALE 1/4" = 1'-0"



OPRATING FLOOR BOTTOM REINF PLAN AT EL 9'-2"

SCALE 1/4" = 1'-0" (FOR ADDL REINF AROUND COUTOUTS PLAN SEE DWG 26196-100-DB-109B1-06529 (PAL-T0-CIV-DWG-19-X-6529)



OPRATING FLOOR TOP REINF PLAN AT EL 9'-2" (TOC)

SCALE 1/4" = 1'-0" (FOR ADDL REINF AROUND COUTOUTS PLAN SEE DWG 26196-100-DB-109B1-06529 (PAL-T0-CIV-DWG-19-X-6529)

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. READ THIS DRAWING IN CONJUCTION WITH DRAWING 26196-100-DB-109B1-06525 (PAL-T0-CIV-DWG-19-X-6525).

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	06-25-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
109B1 MARINE FLARE
INTAKE STRUCTURE - 3, REINFORCEMENT PLANS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6528	000	26196-100-DB-109B1-06528	000

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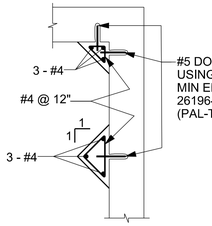
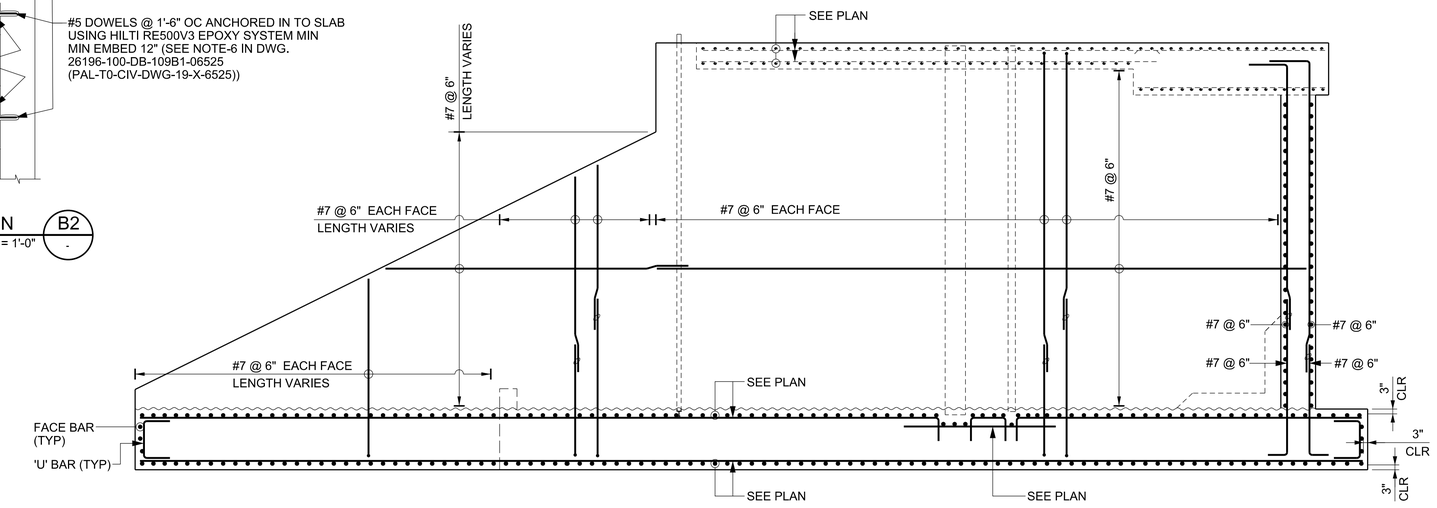
Electronic documents, once printed, are non-controlled and may become outdated.
Refer to the Enterprise Content Management System for current revision.

NOTES:-

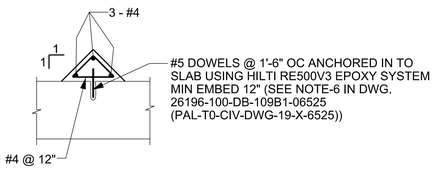
1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-109B1-06525 (PAL-T0-CIV-DWG-19-X-6525).
3. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-109B1-06525 (PAL-T0-CIV-DWG-19-X-6525) 26196-100-DB-109B1-06526 (PAL-T0-CIV-DWG-19-X-6526) & 26196-100-DB-109B1-06528 (PAL-T0-CIV-DWG-19-X-6528).



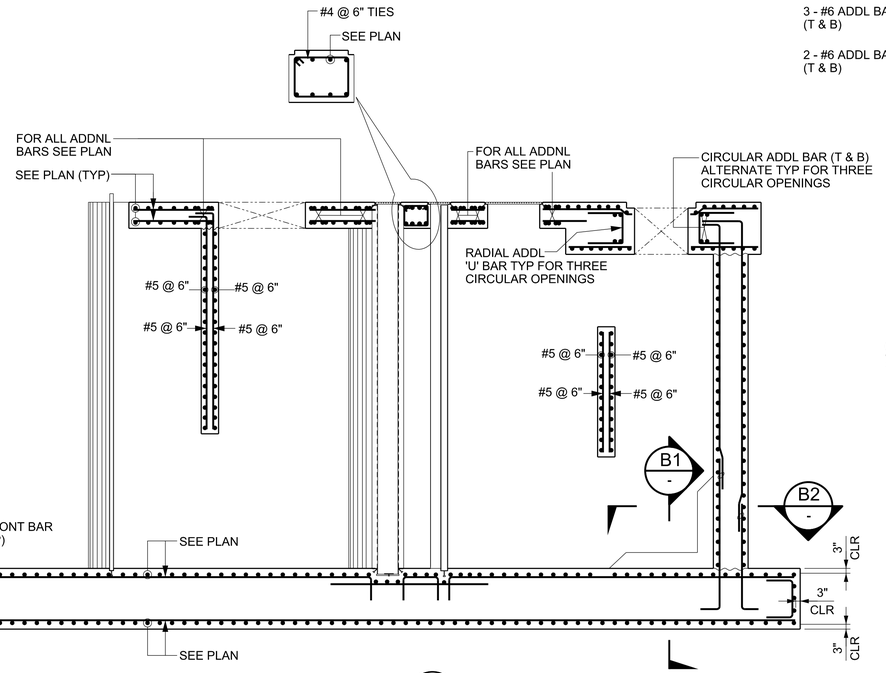
SECTION B2
SCALE 1/2" = 1'-0"

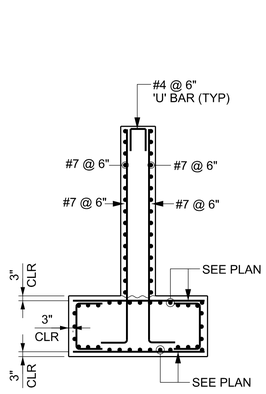


SECTION A
SCALE 1/4" = 1'-0" | DB-109B1-06525 & 06528 (DWG-19-X-6525 & 6528)

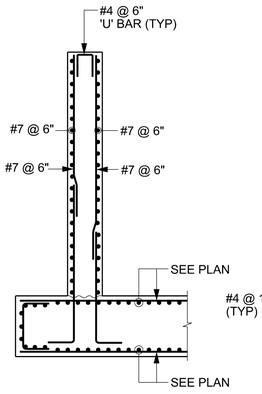


SECTION B1
SCALE 1/2" = 1'-0"



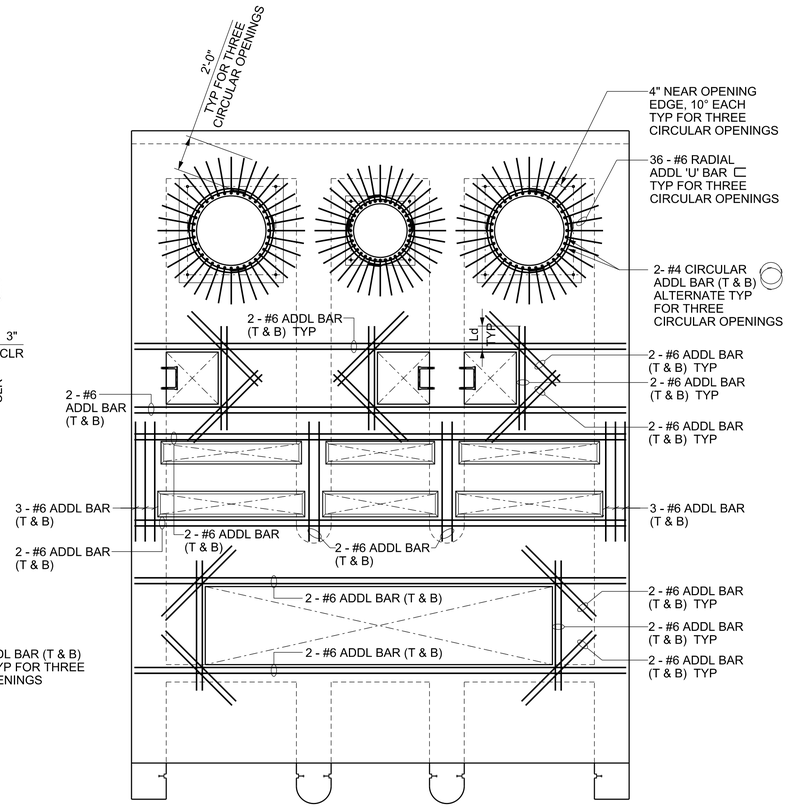


SECTION A1
SCALE 1/4" = 1'-0" | DB-109B1-06528 (DWG-19-X-6528)



SECTION A2
SCALE 1/4" = 1'-0" | DB-109B1-06528 (DWG-19-X-6528)

SECTION B
SCALE 1/4" = 1'-0" | DB-109B1-06525 & 06528 (DWG-19-X-6525 & 6528)



OPERATING FLOOR ADDITIONAL REINF PLAN AT EL 9'-2" (TOC)
SCALE 1/4" = 1'-0"

Port Arthur LNG

BECHTEL Bechtel Energy Inc. 26196-100 FIRM NO. F-9684

SCALE: AS NOTED

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000	06-25-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
109B1 MARINE FLARE
INTAKE STRUCTURE - 3, REINF PLAN, SECTIONS & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6529	000	26196-100-DB-109B1-06529	000

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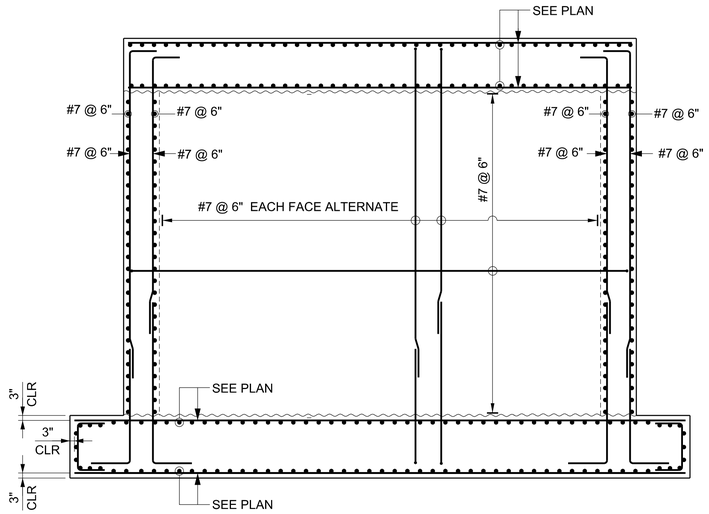
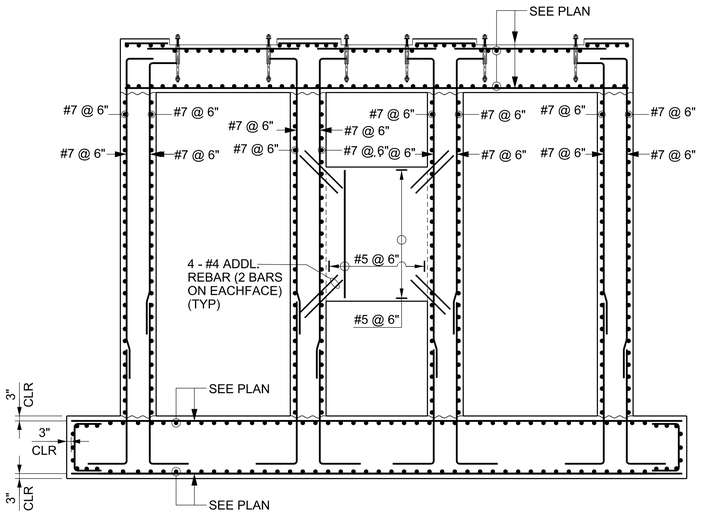
NOTES:-

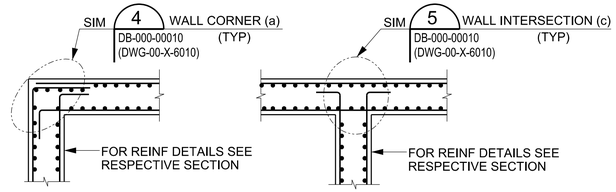
1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-109B1-06525 (PAL-T0-CIV-DWG-19-X-6525).
3. READ THIS DRAWING IN CONJUCTION WITH FOLLOWING DRAWINGS:
   A) 26196-100-DB-109B1-06525 (PAL-T0-CIV-DWG-19-X-6525)
   B) 26196-100-DB-109B1-06527 (PAL-T0-CIV-DWG-19-X-6527)
   C) 26196-100-DB-109B1-06528 (PAL-T0-CIV-DWG-19-X-6528).



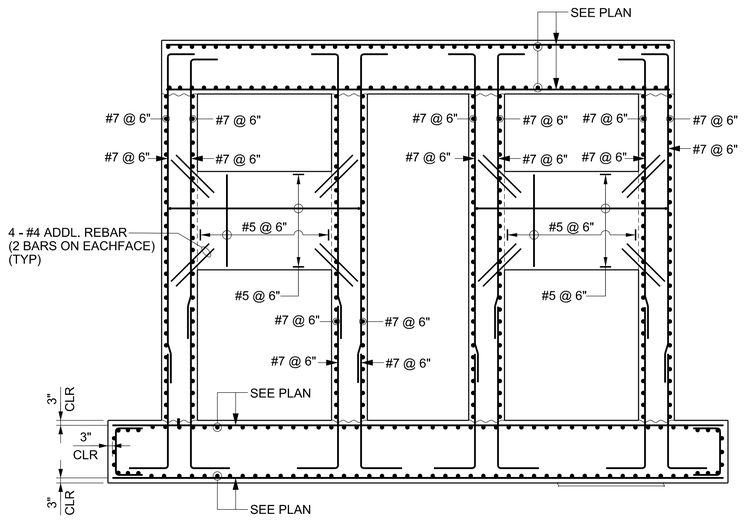
SECTION C
SCALE 1/4" = 1'-0" | DB-109B1-06525 & 06528 (DWG-19-X-6525 & 6528)



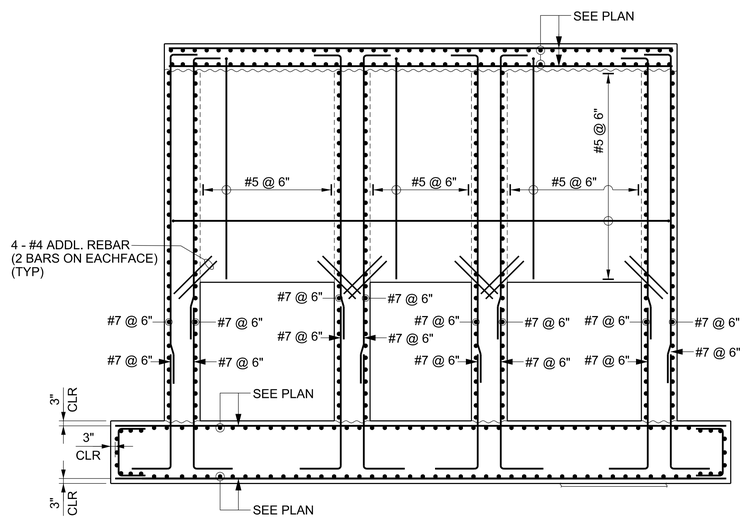
SECTION D
SCALE 1/4" = 1'-0" | DB-109B1-06525 & 06528 (DWG-19-X-6525 & 6528)



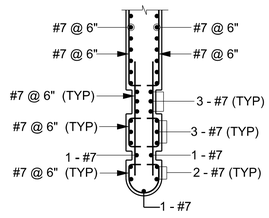
TYP WALL JUNCTION & WALL CORNER REINF PLAN
SCALE 1/4" = 1'-0"



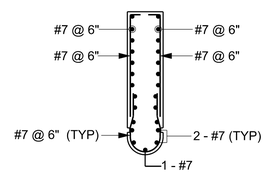
SECTION E
SCALE 1/4" = 1'-0" | DB-109B1-06525 & 06528 (DWG-19-X-6525 & 6528)



SECTION F
SCALE 1/4" = 1'-0" | DB-109B1-06525 & 06528 (DWG-19-X-6525 & 6528)



DETAIL 11
SCALE 1/4" = 1'-0" | DB-109B1-06528 (DWG-19-X-6528)



DETAIL 12
SCALE 1/4" = 1'-0" | DB-109B1-06528 (DWG-19-X-6528)

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO. F-9684

SCALE: AS NOTED

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000	06-25-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
109B1 MARINE FLARE
INTAKE STRUCTURE - 3, REINF. SECTIONS AND DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6530	000	26196-100-DB-109B1-06530	000

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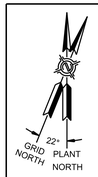
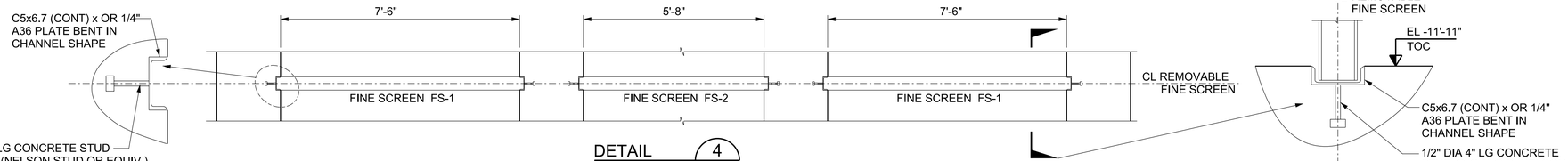
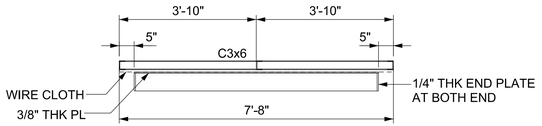
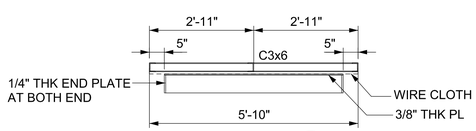




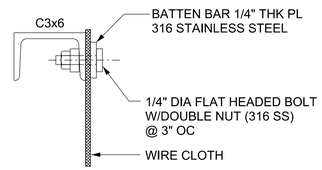
DETAIL 4
SCALE 1/8" = 1'-0" (SEE NOTE-8)
DB-109B1-06525 (DWG-19-X-6525)



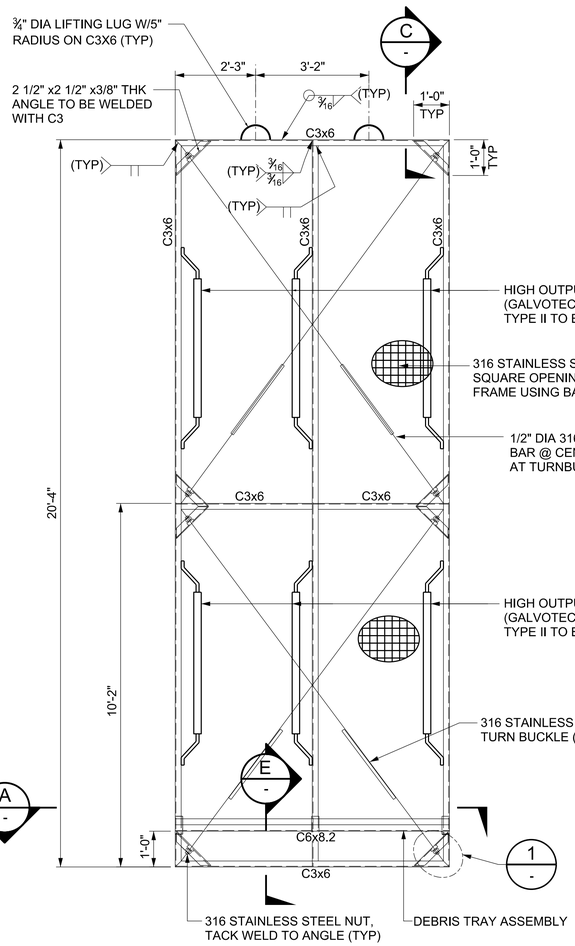
SECTION A
SCALE 1/2" = 1'-0"



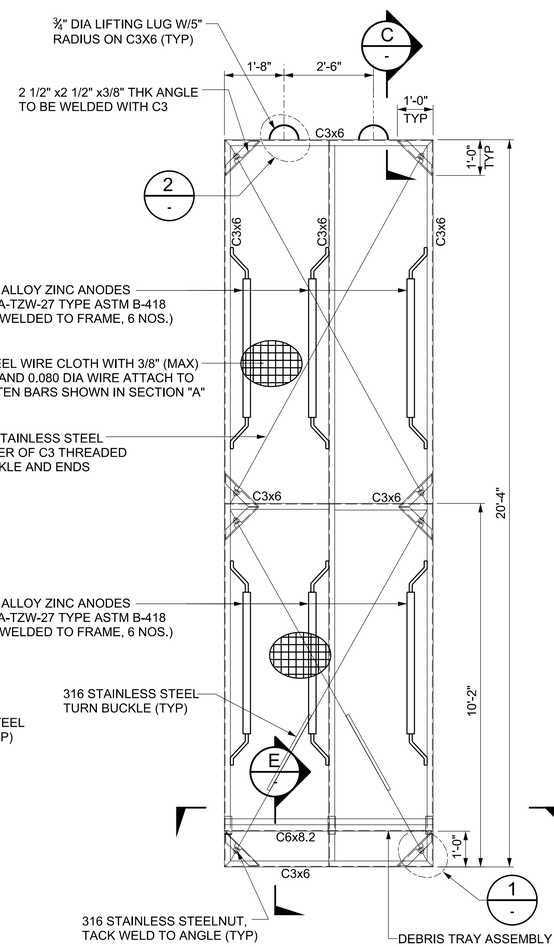
SECTION B
SCALE 1/2" = 1'-0"



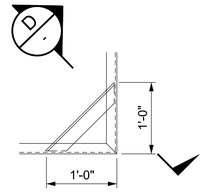
SECTION C
SCALE= NTS



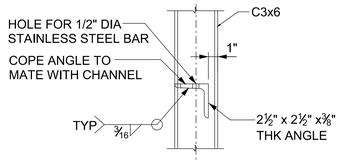
ELE VATION FOR FINE SCREEN FS-1
SCALE 1/2" = 1'-0" (2 Nos)



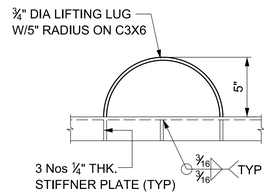
ELE VATION FOR FINE SCREEN FS-2
SCALE 1/2" = 1'-0" (1 No)



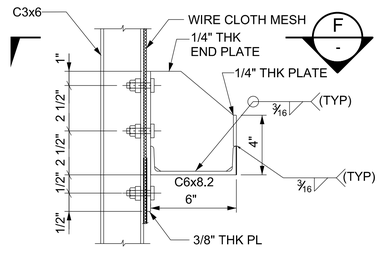
DETAIL 1
SCALE= NTS



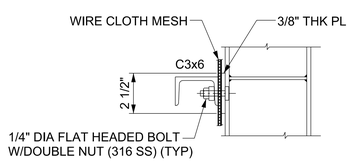
SECTION D
SCALE= NTS



DETAIL 2 (6 PLACES)
SCALE= NTS



SECTION E
SCALE= NTS
DEBRIS TRAY ASSEMBLY



SECTION F
SCALE = NTS

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-109B1-06525 (PAL-T0-CIV-DWG-19-X-6525).
3. READ THIS DRAWING IN CONJUCTION WITH 26196-100-DB-109B1-06525 (PAL-T0-CIV-DWG-19-X-6525).
4. COARSE SCREEN SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. DRY FILM THICKNESS FOR ZINC COATING SHALL BE 3 MILLS PER A123
5. ALL STRUCTURAL STEEL, STEEL SUPPORTS AND HOOKS FOR FINE SCREEN, STEEL SUPPORTS FOR GRATINGS (ALL SIDES, FRAME, HOOKS, & HOLES), EMBEDS (ALL SIDES), AND CHANNELS (ALL SIDES) SHALL BE PREPARED IN ACCORDANCE WITH SSPC-SP 10, NEAR WHITE METAL BLAST CLEANING AND COATED WITH 24-30 MILS OF INTERNATIONAL PAINTS INTERZONE 954 OR DUROMAR 2510. THE COATING SHALL BE APPLIED IN ACCORDANCE WITH AN APPROVED PROCEDURE INCORPORATING THE PAINT MANUFACTURER'S RECOMMENDATION. THE APPLIED COATING MUST BE ESSENTIALLY FREE OF APPLICATION RELATED DEFECTS AND HOLES/VOIDS. COATING FOR CARBON STEEL ONLY, 316 STAINLESS STEEL SHALL NOT BE COATED. FINE SCREEN ASSEMBLY, COARSE SCREEN ASSEMBLY, AND THEIR SUPPORTING COATED CHANNELS, AND COATED EMBEDS SHALL BE CATHODICALLY PROTECTED WITH SACRIFICIAL ANODE OF 5-10 YEARS DESIGN LIFE.
6. ALL PLATES AND CHANNELS SHOWN IN THE DRAWING CONFORM TO ASTM A36.
7. THE SCREEN DETAILS ARE FOR ONE UNIT.
8. ACTUAL DISTANCE BETWEEN SLOTS FOR SCREEN TO BE TAKEN FROM AS BUILT AT SITE AND WIDTH OF THE SCREEN SHALL BE ADJUSTED, IF REQUIRED (FIELD TO PROVIDE AS-BUILT DISTANCE BETWEEN SLOTS @ 1'-0" INTERVALS WITHIN THREE WEEKS OF CONCRETE PLACEMENT)

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	06-25-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
109B1 MARINE FLARE
INTAKE STRUCTURE - 3, REMOVABLE FINE SCREEN DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6531	000	26196-100-DB-109B1-06531	000

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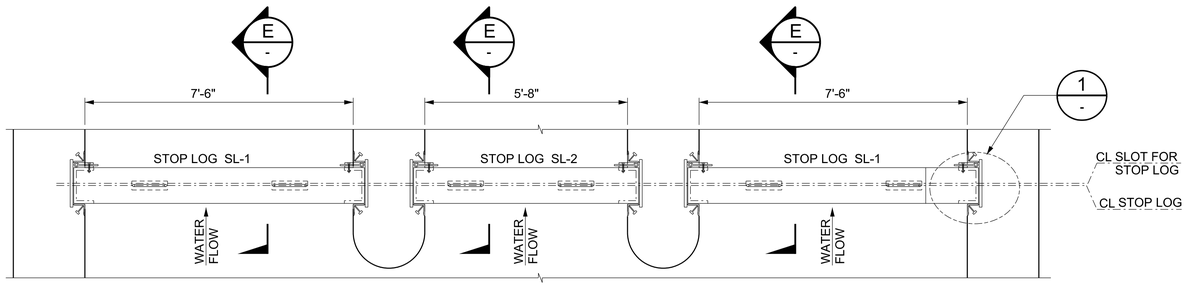
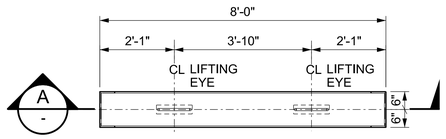
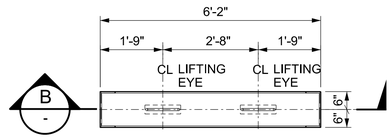


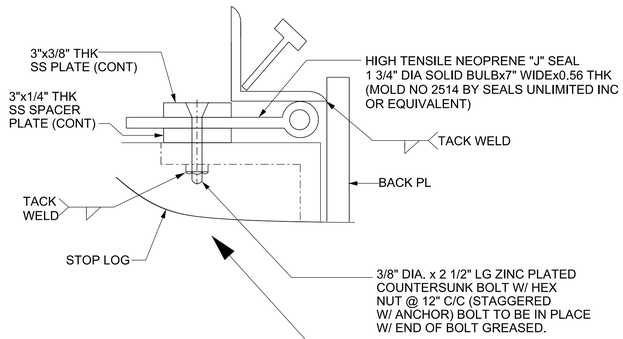
DETAIL 5
SCALE 1/2" = 1'-0" DB-109B1-06525 (DWG-19-X-6525)

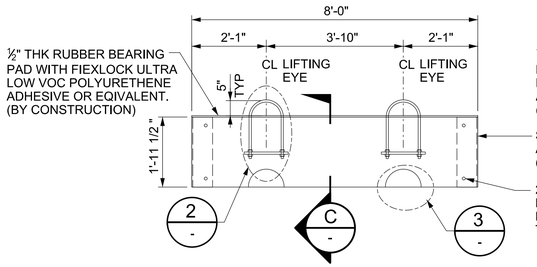


PLAN FOR STOP LOG SL-1
SCALE 1/2" = 1'-0" (10 Nos)

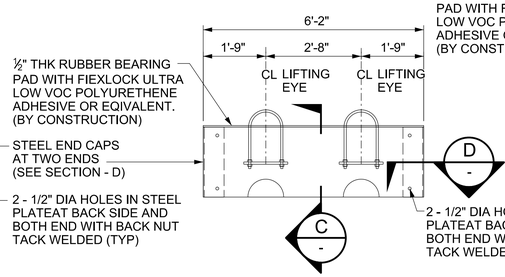


PLAN FOR STOP LOG SL-2
SCALE 1/2" = 1'-0" (10 Nos)

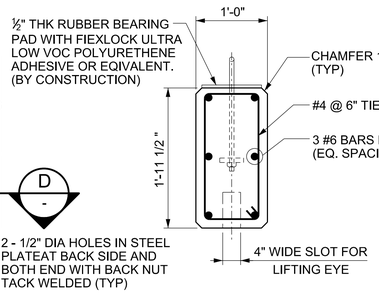




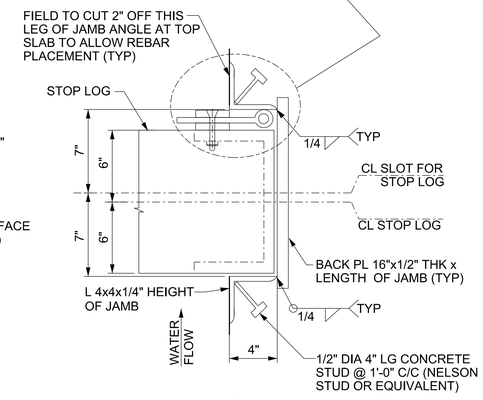
SECTION A
SCALE 1/2" = 1'-0"



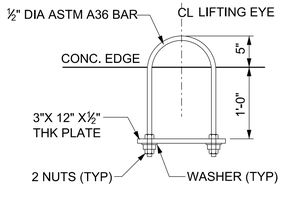
SECTION B
SCALE 1/2" = 1'-0"



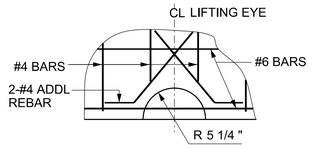
SECTION C
SCALE 1" = 1'-0"



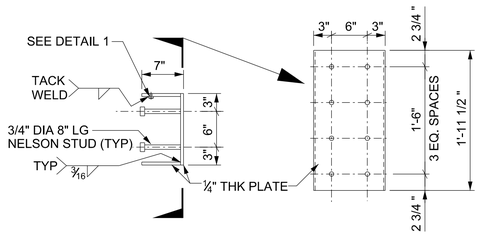
DETAIL 1 BOTH END
SCALE 2" = 1'-0"



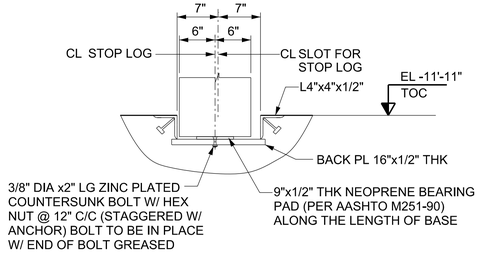
DETAIL 2
SCALE 1" = 1'-0"



DETAIL 3
SCALE 1" = 1'-0"



SECTION D
SCALE 1" = 1'-0"



SECTION E
SCALE 1" = 1'-0"

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. READ THIS DRAWING IN CONJUCTION WITH DRAWING 26196-100-DB-109B1-06525 (PAL-T0-CIV-DWG-19-X-6525).

FIELD VERIFICATION OF THE AS-BUILT HORIZONTAL DIMENSIONS BETWEEN THE EMBEDDED STEEL CHANNELS ON THE CONCRETE INTAKE WALLS, THE VERTICAL ALIGNMENT AND PLUMBNESS OF THE EMBEDDED STEEL CHANNELS, AND THE AS-BUILT TOP ELEVATIONS ON THE CONCRETE INTAKE SLAB ALONG THE ALIGNMENT OF STOP LOGS IS REQUIRED. ONE SET OF STOP LOGS SHALL FIT EACH PUMP BAY SLOT.

BILL OF MATERIALS

TYPE	QTY
STOP LOG SL 1	10 Nos
STOP LOG SL 2	10 Nos

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	06-25-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
109B1 MARINE FLARE
INTAKE STRUCTURE - 3, STOP LOG DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6532	000	26196-100-DB-109B1-06532	000

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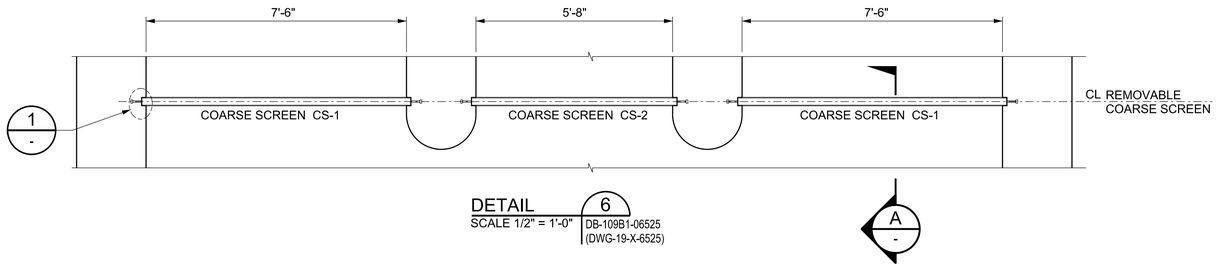
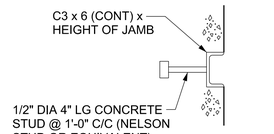
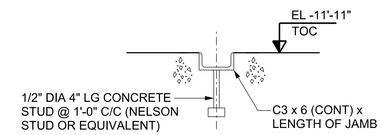


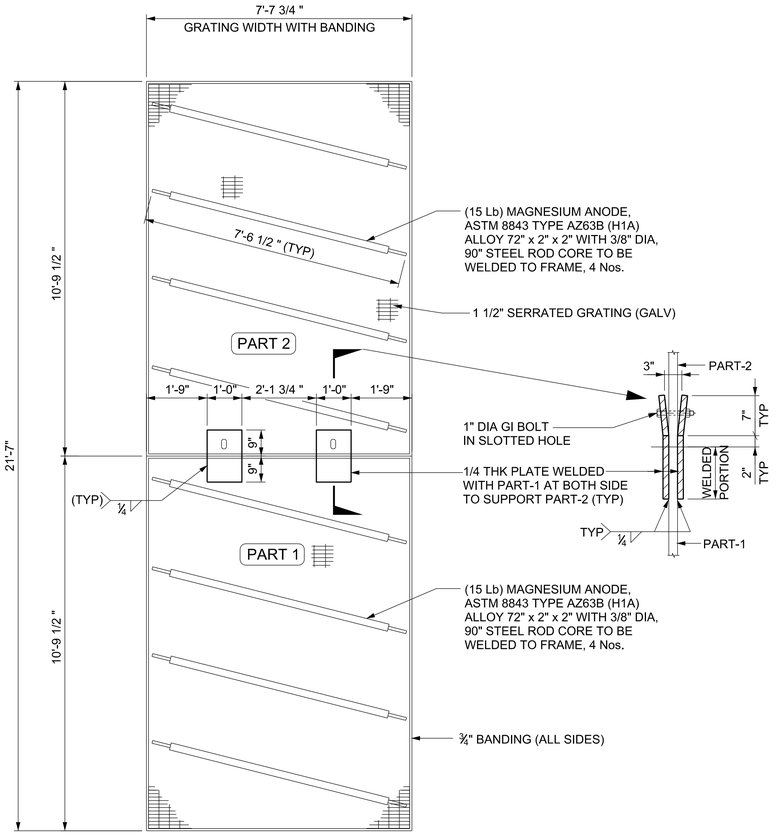
DETAIL 6
SCALE 1/2" = 1'-0" | DB-109B1-06525 (DWG-19-X-6525)



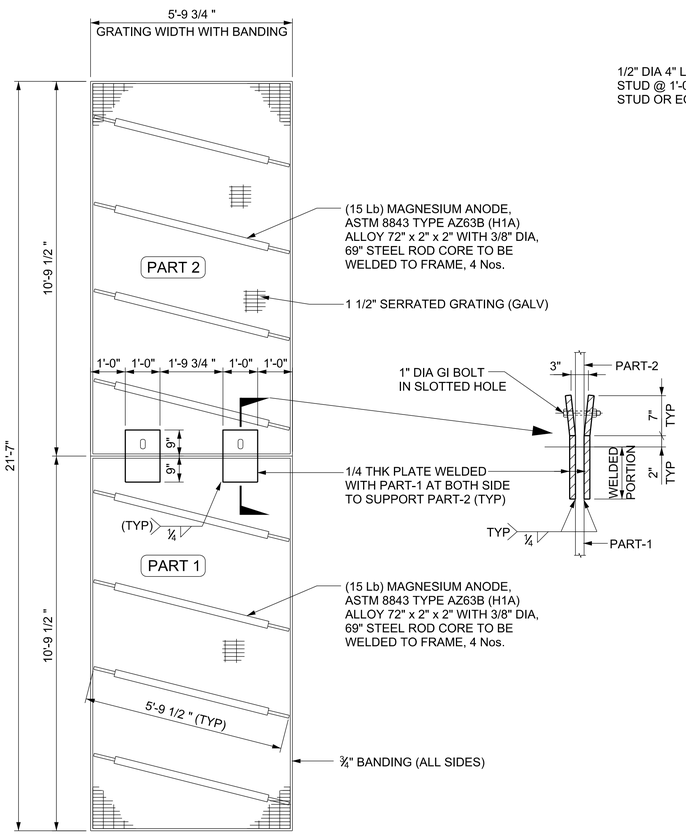
DETAIL 1
SCALE 2" = 1'-0"



SECTION A
SCALE 2" = 1'-0"



ELEVATION FOR COARSE SCREEN CS-1
SCALE 1/2" = 1'-0" (2 Nos)



ELEVATION FOR COARSE SCREEN CS-2
SCALE 1/2" = 1'-0" (1 No)

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. COARSE SCREEN SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. DRY FILM THICKNESS FOR ZINC COATING SHALL BE 3 MILLS PER A123.
3. ALL STRUCTURAL STEEL, STEEL SUPPORTS AND HOOKS FOR FINE SCREEN, STEEL SUPPORTS FOR GRATINGS (ALL SIDES, FRAME, HOOKS, & HOLES), EMBEDS (ALL SIDES), AND CHANNELS (ALL SIDES) SHALL BE PREPARED IN ACCORDANCE WITH SSPC-SP 10, NEAR WHITE METAL BLAST CLEANING AND COATED WITH 24-30 MILS OF INTERNATIONAL PAINTS INTERZONE 954 OR DUROMAR 2510. THE COATING SHALL BE APPLIED IN ACCORDANCE WITH AN APPROVED PROCEDURE INCORPORATING THE PAINT MANUFACTURER'S RECOMMENDATION. THE APPLIED COATING MUST BE ESSENTIALLY FREE OF APPLICATION RELATED DEFECTS AND HOLES/VOIDS. COATING FOR CARBON STEEL ONLY, 316 STAINLESS STEEL SHALL NOT BE COATED. FINE SCREEN ASSEMBLY, COARSE SCREEN ASSEMBLY, AND THEIR SUPPORTING COATED CHANNELS, AND COATED EMBEDS SHALL BE CATHODICALLY PROTECTED WITH SACRIFICIAL ANODE OF 5-10 YEARS DESIGN LIFE.
4. READ THIS DRAWING IN CONJUCTION WITH DRAWING 26196-100-DB-109B1-06525 (PAL-T0-CIV-DWG-19-X-6525).
5. THE SCREEN DETAIL ARE FOR 1 UNIT.

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	06-25-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

Port Arthur LNG

BECHTEL Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

PORT ARTHUR LIQUEFACTION PROJECT
109B1 MARINE FLARE
INTAKE STRUCTURE - 3, REMOVABLE COARSE SCREEN DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6533	000	26196-100-DB-109B1-06533	000

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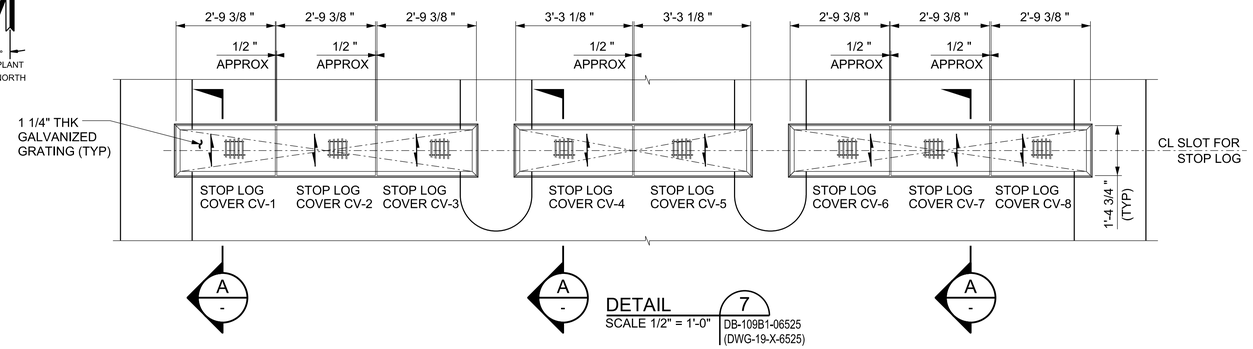
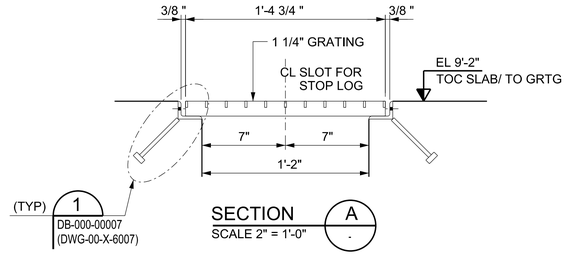
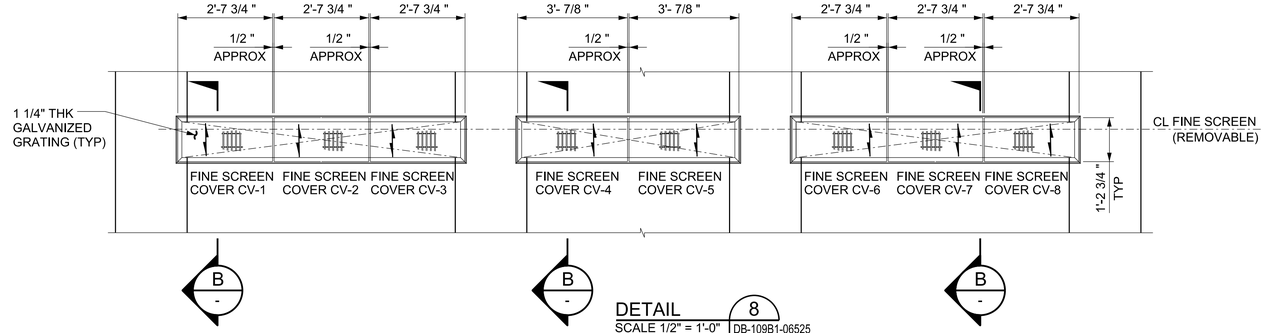


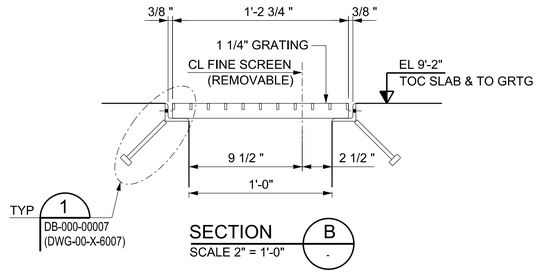
DETAIL 7
SCALE 1/2" = 1'-0"
DB-109B1-06525 (DWG-19-X-6525)



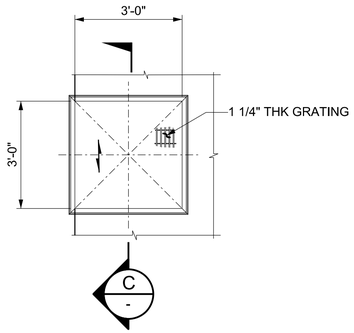
SECTION A
SCALE 2" = 1'-0"



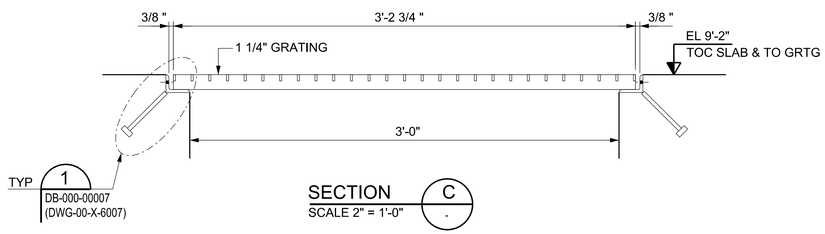
DETAIL 8
SCALE 1/2" = 1'-0"
DB-109B1-06525 (DWG-19-X-6525)



SECTION B
SCALE 2" = 1'-0"



DETAIL 9 3 PLACES
SCALE 1/2" = 1'-0"
DB-109B1-06525 (DWG-19-X-6525)



SECTION C
SCALE 2" = 1'-0"

NOTES:-

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. READ THIS DRAWING IN CONJUCTION WITH DRAWING 26196-100-DB-109B1-06525 (PAL-T0-CIV-DWG-19-X-6525).

Port Arthur LNG

Bechtel Energy Inc.
26196-100
FIRM NO.
F-9684

SCALE: AS NOTED

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	06-25-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

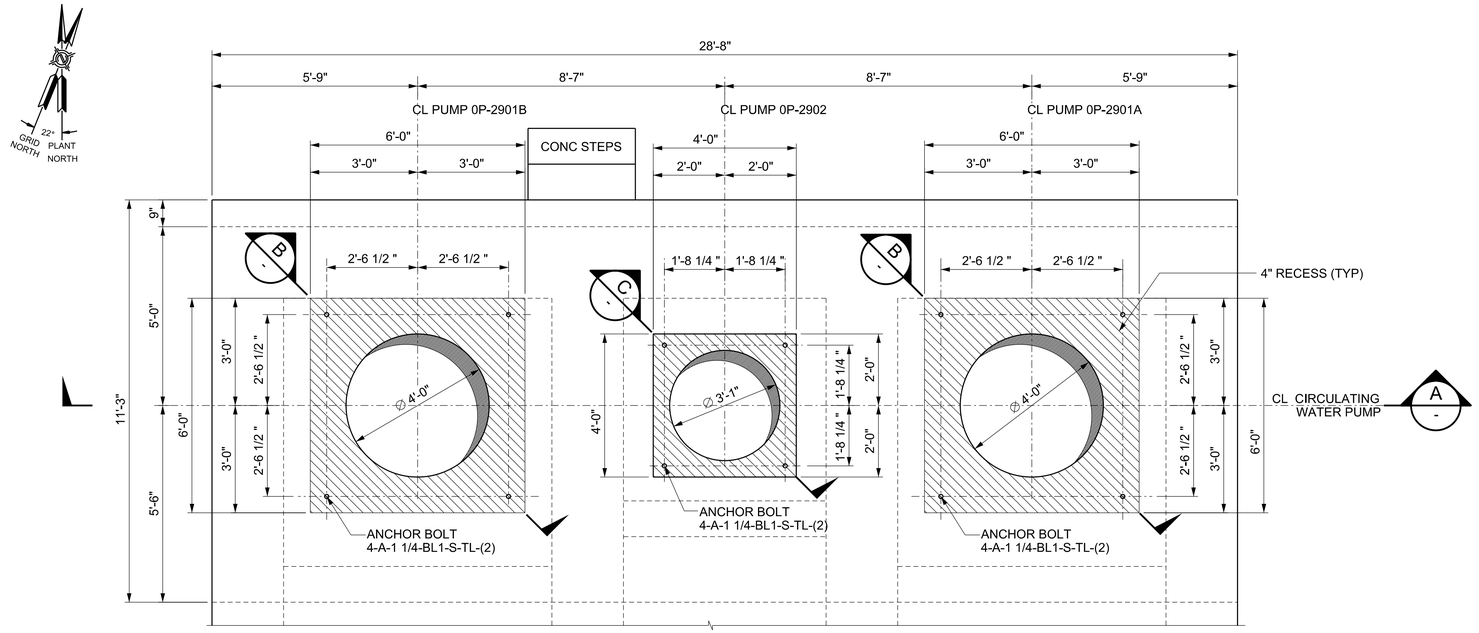
PORT ARTHUR LIQUEFACTION PROJECT
109B1 MARINE FLARE
INTAKE STRUCTURE - 3, GRATING PLAN, SECTION & DETAILS

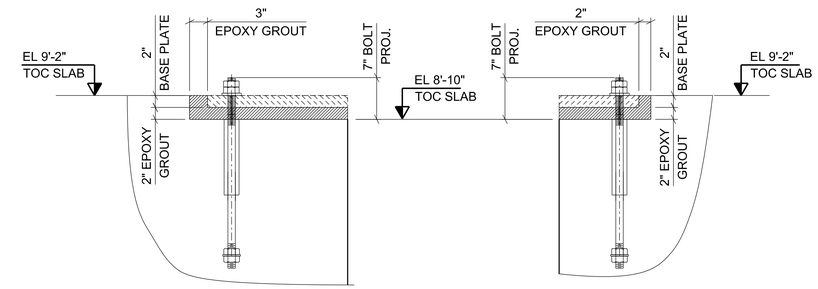
PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6534	000	26196-100-DB-109B1-06534	000

3733

NOTES:-

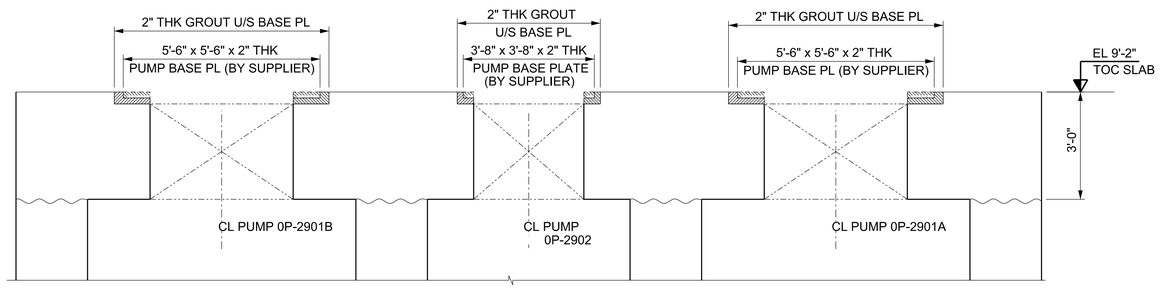
1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET & INCHES.
2. FOR GENERAL NOTES SEE DRAWING 26196-100-DB-109B1-06525 (PAL-T0-CIV-DWG-19-X-6525).
3. READ THIS DRAWING IN CONJUCTION WITH FOLLOWING DWGS 26196-100-DB-109B1-06525 (PAL-T0-CIV-DWG-19-X-6525) AND 26196-100-DB-109B1-06528 (PAL-T0-CIV-DWG-19-X-6528).



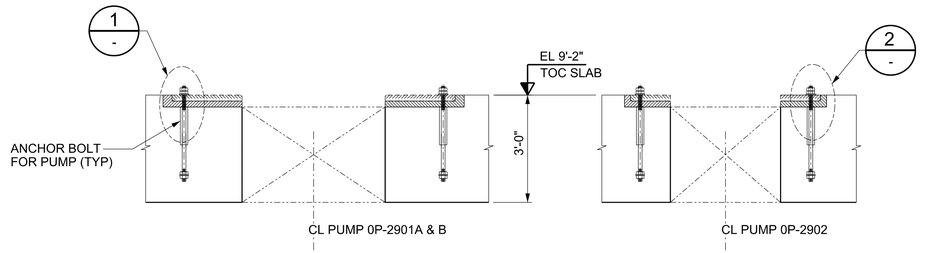


DETAIL 1
SCALE 1" = 1'-0"

DETAIL 2
SCALE 1" = 1'-0"

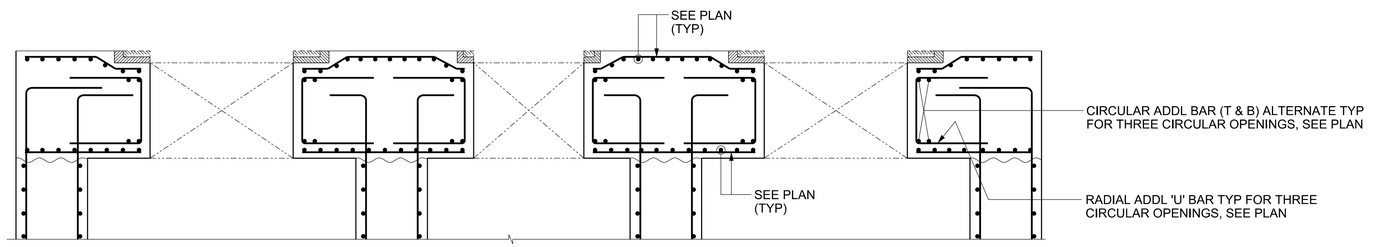


SECTION A
SCALE 1/2" = 1'-0"



SECTION B
SCALE 1/2" = 1'-0"

SECTION C
SCALE 1/2" = 1'-0"



SECTION A
SCALE 1/2" = 1'-0"

Port Arthur LNG

BECHTEL Bechtel Energy Inc. 26196-100 FIRM NO. F-9684

SCALE: AS NOTED

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	06-25-2024	ISSUED FOR CONSTRUCTION	ABK	YP/AB	KS/NG	SA	SS								

PORT ARTHUR LIQUEFACTION PROJECT
109B1 MARINE FLARE
INTAKE STRUCTURE - 3, PLAN, SECTION & DETAILS

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-CIV-DWG-19-X-6535	000	26196-100-DB-109B1-06535	000

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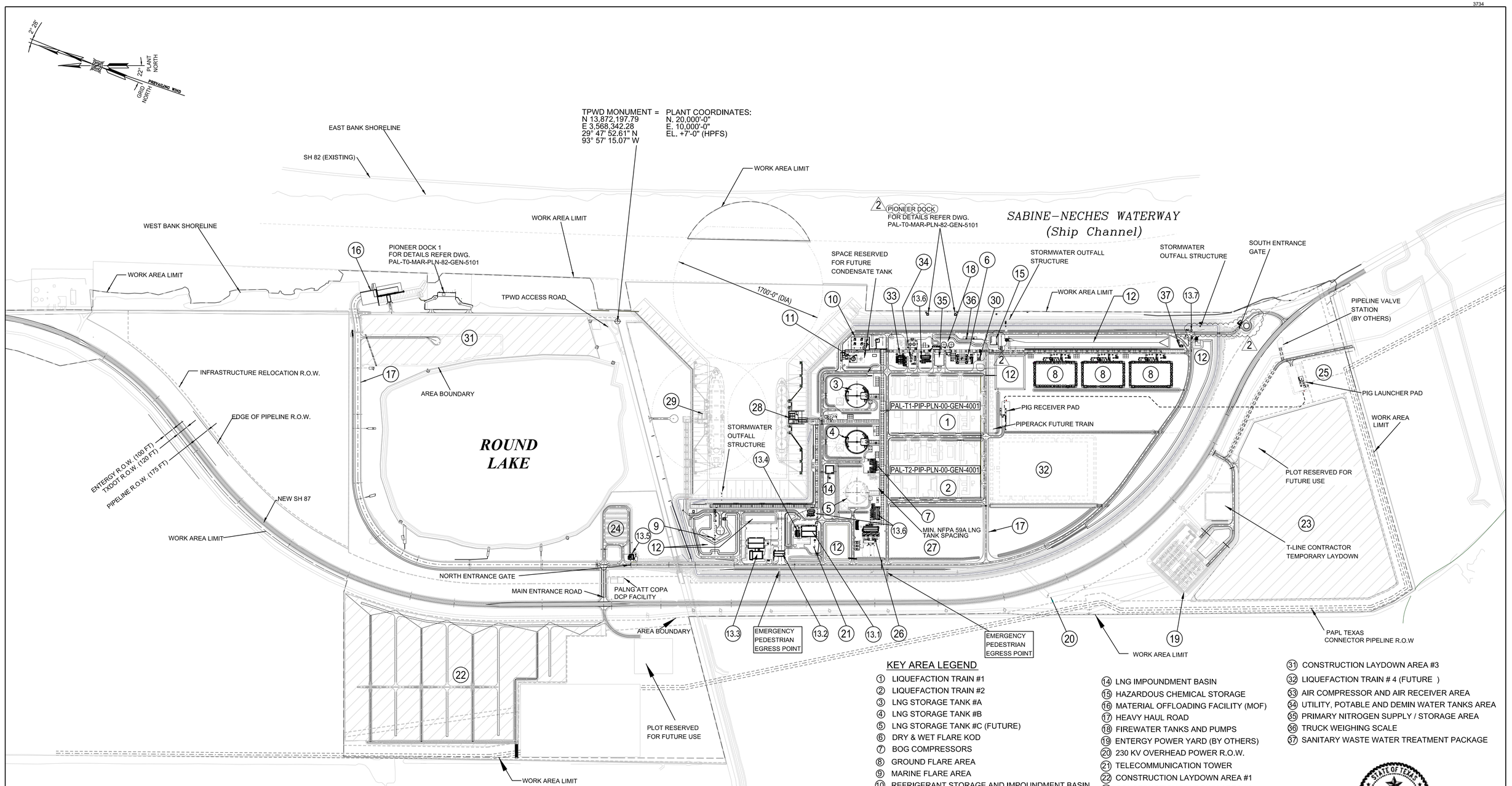

KEY BOUNDARIES

WORK AREA LIMIT : LIMITS OF CONSTRUCTION
AREA BOUNDARY : NOT IMPACTED OR TEMPORARILY IMPACTED BY CONSTRUCTION

REFERENCE DRAWINGS

DRAWING NUMBER	TITLE
26196-100-P1-01-10001 (PAL-T1-PIP-PLN-00-GEN-4001)	UNIT PLOT PLAN LIQUEFACTION TRAIN NO.1
26196-100-P1-02-10001 (PAL-T2-PIP-PLN-00-GEN-4001)	UNIT PLOT PLAN LIQUEFACTION TRAIN NO.2
26196-100-R0-0T00-15101 (PAL-T0-MAR-PLN-82-GEN-5101)	PIONEER DOCKS SITE LAYOUT PLAN
26196-100-C4-000-00001 (PAL-PJT-PMT-MAP-00-GEN-2001)	SITE DESCRIPTION -WORK AREA LIMIT (L-1)

KEY AREA LEGEND

1. LIQUEFACTION TRAIN #1
2. LIQUEFACTION TRAIN #2
3. LNG STORAGE TANK #A
4. LNG STORAGE TANK #B
5. LNG STORAGE TANK #C (FUTURE)
6. DRY & WET FLARE KOD
7. BOG COMPRESSORS
8. GROUND FLARE AREA
9. MARINE FLARE AREA
10. REFRIGERANT STORAGE AND IMPOUNDMENT BASIN
11. CONDENSATE STORAGE AND TRUCK LOADING
12. STORM WATER COLLECTION PONDS
13. MAIN BUILDINGS INCLUDE THE FOLLOWING:
    - 13.1. MAIN CONTROL BUILDING
    - 13.2. EMERGENCY RESPONSE / FIRST AID BUILDING
    - 13.3. ADMINISTRATION AND MAINTENANCE SHOP
    - 13.4. LABORATORY BUILDING
    - 13.5. NORTH ENTRANCE GUARD HOUSE
    - 13.6. BUILDING/UTILITY AREA POWER HOUSES
    - 13.7. SOUTH ENTRANCE GUARD HOUSE
14. LNG IMPOUNDMENT BASIN
15. HAZARDOUS CHEMICAL STORAGE
16. MATERIAL OFFLOADING FACILITY (MOF)
17. HEAVY HAUL ROAD
18. FIREWATER TANKS AND PUMPS
19. ENTERGY POWER YARD (BY OTHERS)
20. 230 KV OVERHEAD POWER R.O.W.
21. TELECOMMUNICATION TOWER
22. CONSTRUCTION LAYDOWN AREA #1
23. CONSTRUCTION LAYDOWN AREA #2
24. VEHICLE PARKING AREA
25. SOUTH FEED GAS METERING (BY OTHERS)
26. MAIN POWER HOUSE AND 230KV GIS SUBSTATION
27. LIQUEFACTION TRAIN # 3 (FUTURE)
28. SOUTH LNG CARRIER BERTH
29. NORTH LNG CARRIER BERTH (FUTURE)
30. BACK UP NITROGEN SUPPLY / STORAGE AREA
31. CONSTRUCTION LAYDOWN AREA #3
32. LIQUEFACTION TRAIN # 4 (FUTURE)
33. AIR COMPRESSOR AND AIR RECEIVER AREA
34. UTILITY, POTABLE AND DEMIN WATER TANKS AREA
35. PRIMARY NITROGEN SUPPLY / STORAGE AREA
36. TRUCK WEIGHING SCALE
37. SANITARY WASTE WATER TREATMENT PACKAGE

STATE OF TEXAS
ISAK PATUWO
67106
LICENSED
PROFESSIONAL ENGINEER
06-05-2025

0 125 250 375 500 1000 1500
GRAPHIC SCALE (FEET)

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	---
000	08-30-2024	ISSUED FOR CONSTRUCTION	KK	KA	AG	NC	SS/SK	
001	02-26-2025	RE-ISSUED FOR CONSTRUCTION	NG	KA	AG	NC	SS/SK	
002	06-05-2025	RE-ISSUED FOR CONSTRUCTION	NG	AS	AG	SA	SS	

Port Arthur LNG
BECHTEL
Bechtel Energy, Inc.
26196-100
FIRM NO.
F-9684

SCALE: 1" = 500'

PORT ARTHUR LIQUEFACTION PROJECT
PALNG SITE PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-PIP-PLN-00-GEN-0001	002	26196-100-P1-00-00001	002

ELECTRONIC FILE NAME: 26196-100-P1-00-00001-002.DGN

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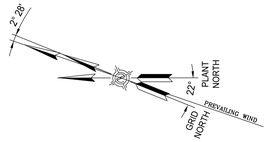


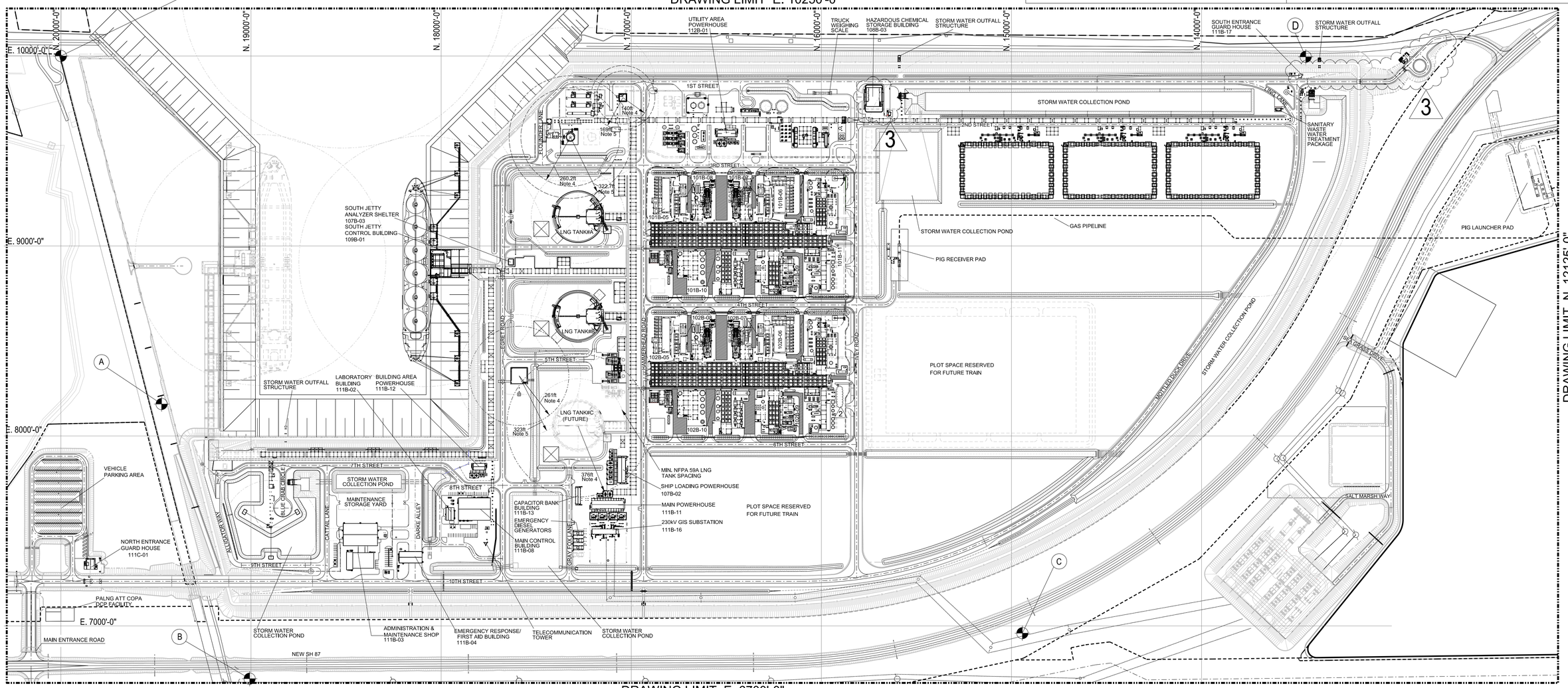
TPWD MONUMENT = PLANT COORDINATES:
N 13,872,197.79 N. 20,000'-0"
E 3,568,342.28 E. 10,000'-0"
29° 47' 52.61" N EL. +7'-0" (HPFS)
93° 57' 15.07" W

NOTES:
4. THERMAL RADIATION RISK CONTOUR AT 10,000 BTU/FT2-HR
5. THERMAL RADIATION RISK CONTOUR AT 4,000 BTU/FT2-HR

GENERAL NOTES:
A) UNLESS OTHERWISE NOTED, ALL DIMENSIONS, ELEVATIONS AND COORDINATES ARE IN FEET AND INCHES.
B) HORIZONTAL DIMENSIONAL CONTROL SHALL BE BASED ON U.S. STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, NAD83, TEXAS SOUTH CENTRAL ZONE, U.S. SURVEY FOOT.
C) ALL VERTICAL DIMENSIONAL CONTROL IS BASED ON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).

NOTES:
1. HIGH POINT OF FINISHED SURFACE (HPFS) ELEVATION = NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88) ELEVATION + 7'-0". NAVD88 ELEVATION = MEAN SEA LEVEL (MSL) -0.59 FT.
2. PALNG PLANT COORDINATE SYSTEM ORIGINATES FROM TPWD MONUMENT LOCATED AT 29° 47' 52.61" N AND 93° 57' 15.07" W. PLANT COORDINATES N. 20,000'- 0" AND E. 10,000'- 0" ARE EQUAL TO TEXAS STATE PLANE COORDINATES N. 13,872,197.79 FT. AND E. 3,568,342.28 FT.
3. OTHER PALNG PLANT COORDINATES CORRESPONDING TO TEXAS STATE PLANE COORDINATES AT MONUMENTS AS IDENTIFIED ON THE DRAWING ARE AS FOLLOWS:

No.	TEXAS STATE PLANE COORDINATES	PLANT COORDINATES
A	N. 13871020.3877 E. 3566842.2075	N. 19470'-3" E. 8168'-1"
B	N. 13870049.5013 E. 3565675.3023	N. 19007'-3" E. 6722'-6"
C	N. 13866370.5787 E. 3567420.0613	N. 14942'-6" E. 6962'-0"
D	N. 13866125.1765 E. 3570791.1311	N. 13452'-3" E. 9995'-8"



BUILDING NO.	DESCRIPTION
101B-05	Train 1 North Powerhouse
101B-06	Train 1 South Powerhouse
101B-07	Train 1 Compressor 1C-2701 Powerhouse
101B-08	Train 1 Compressor 1C-2801 Powerhouse
101B-09	Train 1 NGL Analyzer Shelter
101B-10	Train 1 Liquefaction Analyzer Shelter
101B-11	Inlet Gas Analyzer Shelter
102B-05	Train 2 North Powerhouse
102B-06	Train 2 South Powerhouse
102B-07	Train 2 Compressor 1C-2701 Powerhouse
102B-08	Train 2 Compressor 1C-2801 Powerhouse
102B-09	Train 2 NGL Analyzer Shelter

BUILDING NO.	DESCRIPTION
102B-10	Train 2 Liquefaction Analyzer Shelter
107B-02	Ship Loading Powerhouse
107B-03	South Jetty Analyzer Shelter
108B-03	Hazardous Chemical Storage Building
109B-01	South Jetty Control Building
111B-02	Laboratory Building
111B-03	Administration & Maintenance Shop
111B-04	Emergency Response/First Aid Building
111B-08	Control Building
111B-11	Main Powerhouse
111B-12	Building Area Powerhouse

BUILDING NO.	DESCRIPTION
111B-13	Capacitor Bank Building
111B-16	230kV GIS Substation
111B-17	South Entrance Guard House
111C-01	North Entrance Guard House
112B-01	Utility Powerhouse

STATE OF TEXAS
ISAK PATUWO
67106
LICENSED
PROFESSIONAL ENGINEER
06-05-2025

0 125 250 500 750
GRAPHIC SCALE (FEET)

Port Arthur LNG

Bechtel Energy, Inc.
26196-100
FIRM NO.
F-9684

SCALE: 1" = 250'

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	---
000	01-31-2024	ISSUED FOR CONSTRUCTION	MJ	PK	AG	AH	JT	
001	09-13-2024	RE-ISSUED FOR CONSTRUCTION	KK	KA	AG	NC	SS	
002	02-26-2025	RE-ISSUED FOR CONSTRUCTION	NG	KA	AG	NC	SS	
003	06-05-2025	RE-ISSUED FOR CONSTRUCTION	NG	AS	AG	NC	SS	

PORT ARTHUR LIQUEFACTION PROJECT
PALNG FACILITY PLOT PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-PJT-PIP-PLN-00-GEN-0002	003	26196-100-P1-00-00002	003

ELECTRONIC FILE NAME: 26196-100-P1-00-00002-003.DGN

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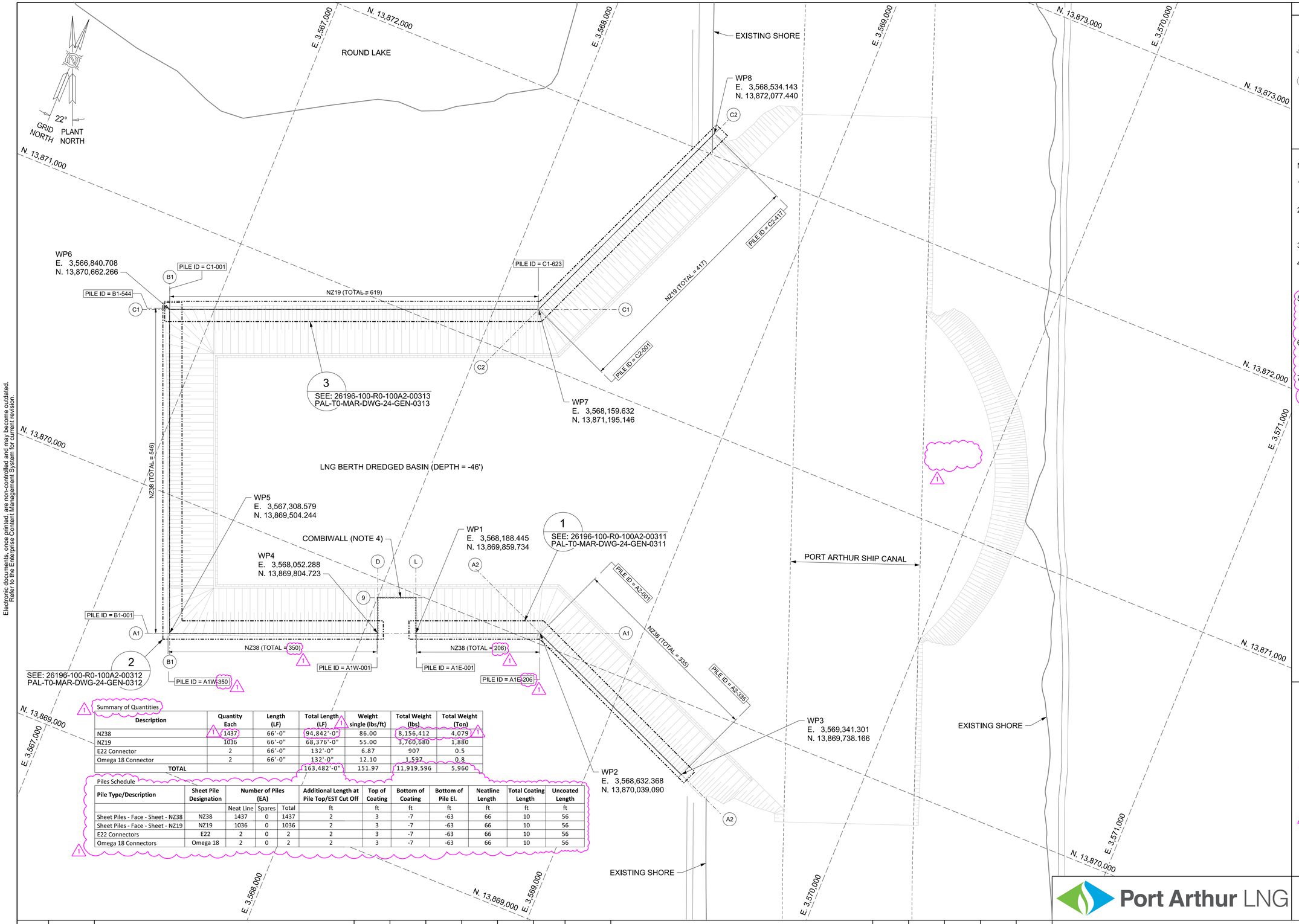


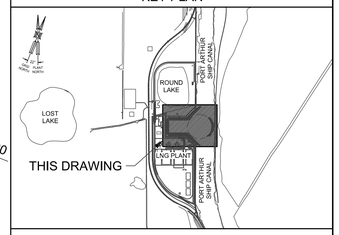
Summary of Quantities

Description	Quantity Each	Length (LF)	Total Length (LF)	Weight single (lbs/ft)	Total Weight (lbs)	Total Weight (Ton)
NZ38	1437	66'-0"	94,842'-0"	86.00	8,156,412	4,079
NZ19	1036	66'-0"	68,376'-0"	55.00	3,760,680	1,880
E22 Connector	2	66'-0"	132'-0"	6.87	907	0.5
Omega 18 Connector	2	66'-0"	132'-0"	12.10	1,597	0.8
TOTAL			163,482'-0"	151.97	11,919,596	5,960

Piles Schedule

Pile Type/Description	Sheet Pile Designation	Number of Piles (EA)			Additional Length at Pile Top/EST Cut Off	Top of Coating	Bottom of Coating	Bottom of Pile El.	Neatline Length	Total Coating Length	Uncoated Length
		Neat Line	Spares	Total	ft	ft	ft	ft	ft	ft	ft
Sheet Piles - Face - Sheet - NZ38	NZ38	1437	0	1437	2	3	-7	-63	66	10	56
Sheet Piles - Face - Sheet - NZ19	NZ19	1036	0	1036	2	3	-7	-63	66	10	56
E22 Connectors	E22	2	0	2	2	3	-7	-63	66	10	56
Omega 18 Connectors	Omega 18	2	0	2	2	3	-7	-63	66	10	56

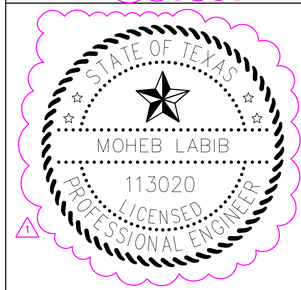
KEY PLAN



NOTES:

1. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN FEET.
2. COORDINATES ARE IN FEET TO NAD 83 / TEXAS STATE PLANE SOUTH CENTRAL ZONE.
3. ELEVATIONS ARE IN FEET TO NAVD88.
4. FOR THE PLAN OF COMBIWALL, SEE DWG. NO. 26196-100-R0-100A2-00201 (PAL-T0-MAR-DWG-24-GEN-0201).
5. TOP OF FINISHED 10 FEET OF PILE TO BE COATED ACCORDING TO PROJECT SPECIFICATION 26196-100-3PS-NX00-00001.
6. SHEET PILES TO BE INSTALLED ACCORDING TO PROJECT SPECIFICTION 26196-100-3PS-CM00-00005.
7. DESIGN DOES NOT REQUIRE CATHODIC PROTECTION, AS PER RECOMMENDATION FROM MET.

FOR SEALED GEOTCHNICAL DESIGN REFER TO REPORT 26196-100-I23-GEK-00553.



For Structural Design Only

Port Arthur LNG

BECHTEL

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: NTS

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	03-02-2023	ISSUED FOR CONSTRUCTION	CLW	ML	CT/SW	KR	JT
001	04-21-2023	RE-ISSUED FOR CONSTRUCTION	CLW	ML	CT/SW	KR	JT

PORT ARTHUR LIQUEFACTION PROJECT
LNG LOADING BERTH BASIN SLOPE PROTECTION
SHEET PILE OVERALL PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-MAR-DWG-24-GEN-0301	001	26196-100-R0-100A2-00301	001

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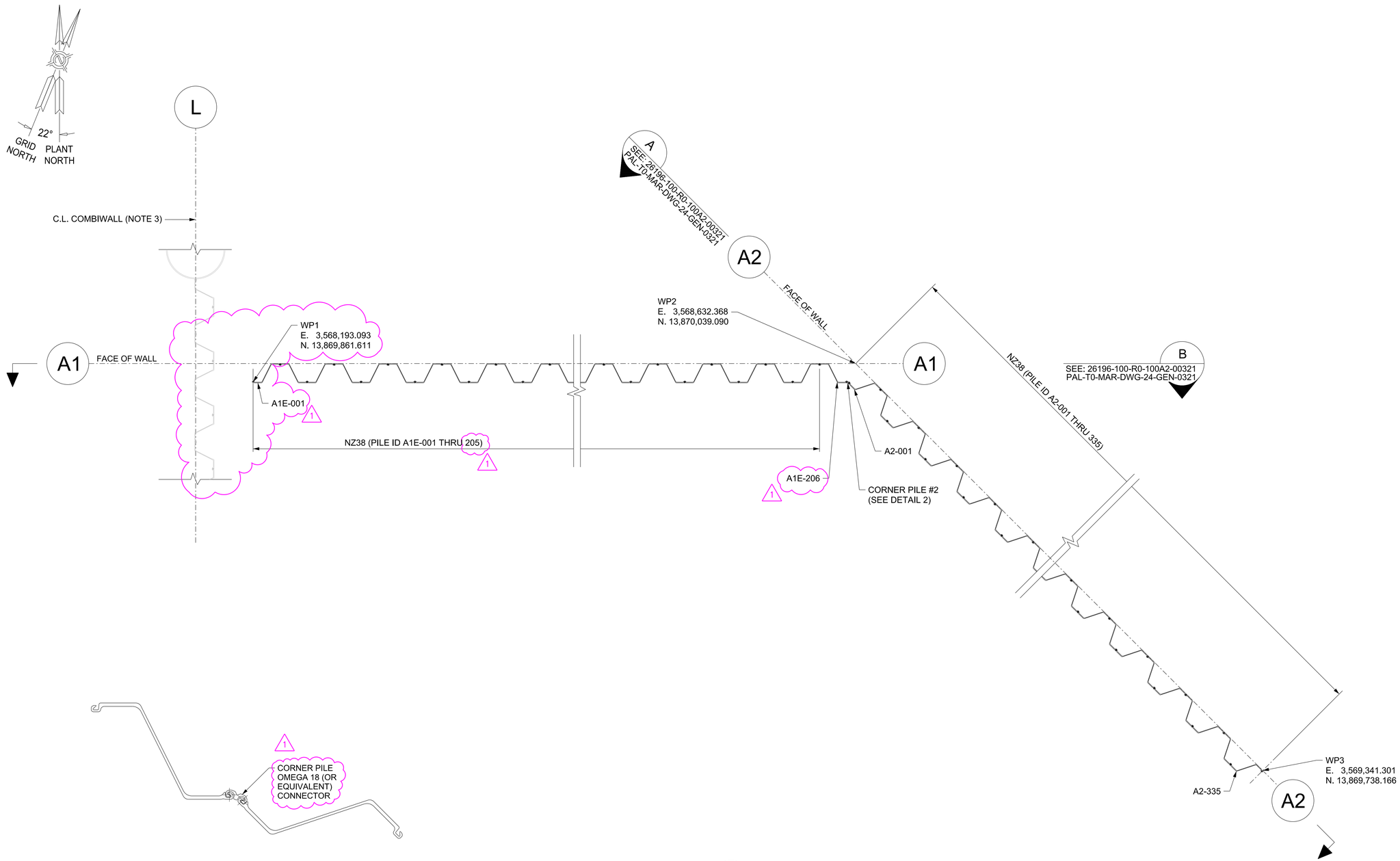

DETAIL 2 / -

DETAIL 1
SEE: 26196-100-R0-100A2-00301
PAL-T0-MAR-DWG-24-GEN-0301

NOTES:

1. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN FEET AND INCHES.
2. COORDINATES ARE IN FEET TO NAD83 / TEXAS STATE PLATE PLANE SOUTH CENTRAL ZONE.
3. FOR DETAIL OF COMBIWALL REFER TO DWG. NO. 26196-100-R0-100A2-00201 (PAL-T0-MAR-DWG-24-GEN-0201).
4. SHEET PILE GRADE: A 572 GRADE 50.
5. SELLER TO PROVIDE SHOWN CORNER CONNECTOR OR EQUIVALENT. 1

1 FOR SEALED GEOTECHNICAL DESIGN REFER TO REPORT 26196-100-I23-GEK-00553.

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Port Arthur LNG

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: NTS

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	03-02-2023	ISSUED FOR CONSTRUCTION	CLW	ML	CT/SW	KR	JT								
001	04-21-2023	RE-ISSUED FOR CONSTRUCTION	CLW	ML	CT/SW	KR	JT								

PORT ARTHUR LIQUEFACTION PROJECT
LNG LOADING BERTH BASIN SLOPE PROTECTION
SHEET PILE ARRANGEMENT - FROM WP1 TO WP3

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-MAR-DWG-24-GEN-0311	001	26196-100-R0-100A2-00311	001

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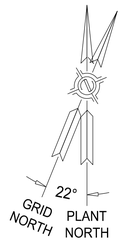
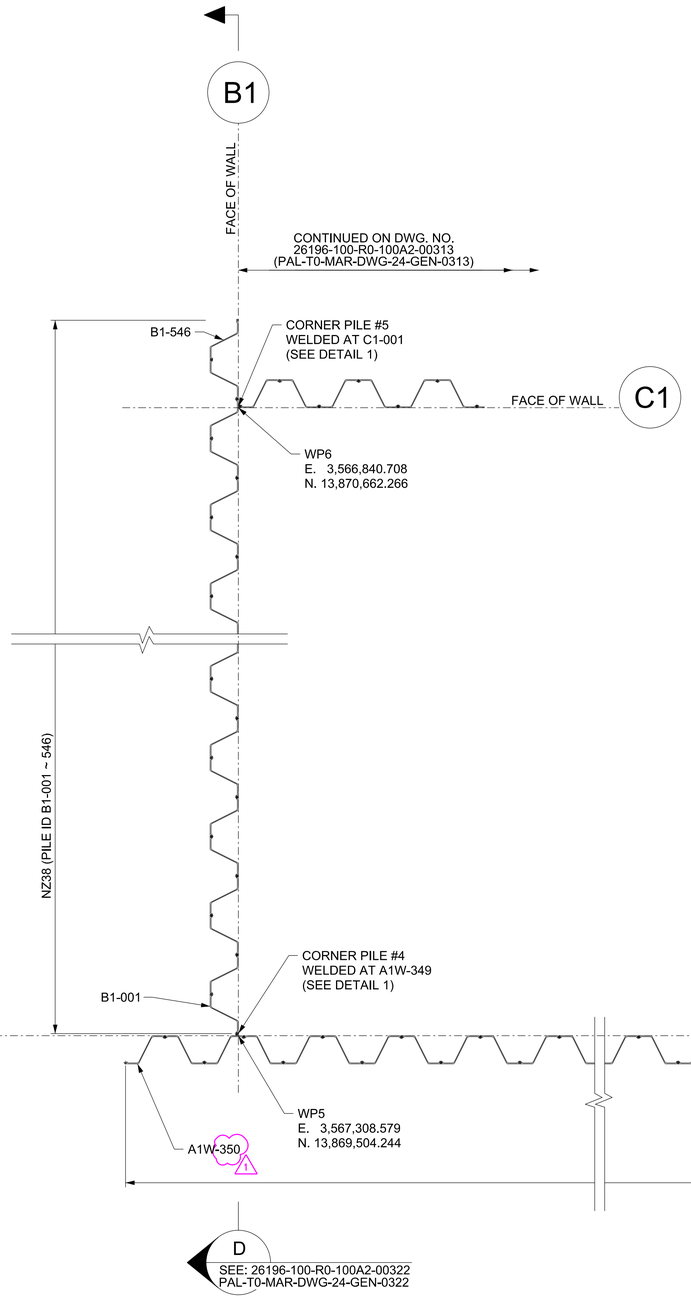
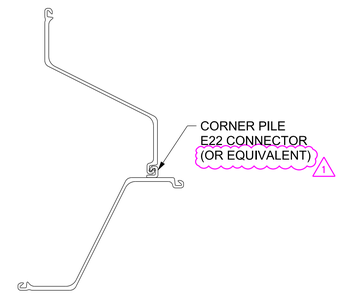
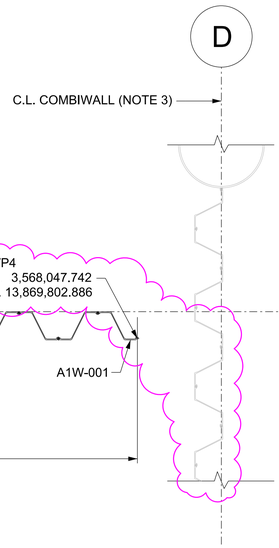




DETAIL 2
SEE: 26196-100-R0-100A2-00301
PAL-T0-MAR-DWG-24-GEN-0301



DETAIL 1
-



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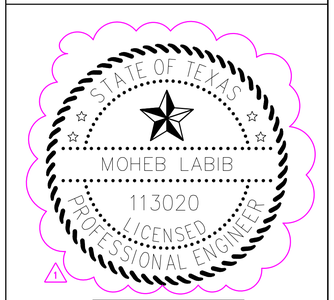
4. SHEET PILE GRADE: A 572 GRADE 50.
5. SELLER TO PROVIDE SHOWN CORNER CONNECTOR OR EQUIVALENT. 1

1 FOR SEALED GEOTECHNICAL DESIGN REFER TO REPORT 26196-100-I23-GEK-00553.



1 For Structural Design Only

Port Arthur LNG

BECHTEL Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: NTS

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	03-02-2023	ISSUED FOR CONSTRUCTION	CLW	ML	CT/SW	KR	JT								
001	04-21-2023	RE-ISSUED FOR CONSTRUCTION	CLW	ML	CT/SW	KR	JT								

PORT ARTHUR LIQUEFACTION PROJECT
LNG LOADING BERTH BASIN SLOPE PROTECTION
SHEET PILE ARRANGEMENT - FROM WP4 TO WP6

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-MAR-DWG-24-GEN-0312	001	26196-100-R0-100A2-00312	001

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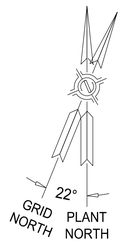

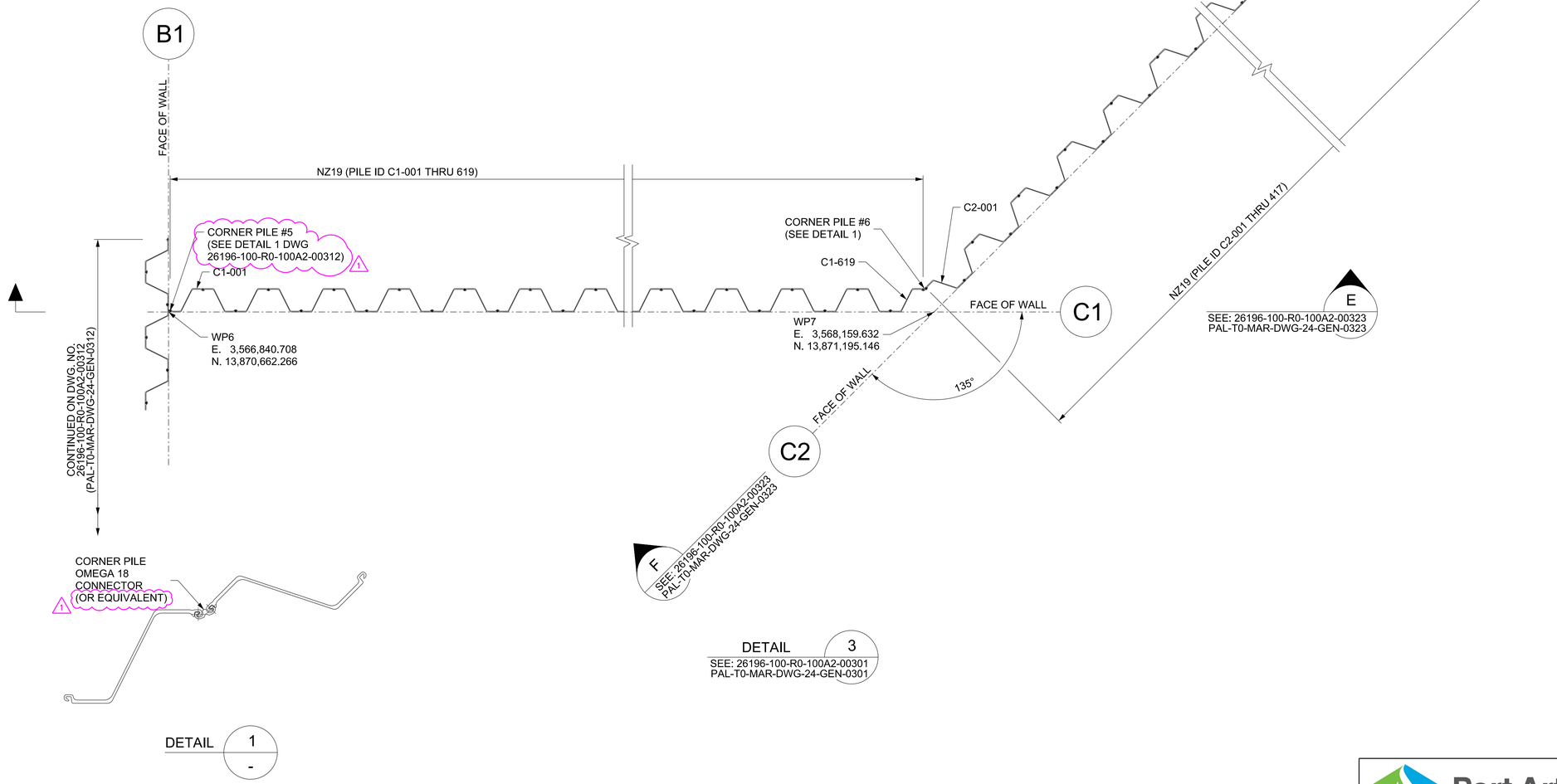

NOTES:

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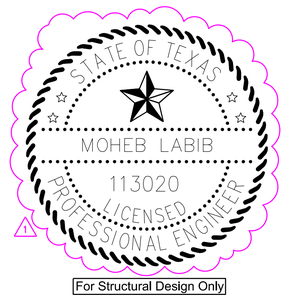
2. COORDINATES ARE IN FEET TO NAD83 / TEXAS STATE PLATE PLANE SOUTH CENTRAL ZONE.
3. SHEET PILE GRADE: A 572 GRADE 50.
4. SELLER TO PROVIDE SHOWN CORNER CONNECTOR OR EQUIVALENT. 1

1 FOR SEALED GEOTECHNICAL DESIGN REFER TO REPORT 26196-100-I23-GEK-00553.



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Port Arthur LNG

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: NTS

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	03-02-2023	ISSUED FOR CONSRUCTION	CLW	ML	CT/SW	KR	JT
001	04-21-2023	RE-ISSUED FOR CONSRUCTION	CLW	ML	CT/SW	KR	JT

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM

PORT ARTHUR LIQUEFACTION PROJECT
LNG LOADING BERTH BASIN SLOPE PROTECTION
SHEET PILE ARRANGEMENT - FROM WP6 TO WP8

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-MAR-DWG-24-GEN-0313	001	26196-100-R0-100A2-00313	001

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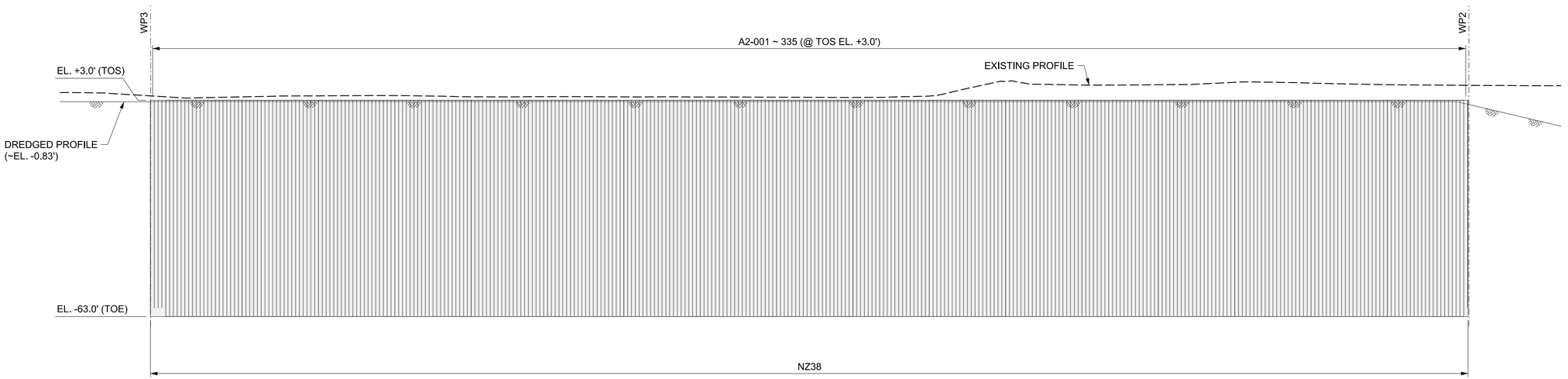
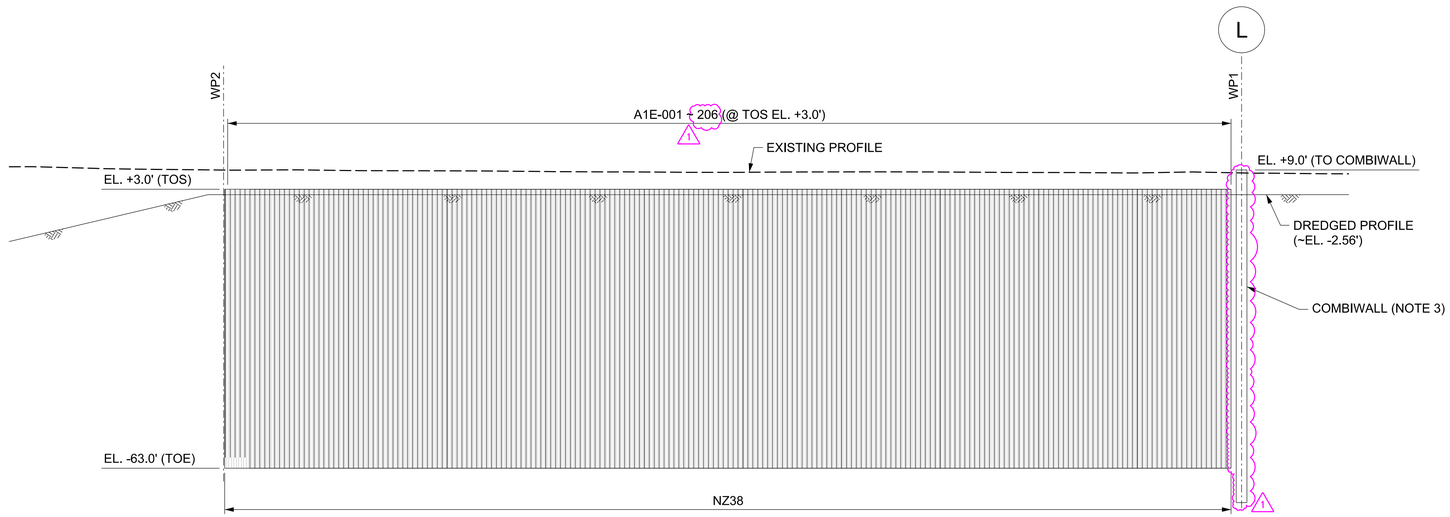


SECTION A
SEE: 26196-100-R0-100A2-00311
PAL-T0-MAR-DWG-24-GEN-0311



SECTION B
SEE: 26196-100-R0-100A2-00311
PAL-T0-MAR-DWG-24-GEN-0311

NOTES:

1. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN FEET AND INCHES.
2. ELEVATIONS ARE FEET TO NAVD88.
3. FOR DETAIL OF COMBIWALL REFER TO DWG. NO. 26196-100-R0-100A2-00201 (PAL-T0-MAR-DWG-24-GEN-0201).

LEGEND:

EXISTING PROFILE

DREDGED PROFILE

1 FOR SEALED GEOTECHNICAL DESIGN REFER TO REPORT 26196-100-I23-GEK-00553. ___

STATE OF TEXAS
MOHEB LABIB
113020
LICENSED
PROFESSIONAL ENGINEER

For Structural Design Only

Port Arthur LNG

Bechtel OG&C,
26196-100
FIRM NO.
F-9684

SCALE: NTS

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
000	03-02-2023	ISSUED FOR CONSTRUCTION	CLW	ML	CT/SW	KR	JT								
001	04-21-2023	RE-ISSUED FOR CONSTRUCTION	CLW	ML	CT/SW	KR	JT								

PORT ARTHUR LIQUEFACTION PROJECT
LNG LOADING BERTH BASIN SLOPE PROTECTION
SHEET PILE ELEVATION - FROM WP1 TO WP3

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-MAR-DWG-24-GEN-0321	001	26196-100-R0-100A2-00321	001

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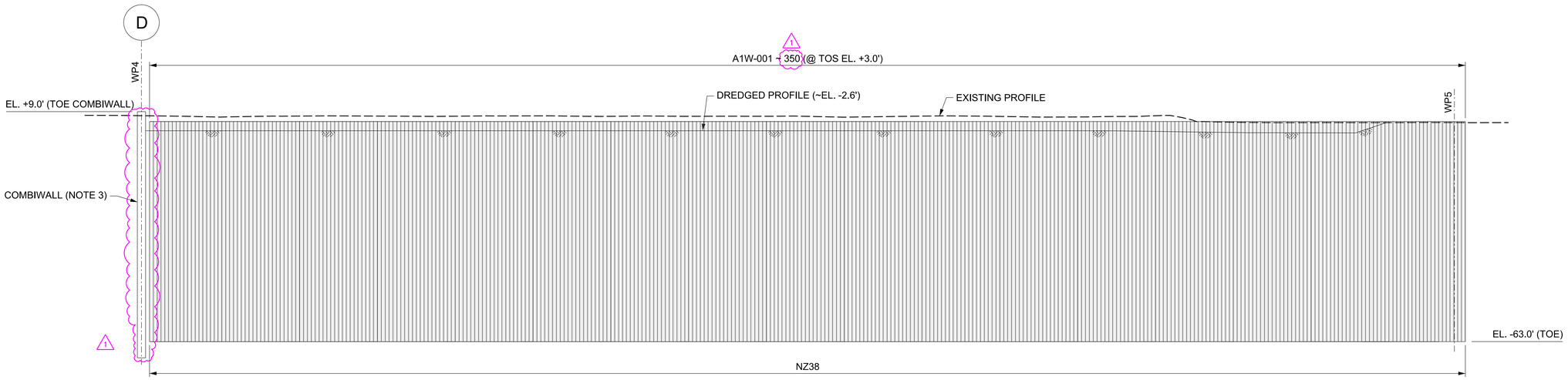
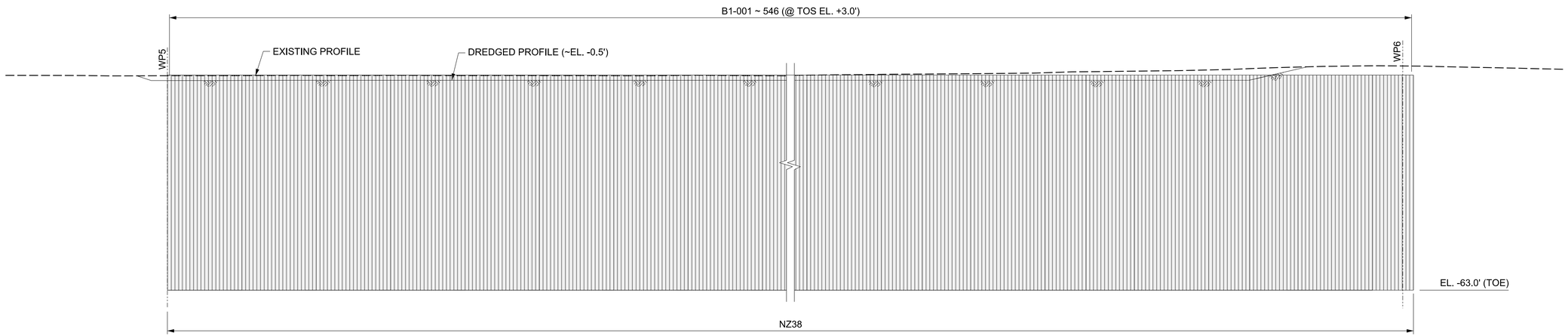


SECTION C
SEE: 26196-100-R0-100A2-00312
PAL-T0-MAR-DWG-24-GEN-0312



SECTION D
SEE: 26196-100-R0-100A2-00312
PAL-T0-MAR-DWG-24-GEN-0312

NOTES:

1. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN FEET AND INCHES.
2. ELEVATIONS ARE FEET TO NAVD88.
3. FOR DETAIL OF COMBIWALL REFER TO DWG. NO. 26196-100-R0-100A2-00201 (PAL-T0-MAR-DWG-24-GEN-0201).

LEGEND:

EXISTING PROFILE

DREDGED PROFILE

1 FOR SEALED GEOTECHNICAL DESIGN REFER TO REPORT 26196-100-I23-GEK-00553.

STATE OF TEXAS
MOHEB LABIB
113020
LICENSED PROFESSIONAL ENGINEER

1 For Structural Design Only

Port Arthur LNG

Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: NTS

NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM	NO.	DATE	REVISION	BY	CHECK	APPR	APE	PEM
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PORT ARTHUR LIQUEFACTION PROJECT
LNG LOADING BERTH BASIN SLOPE PROTECTION
SHEET PILE ELEVATION - FROM WP4 TO WP6

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-MAR-DWG-24-GEN-0322	001	26196-100-R0-100A2-00322	001

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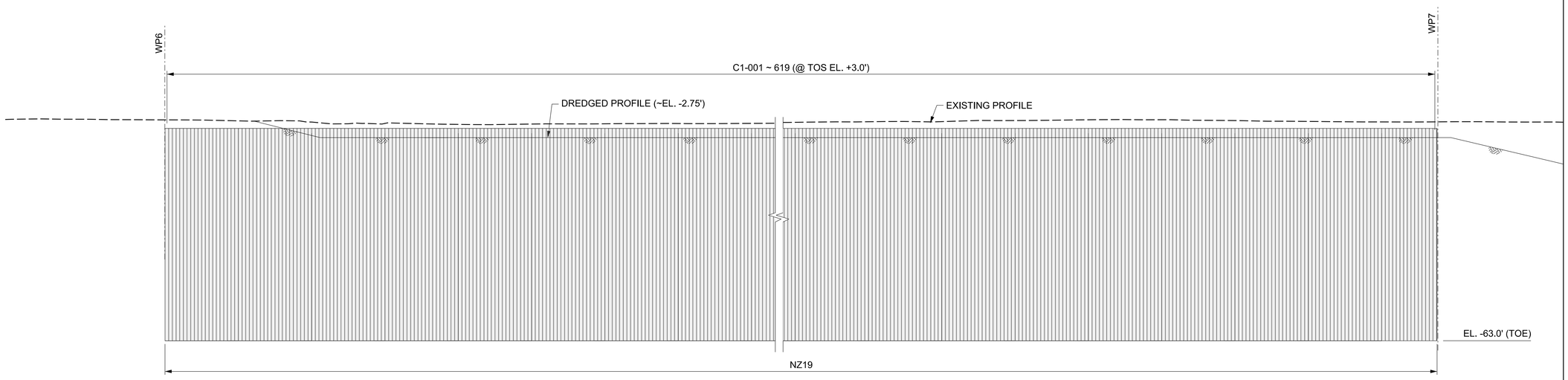
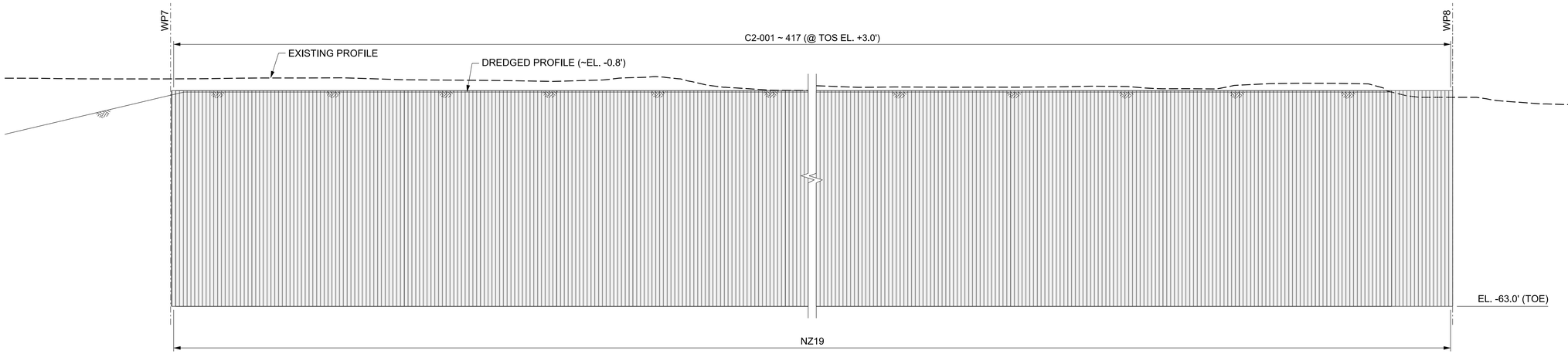


SECTION E
SEE: 26196-100-R0-100A2-00313
PAL-T0-MAR-DWG-24-GEN-0313



SECTION F
SEE: 26196-100-R0-100A2-00313
PAL-T0-MAR-DWG-24-GEN-0313

NOTES:

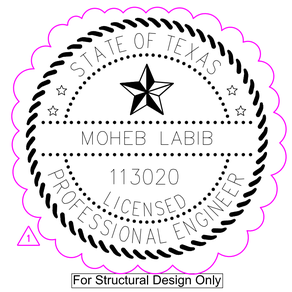
1. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN FEET AND INCHES.
2. ELEVATIONS ARE FEET TO NAVD88.

LEGEND:

EXISTING PROFILE

DREDGED PROFILE

1 FOR SEALED GEOTECHNICAL DESIGN REFER TO REPORT 26196-100-I23-GEK-00553.



1 For Structural Design Only

Port Arthur LNG

BECHTEL Bechtel OG&C, 26196-100 FIRM NO. F-9684

SCALE: NTS

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000	03-02-2023	ISSUED FOR CONSTRUCTION	CLW	ML	CT/SW	KR	JT								
001	04-21-2023	RE-ISSUED FOR CONSTRUCTION	CLW	ML	CT/SW	KR	JT								

PORT ARTHUR LIQUEFACTION PROJECT
LNG LOADING BERTH BASIN SLOPE PROTECTION
SHEET PILE ELEVATION - FROM WP6 TO WP8

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-MAR-DWG-24-GEN-0323	001	26196-100-R0-100A2-00323	001

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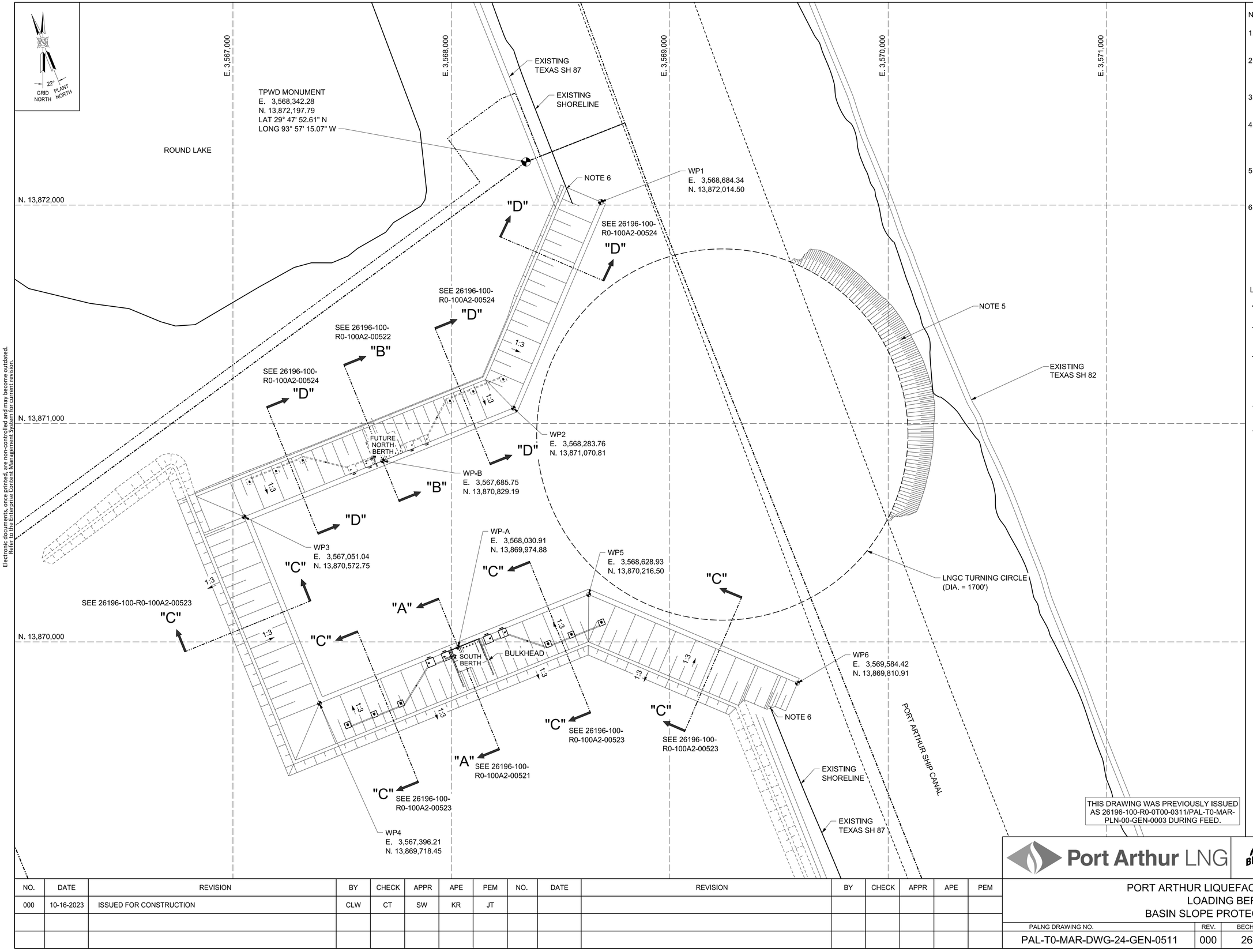

NOTES:

1. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN FEET.
2. COORDINATES ARE IN FEET TO NAD 83 / TEXAS STATE PLANE SOUTH CENTRAL ZONE.
3. ELEVATIONS ARE SHOWN IN FEET TO NAVD88.
4. FOR DETAILS OF SOIL IMPROVEMENT AND SHORE PROTECTION SHEET PILE REFER TO 26196-100-R0-100A2-00302 (PAL-T0-MAR-DWG-24-GEN-0302).
5. TURNING BASIN SLOPE PROTECTION DESIGN AND DRAWING DETAILS BY OTHERS.
6. CONNECTIONS TO THE EXISTING SHORE PROTECTION WILL BE FIELD FIT.

LEGEND:

- PROPERTY BOUNDARY
- PORT ARTHUR SHIP CHANNEL
- LNG CARRIER (LNGC) TURNING CIRCLE
- WORKING POINT
- SHORE PROTECTION

STATE OF TEXAS
DARYL F. HATHCOAT
45605
LICENSED PROFESSIONAL ENGINEER

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0 100 200 300 400 500
SCALE (FEET)

Port Arthur LNG

BECHTEL Bechtel Energy
26196-100
FIRM NO.
F-9684

SCALE: 1" = 200'

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PORT ARTHUR LIQUEFACTION PROJECT
LOADING BERTH
BASIN SLOPE PROTECTION PLAN

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-MAR-DWG-24-GEN-0511	000	26196-100-R0-100A2-00511	000

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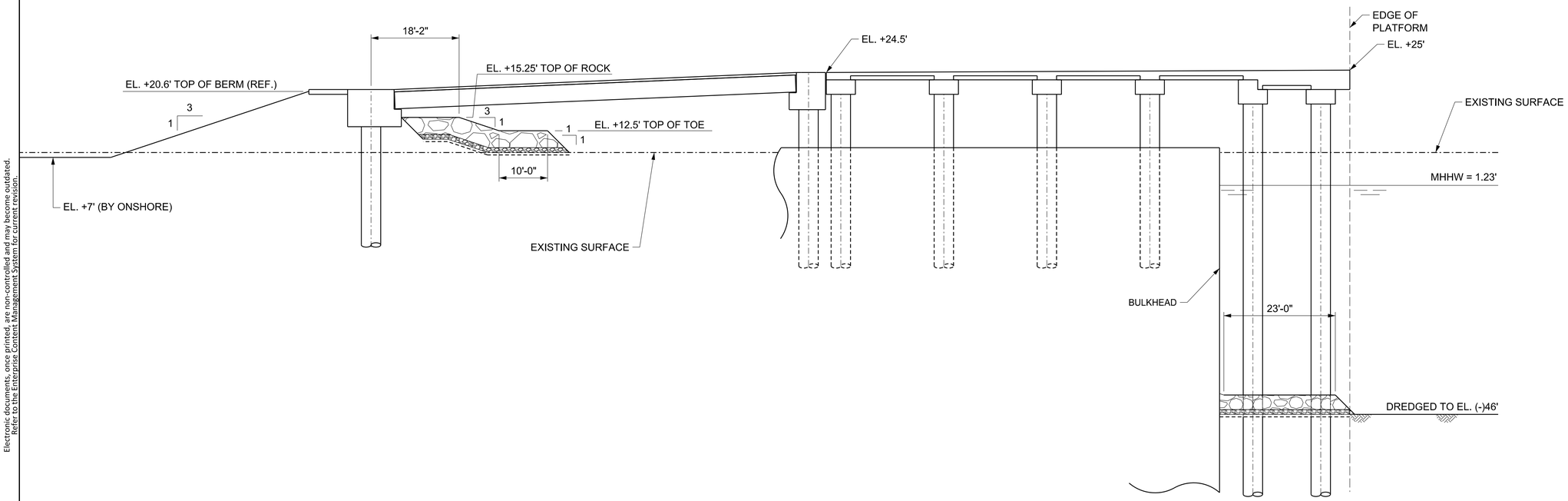

SECTION A-A

SEE 26196-100-R0-100A2-00511
(PAL-T0-MAR-DWG-24-GEN-0511)

NOTES:

1. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN FEET.
2. ELEVATIONS ARE SHOWN IN DECIMAL FEET TO NAVD88.
3. STRUCTURAL CONFIGURATIONS ARE INDICATIVE ONLY. REFER TO RELEVANT DRAWINGS FOR DETAILS.

LEGEND:

- DREDGED SURFACE
- EXISTING SURFACE
- GEOTEXTILE FABRIC
- ARMOUR ROCK W_{50}= 550 lbs THICKNESS = MIN. 3.0 ft
- FILTER ROCK W_{50}= 50 lbs THICKNESS = 1.0 ft

MHHW	+1.23'
MHW	+1.13'
MSL	+0.59'
MLW	+0.04'
NAVD88	0.00'
MLLW	-0.37'

TIDE TABLE

STATE OF TEXAS
DARYL F. HATHCOAT
45605
LICENSED
PROFESSIONAL ENGINEER

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Port Arthur LNG

BECHTEL
Bechtel Energy
26196-100
FIRM NO.
F-9684

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PORT ARTHUR LIQUEFACTION PROJECT
LOADING BERTH
BASIN SLOPE PROTECTION SECTION - SHEET 1

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-MAR-DWG-24-GEN-0521	000	26196-100-R0-100A2-00521	000

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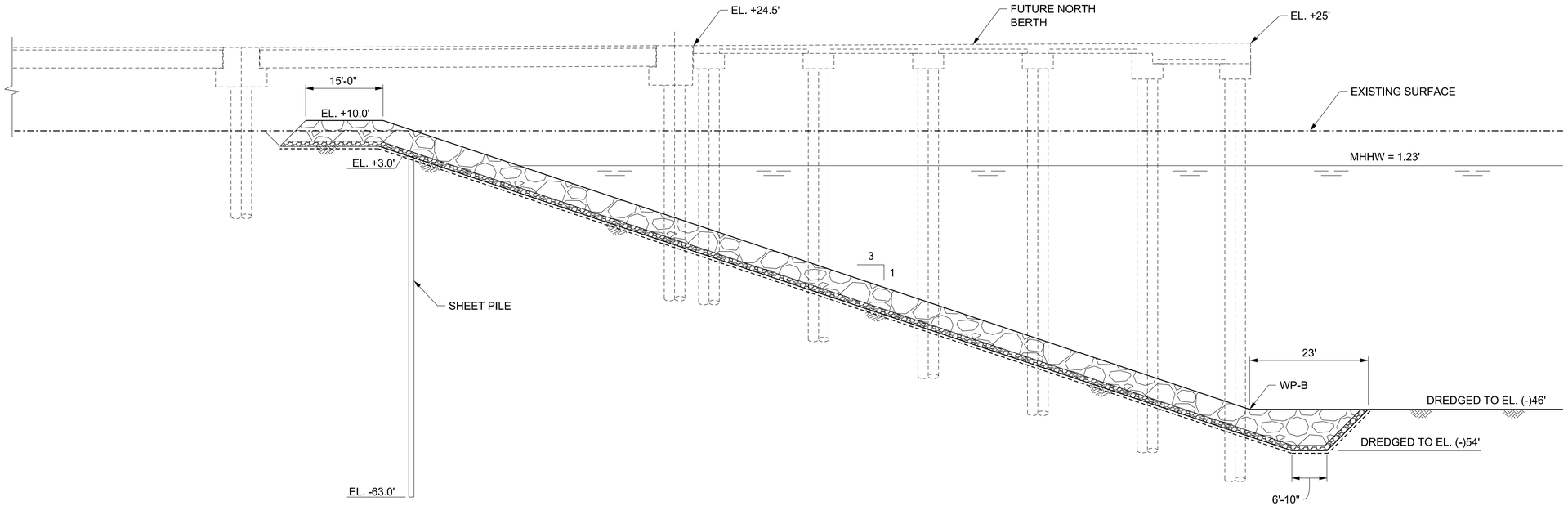

SECTION B-B

SEE 26196-100-R0-100A2-00511
(PAL-T0-MAR-DWG-24-GEN-0511)

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1. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN FEET.
2. ELEVATIONS ARE SHOWN IN DECIMAL FEET TO NAVD88.
3. STRUCTURAL CONFIGURATIONS ARE INDICATIVE ONLY. REFER TO RELEVANT DRAWINGS FOR DETAILS.
4. FOR DETAILS OF THE SHEET PILE PROTECTION REFER TO 26196-100-R0-100A2-00302 (PAL-T0-MAR-DWG-24-GEN-0302).

LEGEND:

DREDGED SURFACE

EXISTING SURFACE

GEOTEXTILE FABRIC

ARMOUR ROCK
W_{50} = 550 lbs
THICKNESS = MIN. 3.0 ft

FILTER ROCK
W_{50} = 50 lbs
THICKNESS = 1.0 ft

MHHW	+1.23'
MHW	+1.13'
MSL	+0.59'
MLW	+0.04'
NAVD88	0.00'
MLLW	-0.37'

TIDE TABLE

STATE OF TEXAS
DARYL F. HATHCOAT
45605
LICENSED
PROFESSIONAL ENGINEER

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Port Arthur LNG

BECHTEL
Bechtel Energy
26196-100
FIRM NO.
F-9684

SCALE: 1" = 12'

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PORT ARTHUR LIQUEFACTION PROJECT
LOADING BERTH
BASIN SLOPE PROTECTION SECTION - SHEET 2

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-MAR-DWG-24-GEN-0522	000	26196-100-R0-100A2-00522	000

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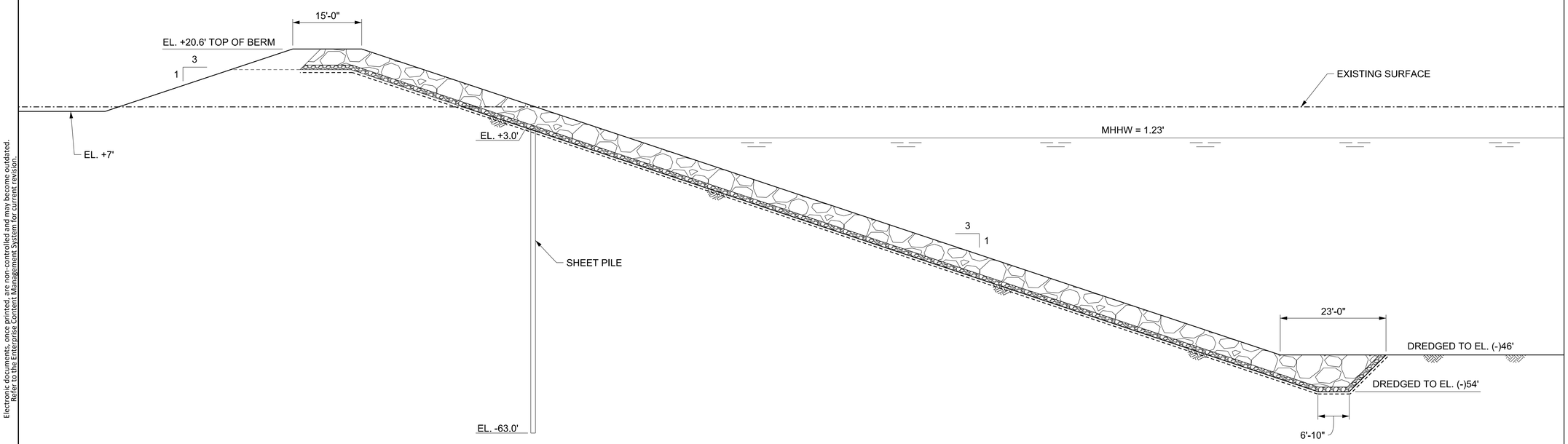

SECTION C-C

SEE 26196-100-R0-100A2-00511
(PAL-T0-MAR-DWG-24-GEN-0511)

NOTES:

1. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN FEET.
2. ELEVATIONS ARE SHOWN IN DECIMAL FEET TO NAVD88.
3. FOR DETAILS OF THE SHEET PILE PROTECTION REFER TO 26196-100-R0-100A2-00302 (PAL-T0-MAR-DWG-24-GEN-0302).

LEGEND:

- DREDGED SURFACE
- EXISTING SURFACE
- GEOTEXTILE FABRIC
- ARMOUR ROCK W_{50} = 550 lbs THICKNESS = MIN. 3.0 ft
- FILTER ROCK W_{50} = 50 lbs THICKNESS = 1.0 ft

MHHW	+1.23'
MHW	+1.13'
MSL	+0.59'
MLW	+0.04'
NAVD88	0.00'
MLLW	-0.37'

TIDE TABLE

STATE OF TEXAS
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45605
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PROFESSIONAL ENGINEER

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Bechtel Energy
26196-100
FIRM NO.
F-9684

SCALE: 1" = 12'

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000	10-16-2023	ISSUED FOR CONSTRUCTION	CLW	CT	SW	KR	JT								

PORT ARTHUR LIQUEFACTION PROJECT
LOADING BERTH
BASIN SLOPE PROTECTION SECTION - SHEET 3

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-MAR-DWG-24-GEN-0523	000	26196-100-R0-100A2-00523	000

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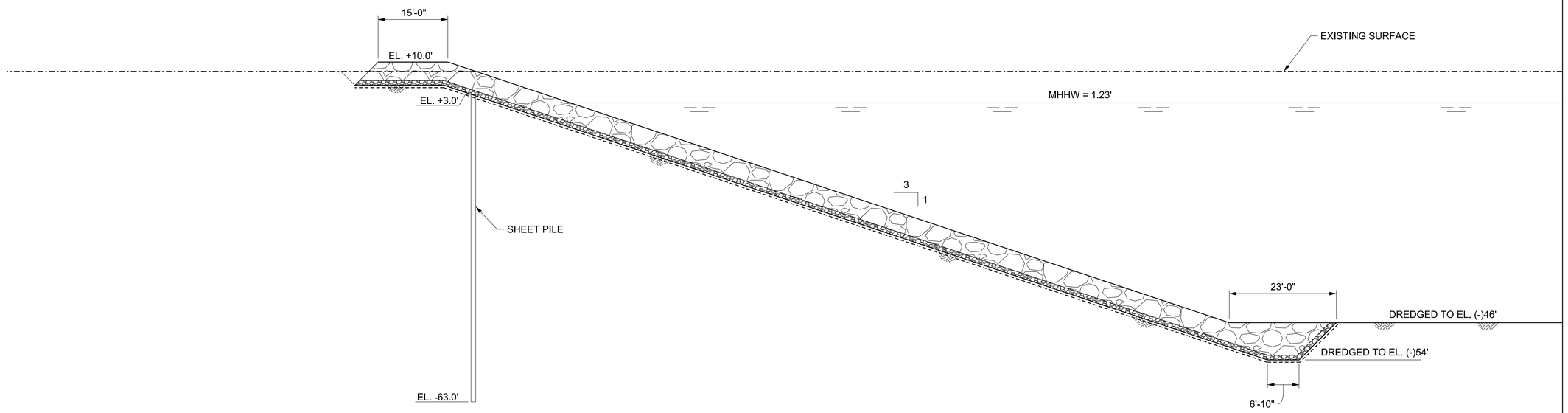

SECTION D-D

SEE 26196-100-R0-100A2-00511
(PAL-T0-MAR-DWG-24-GEN-0511)

NOTES:

1. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN FEET.
2. ELEVATIONS ARE SHOWN IN DECIMAL FEET TO NAVD88.
3. FOR DETAILS OF THE SHEET PILE PROTECTION REFER TO 26196-100-R0-100A2-00302 (PAL-T0-MAR-DWG-24-GEN-0302).

LEGEND:

- DREDGED SURFACE
- EXISTING SURFACE
- GEOTEXTILE FABRIC
- ARMOUR ROCK W_{50}= 550 lbs THICKNESS = MIN. 3.0 ft
- FILTER ROCK W_{50}= 50 lbs THICKNESS = 1.0 ft

MHHW	+1.23'
MHW	+1.13'
MSL	+0.59'
MLW	+0.04'
NAVD88	0.00'
MLLW	-0.37'

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Port Arthur LNG

BECHTEL Bechtel Energy 26196-100 FIRM NO. F-9684

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PORT ARTHUR LIQUEFACTION PROJECT
LOADING BERTH
BASIN SLOPE PROTECTION SECTION - SHEET 4

PALNG DRAWING NO.	REV.	BECHTEL DRAWING NO.	REV.
PAL-T0-MAR-DWG-24-GEN-0524	000	26196-100-R0-100A2-00524	000



Guidance for Flood Risk Analysis and Mapping

Coastal Structures

November 2024

FEMA

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Requirements for the Federal Emergency Management Agency (FEMA) Risk Mapping, Assessment, and Planning (Risk MAP) Program are specified separately by statute, regulation, or FEMA policy (primarily the Standards for Flood Risk Analysis and Mapping). This document provides guidance to support the requirements and recommends approaches for effective and efficient implementation. Alternate approaches that comply with all requirements are acceptable.

For more information, please visit the FEMA Guidelines and Standards for Flood Risk Analysis and Mapping webpage (https://www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping). Copies of the Standards for Flood Risk Analysis and Mapping policy, related guidance, technical references, and other information about the guidelines and standards development process are all available here. You can also search directly by document title at https://www.fema.gov/resource-document-library.

Table of Revisions

Affected Section or Subsection	Date	Description
Section 2.1	November 2024	Revised language regarding Operation and Maintenance plans and design life for certified coastal structures

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1. Topic Overview

This guidance document supports the standards related to approving coastal protection structures to be shown as providing protection on Flood Insurance Rate Maps (FIRMs) and outlines methods for analyzing the stability and effects of coastal structures during the 1-percent-annual-chance flood conditions.

Because coastal structures can significantly affect local topography and flood hazards, Mapping Partners must evaluate coastal structures as part of any flood hazard study. The evaluation should, where possible, determine whether a coastal structure will survive the 1-percent-annual-chance flood and what impacts it will have on upland flooding.

Criteria for evaluating the stability and performance of coastal armoring structures for Flood Risk Project purposes are well-developed and are discussed in detail. Criteria for evaluating beach stabilization structures have not been developed yet, and only basic guidance is provided. Criteria for evaluating miscellaneous structures are not standardized, and only basic guidance is provided. The Mapping Partner should coordinate with FEMA when only basic guidance is provided. Treatment of each structure must be clearly documented in the Technical Study Data Notebook (TSDN).

2. Evaluation Criteria

Mapping Partners are not required to perform detailed engineering evaluations of all coastal structures within the study area. During a flood risk study, engineering judgment is typically used in determining whether a structure should remain intact, failed, or removed from the analysis. A prudent analysis will analyze several scenarios and adopt the most conservative results. However, when such a detailed structure evaluation is performed, there are specific evaluation criteria that must be applied.

2.1. Detailed Engineering Evaluation of Coastal Armoring Structures

Where a Mapping Partner chooses to perform a detailed engineering evaluation of an existing coastal armoring structure during a Flood Risk Project, FEMA requires the evaluation to be based upon the criteria outlined below, and upon as-built documentation. When as-built documents are not available, the evaluation should be based upon best available data, standard design and engineering assumptions, and conservative estimates of material properties. The evaluation should be confirmed and documented by past performance during severe storm events. The underlying requirement is that the evaluation must yield an accurate assessment of coastal structure performance during the 1-percent-annual-chance flood, based upon available evidence.

It should be noted, however, that the art of coastal structure evaluation is constantly evolving. However, permission should be obtained from the FEMA Project Officer prior to utilizing alternative evaluation procedures and criteria.

General

For purposes of the National Flood Insurance Program (NFIP), FEMA will only recognize in its flood hazard and risk mapping effort those coastal flood protection structures that meet, and continue to meet, minimum design and maintenance standards that are consistent with the level of protection sought through the comprehensive floodplain management criteria cited in the Code of Federal Regulations (CFR) at Title 44, Chapter 1, Section 60.3 (44 CFR § 60.3).

Accordingly, the procedure describes the types of information FEMA needs to recognize, on NFIP maps, that a coastal flood protection structure will survive and impact upland flooding during the base flood. This information must be supplied to FEMA by the community or other party seeking recognition of such a coastal flood protection structure at the time a flood risk study or restudy is conducted, when a map revision under the provision of 44 CFR Part 65 is sought based on a coastal flood protection structure, and upon request by the FEMA Administrator during the review of previously recognized structures. The FEMA review will be for the sole purpose of establishing appropriate Special Flood Hazard Areas (SFHAs) for NFIP maps and shall not constitute a determination by FEMA as to how a structure will perform in a flood event.

Design Criteria

For coastal flood protection structures to be recognized by FEMA, sufficient evidence must be provided that adequate design, construction, and maintenance have been undertaken to provide reasonable assurance of durable protection from the base flood. The following requirements must be met:

1. Design Parameters. A coastal flood protection structure must be designed using physical parameters that fully represent the base flooding event, including the following:
    a. Design water levels evaluated should range from the mean low water at the site, to the 1-percent-annual-chance stillwater elevation (SWEL). The full range of elevations must be examined to determine the critical water level because the most severe conditions may not occur at either extreme.
    b. Wave heights and periods must be calculated for each water level analyzed. At a minimum, significant wave heights and periods should be used for “flexible” structures such as revetments, and larger wave heights, up to the 1-Percent-annual-chance wave height (1.67 times the significant wave height), used for more rigid structures such as seawalls and bulkheads. The U.S. Army Corps of Engineers (USACE) Coastal Engineering Manual, provides guidance and procedures for determining appropriate wave heights and periods.
    c. Breaking wave forces under structure-perpendicular loading must be considered in the design unless it can be demonstrated that the structure will not be subject to breaking waves. The very high, short duration “shock” pressures must be used for low mass structures such as bulkheads, while only the secondary “non-shock” pressures need to be used for massive structures such as gravity seawalls. Analyses

of the breaking wave forces using methods such as those identified in the USACE report "Criteria for Evaluating Coastal Flood Protection Structures," (WES TR CERC-89-15) must be submitted.

2. Minimum Freeboard. The minimum freeboard for coastal flood protection structures to be recognized on FEMA flood maps for protection against the storm surge component of the base flood shall be 2 feet above the 1-percent-annual-chance SWEL [and 1 foot above the height of the 1-percent-annual-chance wave or the maximum wave runup (whichever is greater)]. Maximum wave runup can be determined applying the appropriate conversion factor based on the resulting runup wave height:

    a. $R_{max} = R_{mean} * 2.87$

    b. $R_{max} = R_{2\%} * 2.87/2.23 = R_{2\%} * 1.29$

3. Toe Protection. The loss of material and profile lowering seaward of the structures must be included in the design either through the incorporation of adequate toe protection or an evaluation of structural stability with potential scour equal to the maximum wave height on the structure. Engineering analyses such as those recommended in the USACE's Geotechnical Engineering in the Coastal Zone (WES IR CERC-87-1) or Design of Coastal Revetments, Seawalls, and Bulkheads (COE EM 1110-2-1614) must be submitted for toe protection, or an analysis of scour potential such as found in Criteria for Evaluating Coastal Flood Protection Structures (WES TR CERC-89-15) must be submitted.

4. Backfill Protection. Engineering analyses of wave runup, overtopping, and transmission must be performed using methods provided in the USACE report "Criteria for Evaluating Coastal Flood Protection Structures," (WES TR CERC-89-15). Where the structure height is not sufficient to prevent overtopping and/or wave transmission, protection of the backfill must be included in the design. This should address prevention of loss of backfill by rundown over the structures, by drainage landward, under, and laterally around the ends of the structure as well as through joints, seams, or drainage openings in the structures.

5. Structural Stability, Minimum Water Level. Analyses of the ability of the structures to resist the maximum loads associated with the minimum seaward water level, no wave action, saturated soil conditions behind the structures, and maximum toe scour must be submitted. For coastal dikes and revetments, geotechnical analyses of potential failure in a landward direction by rotational gravity slip must be submitted.

    a. For coastal dikes and revetments, geotechnical analyses of potential failure in a landward direction by rotational gravity slip must be submitted.

    b. For gravity and pile-support seawalls, engineering analyses of seaward sliding, seaward overturning, and foundation adequacy using the maximum pressures developed in the sliding and overturning calculations must be submitted.

    c. For anchored bulkheads, engineering analyses of shear failure, moment failure, and the adequacy of the tiebacks and deadmen to resist the loadings must be submitted.

6. Structural Stability, Critical Water Level. Analyses of the ability of the structure to resist the maximum loads associated with the critical water level, which may be any water level from the mean low water level to the 1-percent-annual-chance SWEL, including hydrostatic and hydrodynamic (wave) loads, saturated soil conditions behind the structure, and maximum toe scour must be submitted.

    a. For coastal dikes and revetments, geotechnical analyses of potential failure in a seaward direction by rotational gravity slip and of foundation failure due to inadequate bearing strength must be submitted.

    b. For revetments, engineering analyses of the rock, riprap, or armor block stability under wave action; uplift forces on the rock, riprap, or armor blocks; toe stability; and adequacy of the graded rock and geotechnical filters must be submitted.

    c. For gravity and pile-supported seawalls, engineering analyses of landward sliding, landward overturning, and foundation adequacy using the maximum pressures developed in the sliding and overturning calculations must be submitted.

    d. For anchored bulkheads, engineering analyses of shear failure and moment failure using “shock” pressures must be submitted.

7. Material Adequacy. Documentation and/or analyses must be submitted that demonstrate that the materials used for the construction of the structure are adequate and suitable, including life expectancy considerations, for the conditions that exist at the site.

8. Ice and Impact Alignment. Where appropriate, analyses of ice and impact forces must be submitted.

9. Structure Plan Alignment. A shore protection project should present a continuous structure with redundant return walls at frequent intervals to isolate locations of failure. Isolated structures, or structures with a staggered alignment, must submit analyses of the additional forces from concentrated, diffracted, and/or reflected wave energy on the different sections and ends.

10. Other Design Criteria. FEMA will require that flood protection structures described above, regardless of type, be evaluated on the basis of how they may react structurally to applied forces. Therefore, analyses normally required of one structure type may also be required by another type that would react in a similar manner to applied forces. In unique situations, FEMA may require that other design criteria and analyses be submitted to show that the structure provides adequate protection. In such situations, sound engineering practice will be the standard on which FEMA will base its determinations. FEMA will provide the rationale for requiring any additional information.

Adverse Impact Evaluation

All requests for flood map revisions based upon new or enlarged coastal flood control structures shall include an analysis of potential adverse impacts of the structure on flooding and erosion within, and adjacent to, the protected area.

Community and/or State Review

For coastal flood protection structures to be recognized, evidence must be submitted to show that the design, maintenance, and impacts of the structures have been reviewed and approved by the affected communities and by any federal, state, tribe, territory or local agencies that have jurisdiction over flood control and coastal construction activities.

Operation and Maintenance Plans

For a coastal flood protection structure to be recognized, the structure must be maintained in accordance with an official adopted operations and maintenance plan. A copy of this plan must be provided to FEMA by the owner of the structure when recognition is being sought or when the plan for a previously recognized structure is revised in any manner. All operation and maintenance activities must be under the jurisdiction of a federal or state agency, an agency created by federal or state law, or any agency of a community participating in the NFIP that must assume ultimate responsibility for maintenance. This plan must document the formal procedure that ensures that the stability, height, and overall integrity of the structure and its associated structures and systems are maintained.

At a minimum, maintenance plans may specify the maintenance activities to be performed, the frequency of their performance, and the person by name or title responsible for their performance. All operation of closure devices mechanical systems must occur in accordance with the plan, regardless of whether the systems are manual or automatic. Following 44 CFR 65.6(a)(12), which describes maintenance activities required for a watercourse, 44 CFR 65.6(a)(13) documents for an exception as follows:

"Notwithstanding any other provisions of § 65.6, a community may submit, in lieu of the documentation specified in § 65.6(a)(12), certification by a registered professional engineer that the project has been designed to retain its flood carrying capacity without periodic maintenance."

Coastal floodplains do not qualify as a "watercourse" under regulations, and as such, certified coastal structures must meet a higher standard of certification beyond retaining flood carrying capacity as specified in the CFR, which includes submission of an operation and maintenance plan for the design life of the structure as outlined in this guidance document.

The Mapping Partner may ascertain (through discussions with the community and property owners) whether operation and maintenance plans exist for coastal structures that are expected to remain intact during 1-percent-annual-chance flood conditions. Mapping Partners may not have sufficient resources and time to conduct detailed evaluations of the operation and maintenance of each coastal structure within the study area. In such cases, the Mapping Partner may make an engineering judgment about the adequacy of structure operation and maintenance. The Mapping Partner must document data, materials, and assumptions associated with the flood hazard determinations related to structure operation and maintenance. Communities and property owners should be made aware that these evaluations are for mapping purposes only.

Certification Requirements

Data and analyses submitted to support that a given coastal flood protection structure complies with the structural design requirements set forth in paragraphs 1 through 10 above must be certified by a registered professional engineer. Also, certified as-built plans of the structure must be submitted. Certifications are subject to the definition given at 44 CFR § 65.2. In lieu of these certification requirements, a Federal agency with responsibility for design of coastal flood protection structures may certify that the structure has been adequately designed and constructed to provide base flood protection.

2.2. Coastal Armoring Structure Evaluation Based on Limited Data and Engineering Judgment

For the purposes of flood risk study, the Mapping Partner may not have sufficient resources and time to conduct a detailed evaluation of each coastal armoring structure within the study area. In such cases, the Mapping Partner can apply engineering judgment (albeit, guided by the guidance in Section 2.1 and USACE CERC Technical Report 89-15 Criteria for Evaluating Coastal Flood Protections Structures) to determine the likely stability of each structure during the 1-percent-annual-chance flood. These conclusions may be based largely on available archive information and local observations, including historic evidence of storm damage and maintenance. Note that any data and procedures used in the evaluations shall be documented, and communities and property owners shall be made aware that these evaluations are for mapping purposes only.

If the available information does not clearly point to survival or failure of a coastal structure, the Mapping Partner may either:

1. Conduct a detailed evaluation based on the FEMA criteria (see the previous subsection).
2. Perform the erosion and wave analyses for both the intact and failed structure cases and map the flood hazards associated with the more hazardous case.

If option 2 is selected, the Mapping Partner shall clearly document the results of all cases investigated and specify which case is used for mapping purposes. It should be noted that a failed coastal structure may or may not yield the greatest flood hazards. Therefore, coastal flood analyses for the intact and failed conditions should be performed, with the greatest resulting flood hazard being mapped. Maintaining results of all analyses may be useful in the event map revisions are requested by property owners based upon certified structures[1].

[1] Often, property owners request revisions to the FIRM based upon existing, new, or proposed coastal structures. Map revisions based upon coastal structures require a detailed evaluation and certification by a professional engineer registered in the subject State. FEMA has distributed the *Coastal Structure Form* (MT-2, Form 5, available at https://www.fema.gov/sites/default/files/documents/fema_form-5_coastal-structures-form_ff-206-fy-21-104.pdf) to evaluate coastal structures as the basis for map revisions.

2.3. Evaluation of Beach Stabilization Structures

Guidance on how to predict the survival or failure of groins, which usually fail by loss of profile (through settlement, displacement, or deterioration) and/or by becoming detached at their landward ends, is not readily available. Likewise, guidance on how to predict the failure of breakwaters, sills, and reefs (usually through loss of profile) is not readily available. Some information on failure modes may be available in technical or historical literature, and should be consulted by the Mapping Partner.

If a Mapping Partner chooses to evaluate beach stabilization structures during flood risk study, the proposed evaluation methods and procedures should be discussed with the FEMA Project Officer, in advance, and approval by FEMA must be obtained before the evaluations can be carried out.

3. Flood Risk Project Treatment of Coastal Structures

Technical Report 89-15 identifies four primary functional types of coastal flood protection structures: gravity seawalls, pile-supported seawalls, anchored bulkheads, and dikes or levees. A fifth type, revetment, is added here (see Figures 1 & 2).

Technical Report 89-15 recommends as a general policy that "FEMA not consider anchored bulkheads as providing flood protection during large storms." Thus, the default assessment for open coast anchored bulkheads should be that they are assumed to fail during the 1-percent-annual-chance flood. Mapping Partners may choose to treat some anchored bulkheads as surviving the flood and/or providing some degree of flood protection, but those instances should be limited (e.g., to sheltered waters, where the bulkhead may be stable during 1-percent-annual-chance flood conditions).

Many seawalls, revetments, and (some) bulkheads may be recognized on flood hazard maps if analysis based on the evaluation criteria in Section 2.1 shows they will remain intact during the 1annual-chance storm (in some cases, even if overtopped). These structures may provide total or limited protection against flooding, erosion, and waves, depending upon their location, strength, and dimensions.

3.1. Failure and Removal of Coastal Armoring Structures

In the event that a coastal structure is determined to fail, the Mapping Partner shall remove the structure entirely from the analysis transect or estimate the partial collapse of the structures where appropriate (see Subsection 3.2). In general, structures may be completely removed if they are small and/or localized features such as non-engineered revetments; however, structures that are not expected to be completely destroyed and removed during a 1-percent-annual-chance event, such as large-scale, engineered rick revetments, should not. If the failed structure is removed entirely, the remaining soil profile should be altered to achieve its likely slope immediately after structure failure. Information on slopes behind failed structures is limited. These slopes may vary from 1 on 100 (v:h)

for unconsolidated sands, to 1:1 or steeper for consolidated material landward of the failed structure.

For the purposes of a coastal Flood Risk Project, the post-failure slope for this analysis should be in the range of 1:1 to 1:1.5 (v:h). Note that the post-failure slope may not necessarily match the long-term stable slope, but will serve as the basis for subsequent site-specific, event-based erosion, wave height, wave runup, and wave overtopping analyses.

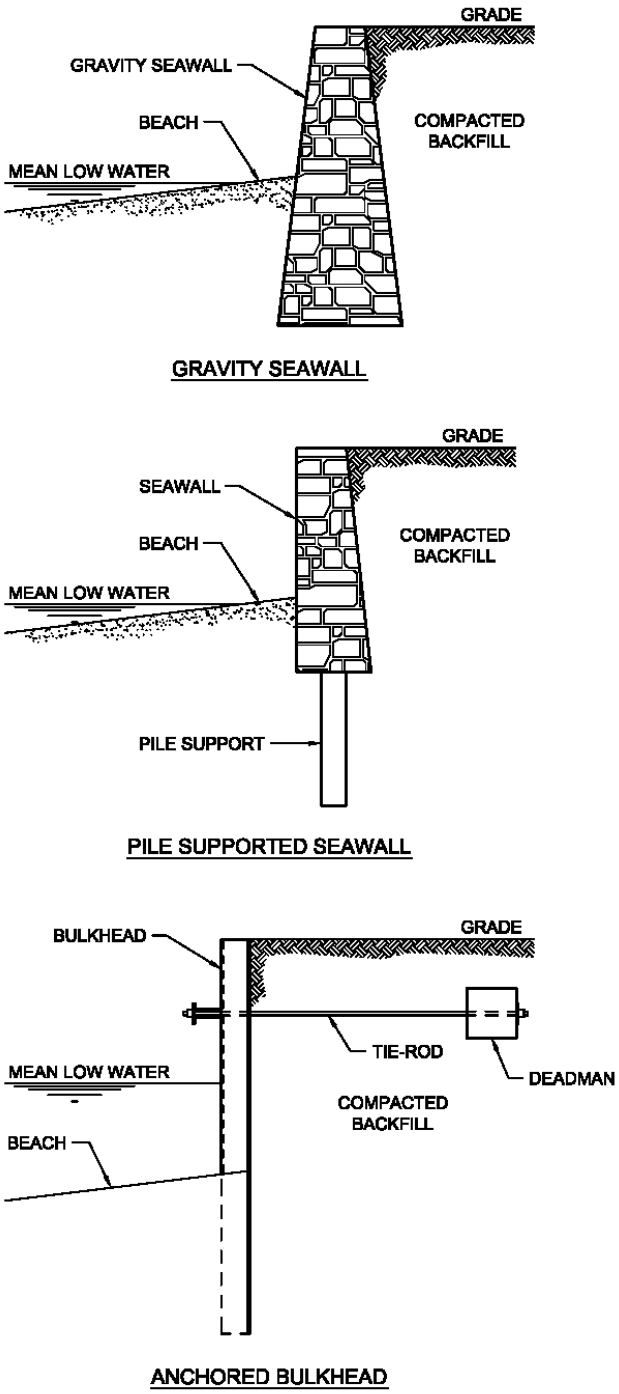


Figure 1: General Classification of Coastal Armoring Structures

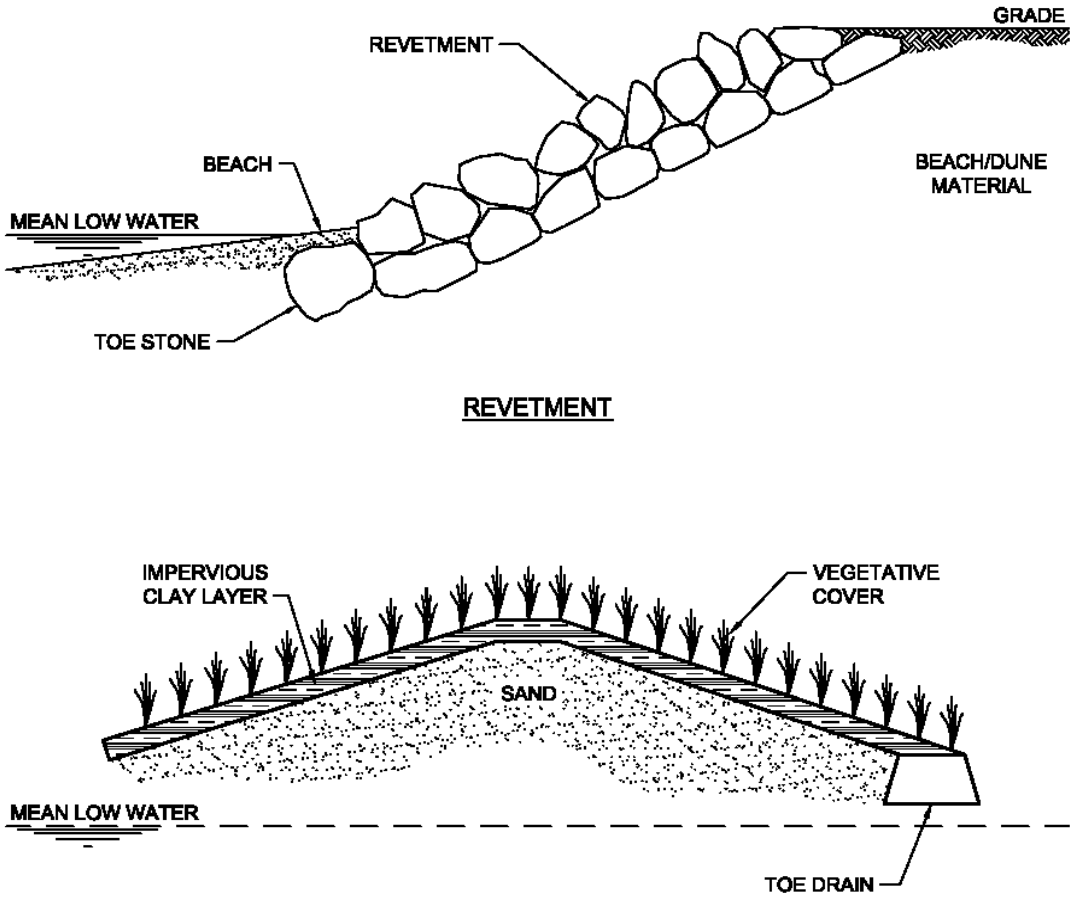


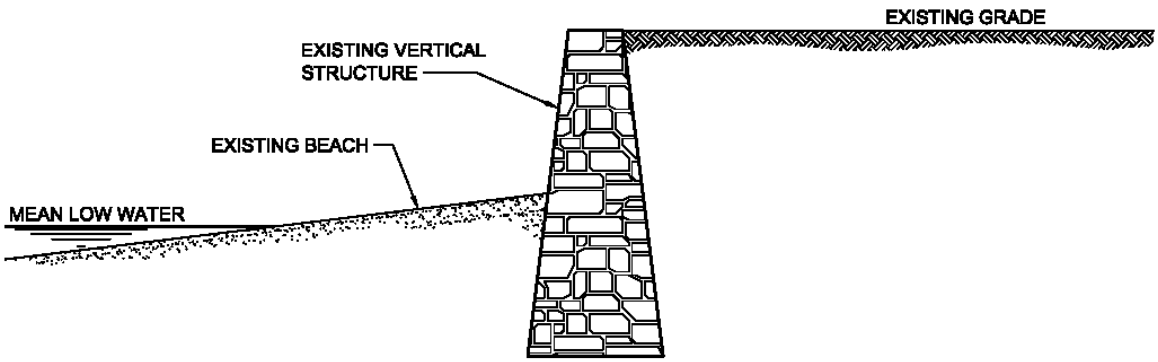
Figure 2: General Classification of Coastal Armoring Structures

3.2. Partial Failure of Coastal Armoring Structures

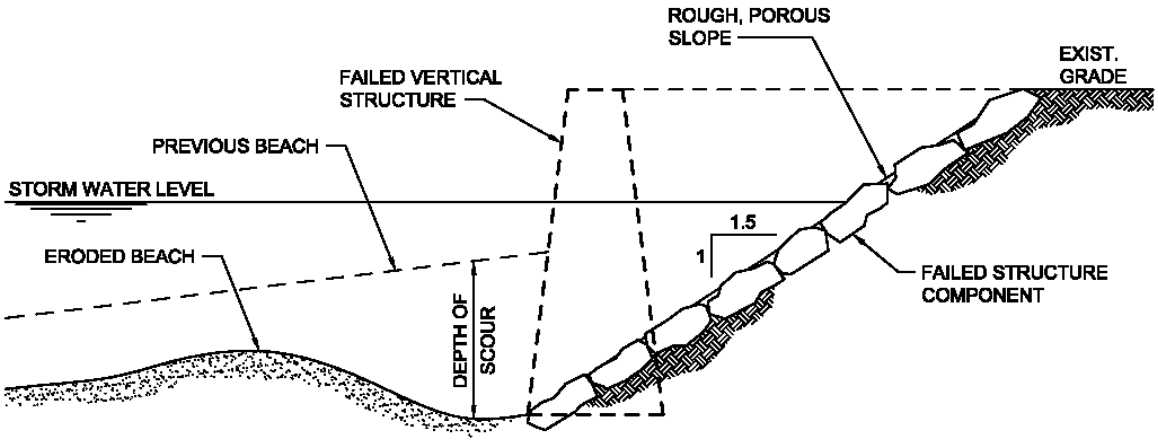
It may be appropriate to assume partial failure of such structures and to model accordingly. A recommended simple geometric approach for approximating partial failure of a vertical or near-vertical coastal armoring structure is as follows (see Figure 3):

1. Estimate toe scour at the subject structure based upon the methods described in the Coastal Engineering Manual (USACE, 2003) www.publications.usace.army.mil/usace-publications/engineer-manuals/?udt_43544_param_page=1.

2. Assume the structure fails and falls into a rough, porous slope at 1:1.5 (v:h).
3. Extend the 1:1.5 failure slope from the depth of scour at the structure toe landward to the point where it intersects the existing grade.



VERTICAL STRUCTURE GEOMETRY PRIOR TO FAILURE



VERTICAL STRUCTURE FAILURE GEOMETRY

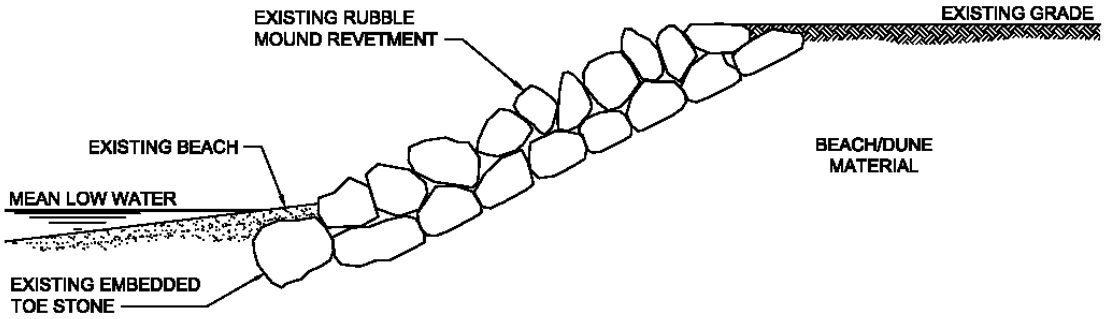
PARTIAL FAILURE OF VERTICAL COASTAL STRUCTURE

Figure 3: Partial Failure of Vertical Coastal Structure

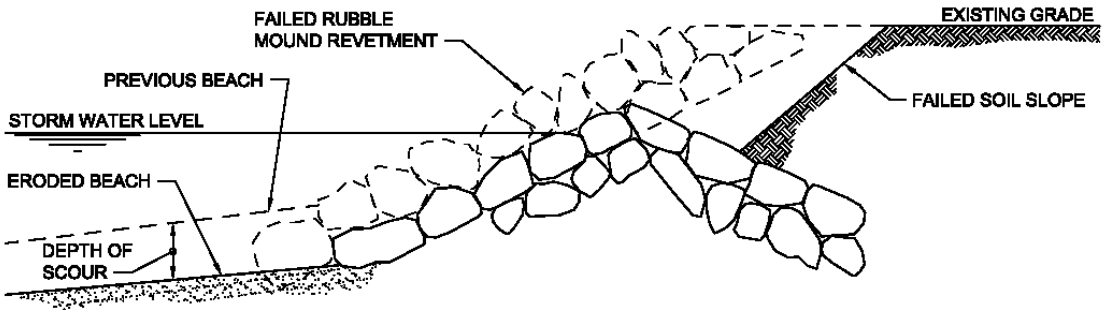
A recommended approach for approximating partial failure of a sloping revetment (due to undermining at the toe, or to collapse at the top due to erosion behind the structure) is as follows (see Figure 4):

1. Assume scour at the base of the structure is equal to the depth of the armor layer.
2. Assume the structure will collapse in place into a triangular section throughout the structure footprint, with side slopes equal to the original structure slope.
3. Assume the landward side of the failed configuration will be half exposed and half buried. Approximate the soil slope landward from the failed structure at a slope in the range of 1:1 to 1:1.5 (v:h).

After determining an appropriate failure configuration, the Mapping Partner shall conduct overland wave height propagation and wave runup analyses upon the failed structure. The Mapping Partner shall select an appropriate roughness factor when conducting runup and overtopping analyses on the failed structure.



REVETMENT GEOMETRY PRIOR TO FAILURE



REVETMENT FAILURE GEOMETRY

PARTIAL FAILURE OF A SLOPING REVETMENT

Figure 4: Partial Failure of a Sloping Revetment

3.3. Buried Coastal Structures

Some buried structures are of a size and construction to possibly affect coastal flood hazards, and should—like exposed structures—be considered during the Flood Risk Project.

Once the Mapping Partner has determined that a coastal structure is likely buried at a site, the next steps are to collect information about the structure and follow the study process outlined in Figure 5. The erosion analysis will result in one of the following two scenarios: 1) the buried structure will

remain buried during the 1-percent-annual-chance flood (see Figure 6), or 2) the buried structure will be exposed by the 1-percent-annual chance flood (see Figure 7).

Note that the buried structure study process need not be followed unless the presence of buried structures is known or is highly likely. Field investigations are not required to identify buried coastal structures. There may be some instances where limited field work (such as soil probes to locate the structure) might be useful, but this should be limited to cases where large buried structures are known to exist.

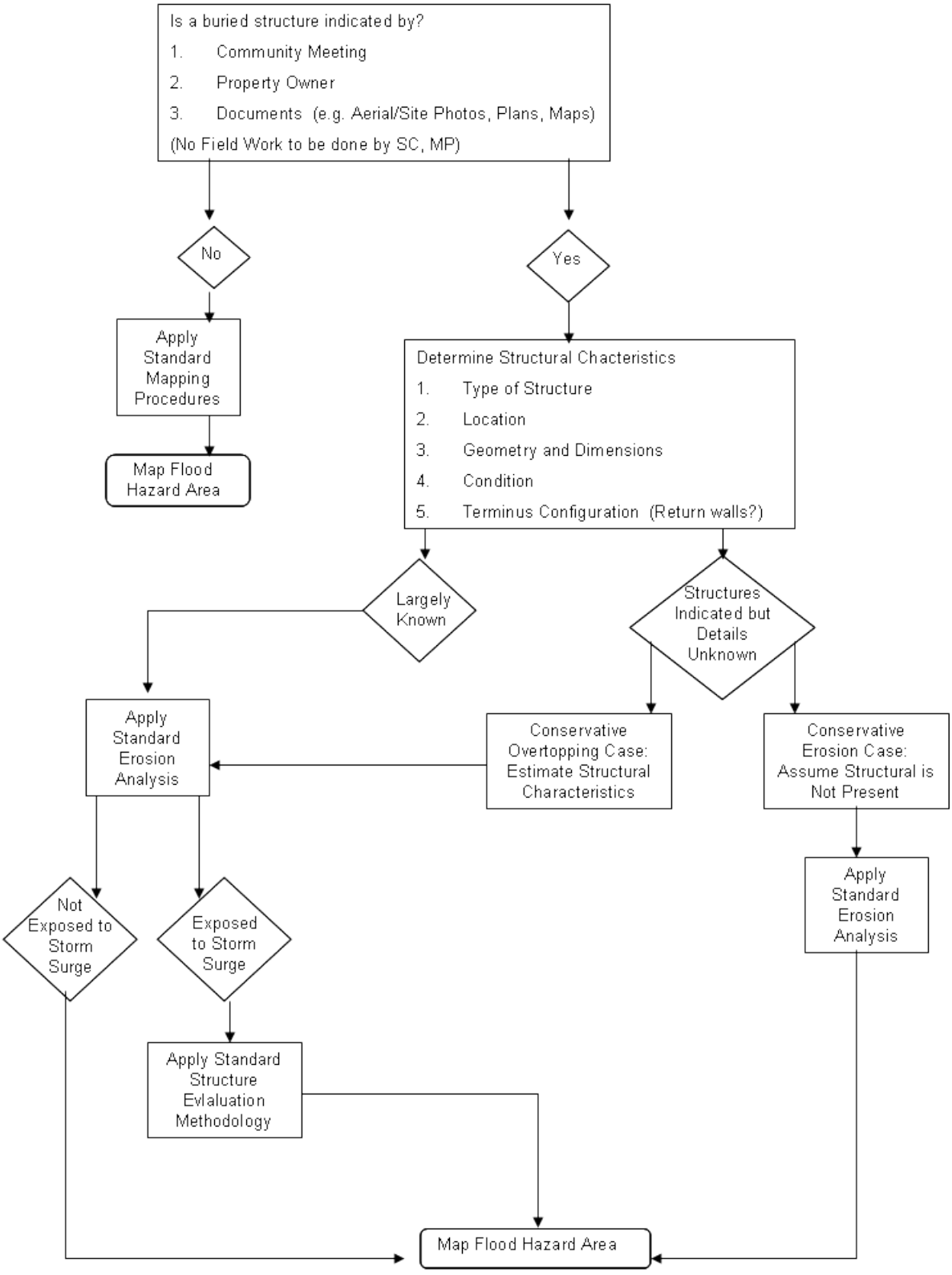


Figure 5: Methodology for Evaluating Buried Coastal Structures

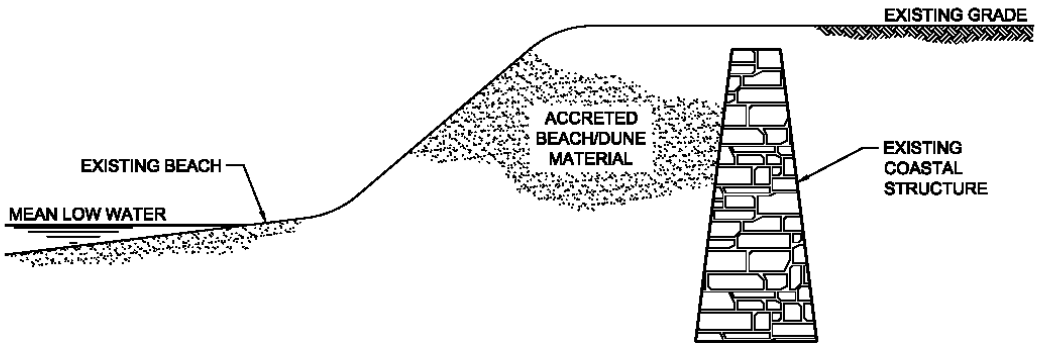


Figure 6: Buried Structure Remains Buried During 1-Percent-Annual-Chance Flood

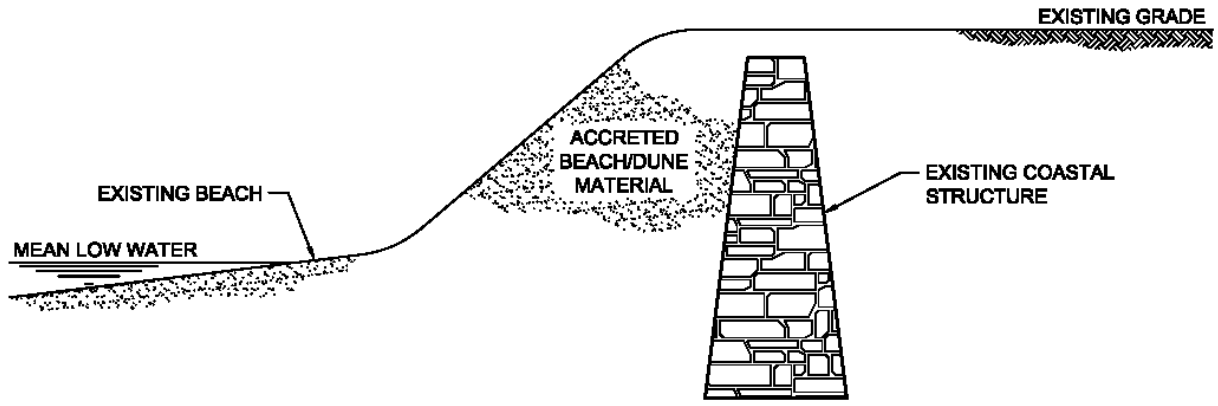


Figure 7: Buried Structure Exposed During 1-Percent-Annual-Chance Flood

3.4. Coastal Levees

All levees are subject to Levees Guidance. Levees Guidance is accessible through the FEMA Guidelines and Standards for Flood Risk Analysis and Mapping webpage.

4. Flood Risk Project Treatment of Coastal Structures in Sheltered Waters

In sheltered waters, the Mapping Partner should use the recommended guidance below:

- Coastal Armoring Structures, Navigation Structures, and Beach Stabilization Structures (e.g. revetments, seawalls, jetties, quay walls, groins, breakwaters): These structures should generally be left intact in the storm surge model setup, unless the Mapping Partner has reason to believe that the failure or removal of such structures will best represent hydromorphologic conditions during storms; in such cases, the Mapping Partner should consult with the FEMA Project Officer prior to making final decisions regarding failure or removal of these structures. These structures should be evaluated for stability per existing guidance (for coastal armoring structures, miscellaneous or beach stabilization structures), as appropriate, during the analysis of overland wave propagation, wave runup, wave overtopping, etc. In instances where Total Water Levels (TWLs) are to be computed for several storm simulations, an initial evaluation should be made to determine which structural configuration (intact or failed structure), on average, best represents the most hazardous condition; this configuration should be used in computing the TWLs.

- Causeways, Roads, and Railroads: These obstacles should not be evaluated according to FEMA guidance on levees or coastal armoring structures even though they may act as such in certain instances. During storm surge modeling and the analysis of wave-related effects, these obstacles should generally be left in place as captured in the topographic data and no additional effort should be made to either remove or represent these structures in the modeling setup. If the Mapping Partner has reason to believe that the removal or the explicit representation of such obstacles might best represent hydro-morphologic conditions during storms, the Mapping Partner should consult with the FEMA Project Officer regarding possible removal or representation of these structures.

- Industrial Facilities, Tank Farms, Containment Berms, Perimeter Roads, and Related Structures: These structures should remain in place if captured in the topographic data and no additional effort should be made to represent these structures in the modeling setup unless the Mapping Partner has reason to believe that their explicit representation will best reproduce the hydraulic conditions during storms. If these structures are captured in the topographic data, engineering judgment should be used to ascertain whether their presence unreasonably results in the under-estimation or over-estimation of flood effects, and if the Mapping Partner believes this to be the case, should consult with the FEMA Project Officer regarding possible failure or removal of these structures.

5. Flood Risk Project Treatment of Beach Stabilization Structures

If a Mapping Partner chooses to evaluate beach stabilization structures (e.g., groins, jetties, sills, or similar structures) during Flood Risk Project, the following approach is recommended:

1. Identify any beach stabilization structures during the Flood Risk Project reconnaissance phase.
2. Use historical evidence and engineering judgment to determine whether the structures (or similar structures nearby) have been damaged or detached (during prior storms or gradually over time).
3. Document prior damage to the stabilization structures and any resulting shoreline recession attributable to the structural damage.
4. Notify the FEMA Project Officer if the Mapping Partner intends to remove beach stabilization structures or reduce their effects during the Flood Risk Project analyses. Obtain FEMA concurrence before proceeding with the following steps.
5. Use historical evidence and engineering judgment to predict the likely shoreline configuration (in plain view and elevation) if the structures fail during 1-percent-annual-chance flood conditions.
6. Subject the modified shoreline and profile to typical Flood Risk Project analyses (e.g., event-based erosion analysis, wave runup and overtopping analysis, and wave height analysis).
7. Note that in the case of some stabilization structures, it is unlikely that their failure will require “removal” from analysis transects; the effects of the structure failure on the shoreline configuration, however, should be considered by the analyses.

6. Flood Risk Project Treatment of Miscellaneous Structures

Current FEMA guidance does not address the effects of miscellaneous structures (e.g., piers, port and navigation structures, bridges, culverts, tide gates, etc.) on coastal flood hazard analysis and mapping. This subsection provides general guidance for identifying and analyzing the effects of miscellaneous structures on flooding areas as follows:

- The Mapping Partner may identify structures – in addition to the coastal armoring and beach stabilization structures addressed above – that could exert a significant influence on nearshore waves and currents, coastal sediment transport, or ponding in backshore areas, during 1-percent-annual-chance flood conditions, particularly in sheltered waters. This should be done during the Flood Risk Project reconnaissance phase.
- Once identified, the Mapping Partner may use historical evidence, other readily available data, and engineering judgment to determine whether the miscellaneous structures are likely to

survive the 1-percent-annual-chance flood conditions. If the structures are likely to fail, then they (and their effects on the shoreline and flooding) may be removed from subsequent analyses.

- The Mapping Partner shall notify the FEMA Project Officer as to how he/she intends to address miscellaneous structures and their effects during the Flood Risk Project analyses, and obtain FEMA concurrence before proceeding.

6.1. Piers and Wharves

Piers and wharves are structures extending from the shoreline into the water used for commercial and industrial operations, residential developments, and recreational activities; for the purposes of this guidance document, a pier shall be defined as a structure extending perpendicular to or at an angle to the shoreline and a wharf shall be defined as a structure oriented approximately parallel to the shoreline. The Mapping Partner should review relevant information including navigation charts and aerial photographs to identify piers and wharves within the study area. The Mapping Partner should verify basic structure and facility information with local agencies and communities to determine location and characteristics including its type of support structure: open structures supported on pilings or closed structures supported on fill. Field surveys should be utilized to augment this information, as needed, to confirm collected data and assess the structure's current condition.

Evaluation of coastal hazards at open construction piers and wharves should follow guidance in Section 6.1.2. Closed construction piers and wharves should be captured in delineation of the transect baseline and evaluation of coastal hazards should follow guidance in Section 6.1.3.

6.1.1. STABILITY IN A 1-PERCENT-ANNUAL-CHANCE EVENT

A pier or wharf must be of suitable material and design to be considered in the analysis of coastal flood hazards. Similar to the analysis of coastal armoring structures, engineering judgement may be sufficient to determine 1-percent-annual-chance survivability. However, if a detailed analysis is warranted, structural design should consider the applicable criteria detailed in Section 2.1 to evaluate the stability of the pier's structural support components. In addition, forces acting on the deck should be evaluated, including:

- Hydrostatic load
- Vertical uplift forcing
- Wave slam

Structures identified as insufficient to withstand a 1-percent-annual-chance event should be removed from subsequent coastal analyses unless a suitable partial failure geometry can be established based on research of failed piers and wharves of similar design.

6.1.2. OPEN PIERS AND WHARVES

At open piers and wharves, the dissipative effect of the pilings, substructure, and deck may be accounted for using empirical analysis or a numerical wave model. An empirical analysis should consider wave transmission through the pile openings based on depth, dimension of structures and piles, and water depths. The analysis should be performed at a resolution sufficient to capture major changes in bathymetry and spatial configuration of piles. Numerical modeling approaches should represent the physics of the wave-structure interaction with sufficient resolution to represent the characteristics of the structure.

Special considerations are recommended based on the deck elevation relative to the elevation of the wave envelope.

- For open, pile supported structures where the lowest horizontal structural member is above the crest of the design wave event, dissipation of wave energy propagating beneath the deck may be evaluated for wave-pile interaction. The analysis should evaluate any runup hazards where the SWEL intersects the underlying topography or support structure.

- For open, pile supported structures where the lowest horizontal structural member and/or deck interacts with the wave envelope, wave energy dissipation from piles, deck, and buildings atop the deck may be evaluated as the wave propagates toward the shoreline. At the seaward end and along transverse edges of the structure, wave runup/splash and overtopping should be considered on the deck itself.

- For open, pile supported structures where the SWEL is higher than the deck elevation, wave propagation analysis over the deck should be performed. The analysis should include attenuation from any building atop the pier expected to survive a 1-percent-annual-chance event.

A single pier or wharf in a response-based study may need to consider several of the configurations described above and the associated analyses based on the water level and wave combinations evaluated. For the first two configurations listed above, fixed pier or wharf structures (open piles, substructure, and deck) may interact with shoreward propagating waves to influence wave conditions at the shoreline. The interactive effect of the structure may be accounted for in determination of overland hazard zones.

In the vicinity of a pier or wharf, the area landward of the shoreline should be evaluated for coastal flood hazards using the wave parameters (height and period) propagated under or across the pier or wharf and its support structure. In the event that surge is below the elevation of the top of the deck, the overland analysis should consider any obstruction to wave hazards imposed by the deck itself.

6.1.3. CLOSED CONSTRUCTION PIERS AND WHARVES

Piers or wharves which have a closed substructure should generally be treated as extensions of the shoreline and be included in the coastal analyses. This includes representation of piers and wharves in storm surge and offshore wave modeling, as allowed by model resolution. Determination of

coastal Base Flood Elevations (BFEs) should follow standard overland wave analysis methods for assessing structural stability, wave propagation, wave runup, and overtopping:

- For closed structures where the deck is above the SWEL, wave runup and overtopping should be evaluated.
- For closed structures where the deck is below the SWEL, overland wave propagation should be evaluated, accounting for any obstructions upon the deck expected to survive a 1-percent-annual-chance event.

The Mapping Partner should position transect(s) to best represent the most hazardous conditions across the pier or wharf. The effects of closed piers and wharves on coastal hazards at adjacent shorelines should also be reflected in the surrounding modeling and mapping.

6.1.4. MAPPING PIERS AND WHARVES

Open construction piers or wharves not evaluated for stability or determined to fail during a 1-percent-annual-chance event should be mapped according to the highest hazard determined along the edge of the pier or wharf. An open pier or wharf can alternately be mapped in Zone D if it is judged stable during a 1-percent-annual-chance event. This alternative should be discussed with the community, as Zone D represents an undetermined flood hazard where purchase of flood insurance is not required.

Closed piers and wharves should be treated as an extension of the shoreline and mapped in accordance with Coastal Floodplain Mapping Guidance, regarding mapping of overland wave hazards including wave propagation, runup, and overtopping. Coastal Floodplain Mapping Guidance is accessible through the FEMA Guidelines and Standards for Flood Risk Analysis and Mapping webpage.

7. Data Requirements

The Mapping Partner shall obtain documentation for each coastal structure that could provide protection during 1-percent-annual-chance flood conditions, or significantly affect flood hazards in the study area. The documentation shall provide all information necessary to evaluate the structure according to the criteria set forth in Section 2.1. Documentation should include, but is not limited to, the following:

- As-built design parameters: structure type, location, layout, dimensions, crest elevation of structure, etc.
- Dominant site particulars (e.g., local water depth, tide, surge and wave conditions, erosion rate, sediment characteristics and geotechnical conditions, debris hazards, and ice climate)
- Construction materials and present integrity

- Historical record for structure including: construction date, plans, and specifications; recent inspection reports and photographs; maintenance plan and responsible party; and dates and descriptions of damage, repairs, and modifications

- Clear indications of effectiveness or ineffectiveness

The Mapping Partner may develop much of this information through office activity, including a careful review of aerial and site photographs, reports and information provided by the community and property owners, and other readily available information. In the case of some major coastal structures, site inspection would be advisable to confirm preliminary judgments.

Note that the level and detail of the structure and site data collected should be consistent with the level of analysis undertaken by the Mapping Partner. An analysis based on engineering judgment, or multiple analyses assuming different structure responses during 1-percent-annual-chance flood conditions (e.g., structure survives intact, partial failure, complete failure) will require less detailed and precise information than a structural engineering and geotechnical evaluation of a coastal structure.

8. Study Documentation

If coastal structures are present in the study area, the Mapping Partner shall document the data, methods, and procedures used to evaluate the likelihood that the structures will survive 1-percent-annual-chance flood conditions. This documentation shall include any assumptions or approximations used in the analyses. The same documentation shall be required in the event that coastal structures are indicated by information collected during the Flood Risk Project, but are apparently buried and not visible during the study.

The Mapping Partner shall document the results of all analyses of coastal structures conducted for the Flood Risk Project. In cases where the Mapping Partner cannot determine whether a given structure would survive the 1-percent-annual-chance flood intact, and where multiple analyses were conducted for the structure (i.e., intact condition, failed condition, and removed from the analysis transect), the Mapping Partner shall document each analysis and record the structure condition that was used to map SFHAs and BFEs.



Guidance for Flood Risk Analysis and Mapping

MT-2 Requests

November 2023

FEMA

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Requirements for the FEMA Risk Mapping, Assessment, and Planning (Risk MAP) Program are specified separately by statute, regulation, or FEMA policy (primarily the Standards for Flood Risk Analysis and Mapping). This document provides guidance to support the requirements and recommends approaches for effective and efficient implementation. Alternate approaches that comply with all requirements are acceptable.

For more information, please visit the FEMA Guidelines and Standards for Flood Risk Analysis and Mapping webpage (www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping). Copies of the Standards for Flood Risk Analysis and Mapping policy, related guidance, technical references, and other information about the guidelines and standards development process are all available here. You can also search directly by document title at https://www.fema.gov/library.

Table of Revisions

The following summary of changes details revisions to this document subsequent to its most recent version in November 2022.

Affected Section or Subsection	Date	Description
Sections 2.12 and 2.13	Nov. 2023	Minor text updates to align with levee guidance
Section 2.13.1	Nov. 2023	Added new section added titled “National Levee Database”
Section 2.13.2	Nov. 2023	Minor text updates to reference updated modeling along an accredited levee and submittals from other federal agencies
Section 2.13.3	Nov. 2023	Updated Figure 5 – Levee Analysis and Mapping Procedures Workflow

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1. Introduction

The purpose of this document is to explain how the Department of Homeland Security, Federal Emergency Management Agency (FEMA) implements the review and processing of requests to revise Flood Insurance Rate Maps (FIRMs) and Flood Insurance Study (FIS) reports (collectively referred to as MT-2 requests). The regulations related to these requests are in Title 44, Chapter 1 of the Code of Federal Regulations (CFR), Parts 60, 65 and 72, available online at www.ecfr.gov/cgi-bin/text-idx?SID=3f8e734915da4dcb349e90ecd70e5931&mc=true&tpl=/ecfrbrowse/Title44/44CIsubchapB.tpl.

This guidance document is intended to supplement the information presented in the MT-2 Instructions which accompany the MT-2 Application Forms. These instructions are referenced at various locations within this document and can be accessed via https://www.fema.gov/flood-maps/change-your-flood-zone/paper-application-forms/mt-2.

1.1. Letter of Map Change Products

This section contains a brief description of FEMA's Letter of Map Change (LOMC) products. The National Flood Insurance Program (NFIP) adopted a baseline probability flood, the base flood, as a standard for floodplain management regulations. The base flood is the flood that has a 1% probability of being equaled or exceeded in any given year (also referred to as the 100-year flood or the 1% annual-chance flood). The Base Flood Elevation (BFE) refers to the height of the base flood, usually in feet in relation to the datum used, or the depth of the base flood, usually in feet above the ground surface. An area subject to inundation by the base flood is identified as a Special Flood Hazard Area (SFHA) on FIRMs.

The BFEs and boundaries of the SFHAs on the FIRMs are determined using the best topographic data available, in combination with hydrologic and hydraulic analyses. Because of limitations of scale or the topographic definition of the source maps used to prepare a community's FIRM, a property may be shown within the SFHA, but be on ground that is above the BFE at the site. In addition, development within a community often occurs that may affect the flood hazard information shown on the FIRM.

The LOMC process was developed to amend or revise the published flood hazard information by letter. The process can be used as frequently as needed to keep the FIRMs up-to-date. FEMA has several types of LOMCs:

- MT-1 (Amendments): Letter of Map Amendment (LOMA), Letter of Map Revision based on Fill (LOMR-F), and Conditional LOMA/LOMR-F.
- MT-2 (Revisions): Letter of Map Revision (LOMR), Conditional LOMR (CLOMR), and Physical Map Revision (PMR).

This guidance document applies specifically to MT-2 requests and the required data necessary for processing them. For information on MT-1 requests, refer to FEMA Guidance Document 65, MT-1 Technical Guidance.

MT-2 revision types are generally described as:

- CLOMR: A letter from FEMA commenting on whether a proposed project, if built as proposed, would meet the minimum NFIP requirements (see 44 CFR Parts 60, 65 and 72). Additionally, a CLOMR may be issued for proposed hydrology-only changes compared to the effective hydrology.
- LOMR: A letter from FEMA officially revising a portion of the effective FIRM to show changes to floodplains, regulatory floodways and/or flood elevations (see 44 CFR Parts 60, 65 and 72). A FIRM is not republished.
- PMR: A republished FIRM panel, with updated FIRM Panel No. and FIRM effective date, incorporating changes to floodplains, regulatory floodways, and/or flood elevations. Because of the increased time and cost involved to change, reprint, and redistribute an NFIP map, compared to a LOMR, a PMR is usually processed when a revision reflects large-scope changes. The republished FIRM will also reflect any effective LOMRs issued within the footprint of the PMR since the FIRM was last published.

1.2. Regulations Applicable to LOMC Processing

The NFIP requires participating communities to adopt floodplain management ordinances containing certain minimum requirements intended to reduce future flood losses. This is a condition of the agreement for making flood insurance available in a community. The NFIP regulations for floodplain management are the minimum criteria a community must adopt for participation in the NFIP. This section describes the portions of Title 44 of the CFR – Emergency Management and Assistance – which are applicable to the LOMC process.

Part 60 of the NFIP regulations provides the floodplain management criteria for floodprone areas. It lays out specific requirements for floodplain management regulations, which are legally enforceable and applied uniformly across the community. These regulations take precedence over any less restrictive conflicting local laws, ordinances or codes. Section 60.3 applies specifically to a community's level of ordinances for floodprone areas. Some states and communities have more restrictive regulations that take precedence over the minimum NFIP requirements of 44 CFR 60.3. These are referred to as higher standards.

Part 65 of the NFIP regulations relates directly to identifying and mapping SFHAs. It outlines the steps a community needs to take to assist in FEMA's effort to identify and publish up-to-date SFHAs. More specifically, 44 CFR 65 provides the procedures and engineering data requirements for identifying and revising flood hazard mapping information. In general, two types of approaches (detailed and approximate) have been used to prepare the FIRM. Approximate methods are typically used to delineate a community's Zone A boundaries (where no BFEs are shown) for participation in

the NFIP. FISs are subsequently prepared for most communities that participate in the regular phase of the NFIP. FISs are based on detailed hydrologic and hydraulic analyses to develop BFEs, flood hazard areas, and floodways for developed communities.

At any time, communities and property owners have the right to request revisions to the flood hazard areas and other flood information shown on a FIRM and in an FIS report. The data requirements and procedures for revising effective FIRMs and flood hazard information vary according to the community's level of ordinance and the type of effective study performed for the affected flooding source. For example, the requirements to revise the FIRM for a community with the ordinance level described in 44 CFR 60.3(d) are more complex than those for a community with the ordinance level described in 44 CFR 60.3(b). The requirements for revising effective FIRMs and flood hazard information are discussed in 44 CFR 65. Application of relevant regulations are described in detail in Chapter 3 of this document.

Procedures for hearings and appeals to protest BFEs are described in 44 CFR 67 and 68. To offset the cost of revising FIRMs and reviewing proposed projects, FEMA established a standard review and processing fee schedule. The specific requirements related to fees are described in detail in 44 CFR 72, and a summary can be found in Chapter 4 of this document.

1.3. MT-2 Requests Based on Scientific and Technical Data

As part of the agreement for making flood insurance available in a community, the NFIP requires the participating community to adopt floodplain management ordinances containing certain requirements intended to reduce future flood losses. These are the minimum criteria a community must adopt for participation in the NFIP. A community is responsible for approving all proposed floodplain development and for ensuring any permits required by federal or state law have been received. State and community officials, based on their knowledge of local conditions and in the interest of public safety, may set higher standards for construction or may limit development in floodplain areas. If the state or community has adopted more restrictive or comprehensive floodplain management criteria, those criteria take precedence over the minimum NFIP requirements.

The community is responsible for ensuring updated flood hazard information is submitted, so FEMA can revise the FIRM as appropriate. This will allow floodplain management requirements to be based on current flood hazard information. Some communities use the floodplain permitting process to determine if a CLOMR and/or LOMR is required for a project.

1.3.1. REQUIREMENTS TO SUBMIT TECHNICAL OR SCIENTIFIC DATA (44 CFR 65.3)

The requirement to submit new technical data to FEMA is specified in 44 CFR 65.3:

> A community's base flood elevations may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, a community shall notify the Administrator of the changes by submitting technical or scientific data in accordance with this part. Such a submission is necessary so that upon confirmation of those physical changes affecting flooding conditions, risk premium rates and flood plain management requirements will be based upon current data.

This regulation requires communities to submit data to FEMA within six months of completing a project that affects the BFEs, but it does not require a community request a LOMR. FEMA can use this data to either physically update the FIRM or issue a LOMR. Communities must submit this data in accordance with their adopted floodplain management ordinances. FEMA will review the data and will either initiate a revision or save the data for a future FIRM update. To help ensure local floodplain management ordinances are based on existing conditions, FEMA recommends communities submit LOMR requests for all projects within the SFHA that affect the effective BFEs, SFHA and/or floodways. Because BFEs may be published to the tenth of a foot, LOMR requests are recommended for projects resulting in a BFE increase or decrease of 0.1 foot or greater. Generally, for multi-phased projects, FEMA recommends a community require a LOMR request for any phase completed more than six months before the next phase begins. If a CLOMR was issued for an entire project (all phases), LOMRs for each phase should not show an increase in BFE greater than what was previously proposed in the issued CLOMR.

Projects crossing or within the channel of a watercourse are assumed to cause an increase or decrease in BFE unless a hydraulic analysis is performed to demonstrate the project does not result in a change to the BFE. These types of projects include, but are not limited to, bridges, culverts, dams, weirs and channel modifications. LOMR requests should be submitted when these types of projects are within an effective SFHA. This includes when they are along tributaries that may not have an effective hydraulic model but are within the floodplain/backwater of a stream with a detailed study. Because they are based on the effective FIRM, MT-1 (LOMA/CLOMA/LOMR-F/CLOMR-F) requests may not be processed if such projects have occurred, because a LOMR has not revised the effective flood hazard information to reflect existing conditions.

While floodplain encroachment within an SFHA overbank area may not significantly increase the BFE, an effective regulatory floodway encroachment should be submitted as a LOMR request, so BFE impacts can be evaluated through hydrologic and hydraulic analyses. The requirement for hydrologic and hydraulic analyses of any encroachment within the regulatory floodway is described in 44 CFR 60.3(d)(3):

> When the Federal Insurance Administrator has provided a notice of final base flood elevations within Zones A1-30 and/or AE on the community's FIRM and, if appropriate, has designated AO zones, AH zones, A99 zones, and A zones on the community's FIRM, and has provided data from which the community shall designate its regulatory floodway, the community shall… Prohibit encroachments, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.

Per 44 CFR 65.6(a)(3), revisions cannot be based on the effects of proposed projects or future conditions. LOMRs must be based on existing conditions. FEMA reviews proposed projects through the CLOMR process.

1.3.2. REQUIREMENTS TO SUBMIT A CLOMR (44CFR 65.12)

The NFIP requirement to submit a CLOMR request to FEMA for a proposed project is 44 CFR 65.12(a):

> When a community proposes to permit encroachments upon the flood plain when a regulatory floodway has not been adopted or to permit encroachments upon an adopted regulatory floodway which will cause base flood elevation increases in excess of those permitted under paragraphs (c)(10) or (d)(3) of §60.3 of this subchapter, the community shall apply to the Federal Insurance Administrator for conditional approval of such action prior to permitting the encroachments to occur…

Therefore, unless a community has higher standards than the minimum required under 44 CFR 60.3, a CLOMR is required before a community issues a permit for a project if it meets one of the two criteria listed below.

- A project within a Zone AE floodplain without an effective floodway, which would result in a BFE increase of greater than 1.00 foot, compared to the existing (pre-project) conditions, when considering the cumulative impacts of all other existing and proposed encroachments.
- A project within an effective regulatory floodway that would result in any (0.00 foot) BFE increase.

An issued CLOMR by FEMA does not replace a floodplain development permit. A community is not obligated to approve a floodplain development permit because FEMA has issued a CLOMR. A CLOMR is a letter from FEMA commenting on whether a proposed project, if built as proposed, would meet minimum NFIP standards. The community has a choice to approve or disapprove a project's floodplain permit after receiving an issued CLOMR. A CLOMR request must have all the applicable permits, as required for a LOMR request, verified by the participating NFIP community.

1.3.3. HIGHER STANDARDS

Many communities have higher standards of floodplain management ordinances, which exceed the minimum NFIP requirements of 44 CFR 60.3. Therefore, some communities may require LOMRs or CLOMRs for projects that do not trigger the requirement per the criteria described above. Before a revision is submitted to FEMA for review, all other federal, state and local permits must be obtained. FEMA's review would also default to a state's or a community's minimum standards, and FEMA would use that same criteria in CLOMR/LOMR processing.

1.4. Right to Submit an MT-2 Request

1.4.1. RIGHT TO SUBMIT A LOMR (44 CFR 65.4(A))

Per 44 CFR 65.4(a). the community has the right to submit new non-regulatory technical data:

> A community has a right to request changes to any of the information shown on an effective map that does not impact flood plain or floodway delineations or base flood elevations, such as community boundary changes, labeling, or planimetric details. Such a submission shall include appropriate supporting documentation in accordance with this part and may be submitted at any time.

FEMA accepts community-submitted data related to changes in non-regulatory information (information other than floodplain/floodway delineations or BFEs) such as annexations, de-annexations, or incorporation of new communities. FEMA will typically keep these data on file for incorporation into the next map update for the community, but it occasionally may process a LOMR to incorporate the new data. Also, LOMR requests may include a submittal of non-regulatory data, along with changes to regulatory flood hazard information. In these cases, the non-regulatory data may be incorporated into the revised FIRM panels and FIS attachments.

The community's right to submit new technical data is described in 44 CFR 65.4(b):

> All requests for changes to effective maps, other than those initiated by FEMA, must be made in writing by the Chief Executive Officer of the community (CEO) or an official designated by the CEO. Should the CEO refuse to submit such a request on behalf of another party, FEMA will agree to review it only if written evidence is provided indicating the CEO or designee has been requested to do so.

This requirement is typically fulfilled by submitting MT-2 Form 1, signed by an appropriate official from the community (e.g., floodplain administrator) where the changes are occurring. If the revision affects the regulatory flood hazard information for multiple communities, concurrence is required from each community. Affected communities are determined based on the corporate limits shown on the effective FIRM, unless official documentation from the community is provided to demonstrate that the corporate limits on the FIRM are not accurate. Such documentation should include annexation agreements and/or updated corporate limits maps.

If a community chooses not to concur on an MT-2 request, the requester must provide documentation to FEMA to show the request was submitted to the community for review and approval. A written response from the community should be obtained to explain why they do not concur with the MT-2 request. FEMA will consider the response from the community when processing the MT-2 request.

1.4.2. RIGHT TO SUBMIT A CLOMR (44 CFR 65.8)

The right to request FEMA's review of a proposed project is specified under 44 CFR 65.8:

> A community, or an individual through the community, may request FEMA's comments on whether a proposed project, if built as proposed, would justify a map revision. FEMA's comments will be issued in the form of a letter, termed a Conditional Letter of Map Revision, in accordance with 44 CFR part 72. The data required to support such requests are the same as those required for final revisions under §§65.5, 65.6, and 65.7, except as-built certification is not required. All such requests shall be submitted to the FEMA Headquarters Office in Washington, DC, and shall be accompanied by the appropriate payment, in accordance with 44 CFR part 72.

CLOMR requests may also be submitted to obtain FEMA's comment on proposed new hydrology. This allows communities conducting floodplain studies to receive FEMA's comments on the hydrology before proceeding with the hydraulic analysis phase of the study.

1.5. How to Apply

There are two options for submitting an MT-2 request to FEMA.

1. Submit a request online via the Online LOMC Tool at https://hazards.fema.gov/femaportal/onlinelomc/signin. An actual MT-2 Form 1 is not required when applying online, but all other required forms must be submitted. In addition, the signature page for community concurrence and Professional Engineer certification must be printed, signed and submitted with the application. A signature page must be included for each community impacted by the revision request.
2. Submit a request to the LOMC Clearinghouse or any of the applicable addresses listed on the MT-2 Instructions.

1.6. Review and Processing Fee

Some MT-2 requests meant to improve the flood hazard information shown on the effective FIRM and in the FIS report may be exempt from the review and processing fee, per 44 CFR 72.5, which states the following:

Requesters are exempt from submitting review and processing fees for:

a. Requests for map changes based on mapping or study analysis errors;

b. Requests for map changes based on the effects of natural changes within SFHAs;

c. Requests for a Letter of Map Amendment (LOMA);

d. Requests for map changes based on federally sponsored flood-control projects where 50 percent or more of the project's costs are federally funded;

e. Requests for map changes based on detailed hydrologic and hydraulic studies conducted by Federal, State, or local agencies to replace approximate studies conducted by FEMA and shown on the effective FIRM; and

f. Requests for map changes based on flood hazard information meant to improve upon that shown on the flood map or within the flood study will be exempt from review and processing fees. Improvements to flood maps or studies that partially or wholly incorporate man-made modifications within the special flood hazard area will not be exempt from review and processing fees.

Per these regulations, requests meant to improve the flood hazard information shown on the effective FIRM and FIS report are fee exempt. This includes correcting errors, reflecting natural changes, and incorporating more detailed data (i.e., updated topography) and/or better modeling/analysis methods. However, improvements that partially or wholly incorporate manmade modifications within the SFHA will not be exempt from review and processing fees, unless they fall into one of the two categories below.

1. Per 44 CFR 72.5(d), there is a fee exemption for manmade modifications that are federally sponsored flood-control projects where 50% or more of the project's costs are federally funded. To be eligible for this fee exemption, projects must meet the flood protection system definition per 44 CFR 59.1, which is shown below.

    a. Flood protection system means those physical structural works for which funds have been authorized, appropriated and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the area within a community subject to a "special flood hazard" and the extent of the depths of associated flooding. Such a system typically includes hurricane tidal barriers, dams, reservoirs, levees or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

2. In accordance with the Homeowner Flood Insurance Affordability Act of 2014 (Public Law 113-89, section 22), a requester is exempt from submitting a review or processing fee for a request for a FIRM change based on a project where: (1) the primary purpose is habitat restoration; and (2) the project is funded in whole or in part with federal or state funds. This exemption includes projects to remove a dam, redesign or install a culvert, or install fish passage. For the purposes of this exemption, the meaning of "habitat restoration" is the same as defined in the Partners for Fish and Wildlife Act, 16 USC § 3772 (5):

> The term "habitat restoration" includes:
>
> (2) an activity conducted to return a project site, to the maximum extent practicable, to the ecological condition that existed prior to the loss or degradation, including—
>
> a. removing tile drains or plugging drainage ditches in former or degraded wetland;
>
> b. returning meanders and sustainable profiles to straightened streams;
>
> c. burning grass communities heavily invaded by exotic species to reestablish native grass and plant communities; and
>
> d. planting plant communities that are native to the project site;
>
> (3) if restoration of a project site to its original ecological condition is not practicable, an activity that repairs 1 or more of the original habitat functions and that involves the use of native vegetation, including—
>
> a. the installation of a water control structure in a swale on land isolated from overbank flooding by a major levee to simulate natural hydrological processes; and
>
> b. the placement of streambank or instream habitat diversity structures in streams that cannot be restored to original conditions or profile; and
>
> c. removal of a disturbing or degrading element to enable the native habitat to reestablish or become fully functional.

Requests that incorporate manmade modifications and are not eligible for either of these two fee exemptions shall require the review and processing fee, regardless of project ownership or completion date.

If requesters believe their online case submittals are fee exempt and the system will not set up cases without fees, the requester may choose any fee exemption type and it may be corrected later. However, any required fees not submitted with the initial application must be submitted through the LOMC Clearinghouse and cannot be paid online.

2. MT-2 Supporting Data Requirements

The MT-2 instructions offer a MT-2 Revision Request Submittal Checklist, which is an overview of the required items. Requesters can use that checklist as a reference, but this section provides additional details on the requirements for these items. Generally, MT-2 submittals must be based on the best available data, such as the latest topography and land use information, so the revised flood hazard information reflects existing conditions.

2.1. Narrative

A written description should be submitted describing the request (i.e., the basis of the map change), the scope of the proposed/as-built project, and the method used to analyze the project's effects, as

required per 44 CFR 65.6. A narrative is helpful to give FEMA an overall understanding of the submittal and is encouraged in the MT-2 Instructions.

2.2. MT-2 Application Forms

All forms applicable to the request must be completed and submitted with the application package. This package, which covers various types of revisions, includes six forms, a payment form, plus information about Endangered Species Act of 1973 (ESA) compliance documentation. Only the forms applicable to the request need to be submitted. To access the forms and detailed instructions on selecting and completing the appropriate forms, please refer to https://www.fema.gov/flood-maps/change-your-flood-zone/lomr-clomr?web=1&wdLOR=c4A5173B9-A6F9-4885-8A38-168CC3DFBCFE:

- Form 1, entitled "Overview & Concurrence Form:" Ensure this form is signed by the requester, the certifying engineer, and each community affected by the revision. For online applications, the signature page for community concurrence may be submitted in place of Form 1 (see 1.5.1)

  Community Concurrence:

  - It is common for MT-2 requests to affect multiple communities. Any community that would receive changes to the delineations of the effective floodway or floodplain, or changes to the effective BFEs as a result of the revision, is considered an affected community.

  - Affected communities are identified based on the corporate limits shown on the effective FIRM panel(s), unless the requester demonstrates that these are not accurate. This can be demonstrated by submitting an official corporate limits map from the community.

  - MT-2 applicants must provide all impacted communities with a copy of the MT-2 application package for their review and signature of concurrence. Ideally, this should be done before submitting the request to FEMA. Per 44 CFR 65.4(b), if a community refuses to provide concurrence by signing the MT-2 form, FEMA will still review the request if written evidence indicates that the community's Chief Executive Official (CEO) or designee was asked to do so. The community should provide a written explanation for why they chose not to sign the form. If, in this explanation, a community expresses that they have no objection to the CLOMR or LOMR, this will suffice for community concurrence. If a community voices concerns with the CLOMR or LOMR, FEMA will consider those comments during processing.

  - Flood hazard information for communities not participating in the NFIP may be revised by a LOMR. However, non-participating communities are not required to provide concurrence. LOMRs impacting non-participating communities will become effective 6 months after issuance, to give the non-participating community time to join the NFIP and adopt the new FIRMs.

- Form 2, entitled "Riverine Hydrology and Hydraulics Form"

- Form 3, entitled “Riverine Structures Form”
- Form 4, entitled “Coastal Analysis Form”
- Form 5, entitled “Coastal Structures Form”
- Form 6, entitled “Alluvial Fan Flooding Form”

2.3. State Approval

Some states must approve an MT-2 request before FEMA issues a determination. If an MT-2 request is received without state approval in a state that requires it, FEMA will request the state approval along with any other necessary data/documentation needed for MT-2 processing. At this time, approval is required for MT-2 processing from the following states:

- Illinois – Approval is required for a LOMR that will add a floodway, with no previously issued CLOMR. Approval is required for a CLOMR in which a floodway is added. Notification is required for a LOMR involving only Zone A or a CLOMR without an effective floodway. Refer to Figure 1 for additional information on approvals in Illinois.

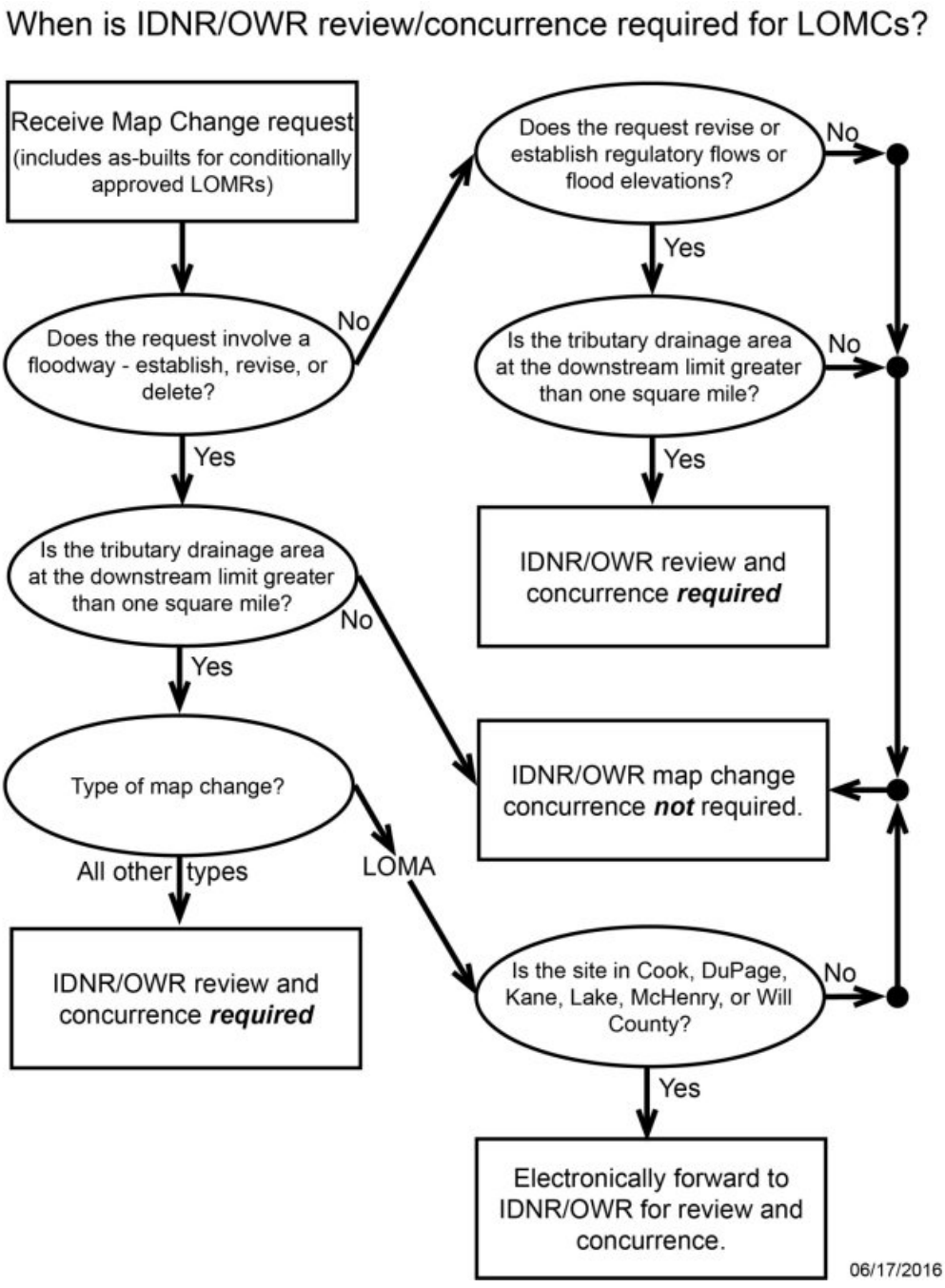

Figure 1. Information on MT-2 State Approval (Illinois)

- Indiana – Approval by the state's Department of Natural Resources (DNR) is required for all LOMRs and CLOMRs. If a project scope changes during the processing of the request, the requester will need to have the state re-approve the project. Any hydrologic and/or hydraulic revision due to a FEMA review requires an amended DNR approval.

- Michigan – Approval is required for a LOMR or CLOMR with a drainfeage area greater than 2 square miles. Approval can be in the form of a permit or letter from Michigan's Department of Environment, Great Lakes, and Energy.

- Minnesota – Approval is required for a LOMR or CLOMR revising the floodway and/or effective hydrology, and for any request involving any part of 44 CFR Part 65 of the NFIP regulations. Approval is not required for any LOMR following a CLOMR where the project was built as proposed, as long as the state approved the CLOMR. Projects revising the hydrology in a detailed study area will be subject to review by Minnesota's Interagency Hydrology Review Committee, which consists of the following members: MNDNR; U.S. Army Corps of Engineers (USACE); U.S. Geological Survey (USGS); Natural Resources Conservation Service; and National Weather Service.

- Wisconsin – Approval is required for all LOMRs and CLOMRs. If a project scope changes during the processing of the request, the requester must ask the state to re-approve the project. Any hydrologic and/or hydraulic revision due to a FEMA review requires an amended DNR approval.

2.4. Hydrologic Analysis

Generally, hydrologic models were not available for many effective Zone As. However, more recent Zone A floodplains are based on models, which can be obtained from FEMA and should be used as the starting point for CLOMRs and LOMRs.

MT-2 requests require a new hydrologic analysis if there are no effective flows available for the flooding source(s) being revised or if the effective flows are no longer reasonable. It is generally up to the certifying engineer to determine if the effective flows are sufficiently accurate or if the effective hydrology must be revised. In general, a revised (or new) hydrologic analysis for a revision request may be conducted for any of the following reasons:

- To reflect longer periods of gaging records of hydrologic data.

- To reflect changed (natural or manmade) physical conditions of the watershed and/or the stream.

- To use improved hydrologic methods.

- To correct an error in the hydrologic analysis performed for the effective study.

- To revise an effective Zone A SFHA where no hydrologic analysis is available.

The following items should be considered when determining if revised hydrology is warranted and which hydrologic method to use.

a. The hydrology should be revised using a method that is at least as detailed as the method used for the effective hydrologic analysis. For example, rainfall runoff

modeling is considered to be more detailed than regression equations. Therefore, if the effective hydrology is based on a rainfall runoff model, the revised flows should not be based solely on the results of regression equations.

b. If a revision uses a hydrologic model or method different from that used for the effective study, the discharges resulting from the new or revised analysis should show a statistically significant difference from the effective discharges. Statistical significance is defined in Section 6.0 of the Guidance for Flood Risk Analysis and Mapping: General Hydrologic Considerations, which may be downloaded from the "Guidance" page on the FEMA website at https://www.fema.gov/flood-maps/guidance-reports/guidelines-standards/guidance-femas-risk-mapping-assessment-and-planning. Generally, if the revised hydrology does not change the computed BFEs by at least 0.5 foot, then the effective flows should be used.

c. Submittals involving revised hydrology must include back-up documentation to support all of the analysis input parameters including, but not necessarily limited to, a drainage area map. Supporting Geographic Information System (GIS) files and a Digital Elevation Model should be submitted when available. Drainage area maps should include the following information:

- Topographic contours (with elevation labels) covering the entire watershed being studied.
- Delineation of all the sub-basins included in the hydrologic analysis, with the sub-basin labels using the same nomenclature as the model.
- Flow paths used for time of concentration calculations (if applicable).
- Locations of discharge calculation points.
- Scale of the map, north arrow, author and date.
- Certification by a Professional Engineer or Surveyor.

d. If a revision affects only a portion of a detailed-study stream, a logical transition between the revised and unrevised flows is preferred. Generally, the revised discharges should not result in lower flow rates for downstream areas than the upstream effective flows or higher flow rates for upstream areas than the downstream effective flows. MT-2 requesters are expected to make a reasonable effort to achieve this logical transition, which may require extending the revised reach significantly upstream or downstream. However, it may not be feasible to achieve this logical transition in some situations. FEMA may accept a discontinuity on a case-by-case basis.

e. Use the flows computed in the hydrologic analysis as inputs to the revised hydraulic model. Generally, the flow rates computed at the basin outlets are used in the hydraulic model for the entire reach flowing through that basin. It may be reasonable to interpolate flows between nodes of the hydrologic model if the sub-basins have a uniform land use and slope. Interpolation should be based on drainage area, with the areas delineated on the drainage area map.

The following methods may be used for the new hydrologic analysis:

- Statistical Analysis of Gage Records.
- Precipitation/Runoff Model.
- Regional Regression Equations.

The requirements for each of these methods are briefly described in the following sections. Please refer to FEMA Guidance Document 71, General Hydrologic Considerations for more information on hydrologic analysis requirements.

2.4.1. STATISTICAL ANALYSES OF GAGE RECORDS

Bulletin 17C, Guidelines for Determining Flood Frequency, is the recommended approach for analyzing gage records. Bulletin 17C can be downloaded from the Subcommittee on Hydrology of the Advisory Committee on Water Information website at https://acwi.gov/hydrology/Frequency/b17c/.

2.4.2. PRECIPITATION / RUNOFF MODEL

A FEMA-acceptable hydrologic analysis must be submitted in digital format. A list of FEMA-acceptable models can be accessed at http://www.fema.gov/flood-maps/products-tools/numerical-models/hydrologic.

The submittal must also include back-up documentation, including the following, to support all model input parameters:

- Drainage area maps.
- Land use and soils maps.
- Calculations used to determine parameters such as lag time, curve number and loss values.
- Source of rainfall data, including temporal distributions, areal reduction factors, etc.
- Unit hydrograph method and associated documentation.
- Survey or as-built documentation for controls of stormwater storage facilities included in the analysis.
- Routing method and associated documentation.

Where possible, the model must be calibrated, and the process fully documented. The procedure should be clearly described in the CLOMR/LOMR narrative. This should include dates, measurements and locations of measurements of historic storms; the parameters revised and the rationale for revising; and input and output data for the calibrated model.

For areas with an effective hydrologic analysis, a revised hydrologic analysis must include an evaluation of the same recurrence interval(s) studied in the effective FIS, such as the base (1% annual-chance) flood and the 10% (10-year), 2% (50-year), and 0.2% (500-year) floods.

If the revision is based on revised hydrology, hydrologic analyses for both pre-project and post-project conditions should be submitted.

For additional guidance related to precipitation/runoff modeling, please refer to FEMA Guidance Document 91, Hydrology: Rainfall-Runoff Analysis.

2.4.3. REGIONAL REGRESSION EQUATIONS

USGS regression equations are available nationwide and recommended for use. A summary of regional regression equation publications for each state can be found at https://water.usgs.gov/osw/programs/nss/pubs.html. If the most recent USGS regression equations were not used, explain why these equations do not apply. Include documentation to support all the input parameters for the regression equations. This typically includes at least a drainage area map.

2.5. Hydraulic Analysis

2.5.1. REQUIREMENTS TO SUBMIT A HYDRAULIC ANALYSIS

Most LOMR and CLOMR requests require a revised hydraulic analysis. However, an MT-2 request may be processed without a new hydraulic analysis in the following situations.

1. The published regulatory flood hazard information (BFEs, SFHA, floodway) does not accurately reflect the results of the effective hydraulic model. In this situation, the FIRM and or FIS report may be updated to match the effective modeling without a new hydraulic analysis.
2. If a LOMR is requested to redelineate the SFHA based on better topographic data than that used to delineate the effective SFHA, FEMA will process the request if it meets both of the following conditions.
    a. No manmade modification within the vicinity of the project may change the BFEs, including fill, excavation, channel modification, or a new or replaced bridge/culvert, dams, weirs, basins or levees. Any of these modifications within the SFHA may affect the BFEs, unless they occur entirely within an area with clearly ineffective flow that is not used for flood storage.
    b. The area being redelineated is relatively small and site specific or, if a significant reach is to be redelineated, the reach is currently categorized as “Valid” under FEMA’s Coordinated Needs Management Strategy (CNMS). For additional information on CNMS, refer to FEMA’s Coordinated Needs Management Strategy (CNMS) Technical Reference CNMS Database User’s Guide, dated November 2019.

3. The area being revised is a stillwater area where a hydrologic analysis accounting for the storage and routing of the full hydrograph is used to determine the BFE(s), such as the analysis of reservoirs and stormwater storage facilities.
4. A hydrology-only CLOMR request may be submitted if a community would like FEMA to review and comment on the new hydrology compared to the effective before they proceed with the hydraulic analysis. Hydrology-only CLOMRs are typically submitted for larger revisions, such as new watershed studies conducted by a community.

A watercourse may have an effective SFHA due to backwater from a downstream flooding source. Although there may not be an effective model for the tributary, a hydraulic model is required to revise the SFHA for the tributary if any manmade modifications have occurred within the SFHA that cross or are within the channel of the tributary. This includes, but is not necessarily limited to, new or replaced bridges/culverts, dams, weirs and channel modifications.

2.5.2. HYDRAULIC CONDITIONS TO BE ANALYZED

Per 44 CFR 65.6(a)(8), unless the basis of the request is using an alternative hydraulic method, or unless the requester can demonstrate that the data of the original hydraulic computer model is unavailable or its use is inappropriate, the analysis must use the same hydraulic computer model used to develop the BFEs shown on the effective FIRM. The model must be updated to show present conditions in the floodplain. Therefore, it is best to request approval from FEMA before submitting an MT-2 request that is not based on the effective hydraulic model.

When a request involves a hydraulic analysis for riverine flooding that differs from the one used to develop the effective FIRM, submit a FEMA-acceptable hydraulic analysis in digital format. Information on FEMA-acceptable models can be accessed at https://www.fema.gov/flood-maps/products-tools/numerical-models/hydraulic.

The following conditions models, as applicable, must be submitted, as explained on Page 16 of the MT-2 Instructions.

- **Duplicate Effective Model:** The duplicate effective model is a copy of the hydraulic analysis used in the effective FIS, referred to as the effective model. The effective model should be reproduced on the requester's equipment to produce the duplicate effective model. This is required to ensure the effective model's input data have been transferred correctly to the requester's equipment. It also ensures the revised data will be integrated into the effective data to provide a continuous FIS model, upstream and downstream of the revised reach. For information on how to obtain copies of the effective FIS models, please visit the FEMA website at https://www.fema.gov/sites/default/files/documents/fema_flood-insurance-study-data-request-form.pdf.

  A duplicate effective model is required for all LOMRs where there is an effective model, even if it is not being used as a basis for the revised modeling, but so it can be compared to the revised modeling. If the effective model is being updated to produce the revised conditions modeling, run the revised conditions modeling using the same model version as the effective, unless the

entire modeled reach is being revised. This is to avoid discrepancies outside of the revised reach that may result from running the model in a different version.

If an effective HEC-2 model is converted to the Hydrologic Engineering Center River Analysis System (HEC-RAS), this is considered a duplicate effective model.

If the effective model is not available from FEMA, the requester should check to see if it is available from the community or any other agency involved with floodplain management in the area of interest. If the effective model is not available, or is available only in PDF format, then a duplicate effective model may not be required. Refer to the flow chart in Figure 2 to determine if a duplicate effective model is required and if the modeling should be truncated. If the entire reach is being revised, it is not necessary to use the duplicate effective model as a base model, but it should be used as a reference for cross section placement and BFE comparisons. Communication from the FEMA Engineering Library should be included with the MT-2 submittal to document that the effective model was requested, but is not available.

- **Corrected Effective Model:** The corrected effective model is the model that corrects any errors in the duplicate effective model, adds any additional cross sections to the duplicate effective model, or incorporates more detailed topographic information used in the effective model. The corrected effective model must not reflect any manmade physical changes that have occurred since the date of the effective published study. Generally, the updated topography should reflect the physical conditions of the area on the date of the FIRM that incorporated the effective modeling. Physical changes in the hydraulic condition of the stream may have occurred after the date of the effective published study. Sometimes the changes result from natural changes, such as a channel “cut-off” at a bend, which may be included in the corrected effective model. Sometimes these are the result of manmade changes, which should not be included in the corrected effective model. An error could be a technical error in the modeling procedures, or it could be any construction in the floodplain that occurred before the date of the effective model but was not incorporated into it.

- **Pre-Project (Existing) Conditions Model:** The duplicate effective model or corrected effective model is modified to produce the pre-project conditions model. The pre-project model reflects any physical modifications that have occurred within the floodplain since the date of the effective model, but prior to the construction of the project for which the revision is being requested. If no modification has occurred since the date of the effective model, this model would be identical to the corrected effective model or duplicate effective model. The pre-project conditions model may be required to support conclusions about the actual impacts of the project associated with the revised or post-project conditions model or to establish more up-to-date models on which to base the revised or post-project conditions model.

- **Revised or Post-Project Conditions Model:** The pre-project conditions model (or duplicate effective model or corrected effective model, as appropriate) is modified to reflect revised or post-project conditions. This model must incorporate any physical changes to the floodplain that

have occurred since the effective model was produced, as well as the effects of the project. For CLOMR requests, this model must reflect proposed conditions.

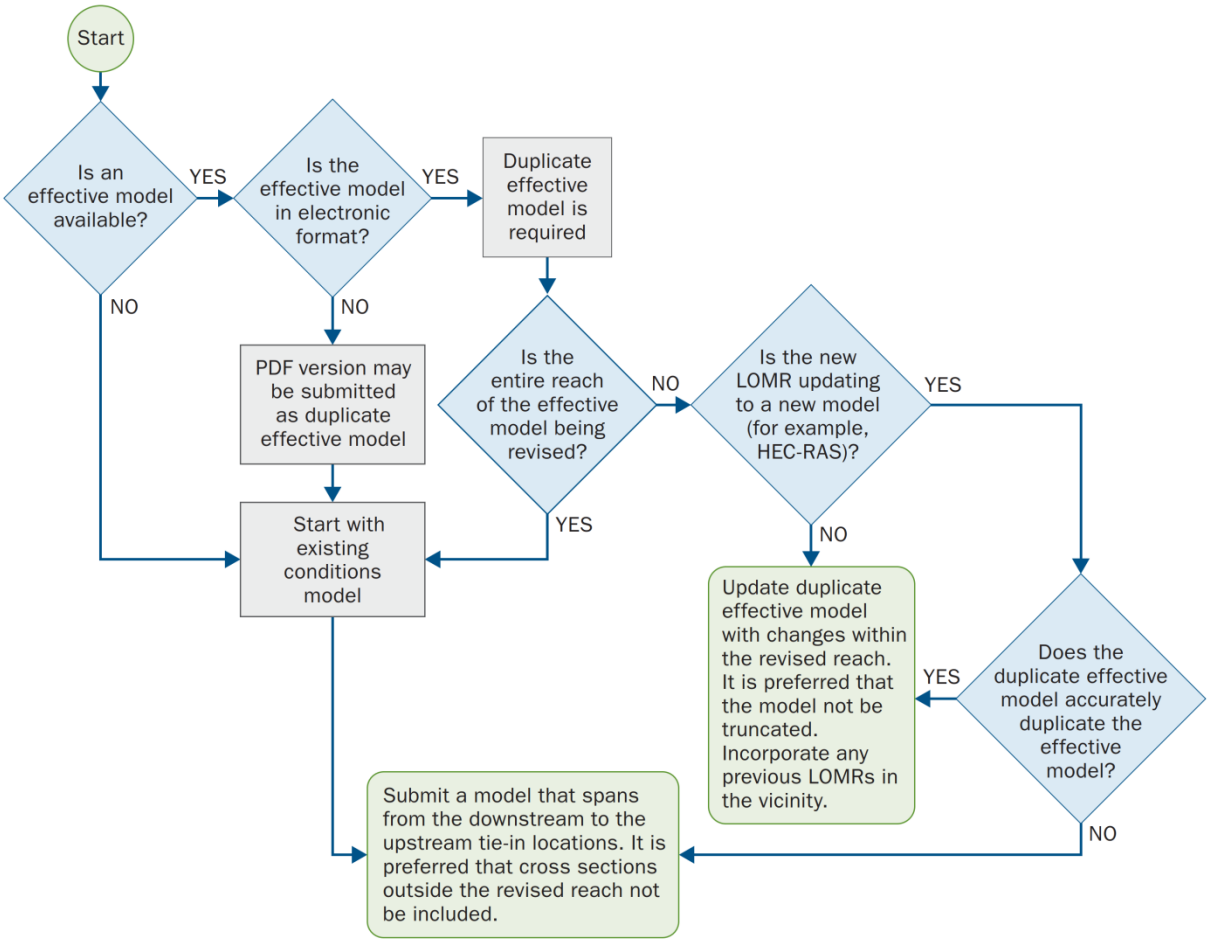

Figure 2. Flow Chart for Determining the Need for a Duplicate Effective Model

The guidelines below should also be followed:

- All submitted models should be clearly named using the nomenclature described above.
- Each model should be described, preferably in the MT-2 report narrative.
- Extraneous models should be omitted from the submission.
- The model version, vertical datum and any other relevant notes should be included in the model, if possible. For HEC-RAS models, this information should be entered in the description field.

2.6. Hydraulic Analysis Criteria

2.6.1. REQUIRED FLOOD FREQUENCIES (44 CFR 65.6(A)(8))

A revised hydraulic analysis for a flooding source with established BFEs must include evaluation of the same recurrence interval(s) studied in the effective model, such as 10-, 50-, 100, and 500-year elevations, and of the floodway.

Boundary Conditions: Typically slope area/normal depth should be used at a confluence for tributaries unless it is demonstrated that the tributary and main stream have coincident peaks. The normal depth method should also be used anywhere a known water-surface elevation is not available. Known water-surface elevations are to be used as the downstream boundary conditions for models starting in the middle of a reach, whenever a reliable source is available. If the reach has effective BFEs, those must be the source of the known water-surface elevation.

BFE "Tie-In" (44 CFR 65.6(a)(2)): Per 65.6(a)(2), unless it is demonstrated that it would not be appropriate, the revised and unrevised BFEs must match within 0.5 foot where such transitions occur within the revision reach. This is determined by comparing the revised or post-project conditions model BFEs to the BFEs from the effective FIS report. Also, post-project BFEs must match pre-project BFEs within 0.1 foot at the limits of revision to ensure that all project impacts are reflected in the revision. Note: the area of revision and the project area may not be the same. If a revised model does not meet tie-in criteria at the project limits, the model must be extended until a tie-in is achieved.

Floodway Analysis: If there is an effective regulatory floodway, the model submitted for each condition listed in Section 2.5.2 should include a baseline conditions model run and a separate floodway model run. Per 44 CFR 65.7(b)(4)(i), the floodway analysis must be performed using the hydraulic computer model used to determine the proposed BFEs.

FEMA recommends using Methods 4 and 1 for modeling the floodway. The floodway surcharge values should be between 0.0 and 1.0. However, some states or communities have maximum surcharge values that are lower than 1.0. For rivers or streams that border two states, one of which has a more restrictive floodway standard, the 1.0 foot surcharge is used unless the states have mutually agreed on a lesser criterion.

In addition, if the modeling is using an effective model and attempting to tie the revised model into the effective model, the model should be run far enough upstream to determine that the surcharge values do not exceed the allowable limit. This can be accomplished by continuing to add effective model cross sections far enough upstream to balance the energy grades in the model between the effective model and the revised model to 0.00-foot tolerance. Once that is achieved, then it is unlikely a surcharge value upstream of this area would exceed the allowable limit.

Refer to FEMA Guidance Document 79, *Floodway Analysis and Mapping*, for more information on floodways.

Additional Model Parameters: Generally, the factors listed below should be considered when developing the hydraulic models to support a CLOMR and/or LOMR, but this list is not exhaustive.

- Whenever feasible, the revised hydraulic model includes cross sections cut/placed at the same profile baseline locations as the cross sections in the effective model to facilitate a comparison of the results.
- Flood discharges used as inputs in the revised hydraulic models correlate with the revised (or effective) hydrologic analysis.
- Roughness Coefficient. The Manning's "n" value is reasonable for the channel and overbank areas in the horizontal and vertical directions.
- Cross sections for bridge/culvert/drop structure modeling are sufficient, reasonably located and consistent with the user's manual recommendations for the software being used.
- Transition Coefficient. Appropriate values are used for the contraction and expansion coefficients along the stream lengths, near structures.
- The loss parameters for the structures are reasonable and consistent with the recommended values for the types of structures in the users' manual for the software being used.
- Bridge modeling approaches and corresponding values are reasonable and consistent with those recommended for the types of structures in the users' manual for the software being used.
- The specifications of the structure in the hydraulic models are verified from as-built plans or a survey for the project.
- The ineffective flow areas are appropriately defined near structures and other applicable locations.
- The selected model satisfies the requirements in the users' manual and the standards of the selected methods.
- The cross sections in the model extend across the entire floodplain to contain the base floodplain and 0.2% annual-chance floodplain, if appropriate.
- The BFEs computed in the baseline conditions model run and the BFEs computed for the floodway model run are consistent.
- The water-surface profiles of different flood frequencies do not cross one another.
- The water-surface profiles do not show drawdowns (i.e., the water-surface elevation at an upstream cross section must be higher than a water-surface elevation at a downstream cross section). However, drawdowns in the vicinity of bridges/culverts may indicate errors in the

hydraulic modeling of the structure; the modeling errors should be corrected or verified as reasonable before profiles are revised.

- Any notes, warnings or errors provided by the modeling program have been examined and addressed where appropriate.

2.7. Coastal Analysis

Flood hazard studies are considered coastal studies when the flooding being evaluated is a combination of elevated water levels, typically due to storm surge, and wave action. Coastal study methodologies are used to evaluate flood hazards along the shorelines of the Atlantic Ocean, Gulf of Mexico, Pacific Ocean and Great Lakes. Bays, tributaries and other lakes are also considered to have coastal floodplains when they are subject to water level and wave hazard processes similar to those on the open coasts. Map revisions may be requested for one or more of the following reasons (note: the list below is not exhaustive):

- To rectify an error in the flood hazard analysis conducted in the effective study or an error in the mapping of the results of the effective study.

- To reflect changes, natural or manmade, in the physical conditions of the coastal transect.

    - Guidance for Flood Risk Analysis and Mapping: Coastal Structures outlines procedures for the treatment of structures and obstacles that are present on the transect but may or may not be engineered to provide flood protection.

    - Any case submitted in an area affected by beach nourishment must appropriately account for the nourishment, according to Guidance for Flood Risk Analysis and Mapping: General Study Considerations.

- To reflect more accurate topographic data: the new topographic data must be certified by a licensed surveyor or registered professional engineer.

- To reflect a different period of record of wave or tide gauge data: frequency analysis of wave heights or storm surge elevations based on a small sample may have a wide variance; requests may seek to update old frequency analyses with new data. The new analysis must be statistically adequate to support the calculation of the base flood.

- To incorporate improved engineering methods: requesters may choose to use more detailed or computationally involved engineering analyses in support of map revision requests. For example, a revision request may be based on wave transformation using two-dimensional spectral wave models instead of the standard parametric fetch-limited wave transformation approaches. Any models used in the engineering analyses must be included in the list of numerical models meeting the minimum requirements of the NFIP. This list may be found at https://www.fema.gov/flood-maps/products-tools/numerical-models/coastal. The use of more advanced models does not guarantee an improvement in the quality or accuracy of the

engineering analysis; the engineer should ascertain the appropriateness of the model chosen for the specific analysis.

- To reflect site-specific analyses and information: on a coastline with complex geometry, the flood hazards at certain locations may not have been precisely represented under the broad brush of a large-scale study. For example, the starting wave heights used in the effective Wave Height Analysis for Flood Insurance Studies (WHAFIS) model may not represent the local wave climate due to wave sheltering. The requester should provide detailed engineering analyses and should meet the standards for coastal engineering practice and the requirements set forth in the various FEMA guidance documents related to coastal analysis and mapping.

FEMA guidance documents related to coastal analysis and mapping include:

- Coastal General Study Considerations
- Coastal Wave Setup
- Determination of Wave Characteristics
- Overland Wave Propagation
- Coastal Erosion
- Coastal Structures
- Coastal Water Levels
- Coastal Floodplain Mapping
- Coastal Statistical Simulation Methods
- Coastal Flood Frequency and Extreme Value Analysis
- Coastal Notation, Acronyms and Glossary of Terms
- Combined Coastal and Riverine Floodplain
- Guidelines for Coastal Flood Hazard Analysis and Mapping for the Pacific Coast of the United States

2.8. Alluvial Fan Flooding Analysis

Alluvial fans are gently sloping, fan-shaped landforms created over time by the deposition of eroded sediment. They are common at the base of mountain ranges in arid and semi-arid regions such as southwestern North America. Alluvial fans, and flooding on alluvial fans, show great diversity because of variations in climate, fan history, rates and styles of tectonism, source area lithology,

vegetation and land use. Acknowledging this diversity, FEMA developed an approach that considers site-specific conditions to identify and map flood hazards on alluvial fans. This approach can be found in FEMA's Guidance for Flood Risk Analysis and Mapping, Alluvial Fans. Figure 3 shows an example of an alluvial fan.



Photo taken by Martin G. Miller (from cover of Journal of Geoscience Education)

Figure 3. Photograph of Alluvial Fan

This section defines and discusses the submittal and processing of alluvial fan cases. MT-2 requests for alluvial fan cases require the following:

- Scientific and engineering knowledge of an alluvial fan and how to identify it.
- Alluvial fan flooding and how to analyze it and determine the SFHA associated with it.
- Knowledge of the applicable NFIP regulations.

Submittal and processing of MT-2 alluvial fan cases requires knowledge of the science of alluvial fans, sediment transport analysis, scour analysis, the use of the Fan program, and two-dimensional hydraulic models.

2.8.1. DEFINITIONS AND GENERAL TERMINOLOGY FOR ALLUVIAL FANS

An alluvial fan is a sedimentary deposit at a topographic break, such as the base of a mountain front, escarpment, or valley side, that is composed of stream flow and/or debris flow/sediments and has the shape of a fan, either fully or partially extended. Section 59.1 of the NFIP regulations defines "Alluvial Fan Flooding" as "flooding occurring on the surface of an alluvial fan or similar landform

which originates at the apex and is characterized by high-velocity flows; active processes of erosion, sediment transport and deposition; and unpredictable flow paths."

Alluvial fan flooding encompasses what is described as active and inactive flooding. Active alluvial fan flooding is characterized by flow path uncertainty, abrupt erosion and deposition, and ultra-hazardous conditions. Inactive alluvial fan flooding is similar in nature to traditional riverine flooding, probably subject to erosion and sediment deposition, but characterized by a relatively stable flow path. An alluvial fan may exhibit both active and inactive fan flooding. Examples and more detailed definitions of active and inactive fan flooding hazards can be found in the previously referenced FEMA guidance document.

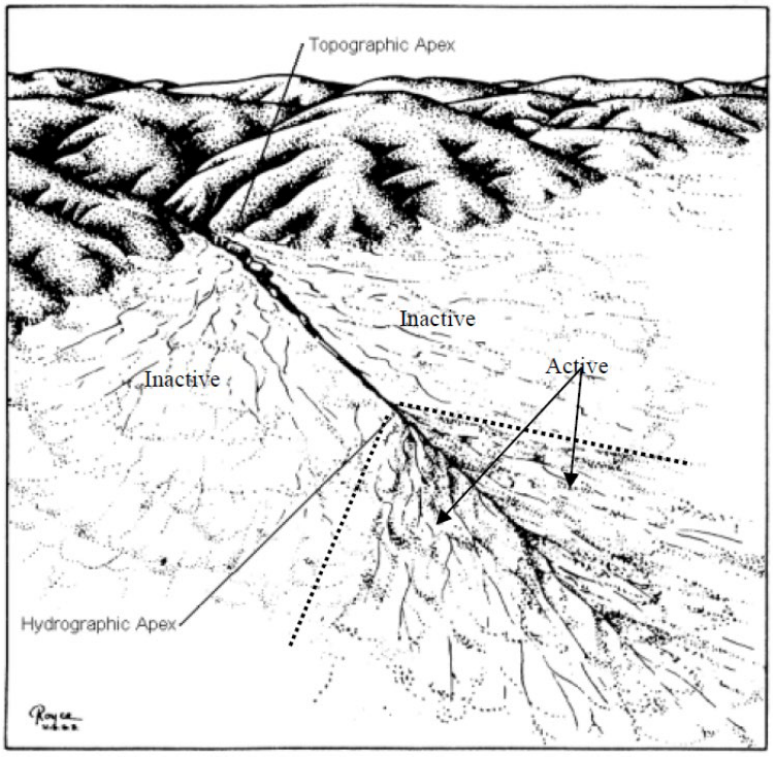

Figure 4. Active and Inactive Alluvial Fan Flow Paths

2.8.2. APPROACHES TO IDENTIFY ALLUVIAL FAN FLOODING

The approach to follow for identifying and mapping alluvial fan flood hazards is discussed in FEMA's Guidance for Flood Risk Analysis and Mapping, Alluvial Fans. This approach divides the analysis into three stages, summarized below.

Stage 1: Recognizing and Characterizing Alluvial Fan Landforms.

At this stage, the scientist or engineer should be able to recognize whether or not a landform is an alluvial fan. This stage will require review of surficial geologic maps, soil maps, topographic maps and aerial photographs. The use of these items will help to identify the type of sedimentary

deposit (alluvium or debris-flow deposits), the shape of the fan, the lateral boundary of the fan and whether the landform is located at a topographic break.

Stage 2: Defining the nature of the alluvial fan environment and identifying active and inactive areas of the fan.

At this stage, the scientist or engineer should be able to identify the active and inactive parts of the fan. This stage will require the use of aerial photographs, topographic and soils maps, surficial geologic maps, historical records and a detailed field investigation.

Stage 3: Defining and Characterizing the Base Flood Within the Defined Areas.

This stage determines the severity and delineates the extent of the base flood within any floodprone area identified in Stage 2 as an active alluvial fan area. Several methods are appropriate for quantifying the base flood; however, not all methods are appropriate for all situations. The methods below are the most commonly used.

Probabilistic Method: This method entails the use of the Fan Program, which is based on the assumption of critical depth and equal probability along contour arcs (random flow paths). Some experts think this method overpredicts the extent of the SFHA.

Geomorphic Method: This method is based on qualitative information such as surficial geologic maps, soil maps, topographic maps, aerial photographs, historical data, post-flood verification, interpretive studies and extensive field surveys. It is frequently used for younger, less-developed soils with deeply incised channels. This method is mainly used for Zone A delineations because it does not involve any computations.

Deterministic Method: This method entails the use of two-dimensional hydraulic models such as HEC-RAS v5.0 or higher. By simulating two dimensional overland flow, the model is able to calculate the flow rate, depth, and velocity in each node of the alluvial fan. In addition, sediment transport analyses are generally required for alluvial fan analysis. Because of the extreme uncertainty associated with the science of sediment transport, it is subject to the reviewer's own judgment. Sediment transport formulas and classifications are shown in Table 2 in FEMA's Guidance for Flood Risk Analysis and Mapping, Alluvial Fans.

Note: When using the Probabilistic or Deterministic Method, the Geomorphic method should always be the basis on which to build the models for both methods.

2.8.3. INITIAL REVIEW AND GENERAL REQUIREMENT

The general CLOMR/LOMR submittal requirements for alluvial fan cases are similar to the riverine submittal requirements. The following additional items are required:

- MT-2 Application/Certification Form 6: Alluvial Fan Flooding.

- MT-2 Application/Certification Form 3: Riverine Structures. This form is required if the request is based on structural control measures such as channelization, levee, floodwall, dams and sedimentation basins.

2.8.4. REVIEW OF ALLUVIAL FAN CLOMR/LOMR SUBMITTALS

The most common type of LOMR/CLOMR request involves revising an effective alluvial fan SFHA depicted on the FIRM as Zone AO, with flood depths and velocities, or Zone A. This type of request nearly always involves structural measures, such as levees, floodwalls, detention/retention basins or channelization. MT-2 requests may also establish a new SFHA along an alluvial fan or revise an effective SFHA along an alluvial fan based on better data. The effective zone designation should be verified by the applicant to confirm whether or not the flooding source is an alluvial fan.

2.8.5. SUBMITTAL FOR AN ESTABLISHED ALLUVIAL FAN SFHA

Most alluvial fan MT-2 requests involve an established alluvial fan SFHA shown on the FIRM. Those cases are based on structural control measures such as channelization, levees, floodwalls, dams and sedimentation basins. Therefore, there is no need for a Stage 1 or 2 analysis; only a Stage 3 analysis, as described in Section 2.7.7, is required.

2.8.6. REQUESTS FOR A SUBMITTAL IN A NEWLY ESTABLISHED ALLUVIAL FAN SFHA OR BETTER DATA

When requests involve newly identified (or suspected) alluvial fan areas, the submittal must include all three stages of analysis. A request to revise an established SFHA based on better data will also require the submittal of all three stages of analysis.

Additional information regarding the three-stage analysis and required documentation can be found in FEMA's Guidance for Flood Risk Analysis and Mapping, Alluvial Fans.

2.8.7. STAGE 3 ANALYSIS

Information regarding the Stage 3 process and requirements can be found in FEMA's Guidance for Flood Risk Analysis and Mapping, Alluvial Fans. At minimum, this analysis should demonstrate the flood control measures will effectively eliminate alluvial fan hazards from the area they protect. The analysis must include the following:

- Assessment of discharge, debris and sediment movement in the entire drainage basin (not only the fan area).

- Engineering analysis showing that the measures will accommodate the peak discharge volumes of water debris and sediment, and will withstand the hydrodynamic and hydrostatic forces.

- Engineering analysis showing potential scour and erosion, and measures for protection against them.

- Engineering analysis showing the measures will provide protection from hazards associated with the possible relocation of flow paths from other parts of the fan.
- Engineering analysis that assesses the effects of the project on flood hazards, including the depth and velocity of floodwaters and scour and sediment deposition, on other areas of the fan.
- An accounting for local drainage (if any).

In addition, the following items must be submitted:

- Certification by a registered professional engineer.
- An operations and maintenance plan (reviewed and accepted by community, state and local agencies that have jurisdiction) for any structure within the alluvial fan.
- Certified as-built plans.

The applicable provisions of Sections 65.2, 65.4, 65.6, 65.8 and 65.10 of the NFIP regulations also apply to MT-2 requests involving alluvial fan flooding, and the appropriate supporting data must be submitted.

2.8.8. MAPPING OF ALLUVIAL FAN SFHA

Where possible, the SFHA for an alluvial fan will be mapped as Zone AO, with a listed depth and velocity. Alluvial fan flood hazard zones with a depth greater than 3 feet should be mapped as Zone AE or Zone A on the FIRM, with a note indicating that the flood zone is an alluvial fan flood zone.

NOTE: Refer to the Regulations for Mapping and Map Revisions for Areas Subject to Alluvial Fan Flooding (44 CFR 65.13).

2.9. Topographic Workmap

A certified topographic workmap of suitable scale, contour interval, and planimetric definition, which is extensive enough to show the entire area covered by the revised or post-project conditions model, must be submitted. The workmap must be submitted in Portable Document Format (PDF) and certified (sealed, signed and dated) by a registered professional engineer. The scale of the map must be sufficient to confirm the accurate delineation of the floodway and floodplain boundaries, and all features must be clearly shown and described via a legend or labels.

The submitted topographic workmap should include the following:

- Boundary delineations of the revised conditions base floodplain and, if applicable, the floodway and 0.2% annual-chance floodplain.
- Boundary delineations of the effective base floodplain and, if applicable, the floodway and 0.2% annual-chance floodplain.

- Graphical tie-in between the revised and effective boundary delineations.
- Topographic contour information used for the floodplain boundary delineations, with elevation labels.
- Vertical datum used on the map (must match the vertical datum of the hydraulic analysis).
- Locations and alignment of all cross sections in the hydraulic modeling within the revised reach.
- Flow line used in the revised hydraulic model.

The floodplain and floodway delineations on the workmap must be consistent with the output from the hydraulic analysis. Therefore, the cross section topwidths and reach lengths shown on the submitted mapping must match the modeling. There may be situations where a discrepancy between the map and model topwidths is warranted (e.g., intermediate high ground and ineffective flow areas), but adequate justification must be provided.

It is strongly recommended that requesters submit workmap source files, such as GIS or Computer-aided design (CAD), along with the PDF. If the effective FIRM for the area of revisions is modernized and includes a FIRM database, then digital (GIS or CAD) data are required. The vertical datum used to reference the topographic elevations must be specified and should be consistent with the datum used to reference the elevations in the hydraulic analysis. The digital data provided should be spatially referenced and cite the projection used (coordinate system, example: Universal Transverse Mercator (UTM)/State Plane) to produce the most accurate mapping possible. If this spatial reference data is not submitted, the workmap will need to be manually georeferenced.

2.10. Annotated FIRM

An annotated FIRM panel (and Flood Boundary and Floodway Map panel, if applicable) must be submitted that shows the revised delineations of the floodplain(s) (and regulatory floodway, if applicable) as delineated on the submitted workmap. The revised boundaries must tie into the effective flood hazard boundaries at the upstream and downstream limits of the area of revision.

2.11. Proposed/As-built Plans

Certified as-built drawings are required for all existing/as-built hydraulic structures that are not included in the effective analysis or are modeled with different geometry than in the effective model. The plans must contain all the details needed to verify the geometry used in the modeling, and the vertical datum must be referenced on all plans. The plans must be certified by a registered professional engineer or surveyor (plans for structures proposed in a CLOMR do not need to be certified, but they must be submitted by a professional engineer). As-built or proposed grading for fill and/or excavation projects must be reflected in the topography shown on the submitted topographic workmap.

2.12. Operation and Maintenance (O&M) Plans

Per 65.6(a)(12), if a community or other party seeks recognition from FEMA on its Flood Hazard Boundary Map or FIRM that an altered or relocated portion of a watercourse provides protection from, or mitigates potential hazards of, the base flood, the Federal Insurance Administrator may request specific documentation from the community describing how and certifying that the flood control structure will be maintained. This documentation, which may be in the form of a written statement from the community CEO, an ordinance, or other legislative action, shall describe the nature of the maintenance activities to be performed, the frequency with which they will be performed, and the title of the local community official responsible for ensuring that the maintenance activities are accomplished.

This documentation is required for LOMRs involving the following structures.

- Accredited levee systems and analysis and mapping procedures for non-accredited levee systems (as appropriate).
- Dams/basins/ponds that are being used to reduce the peak downstream discharges and/or may pose a potential flood risk to adjacent properties.
- Coastal structures being used to reduce the mapped flood hazard.

A draft version of the O&M Plan should be submitted for CLOMRs that are proposing such structures. A final copy will be required after the structure is constructed and a revision to the FIRM is requested.

All maintenance activities must be under the jurisdiction of a federal or state agency, an agency created by federal or state law, or an agency of a community participating in the NFIP that assumes the ultimate responsibility for maintenance. A community may enter into an agreement whereby a private property owner is responsible for the maintenance, but that must be done as part of their own officially adopted maintenance plan. Under the NFIP, FEMA will hold the community responsible for monitoring the maintenance and taking over any maintenance responsibilities that were delegated to a private entity if the entity should default on their agreement with the community. In addition, FEMA will not review the covenant for correctness or liability for the community, only see that the overall O&M plan is sufficient to meet FEMA's requirement.

Per 44 CFR 65.6(a)(13), a community may submit, in lieu of a maintenance plan, certification by a registered professional engineer that the project has been designed to retain its flood-carrying capacity without periodic maintenance.

2.13. Levee-Based MT-2 Requests

Per 44 CFR 59.1, a levee is a manmade structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control or divert the flow of water to reduce flood hazards posed by temporary flooding. A floodwall is a designed structural wall

constructed adjacent to shorelines or stream banks for the purpose of reducing flooding of property on the landward side of the wall. Floodwalls are normally constructed in lieu of or to supplement levees where the land required for levee construction is too expensive or not available. In this document, the term "levee" is used to refer to both earthen embankments and floodwalls.

For the purpose of accrediting levee systems that provide base flood hazard reduction, regulatory and engineering data requirements for processing MT-2 requests through the NFIP have been defined in 44 CFR 65.10. Additional information can be found in FEMA Guidance Document 95: Levees.

Section E of MT-2 Form 3, entitled "Riverine Structures Form," pertains to levees and should be completed in its entirety, in addition to Forms 1 and 2. Section E is comprehensive, and, if filled out properly, will provide an initial overview of the levee system and data requirements.

To facilitate a compliance review, the initial submittal should include, but may not be limited to:

- Detailed hydraulic analyses for both the with-levee and natural valley scenarios.
- Certified topographic work map.
- Levee profile.
- Closure structure Information.
- Certified as-built engineering plans and specifications for the levee system.
- Geotechnical report.
- O&M plan, including emergency preparedness plans.
- Hydrologic and hydraulic analysis of the interior drainage, if applicable.

2.13.1. NATIONAL LEVEE DATABASE

If levee map revisions are requested through the MT-2 Letter of Map Revision (LOMR) process, the appropriate FEMA Regional Project Officer or designee must be provided the necessary data so that the appropriate updates to the levee attributes and alignments can be entered in the National Levee Database (NLD).

2.13.2. LEVEE SYSTEM ACCREDITATION

Regardless of the map change vehicle, LOMR or PMR, all accredited levee systems must comply with 44 CFR 65.10. Generally, the submitted data/documentation must include the following items as applicable but may not be limited to these items. For additional guidance, refer to Chapter 4 of FEMA Guidance Document 95: Levees..

- Design Criteria
  - Freeboard
  - Closures
  - Embankment Protection
  - Embankment and Foundation Stability
  - Settlement
  - Interior Drainage
- Operation Plans
- Emergency Preparedness Plans
- Maintenance Plans
- Certification Requirements

Furthermore, LOMRs including all, or a portion of, accredited levee systems must include documentation of continued compliance with 44 CFR 65.10. Please refer with Section 4.2.5 of FEMA Guidance Document 95: Levees regarding updated modeling along an accredited levee.

There may be instances when other Federal Agencies (such as USACE) may provide information to FEMA in support of a community's request for levee system accreditation. Please refer to Section 4.2.2 of FEMA Guidance Document 95: Levees regarding processing these submittals.

2.13.3. NON-ACCREDITED LEVEE SYSTEMS

Levee systems not mapped as accredited on the effective FIRM must be evaluated "with levee" and using the "natural valley" procedure for the entire system. The landward side of the structure may be mapped based on the results of the natural valley analysis. If desired by the requester, a more refined approach to mapping the flood hazards landward of a levee system, the Levee Analysis and Mapping Process, may be used. As shown in Figure 5, this process should be completed before submitting a CLOMR or LOMR request to FEMA. For more information on non-accredited levee systems and the Levee Analysis and Mapping Process, refer to Chapter 6 of FEMA Guidance Document 95: Levees.

Per FEMA Guidance Document 95: Levees, if a levee system is accredited on the effective FIRM but has insufficient data/documentation to comply with 44 CFR 65.10, then the levee system must be remapped following the analysis and mapping procedures for non-accredited levee systems.

For more guidance on non-accredited levee systems, including non-levee features/reaches, refer to Chapter 6 and 7 of FEMA Guidance Document 95: Levees.

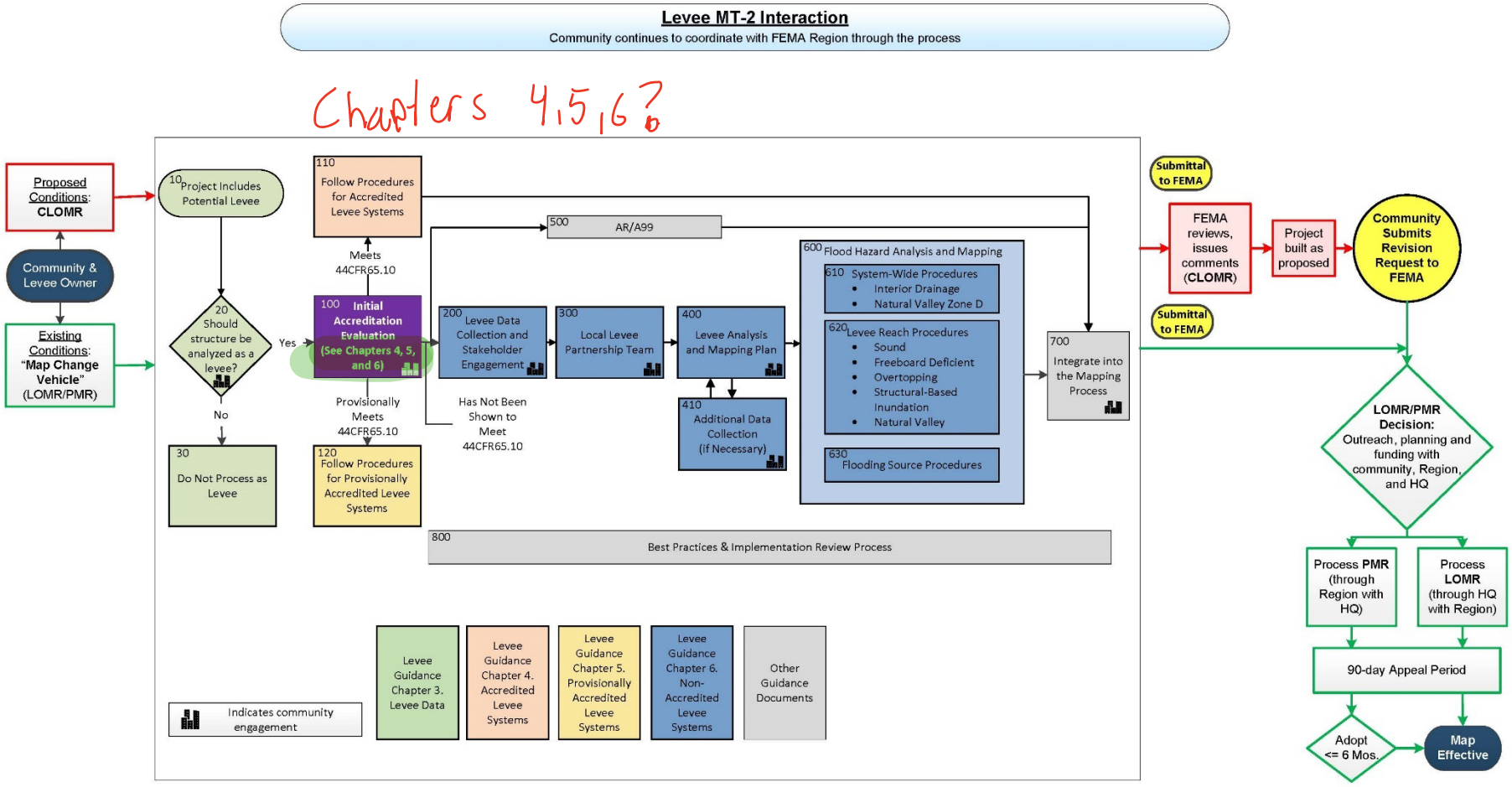

Figure 5. Levee Analysis and Mapping Procedures Workflow

2.14. Property Owner Notification

Notification of the revision is required for a CLOMR and LOMR if any of the following changes will occur as a result of the LOMR.

- Widening/shifting/establishing of the base floodplain such that any property is being added to the SFHA.
- Increases and/or establishment of BFEs.
- Any change in the floodway delineation.

Notification may be achieved either through individual legal notices to affected property owners or via a legal notice published in the local newspaper. Notices must include the extent of revision and contact information for any interested parties.

- Individual Legal Notices: These may take the form of a signed copy of the letter sent along with either a mailing list or certified mailing receipts.
- Newspaper Notice: The newspaper notice should be published in the legal notices section of a prominent local newspaper with circulation throughout the impacted communities. Only one publication date is needed.

According to 44 CFR 65.7, floodway revisions require submitting a copy of the public notice distributed by the community stating its intent to revise the regulatory floodway, or a statement by the community that it has notified all affected property owners and affected adjacent jurisdictions. Therefore, a newspaper notice for a floodway revision must be coordinated by or on behalf of the community. Individual property owner notifications for floodway revisions must either be on community letterhead or the community must provide a written statement to confirm “all affected property owners have been notified of the floodway revision.”

When the floodway is not being revised and all BFE and/or SFHA increases are on property owned by the requester, property owner notification is not required if:

1. The property owner has signed MT-2 Form 1.
2. The certifying engineer confirms in writing all adversely impacted property is owned by the requester.

If the regulatory floodway is being revised, the community must confirm all impacted property owners have been notified of the floodway revision (per 44 CFR 65.7), even if the floodway revision is entirely contained within the requester’s property.

Sample notification templates for various changes to SFHAs, BFEs and regulatory floodways are shown in the MT-2 Forms Instructions (Figures 3 and 4 for LOMRs, and Figures 5 and 6 for CLOMRs).

CLOMRs require notifications if the follow-up LOMR would result in the changes described in this section.

2.15. CLOMR-Only Requirements

2.15.1. 65.12 REGULATORY REQUIREMENTS

If the BFE increases more than 0.00 feet as a result of encroachment within an effective floodway, or more than 1.0 foot within Zone AE in an area without a floodway, between the pre-project (existing) conditions and the proposed conditions as a result of the proposed project, the following must be submitted.

a. Certification no structures are in areas that would be affected by the BFE increase.
    - Structures that are already in the effective floodplain are affected if the BFE at the structure would increase as a result of the proposed project.
    - Structures are affected if their lowest adjacent grade is below the proposed conditions BFE, even if the first-floor elevation is above the BFE.
    - This refers to any BFE increase greater than 0.00 feet. It may be possible for a project to result in small BFE increases in areas outside the revised reach. Therefore, this certification is not limited to areas within the revised reach.
b. Documentation of the individual legal notice sent to all affected property owners, explaining the impact of the proposed action on their property.
c. An evaluation of alternatives that would not result in an increase in BFE.
d. Concurrence of the CEO of any communities affected by the proposed actions.

According to FEMA's policy, a CLOMR for a project in Zone A is subject to meeting the same standards of 65.12 as a project in Zone AE with BFEs and no floodway.

2.15.2. ENDANGERED SPECIES ACT COMPLIANCE

CLOMR applicants are responsible for providing FEMA with documentation that the project has complied with the Endangered Species Act of 1973 (ESA). This must occur before FEMA reviews the CLOMR application.

While FEMA does not play a role in ESA compliance for proposed private development, these projects are required to comply with the ESA independently of FEMA's CLOMR process. For non-federal projects, the requester must document:

1. No potential for "take" exists, meaning the project has no potential to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect (or to attempt to engage in any such conduct) threatened and endangered species. The requester will be responsible for determining the potential for "take." The evaluation must be performed by a qualified professional well-versed in

such assessments. The no potential for "take" determination is not required to come from, or be concurred by, the Services.

2. If the requester determines a "take" will or has a potential to occur, they can consider contacting the Services to discuss potential project revisions to eliminate the "take."

If neither option 1 nor 2 is possible, and the project has the potential to "take" listed species, an Incidental Take Permit may be submitted showing the project is the subject, or is covered by the subject, of the permit.

If federal construction, funding or permitting is involved in a project for which a CLOMR or CLOMR-F has been requested, then the applicant may use that agency's Section 7 consultation to document to FEMA that ESA compliance has been achieved. The ESA documentation may be:

1. A "No Effect" determination made by, or concurred by, the federal agency.
2. A "Not Likely to Adversely Affect" determination with concurrence from the Services.
3. A biological opinion with a "no jeopardy" determination or with accepted reasonable and prudent alternatives.
4. A copy of a federally issued permit with justification the proposed development for which a CLOMR or CLOMR-F is sought is covered by the permit.

For LOMR requests involving floodplain activities that have occurred already, private individuals and local and state jurisdictions are required to comply with the ESA independently of FEMA's process. The community needs to ensure any permits are obtained per the NFIP regulations at 44 CFR 60.3(a)(2).

Additional information about the ESA and these requirements is available in the Guidance for Flood Risk Analysis and Mapping: Documentation of Endangered Species Act Compliance for Conditional Letters of Map Change.

2.16. Other Considerations

2.16.1. PRELIMINARY STUDIES

Revision requesters should check with the community to see if an ongoing study will result in a new FIRM and FIS report for the area to be revised. They should also check the FEMA Map Service Center to see if FEMA has issued preliminary or pending data.

If FEMA has issued preliminary products for an ongoing study, the requester should obtain copies of the new FIRM and FIS report and determine if the flooding source to be revised in the MT-2 request was restudied for the new FIRM and FIS. If the flooding source was not restudied, the effective model will remain effective and can be used for the MT-2 modeling. If the flooding source was restudied during the new FIS, it may be necessary to prepare the MT-2 request using both the preliminary and

effective models. While there are advantages to using preliminary data, it must be done with the understanding the data is subject to change or may be delayed in becoming effective.

LOMRs are not issued to revise preliminary FIRMs. LOMRs must be issued for the effective FIRM panel.

CLOMRs may be based on the effective data, preliminary data, or both. However, even if the modeling for a CLOMR is based on the preliminary study, the effective model must be submitted for comparison purposes. In addition, the effective delineations should be shown on the topographic workmap and the annotated FIRM should be based on the effective FIRM.

2.16.2. PHYSICAL MAP REVISIONS

A PMR occurs when FEMA republishes one or more FIRM panels. This is different from a LOMR, which revises a portion of one or more FIRM panels but does not republish the panel(s). PMRs require a more extensive due process, so the revised FIRM panels and FIS report take longer to become effective. In coordination with the community(-ies), FEMA evaluates LOMR submittals to determine whether a LOMR or a PMR is the best map change vehicle for the specific revision on a case-by-case basis. PMRs are typically more appropriate for revisions that are large, will result in increased flood hazards for many properties, and/or are contentious and have a high risk of being appealed. If a PMR is determined to be the appropriate map change vehicle, FEMA will send a letter to the community and the requester, notifying them that the revision has been converted to a PMR. This letter is sent after FEMA completes the technical review. LOMR requests that are converted to PMRs have the same data requirements as a regular LOMR, except that property owner notifications are not required for the PMR. The time frame for FEMA to process the PMR depends on available funding from the FEMA regional office. Alternatively, the LOMR requester may pay the per-panel PMR processing fee to avoid potential delays from waiting for FEMA funding.

2.16.3. UNSTEADY FLOW AND TWO-DIMENSIONAL MODELING

FEMA flood studies have historically been performed using one-dimensional (1D) hydraulic modeling techniques. Therefore, most effective models are 1D. The effective model must be used as the base model for CLOMRs and LOMRs unless it is not available, or its use is demonstrated to be inappropriate. There are some situations where 1D modeling alone is not capable of accurately representing flood conditions. These include flat terrain with very wide, shallow floodplains; flow through highly urbanized areas; and breakout flow that is hydraulically independent from a main channel/watercourse. In these situations, it may be necessary to employ two-dimensional (2D) modeling, or 2D-informed 1D modeling. If conditions such as these do not exist, then a 1D analysis should be used if it can produce reasonably accurate results. In addition, some software has the functionality to couple 1D and 2D analyses. This should be done if a riverine channel/floodway can be modeled in 1D and overbank areas are more appropriately analyzed in 2D. In highly developed areas with wide overbanks that have an effective detailed 1D model with floodway, there may still be the need for some 2D-informed 1D modeling until adequate resources are available to allow transition to either a 2D, or 1D/2D coupled model.

Floodway regulations are based on the concept of 1D steady-state hydraulic modeling and are difficult to apply to unsteady flow. The floodway analysis must be performed using the same hydraulic computer model used to determine the proposed BFEs. Therefore, if the BFEs are based on an unsteady hydraulic analysis, the floodway must be run on the same unsteady model. The HEC-RAS user manual has guidance for developing 1D unsteady floodway models. Guidance for developing floodways using 2D models is found in FEMA's Floodway Analysis and Mapping Guidance document.

Advanced modeling methods are capable of more accurately simulating complex flooding conditions, but they also come with challenges. MT-2 requests are often intended to revise a small portion of an effective flooding source. When a different model/method is used to analyze the area of interest, there can be difficulties creating a logical transition to the effective flood hazard data at the limits of revision. This may require revising the entire effective reach of the stream. Also, models submitted in support of LOMR requests will become the effective model and must be used for future CLOMR and LOMRs, as well as evaluating the impacts of future development (for example, no-rise analyses). Therefore, when deciding to use a more complex model in support of a CLOMR or LOMR, it is important for communities and requesters to understand the implications it will have on the processing of the individual MT-2 request, data storage and accessibility, future model maintenance and floodplain management activities.

2.16.4. NON-PARTICIPATING COMMUNITIES

FEMA will process CLOMR and/or LOMR requests submitted for areas within the jurisdiction of a community that is not participating in the NFIP. If a community does not participate in the NFIP, it is technically not able to provide the assurances or concurrences required when signing Form 1 of the MT-2 application. However, as explained in Section 1.4.1, FEMA will process a request without the community signature on the application forms, as long as the requester provides documentation to show the request was submitted to the community for review and concurrence. LOMRs impacting non-participating communities will generally become effective 6 months from the issue date, to give the community an opportunity to join the NFIP and adopt the LOMR.

2.16.5. REVISIONS AFFECTING FEDERAL LAND

Projects entirely on federal property or entirely funded and permitted through the federal government are subject to Executive Order (EO) 11988, rather than the regulations of 44 CFR. The federal agency must review their implementation of the EO and act based on their own procedures. However, requests for CLOMRs or LOMRs impacting federal land may be submitted and will be processed based on the criteria described in this Guidance Document. Federal land, such as military bases, may not be within the jurisdiction of an incorporated community or county. Therefore, community concurrence for revisions within these areas is not required.

2.16.6 POTENTIAL VIOLATIONS

While reviewing and processing a CLOMR or LOMR request, FEMA may identify that a community is potentially in violation of NFIP floodplain management regulations as codified in 44 CFR 60.3. If a

previous unresolved or new potential violation is identified, FEMA may suspend its processing of the CLOMR or LOMR until the community remedies all potential violations to the maximum extent possible through coordination with FEMA.

3. MT-2 Request Processing Overview

As explained is Section 1.5, an MT-2 request may be submitted to FEMA either through the Online LOMC Tool or by mailing it to the applicable address. Once a request is received, a case number is assigned, and an automatically generated email is sent to the applicant. Shortly after receipt, the case reviewer will send another acknowledgement email to establish a point of contact for the requester and community.

Per 44 CFR 65.9, within 90 days of receiving an MT-2 request, FEMA will provide the requester and the community either a LOMR, a CLOMR, review comments, or notification that additional time is needed for reviewing/processing the request. Review comments may pertain to any of the MT-2 data requirements described in Section 2.0 of this document. When FEMA provides review comments, the applicant must adequately address all of the comments within 90 days. If they do not, the case will be suspended. Therefore, MT-2 requesters are highly encouraged to discuss the comments with the reviewer prior to submitting the official response to ensure mutual agreement on how to adequately address the comments. Data submittals after a case has been suspended will be treated as original submissions and are subject to all submittal/payment procedures. This also applies if, at any time after the initial request is submitted, the project on which the request is based is altered significantly in design or scope (other than what is needed to respond to comments, concerns or other findings made by FEMA regarding the original submission).

Once FEMA's review is complete and all review comments have been adequately addressed, FEMA will issue a CLOMR or LOMR to the affected communities and provide copies to the requester. The CLOMR/LOMR will generally be issued within 90 days after all review comments have been adequately addressed.

CLOMRs are effective upon issuance and are valid indefinitely. However, if the design of a proposed project changes from what was submitted in an issued CLOMR, it may be necessary to submit an updated CLOMR, particularly if the changes may result in BFE increases greater than the increases proposed in the issued CLOMR. While CLOMRs do not "expire," the follow-up LOMR request may need to update the hydrologic and/or hydraulic analyses submitted with the CLOMR. This would be necessary, for example, if a new flood study becomes effective and the study on which the CLOMR was based is superseded. Another example is the occurrence of significant changes within the floodplain or watershed, where the analysis submitted with the CLOMR no longer represents existing conditions.

LOMRs which result in changes to regulatory flood hazard information (SFHAs, BFEs, and/or floodways) are subject to a statutory 90-day appeal period. FEMA publishes a notice of the appeal period in the local newspaper. This notice is published twice, shortly after the LOMR is issued. The 90-appeal period commences on the date of the second newspaper publication. The notice of appeal

period is also published in the Federal Register and on FEMA's Flood Hazard Determination website (https://www.floodmaps.fema.gov/fhm/bfe_status/bfe_main.asp). LOMRs receiving no valid appeals will typically become effective approximately 4.5 months after issuance (120 days after the second newspaper publication). Valid appeals must be based on scientific and technical data, as explained in FEMA Guidance Document 26, Appeal and Comment Processing, and will be reviewed according to the procedures described in the guidance document. If no valid appeals are received, FEMA will send a notice of final flood hazard determination to the community to confirm the LOMR has become effective as of the effective date on the determination document. If one or more valid appeals are received, the LOMR may be suspended. If appropriate, a revised LOMR incorporating the submitted scientific/technical data will be issued under a new case number.



Figure 6. General Example LOMR Timeline (One Additional Data Submittal)



Guidance for Flood Risk Analysis and Mapping

Hydraulics: Two-Dimensional Analysis

November 2023

FEMA

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Requirements for the FEMA Risk Mapping, Assessment, and Planning (Risk MAP) Program are specified separately by statute, regulation, or FEMA policy (primarily the Standards for Flood Risk Analysis and Mapping). This document provides guidance to support the requirements and recommends approaches for effective and efficient implementation. Alternate approaches that comply with all requirements are acceptable.

For more information, please visit the FEMA Guidelines and Standards for Flood Risk Analysis and Mapping webpage (www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping). Copies of the Standards for Flood Risk Analysis and Mapping policy, related guidance, technical references, and other information about the guidelines and standards development process are all available here. You can also search directly by document title at https://www.fema.gov/library.

Table of Revisions

The following summary of changes details revisions to this document subsequent to its most recent version in November 2022.

Affected Section or Subsection	***Date***	***Description***
All sections	November 2023	Various minor grammatical updates, including updating references to existing Risk MAP guidance and external resources

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1. Introduction

This document discusses two-dimensional (2-D) modeling as it pertains to National Flood Insurance Program (NFIP) regulatory products. NFIP regulatory products are used to determine if a structure is located in a Special Flood Hazard Area (SFHA) and enforce appropriate floodplain management regulations. The 1% annual-chance flood is a regulatory standard for the NFIP. Flood Insurance Rate Maps (FIRMs) are regulatory maps, where the 1% and in some instances 0.2% annual-chance floodplain boundaries are shown. If a flood insurance study includes regulatory floodways, additional information such as average flood velocity and cross-sectional area are provided at some modeled cross sections as well. It is important to note that although some communities might choose to use FIRMs as a flood risk management tool, the main purpose of these maps is still in outlining flood insurance purchase requirements and for floodplain management. Therefore, the most critical information shown on FIRMs are the SFHA delineations and flood elevations associated with the 1% annual-chance discharges in the flooding sources. This document is not a technical manual or reference for 2-D modeling techniques.

The underlying assumption for one-dimensional (1-D) hydraulic modeling is that the conveyances, velocities, and associated physical forces and variations are only significant in the stream direction (i.e., upstream and downstream); those in the lateral directions are negligible in modeling. As a result, the hydraulic parameters can be computed using cross sections placed perpendicular to the flow direction. Two-dimensional (2-D) modeling accounts for the transverse components. 2-D models solve depth-averaged equations of motion using a grid-based finite difference scheme, finite volume method, or apply finite element solution techniques. In a 2-D analysis, hydraulic properties of the floodplain are computed at the grids for the finite difference scheme and at the nodes, for the finite element scheme of solution. The governing equations of a 2-D solution assume that topography of the ground within a grid or element, and hence the water elevation, show mild variations. The hydraulic analysis in the vicinity of control structures is computed using steady flow analysis methods for the range of discharges the structure is likely to experience.

2-D models are most applicable to streams on flat terrain with broad floodplains where flow is moving in two or more directions, or flow is hydraulically disconnected between the main channel and the floodplain.

Physical Map Revision Overview

The objective of the Physical Map Revision (PMR) is to update the regulatory flood hazard data and ensure that the most current and up-to-date flood hazard data, including all new studies and Letters of Map Revision (LOMRs), are incorporated into the National Flood Hazard Layer (NFHL). PMRs are processed by FEMA when a portion of a community's flood hazards need to be revised and updating the full countywide regulatory products is not necessary. As a result, the updated flood hazard data will be used to create revised Flood Insurance Rate Map (FIRM) panels and a PMR FIRM Database.

Outlined in this guidance document is the process that Mapping Partners should follow when preparing and submitting PMRs. The roles and responsible parties for each phase are listed and the

details of each responsibility are listed sequentially. A graphical representation of multiple LOMR scenarios and how to address each of them is provided in Section 3.0. A summary of the PMR scenarios is provided in Section 4.0.

1.1. Background

The vast majority of the hydraulic modeling underlying the special flood hazard areas depicted on Flood Insurance Rate Maps (FIRMs) throughout the nation are steady-state flow, 1-D hydraulic models. However, in recent years, there has been an increasing number of unsteady flow, 1-D and 2-D hydraulic models being prepared to support revisions to the NFIP's special flood hazard areas.

1.2. Appropriate Use of 2-D Model

Steady-state models represent the flood with a constant discharge throughout time, whereas unsteady-state models have the flood wave represented as a function of time in every detail. In 1-D models, the inherent assumption is that the water flow occurs mainly in one direction, whereas in 2-D models two horizontal coordinates are used to represent the flow velocity vectors; the vertical velocity is assumed to be negligible (Cook, 2008). Therefore, from a theoretical point of view, and given that all other conditions are met, an unsteady-state, 2-D model would produce a more realistic prediction of the flooding extent, because more details of the flood wave and flooding patterns can be represented with horizontal resolution. Cook and Merwade (2009) found that it is reasonable to assume that inundation extent could be more accurately predicted using 2-D simulations, as influences of topographic and geometric features are more accurately represented. However, this straightforward approach for modeling floods does not work well in all cases. In general, the simplest model that can solve the problem with accuracy should be the one selected.

The available data used in a flood study can be a major deciding factor in whether to use a 1-D or 2-D model. Naturally, unsteady–state, 1-D and 2-D modeling approaches require both a higher level of input hydrologic data (time series of discharges or hydrographs, possibly at several locations), higher levels of output analysis, and more rigorous model calibration, as opposed to the steady-state counterparts (Hosseinipour et al., 2012). Data availability required to calibrate and validate a model is variable depending on the community where the study is being developed; the data may be absent in many cases and unfortunately most flooding models applied recently lack calibration.

Not having detailed enough terrain data to undertake the modeling effort is a major concern for 2-D models. If the data do not exist, it is not recommended to use a 2-D model because the model effort will not provide improved results over a 1-D representation. The 1-D model is a reasonable choice if the data do not support the 2-D model.

1.2.1. DECISION PROCESS

There are several factors that should be considered when multi-dimensional modeling is considered for flood insurance studies. These factors should go beyond technical aspects of the modeling to ensure that the added value of these models are commensurate with the added cost associated with data and the modeling effort.

Standard Engineering practice should be followed and in general, technical modeling factors to be considered include but are not limited to:

1. Topographic data availability and resolution
2. Cell size and computation time
3. Flooding from multiple sources
4. The prevalence of braided or split flow conditions as well as ineffective flow areas
5. Levees (overtopping and breach) or other lateral hydraulic structures
6. Dams or reservoirs
7. Shallow flooding
8. Hydraulic conditions (supercritical vs. critical)
9. Hydrologic and soil conditions (high infiltration rate, land use etc.)
10. Bridges, channels, culverts etc.
11. Boundary conditions
12. Model stability
13. Calibration
14. Data storage, transfer, and management
15. Steady or unsteady
16. Data uncertainty

Additional factors that may more closely impact the FEMA products that should be considered include:

1. Population density
2. Level of expertise in community
3. Type of effective models up and downstream
4. Communities up and downstream
5. Up and downstream tie-ins
6. Ease of base flood elevation (BFE) and profile extraction
7. Regulatory floodway
8. Ease of reporting and review
9. Ease of reproducing results

10. Ease of maintenance and future map revision
11. Ease of communication to general stakeholders
12. Software licensing and versioning
13. Cost of modeling and maintenance

Considering the technical and FEMA-specific factors, the decision steps can be broken down into three main categories: Technical, Cost, and Programmatic. When deciding whether a 2-D model would be appropriate the following questions should be asked:

A. Technical (qualitative or quantitative assessment):

1. Will a 2-D analysis (as opposed to 1-D analysis) result in more accurate flood elevations on NFIP maps given the conditions on the ground?
2. Can the 2-D model be used for other purposes?
3. Is the best available topographic information sufficient for a 2-D analysis?
4. Can the effective hydrology be used or is a new hydrologic analysis needed?
5. Are there hydraulic structures that need to be surveyed and modeled?
6. Is effective model calibrated? Is there enough data to calibrate a 2-D model?
7. Is a 1-D, 2-D hybrid more appropriate?
8. Do the potential model parameters work with the model limitations? (i.e., Some 2-D models are 1-D in channel and do not handle bridges well, other 2-D models have things built into their codes that make it run smoother but can affect accuracy).

B. Cost (qualitative or quantitative assessment):

1. Does the model need to be purchased and what is the cost to FEMA or the user, ensuring it adheres to requirements set forth in 44 CFR 65.6(a)(6)?
2. What is the cost of data development if needed? (topographic information, calibration data, hydrology, structure information…).
3. Is there a need for new IT equipment or systems and what would be the cost?
4. What level of expertise is needed to perform the modeling and how does it compare to 1-D modeling?
5. Is there additional cost associated with extracting profiles, BFEs or shapefiles from the 2-D model compared to a 1-D model?
6. What is the cost associated with developing a regulatory floodway and how does it compare to a 1-D model?
7. Cost of QC (no check-RAS)?

8. Does the entire area need to be in 2-D or can a small segment be broken out to handle that?

C. Programmatic (qualitative or quantitative assessment):

1. What are the benefits to the community and property owners from a 2-D analysis?
2. How many structures and how many people will be impacted?
3. Does the community support a 2-D analysis?
4. For floodplain management purposes, including floodway as applicable, does the 2-D model offer benefits compared to the effective model?
5. Is the requirement of 44 CFR 65.6(a)(8) met, demonstrating the effective model is no longer appropriate?
    a. 44 CFR 65.6 (a)(8): A revised hydraulic analysis for a flooding source with established base flood elevations must include evaluation of the same recurrence interval(s) studied in the effective FIS, such as the 10-, 50-, 100-, and 500-year flood elevations, and of the floodway. Unless the basis of the request is the use of an alternative hydraulic methodology or the requestor can demonstrate that the data of the original hydraulic computer model is unavailable or its use is inappropriate, the analysis shall be made using the same hydraulic computer model used to develop the base flood elevations shown on the effective Flood Insurance Rate Map and updated to show present conditions in the floodplain. Copies of the input and output data from the original and revised hydraulic analyses shall be submitted.
6. What are the risks associated with using 2-D models in the community?
7. Does the community/CTP have the in-house capability to work with the 2-D model?
8. Will there be challenges with the appeal process?
9. Will there be software licensing challenges for LOMR requesters, the community or CTP?
10. See comments on floodways.

The results of the assessments above could provide the information necessary to make an informed decision that is technically, financially, and programmatically sound. Please note that additional categories or questions can be incorporated into the process.

1.3. Minimum Data Requirements for 2-D Model Use

Data requirements for flood inundation models fall into four groups: 1) topographic data of the channel and floodplain (model bathymetry), 2) time series of flow rates and stage data for model input and output boundary conditions, 3) roughness coefficients for channel and floodplain, and 4) data for model calibration and validation (Mason et al., 2010).

The creation of a 2-D model requires a detailed and accurate terrain model of the study area. The quality of the terrain model is one of the most limiting factors to the accuracy of the model. For more

information about elevation data used in flood studies see the Elevation Guidance document. For significant flow paths within the model a terrain will need to be supplemented with channel and structure surveys to ensure that flow is routed correctly through the floodplain.

Discharge and stage data are another flood model data requirement which help provide the model boundary conditions and will be discussed in Section 4.5 of this document.

Flow across a floodplain is heavily affected by the type of land cover that is present along the grid. To ensure that significant variations in land cover are accounted for in the 2-D model Manning's roughness coefficients should very from cell to cell. Values of Manning's "n" (roughness) can be determined with the help of aerial or satellite imagery, textbooks, guidelines found in manuals, and site inspections (surveying).

2. Model Verification and Maintenance

2.1. Model Verification

When a currently effective model is updated or run within a new version / type of software testing and documentation of variations due to the model code should be made. If changes due to model code cause significant changes in BFE or SFHA results should be discussed with the regional project officer (RPO).

2.2. Model Maintenance

Models must be designed with ease of maintenance in mind and should be created in discrete areas that allow for efficient modification and computation. There are many factors that can affect the efficiency of a model, number of pixels, pixel size, variation of model parameters between pixels, please refer to the models users guide to ensure that the model runs efficiently.

If a project or additional information affect a models parameter at a scale smaller than the effective model start by assessing if the changes modify the existing model inputs. An example would be if fill is placed in an amount that would change the elevation of pixels within the model, or ground cover is changed that would change the roughness values of pixels. If changes which are localized within a given cell do not change the effective parameters and multiple properties / structures are contained within the affected cell an effort should be made to evaluate localized impacts.

When a 2-D model is modified with new inputs, results from changes within the 2-D model need to be provided for the extent where resulting grid and /or cross section elevations tie in within 0.5 foot.

3. Two-Dimensional Hydraulic Analysis Procedures

The choice of hydraulic procedures for the analyses and presentation of flood hazard information is determined during project scoping. The level of effort and the amount of data collected determines whether flood elevations, or only floodplain boundaries, can be shown on the FIRM.

The approach used for the hydraulic analyses can generally be categorized as one of three types: 1-D steady flow, 1-D unsteady flow, and 2-D steady and unsteady flow analyses. The approaches require different level of effort. The following sections present more information about 2-D analysis.

Documentation of 2-D models must include a georeferenced spatial file showing the locations of the stream under study, major flow paths emanating from and adjacent to the study stream, hydraulic structures adjacent to and crossing the stream, and the grid of cells. The location of each cell must be readily ascertained from the spatial file either through labeling or a labeling scheme (e.g., row and column numbers). Model settings and tolerances should be documented also to ensure that rerunning the model will reproduce previous results.

3.1. Topographic Information

2-D models require digital terrain models as input. Peak water-surface elevations are determined at cells, either evenly spaced squares or irregularly spaced geometric elements, composing a grid or mesh (below both will be referred to as a grid). The model grid should be carefully examined to ensure that linear features, such as embankments and ditches that effect the travel of water through the model are accounted for. The grid must cover the entire project area and the derivation or development of the grid must be clearly documented. For more information about elevation data used in flood studies see the Elevation Guidance document.

The Mapping Partner should carefully select cell size, not only considering the accuracy of the topographic data and computational efficiency of the model, but also mapping and floodplain management needs. Too small a cell size not only slows computations, but also creates too many elevation grids, which may not practically be presented on the floodplain map. Too large a cell size either creates flat water-surface elevations over a large area or does not accurately define the flood boundaries. Cell size and orientation are important attributes to ensure that linear features are represented correctly in the grid. Portions of the grid should be further refined as necessary to ensure that these features are not lost within the grid. In spacing the cells, Mapping Partners should maintain gradual changes in elevation from one cell to adjacent cells to avoid numerical instability; they should not use too many cells along a cross section to avoid unnecessary difficulty in maintaining surcharge in the floodway calculation. More details are discussed in the Floodway Analysis and Mapping Guidance document. The Mapping Partner should not size cells specifically to remove certain structures or lots from the floodplain.

3.2. Hydraulic Structures

The effects of hydraulic structures including bridges and culverts are typically input as rating tables at specified cells. The Mapping Partner must document the modeling of each hydraulic structure. That documentation must include a list of each cell associated with the structure and a description of the rating table including the derivation, sources of data, and the information required in the Hydraulic Structures heading under Section 2.2.3, Hydraulics: One-Dimensional Analysis Guidance.

3.3. Non-Conveyance Areas

Because 2-D models simulate flow in all horizontal directions, the modeler does not, in general, have to identify non-conveyance areas in the input data. However, there may be reasons (e.g., cell size) to identify non-conveyance areas through input data.

The modeling technique should be chosen to reflect the natural conditions (topography and roughness) as closely as practical. Artificially removing cells from computation (e.g., removing cells for areas that were not inundated during the calibration event) may be used to reflect natural conditions in model calibration, but this practice should not be used when developing BFEs for mapping. This approach should also not be used for removing a structure from the floodplain or forcing flow toward or away from a particular area. Similarly, the approach of turning off the cells at the edge of the grids to accelerate model computational time should not be used in runs that develop BFEs for mapping.

The Mapping Partner must fully document the reasoning for, location of, and technique used to model non-conveyance areas through input data. The documentation must include a clear explanation of the natural conditions where artificial data have been used. The Mapping Partner must ensure that non-conveyance areas that should be included in the floodplain are mapped as such.

3.4. Energy Loss Coefficients

Cells are analogous to intervening reaches between cross sections in 1-D models. For example, each cell is assigned a roughness coefficient. As in 1-D modeling, roughness is described by Manning's "n." Mapping Partners must document roughness coefficients as described in Loss Parameters under Section 2.2.5 of Hydraulics: One-dimensional Analysis. Roughness coefficient ranges available for different land cover categories are established through 1-D steady flow computations. Therefore, the roughness coefficients applied in a 2-D analysis should be validated through calibration.

3.5. Hydrologic Inputs

The choice of hydrologic procedures is associated with the size and characteristics of the watershed, the study type, the effective FIS methods, the availability of data, the requirements from the hydraulic study, and the allocated funds. In addition, information on any relevant hydrologic studies developed by other Federal or State agencies would be of use in selecting the hydrologic procedure. Hydrologic analyses, to determine the discharge characteristics along stream reaches under study, can be developed based on statewide regression equations, statistical analysis of stream gage data, or hydrologic models developed for the watershed. Unsteady flow analyses of the floodplain require the development of hydrographs using hydrologic models of the watershed. For more information about hydrologic analysis see the General Hydrologic Considerations Guidance.

For many of the 2-D models hydrologic inputs are entered as initial conditions and boundary conditions. Generally, you'll see it input two ways, as a flow hydrograph on a bounding cell or channel section originating from another basin (discussed in Section 3.5.2) or as rainfall or rainfall excess

that is input directly on the 2-D flow area. Care should be taken if rainfall is used to know whether total rainfall or rainfall excess (rainfall minus losses due to interception / infiltration) is required for the model, the models user's manual should define which is required.

If the rainfall-runoff modeling capabilities of the model are utilized for initial or boundary conditions for the hydraulic computations. Mapping Partners utilizing those capabilities should meet the analysis and documentation requirements of the rainfall-runoff input as described in the applicable parts of Hydrology Rainfall-Runoff Analysis Guidance.

3.5.1. INITIAL CONDITIONS

Initial conditions in 2-D hydraulic models are typically established by preliminary simulations (warm-up runs) until reasonable initial values are established. 2-D hydrodynamic models usually have the capability to generate initial conditions through the rainfall-runoff process. Flow is then routed through the system for a warm-up period to establish the initial water-surface elevation. In either situation, using a separate warm-up run or development of a warm-up period through rainfall-runoff and routing simulations, the Mapping Partner should fully evaluate and ensure reasonableness of the initial conditions before performing the runs that develop water-surface elevations for mapping. The Mapping Partner must document the simulation history including justification of reasonableness of the initial condition.

Rainfall-runoff modeling usually establishes antecedent conditions through input data (antecedent moisture conditions, elevations in reservoirs, etc.). The rainfall-runoff step in the 2-D modeling process often establishes starting conditions by simulating a "typical" recent history of storms. The Mapping Partner should investigate the ramifications of using other reasonable simulated histories and document that investigation. The documentation must include a discussion of the sensitivity of the results with respect to storm history and the implications regarding the frequency assigned to the results.

For areas with distinct dry and wet seasons, the Mapping Partner should use the average wet season condition, either average rainfall for the rainfall-runoff process of the hydrodynamic model or average channel flow for the hydraulic routing model, to establish the initial condition to develop water-surface elevations for mapping.

3.5.2. BOUNDARY CONDITIONS

Boundary conditions for 2-D models are similar to those for 1-D models. Rather than being associated with cross sections, boundary conditions in 2-D models are associated with boundary cells. The Mapping Partner should meet the requirements described in Starting Water-Surface Elevations, and Boundary conditions for unsteady flow in Hydraulics: One-Dimensional Analysis Guidance; for all cells where boundary conditions are user supplied.

Flow hydrographs that originate from other basins should be modeled as inflow at boundary cells. Mapping Partners must document crossing basin flow hydrographs to meet the requirements for inflow hydrographs described General Hydrologic Considerations Guidance.

3.6. Flow Paths

An advantage of using 2-D models is their capacity to identify separate flow paths in addition to the mainstream channel. Velocity, flow rate, and flow volume can identify flow paths. The Mapping Partner may create separate flood profiles for significant flow paths. Details of water-surface profiles are described in the Flood Profiles Guidance.

The profile baseline is the horizontal distance along the Flood Profile as represented on the FIRM. The profile baseline can be the distance between centers of cells along flow direction in the 2-D model. Graphic specifications for profile line types can be found in the Flood Insurance Study (FIS) Report Technical Reference.

Computer programs that offer 2-D and 1-D solution capability compute flow parameters in a form suitable to develop flood profiles and floodway data published in the FIS, because the stream channel can be modeled using cross sections based on 1-D analysis.

4. Calibration of Hydraulic Models

Calibration of hydraulic model parameters is performed through modeling major historic floods on stream reaches where flood flow and elevation data are available. By comparing the measured water surface elevation from a flood to the modeled water-surface elevation, the modeler can judge the reliability of the model and adjust input parameters accordingly. The parameters adjusted are usually energy loss coefficients. The user's manuals for most models provide guidance and, in many cases, optimization options for calibrating friction loss (roughness) coefficients. For more information on calibration of Hydraulic Models see Section 4.5 of the General Hydraulics Considerations Guidance.

5. Alluvial Fan Analysis

Alluvial fans, and flooding on alluvial fans, show great diversity because of variations in climate, fan history, rates and styles of tectonism, source area lithology, vegetation, and land use. 2-D models are a good way of defining the 1% annual-chance flood elevation on inactive areas of the alluvial fan. For more information, specific to Alluvial Fan Analysis, please see Alluvial Fans Guidance.

6. Floodway Determination

A floodway is a tool to assist communities in balancing development within the floodplain against the resulting increase in flood hazard. The Mapping Partner must coordinate with the community when developing floodways.

A regulatory floodway is defined as the channel of a river or other watercourse and the adjacent land area that is reserved from encroachment in order to discharge the base flood without cumulatively increasing the water-surface elevation by more than a designated height, or surcharge. A maximum height of 1.0 feet based on NFIP regulations should be used unless the project resides within a state or other jurisdiction that has established more stringent regulations. The portions of the floodplain

beyond the floodway are called the floodway fringe. The community is responsible for maintaining the floodway to mitigate flood hazards; the community must not allow any activities causing a rise in the BFE in the regulatory floodway. For more information about conducting a floodway analysis see the Floodway Analysis and Mapping Guidance.

7. Hydraulic Review Requirements

The reviewing Mapping Partner will be responsible for performing hydraulic reviews. The reviewing Mapping Partner is responsible for determining whether the proposed analyses are reasonable. Section 9 of the General Hydraulics Considerations Guidance provides requirements and criteria that should be used to determine if the hydraulic analyses are reasonable.

8. Deliverable Products

The Mapping Partner must submit the hydraulic and floodway data in digital format as described in Technical Reference: Data Capture. The Mapping Partner must submit files via the mapping information platform (MIP); other media may be acceptable if coordinated with FEMA.

8.1. Special Mapping Considerations

As 2-D modeling becomes used for more applications around the country additional resources are being developed. The following white papers / references are good sources for additional information:

- One-Dimensional Unsteady and Two-Dimensional Models: Issues for Regulatory Use, ASFPM 2014.
- On the issues associated with 2-D modeling for flood mapping purposes, Devinder S. Dhillon, Fabián A. Bombardelli, Wm. E. Fleenor and Kaveh Zamani 2014.
- Hunter, NM, Bates, PD, Neelz, S, Pender, G, Villanueva, I, Wright, NG, Liang, D, Falconer, RA, Lin, B, Waller, S, Crossley, AJ and Mason, D (2008) Benchmarking 2-D hydraulic models for urban flood simulations. Proceedings of the Institution of Civil Engineers: Water Management, 161 (1). 13-30.

9. References

Cook, A. Comparison of one-dimensional HEC-RAS with two-dimensional FESWMS model in flood inundation mapping. 2008.

Cook, A., Merwade, V. Effect of Topographic Data, Geometric Configuration and Modeling Approach On Flood Inundation Mapping. Journal of Hydrology. 2009

Hosseinipour, E.Z. 2-D Fine Grid Hydrodynamic Modeling for More Accurate Floodplain Mapping in Southern California. 2012.

Mason, D.C., Schumann, G. J-p., Bates, P.D. 2010. Data Utilization in Flood Inundation Modeling. Flood Risk Science and Management, doi; 10.1002/9781444324846. Chapter 11.

SUPPLEMENTARY WHAFIS DOCUMENTATION

WHAFIS 4.0

Maintenance of FEMA's WHAFIS Program

April 2024

Background

FEMA's WHAFIS 4.0 program has been recompiled to ensure its continued operation within modern Windows operating systems. All changes are limited to the compiling steps taken to generate an executable file. The source code has not been edited or revised in any way. The purpose of this revision is to maintain the current functionality as described within the WHAFIS 3.0 manual (September 1988) and WHAFIS 4.0 supplement (August 2007).

What's New

The updated WHAFIS program executable has been compiled using the Intel OneAPI compiler, build 2023.1.0.46351. The build required the following prerequisite installations:

- Compatible version of Visual Studio or the Build Tools for Visual Studio
- Visual Studio Community 2022 – 17.6.4.
- .NET desktop development and Desktop development with C++ workloads

Note, these are not required software for installation of the executable, see the Installation and Setup section below for more details on the install process.

Version Testing

Testing was performed on the recompiled WHAFIS to ensure consistency with the previous WHAFIS 4.0 executable. Minor discrepancies were observed in the results reported in WHAFIS PART 1 through PART 6. These discrepancies are believed to be due to differences in significant digit storage and rounding between the previously used and new compilers. Importantly, these were found to be within an acceptable error tolerance and do not appreciably change the estimation of overland coastal hazards. Examples of these differences are summarized below:

WHAFIS Part	Differences Observed
1 Input	Slopes (column 9) reported as 0.0000 in previous build are reported as -0.0000 in new build. The change in sign was not found to affect results beyond the sign convention reported in PART 1.
4 Location of Surge Changes	Additional lines indicating a change in surge were reported in PART 4 of the new build when compared to the previous build. These additional lines describe small (approximately 0.05 feet or less, vertically) changes in the reported stillwater elevation. Conversely, lines were omitted from PART 4 of the new build when compared to the previous build. Similarly, the impact is minor, resulting in small (approximately 0.05 feet or less, vertically) changes in the reported stillwater elevation.
5 Location of V Zones	The stationing of the reported V zones were observed to have small differences (approximately 0.05 feet or less, horizontally) between the previous build and new build.

WHAFIS Part	Differences Observed
6 Numbered A Zones and V Zones	The stationing of the reported zones was observed to have minor differences (approximately 0.05 feet or less, horizontally) between the previous build and new build. The new build was also observed to insert additional lines representing redundant zones. For example, a line describing an A Zone with elevation 14 may be inserted between two other A Zones also with elevation 14.

Command Line Usage

The standalone WHAFIS 4.0 executable can be run from a command line with input and output file names provided as command line parameters, as in the following example:

WHAFIS4.exe *inputFileName outputFileName*

Installation and Setup

The current version of the software can be saved directly to any machine with a Windows operating system. The executable can be run directly from the folder it has been saved to by opening and supplying the input and output filenames. Alternatively, the executable can be called from another computing program capable of calling and interfacing with executables.

How to Update WHAFIS for CHAMP

The Coastal Hazard Analysis and Mapping Program (CHAMP) program will install the 2007 version of the WHAFIS executable. Therefore, new users installing CHAMP or users with CHAMP already installed on their computing system should replace the previous version of the executable with this recompiled version. To make the change, replace the WHAFIS4.exe file in the CHAMP program folder with the updated version as described by the steps below. The MG.DAT file does not need to be changed or replaced. The CHAMP program will utilize this WHAFIS build once the updated executable has been saved to the CHAMP program folder.

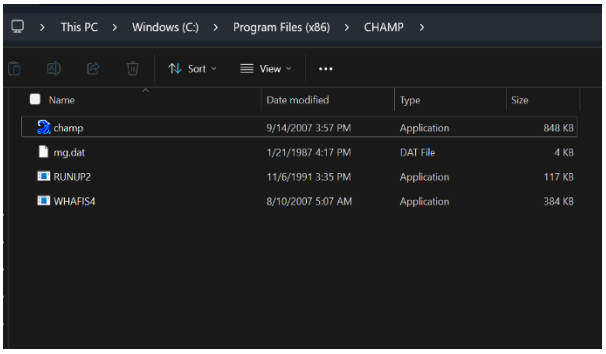
1. Download the CHAMP Application from FEMA's Coastal Engineering Tools page.
2. Run the CHAMP setup.exe file to install the program
3. Download the updated WHAFIS application:

    - WHAFIS Application

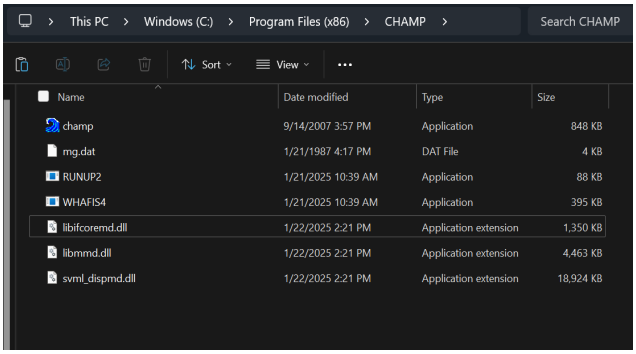
    Clicking the link above will download a zip file to your computer. The WHAFIS zip file will contain a file named "WHAFIS4.exe".

4. On your computer, navigate to the Program Files (x86) folder. Inside the Program Files (x86) folder, you will find a folder named CHAMP, which is automatically placed there when you first install CHAMP.

5. Move the newly downloaded WHAFIS4.exe files to the CHAMP folder to replace the older versions of these files. This can be done by selecting the new files and either dragging and dropping them into the CHAMP folder or by copying and pasting them.
    - Ensure the WHAFIS file is named exactly WHAFIS4.exe
    - This step requires administrative privileges, and may require Government Furnished Equipment (GFE) users to call the help desk for assistance and non-GFE users to contact similar organization IT resources.

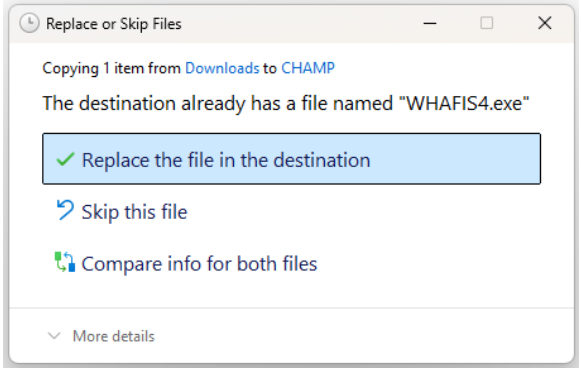


The above figure shows the CHAMP folder **before** copying and pasting in the new RUNUP2.exe, WHAFIS4.exe, and DLL files.



The above figure shows the CHAMP folder **after** copying and pasting the new RUNUP2.exe, WHAFIS4.exe, and DLL files. The “date modified” column as seen above will contain updated dates, indicating the RUNUP2.exe and WHAFIS4.exe files have been replaced successfully.

6. After moving the files to the CHAMP folder, it will prompt you to replace the existing files. Click “Replace the file in destination” when prompted.



JEFFERSON COUNTY JUVENILE PROBATION DEPARTMENT
MINNIE ROGERS JUVENILE JUSTICE CENTER

5326 Hwy 69 South
Beaumont, TX 77705
Ph: (409) 722-7474
Fx: (409) 726-2896

Edward J. Cockrell, Sr.,
Chief Probation Officer

900 Fourth Street
Port Arthur, TX 77640
Ph: (409) 983-8370
Fx: (409) 983-8348

MEMORANDUM

To: Maria Vargas
County Judge's Office

From: Edward J. Cockrell, Sr EC
Chief Juvenile Probation Officer

Date: March 19, 2026

Re: **Commissioners' Court Agenda, March 31, 2026**

Please place the following item on the Commissioners' Court agenda for March 31, 2026.

Juvenile Probation

Receive and File the Jefferson County Juvenile Board's Inspection and Certification of the Juvenile Detention Facilities at the Minnie Rogers Juvenile Justice Center as per Title 3, Texas Family Code, Section 51.12(c).

JEFFERSON COUNTY JUVENILE PROBATION DEPARTMENT
MINNIE ROGERS JUVENILE JUSTICE CENTER

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Edward "Ed" Cockrell, Sr.
Chief Juvenile Probation Officer

900 Fourth Street
Port Arthur, TX 77640
Ph: (409) 983-8370
Fx: (409) 983-8348

March 17, 2026

Honorable Commissioner's Court
Jefferson County Courthouse
Beaumont, Texas 77701

Re: Jefferson County Juvenile Detention Facility

Gentlemen:

We, the undersigned, being the membership of the Jefferson County Juvenile Board, did on the 17th day of March, personally inspect the detention facilities of the Jefferson County Juvenile Detention Facility at 5326 Highway 69 South, Beaumont, Texas and do hereby certify as to the following:

1. That said facilities, in accordance with Title 3, Texas Family Code, Section 51.12 (c), are suitable for the detaining of 48 juveniles (capacity);

2. That the facilities are operated in accordance with standards for Juvenile Detention Facilities, as promulgated by the Texas Juvenile Justice Department;

3. That said Board has reviewed the Annual Reports as prepared by the facility administrator and;

4. That said facilities are now certified by this Board for 365 days.

Respectfully submitted,

Jefferson County, Juvenile Board

Juvenile Board

Judge Randy Shelton
279th District Court

Judge Gordon Friesz
317th District Court

Judge Raquel West
252nd District Court

Judge Mitch Templeton
172nd District Court

Judge Justin Sanderson
60th District Court

Judge Kent Walston
58th District Court

Judge Baylor Wortham
136th District Court

Judge John Stevens
Criminal Court

Judge Jeff Branick
County Judge

Spring 2026

Grant Applicants with Totals:

		Requested:	Awarded:
1.	**Lion Hearted**	**$7,930**	**$6,530**

Bid Fee – United States Olympic & Paralympic Committee USA Amateur Boxing Tournament

2.	**Magnolia Garden Club**	**$1,050**	**$1,050**

Pre-promotion and Advertising – Transportation for MGC Flower Show

3.	**Lamar State College Port Arthur**	**$2,200**	**$2,200**

Pre-promotion and Advertising – Sabine Showdown Fishing Tournament

4.	**Beaumont Heritage Society**	**$2,495.90**	**$2,495.90**

Pre-promotion and Advertising – John Jay French Museum/Spindletop Park

5.	**Southeast Texas Baseball Academy**	**$12,640**	**$12,640**

Bid Fee – Baseball Tournaments from May – June, 2026

6.	**Beaumont Convention & Visitors Bureau**	**$20,000**	**$20,000**

Beach/Park on a Waterway – Tyrrell Park Nature Center – Pollinator Garden

7.	**Tri-City Corvette Club**	**$3,300**	**$3,300**

Pre-promotion and Advertising – 32nd Annual Corvette Show

8.	**Aimed Dance**	**$3,460.31**	**$2,710.31**

Pre-promotion and Advertising – Aimed Dance Summer Fest

9. Port Arthur & Beaumont CVBs w/BJRRVC **$7,050** **$7,050**

Pre-promotion and Advertising – Co-op Trade Shows Promoting Jefferson County

10. Port Arthur Convention & Visitors Bureau **$7,310** **$7,310**

Bid Fee – Elite Fishing

11. Golden Triangle Audubon Society **$7,111.66** **$7,111.66**

Beach/Park on a Waterway – Sabine Woods

12. Boomtown Film & Music Festival **$3,500** **$3,500**

Pre-promotion and Advertising – Boomtown Film & Music Festival 2026

13. Port Arthur Historical Society **$9,213** **$9,213**
DBA Museum of the Gulf Coast

Pre-promotion and Advertising – Museum of the Gulf Coast – Billboard

14. Gulf Coast Youth Soccer Club **$5,100** **$5,100**

Pre-promotion and Advertising – Soccer Tournament – August 29-30, 2026

15. Downtown Beaumont Cultural Arts District **$1,000** **$1,000**

Pre-promotion and Advertising – Crawfish Art & Music Festival

16. Gator Country **$4,000** **$4,000**

Pre-promotion and Advertising – Gator Country Adventure Park

17. Southeast Texas Stages **$9,000** **$9,000**

Pre-promotion and Advertising – The Black History Education Program ‘26/’27 Season

		Requested:	Awarded:
18.	**Crime Stoppers of Southeast Texas**	**$12,600**	**$2,600**

Pre-promotion and Advertising – 2027 State Campus Crime Stoppers Conference

19.	**Art Museum of Southeast Texas**	**$20,272**	**$10,136**

Pre-promotion and Advertising – Fall 2026/Winter 2027 Exhibitions

	Requested:	Awarded:
Totals:	**$139,232.87**	**$116,946.87**